

Operation, Maintenance and Monitoring Report June 2013

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

**Work Assignment No.
D007626-25**

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

August 2013

August 16, 2013

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: "June" 2013**

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 29-day period **(May 28 – June 26, 2013)**.

With the exceptions noted below, if any, the P&T system was online and operational throughout the reporting period. Approximately 490,300 gallons of water were treated during the period. Discharge from the treatment system averaged approximately 16,900 gallons per day (gpd), compared to 7,700 gpd in the prior reporting period.

As of the last day of the reporting period, a total of 93,074,000 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 June 26, 2013. Although a trace amount of TCE was detected in system effluent, **there were no exceedances of effluent limitations**. A copy of the analytical laboratory report is attached. Table 2 summarizes selected operational data as recorded on the sampling date. Table 3 presents quarterly water levels measured on June 26 in site-related groundwater monitoring wells.

There was no system downtime in the reporting period.

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

June 26 – Measured monitoring-well water levels; trimmed weeds around treatment building and wells; collected monthly influent and effluent samples; delivered new spare effluent pump purchased at PSS in Troy. The blower was operating at 55 Hz for sample collection.

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.



Page 2
Mr. Carl Hoffman
NYSDEC

Stephen R. Choiniere
Project Manager

Table 1
Summary of Influent and Effluent Data
Sampling Date: June 26, 2013
NOW Corporation Site
NYSDEC Site No. 3-14-008
Town of Clinton, New York

Analytes/ Parameters	Total Influent	Effluent	Recovery Wells			Effluent Limitations	
			TW-1	TW-2A	TW-3	(units)	
Quantity treated, per day		16,907				Monitor	gallons
pH	6.8	6.9				6.5 to 8.5	standard units
Oil and Grease	<5.0	<5.0	NA	NA	NA	15	mg/L
Total Cyanide	<10	<10	NA	NA	NA	10	ug/L
TDS	300	290	NA	NA	NA	1000	mg/L
TSS	<10	<10	NA	NA	NA	50	mg/L
Aluminum, Total	<200	<200	NA	NA	NA	Monitor	ug/L
Arsenic, Total	<20	<20	NA	NA	NA	100	ug/L
Barium, Total	67 J	70 J	NA	NA	NA	Monitor	ug/L
Chromium	<20	<20	NA	NA	NA	400	ug/L
Copper	<25	<25	NA	NA	NA	24	ug/L
Iron	<200	<200	NA	NA	NA	600	ug/L
Mercury	<0.20	<0.20	NA	NA	NA	0.8	ug/L
Manganese	78	40 J	NA	NA	NA	Monitor	ug/L
Nickel	2.1 BJ	1.7 BJ	NA	NA	NA	200	ug/L
Zinc	8.3 BJ	7.5 BJ	NA	NA	NA	150	ug/L
1,1,1-Trichloroethane	170	<0.50	2.5	310	1.3	10	ug/L
1,1,2-Trichloroethane	<5.0	<0.50	<2.0	<10	<0.50	1.2	ug/L
1,1-Dichloroethane	96	<0.50	26	150	12	10	ug/L
1,1-Dichloroethene	11	<0.50	8.0	17	1.6	0.5	ug/L
1,2-Dichloroethane	<5.0	<0.50	<2.0	<10	<0.50	1.6	ug/L
Benzene	<5.0	<0.50	<2.0	<10	<0.50	1.4	ug/L
Chlorobenzene	<5.0	<0.50	<2.0	<10	<0.50	10	ug/L
Chloroethane	<5.0	<0.50	<2.0	<10	<0.50	10	ug/L
cis -1,2-Dichloroethene	9.2	<0.50	2.7	18	0.30 J	5	ug/L
Ethylbenzene	<5.0	<0.50	<2.0	<10	<0.50	10	ug/L
o-Xylene	<5.0	<0.50	<2.0	<10	<0.50	5	ug/L
m,p-Xylene	<5.0	<0.50	<2.0	<10	<0.50	10	ug/L
Tetrachloroethene	<5.0	<0.50	<2.0	<10	<0.50	1.4	ug/L
Toluene	<5.0	<0.50	<2.0	<10	<0.50	10	ug/L
trans -1,2-Dichloroethene	<5.0	<0.50	<2.0	<10	<0.50	5	ug/L
Trichloroethene	240	0.33 J	44	400	12	6	ug/L
Vinyl Chloride	<5.0	<0.50	<2.0	<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 June 2013 O&M Data

NOW Corporation Site
Town of Clinton, New York

Instrumentation/Readings:		6/26/13	Units
<i>TW-1</i>			
	Pumping Rate	NA	GPM
	Water Level Above Transducer	36.41	feet
	Flow Meter Reading	6,679,372	gallons
	Pump Pressure	8	psi
<i>TW-2A</i>			
	Pumping Rate	NA	GPM
	Water Level Above Transducer	38.14	feet
	Flow Meter Reading	0	gallons
	Pump Pressure	6	psi
<i>TW-3</i>			
	Pumping Rate	5	GPM
	Water Level Above Transducer	38.19	feet
	Flow Meter Reading	0	gallons
	Pump Pressure	70	psi
<i>VFD Setting</i>			
	Arrival	55	Hz
	Departure	55	Hz
<i>Air Stripper</i>			
	Stripper Blower Pressure	17	inches H ₂ O
	Air Temperature in Stripper	NA	°F
<i>Effluent Flow</i>			
	Effluent Flow this period (calculated)	490,300	gallons
	Total Effluent Flow (calculated)	93,074,400	gallons

Table 3
Groundwater Levels
NOW Corporation Site
NYSDEC Site No. 3-14-008
Town of Clinton, New York

Well ID	MP	6/26/13	
	Elevation	Depth to Water (Ft below MP)	GW Elevation
MW-1	289.50	9.66	279.84
MW-2	332.51	26.19	306.32
MW-3	312.83	24.40	288.43
MW-3S	312.51	22.31	290.20
MW-4	298.29	21.03	277.26
MW-4D	298.16	28.40	269.76
MW-5	285.48	18.68	266.80
MW-6S	287.90	4.02	283.88
MW-6D	287.25	6.35	280.90
MW-7S	292.12	15.62	276.50
MW-7D	292.54	41.23	251.31
MW-12S	NA	8.90	NA
MW-12D	NA	13.23	NA
OW-1	307.75	45.83	261.92
OW-2	305.96	69.22	236.74
OW-6	294.81	5.05	289.76
IW-1	312.46	26.65	285.81
IW-2	304.56	36.75	267.81

Note: NA indicates data are not available.
MP denotes measuring point.

Report Date:
16-Jul-13 09:13



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

Laboratory Report

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

Work Order: M1062
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>
M1062-01	EFF-60-062613	Aqueous	26-Jun-13 11:00	27-Jun-13 08:36
M1062-02	INF-062613	Aqueous	26-Jun-13 11:15	27-Jun-13 08:36
M1062-03	TW-1-062613	Aqueous	26-Jun-13 11:20	27-Jun-13 08:36
M1062-04	TW-2A-062613	Aqueous	26-Jun-13 11:25	27-Jun-13 08:36
M1062-05	TW-3-062613	Aqueous	26-Jun-13 11:30	27-Jun-13 08:36
M1062-06	TB 062613	Aqueous	26-Jun-13 00:00	27-Jun-13 08:36

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 Spectrum Analytical.

All applicable NELAC or USEPA CLP requirements have been met.

Spectrum Analytical (Rhode Island) is accredited under the National Environmental Laboratory Approval Program (NELAP) and DoD Environmental Laboratory Accreditation Program (ELAP), holds Organic and Inorganic contracts under the USEPA CLP Program and is certified under several states. The current list of our laboratory approvals and certifications is available on the Certifications page on our web site at www.spectrum-analytical.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
Florida	E87664
Maine	2007037
Massachusetts	M-RI907
New Hampshire	2631
New Jersey	RI001
New York	11522
North Carolina	581
Rhode Island	LAI00301
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-11-033



Certificate # L2247 Testing

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 #: M1062

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: SW5030B

V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V5
Instrument Type: GCMS-VOA

Description: HP6890 / HP6890
Manufacturer: Hewlett-Packard
Model: 6890 / 6890

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 with the following exceptions. Please note that most test procedures allow for several compounds outside of the QC limits for the LCS, although this may indicate a bias for this specific compound.

LCS-72549 in batch 72549, recovery is above criteria for Tetrachloroethene at 118% with criteria of (74-115) and Trichloroethene at 127% with criteria of (74-123).

LCSD-72549 in batch 72549, recovery is above criteria for Tetrachloroethene at 115% with criteria of (74-115).

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 samples were analyzed at dilution:

INF-062613 (M1062-02A) : Dilution Factor: 10
TW-1-062613 (M1062-03A) : Dilution Factor: 4
TW-2A-062613 (M1062-04A) : Dilution Factor: 20

G. Samples:

No other unusual occurrences were noted during sample analysis.

H. Manual Integration

No manual integrations were performed on any sample or standard.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and Spectrum, 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.

A handwritten signature in black ink, appearing to be 'J. H. L.', is written over a horizontal line.

Signed:_____

Date:_____7/15/2013_____

REPORT NARRATIVE

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

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: M1062

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: SW3005A

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

V. INSTRUMENTATION

The following instrumentation was used:

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 other unusual occurrences were noted during sample analysis.

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A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke at the end.

Signed: _____

Date: 07/10/2013

REPORT NARRATIVE

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

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: M1062

SM 2540C, SM 2540D, SW846 9012B

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

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

V. INSTRUMENTATION

The following instrumentation was used:

Instrument Code: LACHAT1

Instrument Type: WC

Description: Flow Injection Analyzer
Manufacturer: Zellweger Analytics
Model: Quik-Chem 8000

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 lab control samples were within the QC limits.

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

Matrix spikes were performed on sample: INF-062613 (M1062-02EMS).

Percent recoveries were within the QC limits.

D. Duplicate sample:

Duplicate analyses were performed on sample: INF-062613 (M1062-02EDUP).

Relative percent differences were within the QC limits.

E. Dilutions:

No sample required dilution in this SDG.

F. Samples:

No other unusual occurrences were noted during sample analysis.

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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.

A handwritten signature in black ink, consisting of a series of loops and a long horizontal stroke at the end.

Signed:_____

Date:_____ 07/10/2013 _____

REPORT NARRATIVE

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

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: M1062

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: SW3510C

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 recoveries for lab control samples were within the QC limits.

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

Matrix spikes were performed on samples: INF-062613 (M1062-02BMS) and INF-062613 (M1062-02BMSD).

Percent recoveries were within the QC limits with the following exceptions:

INF-062613 (M1062-02BMS), recovery is below criteria for Oil & Grease, Total Recoverable at 76% with criteria of (78-114).

INF-062613 (M1062-02BMSD), recovery is below criteria for Oil & Grease, Total Recoverable at 74% with criteria of (78-114).

D. Duplicate sample:

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

E. 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, 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.

A handwritten signature in black ink, appearing to be 'J. H. P.' or similar, written in a cursive style.

Signed: _____

Date: _____ 7/15/2013 _____

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

07/15/2013

Client: AECOM Technical Services, Inc.

Client Sample ID: EFF-60-062613

Lab ID: M1062-01

Project: NOW Corp. Site

Collection Date: 06/26/13 11:00

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	ug/L		107/01/2013 21:43	72549
Chloroethane	ND		0.50	ug/L		107/01/2013 21:43	72549
1,1-Dichloroethene	ND		0.50	ug/L		107/01/2013 21:43	72549
trans-1,2-Dichloroethene	ND		0.50	ug/L		107/01/2013 21:43	72549
Methyl tert-butyl ether	ND		0.50	ug/L		107/01/2013 21:43	72549
1,1-Dichloroethane	ND		0.50	ug/L		107/01/2013 21:43	72549
cis-1,2-Dichloroethene	ND		0.50	ug/L		107/01/2013 21:43	72549
1,1,1-Trichloroethane	ND		0.50	ug/L		107/01/2013 21:43	72549
1,2-Dichloroethane	ND		0.50	ug/L		107/01/2013 21:43	72549
Benzene	ND		0.50	ug/L		107/01/2013 21:43	72549
Trichloroethene	0.33	J	0.50	ug/L		107/01/2013 21:43	72549
Toluene	ND		0.50	ug/L		107/01/2013 21:43	72549
1,1,2-Trichloroethane	ND		0.50	ug/L		107/01/2013 21:43	72549
Tetrachloroethene	ND		0.50	ug/L		107/01/2013 21:43	72549
Chlorobenzene	ND		0.50	ug/L		107/01/2013 21:43	72549
Ethylbenzene	ND		0.50	ug/L		107/01/2013 21:43	72549
m,p-Xylene	ND		0.50	ug/L		107/01/2013 21:43	72549
o-Xylene	ND		0.50	ug/L		107/01/2013 21:43	72549
Surrogate: Dibromofluoromethane	101		88-124	%REC		107/01/2013 21:43	72549
Surrogate: 1,2-Dichloroethane-d4	105		79-115	%REC		107/01/2013 21:43	72549
Surrogate: Toluene-d8	94.3		80-114	%REC		107/01/2013 21:43	72549
Surrogate: Bromofluorobenzene	93.6		60-123	%REC		107/01/2013 21:43	72549

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. - North Kingstown RI -- Rhode Island Division

07/15/2013

Client: AECOM Technical Services, Inc.

Client Sample ID: INF-062613

Lab ID: M1062-02

Project: NOW Corp. Site

Collection Date: 06/26/13 11:15

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		5.0	ug/L		10 07/01/2013 22:11	72549
Chloroethane	ND		5.0	ug/L		10 07/01/2013 22:11	72549
1,1-Dichloroethene	11		5.0	ug/L		10 07/01/2013 22:11	72549
trans-1,2-Dichloroethene	ND		5.0	ug/L		10 07/01/2013 22:11	72549
Methyl tert-butyl ether	ND		5.0	ug/L		10 07/01/2013 22:11	72549
1,1-Dichloroethane	96		5.0	ug/L		10 07/01/2013 22:11	72549
cis-1,2-Dichloroethene	9.2		5.0	ug/L		10 07/01/2013 22:11	72549
1,1,1-Trichloroethane	170		5.0	ug/L		10 07/01/2013 22:11	72549
1,2-Dichloroethane	ND		5.0	ug/L		10 07/01/2013 22:11	72549
Benzene	ND		5.0	ug/L		10 07/01/2013 22:11	72549
Trichloroethene	240		5.0	ug/L		10 07/01/2013 22:11	72549
Toluene	ND		5.0	ug/L		10 07/01/2013 22:11	72549
1,1,2-Trichloroethane	ND		5.0	ug/L		10 07/01/2013 22:11	72549
Tetrachloroethene	ND		5.0	ug/L		10 07/01/2013 22:11	72549
Chlorobenzene	ND		5.0	ug/L		10 07/01/2013 22:11	72549
Ethylbenzene	ND		5.0	ug/L		10 07/01/2013 22:11	72549
m,p-Xylene	ND		5.0	ug/L		10 07/01/2013 22:11	72549
o-Xylene	ND		5.0	ug/L		10 07/01/2013 22:11	72549
Surrogate: Dibromofluoromethane	103		88-124	%REC		10 07/01/2013 22:11	72549
Surrogate: 1,2-Dichloroethane-d4	108		79-115	%REC		10 07/01/2013 22:11	72549
Surrogate: Toluene-d8	96.8		80-114	%REC		10 07/01/2013 22:11	72549
Surrogate: Bromofluorobenzene	95.2		60-123	%REC		10 07/01/2013 22:11	72549

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. - North Kingstown RI -- Rhode Island Division

07/15/2013

Client: AECOM Technical Services, Inc.

Client Sample ID: TW-1-062613

Lab ID: M1062-03

Project: NOW Corp. Site

Collection Date: 06/26/13 11:20

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		2.0	ug/L		4 07/01/2013 22:38	72549
Chloroethane	ND		2.0	ug/L		4 07/01/2013 22:38	72549
1,1-Dichloroethene	8.0		2.0	ug/L		4 07/01/2013 22:38	72549
trans-1,2-Dichloroethene	ND		2.0	ug/L		4 07/01/2013 22:38	72549
Methyl tert-butyl ether	ND		2.0	ug/L		4 07/01/2013 22:38	72549
1,1-Dichloroethane	26		2.0	ug/L		4 07/01/2013 22:38	72549
cis-1,2-Dichloroethene	2.7		2.0	ug/L		4 07/01/2013 22:38	72549
1,1,1-Trichloroethane	2.5		2.0	ug/L		4 07/01/2013 22:38	72549
1,2-Dichloroethane	ND		2.0	ug/L		4 07/01/2013 22:38	72549
Benzene	ND		2.0	ug/L		4 07/01/2013 22:38	72549
Trichloroethene	44		2.0	ug/L		4 07/01/2013 22:38	72549
Toluene	ND		2.0	ug/L		4 07/01/2013 22:38	72549
1,1,2-Trichloroethane	ND		2.0	ug/L		4 07/01/2013 22:38	72549
Tetrachloroethene	ND		2.0	ug/L		4 07/01/2013 22:38	72549
Chlorobenzene	ND		2.0	ug/L		4 07/01/2013 22:38	72549
Ethylbenzene	ND		2.0	ug/L		4 07/01/2013 22:38	72549
m,p-Xylene	ND		2.0	ug/L		4 07/01/2013 22:38	72549
o-Xylene	ND		2.0	ug/L		4 07/01/2013 22:38	72549
Surrogate: Dibromofluoromethane	101		88-124	%REC		4 07/01/2013 22:38	72549
Surrogate: 1,2-Dichloroethane-d4	95.4		79-115	%REC		4 07/01/2013 22:38	72549
Surrogate: Toluene-d8	96.6		80-114	%REC		4 07/01/2013 22:38	72549
Surrogate: Bromofluorobenzene	95.2		60-123	%REC		4 07/01/2013 22:38	72549

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. - North Kingstown RI -- Rhode Island Division

07/15/2013

Client: AECOM Technical Services, Inc.**Client Sample ID:** TW-2A-062613**Lab ID:** M1062-04**Project:** NOW Corp. Site**Collection Date:** 06/26/13 11:25

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	ug/L		20 07/01/2013 23:06	72549
Chloroethane	ND		10	ug/L		20 07/01/2013 23:06	72549
1,1-Dichloroethene	17		10	ug/L		20 07/01/2013 23:06	72549
trans-1,2-Dichloroethene	ND		10	ug/L		20 07/01/2013 23:06	72549
Methyl tert-butyl ether	ND		10	ug/L		20 07/01/2013 23:06	72549
1,1-Dichloroethane	150		10	ug/L		20 07/01/2013 23:06	72549
cis-1,2-Dichloroethene	18		10	ug/L		20 07/01/2013 23:06	72549
1,1,1-Trichloroethane	310		10	ug/L		20 07/01/2013 23:06	72549
1,2-Dichloroethane	ND		10	ug/L		20 07/01/2013 23:06	72549
Benzene	ND		10	ug/L		20 07/01/2013 23:06	72549
Trichloroethene	400		10	ug/L		20 07/01/2013 23:06	72549
Toluene	ND		10	ug/L		20 07/01/2013 23:06	72549
1,1,2-Trichloroethane	ND		10	ug/L		20 07/01/2013 23:06	72549
Tetrachloroethene	ND		10	ug/L		20 07/01/2013 23:06	72549
Chlorobenzene	ND		10	ug/L		20 07/01/2013 23:06	72549
Ethylbenzene	ND		10	ug/L		20 07/01/2013 23:06	72549
m,p-Xylene	ND		10	ug/L		20 07/01/2013 23:06	72549
o-Xylene	ND		10	ug/L		20 07/01/2013 23:06	72549
Surrogate: Dibromofluoromethane	103		88-124	%REC		20 07/01/2013 23:06	72549
Surrogate: 1,2-Dichloroethane-d4	107		79-115	%REC		20 07/01/2013 23:06	72549
Surrogate: Toluene-d8	99.2		80-114	%REC		20 07/01/2013 23:06	72549
Surrogate: Bromofluorobenzene	97.1		60-123	%REC		20 07/01/2013 23:06	72549

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. - North Kingstown RI -- Rhode Island Division

07/15/2013

Client: AECOM Technical Services, Inc.

Client Sample ID: TW-3-062613

Lab ID: M1062-05

Project: NOW Corp. Site

Collection Date: 06/26/13 11:30

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	ug/L		107/01/2013 23:33	72549
Chloroethane	ND		0.50	ug/L		107/01/2013 23:33	72549
1,1-Dichloroethene	1.6		0.50	ug/L		107/01/2013 23:33	72549
trans-1,2-Dichloroethene	ND		0.50	ug/L		107/01/2013 23:33	72549
Methyl tert-butyl ether	ND		0.50	ug/L		107/01/2013 23:33	72549
1,1-Dichloroethane	12		0.50	ug/L		107/01/2013 23:33	72549
cis-1,2-Dichloroethene	0.30	J	0.50	ug/L		107/01/2013 23:33	72549
1,1,1-Trichloroethane	2.1		0.50	ug/L		107/01/2013 23:33	72549
1,2-Dichloroethane	ND		0.50	ug/L		107/01/2013 23:33	72549
Benzene	ND		0.50	ug/L		107/01/2013 23:33	72549
Trichloroethene	12		0.50	ug/L		107/01/2013 23:33	72549
Toluene	ND		0.50	ug/L		107/01/2013 23:33	72549
1,1,2-Trichloroethane	ND		0.50	ug/L		107/01/2013 23:33	72549
Tetrachloroethene	ND		0.50	ug/L		107/01/2013 23:33	72549
Chlorobenzene	ND		0.50	ug/L		107/01/2013 23:33	72549
Ethylbenzene	ND		0.50	ug/L		107/01/2013 23:33	72549
m,p-Xylene	ND		0.50	ug/L		107/01/2013 23:33	72549
o-Xylene	ND		0.50	ug/L		107/01/2013 23:33	72549
Surrogate: Dibromofluoromethane	101		88-124	%REC		107/01/2013 23:33	72549
Surrogate: 1,2-Dichloroethane-d4	103		79-115	%REC		107/01/2013 23:33	72549
Surrogate: Toluene-d8	95.2		80-114	%REC		107/01/2013 23:33	72549
Surrogate: Bromofluorobenzene	92.7		60-123	%REC		107/01/2013 23:33	72549

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. - North Kingstown RI -- Rhode Island Division

07/15/2013

Client: AECOM Technical Services, Inc.

Client Sample ID: TB 062613

Lab ID: M1062-06

Project: NOW Corp. Site

Collection Date: 06/26/13 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	ug/L		107/02/2013 0:01	72549
Chloroethane	ND		0.50	ug/L		107/02/2013 0:01	72549
1,1-Dichloroethene	ND		0.50	ug/L		107/02/2013 0:01	72549
trans-1,2-Dichloroethene	ND		0.50	ug/L		107/02/2013 0:01	72549
Methyl tert-butyl ether	ND		0.50	ug/L		107/02/2013 0:01	72549
1,1-Dichloroethane	ND		0.50	ug/L		107/02/2013 0:01	72549
cis-1,2-Dichloroethene	ND		0.50	ug/L		107/02/2013 0:01	72549
1,1,1-Trichloroethane	ND		0.50	ug/L		107/02/2013 0:01	72549
1,2-Dichloroethane	ND		0.50	ug/L		107/02/2013 0:01	72549
Benzene	ND		0.50	ug/L		107/02/2013 0:01	72549
Trichloroethene	ND		0.50	ug/L		107/02/2013 0:01	72549
Toluene	ND		0.50	ug/L		107/02/2013 0:01	72549
1,1,2-Trichloroethane	ND		0.50	ug/L		107/02/2013 0:01	72549
Tetrachloroethene	ND		0.50	ug/L		107/02/2013 0:01	72549
Chlorobenzene	ND		0.50	ug/L		107/02/2013 0:01	72549
Ethylbenzene	ND		0.50	ug/L		107/02/2013 0:01	72549
m,p-Xylene	ND		0.50	ug/L		107/02/2013 0:01	72549
o-Xylene	ND		0.50	ug/L		107/02/2013 0:01	72549
Surrogate: Dibromofluoromethane	116		88-124	%REC		107/02/2013 0:01	72549
Surrogate: 1,2-Dichloroethane-d4	103		79-115	%REC		107/02/2013 0:01	72549
Surrogate: Toluene-d8	95.3		80-114	%REC		107/02/2013 0:01	72549
Surrogate: Bromofluorobenzene	94.6		60-123	%REC		107/02/2013 0:01	72549

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

ANALYTICAL QC SUMMARY REPORT

CLIENT: AECOM Technical Services, Inc.

Work Order: M1062

SW8260_25_W

Project: NOW Corp. Site

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

Sample ID: MB-72549	SampType: MBLK	TestCode: SW8260_25_W	Prep Date: 07/01/13 15:40	Run ID: V5_130701B							
Client ID: MB-72549	Batch ID: 72549	Units: ug/L	Analysis Date 07/01/13 21:16	SeqNo: 1933534							
Analyte	Result	MDL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Vinyl chloride	ND	0.15	0.50							
Chloroethane	ND	0.24	0.50							
1,1-Dichloroethene	ND	0.19	0.50							
trans-1,2-Dichloroethene	ND	0.14	0.50							
Methyl tert-butyl ether	ND	0.13	0.50							
1,1-Dichloroethane	ND	0.18	0.50							
cis-1,2-Dichloroethene	ND	0.19	0.50							
1,1,1-Trichloroethane	ND	0.11	0.50							
1,2-Dichloroethane	ND	0.16	0.50							
Benzene	ND	0.12	0.50							
Trichloroethene	ND	0.13	0.50							
Toluene	ND	0.14	0.50							
1,1,2-Trichloroethane	ND	0.20	0.50							
Tetrachloroethene	ND	0.17	0.50							
Chlorobenzene	ND	0.13	0.50							
Ethylbenzene	ND	0.13	0.50							
m,p-Xylene	ND	0.22	0.50							
o-Xylene	ND	0.17	0.50							
Surrogate:	10.29		0.50	10.00	0	103	88	124	0	
Dibromofluoromethane										
Surrogate: 1,2-Dichloroethane-d4	9.860		0.50	10.00	0	98.6	79	115	0	
Surrogate: Toluene-d8	9.786		0.50	10.00	0	97.9	80	114	0	
Surrogate: Bromofluorobenzene	9.639		0.50	10.00	0	96.4	60	123	0	

Work Order: M1062

SW8260_25_W

Project: NOW Corp. Site

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

Sample ID: LCS-72549	SampType: LCS	TestCode: SW8260_25_W	Prep Date: 07/01/13 15:40	Run ID: V5_130701B								
Client ID: LCS-72549	Batch ID: 72549	Units: ug/L	Analysis Date 07/01/13 19:54	SeqNo: 1933528								
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	10.20	0.15	0.50	10.00	0	102	77	120	0			
Chloroethane	11.32	0.24	0.50	10.00	0	113	75	135	0			
1,1,1-Dichloroethene	9.660	0.19	0.50	10.00	0	96.6	81	125	0			
trans-1,2-Dichloroethene	9.973	0.14	0.50	10.00	0	99.7	60	137	0			
Methyl tert-butyl ether	10.20	0.13	0.50	10.00	0	102	61	134	0			
1,1,1,1-Dichloroethane	10.20	0.18	0.50	10.00	0	102	82	120	0			
cis-1,2-Dichloroethene	9.439	0.19	0.50	10.00	0	94.4	84	116	0			
1,1,1,1-Trichloroethane	10.30	0.11	0.50	10.00	0	103	80	124	0			
1,1,2-Dichloroethane	10.24	0.16	0.50	10.00	0	102	86	117	0			
Benzene	10.09	0.12	0.50	10.00	0	101	81	121	0			S
Trichloroethene	12.67	0.13	0.50	10.00	0	127	74	123	0			
Toluene	10.18	0.14	0.50	10.00	0	102	88	117	0			
1,1,1,2-Trichloroethane	9.739	0.20	0.50	10.00	0	97.4	83	121	0			S
Tetrachloroethene	11.77	0.17	0.50	10.00	0	118	74	115	0			
Chlorobenzene	9.107	0.13	0.50	10.00	0	91.1	83	112	0			
Ethylbenzene	9.473	0.13	0.50	10.00	0	94.7	87	110	0			
m,p-Xylene	19.37	0.22	0.50	20.00	0	96.8	87	114	0			
o-Xylene	9.934	0.17	0.50	10.00	0	99.3	84	114	0			
Surrogate:	10.41		0.50	10.00	0	104	88	124	0			
Dibromofluoromethane												
Surrogate: 1,2-Dichloroethane-d4	11.24		0.50	10.00	0	112	79	115	0			
Surrogate: Toluene-d8	9.754		0.50	10.00	0	97.5	80	114	0			
Surrogate:	10.42		0.50	10.00	0	104	60	123	0			
Bromofluorobenzene												

ND - Not Detected at the MDL

J - Analyte detected below quantitation limits

S - Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

MDL - Method Detection Limit

RL - Reporting Limit

B - Analyte detected in the associated Method Blank

Work Order: M1062

Project: NOW Corp. Site

SW8260_25_W

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

Sample ID: LCSD-72549		SampType: LCSD	TestCode: SW8260_25_W		Prep Date: 07/01/13 15:40		Run ID: V5_130701B					
Client ID: LCSD-72549		Batch ID: 72549	Units: ug/L		Analysis Date 07/01/13 20:21		SeqNo: 1933531					
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	10.36	0.15	0.50	10.00	0	104	77	120	10.20	1.54	40	
Chloroethane	8.836	0.24	0.50	10.00	0	88.4	75	135	11.32	24.7	40	
1,1,1,1-Dichloroethene	9.869	0.19	0.50	10.00	0	98.7	81	125	9.660	2.14	40	
trans-1,2-Dichloroethene	9.899	0.14	0.50	10.00	0	99.0	60	137	9.973	0.752	40	
Methyl tert-butyl ether	9.928	0.13	0.50	10.00	0	99.3	61	134	10.20	2.71	40	
1,1,1,1-Dichloroethane	10.02	0.18	0.50	10.00	0	100	82	120	10.20	1.81	40	
cis-1,2-Dichloroethene	9.570	0.19	0.50	10.00	0	95.7	84	116	9.439	1.38	40	
1,1,1,1-Trichloroethane	10.23	0.11	0.50	10.00	0	102	80	124	10.30	0.682	40	
1,1,2-Dichloroethane	9.795	0.16	0.50	10.00	0	97.9	86	117	10.24	4.48	40	
Benzene	10.11	0.12	0.50	10.00	0	101	81	121	10.09	0.228	40	
Trichloroethene	12.11	0.13	0.50	10.00	0	121	74	123	12.67	4.6	40	
Toluene	10.09	0.14	0.50	10.00	0	101	88	117	10.18	0.855	40	
1,1,1,2-Trichloroethane	9.395	0.20	0.50	10.00	0	93.9	83	121	9.739	3.6	40	
Tetrachloroethene	11.54	0.17	0.50	10.00	0	115	74	115	11.77	1.98	40	S
Chlorobenzene	8.866	0.13	0.50	10.00	0	88.7	83	112	9.107	2.68	40	
Ethylbenzene	9.911	0.13	0.50	10.00	0	99.1	87	110	9.473	4.53	40	
m,p-Xylene	19.72	0.22	0.50	20.00	0	98.6	87	114	19.37	1.78	40	
o-Xylene	9.803	0.17	0.50	10.00	0	98.0	84	114	9.934	1.32	40	
Surrogate:	10.26		0.50	10.00	0	103	88	124	0			
Dibromofluoromethane												
Surrogate: 1,2-Dichloroethane-d4	9.753		0.50	10.00	0	97.5	79	115	0			
Surrogate: Toluene-d8	9.624		0.50	10.00	0	96.2	80	114	0			
Surrogate: Bromofluorobenzene	10.65		0.50	10.00	0	106	60	123	0			

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

07/10/2013

Client: AECOM Technical Services, Inc.

Client Sample ID: EFF-60-062613

Lab ID: M1062-01

Project: NOW Corp. Site

Collection Date: 06/26/13 11:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							SW6010_W
Aluminum	ND		200	ug/L		1 07/09/2013 11:12	72616
Arsenic	ND		20	ug/L		1 07/09/2013 11:12	72616
Barium	70	J	200	ug/L		1 07/09/2013 11:12	72616
Chromium	ND		20	ug/L		1 07/09/2013 11:12	72616
Copper	ND		25	ug/L		1 07/09/2013 11:12	72616
Iron	ND		200	ug/L		1 07/09/2013 11:12	72616
Manganese	40	J	50	ug/L		1 07/09/2013 11:12	72616
Nickel	1.7	BJ	50	ug/L		1 07/09/2013 11:12	72616
Zinc	7.5	BJ	50	ug/L		1 07/09/2013 11:12	72616
SW846 7470A -- Mercury by FIA							SW7470
Mercury	ND		0.20	µg/L		1 07/09/2013 10:16	72622

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. - North Kingstown RI -- Rhode Island Division

07/10/2013

Client: AECOM Technical Services, Inc.

Client Sample ID: INF-062613

Lab ID: M1062-02

Project: NOW Corp. Site

Collection Date: 06/26/13 11:15

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							SW6010_W
Aluminum	ND		200	ug/L		1 07/09/2013 11:16	72616
Arsenic	ND		20	ug/L		1 07/09/2013 11:16	72616
Barium	67	J	200	ug/L		1 07/09/2013 11:16	72616
Chromium	ND		20	ug/L		1 07/09/2013 11:16	72616
Copper	ND		25	ug/L		1 07/09/2013 11:16	72616
Iron	ND		200	ug/L		1 07/09/2013 11:16	72616
Manganese	78		50	ug/L		1 07/09/2013 11:16	72616
Nickel	2.1	BJ	50	ug/L		1 07/09/2013 11:16	72616
Zinc	8.3	BJ	50	ug/L		1 07/09/2013 11:16	72616
SW846 7470A -- Mercury by FIA							SW7470
Mercury	ND		0.20	µg/L		1 07/09/2013 10:17	72622

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

ANALYTICAL QC SUMMARY REPORT

Client: AECOM Technical Services, Inc.
Work Order: M1062
Project: NOW Corp. Site

SW6010_W
SW846 6010C -- Metals by ICP

Sample ID: MB-72616	SampType: MBLK	TestCode: SW6010_W	Prep Date: 07/08/13 13:00	Run ID: OPTIMA3_130709A								
Client ID: MB-72616	Batch ID: 72616	Units: ug/L	Analysis Date: 07/09/13 11:05	SeqNo: 1932279								
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	1.320	0.85	50									J
Zinc	4.925	4.9	50									J

Sample ID: LCS-72616		SampType: LCS		TestCode: SW6010_W		Prep Date: 07/08/13 13:00		Run ID: OPTIMA3_130709A				
Client ID: LCS-72616		Batch ID: 72616		Units: ug/L		Analysis Date: 07/09/13 11:09		SeqNo: 1932280				
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	8448	66	200	9100	0	92.8	80	120	0			
Arsenic	448.5	4.3	20	455.0	0	98.6	80	120	0			
Barium	8882	1.1	200	9100	0	97.6	80	120	0			
Chromium	873.8	0.64	20	910.0	0	96.0	80	120	0			
Copper	1061	3.6	30	1130	0	93.9	80	120	0			
Iron	4507	31	200	4550	0	99.0	80	120	0			
Manganese	2166	10	50	2270	0	95.4	80	120	0			
Nickel	2210	0.85	50	2270	0	97.4	80	120	0			B
Zinc	2213	4.9	50	2270	0	97.5	80	120	0			B

CLIENT: AECOM Technical Services, Inc.

ANALYTICAL QC SUMMARY REPORT

Work Order: M1062

Project: NOW Corp. Site

SW7470

SW846 7470A -- Mercury by FIA

Sample ID: MB-72622	SampType: MBLK	TestCode: SW7470	Prep Date: 07/08/13 16:00	Run ID: FIMS2_130709A							
Client ID: MB-72622	Batch ID: 72622	Units: µg/L	Analysis Date: 07/09/13 9:36	SeqNo: 1932032							
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-72622	SampType: LCS	TestCode: SW7470	Prep Date: 07/08/13 16:00	Run ID: FIMS2_130709A							
Client ID: LCS-72622	Batch ID: 72622	Units: µg/L	Analysis Date: 07/09/13 9:37	SeqNo: 1932033							
Analyte	Result	MDL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	3.982	0.028	0.20	4.550	0	87.5	80	120	0		

Qualifiers:	ND - Not Detected at the MDL	S - Recovery outside accepted recovery limits	MDL - Method Detection Limit	B - Analyte detected in the associated Method Blank
m13.07.10.A	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	RL - Reporting Limit	

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

07/10/2013

Client: AECOM Technical Services, Inc.

Client Sample ID: EFF-60-062613

Lab ID: M1062-01

Project: NOW Corp. Site

Collection Date: 06/26/13 11:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SM 2540C -- TOTAL DISSOLVED SOLIDS							SM2540_TDS
Total Dissolved Solids	290		10	mg/L	1	07/02/2013 17:48	72577
SM 2540D -- TOTAL SUSPENDED SOLIDS							SM2540_TSS
Total Suspended Solids	ND		10	mg/L	1	07/02/2013 17:49	72578
SW846 9012B -- Total Cyanide							SW9012_W
Cyanide	ND		10	ug/L	1	07/01/2013 13:17	72528

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. - North Kingstown RI -- Rhode Island Division

07/10/2013

Client: AECOM Technical Services, Inc.

Client Sample ID: INF-062613

Lab ID: M1062-02

Project: NOW Corp. Site

Collection Date: 06/26/13 11:15

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	07/02/2013 17:50	72577
SM 2540D -- TOTAL SUSPENDED SOLIDS							SM2540_TSS
Total Suspended Solids	ND		10	mg/L	1	07/02/2013 17:51	72578
SW846 9012B -- Total Cyanide							SW9012_W
Cyanide	ND		10	ug/L	1	07/01/2013 13:20	72528

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

ANALYTICAL QC SUMMARY REPORT

CLIENT: AECOM Technical Services, Inc.
Work Order: M1062
Project: NOW Corp. Site

SM2540_TDS
SM 2540C -- TOTAL DISSOLVED SOLIDS

Sample ID: MB-72577	SampType: MBLK	TestCode: SM2540_TDS	Prep Date: 07/02/13 17:45	Run ID: MANUAL_130702B
Client ID: MB-72577	Batch ID: 72577	Units: mg/L	Analysis Date: 07/02/13 17:45	SeqNo: 1932889
Analyte	Result	MDL	SPK Ref Val	SPK value
Total Dissolved Solids		ND	%REC	LowLimit HighLimit
		10	RPD Ref Val	%RPD RPDLimit
		10		Qual
Sample ID: LCS-72577	SampType: LCS	TestCode: SM2540_TDS	Prep Date: 07/02/13 17:45	Run ID: MANUAL_130702B
Client ID: LCS-72577	Batch ID: 72577	Units: mg/L	Analysis Date: 07/02/13 17:46	SeqNo: 1932890
Analyte	Result	MDL	SPK Ref Val	SPK value
Total Dissolved Solids		282.0	%REC	LowLimit HighLimit
		10	RPD Ref Val	%RPD RPDLimit
		10		Qual
		10	0	0
		10	118	120
		10	0	0

CLIENT: AECOM Technical Services, Inc.

ANALYTICAL QC SUMMARY REPORT

Work Order: M1062

SM2540_TSS

Project: NOW Corp. Site

SM 2540D -- TOTAL SUSPENDED SOLIDS

Sample ID: MB-72578	SampType: MBLK	TestCode: SM2540_TSS	Prep Date: 07/02/13 17:45	Run ID: MANUAL_130702A							
Client ID: MB-72578	Batch ID: 72578	Units: mg/L	Analysis Date: 07/02/13 17:45	SeqNo: 1930404							
Analyte	Result	MDL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids		ND	10	10							

Sample ID: LCS-72578	SampType: LCS	TestCode: SM2540_TSS	Prep Date: 07/02/13 17:45	Run ID: MANUAL_130702A							
Client ID: LCS-72578	Batch ID: 72578	Units: mg/L	Analysis Date: 07/02/13 17:47	SeqNo: 1930405							
Analyte	Result	MDL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids		45.00	10	10	46.95	0	95.8	80	120	0	

CLIENT: AECOM Technical Services, Inc.
Work Order: M1062
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT
SW9012_W
SW846 9012B -- Total Cyanide

Sample ID: MB-72528	SampType: MBLK	TestCode: SW9012_W	Prep Date: 06/28/13 10:00	Run ID: LACHAT1_130701A
Client ID: MB-72528	Batch ID: 72528	Units: ug/L	Analysis Date: 07/01/13 13:12	SeqNo: 1928555
Analyte	Result	MDL	SPK value	SPK Ref Val
Cyanide	ND	7.5	RL	RPD Ref Val
			20	%RPD RPDLimit
				Qual

Sample ID: LCS-72528	SampType: LCS	TestCode: SW9012_W	Prep Date: 06/28/13 10:00	Run ID: LACHAT1_130701A
Client ID: LCS-72528	Batch ID: 72528	Units: ug/L	Analysis Date: 07/01/13 13:15	SeqNo: 1928556
Analyte	Result	MDL	SPK value	SPK Ref Val
Cyanide	95.97	7.5	RL	RPD Ref Val
			20	%RPD RPDLimit
				Qual

Sample ID: M1062-02EDUP	SampType: DUP	TestCode: SW9012_W	Prep Date: 06/28/13 10:00	Run ID: LACHAT1_130701A
Client ID: INF-062613	Batch ID: 72528	Units: ug/L	Analysis Date: 07/01/13 13:22	SeqNo: 1928559
Analyte	Result	MDL	SPK value	SPK Ref Val
Cyanide	ND	2.5	RL	RPD Ref Val
			10	%RPD RPDLimit
				Qual

Sample ID: M1062-02EMS	SampType: MS	TestCode: SW9012_W	Prep Date: 06/28/13 10:00	Run ID: LACHAT1_130701A
Client ID: INF-062613	Batch ID: 72528	Units: ug/L	Analysis Date: 07/01/13 13:25	SeqNo: 1928560
Analyte	Result	MDL	SPK value	SPK Ref Val
Cyanide	98.05	2.5	RL	RPD Ref Val
			10	%RPD RPDLimit
				Qual

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

07/15/2013

Client: AECOM Technical Services, Inc.

Client Sample ID: EFF-60-062613

Lab ID: M1062-01

Project: NOW Corp. Site

Collection Date: 06/26/13 11:00

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		1 07/09/2013 11:06	72625

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. - North Kingstown RI -- Rhode Island Division

07/15/2013

Client: AECOM Technical Services, Inc.

Client Sample ID: INF-062613

Lab ID: M1062-02

Project: NOW Corp. Site

Collection Date: 06/26/13 11:15

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		1 07/09/2013 11:06	72625

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

M

Client: AECOM Technical Services, Inc.
Work Order: M1062
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

E1664
EPA 1664A -- Oil & Grease, HEM

Sample ID: MB-72625	SampType: MBLK	TestCode: E1664	Prep Date: 07/08/13 16:04	Run ID: MANUAL_130709A
Client ID: MB-72625	Batch ID: 72625	Units: mg/L	Analysis Date 07/09/13 11:06	SeqNo: 1932195
Analyte	Result	MDL	SPK Ref Val	SPK value
Oil & Grease, Total Recoverable	ND	1.2	0	40.00
			92.3	78
			114	0

Sample ID: LCS-72625	SampType: LCS	TestCode: E1664	Prep Date: 07/08/13 16:04	Run ID: MANUAL_130709A
Client ID: LCS-72625	Batch ID: 72625	Units: mg/L	Analysis Date 07/09/13 11:06	SeqNo: 1932186
Analyte	Result	MDL	SPK Ref Val	SPK value
Oil & Grease, Total Recoverable	36.90	1.2	0	40.00
			92.3	78
			114	0

Sample ID: M1062-02BMS	SampType: MS	TestCode: E1664	Prep Date: 07/08/13 16:04	Run ID: MANUAL_130709A
Client ID: INF-062613	Batch ID: 72625	Units: mg/L	Analysis Date 07/09/13 11:06	SeqNo: 1932191
Analyte	Result	MDL	SPK Ref Val	SPK value
Oil & Grease, Total Recoverable	30.50	1.2	0	40.00
			76.3	78
			114	0

Sample ID: M1062-02BMSD	SampType: MSD	TestCode: E1664	Prep Date: 07/08/13 16:04	Run ID: MANUAL_130709A
Client ID: INF-062613	Batch ID: 72625	Units: mg/L	Analysis Date 07/09/13 11:06	SeqNo: 1932192
Analyte	Result	MDL	SPK Ref Val	SPK value
Oil & Grease, Total Recoverable	29.80	1.2	0	40.00
			74.5	78
			114	30.50

Spectrum Analytical Inc. - North Kingstown RI -- Rhode Island Division

WorkOrder: M1062

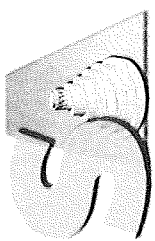
Client ID: EARTH_NY
 Project: NOW Corp. Site
 WO Name: NOW Corp. Site
 Location: NOW_CORP,
 Comments: N/A

Case: HC Due: 07/16/13
 SDG: Fax Due: Special Program:
 PO: 6027 6639 1
 EDD: Fax Report: ☐

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
M1062-01A	EFF-60-062613	06/26/2013 11:00	06/27/2013	Aqueous	SW8260_25_W	/				Y	VOA
M1062-01B	EFF-60-062613	06/26/2013 11:00	06/27/2013	Aqueous	E1664	/					I1
M1062-01C	EFF-60-062613	06/26/2013 11:00	06/27/2013	Aqueous	SM2540_TDS	/					I1
M1062-01C	EFF-60-062613	06/26/2013 11:00	06/27/2013	Aqueous	SM2540_TSS	/					I1
M1062-01D	EFF-60-062613	06/26/2013 11:00	06/27/2013	Aqueous	SW6010_W	/ See SEL list				Y	M1
M1062-01D	EFF-60-062613	06/26/2013 11:00	06/27/2013	Aqueous	SW7470	/ See SEL list					M1
M1062-01E	EFF-60-062613	06/26/2013 11:00	06/27/2013	Aqueous	SW9012_W	/				Y	I1
M1062-02A	INF-062613	06/26/2013 11:15	06/27/2013	Aqueous	SW8260_25_W	/				Y	VOA
M1062-02B	INF-062613	06/26/2013 11:15	06/27/2013	Aqueous	E1664	/					I1
M1062-02C	INF-062613	06/26/2013 11:15	06/27/2013	Aqueous	SM2540_TDS	/					I1
M1062-02C	INF-062613	06/26/2013 11:15	06/27/2013	Aqueous	SM2540_TSS	/					I1
M1062-02D	INF-062613	06/26/2013 11:15	06/27/2013	Aqueous	SW6010_W	/ See SEL list				Y	M1
M1062-02D	INF-062613	06/26/2013 11:15	06/27/2013	Aqueous	SW7470	/ See SEL list					M1
M1062-02E	INF-062613	06/26/2013 11:15	06/27/2013	Aqueous	SW9012_W	/				Y	I1
M1062-03A	TW-1-062613	06/26/2013 11:20	06/27/2013	Aqueous	SW8260_25_W	/				Y	VOA
M1062-04A	TW-2A-062613	06/26/2013 11:25	06/27/2013	Aqueous	SW8260_25_W	/				Y	VOA
M1062-05A	TW-3-062613	06/26/2013 11:30	06/27/2013	Aqueous	SW8260_25_W	/				Y	VOA
M1062-06A	TB 062613	06/26/2013 00:00	06/27/2013	Aqueous	SW8260_25_W	/				Y	VOA

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

HT = Test logged in but has been placed on hold



SPECTRUM ANALYTICAL, INC.
Featuring
HANTHAL TECHNOLOGY

Page 1 of 1

CHAIN OF CUSTODY RECORD

☐ 11 Almgren Drive ☐ 8405 Benjamin Road, Ste A
Agawam, MA 01001 Tampa, FL 33634
(413) 789-9018 (813) 888-9507

Special Handling:

TAT- Indicate Date Needed: _____
· All TATs subject to laboratory approval.
· Min. 24-hour notification needed for rushes.
· Samples disposed of after 60 days unless otherwise instructed.

Report To: Stephen Choiniere
40 Britten American Boulevard
Latham NY 12110

Telephone #: 518-951-2260
Project Mgr. Stephen Choiniere

Invoice To: SAME
P.O. No.: _____ RQN: _____

Project No.: Now Corp 60276639.1
Site Name: Now Corp
Location: Staatsburg State: NY
Sampler(s): TLK + SRG

1=Na₂S₂O₃ 2=HCl 3=H₂SO₄ 4=HNO₃ 5=NaOH 6=Ascorbic Acid 7=CH₃OH
8=NaHSO₄ 9=Deionized Water 10=H₃PO₄ 11= None 12= _____

DW=Drinking Water GW=Groundwater WW=Wastewater
O=Oil SW=Surface Water SO=Soil SL=Sludge A=Air
X1= Trip Blank X2= _____ X3= _____

List preservative code below:

2 4 11 2 5

QA/QC Reporting Notes:

QA/QC Reporting Level

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

State-specific reporting standards:

*Al, As, Ba, Cr, Cu,
Fe, Mn, Hg, Zn, Ni

G=Grab C=Composite

Matrix

Type

Lab Id: Sample Id: Date: Time:

M1062-01 EFF-60-062613 6/26/13 1100 G

M1062-02 INF-062613 1115

M1062-03 TW-1-062613 1120

M1062-04 TW-2A-062613 1125

M1062-05 TW-3-062613 1130

M1062-06 TB-062613 X1

Containers:

of VOA Vials

of Amber Glass

of Clear Glass

of Plastic

Analyses:

Metals *

Cyanide

O + G

TS/STOS

8260

Relinquished by:

Received by:

Date: Time:

Temp °C

EDD Format

E-mail to

Condition upon receipt: ☐ Ambient ☒ Iced ☐ Refrigerated ☐ DI/VOA Frozen ☒ Present ☒ Intact ☐ Broken ☐ Soil Jar Frozen

Received By: <u>MEJ</u>		Page 01 of 00	
Reviewed By: <u>[Signature]</u>		Log-in Date 06/27/2013	
Work Order: M1062		Client Name: AECOM Technical Services, Inc.	
Project Name/Event: NOW Corp. Site			
Remarks: (1/2) Please see associated sample/extract transfer logbook pages submitted with this data package.			

Lab Sample ID	Preservation (pH)					VOA Matrix	Soil HeadSpace or Air Bubble > or equal to 1/4"
	HNO3	H2SO4	HCl	NaOH	H3PO4		
M1062-01	<2		<2	>12		H	
M1062-02	<2		<2	>12		H	
M1062-03						H	
M1062-04						H	
M1062-05						H	
M1062-06						H	

1. Custody Seal(s)	Present / Absent
	Intact / Broken
2. Custody Seal Nos.	N/A
3. Traffic Reports/ Chain of Custody Records (TR/COCs) or Packing Lists	Present / Absent
4. Airbill	AirBill / Sticker
	Present / Absent
5. Airbill No.	FedEx 8027 0341 8760
6. Sample Tags	Present / Absent
Sample Tag Numbers	Listed /
	Not Listed on Chain-of-Custody
7. Sample Condition	Intact / Broken / Leaking
8. Cooler Temperature Indicator Bottle	Present / Absent
9. Cooler Temperature	4.1 °C
10. Does information on TR/COCs and sample tags agree?	Yes / No
11. Date Received at Laboratory	06/27/2013
12. Time Received	08:36
Sample Transfer	
Fraction (1) TVOA/VOA	Fraction (2) SVOA/PEST/ARO
Area #	Area #
By	By
On	On
IR Temp Gun ID: MT-74	
Coolant Condition: ICE	
Preservative Name/Lot No:	

VOA Matrix Key:

US = Unpreserved Soil A = Air

UA = Unpreserved Aqueous H = HCl

M = MeOH E = Encore

N = NaHSO4 F = Freeze

See Sample Condition Notification/Corrective Action Form Yes / No

Rad OK Yes / No

Last Page of Data Report