

US EPA ARCHIVE DOCUMENT

**MWH**

September 6, 2007

Ms. Diana Engeman
Remedial Project Manager
Superfund Division
U.S. Environmental Protection Agency, Region VII
901 North 5th Street
Kansas City, KS 66101

40273452



Superfund

MWH #1913678.0101

RE: Additional Evaluation of the Western Extent of the
Proposed Technical Impracticability Zone
Former Peoples Natural Gas Site
Dubuque, Iowa

Dear Ms. Engeman:

On behalf of MidAmerican Energy Company (MidAmerican), MWH has prepared this Additional Evaluation Report for the former Peoples Natural Gas (PNG) site located in Dubuque, Iowa. The additional site characterization activities performed in June 2007 included direct-push assessment of the western edge of the proposed technical impracticability zone (TI Zone), and installation and sampling of an additional groundwater monitoring well. The work was conducted in accordance with the May 14, 2007, Work Plan for Additional Evaluation of the Western Extent of the Proposed Technical Impracticability Zone (Work Plan). The overall goal of the additional characterization activities at the PNG site was to further evaluate the proposed western extent of the TI Zone. The proposed TI Zone was identified in the May 2006 Technical Impracticability Evaluation Report (TI Report) for the site.

Additional Soil Borings/Sampling

Three soil borings, SB-AA, SB-BB, and SB-CC, were advanced west of Highway 61 and south of 11th Street (Figure 1). The three soil borings were advanced into the silty sand aquifer by Below Ground Surface, Inc. (BGS) of Lawrence, Kansas using a track-mounted Geoprobe[®] rig. Each boring was advanced to a depth of 30 feet below ground surface (bgs) and was logged in accordance with the United Soil Classification System (USCS). Copies of the soil boring logs and monitoring well construction diagrams for each soil boring are provided in Attachment A. Soil samples were collected using a 5-foot continuous sampler with disposable acetate sleeves. Soil samples were collected directly from the acetate sleeve for on-site screening with a photoionization detector (PID) and off-site laboratory analysis. The samples for on-site screening were placed in plastic bags. The samples collected for laboratory analysis were placed directly into clean, labeled, laboratory-supplied containers. The laboratory samples were then placed into an iced cooler to prevent or retard alteration of chemicals in the sample. Two samples each from SB-AA and SB-BB, and three samples from SB-CC, were selected for laboratory analysis

of benzene, toluene, ethylbenzene, and xylenes (BTEX) and polynuclear aromatic hydrocarbons (PAHs) based on the PID readings and field observations. The selected samples were transported to TestAmerica, Inc. of Cedar Falls, Iowa for laboratory analysis.

Soil Analytical Results. Analytical results of the soil sampling are located in Attachment B and summarized in Table 1. The PAH concentrations for the three soil borings were compared to soil cleanup goals for the 1995, 1996, and 1998 removal actions as set forth in the September 1991 Record of Decision (ROD) (USEPA, 1991). During the removal actions, soil with no visible impact, and a total PAH concentration greater than 500 milligrams per kilogram (mg/kg), and/or a total carcinogenic PAH concentration greater than 100 mg/kg, was used as backfill below 6 feet bgs. All concentrations detected in soil borings SB-AA, SB-BB, and SB-CC are below the cleanup levels for soils greater than 6 feet.

Additional Monitoring Well Installation/Sampling

One additional groundwater monitoring well, designated W-128, was installed at the western edge of the proposed TI Zone (Figure 1). The additional monitoring well was intended to provide improved delineation of the off-site groundwater impact in the silty sand aquifer west of the site. Monitoring well W-128 is screened in the silty sand aquifer from 25 to 20 feet bgs (Figure 1) and was installed next to soil boring SB-BB, which was judged to have the highest field-determined level of impact. Monitoring well W-128 was developed and sampled using a dedicated Waterra inertial pump. The monitoring well was installed, developed, and sampled in accordance with the Work Plan. Copies of the soil boring logs and monitoring well construction diagrams for the monitoring well are provided in Attachment A.

No variations to the Work Plan were noted with regard to equipment decontamination or the handling of investigation-derived wastes (IDW) generated during the additional evaluation activities. The monitoring well and soil boring elevations will be surveyed into the monitoring well network during the next semiannual groundwater sampling event.

Groundwater Analytical Results. Samples were collected from the newly installed monitoring well W-128 on July 10, 2007, approximately two weeks after well development. The laboratory analytical reports are presented in Attachment B and summarized in Table 2. The primary sample or associated blind duplicate exceeded Remediation Goals (RG) for groundwater for the following five analytes: benzo(a)anthracene, benzo(b)fluoranthene, chrysene, benzo(k)fluoranthene, and benzo(a)pyrene (Table 2).

Discussion of the Western Extent of the TI Zone

The detected impacts to soil in soil borings SB-AA, SB-BB, and SB-CC; and groundwater in monitoring well W-128 indicate impact from the PNG site is present in the western extent of the TI Zone. The lower confining unit, which serves as a boundary between the silty sand aquifer and alluvial aquifer, was encountered in the three soil borings up to 1 foot thick below the Silty Sand aquifer. Groundwater flow from W-128 is southeast toward the site.

Although the detections in soil are below the historic removal action goals, RGs were exceeded for five of the analytes detected in groundwater. Based on the additional investigation activities, no adjustment to the western extent of the TI Zone appears warranted.

If you have any questions regarding the site, please contact Michelle Wei of MidAmerican or me.

Sincerely,



Kevin G. Armstrong, C.P.G.
Project Manager

/jeb:kga:vas

Enclosures

Table 1 – Soil Analytical Results

Table 2 – Groundwater Analytical Results

Figure 1 – June 2007 Soil Boring and Monitoring Well Location

Attachment A – Soil Boring Logs and Monitoring Well Construction Diagram

Attachment B – Laboratory Analytical Reports

cc: Michelle Wei, MidAmerican Energy Company
Matt Culp, Iowa Department of Natural Resources
Jim Rost, Iowa Department of Transportation
Barry Lindahl, City of Dubuque
Don Vogt, City of Dubuque

TABLE 1

SOIL ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Sample Identifier		SBAA-SL-10'-12.5'	SBAA-SL-20'-22.5'	SBBB-SL-12.5'-15'	SBBB-SL-20'-22.5'	SBCC-SL-10'-12.5'	SBCC-SL-12.5'-15'	SBCC-SL-22.5'-25'
Date Collected		26-Jun-07	26-Jun-07	26-Jun-07	26-Jun-07	26-Jun-07	26-Jun-07	26-Jun-07
Starting Depth (feet)		10.0	20.0	12.5	20.0	10	12.5	22.5
Ending Depth (feet)		12.5	22.5	15.0	22.5	12.5	15.0	25.0
Analyte	Units			W-128	W-128			
Benzene	mg/kg	<0.000527	<0.000352	0.000333	<0.000211	<0.000329	<0.000310	<0.000480
Ethylbenzene	mg/kg	0.000889	0.000462	0.00166	0.000277	0.000412	0.000504	0.00063
Toluene	mg/kg	0.000823	0.00066	0.002	0.000501	0.000823	0.000795	0.00054
Xylenes	mg/kg	0.00421	0.00209	0.0136	0.00129	0.00169	0.00287	0.00315
Acenaphthene	mg/kg	<3.23	<2.89	440	<2.83	<2.99	<3.12	<2.96
Acenaphthylene	mg/kg	<2.15	<1.93	<2.29	<1.88	<1.99	<2.08	<1.97
Anthracene	mg/kg	<0.161	0.61	202	<0.141	8.96	0.25	<0.148
Benzo(a)anthracene	mg/kg	1.53	10.9	<0.158	<0.130	18.8	<0.143	<0.136
Benzo(a)pyrene	mg/kg	3.61	<1.02	<1.22	<1.00	15.2	<1.11	<1.05
Benzo(b)fluoranthene	mg/kg	3.78	19.9	<0.287	<0.236	36.2	<0.260	1.1
Benzo(g,h,i)perylene	mg/kg	<0.323	9.32	<0.344	<0.283	39.6	<0.312	<0.296
Benzo(k)fluoranthene	mg/kg	<0.269	7.9	<0.287	<0.236	<0.249	<0.260	<0.247
Chrysene	mg/kg	<0.403	10.1	<0.430	<0.353	29	<0.390	<0.370
Dibenzo(a,h)anthracene	mg/kg	<0.282	1.02	<0.301	<0.247	<0.262	<0.273	<0.259
Fluoranthene	mg/kg	<1.30	19.4	<1.39	<1.14	33.1	<1.26	<1.20
Fluorene	mg/kg	<0.430	<0.386	451	<0.377	<0.399	<0.416	<0.395
Indeno(1,2,3cd)pyrene	mg/kg	<0.363	13.2	<0.387	<0.318	31.2	<0.351	<0.333
Naphthalene	mg/kg	<1.34	<1.20	125	<1.18	7.67	<1.30	<1.23
Phenanthrene	mg/kg	<0.927	4.32	493	<0.813	19.7	<0.897	<0.851
Pyrene	mg/kg	<1.14	19.9	<1.22	<1.00	93.2	<1.11	<1.05
Percent Solids	%	74.4	83	69.8	84.9	80.3	76.9	81.1

Notes:

mg/kg = Milligram per kilogram.

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
MIDAMERICAN ENERGY COMPANY
PEOPLES NATURAL GAS SITE
DUBUQUE, IOWA

Analyte	Units	Sample Identifier		W-128 Silty Sand 25 10-Jul-07	W-128 Duplicate Silty Sand 25 10-Jul-07
		Aquifer	Total Depth (feet) Sample Date Remediation Goal		
Benzene.	µg/L		5	1.00 U	1.00 U
Toluene	µg/L		2,000	1.00 U	1.00 U
Ethylbenzene	µg/L		700	1.00 U	1.00 U
Xylenes	µg/L		10,000	3.00 U	3.00 U
Acenaphthene	µg/L		--	4.16	4.64
Acenaphthylene	µg/L		--	0.0850 U	0.0850 U
Anthracene	µg/L		--	0.405	0.672
Benzo(a)anthracene	µg/L		0.1	0.189	0.443
Benzo(b)fluoranthene	µg/L		0.2	0.292	0.587
Benzo(k)fluoranthene	µg/L		0.2	0.139 J	0.301
Benzo(a)pyrene	µg/L		0.2	0.197	0.467
Benzo(g,h,i)perylene	µg/L		--	0.114	0.288
Chrysene	µg/L		0.2	0.218	0.529
Dibenzo(a,h)anthracene	µg/L		0.2	0.0100 U	0.0327
Fluoranthene	µg/L		--	1.53	2.53
Fluorene	µg/L		--	0.685	0.902
Indeno(1,2,3cd)pyrene	µg/L		0.4	0.165	0.387
Naphthalene	µg/L		100	0.354	0.54
Phenanthrene	µg/L		--	0.329	0.779
Pyrene	µg/L		--	2.35	4.8

Notes:

U = Analyte not detected at or above reporting limit.

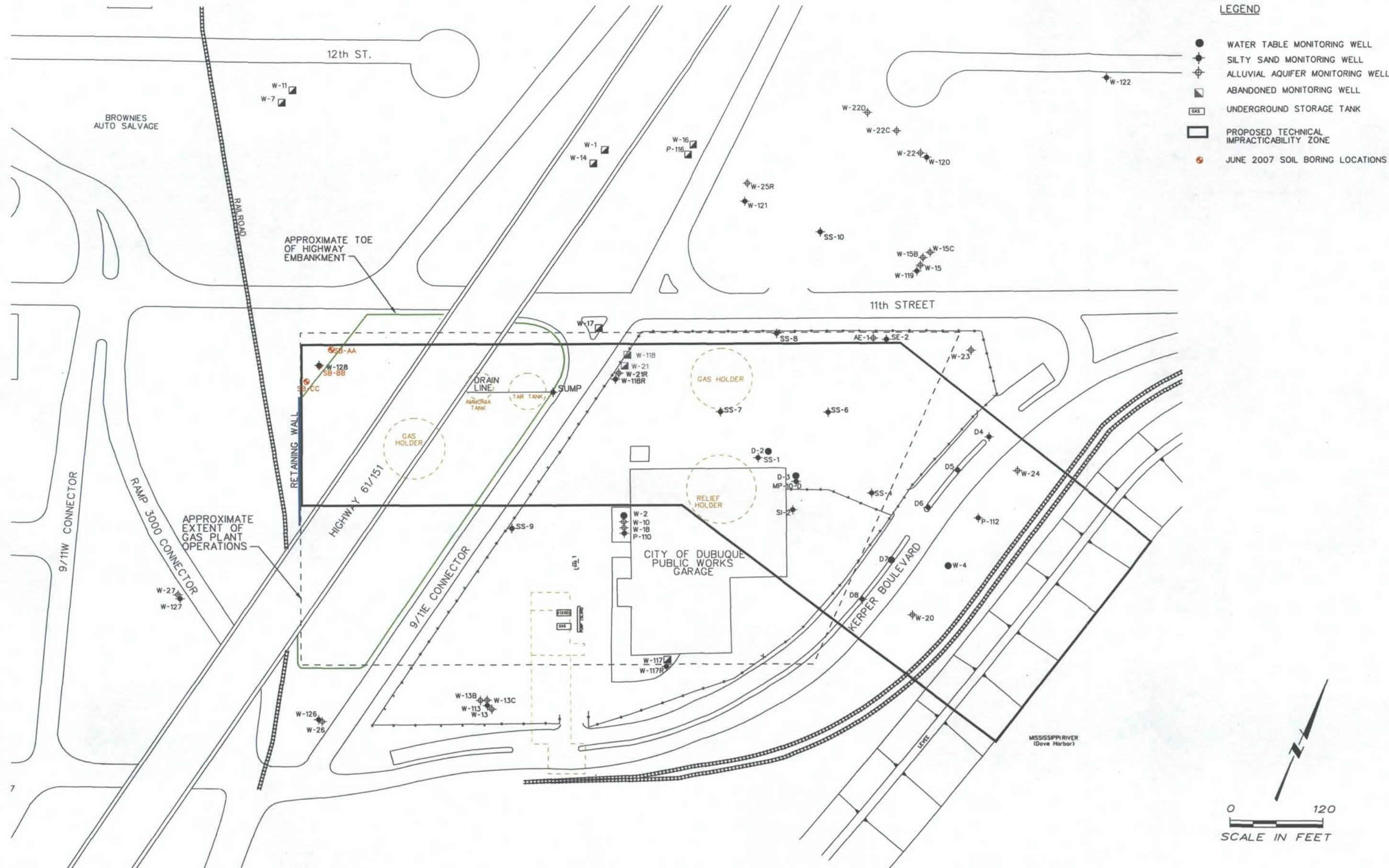
J = Estimated concentration below the reporting limit

µg/l = Micrograms per liter.

Shaded cells indicate values that exceed the applicable Remediation Goal.

-- = Remediation Goal not established.

\\usiwi01802\projects\CAD\MidAmerican\Dubuque-PNG\abmwi-0607.dgn 25-JUL-2007



Des Moines
Iowa

MIDAMERICAN ENERGY COMPANY
PEOPLE'S NATURAL GAS SITE
DUBUQUE, IOWA

JUNE 2007 SOIL BORING
AND MONITORING WELL LOCATION

FIGURE

1

ATTACHMENT A


MWH

Drilling Log and Well Construction Diagram

 Soil Boring **SB-AA**

Page: 1 of 1

 Project Peoples Natural Gas Site

 Owner MidAmerican Energy Company

 Location Dubuque, Iowa

 Project Number 1913678.0102

 Surface Elev. NA Hole Depth 30.0 ft Hole Diameter 2.25 in North NA

 Top of Casing NA Water Level Initial ▽ Static ▽ East NA

 Screen: Diameter NA Length NA Type/Size NA

 Casing: Diameter NA Length NA Type NA

 Drill Co. Below Ground Surface Inc. Drilling Method Direct Push

 Driller Mike Ocsody Drillers License Number 40702 Log By Janet Baldwin Checked By K. Armstrong

 Start Date 6/26/07 Completion Date 6/26/07 Well Permit # NA

Bentonite Chips Bentonite Granules Grout Portland Cement Sand Pack Sand Pack

COMMENTS

Borehole plugged with bentonite following completion of soil sampling.

Depth (ft)	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.
0	0.0	55%			SP	Topsoil, black, dry, friable.
						Poorly graded sand, yellowish orange, loose, dry, very fine grained, well sorted, (Fill).
						Gravel; sand, and brick rubble, orange brick with dark brown to black matrix, dry (Fill).
						No Recovery
5	0.0	30%				Gravel, sand, and brick rubble, orange brick with dark brown to black matrix, dry (Fill).
					SW SM	Well graded silty sand, dark brown, loose, moist, sand fraction is fine grained and poorly sorted.
						No Recovery.
10	70.8	60% Yes			SW SM	Well graded silty sand, dark brown, loose/soft, wet, Sand fraction is fine grained and moderately sorted.
					CL ML	Silty clay, black, soft, friable, wet.
					SP SM	Silty sand, black, loose, wet, fine grained sand, moderately sorted, odor.
					CL ML	Silty clay to clay, dark grey, soft, moist, medium plasticity, odor.
						No Recovery.
15	0.0	75%			CL ML	Silty clay to clay, dark grey, soft, moist, medium plasticity, odor.
					SP SM	silty sand, greyish to yellowish orange, soft, wet, medium plasticity, no odor.
						Clayey silt, greyish light brown, soft to very soft, wet, high plasticity.
20	0.0	45% Yes			MH	Silty clayey sand, olive grey to brownish gray, soft, wet, well sorted, fine to medium grained sand, low plasticity, odor.
					SC SM	Well graded sand, dark gray to black, loose, wet, fine to coarse grained sand, non-cohesive, odor.
					SW	No Recovery.
25	0.0	35%			CL ML	Silty sand, olive gray, loose, wet, fine grained sand, over clayey silt, greyish to yellowish orange, very soft, wet, low plasticity - though very malleable.
					CL ML	Clayey silt, olive gray, very soft, wet, low to medium plasticity.
					SW	Well graded sand, olive gray, wet, loose to dense, coarse to fine grained sand, poorly sorted.
						No Recovery.
30						End of boring = 30 feet b.g.s.



MWH

Drilling Log and Well Construction Diagram

Monitoring Well

W-128/SB-BB

Page: 1 of 1

Project Peoples Natural Gas Site

Owner MidAmerican Energy Company

Location Dubuque, Iowa

Project Number 1913678.0102

Surface Elev. 0.00 ft

Hole Depth 25.0 ft

Hole Diameter 8.0 in

North NA

Top of Casing NA

Water Level Initial ▽

Static ▽

East NA

Screen: Diameter 2 in

Length 5.0 ft

Type/Size PVC/0.01 in

Casing: Diameter 2 in

Length 20.0 ft

Type Sch 40 PVC

Drill Co. Below Ground Surface Inc.

Drilling Method Direct Push for SB-BB and 8 in. Hollow Stem Auger for W-128

Driller Mike Ocsody

Drillers License Number 40702

Log By Janet Baldwin

Checked By K. Armstrong

Start Date 6/26/07

Completion Date 6/26/07

Well Permit # NA



Bentonite Chips



Bentonite Granules



Grout



Portland Cement



Sand Pack



Sand Pack

COMMENTS

Direct push borehole SB-BB was advanced as a pilot hole to a depth of 30 feet bgs and plugged with bentonite following completion of soil sampling. Monitoring well W-128 was installed to a depth of 25 feet bgs next to SB-BB.

Depth (ft)	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.	Well Completion	Elevation (ft)
0								0.0
52.8	50%				SP	Topsoil		
					SP	Sand, yellowish orange, loose, moist, fine grained, well sorted (Fill).		
					SP	Rubble, mainly orange oxidized colored brick and gravel (Fill).		
					SP	Sand, brown, loose, moist, very fine grained, well sorted (Fill).		
						No Recovery.		
5								-5
69.8	40%				SC	Brick and cinder rubble (Fill).		
					SC	Sand and gravel sized limestone (Fill).		
					SC	Large pieces of wood, light tannish grey (Fill).		
					SC	Clayey sand, black, soft, moist, fine grained sand, odor, (Fill).		
						No Recovery.		
10								-10
0.0	55%				CL ML	Silty clay, dark grey to black, soft, moist, low plasticity, strong odor (fuel).		
						No Recovery.		
86.1	Yes							-15
	100%				CL ML	Silty clay, dark grey to black, soft, wet, low plasticity, strong odor.		
					CL ML	Clayey silt, olive gray, soft, moist to wet, medium plasticity.		
20								-20
26.5	50%				SP SM	Silty sand, olive gray, dense, wet, medium grained sand, low-cohesion.		
0.0	Yes					No Recovery.		
25								-25
0.0	50%				SW	Well graded sand, dense, wet, fine to coarse grained sand, poorly sorted.		
					SP	Poorly graded silty sand, dense, wet, very fine to fine grained sand, well sorted.		
					SM	Well graded sand, dense, wet, fine to coarse grained sand, poorly sorted.		
					SW	No Recovery.		
30						End of boring = 30 feet b.g.s.		-30

DRILLING LOG WELLLO-1.GPJ MWH IA.GDT 9/5/07


MWH

Drilling Log and Well Construction Diagram

Soil Boring

SB-CC

Page: 1 of 1

 Project Peoples Natural Gas Site

 Owner MidAmerican Energy Company

 Location Dubuque, Iowa

 Project Number 1913678.0102

 Surface Elev. NA

 Hole Depth 30.0 ft

 Hole Diameter 2.25 in

 North NA

 Top of Casing NA

 Water Level Initial ▽

 Static ▽

 East NA

 Screen: Diameter NA

 Length NA

 Type/Size NA

 Casing: Diameter NA

 Length NA

 Type NA

 Drill Co. Below Ground Surface Inc.

 Drilling Method Direct Push

 Driller Mike Ocsody

 Drillers License Number 40702

 Log By Janet Baldwin

 Checked By K. Armstrong

 Start Date 6/26/07

 Completion Date 6/26/07

 Well Permit # NA


Bentonite Chips



Bentonite Granules



Grout



Portland Cement



Sand Pack



Sand Pack

COMMENTS

Borehole plugged with bentonite following completion of soil sampling.

Depth (ft)	PID (ppm)	Sample ID % Recovery	Blow Count Recovery	Graphic Log	USCS	Description (Color, Moisture, Texture, Structure, Odor) Geologic Descriptions are Based on the USCS.
0	0.0					Fill, same as SB-AA and SB-BB
5						No Recovery.
10	0.0	Yes - DP01			SP SM	Silty sand, yellowish orange, loose, dry, very fine to fine grained sand, well sorted.
15	33.9	Yes - DP02			CH	Clay to silty clay, dark gray, soft to stiff, moist, high plasticity, slight odor.
20	0.0				CL ML	Clayey silt, olive gray, soft, wet, medium plasticity, no odor.
25	0.0	Yes			CL ML	Clayey silt, olive gray to light greyish brown, soft, wet, medium plasticity.
25	0.0				SP SM	Silty sand with trace clay, olive gray, soft to very soft, wet, non-plastic.
25	0.0				SP	Poorly graded sand, olive gray to light brown, dense, wet, coarse sand to very fine sand.
25	0.0				SC	Sandy clay, olive gray, soft, wet, fine grained sand, low plasticity.
25	0.0				SW	Sand, tan, dense, wet, poorly sorted, well rounded, with fine to medium sized gravel.
30						No Recovery
30						End of boring = 30 feet b.g.s.

ATTACHMENT B

July 09, 2007

RECEIVED
JUL 11 2007
MW/IOWA**Client:**MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322**Work Order:** CQF1530
Project Name: MEC - Dubuque
Project Number: 1913678.0102**Attn:** Kevin Armstrong**Date Received:** 06/27/07

An executed copy of the chain of custody is also included as an addendum to this report

If you have any questions relating to this analytical report please contact your Laboratory Project Manager at 1-(800)750-2401

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
Trip Blank	CQF1530-01	06/26/07 07:00
EB01-GW-0607	CQF1530-02	06/26/07 14:00
DP01-SL-10'-12.5'	CQF1530-03	06/26/07
DP02-SL-12.5'-15'	CQF1530-04	06/26/07
SBAA-SL-10'-12.5'	CQF1530-05	06/26/07 09:15
SBAA-SL-10'-12.5'	CQF1530-06	06/26/07 09:15
SBAA-SL-20'-22.5'	CQF1530-07	06/26/07 09:35
SBAA-SL-20'-22.5'	CQF1530-08	06/26/07 09:35
SBBB-SL-12.5'-15'	CQF1530-09	06/26/07 10:15
SBBB-SL-12.5'-15'	CQF1530-10	06/26/07 10:15
SBBB-SL-20'-22.5'	CQF1530-11	06/26/07 10:40
SBBB-SL-20'-22.5'	CQF1530-12	06/26/07 10:40
SBCC-SL-10'-12.5'	CQF1530-13	06/26/07 11:15
SBCC-SL-10'-12.5'	CQF1530-14	06/26/07 11:15
SBCC-SL-12.5'-15'	CQF1530-15	06/26/07 11:20
SBCC-SL-12.5'-15'	CQF1530-16	06/26/07 11:20
SBCC-SL-22.5'-25'	CQF1530-17	06/26/07 11:25
SBCC-SL-22.5'-25'	CQF1530-18	06/26/07 11:25

Samples were received into laboratory at a temperature of 3 °C.

NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

Please refer to the Temperature and Sample Receipt form that is included with this report for additional information regarding the condition of samples at the time of receipt by the laboratory.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Iowa Certification Number: 007

TestAmerica

ANALYTICAL TESTING CORPORATION

704 Enterprise Drive Cedar Falls, IA 50613 * 800-750-2401 * Fax 319-277-2425

MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322
Kevin Armstrong

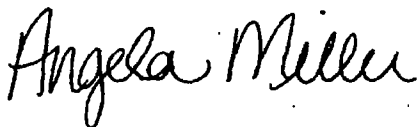
Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.

TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample analyzed.

Approved By:



TestAmerica - Cedar Falls, IA
Angie Miller
Project Coordinator

MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322
Kevin Armstrong

Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-01 (Trip Blank - Water)					Sampled: 06/26/07 07:00			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
UST Volatile Compounds by GC/MS										
Benzene	<1.00		ug/L		1.00	1	06/30/07 15:53	DMD	7070067	SW
Toluene	<1.00		ug/L		1.00	1	06/30/07 15:53	DMD	7070067	8260B/OA-1 SW
Ethylbenzene	<1.00		ug/L		1.00	1	06/30/07 15:53	DMD	7070067	8260B/OA-1 SW
Xylenes, total	<3.00		ug/L		3.00	1	06/30/07 15:53	DMD	7070067	8260B/OA-1 SW
Surr: Dibromofluoromethane (80-120%)	85 %									
	91 %									
	90 %									
Surr: 4-Bromofluorobenzene (65-115%)										
VOC Preservation Check										
pH	<2.00		units		2.00	1	07/02/07 19:41	dmd	7070073	SW

MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322
Kevin Armstrong

Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-02 (EB01-GW-0607 - Ground Water)					Sampled: 06/26/07 14:00			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
UST Volatile Compounds by GC/MS										
Benzene	<1.00		ug/L		1.00	1	07/01/07 09:23	DMD	7070068	SW 8260B/OA-1
Toluene	<1.00		ug/L		1.00	1	07/01/07 09:23	DMD	7070068	SW 8260B/OA-1
Ethylbenzene	<1.00		ug/L		1.00	1	07/01/07 09:23	DMD	7070068	SW 8260B/OA-1
Xylenes, total	<3.00		ug/L		3.00	1	07/01/07 09:23	DMD	7070068	SW 8260B/OA-1
Surr: Dibromofluoromethane (80-120%)	87 %									
Surr: Toluene-d8 (80-110%)	94 %									
Surr: 4-Bromofluorobenzene (65-115%)	92 %									
VOC Preservation Check										
pH	<2.00		units		2.00	1	07/02/07 19:41	dmd	7070073	SW
PNA compounds by HPLC										
Acenaphthene	<0.0490 L5		ug/L	0.0490	0.190	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Acenaphthylene	<0.0850 L5		ug/L	0.0850	0.190	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Anthracene	<0.0100		ug/L	0.0100	0.190	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Benzo (a) anthracene	<0.00300		ug/L	0.00300	0.130	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Benzo (b) fluoranthene	<0.0130		ug/L	0.0130	0.100	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Benzo (k) fluoranthene	<0.0150		ug/L	0.0150	0.140	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Benzo (a) pyrene	<0.0320		ug/L	0.0320	0.190	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Benzo (g,h,i) perylene	<0.00900		ug/L	0.00900	0.100	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Chrysene	<0.00500		ug/L	0.00500	0.100	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Dibenzo (a,h) anthracene	<0.0100		ug/L	0.0100	0.100	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Fluoranthene	<0.0100		ug/L	0.0100	0.190	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Fluorene	<0.0100		ug/L	0.0100	0.190	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Indeno (1,2,3-cd) pyrene	<0.00700		ug/L	0.00700	0.100	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Naphthalene	0.0964 J		ug/L	0.0540	0.100	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Phenanthrene	0.0304 J		ug/L	0.00700	0.100	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Pyrene	<0.0190		ug/L	0.0190	0.190	1.03	07/03/07 12:02	ccc	7070069	SW 8310
Surr: 2-Fluorobiphenyl (15-110%)	84 %									

MWH - DES MOINES
11153 Aurora Avenue
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Kevin Armstrong

Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-03 (DP01-SL-10'-12.5' - Soil)					Sampled: 06/26/07			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin					Phone		515-253-0830			
UST Volatile Compounds by GC/MS										
Benzene	<0.000290		mg/kg	0.000290	0.00905	1.81	07/01/07 15:21	MMK	7070014	SW 8260B/OA-1
Toluene	0.000941 J		mg/kg	0.000290	0.00905	1.81	07/01/07 15:21	MMK	7070014	SW 8260B/OA-1
Ethylbenzene	0.000507 J		mg/kg	0.000134	0.00905	1.81	07/01/07 15:21	MMK	7070014	SW 8260B/OA-1
Xylenes, total	0.00275 J		mg/kg	0.000398	0.0272	1.81	07/01/07 15:21	MMK	7070014	SW 8260B/OA-1
Surr: Dibromofluoromethane (75-125%) 105 %										
Surr: Toluene-d8 (65-130%) 101 %										
Surr: 4-Bromofluorobenzene (70-125%) 93 %										

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ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-04 (DP02-SL-12.5'-15' - Soil)					Sampled: 06/26/07			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
General Chemistry Parameters										
% Solids	76.7		%		0.100	1	06/29/07 16:08	mkr	7061343	SM 2540 G
PNA compounds by HPLC										
Acenaphthene	<3.13	L5	ug/kg dry	3.13	54.8	0.979	07/03/07 20:01	eee	7070065	SW 8310
Acenaphthylene	<2.09	L5, M1	ug/kg dry	2.09	54.8	0.979	07/03/07 20:01	eee	7070065	SW 8310
Anthracene	<0.156		ug/kg dry	0.156	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Benzo (a) anthracene	<0.143		ug/kg dry	0.143	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Benzo (b) fluoranthene	<0.261		ug/kg dry	0.261	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Benzo (k) fluoranthene	<0.261		ug/kg dry	0.261	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Benzo (a) pyrene	<1.11		ug/kg dry	1.11	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Benzo (g,h,i) perylene	<0.313		ug/kg dry	0.313	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Chrysene	<0.391		ug/kg dry	0.391	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Dibenzo (a,h) anthracene	<0.274		ug/kg dry	0.274	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Fluoranthene	<1.26		ug/kg dry	1.26	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Fluorene	<0.417		ug/kg dry	0.417	45.6	0.979	07/03/07 20:01	eee	7070065	SW 8310
Indeno (1,2,3-cd) pyrene	<0.352		ug/kg dry	0.352	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Naphthalene	<1.30		ug/kg dry	1.30	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Phenanthrene	<0.900		ug/kg dry	0.900	22.2	0.979	07/03/07 20:01	eee	7070065	SW 8310
Pyrene	<1.11		ug/kg dry	1.11	54.8	0.979	07/03/07 20:01	eee	7070065	SW 8310
Surr: 2-Fluorobiphenyl (20-115%)	80 %									

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Received: 06/27/07
Reported: 07/09/07 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-05 (SBAA-SL-10'-12.5' - Soil)					Sampled: 06/26/07 09:15			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
UST Volatile Compounds by GC/MS										
Benzene	<0.000527		mg/kg	0.000527	0.0165	3.29	07/01/07 19:30	MMK	7070014	SW
Toluene	0.000823 J		mg/kg	0.000527	0.0165	3.29	07/01/07 19:30	MMK	7070014	8260B/OA-1 SW
Ethylbenzene	0.000889 J		mg/kg	0.000244	0.0165	3.29	07/01/07 19:30	MMK	7070014	8260B/OA-1 SW
Xylenes, total	0.00421 J		mg/kg	0.000724	0.0494	3.29	07/01/07 19:30	MMK	7070014	8260B/OA-1 SW
Surr: Dibromofluoromethane (75-125%) 104 %										
Surr: Toluene-d8 (65-130%) 100 %										
Surr: 4-Bromofluorobenzene (70-125%) 95 %										

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Received: 06/27/07
Reported: 07/09/07, 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-06 (SBAA-SL-10'-12.5' - Soil)					Sampled: 06/26/07 09:15			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
General Chemistry Parameters										
% Solids	74.4		%		0.100	1	06/29/07 16:08	mkr	7061343	SM 2540 G
PNA compounds by HPLC										
Acenaphthene	<3.23	L5	ug/kg dry	3.23	56.5	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Acenaphthylene	<2.15	L5	ug/kg dry	2.15	56.5	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Anthracene	<0.161		ug/kg dry	0.161	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Benzo (a) anthracene	1.53	J	ug/kg dry	0.148	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Benzo (b) fluoranthene	3.78	J	ug/kg dry	0.269	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Benzo (k) fluoranthene	<0.269		ug/kg dry	0.269	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Benzo (a) pyrene	3.61	J	ug/kg dry	1.14	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Benzo (g,h,i) perylene	<0.323		ug/kg dry	0.323	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Chrysene	<0.403		ug/kg dry	0.403	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Dibenzo (a,h) anthracene	<0.282		ug/kg dry	0.282	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Fluoranthene	<1.30		ug/kg dry	1.30	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Fluorene	<0.430		ug/kg dry	0.430	47.0	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Indeno (1,2,3-cd) pyrene	<0.363		ug/kg dry	0.363	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Naphthalene	<1.34		ug/kg dry	1.34	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Phenanthrene	<0.927		ug/kg dry	0.927	22.8	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Pyrene	<1.14		ug/kg dry	1.14	56.5	0.985	07/03/07 20:30	ccc	7070065	SW 8310
Surr: 2-Fluorobiphenyl (20-115%)	89 %									

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Received: 06/27/07
Reported: 07/09/07 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-07 (SBAA-SL-20'-22.5' - Soil)					Sampled: 06/26/07 09:35			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin					Phone		515-253-0830			
UST Volatile Compounds by GC/MS										
Benzene	<0.000352		mg/kg	0.000352	0.0110	2.2	07/01/07 20:02	MMK	7070014	SW 8260B/OA-1
Toluene	0.000660 J		mg/kg	0.000352	0.0110	2.2	07/01/07 20:02	MMK	7070014	SW 8260B/OA-1
Ethylbenzene	0.000462 J		mg/kg	0.000163	0.0110	2.2	07/01/07 20:02	MMK	7070014	SW 8260B/OA-1
Xylenes, total	0.00209 J		mg/kg	0.000484	0.0330	2.2	07/01/07 20:02	MMK	7070014	SW 8260B/OA-1
Surr: Dibromofluoromethane (75-125%) 101 %										
Surr: Toluene-d8 (65-130%) 103 %										
Surr: 4-Bromofluorobenzene (70-125%) 94 %										

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Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-08 (SBAA-SL-20'-22.5' - Soil)					Sampled: 06/26/07 09:35			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
General Chemistry Parameters										
% Solids	83.0		%		0.100	1	06/29/07 16:08	mkr	7061343	SM 2540 G
Volatile Organic Compounds by HPLC										
Acenaphthene	<2.89	L5	ug/kg dry	2.89	50.6	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Acenaphthylene	<1.93	L5	ug/kg dry	1.93	50.6	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Anthracene	0.610	J	ug/kg dry	0.145	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Benzo (a) anthracene	10.9	J	ug/kg dry	0.133	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Benzo (b) fluoranthene	19.9	J	ug/kg dry	0.241	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Benzo (k) fluoranthene	7.90	J	ug/kg dry	0.241	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Benzo (a) pyrene	<1.02		ug/kg dry	1.02	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Benzo (g,h,i) perylene	9.32	J	ug/kg dry	0.289	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Chrysene	10.1	J	ug/kg dry	0.361	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Dibenzo (a,h) anthracene	1.02	J	ug/kg dry	0.253	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Fluoranthene	19.4	J	ug/kg dry	1.17	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Fluorene	<0.386		ug/kg dry	0.386	42.2	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Indeno (1,2,3-cd) pyrene	13.2	J	ug/kg dry	0.325	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Naphthalene	<1.20		ug/kg dry	1.20	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Phenanthrene	4.32	J	ug/kg dry	0.831	20.5	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Pyrene	19.9	J	ug/kg dry	1.02	50.6	0.981	07/03/07 20:58	ccc	7070065	SW 8310
Surr: 2-Fluorobiphenyl (20-115%)	87 %									

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ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-09 (SBBB-SL-12.5'-15' - Soil)					Sampled: 06/26/07 10:15			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
UST Volatile Compounds by GC/MS										
Benzene	0.000333	J	mg/kg	0.000280	0.00875	1.75	07/02/07 20:44	MMK	7070080	SW 8260B/OA-1
Toluene	0.00200	J	mg/kg	0.000280	0.00875	1.75	07/02/07 20:44	MMK	7070080	SW 8260B/OA-1
Ethylbenzene	0.00166	J	mg/kg	0.000130	0.00875	1.75	07/02/07 20:44	MMK	7070080	SW 8260B/OA-1
Xylenes, total	0.0136	J	mg/kg	0.000385	0.0263	1.75	07/02/07 20:44	MMK	7070080	SW 8260B/OA-1
Surr: Dibromofluoromethane (75-125%) 87 %										
Surr: Toluene-d8 (65-130%) 95 %										
Surr: 4-Bromofluorobenzene (70-125%) 104 %										

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Reported: 07/09/07 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-10 (SBBB-SL-12.5'-15' - Soil)					Sampled: 06/26/07 10:15			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin					Phone		515-253-0830			
General Chemistry Parameters										
% Solids	69.8		%		0.100	1	06/29/07 16:08	mkr	7061343	SM 2540 G
PNA compounds by HPLC										
Acenaphthene	440	L5	ug/kg dry	3.44	60.2	0.998	07/03/07 21:26	eee	7070065	SW 8310
Acenaphthylene	<2.29	L5	ug/kg dry	2.29	60.2	0.998	07/03/07 21:26	eee	7070065	SW 8310
Anthracene	202		ug/kg dry	0.860	122	4.99	07/06/07 11:52	eee	7070065	SW 8310
Benzo (a) anthracene	<0.158		ug/kg dry	0.158	24.4	0.998	07/03/07 21:26	ccc	7070065	SW 8310
Benzo (b) fluoranthene	<0.287		ug/kg dry	0.287	24.4	0.998	07/03/07 21:26	ccc	7070065	SW 8310
Benzo (k) fluoranthene	<0.287		ug/kg dry	0.287	24.4	0.998	07/03/07 21:26	ccc	7070065	SW 8310
Benzo (a) pyrene	<1.22		ug/kg dry	1.22	24.4	0.998	07/03/07 21:26	ccc	7070065	SW 8310
Benzo (g,h,i) perylene	<0.344		ug/kg dry	0.344	24.4	0.998	07/03/07 21:26	ccc	7070065	SW 8310
Chrysene	<0.430		ug/kg dry	0.430	24.4	0.998	07/03/07 21:26	eee	7070065	SW 8310
Dibenzo (a,h) anthracene	<0.301		ug/kg dry	0.301	24.4	0.998	07/03/07 21:26	eee	7070065	SW 8310
Fluoranthene	<1.39		ug/kg dry	1.39	24.4	0.998	07/03/07 21:26	ccc	7070065	SW 8310
Fluorene	451		ug/kg dry	0.458	50.1	0.998	07/03/07 21:26	eee	7070065	SW 8310
Indeno (1,2,3-cd) pyrene	<0.387		ug/kg dry	0.387	24.4	0.998	07/03/07 21:26	ccc	7070065	SW 8310
Naphthalene	125		ug/kg dry	1.43	24.4	0.998	07/03/07 21:26	ccc	7070065	SW 8310
Phenanthrene	493		ug/kg dry	4.94	122	4.99	07/06/07 11:52	ccc	7070065	SW 8310
Pyrene	<1.22		ug/kg dry	1.22	60.2	0.998	07/03/07 21:26	ccc	7070065	SW 8310
Surr: 2-Fluorobiphenyl (20-115%)	67 %									

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Received: 06/27/07
Reported: 07/09/07 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-11 (SBBB-SL-20'-22.5' - Soil)					Sampled: 06/26/07 10:40			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
UST Volatile Compounds by GC/MS										
Benzene	<0.000211		mg/kg	0.000211	0.00660	1.32	07/01/07 20:33	MMK	7070014	SW 8260B/OA-1
Toluene	0.000501 J		mg/kg	0.000211	0.00660	1.32	07/01/07 20:33	MMK	7070014	SW 8260B/OA-1
Ethylbenzene	0.000277 J		mg/kg	0.0000977	0.00660	1.32	07/01/07 20:33	MMK	7070014	SW 8260B/OA-1
Xylenes, total	0.00129 J		mg/kg	0.000290	0.0198	1.32	07/01/07 20:33	MMK	7070014	SW 8260B/OA-1
Surr: Dibromofluoromethane (75-125%) 107 %										
Surr: Toluene-d8 (65-130%) 103 %										
Surr: 4-Bromofluorobenzene (70-125%) 93 %										

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ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-12 (SBBB-SL-20'-22.5' - Soil)					Sampled: 06/26/07 10:40			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
General Chemistry Parameters										
% Solids	84.9		%		0.100	1	06/29/07 16:08	mkr	7061343	SM 2540 G
PNA compounds by HPLC										
Acenaphthene	<2.83	L5	ug/kg dry	2.83	49.5	0.987	07/03/07 23:47	eee	7070065	SW 8310
Acenaphthylene	<1.88	L5	ug/kg dry	1.88	49.5	0.987	07/03/07 23:47	eee	7070065	SW 8310
Anthracene	<0.141		ug/kg dry	0.141	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Benzo (a) anthracene	<0.130		ug/kg dry	0.130	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Benzo (b) fluoranthene	<0.236		ug/kg dry	0.236	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Benzo (k) fluoranthene	<0.236		ug/kg dry	0.236	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Benzo (a) pyrene	<1.00		ug/kg dry	1.00	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Benzo (g,h,i) perylene	<0.283		ug/kg dry	0.283	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Chrysene	<0.353		ug/kg dry	0.353	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Dibenzo (a,h) anthracene	<0.247		ug/kg dry	0.247	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Fluoranthene	<1.14		ug/kg dry	1.14	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Fluorene	<0.377		ug/kg dry	0.377	41.2	0.987	07/03/07 23:47	eee	7070065	SW 8310
Indeno (1,2,3-cd) pyrene	<0.318		ug/kg dry	0.318	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Naphthalene	<1.18		ug/kg dry	1.18	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Phenanthrene	<0.813		ug/kg dry	0.813	20.0	0.987	07/03/07 23:47	eee	7070065	SW 8310
Pyrene	<1.00		ug/kg dry	1.00	49.5	0.987	07/03/07 23:47	eee	7070065	SW 8310
Surr: 2-Fluorobiphenyl (20-115%)	86 %									

MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322
Kevin Armstrong

Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-13 (SBCC-SL-10'-12.5' - Soil)					Sampled: 06/26/07 11:15			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone 515-253-0830						
UST Volatile Compounds by GC/MS										
Benzene	<0.000329		mg/kg	0.000329	0.0103	2.06	07/01/07 21:04	MMK	7070014	SW 8260B/OA-1
Toluene	0.000823 J		mg/kg	0.000329	0.0103	2.06	07/01/07 21:04	MMK	7070014	SW 8260B/OA-1
Ethylbenzene	0.000412 J		mg/kg	0.000152	0.0103	2.06	07/01/07 21:04	MMK	7070014	SW 8260B/OA-1
Xylenes, total	0.00169 J		mg/kg	0.000453	0.0309	2.06	07/01/07 21:04	MMK	7070014	SW 8260B/OA-1
Surr: Dibromofluoromethane (75-125%) 109 %										
Surr: Toluene-d8 (65-130%) 103 %										
Surr: 4-Bromofluorobenzene (70-125%) 93 %										

MWH - DES MOINES
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Kevin Armstrong

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Reported: 07/09/07 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Seq/ Analyst	Batch	Method
Sample ID: CQF1530-14 (SBCC-SL-10'-12.5' - Soil)					Sampled: 06/26/07 11:15			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
General Chemistry Parameters										
% Solids	80.3		%		0.100	1	06/29/07 16:08	mkr	7061343	SM 2540 G
PNA compounds by HPLC										
Acenaphthene	<2.99	L5	ug/kg dry	2.99	52.3	0.969	07/04/07 00:15	eee	7070065	SW 8310
Acenaphthylene	<1.99	L5	ug/kg dry	1.99	52.3	0.969	07/04/07 00:15	eee	7070065	SW 8310
Anthracene	8.96	J	ug/kg dry	0.149	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Benzo (a) anthracene	18.8	J	ug/kg dry	0.137	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Benzo (b) fluoranthene	36.2		ug/kg dry	0.249	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Benzo (k) fluoranthene	<0.249		ug/kg dry	0.249	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Benzo (a) pyrene	15.2	J	ug/kg dry	1.06	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Benzo (g,h,i) perylene	39.6		ug/kg dry	0.299	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Chrysene	29.0		ug/kg dry	0.374	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Dibenzo (a,h) anthracene	<0.262		ug/kg dry	0.262	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Fluoranthene	33.1		ug/kg dry	1.21	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Fluorene	<0.399		ug/kg dry	0.399	43.6	0.969	07/04/07 00:15	eee	7070065	SW 8310
Indeno (1,2,3-cd) pyrene	31.2		ug/kg dry	0.336	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Naphthalene	7.67	J	ug/kg dry	1.25	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Phenanthrene	19.7	J	ug/kg dry	0.859	21.2	0.969	07/04/07 00:15	eee	7070065	SW 8310
Pyrene	93.2		ug/kg dry	1.06	52.3	0.969	07/04/07 00:15	eee	7070065	SW 8310
Surr: 2-Fluorobiphenyl (20-115%)	85 %									

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ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-15 (SBCC-SL-12.5'-15' - Soil)					Sampled: 06/26/07 11:20			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
UST Volatile Compounds by GC/MS										
Benzene	<0.000310		mg/kg	0.000310	0.00969	1.94	07/01/07 21:36	MMK	7070014	SW 8260B/OA-1
Toluene	0.000795 J		mg/kg	0.000310	0.00969	1.94	07/01/07 21:36	MMK	7070014	SW 8260B/OA-1
Ethylbenzene	0.000504 J		mg/kg	0.000143	0.00969	1.94	07/01/07 21:36	MMK	7070014	SW 8260B/OA-1
Xylenes, total	0.00287 J		mg/kg	0.000426	0.0291	1.94	07/01/07 21:36	MMK	7070014	SW 8260B/OA-1
Surr: Dibromofluoromethane (75-125%) 107 %										
Surr: Toluene-d8 (65-130%) 101 %										
Surr: 4-Bromofluorobenzene (70-125%) 94 %										

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ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-16 (SBCC-SL-12.5'-15' - Soil)					Sampled: 06/26/07 11:20			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
General Chemistry Parameters										
% Solids	76.9		%		0.100	1	06/29/07 16:08	mkr	7061343	SM 2540 G
PNA compounds by HPLC										
Acenaphthene	<3.12		ug/kg dry	3.12	54.6	0.99	07/06/07 11:24	eee	7070065	SW 8310
Acenaphthylene	<2.08		ug/kg dry	2.08	54.6	0.99	07/06/07 11:24	eee	7070065	SW 8310
Anthracene	0.250 J		ug/kg dry	0.156	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Benzo (a) anthracene	<0.143		ug/kg dry	0.143	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Benzo (b) fluoranthene	<0.260		ug/kg dry	0.260	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Benzo (k) fluoranthene	<0.260		ug/kg dry	0.260	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Benzo (a) pyrene	<1.11		ug/kg dry	1.11	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Benzo (g,h,i) perylene	<0.312		ug/kg dry	0.312	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Chrysene	<0.390		ug/kg dry	0.390	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Dibenzo (a,h) anthracene	<0.273		ug/kg dry	0.273	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Fluoranthene	<1.26		ug/kg dry	1.26	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Fluorene	<0.416		ug/kg dry	0.416	45.5	0.99	07/06/07 11:24	eee	7070065	SW 8310
Indeno (1,2,3-cd) pyrene	<0.351		ug/kg dry	0.351	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Naphthalene	<1.30		ug/kg dry	1.30	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Phenanthrene	<0.897		ug/kg dry	0.897	22.1	0.99	07/06/07 11:24	eee	7070065	SW 8310
Pyrene	<1.11		ug/kg dry	1.11	54.6	0.99	07/06/07 11:24	eee	7070065	SW 8310
Surr: 2-Fluorobiphenyl (20-115%)	78 %									

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Reported: 07/09/07 11:26

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-17 (SBCC-SL-22.5'-25' - Soil)					Sampled: 06/26/07 11:25			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin					Phone		515-253-0830			
UST Volatile Compounds by GC/MS										
Benzene	<0.000480		mg/kg	0.000480	0.0150	3	07/01/07 22:07	MMK	7070014	SW
Toluene	0.000540 J		mg/kg	0.000480	0.0150	3	07/01/07 22:07	MMK	7070014	8260B/OA-1 SW
Ethylbenzene	0.000630 J		mg/kg	0.000222	0.0150	3	07/01/07 22:07	MMK	7070014	8260B/OA-1 SW
Xylenes, total	0.00315 J		mg/kg	0.000660	0.0450	3	07/01/07 22:07	MMK	7070014	8260B/OA-1 SW
Surr: Dibromofluoromethane (75-125%) 97 %										
Surr: Toluene-d8 (65-130%) 103 %										
Surr: 4-Bromofluorobenzene (70-125%) 93 %										

MWH - DES MOINES
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ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQF1530-18 (SBCC-SL-22.5'-25' - Soil)					Sampled: 06/26/07 11:25			Recvd: 06/27/07 19:10		
Sampled By: Janet Baldwin				Phone		515-253-0830				
General Chemistry Parameters										
% Solids	81.1		%		0.100	1	06/29/07 16:08	mkr	7061343	SM 2540 G
PNA compounds by HPLC										
Acenaphthene	<2.96	L5	ug/kg dry	2.96	51.8	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Acenaphthylene	<1.97	L5	ug/kg dry	1.97	51.8	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Anthracene	<0.148		ug/kg dry	0.148	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Benzo (a) anthracene	<0.136		ug/kg dry	0.136	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Benzo (b) fluoranthene	1.10	J	ug/kg dry	0.247	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Benzo (k) fluoranthene	<0.247		ug/kg dry	0.247	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Benzo (a) pyrene	<1.05		ug/kg dry	1.05	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Benzo (g,h,i) perylene	<0.296		ug/kg dry	0.296	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Chrysene	<0.370		ug/kg dry	0.370	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Dibenzo (a,h) anthracene	<0.259		ug/kg dry	0.259	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Fluoranthene	<1.20		ug/kg dry	1.20	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Fluorene	<0.395		ug/kg dry	0.395	43.2	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Indeno (1,2,3-cd) pyrene	<0.333		ug/kg dry	0.333	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Naphthalene	<1.23		ug/kg dry	1.23	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Phenanthrene	<0.851		ug/kg dry	0.851	21.0	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Pyrene	<1.05		ug/kg dry	1.05	51.8	0.989	07/04/07 01:11	ccc	7070065	SW 8310
Surr: 2-Fluorobiphenyl (20-115%)	90 %									

MWH - DES MOINES
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SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
PNA compounds by HPLC							
SW 8310	7070069	CQF1530-02	970	2	07/02/07 17:29	MDM	SW 3510C_HPLC
SW 8310	7070065	CQF1530-04	31	2	07/02/07 15:49	MDM	SW 3550B
SW 8310	7070065	CQF1530-06	30	2	07/02/07 15:49	MDM	SW 3550B
SW 8310	7070065	CQF1530-08	31	2	07/02/07 15:49	MDM	SW 3550B
SW 8310	7070065	CQF1530-10	30	2	07/02/07 15:49	MDM	SW 3550B
SW 8310	7070065	CQF1530-10RE1	30	2	07/02/07 15:49	MDM	SW 3550B
SW 8310	7070065	CQF1530-12	30	2	07/02/07 15:49	MDM	SW 3550B
SW 8310	7070065	CQF1530-14	31	2	07/02/07 15:49	MDM	SW 3550B
SW 8310	7070065	CQF1530-16	30	2	07/02/07 15:49	MDM	SW 3550B
SW 8310	7070065	CQF1530-18	30	2	07/02/07 15:49	MDM	SW 3550B

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LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
UST Volatile Compounds by GC/MS													
Benzene	7070014		mg/kg	3.000343	0.0107	<0.000343							
Toluene	7070014		mg/kg	3.000343	0.0107	<0.000343							
Ethylbenzene	7070014		mg/kg	3.000155	0.0107	0.000236							J
Xylenes, total	7070014		mg/kg	3.000472	0.0322	0.000815							J
Surrogate: Dibromofluoromethane	7070014		ug/L					97		75-125			
Surrogate: Toluene-d8	7070014		ug/L					102		65-130			
Surrogate: 4-Bromofluorobenzene	7070014		ug/L					97		70-125			
Benzene	7070067		ug/L	N/A	1.00	<1.00							
Toluene	7070067		ug/L	N/A	1.00	<1.00							
Ethylbenzene	7070067		ug/L	N/A	1.00	<1.00							
Xylenes, total	7070067		ug/L	N/A	3.00	<3.00							
Surrogate: Dibromofluoromethane	7070067		ug/L					83		80-120			
Surrogate: Toluene-d8	7070067		ug/L					92		80-110			
Surrogate: 4-Bromofluorobenzene	7070067		ug/L					89		65-115			
Benzene	7070068		ug/L	N/A	1.00	<1.00							
Toluene	7070068		ug/L	N/A	1.00	<1.00							
Ethylbenzene	7070068		ug/L	N/A	1.00	<1.00							
Xylenes, total	7070068		ug/L	N/A	3.00	<3.00							
Surrogate: Dibromofluoromethane	7070068		ug/L					86		80-120			
Surrogate: Toluene-d8	7070068		ug/L					89		80-110			
Surrogate: 4-Bromofluorobenzene	7070068		ug/L					88		65-115			
Benzene	7070080		mg/kg	3.000253	0.00791	<0.000253							
Toluene	7070080		mg/kg	3.000253	0.00791	<0.000253							
Ethylbenzene	7070080		mg/kg	3.000117	0.00791	0.000601							J
Xylenes, total	7070080		mg/kg	3.000348	0.0237	0.00168							J
Surrogate: Dibromofluoromethane	7070080		ug/L					108		75-125			
Surrogate: Toluene-d8	7070080		ug/L					101		65-130			
Surrogate: 4-Bromofluorobenzene	7070080		ug/L					100		70-125			
PNA compounds by HPLC													
Acenaphthene	7070065		ug/kg wet	2.40	42.0	<2.40							
Acenaphthylene	7070065		ug/kg wet	1.60	42.0	<1.60							
Anthracene	7070065		ug/kg wet	0.120	17.0	<0.120							
Benzo (a) anthracene	7070065		ug/kg wet	0.110	17.0	<0.110							
Benzo (b) fluoranthene	7070065		ug/kg wet	0.200	17.0	<0.200							
Benzo (k) fluoranthene	7070065		ug/kg wet	0.200	17.0	<0.200							
Benzo (a) pyrene	7070065		ug/kg wet	0.850	17.0	<0.850							
Benzo (g,h,i) perylene	7070065		ug/kg wet	0.240	17.0	<0.240							
Chrysene	7070065		ug/kg wet	0.300	17.0	<0.300							
Dibenzo (a,h) anthracene	7070065		ug/kg wet	0.210	17.0	<0.210							
Fluoranthene	7070065		ug/kg wet	0.970	17.0	<0.970							
Fluorene	7070065		ug/kg wet	0.320	35.0	<0.320							

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LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Spike Result Level Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
PNA compounds by HPLC												
Indeno (1,2,3-cd) pyrene	7070065	ug/kg wet	0.270	17.0	<0.270							
Naphthalene	7070065	ug/kg wet	1.00	17.0	<1.00							
Phenanthrene	7070065	ug/kg wet	0.690	17.0	<0.690							
Pyrene	7070065	ug/kg wet	0.850	42.0	<0.850							
Surrogate: 2-Fluorobiphenyl	7070065	ug/kg wet					83		20-115			
Acenaphthene	7070069	ug/L	0.0490	0.190	<0.0490							
Acenaphthylene	7070069	ug/L	0.0850	0.190	<0.0850							
Anthracene	7070069	ug/L	0.0100	0.100	<0.0100							
Benzo (a) anthracene	7070069	ug/L	0.00300	0.100	<0.00300							
Benzo (b) fluoranthene	7070069	ug/L	0.0130	0.100	<0.0130							
Benzo (k) fluoranthene	7070069	ug/L	0.0150	0.100	<0.0150							
Benzo (a) pyrene	7070069	ug/L	0.0320	0.100	<0.0320							
Benzo (g,h,i) perylene	7070069	ug/L	0.00900	0.100	<0.00900							
Chrysene	7070069	ug/L	0.00500	0.100	<0.00500							
Dibenzo (a,h) anthracene	7070069	ug/L	0.0100	0.100	<0.0100							
Fluoranthene	7070069	ug/L	0.0100	0.100	<0.0100							
Fluorene	7070069	ug/L	0.0100	0.100	<0.0100							
Indeno (1,2,3-cd) pyrene	7070069	ug/L	0.00700	0.100	<0.00700							
Naphthalene	7070069	ug/L	0.0540	0.100	<0.0540							
Phenanthrene	7070069	ug/L	0.00700	0.100	<0.00700							
Pyrene	7070069	ug/L	0.0190	0.100	<0.0190							
Surrogate: 2-Fluorobiphenyl	7070069	ug/L					83		15-110			

MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322
Kevin Armstrong

Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

LABORATORY DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	% REC	Dup %REC	% REC Limits	RPD RPD	RPD Limit	Q
General Chemistry Parameters												
QC Source Sample: CQF1508-02												
% Solids	7061343	81.4	%	N/A	0.100	83.1				2	10	
QC Source Sample: CQF1508-11												
% Solids	7061343	76.7	%	N/A	0.100	76.1				1	10	

MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322
Kevin Armstrong

Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	%REC Limits	RPD RPD	RPD Limit	Q
UST Volatile Compounds by GC/MS													
Benzene	7070014	0.0367	mg/kg	0.000293	0.00917	0.0289		79		60-135			
Toluene	7070014	0.0367	mg/kg	0.000293	0.00917	0.0283		77		55-135			
Ethylbenzene	7070014	0.0367	mg/kg	0.000136	0.00917	0.0287		78		50-140			
Xylenes, total	7070014	0.110	mg/kg	0.000404	0.0275	0.0824		75		55-135			
Surrogate: Dibromofluoromethane	7070014		ug/L					98		80-125			
Surrogate: Toluene-d8	7070014		ug/L					101		85-110			
Surrogate: 4-Bromofluorobenzene	7070014		ug/L					99		85-120			
Benzene	7070067	20.0	ug/L	N/A	N/A	20.2		101		75-125			
Toluene	7070067	20.0	ug/L	N/A	N/A	18.9		94		75-120			
Ethylbenzene	7070067	20.0	ug/L	N/A	N/A	19.6		98		75-125			
Xylenes, total	7070067	60.0	ug/L	N/A	N/A	59.9		100		75-125			
Surrogate: Dibromofluoromethane	7070067		ug/L					99		80-115			
Surrogate: Toluene-d8	7070067		ug/L					98		85-110			
Surrogate: 4-Bromofluorobenzene	7070067		ug/L					97		80-115			
Benzene	7070068	20.0	ug/L	N/A	N/A	19.1		95		75-125			
Toluene	7070068	20.0	ug/L	N/A	N/A	17.4		87		75-120			
Ethylbenzene	7070068	20.0	ug/L	N/A	N/A	18.5		92		75-125			
Xylenes, total	7070068	60.0	ug/L	N/A	N/A	54.1		90		75-125			
Surrogate: Dibromofluoromethane	7070068		ug/L					98		80-115			
Surrogate: Toluene-d8	7070068		ug/L					94		85-110			
Surrogate: 4-Bromofluorobenzene	7070068		ug/L					95		80-115			
Benzene	7070080	0.0343	mg/kg	0.000274	0.00857	0.0318		93		60-135			
Toluene	7070080	0.0343	mg/kg	0.000274	0.00857	0.0312		91		55-135			
Ethylbenzene	7070080	0.0343	mg/kg	0.000127	0.00857	0.0326		95		50-140			
Xylenes, total	7070080	0.103	mg/kg	0.000377	0.0257	0.0951		93		55-135			
Surrogate: Dibromofluoromethane	7070080		ug/L					99		80-125			
Surrogate: Toluene-d8	7070080		ug/L					101		85-110			
Surrogate: 4-Bromofluorobenzene	7070080		ug/L					97		85-120			
PNA compounds by HPLC													
Acenaphthene	7070065	333	ug/kg wet	2.40	42.0	437		131		45-120			L5
Acenaphthylene	7070065	667	ug/kg wet	1.60	42.0	708		106		45-105			L5
Anthracene	7070065	33.3	ug/kg wet	0.120	17.0	31.2		94		50-105			
Benzo (a) anthracene	7070065	33.3	ug/kg wet	0.110	17.0	30.8		92		50-110			
Benzo (b) fluoranthene	7070065	66.7	ug/kg wet	0.200	17.0	63.0		95		50-110			
Benzo (k) fluoranthene	7070065	33.3	ug/kg wet	0.200	17.0	30.3		91		50-110			
Benzo (a) pyrene	7070065	33.3	ug/kg wet	0.850	17.0	28.4		85		45-100			
Benzo (g,h,i) perylene	7070065	66.7	ug/kg wet	0.240	17.0	62.3		93		50-105			
Chrysene	7070065	33.3	ug/kg wet	0.300	17.0	30.6		92		55-110			
Dibenzo (a,h) anthracene	7070065	66.7	ug/kg wet	0.210	17.0	60.4		91		50-110			
Fluoranthene	7070065	66.7	ug/kg wet	0.970	17.0	67.6		101		50-110			
Fluorene	7070065	66.7	ug/kg wet	0.320	35.0	65.5		98		50-110			

MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322
Kevin Armstrong

Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	%REC Limits	RPD RPD	RPD Limit	Q
PNA compounds by HPLC													
Indeno (1,2,3-cd) pyrene	7070065	33.3	ug/kg wet	0.270	17.0	29.2		88		50-110			
Naphthalene	7070065	333	ug/kg wet	1.00	17.0	287		86		45-100			
Phenanthrene	7070065	33.3	ug/kg wet	0.690	17.0	31.0		93		55-115			
Pyrene	7070065	33.3	ug/kg wet	0.850	42.0	31.1		93		45-130			J
Surrogate: 2-Fluorobiphenyl	7070065		ug/kg wet					91		50-105			
Acenaphthene	7070069	10.0	ug/L	0.0490	0.200	7.31	7.23	73	72	15-110	1	35	
Acenaphthylene	7070069	20.0	ug/L	0.0850	0.200	14.5	14.4	73	72	30-95	1	35	
Anthracene	7070069	1.00	ug/L	0.0100	0.100	0.475	0.420	47	42	10-95	12	35	
Benzo (a) anthracene	7070069	1.00	ug/L	0.00300	0.100	0.732	0.710	73	71	25-95	3	35	
Benzo (b) fluoranthene	7070069	2.00	ug/L	0.0130	0.100	1.62	1.58	81	79	30-100	3	35	
Benzo (k) fluoranthene	7070069	1.00	ug/L	0.0150	0.100	0.790	0.772	79	77	30-95	2	35	
Benzo (a) pyrene	7070069	1.00	ug/L	0.0320	0.100	0.704	0.673	70	67	10-95	4	35	
Benzo (g,h,i) perylene	7070069	2.00	ug/L	0.00900	0.200	1.54	1.51	77	76	15-90	2	35	
Chrysene	7070069	1.00	ug/L	0.00500	0.100	0.780	0.759	78	76	35-100	3	35	
Dibenzo (a,h) anthracene	7070069	2.00	ug/L	0.0100	0.100	1.53	1.49	76	75	10-90	2	35	
Fluoranthene	7070069	2.00	ug/L	0.0100	0.100	1.65	1.60	83	80	35-100	3	35	
Fluorene	7070069	2.00	ug/L	0.0100	0.100	1.50	1.48	75	74	35-100	1	35	
Indeno (1,2,3-cd) pyrene	7070069	1.00	ug/L	0.00700	0.100	0.747	0.737	75	74	30-95	1	35	
Naphthalene	7070069	10.0	ug/L	0.0540	0.200	7.37	7.31	74	73	30-95	1	35	
Phenanthrene	7070069	1.00	ug/L	0.00700	0.100	0.784	0.799	78	80	35-100	2	35	
Pyrene	7070069	1.00	ug/L	0.0190	0.100	0.787	0.749	79	75	25-120	5	35	
Surrogate: 2-Fluorobiphenyl	7070069		ug/L					82	82	25-100			

MWH - DES MOINES
11153 Aurora Avenue
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Kevin Armstrong

Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup % REC	% REC Limits	RPD RPD	RPD Limit	Q
UST Volatile Compounds by GC/MS													
QC Source Sample: CQF1405-04													
Benzene	7070014	<0.00016 0.0408	mg/kg	3.000326	0.0102	0.0270	0.0254	66	67	40-135	6	35	
Toluene	7070014	0.000510 0.0408	mg/kg	3.000326	0.0102	0.0213	0.0209	51	53	35-130	2	40	
Ethylbenzene	7070014	0.000649 0.0408	mg/kg	3.000151	0.0102	0.0186	0.0181	44	46	35-130	3	40	
Xylenes, total	7070014	0.00234 0.122	mg/kg	3.000445	0.0306	0.0569	0.0496	45	41	35-130	14	40	
Surrogate: Dibromofluoromethane	7070014		ug/L					101	98	80-120			
Surrogate: Toluene-d8	7070014		ug/L					101	101	70-130			
Surrogate: 4-Bromofluorobenzene	7070014		ug/L					99	99	80-120			
QC Source Sample: CQF1585-01													
Benzene	7070067	<1.00 20.0	ug/L	N/A	N/A	19.0	18.7	95	94	70-125	2	15	
Toluene	7070067	<1.00 20.0	ug/L	N/A	N/A	17.5	17.6	88	88	60-130	1	15	
Ethylbenzene	7070067	<1.00 20.0	ug/L	N/A	N/A	18.6	18.5	93	92	65-125	1	15	
Xylenes, total	7070067	<3.00 60.0	ug/L	N/A	N/A	53.6	55.0	89	92	50-135	3	35	
Surrogate: Dibromofluoromethane	7070067		ug/L					101	100	85-120			
Surrogate: Toluene-d8	7070067		ug/L					94	96	85-110			
Surrogate: 4-Bromofluorobenzene	7070067		ug/L					93	97	75-115			
QC Source Sample: CQF1388-05													
Benzene	7070068	<1.00 20.0	ug/L	N/A	N/A	19.5	19.4	98	97	70-125	1	15	
Toluene	7070068	<1.00 20.0	ug/L	N/A	N/A	17.5	18.7	88	94	60-130	7	15	
Ethylbenzene	7070068	<1.00 20.0	ug/L	N/A	N/A	18.2	19.3	91	97	65-125	6	15	
Xylenes, total	7070068	<3.00 60.0	ug/L	N/A	N/A	55.0	58.0	92	97	50-135	5	35	
Surrogate: Dibromofluoromethane	7070068		ug/L					97	99	85-120			
Surrogate: Toluene-d8	7070068		ug/L					93	99	85-110			
Surrogate: 4-Bromofluorobenzene	7070068		ug/L					92	98	75-115			
QC Source Sample: CQF1682-01													
Benzene	7070080	<0.00016 0.0370	mg/kg	3.000296	0.00925	0.0314	0.0287	85	80	40-135	9	35	
Toluene	7070080	0.000364 0.0370	mg/kg	3.000296	0.00925	0.0310	0.0273	83	75	35-130	13	40	
Ethylbenzene	7070080	<0.000740 0.0370	mg/kg	3.000137	0.00925	0.0316	0.0275	85	77	35-130	14	40	
Xylenes, total	7070080	0.00142 0.111	mg/kg	3.000407	0.0278	0.0931	0.0802	83	73	35-130	15	40	
Surrogate: Dibromofluoromethane	7070080		ug/L					107	115	80-120			
Surrogate: Toluene-d8	7070080		ug/L					104	104	70-130			
Surrogate: 4-Bromofluorobenzene	7070080		ug/L					96	95	80-120			
PNA compounds by HPLC													
QC Source Sample: CQF1530-04													
Acenaphthene	7070065	<2.40 432	ug/kg dry	3.13	54.8	324	258	75	60	25-120	23	40	
Acenaphthylene	7070065	<1.60 863	ug/kg dry	2.09	54.8	639	55.3	74	6	30-110	168	40	M1,R
Anthracene	7070065	<0.12 43.2	ug/kg dry	0.156	22.2	33.3	27.4	77	64	25-120	20	40	
Benzo (a) anthracene	7070065	<0.11 43.2	ug/kg dry	0.143	22.2	34.6	32.2	80	75	20-115	7	40	
Benzo (b) fluoranthene	7070065	<0.20 86.3	ug/kg dry	0.261	22.2	98.2	74.9	114	88	15-110	27	40	M1
Benzo (k) fluoranthene	7070065	<0.20 43.2	ug/kg dry	0.261	22.2	33.1	29.0	77	68	15-105	13	40	
Benzo (a) pyrene	7070065	<0.85 43.2	ug/kg dry	1.11	22.2	36.6	32.3	85	76	15-110	12	40	
Benzo (g,h,i) perylene	7070065	<0.24 86.3	ug/kg dry	0.313	22.2	65.4	55.8	76	65	10-100	16	40	
Chrysene	7070065	<0.30 43.2	ug/kg dry	0.391	22.2	34.7	31.5	80	74	25-120	10	40	
Dibenzo (a,h) anthracene	7070065	<0.21 86.3	ug/kg dry	0.274	22.2	66.7	59.1	77	69	10-105	12	40	
Fluoranthene	7070065	<0.97 86.3	ug/kg dry	1.26	22.2	72.9	64.4	85	75	25-120	12	40	
Fluorene	7070065	<0.32 86.3	ug/kg dry	0.417	45.6	66.7	60.5	77	71	30-110	10	40	

MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322
Kevin Armstrong

Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	Limit	Q
PNA compounds by HPLC													
QC Source Sample: CQF1530-04													
Indeno (1,2,3-cd) pyrene	7070065	<0.27	43.2	ug/kg dry	0.352	22.2	32.2	28.1	75	66	15-110	14	40
Naphthalene	7070065	<1.00	432	ug/kg dry	1.30	22.2	309	325	72	76	40-100	5	40
Phenanthrene	7070065	<0.69	43.2	ug/kg dry	0.900	22.2	35.1	31.5	81	74	30-125	11	40
Pyrene	7070065	<0.85	43.2	ug/kg dry	1.11	54.8	36.0	31.9	83	74	30-125	12	40
Surrogate: 2-Fluorobiphenyl	7070065			ug/kg dry					77	82	25-115		J

MWH - DES MOINES
11153 Aurora Avenue
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Kevin Armstrong

Work Order: CQF1530
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 06/27/07
Reported: 07/09/07 11:26

CERTIFICATION SUMMARY

TestAmerica - Cedar Falls, IA

Method	Matrix	Nelac	Iowa
SM 2540 G	Solid/Soil		
SW 8260B/OA-1	Solid/Soil	X	X
SW 8260B/OA-1	Water - NonPotable	X	X
SW 8310	Solid/Soil	X	X
SW 8310	Water - NonPotable	X	X
SW	Water - NonPotable		

Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Temperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) and are sampled in accordance with TA-CF SOP CF09-01.

DATA QUALIFIERS AND DEFINITIONS

- J** Analyte detected at a level less than the Reporting Limit (RL) and greater than or equal to the Method Detection Limit (MDL). Concentrations within this range are estimated
- L5** Laboratory Control Sample was outside of acceptance limits The MS or MSD was used to validate the batch.
- M1** The MS and/or MSD were outside control limits.
- R** Sample duplicate RPD exceeded the laboratory control limit

ADDITIONAL COMMENTS

Results are reported on a wet weight basis unless otherwise noted.

**To assist us in using the proper analytical methods,
is this work being conducted for regulatory purposes?**
Compliance Monitoring

Email Address: kevin.a.armstrong@muhglobal.com

Quote #: PO#:

Page 1 of 2

Sample Receipt and Temperature Log Form

Client: Mid American Energy Project: _____

City: Des Moines, Ia

Date: 6/27/07 Receiver's Initials: ZB Time (Delivered): 19:10

Temperature Record:

Cooler ID# (If Applicable)

DDG

3 °C / On Ice

Thermometer:

☐ IR - 905085 "A"

☒ IR - 809065 "B"

☐ IR - 61854108

☐ 22126775

Courier:

☐ UPS

☒ TA Courier

☐ FedEx

☐ TA Field Services

☐ DHL

☐ Client

☐ US Postal Service

☐ Other

☐ Spee-Dee

☒ Temp Blank

☐ Temperature out of compliance

Custody seals present?

☐ Yes

Custody seals intact?

☐ Yes ☐ No

☐ Non-Conformance report started

Exceptions Noted

☐ Sample(s) not received in a cooler.

☐ Samples(s) received same day of sampling.

☐ Evidence of a chilling process

☐ Temperature not taken:

July 17, 2007

RECEIVED
JUL 20 2007
MW/IOWA

Client:

MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322Work Order: CQG0529
Project Name: MEC - Dubuque
Project Number: 1913678.0102

Attn: Kevin Armstrong

Date Received: 07/11/07

An executed copy of the chain of custody is also included as an addendum to this report

If you have any questions relating to this analytical report please contact your Laboratory Project Manager at 1-(800)750-2401

SAMPLE IDENTIFICATION	LAB NUMBER	COLLECTION DATE AND TIME
W128-GW-0707	CQG0529-01	07/10/07 14:10
W144-GW-0707	CQG0529-02	07/10/07 13:10
Trip Blank	CQG0529-03	07/10/07

Samples were received into laboratory at a temperature of 10 °C.

NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

Please refer to the Temperature and Sample Receipt form that is included with this report for additional information regarding the condition of samples at the time of receipt by the laboratory.

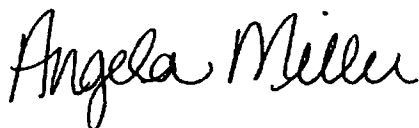
The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.

Iowa Certification Number: 007

Reproduction of this analytical report is permitted only in its entirety. This report shall not be reproduced except in full without the written approval of the laboratory.

TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample analyzed.

Approved By:

TestAmerica - Cedar Falls, IA
Angie Miller
Project Coordinator

MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322
Kevin Armstrong

Work Order: CQG0529
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 07/11/07
Reported: 07/17/07 14:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQG0529-01 (W128-GW-0707 - Ground Water)					Sampled: 07/10/07 14:10			Recvd: 07/11/07 18:55		
Sampled By: Janet Baldwin				Phone		515-253-0830				
UST Volatile Compounds by GC/MS										
Benzene	<1.00		ug/L		1.00	1	07/14/07 15:23	DMD	7070605	SW 8260B/OA-1
Toluene	<1.00		ug/L		1.00	1	07/14/07 15:23	DMD	7070605	SW 8260B/OA-1
Ethylbenzene	<1.00		ug/L		1.00	1	07/14/07 15:23	DMD	7070605	SW 8260B/OA-1
Xylenes, total	<3.00		ug/L		3.00	1	07/14/07 15:23	DMD	7070605	SW 8260B/OA-1
Surr: Dibromofluoromethane (80-120%)	101 %									
Surr: Toluene-d8 (80-110%)	92 %									
Surr: 4-Bromofluorobenzene (65-115%)	84 %									
VOC Preservation Check										
pH	<2.00		units		2.00	1	07/17/07 13:06	sjn	7070646	SW
PNA compounds by HPLC										
Acenaphthene	4.16		ug/L	0.0490	0.190	1.09	07/17/07 12:36	eee	7070586	SW 8310
Acenaphthylene	<0.0850		ug/L	0.0850	0.190	1.09	07/17/07 12:36	ccc	7070586	SW 8310
Anthracene	0.405		ug/L	0.0100	0.190	1.09	07/17/07 12:36	eee	7070586	SW 8310
Benzo (a) anthracene	0.189		ug/L	0.00300	0.130	1.09	07/17/07 12:36	eee	7070586	SW 8310
Benzo (b) fluoranthene	0.292		ug/L	0.0130	0.100	1.09	07/17/07 12:36	ccc	7070586	SW 8310
Benzo (k) fluoranthene	0.139		ug/L	0.0150	0.140	1.09	07/17/07 12:36	eee	7070586	SW 8310
Benzo (a) pyrene	0.197		ug/L	0.0320	0.190	1.09	07/17/07 12:36	ccc	7070586	SW 8310
Benzo (g,h,i) perylene	0.114		ug/L	0.00900	0.100	1.09	07/17/07 12:36	eee	7070586	SW 8310
Chrysene	0.218		ug/L	0.00500	0.100	1.09	07/17/07 12:36	ccc	7070586	SW 8310
Dibenzo (a,h) anthracene	<0.0100		ug/L	0.0100	0.100	1.09	07/17/07 12:36	ccc	7070586	SW 8310
Fluoranthene	1.53		ug/L	0.0100	0.190	1.09	07/17/07 12:36	ccc	7070586	SW 8310
Fluorene	0.685		ug/L	0.0100	0.190	1.09	07/17/07 12:36	ccc	7070586	SW 8310
Indeno (1,2,3-cd) pyrene	0.165		ug/L	0.00700	0.100	1.09	07/17/07 12:36	eee	7070586	SW 8310
Naphthalene	0.354		ug/L	0.0540	0.100	1.09	07/17/07 12:36	eee	7070586	SW 8310
Phenanthrene	0.329		ug/L	0.00700	0.100	1.09	07/17/07 12:36	ccc	7070586	SW 8310
Pyrene	2.35		ug/L	0.0190	0.190	1.09	07/17/07 12:36	ccc	7070586	SW 8310
Surr: 2-Fluorobiphenyl (15-110%)	75 %									

MWH - DES MOINES
11153 Aurora Avenue
Des Moines, IA 50322
Kevin Armstrong

Work Order: CQG0529
Project: MEC - Dubuque
Project Number: 1913678.0102

Received: 07/11/07
Reported: 07/17/07 14:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQG0529-02 (W144-GW-0707 - Ground Water)					Sampled: 07/10/07 13:10			Recvd: 07/11/07 18:55		
Sampled By: Janet Baldwin				Phone		515-253-0830				
UST Volatile Compounds by GC/MS										
Benzene	<1.00		ug/L		1.00	1	07/14/07 14:19	DMD	7070605	SW 8260B/OA-1
Toluene	<1.00		ug/L		1.00	1	07/14/07 14:19	DMD	7070605	SW 8260B/OA-1
Ethylbenzene	<1.00		ug/L		1.00	1	07/14/07 14:19	DMD	7070605	SW 8260B/OA-1
Xylenes, total	<3.00		ug/L		3.00	1	07/14/07 14:19	DMD	7070605	SW 8260B/OA-1
Surr: Dibromofluoromethane (80-120%)	101 %									
Surr: Toluene-d8 (80-110%)	92 %									
Surr: 4-Bromofluorobenzene (65-115%)	85 %									
VOC Preservation Check										
pH	<2.00		units		2.00	1	07/17/07 13:06	sjn	7070646	SW
NA compounds by HPLC										
Acenaphthene	4.64		ug/L	0.0490	0.190	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Acenaphthylene	<0.0850		ug/L	0.0850	0.190	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Anthracene	0.672		ug/L	0.0100	0.190	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Benzo (a) anthracene	0.443		ug/L	0.00300	0.130	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Benzo (b) fluoranthene	0.587		ug/L	0.0130	0.100	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Benzo (k) fluoranthene	0.301		ug/L	0.0150	0.140	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Benzo (a) pyrene	0.467		ug/L	0.0320	0.190	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Benzo (g,h,i) perylene	0.288		ug/L	0.00900	0.100	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Chrysene	0.529		ug/L	0.00500	0.100	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Dibenzo (a,h) anthracene	0.0327 J		ug/L	0.0100	0.100	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Fluoranthene	2.53		ug/L	0.0100	0.190	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Fluorene	0.902		ug/L	0.0100	0.190	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Indeno (1,2,3-cd) pyrene	0.387		ug/L	0.00700	0.100	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Naphthalene	0.540		ug/L	0.0540	0.100	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Phenanthrene	0.779		ug/L	0.00700	0.100	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Pyrene	4.80		ug/L	0.0190	0.190	1.06	07/17/07 13:05	ccc	7070586	SW 8310
Surr: 2-Fluorobiphenyl (15-110%)	71 %									

MWH - DES MOINES
11153 Aurora Avenue
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Received: 07/11/07
Reported: 07/17/07 14:38

ANALYTICAL REPORT

Analyte	Sample Result	Data Qualifiers	Units	MDL	Quan Limit	Dilution Factor	Date Analyzed	Analyst	Seq/ Batch	Method
Sample ID: CQG0529-03 (Trip Blank - Water)					Sampled: 07/10/07			Recvd: 07/11/07 18:55		
Sampled By: Janet Baldwin				Phone		515-253-0830				
UST Volatile Compounds by GC/MS										
Benzene	<1.00		ug/L		1.00	1	07/14/07 13:48	DMD	7070605	SW 8260B/OA-1
Toluene	<1.00		ug/L		1.00	1	07/14/07 13:48	DMD	7070605	SW 8260B/OA-1
Ethylbenzene	<1.00		ug/L		1.00	1	07/14/07 13:48	DMD	7070605	SW 8260B/OA-1
Xylenes, total	<3.00		ug/L		3.00	1	07/14/07 13:48	DMD	7070605	SW 8260B/OA-1
Surr: Dibromofluoromethane (80-120%)	99 %									
	93 %									
	86 %									
Surr: 4-Bromofluorobenzene (65-115%)										
VOC Preservation Check										
pH	<2.00		units		2.00	1	07/17/07 13:06	sjn	7070646	SW

MWH - DES MOINES
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Reported: 07/17/07 14:38

SAMPLE EXTRACTION DATA

Parameter	Batch	Lab Number	Wt/Vol Extracted	Extracted Vol	Date	Analyst	Extraction Method
PNA compounds by HPLC							
SW 8310	7070586	CQG0529-01	920	2	07/16/07 10:49	SLT	SW 3510C_HPLC
SW 8310	7070586	CQG0529-02	940	2	07/16/07 10:49	SLT	SW 3510C_HPLC

MWH - DES MOINES
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LABORATORY BLANK QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	Limit	Q
UST Volatile Compounds by GC/MS													
Benzene	7070605		ug/L	N/A	1.00	<1.00							
Toluene	7070605		ug/L	N/A	1.00	<1.00							
Ethylbenzene	7070605		ug/L	N/A	1.00	<1.00							
Xylenes, total	7070605		ug/L	N/A	3.00	<3.00							
Surrogate: Dibromofluoromethane	7070605		ug/L					103		80-120			
Surrogate: Toluene-d8	7070605		ug/L					95		80-110			
Surrogate: 4-Bromofluorobenzene	7070605		ug/L					89		65-115			
PNA compounds by HPLC													
Acenaphthene	7070586		ug/L	0.0490	0.190	<0.0490							
Acenaphthylene	7070586		ug/L	0.0850	0.190	<0.0850							
Anthracene	7070586		ug/L	0.0100	0.100	<0.0100							
Benzo (a) anthracene	7070586		ug/L	0.00300	0.100	<0.00300							
Benzo (b) fluoranthene	7070586		ug/L	0.0130	0.100	<0.0130							
Benzo (k) fluoranthene	7070586		ug/L	0.0150	0.100	<0.0150							
Benzo (a) pyrene	7070586		ug/L	0.0320	0.100	<0.0320							
Benzo (g,h,i) perylene	7070586		ug/L	0.00900	0.100	<0.00900							
Chrysene	7070586		ug/L	0.00500	0.100	<0.00500							
Dibenzo (a,h) anthracene	7070586		ug/L	0.0100	0.100	<0.0100							
Fluoranthene	7070586		ug/L	0.0100	0.100	<0.0100							
Fluorene	7070586		ug/L	0.0100	0.100	<0.0100							
Indeno (1,2,3-cd) pyrene	7070586		ug/L	0.00700	0.100	<0.00700							
Naphthalene	7070586		ug/L	0.0540	0.100	<0.0540							
Phenanthrene	7070586		ug/L	0.00700	0.100	<0.00700							
Pyrene	7070586		ug/L	0.0190	0.100	<0.0190							
Surrogate: 2-Fluorobiphenyl	7070586		ug/L					82		15-110			

MWH - DES MOINES
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Received: 07/11/07
Reported: 07/17/07 14:38

LCS/LCS DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	% REC Limits	RPD RPD	Limit	Q
UST Volatile Compounds by GC/MS													
Benzene	7070605	20.0	ug/L	N/A	N/A	21.0		105		75-125			
Toluene	7070605	20.0	ug/L	N/A	N/A	19.5		97		75-120			
Ethylbenzene	7070605	20.0	ug/L	N/A	N/A	19.6		98		75-125			
Xylenes, total	7070605	60.0	ug/L	N/A	N/A	59.8		100		75-125			
Surrogate: Dibromofluoromethane	7070605		ug/L					103		80-115			
Surrogate: Toluene-d8	7070605		ug/L					98		85-110			
Surrogate: 4-Bromofluorobenzene	7070605		ug/L					94		80-115			
PNA compounds by HPLC													
Acenaphthene	7070586	10.0	ug/L	0.0490	0.200	7.58		76		15-110			
Acenaphthylene	7070586	20.0	ug/L	0.0850	0.200	14.0		70		30-95			
Anthracene	7070586	1.00	ug/L	0.0100	0.100	0.660		66		10-95			
Benzo (a) anthracene	7070586	1.00	ug/L	0.00300	0.100	0.762		76		25-95			
Benzo (b) fluoranthene	7070586	2.00	ug/L	0.0130	0.100	1.58		79		30-100			
Benzo (k) fluoranthene	7070586	1.00	ug/L	0.0150	0.100	0.771		77		30-95			
Benzo (a) pyrene	7070586	1.00	ug/L	0.0320	0.100	0.548		55		10-95			
Benzo (g,h,i) perylene	7070586	2.00	ug/L	0.00900	0.200	1.53		76		15-90			
Chrysene	7070586	1.00	ug/L	0.00500	0.100	0.824		82		35-100			
Dibenzo (a,h) anthracene	7070586	2.00	ug/L	0.0100	0.100	1.53		76		10-90			
Fluoranthene	7070586	2.00	ug/L	0.0100	0.100	1.57		79		35-100			
Fluorene	7070586	2.00	ug/L	0.0100	0.100	1.50		75		35-100			
Indeno (1,2,3-cd) pyrene	7070586	1.00	ug/L	0.00700	0.100	0.756		76		30-95			
Naphthalene	7070586	10.0	ug/L	0.0540	0.200	7.31		73		30-95			
Phenanthrene	7070586	1.00	ug/L	0.00700	0.100	0.731		73		35-100			
Pyrene	7070586	1.00	ug/L	0.0190	0.100	0.798		80		25-120			
Surrogate: 2-Fluorobiphenyl	7070586		ug/L					77		25-100			

MWH - DES MOINES
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Reported: 07/17/07 14:38

MATRIX SPIKE/MATRIX SPIKE DUPLICATE QC DATA

Analyte	Seq/ Batch	Source Spike Result Level	Units	MDL	MRL	Result	Dup Result	% REC	Dup %REC	%REC Limits	RPD RPD	RPD Limit	Q
UST Volatile Compounds by GC/MS													
QC Source Sample: CQG0521-06													
Benzene	7070605	1.65 20.0	ug/L	N/A	N/A	22.3	21.4	103	99	70-125	4	15	
Toluene	7070605	<1.00 20.0	ug/L	N/A	N/A	19.0	18.2	95	91	60-130	4	15	
Ethylbenzene	7070605	<1.00 20.0	ug/L	N/A	N/A	19.6	18.8	98	94	65-125	4	15	
Xylenes, total	7070605	<3.00 60.0	ug/L	N/A	N/A	57.4	55.5	96	93	50-135	3	35	
Surrogate: Dibromofluoromethane	7070605		ug/L					103	104	85-120			
Surrogate: Toluene-d8	7070605		ug/L					96	94	85-110			
Surrogate: 4-Bromofluorobenzene	7070605		ug/L					90	89	75-115			
PNA compounds by HPLC													
QC Source Sample: CQG0529-01													
Acenaphthene	7070586	4.16 22.2	ug/L	0.109	0.444	19.6	21.2	70	77	25-110	8	35	
Acenaphthylene	7070586	<0.085 44.4	ug/L	0.189	0.444	32.2	34.7	73	78	20-110	7	35	
Anthracene	7070586	0.405 2.22	ug/L	0.0222	0.222	1.84	2.00	65	72	15-110	8	35	
Benzo (a) anthracene	7070586	0.189 2.22	ug/L	0.00667	0.222	1.61	1.78	64	72	20-110	10	35	
Benzo (b) fluoranthene	7070586	0.292 4.44	ug/L	0.0289	0.222	3.22	3.59	66	74	30-105	11	35	
Benzo (k) fluoranthene	7070586	0.139 2.22	ug/L	0.0333	0.222	1.52	1.71	62	71	25-115	12	35	
Benzo (a) pyrene	7070586	0.197 2.22	ug/L	0.0711	0.222	1.60	1.80	63	72	10-105	12	35	
Benzo (g,h,i) perylene	7070586	0.114 4.44	ug/L	0.0200	0.444	3.02	3.40	65	74	15-110	12	35	
Chrysene	7070586	0.218 2.22	ug/L	0.0111	0.222	1.83	1.98	73	79	25-110	8	35	
Dibenzo (a,h) anthracene	7070586	<0.010 4.44	ug/L	0.0222	0.222	3.00	3.40	67	77	10-105	13	35	
Fluoranthene	7070586	1.53 4.44	ug/L	0.0222	0.222	4.24	4.58	61	69	30-110	8	35	
Fluorene	7070586	0.685 4.44	ug/L	0.0222	0.222	3.59	3.89	65	72	25-120	8	35	
Indeno (1,2,3-cd) pyrene	7070586	0.165 2.22	ug/L	0.0156	0.222	1.52	1.69	61	69	20-110	10	35	
Naphthalene	7070586	0.354 22.2	ug/L	0.120	0.444	15.8	17.0	69	75	35-100	7	35	
Phenanthrene	7070586	0.329 2.22	ug/L	0.0156	0.222	1.71	1.88	62	70	40-115	9	35	
Pyrene	7070586	2.35 2.22	ug/L	0.0422	0.222	2.20	2.32	-7	-1	40-135	5	35	M1
Surrogate: 2-Fluorobiphenyl	7070586		ug/L					77	79	35-110			

MWH - DES MOINES
11153 Aurora Avenue
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Work Order: CQG0529
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Received: 07/11/07
Reported: 07/17/07 14:38

CERTIFICATION SUMMARY

TestAmerica - Cedar Falls, IA

Method	Matrix	Nelac	Iowa
SW 8260B/OA-1	Water - NonPotable	X	X
SW 8310	Water - NonPotable	X	X
SW	Water - NonPotable		

Any abnormalities or departures from sample acceptance policy shall be documented on the 'Sample Receipt and Temperature Log Form' and 'Sample Non-conformance Form' (if applicable) included with this report.

For information concerning certifications of this facility or another TestAmerica facility, please visit our website at www.TestAmericaInc.com

Samples collected by TestAmerica Field Services personnel are noted on the Chain of Custody (COC) and are sampled in accordance with TA-CF SOP CF09-01.

DATA QUALIFIERS AND DEFINITIONS

J Analyte detected at a level less than the Reporting Limit(RL) and greater than or equal to the Method Detection Limit(MDL).
Concentrations within this range are estimated

M1 The MS and/or MSD were outside control limits.

ADDITIONAL COMMENTS

**To assist us in using the proper analytical methods,
is this work being conducted for regulatory purposes?**
Compliance Monitoring

Client Name Mid American / MWH Client #:

Address: 1153 Aurora Ave

City/State/Zip Code: Urbandale, IA 50322

Project Manager: Kevin Armstrong

Telephone Number: 315-253-0830 Fax: 315-253-9592

Sampler Name: (Print Name) Janet Baldwin

Sampler Signature: David Baldwin

Email Address: Kevin.g.armstrong@muhohol.com

Project Name: Dubouque - PNG-FMGP site

Project #: 1913678,0102

Site/Location ID: Dubuque - PNG State: IA

Report To: Kevin Armstrong - MWH

Invoice To: Michelle Wei - Mid American

Quote #: _____ PO#: _____

[illegible]

Sample Receipt and Temperature Log Form

Client: Mid American / MWI Project: _____

City: Urbandale, Ia

Date: 7/11/07 Receiver's Initials: JMH Time (Delivered): 1:55

Temperature Record:

Cooler ID# (If Applicable)

TACF 702

10 °C / On Ice

Thermometer:

☒ IR - 905085 "A"

☐ IR - 809065 "B"

☐ IR - 61854108

☐ 22126775

Courier:

☐ UPS

☐ FedEx

☐ DHL

☐ US Postal Service

☐ Spee-Dee

☒ TA Courier

☐ TA Field Services

☐ Client

☐ Other

☒ Temp Blank

☒ Temperature out of compliance

Custody seals present?

☐ Yes

Custody seals intact?

☐ Yes ☐ No

☐ Non-Conformance report started

Exceptions Noted

☐ Sample(s) not received in a cooler.

☐ Samples(s) received same day of sampling.

☒ Evidence of a chilling process

☐ Temperature not taken: