AECOM

Operation, Maintenance and Monitoring Report
May 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

June 2011

June 30, 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: "May" 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 37-day period **(April 20 – May 27, 2011)**.

With the exceptions noted below, if any, the P&T system was online and operational throughout the reporting period. Approximately 570,300 gallons of water were treated during the period. Discharge from the treatment system averaged approximately 15,400 gallons per day (gpd), compared to 17,000 gpd in the prior reporting period.

As of the last day of the reporting period, a total of 84,258,700 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 May 27, 2011. Although three VOCs were detected in system effluent this month, **effluent limitations were not exceeded for any analyte.** Table 2 presents selected operational data recorded on the sampling date. A copy of the analytical laboratory report is attached.

AECOM made three site visits during the period to conduct the required system inspection, perform scheduled and unscheduled maintenance, and to collect water samples. The April 20 service visit was described in the previous report. Details for the current period follow:

May 3 – Replaced failed effluent pump with clean spare pump; restarted system. [We had received a high-level alarm for the third (final) settling tank at 10 PM on April 28.] System was down for 4.5+ days. Recovery well TW-3 is still down. Brought effluent pump to Pump Service in Troy for evaluation.

May 18 – Attached new motor to TW-3 pump end; installed in well and restarted pump after 36 days downtime (since April 12). Disassembled and cleaned air stripper. Restarted air stripper and all well pumps.

May 27 – Collected monthly water samples. Adjusted discharge rates on two well pumps.

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.

Stephen R. Choiniere
Project Manager

Table 1
Summary of Influent and Effluent Data
Sampling Date: May 27, 2011
NOW Corporation Site
Town of Clinton, New York

Analytes/ Parameters	Total Influent	Effluent	Recovery Wells			Effluent Limitations	(units)
			TW-1	TW-2A	TW-3		
Quantity treated, per day		15,414				Monitor	gallons
pH	6.8	7.0				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	**230**	**230**	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	**66 J**	**64 J**	NA	NA	NA	2000	ug/L
Chromium	**0.65 J**	<20	NA	NA	NA	100	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	**77**	**41 J**	NA	NA	NA	600	ug/L
Nickel	<50	<50	NA	NA	NA	200	ug/L
Zinc	**10 J**	**10 J**	NA	NA	NA	150	ug/L
1,1,1-Trichloroethane	**190**	**1.9**	<2.0	**260**	**2.0**	5	ug/L
1,1,2-Trichloroethane	<5	<0.50	<2.0	<10	<0.50	1.2	ug/L
1,1-Dichloroethane	**81**	**2.1**	**31**	**110**	**8.9**	5	ug/L
1,1-Dichloroethene	**11**	<0.50	**8.8**	**16**	**1.0**	0.5	ug/L
1,2-Dichloroethane	<5	<0.50	<2.0	<10	<0.50	1.6	ug/L
Benzene	<5	<0.50	<2.0	<10	<0.50	0.8	ug/L
Chlorobenzene	<5	<0.50	<2.0	<10	<0.50	5	ug/L
Chloroethane	<5	<0.50	<2.0	<10	<0.50	5	ug/L
cis -1,2-Dichloroethene	**8.0**	<0.50	**2.4**	**12**	<0.50	5	ug/L
Ethylbenzene	<5	<0.50	<2.0	<10	<0.50	5	ug/L
Methyl tert-butyl ether	<5	<0.50	<2.0	<10	<0.50	5	ug/L
o-Xylene	<5	<0.50	<2.0	<10	<0.50	5	ug/L
m,p-Xylene	<5	<0.50	<2.0	<10	<0.50	10	ug/L
Tetrachloroethene	<5	<0.50	<2.0	<10	<0.50	1.4	ug/L
Toluene	<5	<0.50	<2.0	<10	<0.50	5	ug/L
trans -1,2-Dichloroethene	<5	<0.50	<2.0	<10	<0.50	5	ug/L
Trichloroethene	**200**	**3.7**	**38**	**280**	**7.2**	5	ug/L
Vinyl Chloride	<5	<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 May 2011 O&M Data

NOW Corporation Site
Town of Clinton, New York

Instrumentation/Readings:		5/27/11	Units
TW-1			
	Pumping Rate	4	GPM
	Water Level Above Transducer	21.21	feet
	Flow Meter Reading	6,122,200	gallons
	Pump Pressure	80	psi
TW-2A			
	Pumping Rate	~14	GPM
	Water Level Above Transducer	23.95	feet
	Flow Meter Reading	21,282,600	gallons
	Pump Pressure	25	psi
TW-3			
	Pumping Rate	5	GPM
	Water Level Above Transducer	36.21	feet
	Flow Meter Reading	8,892,700	gallons
	Pump Pressure	72	psi
Air Stripper			
	Stripper Blower Pressure	22	inches H_2O
	Air Temperature in Stripper	54	°F
	Pressure Gauge - Left Leg	2.5	inches H_2O
	Pressure Gauge - Right Leg	0.5	inches H_2O
Effluent Flow			
	Effluent Flow this period (calculated)	570,300	gallons
	Total Effluent Flow (calculated)	84,258,700	gallons

Report Date:
13-Jun-11 13:03

☑ Final Report
☐ Re-Issued Report
☐ Revised Report

MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

Laboratory Report

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

Work Order: K0937
Project : NOW Corp. Site
Project #:

Attn: Stephen Choiniere

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
K0937-01	EFF-052711	Aqueous	27-May-11 11:25	28-May-11 08:40
K0937-02	INF-052711	Aqueous	27-May-11 11:35	28-May-11 08:40
K0937-03	TW-1-052711	Aqueous	27-May-11 11:45	28-May-11 08:40
K0937-04	TW2A 052711	Aqueous	27-May-11 11:50	28-May-11 08:40
K0937-05	TW-3 052711	Aqueous	27-May-11 11:55	28-May-11 08:40
K0937-06	TRIP BLANK	Aqueous	27-May-11 00:00	28-May-11 08:40

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 samples(s) as received. This report may not be reproduced, except in full, without written approval from Mitkem Laboratories.

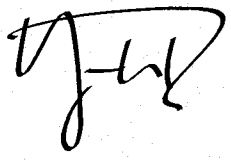
All applicable NELAC or USEPA CLP requirments have been meet.

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
Texas	T104704422-08-TX
USDA	P330-08-00023
USEPA - ISM	EP-W-09-039
USEPA - SOM	EP-W-05-030

Authorized by:



Yihai Ding
Laboratory Director

REPORT NARRATIVE

Mitkem Laboratories, a Division of Spectrum Analytical, Inc.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: K0937

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

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. Laboratory Control Spikes (LCS):

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

E. Internal Standards:

Internal standard peak areas were within the QC limits.

F. Dilutions:

The following samples were analyzed at dilution:

INF-052711 (K0937-02A) : Dilution Factor: 10
TW-1-052711 (K0937-03A) : Dilution Factor: 4
TW2A 052711 (K0937-04A) : Dilution Factor: 20

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 Mitkem, 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: Edward McFarland

Date: 06/13/14

REPORT NARRATIVE

Mitkem Laboratories, a Division of Spectrum Analytical, Inc.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: K0937

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 to perform

Instrument Code: FIMS1
Instrument Type: CVAA
Description: FIMS
Manufacturer: Perkin-Elmer
Model: FIMS

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. Laboratory Control Spikes (LCS):

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

D. 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 Mitkem, 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: Edward A Jang

Date: 6/13/4

REPORT NARRATIVE

Mitkem Laboratories, a Division of Spectrum Analytical, Inc.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: K0937

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. Laboratory Control Spikes (LCS):

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

D. 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 Mitkem, 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: Edward A. King

Date: 6/13/11

REPORT NARRATIVE

Mitkem Laboratories, a Division of Spectrum Analytical, Inc.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: K0937

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

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

VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

All method blanks were within the acceptance criteria.

C. Laboratory Control Spikes (LCS):

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

D. Duplicate sample (DUP):

Relative percent differences were within the QC limits.

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 Mitkem, 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: Edward A. Ford

Date: 6/13/11

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

10-Jun-

Client: AECOM Technical Services, Inc.
Client Sample ID: EFF-052711
Lab ID: K0937-01
Project: NOW Corp. Site
Collection Date: 05/27/11 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		0.50	µg/L	1	06/09/2011 10:36	59659
Chloroethane	ND		0.50	µg/L	1	06/09/2011 10:36	59659
1,1-Dichloroethene	ND		0.50	µg/L	1	06/09/2011 10:36	59659
trans-1,2-Dichloroethene	ND		0.50	µg/L	1	06/09/2011 10:36	59659
Methyl tert-butyl ether	ND		0.50	µg/L	1	06/09/2011 10:36	59659
1,1-Dichloroethane	2.1		0.50	µg/L	1	06/09/2011 10:36	59659
cis-1,2-Dichloroethene	ND		0.50	µg/L	1	06/09/2011 10:36	59659
1,1,1-Trichloroethane	1.9		0.50	µg/L	1	06/09/2011 10:36	59659
1,2-Dichloroethane	ND		0.50	µg/L	1	06/09/2011 10:36	59659
Benzene	ND		0.50	µg/L	1	06/09/2011 10:36	59659
Trichloroethene	3.7		0.50	µg/L	1	06/09/2011 10:36	59659
Toluene	ND		0.50	µg/L	1	06/09/2011 10:36	59659
1,1,2-Trichloroethane	ND		0.50	µg/L	1	06/09/2011 10:36	59659
Tetrachloroethene	ND		0.50	µg/L	1	06/09/2011 10:36	59659
Chlorobenzene	ND		0.50	µg/L	1	06/09/2011 10:36	59659
Ethylbenzene	ND		0.50	µg/L	1	06/09/2011 10:36	59659
m,p-Xylene	ND		0.50	µg/L	1	06/09/2011 10:36	59659
o-Xylene	ND		0.50	µg/L	1	06/09/2011 10:36	59659
Surrogate: Dibromofluoromethane	100		88-124	%REC	1	06/09/2011 10:36	59659
Surrogate: 1,2-Dichloroethane-d4	97.4		79-115	%REC	1	06/09/2011 10:36	59659
Surrogate: Toluene-d8	101		80-114	%REC	1	06/09/2011 10:36	59659
Surrogate: Bromofluorobenzene	94.9		60-123	%REC	1	06/09/2011 10:36	59659

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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

10-Jun-

Client: AECOM Technical Services, Inc.
Client Sample ID: INF-052711
Lab ID: K0937-02
Project: NOW Corp. Site
Collection Date: 05/27/11 11:35

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	µg/L	10	06/09/2011 11:04	59659
Chloroethane	ND		5.0	µg/L	10	06/09/2011 11:04	59659
1,1-Dichloroethene	11		5.0	µg/L	10	06/09/2011 11:04	59659
trans-1,2-Dichloroethene	ND		5.0	µg/L	10	06/09/2011 11:04	59659
Methyl tert-butyl ether	ND		5.0	µg/L	10	06/09/2011 11:04	59659
1,1-Dichloroethane	81		5.0	µg/L	10	06/09/2011 11:04	59659
cis-1,2-Dichloroethene	8.0		5.0	µg/L	10	06/09/2011 11:04	59659
1,1,1-Trichloroethane	190		5.0	µg/L	10	06/09/2011 11:04	59659
1,2-Dichloroethane	ND		5.0	µg/L	10	06/09/2011 11:04	59659
Benzene	ND		5.0	µg/L	10	06/09/2011 11:04	59659
Trichloroethene	200		5.0	µg/L	10	06/09/2011 11:04	59659
Toluene	ND		5.0	µg/L	10	06/09/2011 11:04	59659
1,1,2-Trichloroethane	ND		5.0	µg/L	10	06/09/2011 11:04	59659
Tetrachloroethene	ND		5.0	µg/L	10	06/09/2011 11:04	59659
Chlorobenzene	ND		5.0	µg/L	10	06/09/2011 11:04	59659
Ethylbenzene	ND		5.0	µg/L	10	06/09/2011 11:04	59659
m,p-Xylene	ND		5.0	µg/L	10	06/09/2011 11:04	59659
o-Xylene	ND		5.0	µg/L	10	06/09/2011 11:04	59659
Surrogate: Dibromofluoromethane	96.7		88-124	%REC	10	06/09/2011 11:04	59659
Surrogate: 1,2-Dichloroethane-d4	98.2		79-115	%REC	10	06/09/2011 11:04	59659
Surrogate: Toluene-d8	96.8		80-114	%REC	10	06/09/2011 11:04	59659
Surrogate: Bromofluorobenzene	92.2		60-123	%REC	10	06/09/2011 11:04	59659

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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

10-Jun-

Client: AECOM Technical Services, Inc.
Client Sample ID: TW-1-052711
Lab ID: K0937-03

Project: NOW Corp. Site
Collection Date: 05/27/11 11:45

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	µg/L	4	06/09/2011 11:33	59659
Chloroethane	ND		2.0	µg/L	4	06/09/2011 11:33	59659
1,1-Dichloroethene	8.8		2.0	µg/L	4	06/09/2011 11:33	59659
trans-1,2-Dichloroethene	ND		2.0	µg/L	4	06/09/2011 11:33	59659
Methyl tert-butyl ether	ND		2.0	µg/L	4	06/09/2011 11:33	59659
1,1-Dichloroethane	31		2.0	µg/L	4	06/09/2011 11:33	59659
cis-1,2-Dichloroethene	2.4		2.0	µg/L	4	06/09/2011 11:33	59659
1,1,1-Trichloroethane	ND		2.0	µg/L	4	06/09/2011 11:33	59659
1,2-Dichloroethane	ND		2.0	µg/L	4	06/09/2011 11:33	59659
Benzene	ND		2.0	µg/L	4	06/09/2011 11:33	59659
Trichloroethene	38		2.0	µg/L	4	06/09/2011 11:33	59659
Toluene	ND		2.0	µg/L	4	06/09/2011 11:33	59659
1,1,2-Trichloroethane	ND		2.0	µg/L	4	06/09/2011 11:33	59659
Tetrachloroethene	ND		2.0	µg/L	4	06/09/2011 11:33	59659
Chlorobenzene	ND		2.0	µg/L	4	06/09/2011 11:33	59659
Ethylbenzene	ND		2.0	µg/L	4	06/09/2011 11:33	59659
m,p-Xylene	ND		2.0	µg/L	4	06/09/2011 11:33	59659
o-Xylene	ND		2.0	µg/L	4	06/09/2011 11:33	59659
Surrogate: Dibromofluoromethane	99.3		88-124	%REC	4	06/09/2011 11:33	59659
Surrogate: 1,2-Dichloroethane-d4	102		79-115	%REC	4	06/09/2011 11:33	59659
Surrogate: Toluene-d8	95.2		80-114	%REC	4	06/09/2011 11:33	59659
Surrogate: Bromofluorobenzene	94.1		60-123	%REC	4	06/09/2011 11:33	59659

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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

10-Jun-

Client: AECOM Technical Services, Inc.
Client Sample ID: TW2A 052711
Lab ID: K0937-04
Project: NOW Corp. Site
Collection Date: 05/27/11 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		10	µg/L	20	06/09/2011 12:02	59659
Chloroethane	ND		10	µg/L	20	06/09/2011 12:02	59659
1,1-Dichloroethene	16		10	µg/L	20	06/09/2011 12:02	59659
trans-1,2-Dichloroethene	ND		10	µg/L	20	06/09/2011 12:02	59659
Methyl tert-butyl ether	ND		10	µg/L	20	06/09/2011 12:02	59659
1,1-Dichloroethane	110		10	µg/L	20	06/09/2011 12:02	59659
cis-1,2-Dichloroethene	12		10	µg/L	20	06/09/2011 12:02	59659
1,1,1-Trichloroethane	260		10	µg/L	20	06/09/2011 12:02	59659
1,2-Dichloroethane	ND		10	µg/L	20	06/09/2011 12:02	59659
Benzene	ND		10	µg/L	20	06/09/2011 12:02	59659
Trichloroethene	280		10	µg/L	20	06/09/2011 12:02	59659
Toluene	ND		10	µg/L	20	06/09/2011 12:02	59659
1,1,2-Trichloroethane	ND		10	µg/L	20	06/09/2011 12:02	59659
Tetrachloroethene	ND		10	µg/L	20	06/09/2011 12:02	59659
Chlorobenzene	ND		10	µg/L	20	06/09/2011 12:02	59659
Ethylbenzene	ND		10	µg/L	20	06/09/2011 12:02	59659
m,p-Xylene	ND		10	µg/L	20	06/09/2011 12:02	59659
o-Xylene	ND		10	µg/L	20	06/09/2011 12:02	59659
Surrogate: Dibromofluoromethane	101		88-124	%REC	20	06/09/2011 12:02	59659
Surrogate: 1,2-Dichloroethane-d4	96.7		79-115	%REC	20	06/09/2011 12:02	59659
Surrogate: Toluene-d8	97.8		80-114	%REC	20	06/09/2011 12:02	59659
Surrogate: Bromofluorobenzene	93.2		60-123	%REC	20	06/09/2011 12:02	59659

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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

10-Jun-

Client: AECOM Technical Services, Inc.
Client Sample ID: TW-3 052711
Lab ID: K0937-05
Project: NOW Corp. Site
Collection Date: 05/27/11 11:55

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	06/09/2011 12:31	59659
Chloroethane	ND		0.50	µg/L	1	06/09/2011 12:31	59659
1,1-Dichloroethene	1.0		0.50	µg/L	1	06/09/2011 12:31	59659
trans-1,2-Dichloroethene	ND		0.50	µg/L	1	06/09/2011 12:31	59659
Methyl tert-butyl ether	ND		0.50	µg/L	1	06/09/2011 12:31	59659
1,1-Dichloroethane	8.9		0.50	µg/L	1	06/09/2011 12:31	59659
cis-1,2-Dichloroethene	ND		0.50	µg/L	1	06/09/2011 12:31	59659
1,1,1-Trichloroethane	2.0		0.50	µg/L	1	06/09/2011 12:31	59659
1,2-Dichloroethane	ND		0.50	µg/L	1	06/09/2011 12:31	59659
Benzene	ND		0.50	µg/L	1	06/09/2011 12:31	59659
Trichloroethene	7.2		0.50	µg/L	1	06/09/2011 12:31	59659
Toluene	ND		0.50	µg/L	1	06/09/2011 12:31	59659
1,1,2-Trichloroethane	ND		0.50	µg/L	1	06/09/2011 12:31	59659
Tetrachloroethene	ND		0.50	µg/L	1	06/09/2011 12:31	59659
Chlorobenzene	ND		0.50	µg/L	1	06/09/2011 12:31	59659
Ethylbenzene	ND		0.50	µg/L	1	06/09/2011 12:31	59659
m,p-Xylene	ND		0.50	µg/L	1	06/09/2011 12:31	59659
o-Xylene	ND		0.50	µg/L	1	06/09/2011 12:31	59659
Surrogate: Dibromofluoromethane	101		88-124	%REC	1	06/09/2011 12:31	59659
Surrogate: 1,2-Dichloroethane-d4	95.2		79-115	%REC	1	06/09/2011 12:31	59659
Surrogate: Toluene-d8	99.4		80-114	%REC	1	06/09/2011 12:31	59659
Surrogate: Bromofluorobenzene	95.5		60-123	%REC	1	06/09/2011 12:31	59659

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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

10-Jun-

Client: AECOM Technical Services, Inc.
Client Sample ID: TRIP BLANK
Lab ID: K0937-06
Project: NOW Corp. Site
Collection Date: 05/27/11 00:00

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	06/09/2011 13:00	59659
Chloroethane	ND		0.50	µg/L	1	06/09/2011 13:00	59659
1,1-Dichloroethene	ND		0.50	µg/L	1	06/09/2011 13:00	59659
trans-1,2-Dichloroethene	ND		0.50	µg/L	1	06/09/2011 13:00	59659
Methyl tert-butyl ether	ND		0.50	µg/L	1	06/09/2011 13:00	59659
1,1-Dichloroethane	ND		0.50	µg/L	1	06/09/2011 13:00	59659
cis-1,2-Dichloroethene	ND		0.50	µg/L	1	06/09/2011 13:00	59659
1,1,1-Trichloroethane	ND		0.50	µg/L	1	06/09/2011 13:00	59659
1,2-Dichloroethane	ND		0.50	µg/L	1	06/09/2011 13:00	59659
Benzene	ND		0.50	µg/L	1	06/09/2011 13:00	59659
Trichloroethene	ND		0.50	µg/L	1	06/09/2011 13:00	59659
Toluene	ND		0.50	µg/L	1	06/09/2011 13:00	59659
1,1,2-Trichloroethane	ND		0.50	µg/L	1	06/09/2011 13:00	59659
Tetrachloroethene	ND		0.50	µg/L	1	06/09/2011 13:00	59659
Chlorobenzene	ND		0.50	µg/L	1	06/09/2011 13:00	59659
Ethylbenzene	ND		0.50	µg/L	1	06/09/2011 13:00	59659
m,p-Xylene	ND		0.50	µg/L	1	06/09/2011 13:00	59659
o-Xylene	ND		0.50	µg/L	1	06/09/2011 13:00	59659
Surrogate: Dibromofluoromethane	99.0		88-124	%REC	1	06/09/2011 13:00	59659
Surrogate: 1,2-Dichloroethane-d4	95.8		79-115	%REC	1	06/09/2011 13:00	59659
Surrogate: Toluene-d8	94.7		80-114	%REC	1	06/09/2011 13:00	59659
Surrogate: Bromofluorobenzene	92.4		60-123	%REC	1	06/09/2011 13:00	59659

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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: K0937
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SW8260_25_W

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

Sample ID: **MB-59659** SampType: **MBLK** TestCode: **SW8260_25_W** Prep Date: **06/08/11 16:56** Run ID: **V5_110609A**
Client ID: **MB-59659** Batch ID: **59659** Units: **µg/L** Analysis Date: **06/09/11 10:07** SeqNo: **1542624**

Analyte	Result	MDL	RL	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: Dibromofluoromethane	9.952		0.50	10.00	0	99.5	88	124	0			
Surrogate: 1,2-Dichloroethane-d4	9.672		0.50	10.00	0	96.7	79	115	0			
Surrogate: Toluene-d8	9.944		0.50	10.00	0	99.4	80	114	0			
Surrogate: Bromofluorobenzene	9.614		0.50	10.00	0	96.1	60	123	0			

CLIENT: AECOM Technical Services, Inc.
Work Order: K0937
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SW8260_25_W

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

Sample ID: **LCS-59659** SampType: **LCS** TestCode: **SW8260_25_W** Prep Date: **06/08/11 16:56** Run ID: **V5_110609A**
Client ID: **LCS-59659** Batch ID: **59659** Units: **µg/L** Analysis Date: **06/09/11 09:09** SeqNo: **1542614**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	10.46	0.15	0.50	10.00	0	105	77	120	0			
Chloroethane	10.71	0.24	0.50	10.00	0	107	75	135	0			
1,1-Dichloroethene	10.45	0.19	0.50	10.00	0	104	81	125	0			
trans-1,2-Dichloroethene	10.20	0.14	0.50	10.00	0	102	60	137	0			
Methyl tert-butyl ether	9.701	0.13	0.50	10.00	0	97.0	61	134	0			
1,1-Dichloroethane	10.26	0.18	0.50	10.00	0	103	82	120	0			
cis-1,2-Dichloroethene	10.07	0.19	0.50	10.00	0	101	84	116	0			
1,1,1-Trichloroethane	10.60	0.11	0.50	10.00	0	106	80	124	0			
1,2-Dichloroethane	10.30	0.16	0.50	10.00	0	103	86	117	0			
Benzene	10.46	0.12	0.50	10.00	0	105	81	121	0			
Trichloroethene	10.12	0.13	0.50	10.00	0	101	74	123	0			
Toluene	10.08	0.14	0.50	10.00	0	101	88	117	0			
1,1,2-Trichloroethane	9.760	0.20	0.50	10.00	0	97.6	83	121	0			
Tetrachloroethene	10.72	0.17	0.50	10.00	0	107	74	115	0			
Chlorobenzene	9.799	0.13	0.50	10.00	0	98.0	83	112	0			
Ethylbenzene	10.30	0.13	0.50	10.00	0	103	87	110	0			
m,p-Xylene	21.13	0.22	0.50	20.00	0	106	87	114	0			
o-Xylene	10.19	0.17	0.50	10.00	0	102	84	114	0			
Surrogate: Dibromofluoromethane	9.767		0.50	10.00	0	97.7	88	124	0			
Surrogate: 1,2-Dichloroethane-d4	10.20		0.50	10.00	0	102	79	115	0			
Surrogate: Toluene-d8	10.14		0.50	10.00	0	101	80	114	0			
Surrogate: Bromofluorobenzene	9.624		0.50	10.00	0	96.2	60	123	0			

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

CLIENT: AECOM Technical Services, Inc.
Work Order: K0937
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SW8260_25_W

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

Sample ID: **LCSD-59659**	SampType: **LCSD**	TestCode: **SW8260_25_W**	Prep Date: **06/08/11 16:56**	Run ID: **V5_110609A**	
Client ID: **LCSD-59659**	Batch ID: **59659**	Units: **µg/L**	Analysis Date: **06/09/11 09:38**	SeqNo: **1542619**	

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	10.22	0.15	0.50	10.00	0	102	77	120	10.46	2.37	40	
Chloroethane	10.59	0.24	0.50	10.00	0	106	75	135	10.71	1.09	40	
1,1-Dichloroethene	10.25	0.19	0.50	10.00	0	103	81	125	10.45	1.86	40	
trans-1,2-Dichloroethene	9.757	0.14	0.50	10.00	0	97.6	60	137	10.20	4.48	40	
Methyl tert-butyl ether	9.402	0.13	0.50	10.00	0	94.0	61	134	9.701	3.12	40	
1,1-Dichloroethane	10.02	0.18	0.50	10.00	0	100	82	120	10.26	2.38	40	
cis-1,2-Dichloroethene	9.644	0.19	0.50	10.00	0	96.4	84	116	10.07	4.3	40	
1,1,1-Trichloroethane	10.30	0.11	0.50	10.00	0	103	80	124	10.60	2.92	40	
1,2-Dichloroethane	9.684	0.16	0.50	10.00	0	96.8	86	117	10.30	6.2	40	
Benzene	9.965	0.12	0.50	10.00	0	99.7	81	121	10.46	4.86	40	
Trichloroethene	9.519	0.13	0.50	10.00	0	95.2	74	123	10.12	6.1	40	
Toluene	9.804	0.14	0.50	10.00	0	98.0	88	117	10.08	2.8	40	
1,1,2-Trichloroethane	8.999	0.20	0.50	10.00	0	90.0	83	121	9.760	8.12	40	
Tetrachloroethene	10.17	0.17	0.50	10.00	0	102	74	115	10.72	5.31	40	
Chlorobenzene	9.318	0.13	0.50	10.00	0	93.2	83	112	9.799	5.04	40	
Ethylbenzene	9.460	0.13	0.50	10.00	0	94.6	87	110	10.30	8.45	40	
m,p-Xylene	19.38	0.22	0.50	20.00	0	96.9	87	114	21.13	8.64	40	
o-Xylene	9.603	0.17	0.50	10.00	0	96.0	84	114	10.19	5.96	40	
Surrogate: Dibromofluoromethane	9.790		0.50	10.00	0	97.9	88	124	0			
Surrogate: 1,2-Dichloroethane-d4	9.735		0.50	10.00	0	97.4	79	115	0			
Surrogate: Toluene-d8	9.893		0.50	10.00	0	98.9	80	114	0			
Surrogate: Bromofluorobenzene	9.326		0.50	10.00	0	93.3	60	123	0			

Qualifiers: ND - Not Detected at the Reporting Limit; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank

m11.06.09.A J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

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

08-Jun-

Client: AECOM Technical Services, Inc.
Client Sample ID: EFF-052711
Lab ID: K0937-01

Project: NOW Corp. Site
Collection Date: 05/27/11 11:25

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	06/08/2011 16:22	59645

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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

08-Jun-

Client: AECOM Technical Services, Inc.
Client Sample ID: INF-052711
Lab ID: K0937-02

Project: NOW Corp. Site
Collection Date: 05/27/11 11:35

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	06/08/2011 16:22	59645

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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: K0937
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

E1664

EPA 1664A -- Oil & Grease, HEM

Sample ID: **MB-59645** SampType: **MBLK** TestCode: **E1664** Prep Date: **06/08/11 11:29** Run ID: **MANUAL_110608C**
Client ID: **MB-59645** Batch ID: **59645** Units: **mg/L** Analysis Date: **06/08/11 16:22** SeqNo: **1541417**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease, Total Recoverable	ND	1.2	5.0									

Sample ID: **LCS-59645** SampType: **LCS** TestCode: **E1664** Prep Date: **06/08/11 11:29** Run ID: **MANUAL_110608C**
Client ID: **LCS-59645** Batch ID: **59645** Units: **mg/L** Analysis Date: **06/08/11 16:22** SeqNo: **1541415**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease, Total Recoverable	39.00	1.2	5.0	40.00	0	97.5	78	114	0			

Sample ID: **LCSD-59645** SampType: **LCSD** TestCode: **E1664** Prep Date: **06/08/11 11:29** Run ID: **MANUAL_110608C**
Client ID: **LCSD-59645** Batch ID: **59645** Units: **mg/L** Analysis Date: **06/08/11 16:22** SeqNo: **1541416**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Oil & Grease, Total Recoverable	37.40	1.2	5.0	40.00	0	93.5	78	114	39.00	4.19	18	

Qualifiers: ND - Not Detected at the Reporting Limit; S - Recovery outside accepted recovery limits; MDL - Method Detection Limit; B - Analyte detected in the associated Method Blank
m11.06.07.C J - Analyte detected below quanititation limits; R - RPD outside accepted recovery limits; RL - Reporting Limit

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

10-Jun-

Client: AECOM Technical Services, Inc.
Client Sample ID: EFF-052711
Lab ID: K0937-01
Project: NOW Corp. Site
Collection Date: 05/27/11 11:25

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Aluminum	ND		200	µg/L	1	06/08/2011 9:33	59613
Arsenic	ND		20	µg/L	1	06/08/2011 9:33	59613
Barium	64	J	200	µg/L	1	06/08/2011 9:33	59613
Chromium	ND		20	µg/L	1	06/08/2011 9:33	59613
Copper	ND		25	µg/L	1	06/08/2011 9:33	59613
Iron	ND		200	µg/L	1	06/08/2011 9:33	59613
Manganese	41	J	50	µg/L	1	06/08/2011 9:33	59613
Nickel	ND		50	µg/L	1	06/08/2011 9:33	59613
Zinc	10	J	50	µg/L	1	06/08/2011 9:33	59613
SW846 7470A -- Mercury by FIA							**SW7470**
Mercury	ND		0.20	µg/L	1	06/08/2011 15:44	59653

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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.
Client Sample ID: INF-052711 **Project:** NOW Corp. Site
Lab ID: K0937-02 **Collection Date:** 05/27/11 11:35

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 6010C -- Metals by ICP							**SW6010_W**
Aluminum	ND		200	µg/L	1	06/08/2011 9:37	59613
Arsenic	ND		20	µg/L	1	06/08/2011 9:37	59613
Barium	66	J	200	µg/L	1	06/08/2011 9:37	59613
Chromium	0.65	J	20	µg/L	1	06/08/2011 9:37	59613
Copper	ND		25	µg/L	1	06/08/2011 9:37	59613
Iron	ND		200	µg/L	1	06/08/2011 9:37	59613
Manganese	77		50	µg/L	1	06/08/2011 9:37	59613
Nickel	ND		50	µg/L	1	06/08/2011 9:37	59613
Zinc	10	J	50	µg/L	1	06/08/2011 9:37	59613
SW846 7470A -- Mercury by FIA							**SW7470**
Mercury	ND		0.20	µg/L	1	06/08/2011 15:45	59653

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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: K0937
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SW6010_W
SW846 6010C -- Metals by ICP

Sample ID: **MB-59613** SampType: **MBLK** TestCode: **SW6010_W** Prep Date: **06/07/11 10:30** Run ID: **OPTIMA3_110608A**
Client ID: **MB-59613** Batch ID: **59613** Units: **µg/L** Analysis Date: **06/08/11 7:47** SeqNo: **1540817**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	66.67	66	200									J
Arsenic	ND	4.3	20									
Barium	ND	1.1	200									
Chromium	ND	0.64	20									
Copper	ND	3.6	30									
Iron	50.14	31	200									J
Manganese	ND	10	50									
Nickel	ND	0.85	50									
Zinc	ND	4.9	50									

Sample ID: **LCS-59613** SampType: **LCS** TestCode: **SW6010_W** Prep Date: **06/07/11 10:30** Run ID: **OPTIMA3_110608A**
Client ID: **LCS-59613** Batch ID: **59613** Units: **µg/L** Analysis Date: **06/08/11 7:50** SeqNo: **1540819**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	9038	66	200	9100	0	99.3	80	120	0			B
Arsenic	464.5	4.3	20	455.0	0	102	80	120	0			
Barium	9227	1.1	200	9100	0	101	80	120	0			
Chromium	914.5	0.64	20	910.0	0	100	80	120	0			
Copper	1117	3.6	30	1130	0	98.8	80	120	0			
Iron	4707	31	200	4550	0	103	80	120	0			B
Manganese	2276	10	50	2270	0	100	80	120	0			
Nickel	2333	0.85	50	2270	0	103	80	120	0			
Zinc	2282	4.9	50	2270	0	101	80	120	0			

CLIENT: AECOM Technical Services, Inc.
Work Order: K0937
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SW7470

SW846 7470A -- Mercury by FIA

Sample ID: **MB-59653**	SampType: **MBLK**	TestCode: **SW7470**			Prep Date: **06/08/11 11:15**			Run ID: **FIMS1_110608C**			
Client ID: **MB-59653**	Batch ID: **59653**	Units: **µg/L**			Analysis Date: **06/08/11 15:22**			SeqNo: **1541459**			
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.028	0.20									

Sample ID: **LCS-59653**	SampType: **LCS**	TestCode: **SW7470**			Prep Date: **06/08/11 11:15**			Run ID: **FIMS1_110608C**			
Client ID: **LCS-59653**	Batch ID: **59653**	Units: **µg/L**			Analysis Date: **06/08/11 15:23**			SeqNo: **1541460**			
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	4.740	0.028	0.20	4.550	0	104	80	120	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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

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

10-Jun-

Client: AECOM Technical Services, Inc.
Client Sample ID: EFF-052711
Lab ID: K0937-01

Project: NOW Corp. Site
Collection Date: 05/27/11 11:25

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SM 2540C -- TOTAL DISSOLVED SOLIDS							**SM2540_TDS**
Total Dissolved Solids	230		10	mg/L	1	06/03/2011 5:05	59549
SM 2540D -- TOTAL SUSPENDED SOLIDS							**SM2540_TSS**
Total Suspended Solids	ND		10	mg/L	1	06/03/2011 6:38	59550
SW846 9012B -- Total Cyanide							**SW9012_W**
Cyanide	ND		10	ug/L	1	06/03/2011 11:50	59538

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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

10-Jun-

Client: AECOM Technical Services, Inc.
Client Sample ID: INF-052711
Lab ID: K0937-02
Project: NOW Corp. Site
Collection Date: 05/27/11 11:35

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SM 2540C -- TOTAL DISSOLVED SOLIDS							**SM2540_TDS**
Total Dissolved Solids	230		10	mg/L	1	06/03/2011 6:13	59549
SM 2540D -- TOTAL SUSPENDED SOLIDS							**SM2540_TSS**
Total Suspended Solids	ND		10	mg/L	1	06/03/2011 7:55	59550
SW846 9012B -- Total Cyanide							**SW9012_W**
Cyanide	ND		10	ug/L	1	06/03/2011 11:52	59538

Qualifiers:

ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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: K0937
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SM2540_TDS
SM 2540C -- TOTAL DISSOLVED SOLIDS

Sample ID: **MB-59549**	SampType: **MBLK**	TestCode: **SM2540_TDS**			Prep Date: **06/02/11 16:33**			Run ID: **MANUAL_110602E**				
Client ID: **MB-59549**	Batch ID: **59549**	Units: **mg/L**			Analysis Date: **06/02/11 16:33**			SeqNo: **1539089**				
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	10	10									

Sample ID: **LCS-59549**	SampType: **LCS**	TestCode: **SM2540_TDS**			Prep Date: **06/02/11 16:33**			Run ID: **MANUAL_110602E**				
Client ID: **LCS-59549**	Batch ID: **59549**	Units: **mg/L**			Analysis Date: **06/02/11 17:41**			SeqNo: **1539090**				
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	530.0	10	10	537.0	0	98.7	80	120	0			

Sample ID: **K0937-02BDUP**	SampType: **DUP**	TestCode: **SM2540_TDS**			Prep Date: **06/02/11 16:33**			Run ID: **MANUAL_110602E**				
Client ID: **INF-052711**	Batch ID: **59549**	Units: **mg/L**			Analysis Date: **06/03/11 7:21**			SeqNo: **1539102**				
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Dissolved Solids	226.0	10	10	0	0	0	0	0	233.0	3.05	5.0	

CLIENT: AECOM Technical Services, Inc.
Work Order: K0937
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SM2540_TSS

SM 2540D -- TOTAL SUSPENDED SOLIDS

Sample ID: **MB-59550**	SampType: **MBLK**	TestCode: **SM2540_TSS**			Prep Date: **06/02/11 16:30**			Run ID: **MANUAL_110602F**			
Client ID: **MB-59550**	Batch ID: **59550**	Units: **mg/L**			Analysis Date: **06/02/11 16:30**			SeqNo: **1539120**			
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	ND	10	10									

Sample ID: **LCS-59550**	SampType: **LCS**	TestCode: **SM2540_TSS**			Prep Date: **06/02/11 16:30**			Run ID: **MANUAL_110602F**			
Client ID: **LCS-59550**	Batch ID: **59550**	Units: **mg/L**			Analysis Date: **06/02/11 17:47**			SeqNo: **1539121**			
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	54.00	10	10	54.90	0	98.4	80	120	0			

Sample ID: **K0937-02BDUP**	SampType: **DUP**	TestCode: **SM2540_TSS**			Prep Date: **06/02/11 16:30**			Run ID: **MANUAL_110602F**			
Client ID: **INF-052711**	Batch ID: **59550**	Units: **mg/L**			Analysis Date: **06/03/11 9:12**			SeqNo: **1539133**			
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Suspended Solids	ND	10	10	0	0	0	0	0	0	0	5.0	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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

CLIENT: AECOM Technical Services, Inc.
Work Order: K0937
Project: NOW Corp. Site

ANALYTICAL QC SUMMARY REPORT

SW9012_W
SW846 9012B -- Total Cyanide

Sample ID: **MB-59538** SampType: **MBLK** TestCode: **SW9012_W** Prep Date: **06/02/11 13:30** Run ID: **LACHAT1_110603A**
Client ID: **MB-59538** Batch ID: **59538** Units: **ug/L** Analysis Date: **06/03/11 11:30** SeqNo: **1538147**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	ND	7.5	20									

Sample ID: **LCS-59538** SampType: **LCS** TestCode: **SW9012_W** Prep Date: **06/02/11 13:30** Run ID: **LACHAT1_110603A**
Client ID: **LCS-59538** Batch ID: **59538** Units: **ug/L** Analysis Date: **06/03/11 11:32** SeqNo: **1538149**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	101.1	7.5	20	100.0	0	101	80	120	0			

Sample ID: **LCSD-59538** SampType: **LCSD** TestCode: **SW9012_W** Prep Date: **06/02/11 13:30** Run ID: **LACHAT1_110603A**
Client ID: **LCSD-59538** Batch ID: **59538** Units: **ug/L** Analysis Date: **06/03/11 11:35** SeqNo: **1538151**

Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Cyanide	103.0	7.5	20	100.0	0	103	80	120	101.1	1.87	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quanititation 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

m11.06.09.A

WorkOrder: K0937

05/28/2011 09:05

Mitkem Laboratories

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: 06/15/11
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
K0937-01A	EFF-052711	05/27/2011 11:25	05/28/2011	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
K0937-01B	EFF-052711	05/27/2011 11:25	05/28/2011	Aqueous	SM2540_TDS	/					O2
K0937-01B	EFF-052711	05/27/2011 11:25	05/28/2011	Aqueous	SM2540_TSS	/					O2
K0937-01C	EFF-052711	05/27/2011 11:25	05/28/2011	Aqueous	SW9012_W	/				Y	O2
K0937-01D	EFF-052711	05/27/2011 11:25	05/28/2011	Aqueous	SW6010_W	/ See SEL list				Y	O2
K0937-01D	EFF-052711	05/27/2011 11:25	05/28/2011	Aqueous	SW7470	/ See SEL list					O2
K0937-01E	EFF-052711	05/27/2011 11:25	05/28/2011	Aqueous	E1664	/					O2
K0937-02A	INF-052711	05/27/2011 11:35	05/28/2011	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
K0937-02B	INF-052711	05/27/2011 11:35	05/28/2011	Aqueous	SM2540_TDS	/					O2
K0937-02B	INF-052711	05/27/2011 11:35	05/28/2011	Aqueous	SM2540_TSS	/					O2
K0937-02C	INF-052711	05/27/2011 11:35	05/28/2011	Aqueous	SW9012_W	/				Y	O2
K0937-02D	INF-052711	05/27/2011 11:35	05/28/2011	Aqueous	SW6010_W	/ See SEL list				Y	O2
K0937-02D	INF-052711	05/27/2011 11:35	05/28/2011	Aqueous	SW7470	/ See SEL list					O2
K0937-02E	INF-052711	05/27/2011 11:35	05/28/2011	Aqueous	E1664	/					O2
K0937-03A	TW-1-052711	05/27/2011 11:45	05/28/2011	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
K0937-04A	TW2A 052711	05/27/2011 11:50	05/28/2011	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
K0937-05A	TW-3 052711	05/27/2011 11:55	05/28/2011	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
K0937-06A	TRIP BLANK	05/27/2011 00:00	05/28/2011	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

Lab Client Rep: Edward A Lawler

MITKEM LABORATORIES

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:
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.

Report To: AECOM
40 British American Blvd.
Latham NY 12110

Project Mgr.: Stephen Choiniere

Invoice To: Same

P.O. No.: _____ RQN: _____

Project No.: 60135676 02
Site Name: Now Corp
Location: Staatsburg State: NY
Sampler(s): SRG

1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid 7=CH_3OH
8= $NaHSO_4$ 9= None 10= _____ 11= _____

List preservative code below: 2 4 9 2 5

Notes:

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

G=Grab C=Composite

Lab Id:	Sample Id:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analyses: 8260	Metals*	TDS/TSS	O+G	Cyanide
	EFF-052711	5/27/11	11:25	G	GW	2	3		3	X	X	X	X	X
	INF-052711		11:35				3		3		X	X	X	X
	TW-1-052711		11:45											
	TW-2A052711		11:50											
	TW-3 052711		11:55											
	Trip Blank052711	—	—											

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, N

☐ E-mail to _____
EDD Format _____

Relinquished by:	Received by:	Date:	Time:
Steve Gray	—	5/27/11	14:40
FedEx	Daniel Mckeown	5-28-11	8:40

Condition upon receipt: ☑Iced ☐ Ambient ☐°C 4°C

MITKEM LABORATORIES
Sample Condition Form

Page 1 of 1

Received By: Daniel Mckeon	Reviewed By:	Date: 5-27-11	Mitkem Work Order #: K0937
Client Project: Nov corp		Client: Accom	

1) Cooler Sealed — Yes / No

2) Custody Seal(s) — Present / Absent
Coolers / Bottles
Intact / Broken

3) Custody Seal Number(s) N/A

4) Chain-of-Custody — Present / Absent

5) Cooler Temperature 4°C
IR Temp Gun ID MT-1
Coolant Condition Iced

6) Airbill(s) — Present / Absent
Airbill Number(s) FedEx 8759 1191 0501

7) Samples Bottles — Intact / Broken / Leaking

8) Date Received 5-28-11

9) Time Received 8:40

Preservative Name/Lot No.:

Lab Sample ID		Preservation (pH) HNO_3	H_2SO_4	HCl	NaOH	H_3PO_4	VOA Matrix	Soil Headspace or Air Bubble ≥ 1/4"
K0937	01	<2		<2	>12		H	
	02	<2		<2	>12		H	
	03						H	
	04						H	
	05						H	
K0937	06						H	

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

Form ID: QAF.0006 Rad OK yes / no

Y:\Controlled Forms\QAF.0006 sample condition form.xls

Last Page of Data Report