

# **Operation, Maintenance and Monitoring Report November 2010**

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

**Work Assignment No.  
D004445-4.1**

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

January 2011

January 19, 2011

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

**Re: NOW Corporation - Site #3-14-008  
O&M Summary Report: "November" 2010**

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 **(October 20 – November 18, 2010)**.

With the exceptions noted below, if any, the P&T system was online and operational throughout the reporting period. Approximately 266,600 gallons of water were treated during the period. Discharge from the treatment system averaged approximately 9,200 gallons per day (gpd), slightly less than the 10,000 gpd in the prior reporting period.

As of the last day of the reporting period, a total of 80,685,000 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 November 18, 2010. **Effluent limitations were not exceeded for any analyte.** A copy of the analytical laboratory report is attached. Table 2 summarizes selected operational data, as recorded on the sampling date.

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

November 10 – Responded to system auto-shutdown on November 8<sup>th</sup> by cleaning the air-distribution pipes in the stripper. Started system. Total downtime was 42 hours.

November 18 – Monthly O&M service visit. Collected influent and effluent samples. Adjusted discharge rate on pump in TW-3. Replaced water-level sensor (transducer) in TW-1. Old transducer had been providing spurious output since September 11<sup>th</sup>.

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: November 18, 2010**  
**NOW Corporation Site**  
**Town of Clinton, New York**

Analytes/ Parameters	Total Influent	Effluent	Recovery Wells			Effluent Limitations	
			TW-1	TW-2A	TW-3	Monitor 6.5 to 8.5	(units) gallons standard units
Quantity treated, per day		9,193					
pH	6.9	7.1					
Oil and Grease	<0.5	<5.0	NA	NA	NA	15	mg/L
Total Cyanide	<10	<10	NA	NA	NA	10	ug/L
TDS	<b>350</b>	<b>540</b>	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	<b>91 J</b>	<b>85 J</b>	NA	NA	NA	2000	ug/L
Chromium	<20	<20	NA	NA	NA	100	ug/L
Copper	<25	<25	NA	NA	NA	24	ug/L
Iron	<b>57 J</b>	<200	NA	NA	NA	600	ug/L
Mercury	<0.20	<0.20	NA	NA	NA	0.8	ug/L
Manganese	<b>170</b>	<b>58</b>	NA	NA	NA	600	ug/L
Nickel	<50	<50	NA	NA	NA	200	ug/L
Zinc	<b>9.8 J</b>	<b>13 J</b>	NA	NA	NA	150	ug/L
1,1,1-Trichloroethane	<b>740</b>	<0.50	<b>1.2</b>	<b>930</b>	<b>38</b>	5	ug/L
1,1,2-Trichloroethane	<13	<0.50	<1.0	<20	<0.50	1.2	ug/L
1,1-Dichloroethane	<b>250</b>	<0.50	<b>48</b>	<b>300</b>	<b>40</b>	5	ug/L
1,1-Dichloroethene	<b>130</b>	<0.50	<b>12</b>	<b>150</b>	<b>9.0</b>	0.5	ug/L
1,2-Dichloroethane	<13	<0.50	<1.0	<20	<0.50	1.6	ug/L
Benzene	<13	<0.50	<1.0	<20	<0.50	0.8	ug/L
Chlorobenzene	<13	<0.50	<1.0	<20	<0.50	5	ug/L
Chloroethane	<13	<0.50	<1.0	<20	<b>0.42 J</b>	5	ug/L
cis -1,2-Dichloroethene	<b>20</b>	<0.50	<b>3.2</b>	<b>23</b>	<b>0.48 J</b>	5	ug/L
Ethylbenzene	<13	<0.50	<1.0	<20	<0.50	5	ug/L
Methyl tert-butyl ether	<13	<0.50	<1.0	<20	<0.50	5	ug/L
o-Xylene	<13	<0.50	<1.0	<20	<0.50	5	ug/L
p&m-Xylene	<13	<0.50	<1.0	<20	<0.50	10	ug/L
Tetrachloroethene	<13	<0.50	<1.0	<20	<0.50	1.4	ug/L
Toluene	<13	<0.50	<1.0	<20	<0.50	5	ug/L
trans -1,2-Dichloroethene	<13	<0.50	<1.0	<20	<0.50	5	ug/L
Trichloroethene	<b>530</b>	<0.50	<b>48</b>	<b>640</b>	<b>21</b>	5	ug/L
Vinyl Chloride	<13	<0.50	<b>0.8 J</b>	<20	<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) "D" denotes analytical result for a diluted sample.
- 6) "B" denotes metal detected in method blank at concentration below the RL, but above the method detection limit.

**Table 2**  
**Summary of November 2010 O&M Data**

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

<b>Instrumentation/Readings:</b>		<b>11/18/10</b>	<b>Units</b>
<b><i>TW-1</i></b>			
	Pumping Rate	1	GPM
	Water Level Above Transducer	15.88	feet
	Flow Meter Reading	5,774,200	gallons
	Pump Pressure	85	psi
<b><i>TW-2A</i></b>			
	Pumping Rate	~14	GPM
	Water Level Above Transducer	18.79	feet
	Flow Meter Reading	18,628,400	gallons
	Pump Pressure	20	psi
<b><i>TW-3</i></b>			
	Pumping Rate	2	GPM
	Water Level Above Transducer	58.34	feet
	Flow Meter Reading	8,321,200	gallons
	Pump Pressure	75	psi
<b><i>Air Stripper</i></b>			
	Stripper Blower Pressure	20	inches H <sub>2</sub> O
	Air Temperature in Stripper	52	°F
	Pressure Gauge - Left Leg	1.3	inches H <sub>2</sub> O
	Pressure Gauge - Right Leg	2.0	inches H <sub>2</sub> O
<b><i>Effluent Flow</i></b>			
	Effluent Flow this period (calculated)	266,600	gallons
	Total Effluent Flow (calculated)	80,685,000	gallons

Report Date:  
10-Dec-10 12:59



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

A DIVISION OF SPECTRUM ANALYTICAL, INC. Featuring HANIBAL TECHNOLOGY

### Laboratory Report

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

Work Order: J2410  
Project : NOW Corp. Site, 11/10  
Project #:

Attn: Stephen Choiniere

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
J2410-01	EFF-111810	Aqueous	18-Nov-10 11:10	19-Nov-10 09:15
J2410-02	INF-111810	Aqueous	18-Nov-10 11:25	19-Nov-10 09:15
J2410-03	TW-1	Aqueous	18-Nov-10 11:50	19-Nov-10 09:15
J2410-04	TW-2A	Aqueous	18-Nov-10 11:55	19-Nov-10 09:15
J2410-05	TW-3	Aqueous	18-Nov-10 12:00	19-Nov-10 09:15
J2410-06	TRIP BLANK	Aqueous	18-Nov-10 00:00	19-Nov-10 09:15

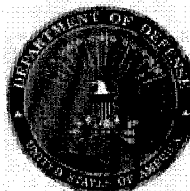
I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. The results relate only to the sample(s) as received. This report may not be reproduced, except in full, without written approval from Mitkem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

All applicable NELAC or USEPA CLP requirements have been met.

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

A handwritten signature in black ink.

Yihai Ding  
Laboratory Director

Technical Reviewer's Initials:

A handwritten signature in black ink.

## REPORT NARRATIVE

Mitkem Laboratories, a Division of Spectrum Analytical, Inc.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: J2410

SW846 8260C

### 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\_25\_PR(METHOD)

### V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: V6

Instrument Type: GCMS-VOA

Description: HP6890 / HP5973

Manufacturer: Hewlett-Packard

Model: 6890 / 5973

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

### VI. ANALYSIS

#### A. Calibration:

Calibrations met the method/SOP acceptance criteria.

#### B. Blanks:

All method blanks were within the acceptance criteria.

**C. Surrogates:**

Surrogate standard percent recoveries were within the QC limits with the following exceptions. Please note that the acceptance criteria allow one surrogate recovery outside of the QC limits per fraction.

INF-111810 (J2410-02A), Percent Recovery is outside QC Limits, recovery is above criteria for 1,2-Dichloroethane-d4 at 132% with criteria of (79-115)

TW-2A (J2410-04A), Percent Recovery is outside QC Limits, recovery is above criteria for 1,2-Dichloroethane-d4 at 151% with criteria of (79-115)

(MB-55905), Percent Recovery is outside QC Limits, recovery is above criteria for 1,2-Dichloroethane-d4 at 156% with criteria of (79-115)

(MB-56033), Percent Recovery is outside QC Limits, recovery is below criteria for Dibromofluoromethane at 87% with criteria of (88-124)

**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-56033 in batch 56033, Percent Recovery is outside QC Limits, recovery is below criteria for 1,2-Dichloropropane at 86% with criteria of (86-119), Dibromomethane at 83% with criteria of (83-118), Toluene at 87% with criteria of (88-117), trans-1,3-Dichloropropene at 87% with criteria of (87-120). Please note that not all compounds were included in the analyte list for this project.

**E. Internal Standards:**

Internal standard peak areas were within the QC limits.

**F. Dilutions:**

The following samples were analyzed at dilution:

INF-111810 (J2410-02A) : Dilution Factor: 25

TW-1 (J2410-03A) : Dilution Factor: 2

TW-1 (J2410-03ADL) : Dilution Factor: 5

TW-2A (J2410-04A) : Dilution Factor: 40

TW-3 (J2410-05ADL) : Dilution Factor: 2

**H. 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 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: \_\_\_\_\_

Date: \_\_\_\_\_

*Edward A. J. J.*  
12/8/10

## REPORT NARRATIVE

Mitekem Laboratories, a Division of Spectrum Analytical, Inc.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: J2410

EPA 1664A

### 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: E1664\_PR(SEPF)

### 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):**

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

**D. Duplicate sample:**

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

**E. Samples:**

No other unusual occurrences were noted during sample analysis.

No sample in this SDG required reanalysis.

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: \_\_\_\_\_

 Timothy McDaniel

Date: \_\_\_\_\_

12/3/10

## REPORT NARRATIVE

Mitkem Laboratories, a Division of Spectrum Analytical, Inc.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: J2410

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: ICP\_W\_PR(3005A)

### V. INSTRUMENTATION

The following instrumentation was used

Instrument Code: FIMS1

Instrument Type: CVAA

Description: FIMS

Manufacturer: Perkin-Elmer

Model: FIMS

Instrument Code: OPTIMA2

Instrument Type: ICP

Description: Optima 3100 XL

Manufacturer: Perkin-Elmer

Model: 3100 XL

### VI. ANALYSIS

A. Calibration:

Calibrations met the method/SOP acceptance criteria.

B. Blanks:

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.

D. Serial Dilution (SD):

Percent differences were within the QC limits.

G. Samples:

No other unusual occurrences were noted during sample analysis.

I certify that this data package is in compliance with the terms and conditions agreed to by the client and 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: \_\_\_\_\_

Date: \_\_\_\_\_

## REPORT NARRATIVE

Mitekem Laboratories, a Division of Spectrum Analytical, Inc.

Client : AECOM Technical Services, Inc.

Project: NOW Corp. Site

Laboratory Workorder / SDG #: J2410

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

### 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.

D. Duplicate sample:

Relative percent differences were within the QC limits for total suspended solids analysis.

F. 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 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: \_\_\_\_\_

Date: \_\_\_\_\_

12/10/10

**Mitkem Laboratories**

Date: 07-Dec-10

Client: AECOM Technical Services, Inc.

Client Sample ID: EFF-111810

Project: NOW Corp. Site, 11/10

Lab ID: J2410-01

Collection Date: 11/18/10 11:10

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 8260C -- VOC by GC-MS (25 mL Purge)							SW8260_25_W
Vinyl chloride	ND		0.50	µg/L	1	11/26/2010 16:23	55905
Chloroethane	ND		0.50	µg/L	1	11/26/2010 16:23	55905
1,1-Dichloroethene	ND		0.50	µg/L	1	11/26/2010 16:23	55905
trans-1,2-Dichloroethene	ND		0.50	µg/L	1	11/26/2010 16:23	55905
Methyl tert-butyl ether	ND		0.50	µg/L	1	11/26/2010 16:23	55905
1,1-Dichloroethane	ND		0.50	µg/L	1	11/26/2010 16:23	55905
cis-1,2-Dichloroethene	ND		0.50	µg/L	1	11/26/2010 16:23	55905
1,1,1-Trichloroethane	ND		0.50	µg/L	1	11/26/2010 16:23	55905
1,2-Dichloroethane	ND		0.50	µg/L	1	11/26/2010 16:23	55905
Benzene	ND		0.50	µg/L	1	11/26/2010 16:23	55905
Trichloroethene	ND		0.50	µg/L	1	11/26/2010 16:23	55905
Toluene	ND		0.50	µg/L	1	11/26/2010 16:23	55905
1,1,2-Trichloroethane	ND		0.50	µg/L	1	11/26/2010 16:23	55905
Tetrachloroethene	ND		0.50	µg/L	1	11/26/2010 16:23	55905
Chlorobenzene	ND		0.50	µg/L	1	11/26/2010 16:23	55905
Ethylbenzene	ND		0.50	µg/L	1	11/26/2010 16:23	55905
m,p-Xylene	ND		0.50	µg/L	1	11/26/2010 16:23	55905
o-Xylene	ND		0.50	µg/L	1	11/26/2010 16:23	55905
Surrogate: Dibromofluoromethane	104		88-124	%REC	1	11/26/2010 16:23	55905
Surrogate: 1,2-Dichloroethane-d4	102		79-115	%REC	1	11/26/2010 16:23	55905
Surrogate: Toluene-d8	95.3		80-114	%REC	1	11/26/2010 16:23	55905
Surrogate: Bromofluorobenzene	98.0		60-123	%REC	1	11/26/2010 16:23	55905

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

# Mitkem Laboratories

Date: 07-Dec-10

Client: AECOM Technical Services, Inc.

Client Sample ID: INF-111810

Lab ID: J2410-02

Project: NOW Corp. Site, 11/10

Collection Date: 11/18/10 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		13	µg/L	25	11/26/2010 17:23	55905
Chloroethane	ND		13	µg/L	25	11/26/2010 17:23	55905
1,1-Dichloroethene	130		13	µg/L	25	11/26/2010 17:23	55905
trans-1,2-Dichloroethene	ND		13	µg/L	25	11/26/2010 17:23	55905
Methyl tert-butyl ether	ND		13	µg/L	25	11/26/2010 17:23	55905
1,1-Dichloroethane	250		13	µg/L	25	11/26/2010 17:23	55905
cis-1,2-Dichloroethene	20		13	µg/L	25	11/26/2010 17:23	55905
1,1,1-Trichloroethane	740		13	µg/L	25	11/26/2010 17:23	55905
1,2-Dichloroethane	ND		13	µg/L	25	11/26/2010 17:23	55905
Benzene	ND		13	µg/L	25	11/26/2010 17:23	55905
Trichloroethene	530		13	µg/L	25	11/26/2010 17:23	55905
Toluene	ND		13	µg/L	25	11/26/2010 17:23	55905
1,1,2-Trichloroethane	ND		13	µg/L	25	11/26/2010 17:23	55905
Tetrachloroethene	ND		13	µg/L	25	11/26/2010 17:23	55905
Chlorobenzene	ND		13	µg/L	25	11/26/2010 17:23	55905
Ethylbenzene	ND		13	µg/L	25	11/26/2010 17:23	55905
m,p-Xylene	ND		13	µg/L	25	11/26/2010 17:23	55905
o-Xylene	ND		13	µg/L	25	11/26/2010 17:23	55905
Surrogate: Dibromofluoromethane	122		88-124	%REC	25	11/26/2010 17:23	55905
Surrogate: 1,2-Dichloroethane-d4	132	S	79-115	%REC	25	11/26/2010 17:23	55905
Surrogate: Toluene-d8	84.0		80-114	%REC	25	11/26/2010 17:23	55905
Surrogate: Bromofluorobenzene	102		60-123	%REC	25	11/26/2010 17:23	55905

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

# Mitkem Laboratories

Date: 07-Dec-10

Client: AECOM Technical Services, Inc.

Client Sample ID: TW-1

Lab ID: J2410-03

Project: NOW Corp. Site, 11/10

Collection Date: 11/18/10 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	0.80	J	1.0	µg/L	2	12/02/2010 20:17	56033
Chloroethane	ND		1.0	µg/L	2	12/02/2010 20:17	56033
1,1-Dichloroethene	12		1.0	µg/L	2	12/02/2010 20:17	56033
trans-1,2-Dichloroethene	ND		1.0	µg/L	2	12/02/2010 20:17	56033
Methyl tert-butyl ether	ND		1.0	µg/L	2	12/02/2010 20:17	56033
1,1-Dichloroethane	48		1.0	µg/L	2	12/02/2010 20:17	56033
cis-1,2-Dichloroethene	3.2		1.0	µg/L	2	12/02/2010 20:17	56033
1,1,1-Trichloroethane	1.2		1.0	µg/L	2	12/02/2010 20:17	56033
1,2-Dichloroethane	ND		1.0	µg/L	2	12/02/2010 20:17	56033
Benzene	ND		1.0	µg/L	2	12/02/2010 20:17	56033
Trichloroethene	48		1.0	µg/L	2	12/02/2010 20:17	56033
Toluene	ND		1.0	µg/L	2	12/02/2010 20:17	56033
1,1,2-Trichloroethane	ND		1.0	µg/L	2	12/02/2010 20:17	56033
Tetrachloroethene	ND		1.0	µg/L	2	12/02/2010 20:17	56033
Chlorobenzene	ND		1.0	µg/L	2	12/02/2010 20:17	56033
Ethylbenzene	ND		1.0	µg/L	2	12/02/2010 20:17	56033
m,p-Xylene	ND		1.0	µg/L	2	12/02/2010 20:17	56033
o-Xylene	ND		1.0	µg/L	2	12/02/2010 20:17	56033
Surrogate: Dibromofluoromethane	103		88-124	%REC	2	12/02/2010 20:17	56033
Surrogate: 1,2-Dichloroethane-d4	94.3		79-115	%REC	2	12/02/2010 20:17	56033
Surrogate: Toluene-d8	97.1		80-114	%REC	2	12/02/2010 20:17	56033
Surrogate: Bromofluorobenzene	95.5		60-123	%REC	2	12/02/2010 20:17	56033

**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

0012

# Mitkem Laboratories

Date: 07-Dec-10

Client: AECOM Technical Services, Inc.

Client Sample ID: TW-1

Lab ID: J2410-03

Project: NOW Corp. Site, 11/10

Collection Date: 11/18/10 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		2.5	µg/L	5	11/26/2010 17:53	55905
Chloroethane	ND		2.5	µg/L	5	11/26/2010 17:53	55905
1,1-Dichloroethene	13		2.5	µg/L	5	11/26/2010 17:53	55905
trans-1,2-Dichloroethene	ND		2.5	µg/L	5	11/26/2010 17:53	55905
Methyl tert-butyl ether	ND		2.5	µg/L	5	11/26/2010 17:53	55905
1,1-Dichloroethane	53		2.5	µg/L	5	11/26/2010 17:53	55905
cis-1,2-Dichloroethene	3.5		2.5	µg/L	5	11/26/2010 17:53	55905
1,1,1-Trichloroethane	ND		2.5	µg/L	5	11/26/2010 17:53	55905
1,2-Dichloroethane	ND		2.5	µg/L	5	11/26/2010 17:53	55905
Benzene	ND		2.5	µg/L	5	11/26/2010 17:53	55905
Trichloroethene	51		2.5	µg/L	5	11/26/2010 17:53	55905
Toluene	ND		2.5	µg/L	5	11/26/2010 17:53	55905
1,1,2-Trichloroethane	ND		2.5	µg/L	5	11/26/2010 17:53	55905
Tetrachloroethene	ND		2.5	µg/L	5	11/26/2010 17:53	55905
Chlorobenzene	ND		2.5	µg/L	5	11/26/2010 17:53	55905
Ethylbenzene	ND		2.5	µg/L	5	11/26/2010 17:53	55905
m,p-Xylene	ND		2.5	µg/L	5	11/26/2010 17:53	55905
o-Xylene	ND		2.5	µg/L	5	11/26/2010 17:53	55905
Surrogate: Dibromofluoromethane	101		88-124	%REC	5	11/26/2010 17:53	55905
Surrogate: 1,2-Dichloroethane-d4	103		79-115	%REC	5	11/26/2010 17:53	55905
Surrogate: Toluene-d8	96.0		80-114	%REC	5	11/26/2010 17:53	55905
Surrogate: Bromofluorobenzene	97.8		60-123	%REC	5	11/26/2010 17:53	55905

**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

# Mitkem Laboratories

Date: 07-Dec-10

Client: AECOM Technical Services, Inc.

Client Sample ID: TW-2A

Lab ID: J2410-04

Project: NOW Corp. Site, 11/10

Collection Date: 11/18/10 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		20	µg/L	40	11/26/2010 18:23	55905
Chloroethane	ND		20	µg/L	40	11/26/2010 18:23	55905
1,1-Dichloroethene	150		20	µg/L	40	11/26/2010 18:23	55905
trans-1,2-Dichloroethene	ND		20	µg/L	40	11/26/2010 18:23	55905
Methyl tert-butyl ether	ND		20	µg/L	40	11/26/2010 18:23	55905
1,1-Dichloroethane	300		20	µg/L	40	11/26/2010 18:23	55905
cis-1,2-Dichloroethene	23		20	µg/L	40	11/26/2010 18:23	55905
1,1,1-Trichloroethane	930		20	µg/L	40	11/26/2010 18:23	55905
1,2-Dichloroethane	ND		20	µg/L	40	11/26/2010 18:23	55905
Benzene	ND		20	µg/L	40	11/26/2010 18:23	55905
Trichloroethene	640		20	µg/L	40	11/26/2010 18:23	55905
Toluene	ND		20	µg/L	40	11/26/2010 18:23	55905
1,1,2-Trichloroethane	ND		20	µg/L	40	11/26/2010 18:23	55905
Tetrachloroethene	ND		20	µg/L	40	11/26/2010 18:23	55905
Chlorobenzene	ND		20	µg/L	40	11/26/2010 18:23	55905
Ethylbenzene	ND		20	µg/L	40	11/26/2010 18:23	55905
m,p-Xylene	ND		20	µg/L	40	11/26/2010 18:23	55905
o-Xylene	ND		20	µg/L	40	11/26/2010 18:23	55905
Surrogate: Dibromofluoromethane	122		88-124	%REC	40	11/26/2010 18:23	55905
Surrogate: 1,2-Dichloroethane-d4	151	S	79-115	%REC	40	11/26/2010 18:23	55905
Surrogate: Toluene-d8	84.2		80-114	%REC	40	11/26/2010 18:23	55905
Surrogate: Bromofluorobenzene	109		60-123	%REC	40	11/26/2010 18:23	55905

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

# Mitkem Laboratories

Date: 07-Dec-10

Client: AECOM Technical Services, Inc.

Client Sample ID: TW-3

Lab ID: J2410-05

Project: NOW Corp. Site, 11/10

Collection Date: 11/18/10 12:00

Analyses	Result Qual	RL Units	DF Date Analyzed	Batch ID
SW846 8260C -- VOC by GC-MS (25 mL Purge)				SW8260_25_W
Vinyl chloride	ND	0.50 µg/L	1 11/26/2010 16:53	55905
Chloroethane	0.42 J	0.50 µg/L	1 11/26/2010 16:53	55905
1,1-Dichloroethene	9.0	0.50 µg/L	1 11/26/2010 16:53	55905
trans-1,2-Dichloroethene	ND	0.50 µg/L	1 11/26/2010 16:53	55905
Methyl tert-butyl ether	ND	0.50 µg/L	1 11/26/2010 16:53	55905
1,1-Dichloroethane	40	0.50 µg/L	1 11/26/2010 16:53	55905
cis-1,2-Dichloroethene	0.48 J	0.50 µg/L	1 11/26/2010 16:53	55905
1,1,1-Trichloroethane	43 E	0.50 µg/L	1 11/26/2010 16:53	55905
1,2-Dichloroethane	ND	0.50 µg/L	1 11/26/2010 16:53	55905
Benzene	ND	0.50 µg/L	1 11/26/2010 16:53	55905
Trichloroethene	21	0.50 µg/L	1 11/26/2010 16:53	55905
Toluene	ND	0.50 µg/L	1 11/26/2010 16:53	55905
1,1,2-Trichloroethane	ND	0.50 µg/L	1 11/26/2010 16:53	55905
Tetrachloroethene	ND	0.50 µg/L	1 11/26/2010 16:53	55905
Chlorobenzene	ND	0.50 µg/L	1 11/26/2010 16:53	55905
Ethylbenzene	ND	0.50 µg/L	1 11/26/2010 16:53	55905
m,p-Xylene	ND	0.50 µg/L	1 11/26/2010 16:53	55905
o-Xylene	ND	0.50 µg/L	1 11/26/2010 16:53	55905
Surrogate: Dibromofluoromethane	103	88-124 %REC	1 11/26/2010 16:53	55905
Surrogate: 1,2-Dichloroethane-d4	104	79-115 %REC	1 11/26/2010 16:53	55905
Surrogate: Toluene-d8	94.6	80-114 %REC	1 11/26/2010 16:53	55905
Surrogate: Bromofluorobenzene	98.5	60-123 %REC	1 11/26/2010 16:53	55905

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

0015

# Mitkem Laboratories

Date: 19-Jan-11

Client: AECOM Technical Services, Inc.

Client Sample ID: TW-3

Lab ID: J2410-05

Project: NOW Corp. Site, 11/10

Collection Date: 11/18/10 12:00

Analyses	Result Qual	RL Units	DF Date Analyzed	Batch ID
SW846 8260C -- VOC by GC-MS (25 mL Purge)			SW8260_25_W	
Vinyl chloride	ND	1.0 µg/L	2 12/02/2010 20:47	56033
Chloroethane	ND	1.0 µg/L	2 12/02/2010 20:47	56033
1,1-Dichloroethene	8.3	1.0 µg/L	2 12/02/2010 20:47	56033
trans-1,2-Dichloroethene	ND	1.0 µg/L	2 12/02/2010 20:47	56033
Methyl tert-butyl ether	ND	1.0 µg/L	2 12/02/2010 20:47	56033
1,1-Dichloroethane	36	1.0 µg/L	2 12/02/2010 20:47	56033
cis-1,2-Dichloroethene	0.45 J	1.0 µg/L	2 12/02/2010 20:47	56033
1,1,1-Trichloroethane	38	1.0 µg/L	2 12/02/2010 20:47	56033
1,2-Dichloroethane	ND	1.0 µg/L	2 12/02/2010 20:47	56033
Benzene	ND	1.0 µg/L	2 12/02/2010 20:47	56033
Trichloroethene	18	1.0 µg/L	2 12/02/2010 20:47	56033
Toluene	ND	1.0 µg/L	2 12/02/2010 20:47	56033
1,1,2-Trichloroethane	ND	1.0 µg/L	2 12/02/2010 20:47	56033
Tetrachloroethene	ND	1.0 µg/L	2 12/02/2010 20:47	56033
Chlorobenzene	ND	1.0 µg/L	2 12/02/2010 20:47	56033
Ethylbenzene	ND	1.0 µg/L	2 12/02/2010 20:47	56033
m,p-Xylene	ND	1.0 µg/L	2 12/02/2010 20:47	56033
o-Xylene	ND	1.0 µg/L	2 12/02/2010 20:47	56033
Surrogate: Dibromofluoromethane	107	88-124 %REC	2 12/02/2010 20:47	56033
Surrogate: 1,2-Dichloroethane-d4	106	79-115 %REC	2 12/02/2010 20:47	56033
Surrogate: Toluene-d8	91.7	80-114 %REC	2 12/02/2010 20:47	56033
Surrogate: Bromofluorobenzene	98.5	60-123 %REC	2 12/02/2010 20:47	56033

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

0015A

# Mitkem Laboratories

Date: 07-Dec-10

Client: AECOM Technical Services, Inc.

Client Sample ID: TRIP BLANK

Lab ID: J2410-06

Project: NOW Corp. Site, 11/10

Collection Date: 11/18/10 0:00

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
SW846 8260C -- VOC by GC-MS (25 mL Purge)							SW8260_25_W
Vinyl chloride	ND		0.50	µg/L		11/26/2010 15:53	55905
Chloroethane	ND		0.50	µg/L		11/26/2010 15:53	55905
1,1-Dichloroethene	ND		0.50	µg/L		11/26/2010 15:53	55905
trans-1,2-Dichloroethene	ND		0.50	µg/L		11/26/2010 15:53	55905
Methyl tert-butyl ether	ND		0.50	µg/L		11/26/2010 15:53	55905
1,1-Dichloroethane	ND		0.50	µg/L		11/26/2010 15:53	55905
cis-1,2-Dichloroethene	ND		0.50	µg/L		11/26/2010 15:53	55905
1,1,1-Trichloroethane	ND		0.50	µg/L		11/26/2010 15:53	55905
1,2-Dichloroethane	ND		0.50	µg/L		11/26/2010 15:53	55905
Benzene	ND		0.50	µg/L		11/26/2010 15:53	55905
Trichloroethene	ND		0.50	µg/L		11/26/2010 15:53	55905
Toluene	ND		0.50	µg/L		11/26/2010 15:53	55905
1,1,2-Trichloroethane	ND		0.50	µg/L		11/26/2010 15:53	55905
Tetrachloroethene	ND		0.50	µg/L		11/26/2010 15:53	55905
Chlorobenzene	ND		0.50	µg/L		11/26/2010 15:53	55905
Ethylbenzene	ND		0.50	µg/L		11/26/2010 15:53	55905
m,p-Xylene	ND		0.50	µg/L		11/26/2010 15:53	55905
o-Xylene	ND		0.50	µg/L		11/26/2010 15:53	55905
Surrogate: Dibromofluoromethane	103		88-124	%REC		11/26/2010 15:53	55905
Surrogate: 1,2-Dichloroethane-d4	103		79-115	%REC		11/26/2010 15:53	55905
Surrogate: Toluene-d8	95.7		80-114	%REC		11/26/2010 15:53	55905
Surrogate: Bromofluorobenzene	98.1		60-123	%REC		11/26/2010 15:53	55905

**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

SW8260 25 W

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

Qualifiers:	ND - Not Detected at the Reporting Limit	S - Recovery outside accepted recovery limits	MDL - Method Detection Limit
10.08 12 A	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	RL - Reporting Limit
			B - Analyte detected in the associated Method Blank

CLIENT: AECOM Technical Services, Inc.

## ANALYTICAL QC SUMMARY REPORT

Work Order: J2410

SW8260 25 W

Project: NOW Corp. Site, 11/10

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

Sample ID: MB-56033	SampType: MBLK	TestCode: SW8260_25_W	Prep Date: 12/02/10 16:59	Run ID: V6_101202A								
Client ID: MB-56033	Batch ID: 56033	Units: µg/L	Analysis Date: 12/02/10 19:16	SeqNo: 1434910								
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:	8.669		0.50	10.00	0	86.7	88	124	0			S
Dibromofluoromethane												
Surrogate: 1,2-	8.330		0.50	10.00	0	83.3	79	115	0			
Dichloroethane-d4												
Surrogate: Toluene-d8	10.75		0.50	10.00	0	107	80	114	0			
Surrogate:	9.416		0.50	10.00	0	94.2	60	123	0			
Bromofluorobenzene												

0018

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  
 m10/08 12 A J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits RL - Reporting Limit

CLIENT: AECOM Technical Services, Inc.

## ANALYTICAL QC SUMMARY REPORT

Work Order: J2410

SW8260\_25\_W

Project: NOW Corp. Site, 11/10

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

Sample ID: LCS-55905	SampType: LCS	TestCode: SW8260_25_W	Prep Date: 11/26/10 13:32	Run ID: V6_101126A								
Client ID: LCS-55905	Batch ID: 55905	Units: µg/L	Analysis Date: 11/26/10 13:52	SeqNo: 1426978								
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	10.91	0.15	0.50	10.00	0	109	77	120	0			
Chloroethane	10.06	0.24	0.50	10.00	0	101	75	135	0			
1,1,1-Dichloroethene	10.27	0.19	0.50	10.00	0	103	81	125	0			
trans-1,2-Dichloroethene	10.19	0.14	0.50	10.00	0	102	60	137	0			
Methyl tert-butyl ether	10.58	0.13	0.50	10.00	0	106	61	134	0			
1,1-Dichloroethane	10.54	0.18	0.50	10.00	0	105	82	120	0			
cis-1,2-Dichloroethene	10.52	0.19	0.50	10.00	0	105	84	116	0			
1,1,1,1-Trichloroethane	10.28	0.11	0.50	10.00	0	103	80	124	0			
1,2-Dichloroethane	10.73	0.16	0.50	10.00	0	107	86	117	0			
Benzene	10.36	0.12	0.50	10.00	0	104	81	121	0			
Trichloroethene	10.29	0.13	0.50	10.00	0	103	74	123	0			
Toluene	10.56	0.14	0.50	10.00	0	106	88	117	0			
1,1,1,2-Trichloroethane	10.18	0.20	0.50	10.00	0	102	83	121	0			
Tetrachloroethene	10.01	0.17	0.50	10.00	0	100	74	115	0			
Chlorobenzene	10.64	0.13	0.50	10.00	0	106	83	112	0			
Ethylbenzene	10.39	0.13	0.50	10.00	0	104	87	110	0			
m,p-Xylene	21.11	0.22	0.50	20.00	0	106	87	114	0			
o-Xylene	10.32	0.17	0.50	10.00	0	103	84	114	0			
Surrogate:	9.998		0.50	10.00	0	100	88	124	0			
Dibromofluoromethane												
Surrogate: 1,2-	9.827		0.50	10.00	0	98.3	79	115	0			
Dichloroethane-d4												
Surrogate: Toluene-d8	9.882		0.50	10.00	0	98.8	80	114	0			
Surrogate:	9.867		0.50	10.00	0	98.7	60	123	0			
Bromofluorobenzene												

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

m10.08.12 A

J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits RL - Reporting Limit

0019

CLIENT: AECOM Technical Services, Inc.

Work Order: J2410

Project: NOW Corp. Site, 11/10

## ANALYTICAL QC SUMMARY REPORT

SW8260\_25\_W

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

Sample ID: LCS-56033	SampType: LCS	TestCode: SW8260_25_W	Prep Date: 12/02/10 16:59	Run ID: V6_101202A								
Client ID: LCS-56033	Batch ID: 56033	Units: µg/L	Analysis Date: 12/02/10 17:46	SeqNo: 1434908								
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Vinyl chloride	8.882	0.15	0.50	10.00	0	88.8	77	120	0			
Chloroethane	8.364	0.24	0.50	10.00	0	83.6	75	135	0			
1,1,1-Dichloroethene	8.650	0.19	0.50	10.00	0	86.5	81	125	0			
trans-1,2-Dichloroethene	8.550	0.14	0.50	10.00	0	85.5	60	137	0			
Methyl tert-butyl ether	8.646	0.13	0.50	10.00	0	86.5	61	134	0			
1,1,1-Dichloroethane	8.676	0.18	0.50	10.00	0	86.8	82	120	0			
cis-1,2-Dichloroethene	8.617	0.19	0.50	10.00	0	86.2	84	116	0			
1,1,1,1-Trichloroethane	8.961	0.11	0.50	10.00	0	89.6	80	124	0			
1,2-Dichloroethane	8.915	0.16	0.50	10.00	0	89.1	86	117	0			
Benzene	8.768	0.12	0.50	10.00	0	87.7	81	121	0			
Trichloroethene	8.974	0.13	0.50	10.00	0	89.7	74	123	0			
Toluene	8.738	0.14	0.50	10.00	0	87.4	88	117	0			
1,1,1,2-Trichloroethane	8.431	0.20	0.50	10.00	0	84.3	83	121	0			S
Tetrachloroethene	9.428	0.17	0.50	10.00	0	94.3	74	115	0			
Chlorobenzene	9.328	0.13	0.50	10.00	0	93.3	83	112	0			
Ethylbenzene	9.216	0.13	0.50	10.00	0	92.2	87	110	0			
m,p-Xylene	18.84	0.22	0.50	20.00	0	94.2	87	114	0			
o-Xylene	9.344	0.17	0.50	10.00	0	93.4	84	114	0			
Surrogate:	9.511		0.50	10.00	0	95.1	88	124	0			
Dibromofluoromethane												
Surrogate: 1,2-Dichloroethane-d4	8.726		0.50	10.00	0	87.3	79	115	0			
Surrogate: Toluene-d8	10.38		0.50	10.00	0	104	80	114	0			
Surrogate:	9.525		0.50	10.00	0	95.3	60	123	0			
Bromofluorobenzene												

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

m10.08.12.A

J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits RL - Reporting Limit

0020

**Mitkem Laboratories****Date:** 03-Dec-10**Client:** AECOM Technical Services, Inc.**Client Sample ID:** EFF-111810**Lab ID:** J2410-01**Project:** NOW Corp. Site, 11/10**Collection Date:** 11/18/10 11:10

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
<b>EPA 1664A -- Oil &amp; Grease, HEM</b>							<b>E1664</b>
Oil & Grease, Total Recoverable	ND		5.0	mg/L	1	12/03/2010 0:00	55977

**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

# Mitkem Laboratories

Date: 03-Dec-10

Client: AECOM Technical Services, Inc.

Client Sample ID: INF-111810

Lab ID: J2410-02

Project: NOW Corp. Site, 11/10

Collection Date: 11/18/10 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	12/03/2010 0:00	55977

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: J2410

E1664

Project: NOW Corp. Site, 11/10

EPA 1664A -- Oil &amp; Grease, HEM

Sample ID: MB-55977	SampType: MBLK	TestCode: E1664	Prep Date: 12/02/10 7:58	Run ID: MANUAL_101203A
Client ID: MB-55977	Batch ID: 55977	Units: mg/L	Analysis Date: 12/03/10 0:00	SeqNo: 1432148
Analyte	Result	MDL	SPK value	SPK Ref Val
Oil & Grease, Total Recoverable	ND	1.2	5.0	RPD Ref Val
				%RPD RPDLimit
				Qual

Sample ID: LCS-55977	SampType: LCS	TestCode: E1664	Prep Date: 12/02/10 7:58	Run ID: MANUAL_101203A
Client ID: LCS-55977	Batch ID: 55977	Units: mg/L	Analysis Date: 12/03/10 0:00	SeqNo: 1432146
Analyte	Result	MDL	SPK value	SPK Ref Val
Oil & Grease, Total Recoverable	37.70	1.2	40.00	RPD Ref Val
				%RPD RPDLimit
				Qual

Sample ID: LCSD-55977	SampType: LCSD	TestCode: E1664	Prep Date: 12/02/10 7:58	Run ID: MANUAL_101203A
Client ID: LCSD-55977	Batch ID: 55977	Units: mg/L	Analysis Date: 12/03/10 0:00	SeqNo: 1432147
Analyte	Result	MDL	SPK value	SPK Ref Val
Oil & Grease, Total Recoverable	38.00	1.2	40.00	RPD Ref Val
				%RPD RPDLimit
				Qual

0023

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  
m10.08.12.A J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits RL - Reporting Limit

**Mitkem Laboratories**

Date: 06-Dec-10

Client: AECOM Technical Services, Inc.

Client Sample ID: EFF-111810

Lab ID: J2410-01

Project: NOW Corp. Site, 11/10

Collection Date: 11/18/10 11:10

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
<b>SW846 6010C -- Metals by ICP</b>							<b>SW6010_W</b>
Aluminum	ND		200	µg/L		1 11/27/2010 13:35	55883
Arsenic	ND		20	µg/L		1 11/27/2010 13:35	55883
Barium	85	J	200	µg/L		1 11/27/2010 13:35	55883
Chromium	ND		20	µg/L		1 11/27/2010 13:35	55883
Copper	ND		25	µg/L		1 11/27/2010 13:35	55883
Iron	ND		200	µg/L		1 11/27/2010 13:35	55883
Manganese	58		50	µg/L		1 11/27/2010 13:35	55883
Nickel	ND		50	µg/L		1 11/27/2010 13:35	55883
Zinc	13	J	50	µg/L		1 11/27/2010 13:35	55883
<b>SW846 7470A -- Mercury by FIA</b>							<b>SW7470</b>
Mercury	ND		0.20	µg/L		1 12/04/2010 10:47	56054

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

**Mitkem Laboratories****Date:** 06-Dec-10**Client:** AECOM Technical Services, Inc.**Client Sample ID:** INF-111810**Lab ID:** J2410-02**Project:** NOW Corp. Site, 11/10**Collection Date:** 11/18/10 11:25

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
<b>SW846 6010C -- Metals by ICP</b>							<b>SW6010_W</b>
Aluminum	ND		200	µg/L	1	11/27/2010 13:38	55883
Arsenic	ND		20	µg/L	1	11/27/2010 13:38	55883
Barium	91	J	200	µg/L	1	11/27/2010 13:38	55883
Chromium	ND		20	µg/L	1	11/27/2010 13:38	55883
Copper	ND		25	µg/L	1	11/27/2010 13:38	55883
Iron	57	J	200	µg/L	1	11/27/2010 13:38	55883
Manganese	170		50	µg/L	1	11/27/2010 13:38	55883
Nickel	ND		50	µg/L	1	11/27/2010 13:38	55883
Zinc	9.8	J	50	µg/L	1	11/27/2010 13:38	55883
<b>SW846 7470A -- Mercury by FIA</b>							<b>SW7470</b>
Mercury	ND		0.20	µg/L	1	12/04/2010 10:49	56054

**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: J2410

SW6010\_W

Project: NOW Corp. Site, 11/10

SW846 6010C -- Metals by ICP

Sample ID: MB-55883	SampType: MBLK	TestCode: SW6010_W	Prep Date: 11/24/10 10:00	Run ID: OPTIMA2_101127A								
Client ID: MB-55883	Batch ID: 55883	Units: µg/L	Analysis Date: 11/27/10 12:10	SeqNo: 1426531								
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	ND	66	200									
Arsenic	ND	4.3	20									
Barium	ND	1.1	200									
Chromium	ND	0.64	20									
Copper	ND	3.6	30									
Iron	ND	31	200									
Manganese	ND	10	50									
Nickel	ND	0.85	50									
Zinc	ND	4.9	50									

Sample ID: LCS-55883	SampType: LCS	TestCode: SW6010_W	Prep Date: 11/24/10 10:00	Run ID: OPTIMA2_101127A								
Client ID: LCS-55883	Batch ID: 55883	Units: µg/L	Analysis Date: 11/27/10 12:13	SeqNo: 1426532								
Analyte	Result	MDL	RL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminum	8666	66	200	9100	0	95.2	80	120	0			
Arsenic	481.9	4.3	20	455.0	0	106	80	120	0			
Barium	8797	1.1	200	9100	0	96.7	80	120	0			
Chromium	869.9	0.64	20	910.0	0	95.6	80	120	0			
Copper	1095	3.6	30	1130	0	96.9	80	120	0			
Iron	4463	31	200	4550	0	98.1	80	120	0			
Manganese	2225	10	50	2270	0	98.0	80	120	0			
Nickel	2172	0.85	50	2270	0	95.7	80	120	0			
Zinc	2178	4.9	50	2270	0	95.9	80	120	0			

0026

# ANALYTICAL QC SUMMARY REPORT

CLIENT: AECOM Technical Services, Inc.

Work Order: J2410

Project: NOW Corp. Site, 11/10

SW7470

SW846 7470A -- Mercury by FIA

Sample ID: MB-56054	Sample Type: MBLK	Test Code: SW7470	Prep Date: 12/03/10 10:45	Run ID: FIMS1_101204C
Client ID: MB-56054	Batch ID: 56054	Units: µg/L	Analysis Date: 12/04/10 10:23	SeqNo: 1433183
Analyte	Result	MDL	SPK value	SPK Ref Val
Mercury	ND	0.028	0.20	0

Sample ID: LCS-56054	Sample Type: LCS	Test Code: SW7470	Prep Date: 12/03/10 10:45	Run ID: FIMS1_101204C
Client ID: LCS-56054	Batch ID: 56054	Units: µg/L	Analysis Date: 12/04/10 10:24	SeqNo: 1433184
Analyte	Result	MDL	SPK value	SPK Ref Val
Mercury	4.695	0.028	4.550	0

Sample ID: LCSD-56054	Sample Type: LCSD	Test Code: SW7470	Prep Date: 12/03/10 10:45	Run ID: FIMS1_101204C
Client ID: LCSD-56054	Batch ID: 56054	Units: µg/L	Analysis Date: 12/04/10 11:11	SeqNo: 1433212
Analyte	Result	MDL	SPK value	SPK Ref Val
Mercury	4.614	0.028	4.550	4.695

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 quantitation limits      R - RPD outside accepted recovery limits      RL - Reporting Limit

**Mitkem Laboratories****Date:** 10-Dec-10**Client:** AECOM Technical Services, Inc.**Client Sample ID:** EFF-111810**Lab ID:** J2410-01**Project:** NOW Corp. Site, 11/10**Collection Date:** 11/18/10 11:10

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
<b>SM 2540C -- TOTAL DISSOLVED SOLIDS</b>							<b>SM2540_TDS</b>
Total Dissolved Solids	540		10	mg/L	1	11/22/2010 6:30	55776
<b>SM 2540D -- TOTAL SUSPENDED SOLIDS</b>							<b>SM2540_TSS</b>
Total Suspended Solids	ND		10	mg/L	1	11/22/2010 1:38	55777
<b>SW846 9012B -- Total Cyanide</b>							<b>SW9012_W</b>
Cyanide	ND		10	ug/L	1	12/01/2010 14:59	55992

**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

0028

**Mitkem Laboratories****Date:** 10-Dec-10**Client:** AECOM Technical Services, Inc.**Client Sample ID:** INF-111810**Lab ID:** J2410-02**Project:** NOW Corp. Site, 11/10**Collection Date:** 11/18/10 11:25

Analyses	Result	Qual	RL	Units	DF	Date Analyzed	Batch ID
<b>SM 2540C -- TOTAL DISSOLVED SOLIDS</b>							<b>SM2540_TDS</b>
Total Dissolved Solids	350		10	mg/L	1	11/22/2010 7:10	55776
<b>SM 2540D -- TOTAL SUSPENDED SOLIDS</b>							<b>SM2540_TSS</b>
Total Suspended Solids	ND		10	mg/L	1	11/22/2010 3:55	55777
<b>SW846 9012B -- Total Cyanide</b>							<b>SW9012_W</b>
Cyanide	ND		10	ug/L	1	12/01/2010 15:02	55992

**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: J2410

SM2540\_TDS

Project: NOW Corp. Site, 11/10

SM 2540C -- TOTAL DISSOLVED SOLIDS

Sample ID: MB-55776	Sample Type: MBLK	Test Code: SM2540_TDS	Prep Date: 11/21/10 16:30	Run ID: MANUAL_101121E	
Client ID: MB-55776	Batch ID: 55776	Units: mg/L	Analysis Date: 11/21/10 16:30	SeqNo: 1429675	
Analyte	Result	MDL	SPK value	SPK Ref Val	%RPD RPDLimit Qual
	ND	10	0	0	0
Total Dissolved Solids		10	0	0	0
Sample ID: LCS-55776	Sample Type: LCS	Test Code: SM2540_TDS	Prep Date: 11/21/10 16:30	Run ID: MANUAL_101121E	
Client ID: LCS-55776	Batch ID: 55776	Units: mg/L	Analysis Date: 11/21/10 17:10	SeqNo: 1429676	
Analyte	Result	MDL	SPK value	SPK Ref Val	%RPD RPDLimit Qual
	400.0	10	410.0	0	0
Total Dissolved Solids		10	97.6	80	120

0030

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  
m10.08.12.A J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits RL - Reporting Limit

**CLIENT:**

J2410

**SM 2540D -- TOTAL SUSPENDED SOLIDS**

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
m10.08.12.A	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	RL - Reporting Limit	

AECOM Technical Services, Inc.

**Work Order:** J2410

**Project:** NOW Corp. Site, 11/10

SW9012 W

SW846 9012B -- Total Cyanide

Sample ID: MB-55992	SampType: MBLK	TestCode: SW9012_W	Prep Date: 12/01/10 10:00	Run ID: LACHAT1_101201A
Client ID: MB-55992	Batch ID: 55992	Units: ug/L	Analysis Date: 12/01/10 14:54	SeqNo: 1431133
Analyte	Result	MDL	SPK value	SPK Ref Val
Cyanide	ND	7.5	20	
Sample ID: LCS-55992	SampType: LCS	TestCode: SW9012_W	Prep Date: 12/01/10 10:00	Run ID: LACHAT1_101201A
Client ID: LCS-55992	Batch ID: 55992	Units: ug/L	Analysis Date: 12/01/10 14:56	SeqNo: 1431134
Analyte	Result	MDL	SPK value	SPK Ref Val
Cyanide	102.5	7.5	20	

**SOCIAL**

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
m10.08.12.A	J - Analyte detected below quantitation limits	R - RPD outside accepted recovery limits	RL - Reporting Limit	

**WorkOrder: J2410****11/19/2010 17:35****Mitkem Laboratories**

Client ID: EARTH\_NY

Project: NOW Corp. Site

WO Name: NOW Corp. Site

Location: NOW\_CORP,

Comments: N/A

Case:

SDG:

HC Due: 12/07/10

Fax Due:

Fax Report: ☐

Report Level: LEVEL 2

Special Program:

EDD:

PO: 94017.02

Lab Samp ID	Client Sample ID	Collection Date	Date Recv'd	Matrix	Test Code	Samp / Lab Test Comments	HF	HT	MS	SEL	Storage
J2410-01A	EFF-111810	11/18/2010 11:10	11/19/2010	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
J2410-01B	EFF-111810	11/18/2010 11:10	11/19/2010	Aqueous	SM2540_TDS	/					D3
J2410-01B	EFF-111810	11/18/2010 11:10	11/19/2010	Aqueous	SM2540_TSS	/					D3
J2410-01C	EFF-111810	11/18/2010 11:10	11/19/2010	Aqueous	SW6010_W	/ See SEL list				Y	M4
J2410-01C	EFF-111810	11/18/2010 11:10	11/19/2010	Aqueous	SW7470	/ See SEL list					M4
J2410-01D	EFF-111810	11/18/2010 11:10	11/19/2010	Aqueous	SW9012_W	/				Y	D3
J2410-01E	EFF-111810	11/18/2010 11:10	11/19/2010	Aqueous	E1664	/					D3
J2410-02A	INF-111810	11/18/2010 11:25	11/19/2010	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
J2410-02B	INF-111810	11/18/2010 11:25	11/19/2010	Aqueous	SM2540_TDS	/					D3
J2410-02B	INF-111810	11/18/2010 11:25	11/19/2010	Aqueous	SM2540_TSS	/					D3
J2410-02C	INF-111810	11/18/2010 11:25	11/19/2010	Aqueous	SW6010_W	/ See SEL list				Y	M4
J2410-02C	INF-111810	11/18/2010 11:25	11/19/2010	Aqueous	SW7470	/ See SEL list					M4
J2410-02D	INF-111810	11/18/2010 11:25	11/19/2010	Aqueous	SW9012_W	/				Y	D3
J2410-02E	INF-111810	11/18/2010 11:25	11/19/2010	Aqueous	E1664	/					D3
J2410-03A	TW-1	11/18/2010 11:50	11/19/2010	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
J2410-04A	TW-2A	11/18/2010 11:55	11/19/2010	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
J2410-05A	TW-3	11/18/2010 12:00	11/19/2010	Aqueous	SW8260_25_W	/ use for VOCs,				Y	VOA
J2410-06A	TRIP BLANK	11/18/2010 00:00	11/19/2010	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



## MITKEM LABORATORIES

## Sample Condition Form

Page 1 of 1

Received By: <u>SN</u>		Reviewed By: <u>CAW</u>		Date: <u>11/19/10</u>		Mitkem Work Order #: <u>J2410</u>	
Client Project: <u>Nash Corp</u>				Client: <u>Earth NS</u>			Soil Headspace or Air Bubble ≥ 1/4"
		Lab Sample ID		Preservation (pH)			VOA Matrix
				HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	HCl	NaOH
				H <sub>3</sub> PO <sub>4</sub>			
1) Cooler Sealed	<u>Yes</u> / No	<u>J2410</u>	<u>01</u>	<u>C2</u>			<u>712</u>
			<u>02</u>	<u>C2</u>			<u>712</u>
2) Custody Seal(s)	<u>Present</u> / Absent		<u>03</u>				
	<u>Coolers</u> / Bottles		<u>04</u>				
	<u>Intact</u> / Broken		<u>05</u>				
		<u>J2410</u>	<u>06</u>				<u>H</u>
3) Custody Seal Number(s)	<u>NA</u>						
4) Chain-of-Custody	<u>Present</u> / Absent						
5) Cooler Temperature	<u>4 °C</u>						
IR Temp Gun ID	<u>MT-1</u>						
Coolant Condition	<u>ice</u>						
6) Airbill(s)	<u>Present</u> / Absent						
Airbill Number(s)	<u>FedEx</u>						
	<u>869079239254</u>						
7) Samples Bottles	<u>Intact</u> / Broken / Leaking						
8) Date Received	<u>11/19/10</u>						
9) Time Received	<u>9:15</u>						
Preservative Name/Lot No.:							

VOA Matrix Key:

US = Unpreserved Soil	A = Air
UA = Unpreserved Aqueous	H = HCl
M = MeOH	E = Encore
N = NaHSO <sub>4</sub>	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

0035

**Last Page of Data Report**