Message

From: James Peeples [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=07c37377e3ed4e8b917f9e44524e0fd7-James Peepl]
on behalf of James Peeples
Sent: 6/27/2017 9:28:56 PM
To: Scott Blanchard [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f20c1dc4161f492d9de83959be4bdcd1-Scott Blanc]
Subject: FW: CSIA sampling protocol
Attachments: Oklahoma U CSIA ClEthenes Sample Collection rev 06-2016.pdf

JAMES PEEPLES, PE
VICE PRESIDENT, SENIOR TECHNICAL ENVIRONMENTAL ENGINEER

4675 Lakehurst Court, Suite 250, Columbus, OH 43016
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JPEEPLES@TANDMASSOCIATES.COM | TANDMASSOCIATES.COM

From: Laurie LaPat-Polasko [mailto:LLaPat@ramboll.com]
Sent: Tuesday, June 27, 2017 4:31 PM
To: James Peeples <JPeeples@tandmassociates.com>
Subject: CSIA sampling protocol

Hi Jim,
Attached please find the sampling protocol for collection and shipping of the groundwater samples for CSIA analyses at OU. Please call me with any questions. Thank you very much for your help.

Cheers,
Laurie

Laurie LaPat-Polasko, PhD, QEP
Principal Consultant
Site Solutions
Environment & Health

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M +1 480 2724350
LLaPat@ramboll.com

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RAMBOLL ENVIRON

Recommendation on Sample Collection for CSIA of Chlorinated Ethenes
Revised 6/14/2016

This recommendation applies to the standard CSIA (compound-specific isotope analysis) techniques at the Isotope Lab of the University of Oklahoma (OU). The recommendation assumes that the requested analysis is carbon CSIA, with optional H and/or Cl CSIA.

Target compounds: chlorinated ethenes.

- Use standard methods for collecting VOCs samples. Use care to prevent volatile losses.
- Sample containers: standard 40 ml VOAs. Normally, the OU lab does not provide VOAs for field sample collection.
- Preservation: Acidify the VOAs to pH below 2 (use HCl or H_2SO_4). Place in a cooler with generous amount of ice or ice packs.
- Sample amount requirements. The amounts shown below should be sufficient to obtain data for cDCE, TCE and PCE at 1 ug/L (C, Cl) and 20 ug/L (H). Inquire about the requirements for additional analytes and/or improved detection limits.
    - Carbon CSIA only: Collect at least FOUR 40 ml VOA vials from each well
    - C + Cl CSIA: Collect at least SIX 40 ml VOA vials from each well
    - C + Cl + H CSIA: Collect at least EIGHT 40 ml VOA vials from each well
- Ship overnight to: c/o Jon Allen
  Dept. of Geology / Geophysics, Univ. of Oklahoma
  100 E Boyd; room A119
  Norman, OK, 73019
  Phone 405-325-4453
- Ship only between Mon – Thu. Samples will NOT be delivered during the weekend. If samples are collected at the end of the week, store in refrigerator and ship on Monday.
- CoC: Any standard CoC format can be used. Specify the type of analysis (Carbon, hydrogen and/or chlorine CSIA) and list target analytes (TCE, PCE, etc.)
- Leave a message at 405-325-4453 that the samples have been sent.
- Contact Tomasz Kuder (tkuder@ou.edu) for additional inquiries.

Message

From: James Peeples [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=07c37377e3ed4e8b917f9e44524e0fd7-James Peepl]
on behalf of James Peeples
Sent: 6/27/2017 11:06:23 PM
To: Scott Blanchard [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=f20c1dc4161f492d9de83959be4bdcd1-Scott Blanc]
Subject: FW: Contact information
Attachments: Tamara House-Knight

Scott,

This is the person from Ramboll who will be there for the sampling on Thursday.

Still no final confirmation. I talked with Joel and he assured me that the decision would be made this evening, but it is really not in his hands.

Thanks for all your help on this – as usual. It is amazing to see how quickly you can put something like this together.

JAMES PEEPLES, PE
VICE PRESIDENT, SENIOR TECHNICAL ENVIRONMENTAL ENGINEER

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JPEEPLES@TANDMASSOCIATES.COM | TANDMASSOCIATES.COM

From: Laurie LaPat-Polasko [mailto:LLaPat@ramboll.com]
Sent: Tuesday, June 27, 2017 4:26 PM
To: James Peeples <JPeeples@tandmassociates.com>
Subject: Contact information

Hi Jim,
See attached contact.

Cheers,
Laurie LaPat-Polasko, PhD, QEP
Principal Consultant
Site Solutions
Environment & Health

D +1 602 7347735
M +1 480 2724350
LLaPat@ramboll.com

Ramboll Environ
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Suite 402
Phoenix, AZ 85016
USA
www.ramboll-environ.com

RAMBOLL ENVIRON

From: Eagle, Joel <Joel.Eagle@thompsonhine.com>
Sent: Tuesday, June 27, 2017 8:44 PM
To: James Peeples
Cc: Coughlin, Timothy; Hubbard, William; Friedman, Heidi
Subject: CSIA approval

Categories: Filed by Newforma

Meritor has approved of the CSIA sampling as proposed today. Thank you for all your efforts Jim.

Joel Eagle | Associate | Thompson Hine LLP
Office: 216.566.5938<tel:216.566.5938> | Alternate: 847.212.5999<tel:847.212.5999> (cell) | Email: joel.eagle@ThompsonHine.com<mailto:joel.eagle@ThompsonHine.com>

Sent from my iPhone

From: James Peeples
Sent: Tuesday, June 27, 2017 9:14 PM
To: Eagle, Joel
Cc: Coughlin, Timothy; Hubbard, William; Friedman, Heidi
Subject: Re: CSIA approval

Categories: Filed by Newforma

Ok, we are all set to go.

Sent from my iPhone

> On Jun 27, 2017, at 9:43 PM, Eagle, Joel <Joel.Eagle@thompsonhine.com> wrote:
>
> Meritor has approved of the CSIA sampling as proposed today. Thank you for all your efforts Jim.
>
> Joel Eagle | Associate | Thompson Hine LLP
> Office: 216.566.5938<tel:216.566.5938> | Alternate: 847.212.5999<tel:847.212.5999> (cell) | Email: joel.eagle@ThompsonHine.com<mailto:joel.eagle@ThompsonHine.com>
>
> Sent from my iPhone

From: Friedman, Heidi <Heidi.Friedman@thompsonhine.com>
Sent: Wednesday, June 28, 2017 7:02 AM
To: James Peeples; Eagle, Joel
Cc: Coughlin, Timothy; Hubbard, William
Subject: RE: CSIA approval

Categories: Filed by Newforma

Jim- beyond a huge thanks for managing this fire drill. We are all very grateful.

H

-----Original Message-----
From: James Peeples [mailto:JPeeples@tandmassociates.com]
Sent: Tuesday, June 27, 2017 10:14 PM
To: Eagle, Joel
Cc: Coughlin, Timothy; Hubbard, William; Friedman, Heidi
Subject: Re: CSIA approval

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>
> Sent from my iPhone

From: James Peeples
Sent: Wednesday, June 28, 2017 7:34 AM
To: 'Friedman, Heidi'
Cc: Joel Eagle (joel.eagle@ThompsonHine.com)
Subject: RE: CSIA approval

Categories: Filed by Newforma

Thanks, Heidi, but Scott is the guy. No one else could have organized this to have the crew and equipment assembled and on the road this morning. The samples will be collected properly and in Fed Ex by Thursday night, I think we can all count on that.

James Peeples
T&M Associates
614.339.3380

-----Original Message-----
From: Friedman, Heidi [mailto:Heidi.Friedman@thompsonhine.com]
Sent: Wednesday, June 28, 2017 8:02 AM
To: James Peeples <JPeeples@tandmassociates.com>; Eagle, Joel <Joel.Eagle@thompsonhine.com>
Cc: Coughlin, Timothy <Tim.Coughlin@thompsonhine.com>; Hubbard, William <Bill.Hubbard@thompsonhine.com>
Subject: RE: CSIA approval

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Cc: Coughlin, Timothy; Hubbard, William; Friedman, Heidi
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>
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> Joel Eagle | Associate | Thompson Hine LLP
> Office: 216.566.5938<tel:216.566.5938> | Alternate: 847.212.5999<tel:847.212.5999> (cell) | Email: joel.eagle@ThompsonHine.com<mailto:joel.eagle@ThompsonHine.com>
>
> Sent from my iPhone

From: James Peeples
Sent: Wednesday, June 28, 2017 1:40 PM
To: Jeff DeLaet
Subject: FW: CSIA approval

Categories: Filed by Newforma

Jeff,

The approval noted below by Joel was for $24,000 for the sampling effort that the group will be completing tomorrow. We do not have any subs other than equipment from IE. The laboratory is run through Ramboll. This should be set up under 07.L. Now that I think about it, let's just go ahead and set up a task for this if that is feasible. It can be task C.

Thanks,

James Peeples
T&M Associates
614.339.3380

-----Original Message-----
From: Eagle, Joel [mailto:Joel.Eagle@thompsonhine.com]
Sent: Tuesday, June 27, 2017 9:44 PM
To: James Peeples <JPeeples@tandmassociates.com>
Cc: Coughlin, Timothy <Tim.Coughlin@thompsonhine.com>; Hubbard, William <Bill.Hubbard@thompsonhine.com>; Friedman, Heidi <Heidi.Friedman@thompsonhine.com>
Subject: CSIA approval

Meritor has approved of the CSIA sampling as proposed today. Thank you for all your efforts Jim.

Joel Eagle | Associate | Thompson Hine LLP
Office: 216.566.5938<tel:216.566.5938> | Alternate: 847.212.5999<tel:847.212.5999> (cell) | Email: joel.eagle@ThompsonHine.com<mailto:joel.eagle@ThompsonHine.com>

Sent from my iPhone

From: Tamara House-Knight <THouseKnight@ramboll.com>
Sent: Wednesday, June 28, 2017 1:44 PM
To: James Peeples
Cc: Scott Blanchard; Becky Chavez; Cynthia M. Jacobsen
Subject: RE: Grenada

Categories: Filed by Newforma

Thanks. I'm staying at Comfort Inn because that's where I have points (☺) but I will meet them at Hampton in the morning. See you all then.

Tamara R. House-Knight PhD, DABT | Managing Consultant
Direct Dial: 501-907-9437 | Cell: 501-240-0435

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From: James Peeples [mailto:JPeeples@tandmassociates.com]
Sent: Wednesday, June 28, 2017 1:37 PM
To: Tamara House-Knight <THouseKnight@ramboll.com>
Cc: Scott Blanchard <SBlanchard@tandmassociates.com>; Becky Chavez <BChavez@tandmassociates.com>; Cynthia M. Jacobsen <CJacobsen@tandmassociates.com>
Subject: Grenada

Tamara,

Scott Blanchard asked that I forward contact information on to you and let you know that they will be meeting at 6:30 AM tomorrow for breakfast at the Hampton. Hopefully, you were able to get a room there.

Scott Blanchard – Personal Phone / Ex. 6
Becky Chavez – Personal Phone / Ex. 6
Cindy Jacobsen – Personal Phone / Ex. 6

They will be arriving there late this evening. Let me or Scott know if you have any questions.

Thanks,

JAMES PEEPLES, PE
VICE PRESIDENT, SENIOR TECHNICAL ENVIRONMENTAL ENGINEER

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T&M-ESI-1076492

ED_002187_00001741-00011

From: James Peeples
Sent: Wednesday, June 28, 2017 2:58 PM
To: Scott Blanchard; Cynthia M. Jacobsen; Becky Chavez
Cc: Laura Page
Subject: FW: Table
Attachments: Well Table - isotope sampling.pdf

Categories: Filed by Newforma

Laura put this nice table together for you guys for placement of the packers and for screen intervals for wells not packered. The nice thing with the packer placement is that the packer is on the bottom for all but two of the packer wells. It is so easy to find the bottom – no measurements needed.

I will call you guys after I get a work plan off to Willie. Hope the ride is going well. I was trying to predict which cities you would hit rush in, but I have lost track now.

Talk to you soon.

JAMES PEEPLES, PE
VICE PRESIDENT, SENIOR TECHNICAL ENVIRONMENTAL ENGINEER

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JPEEPLES@TANDMASSOCIATES.COM | TANDMASSOCIATES.COM

From: Laura Page
Sent: Wednesday, June 28, 2017 3:44 PM
To: James Peeples <JPeeples@tandmassociates.com>
Subject: Table

Jim,
Attached is the table that you can provide to our Grenada crew that's doing the sampling.

LAURA PAGE, EIT
STAFF DESIGNER 2

4675 Lakehurst Court, Suite 250, Columbus, OH 43016
T + 614.339.3380 D + 614.726.7165 C + 614.314.6897
LPAGE@TANDMASSOCIATES.COM | TANDMASSOCIATES.COM

	Well Name	Well Type	Total Depth (ft bTOC)	Screen Length (ft)	Screened Interval (feet bTOC)	Screened Interval (feet msl)	Date Sampled	Interval	Sampling Interval (feet msl)	TCE	cDCE	VC	Where to Place Bottom of packer
PACKER	TW-224S	UA-SZ	26.48	15.00	11.48 - 26.48	161.65 - 176.65	7/10/2015	A	171.65 - 176.65	144.0	140	< 2	
							7/10/2015	B	166.65 - 171.65	179	206	< 2	
							7/10/2015	C	161.65 - 166.65	2,250	3,120	< 40	Bottom of well
	TW-226D	UA-DZ	53.73	17.50	36.23 - 53.73	133.70 - 151.20	7/10/2015	C	148.70 - 153.70	2,600	375	< 100	43.75' bTOC
							7/10/2015	D	143.70 - 148.70	4,160	1310	< 100	
							7/10/2015	E	138.70 - 143.70	2,970	1,250	< 40	
							7/10/2015	F	133.70 - 138.70	1,910	797	3	
	TW-227S	UA-SZ	27.75	20.00	7.75 - 27.75	158.05 - 178.05	11/5/2015	A	168.05 - 173.05	1.7	< 2	< 1	
							11/5/2015	B	163.05 - 168.05	78	35	< 2	
							11/5/2017	C	158.30 - 163.30	960	540	< 33	Bottom of well
	TW-232S	UA-SZ	32.74	21.00	11.74 - 32.74	153.34 - 174.34	3/12/2017	A	166.22 - 171.22	514	527	< 8	
							3/12/2017	B	161.22 - 166.22	987	941	< 8	
							3/12/2017	C	156.22 - 161.22	2,034	2,104	< 20	
							3/12/2017	D	153.34 - 158.34	2,155	2,046	< 20	Bottom of well
	TW-232D	UA-DZ	55.76	21.00	34.76 - 55.76	130.42 - 151.42	3/12/2017	E	146.42 - 151.42	518	678	< 40	
							3/12/2017	F	141.28 - 146.28	309	364	< 20	
							3/12/2017	G	136.18 - 141.18	502	581	< 8	
							3/12/2017	H	131.18 - 136.18	641	733	< 8	Bottom of well
	TW-200D	UA-DZ	54.95	20.00	34.95 - 54.95	129.94 - 149.94	5/7/2015	C	144.74 - 149.74	210	589	< 2	40' bTOC
							5/7/2015	D	139.74 - 144.74	187	455	< 2	
							5/7/2015	E	134.74 - 139.74	153	416	< 10	
							5/7/2015	F	129.74 - 134.74	17	447	< 10	
	TW-204S	UA-SZ	27.83	15.00	12.83 - 27.83	157.56 - 172.56	3/16/2017	A	167.56 - 172.56	167	234	< 2	
							3/16/2017	B	162.56 - 167.56	668	888	< 8	
							3/16/2017	C	157.56 - 162.56	924	1,240	< 8	Bottom of well
SINGLE SCREEN	TW-18D	UA-DZ	44.75	10.00	34.75 - 44.75	134.94 - 144.94	7/6/2015		134.94 - 144.94	42	31	< 2	
	TW-311D	UA-DZ	47.74	10.00	37.74 - 47.74	135.04 - 145.04	7/1/2016		135.04 - 145.04	430	430	< 17	
	PZ-2	UA-SZ	17.32	10.00	7.32 - 17.32	165.43 - 175.43	2/8/2017		165.43 - 175.43	1,400	2,460	33.1	
	PZ-25	UA-SZ	20.9	NA	NA - 20.90	162.96 - NA	2/8/2017		NA - NA	1,800	993	20.8	
	MW-20	UA-SZ	24.20	15.00	9.61 - 24.61	157.70 - 172.70	5/5/2016		157.70 - 172.70	300	220	< 1	
	MW-25	UA-SZ	22.40	10.00	6.68 - 16.68	164.45 - 174.45	5/5/2016		164.45 - 174.45	78,000	14,000 J	900	
	RT-2	UA-SZ	22.05	5.00	17.22 - 22.22	162.27 - 167.27	5/3/2017		162.27 - 167.27	3,100	3,600	< 200	
	MW-60	UA-SZ	25.00	10.00	14.70 - 24.70	159.29 - 169.29	3/20/2017		159.29 - 169.29	525	590	< 80	
	MW-4	UA-SZ	19.78	4.90	14.75 - 19.65	163.17 - 168.07	5/4/2016		163.17 - 168.07	1,900	5,600	400	

Dedicated Bladder Pump

T&M-ESI-1076509

GROUNDWATER SAMPLING FIELD DATA

TW-226D

WELL NUMBER: ~~RI-2~~

PROJECT: Grenada Main Plant PERSONNEL: LP/TC/DK/NH (SR) Date: 6/29/17

TASK: Groundwater Sampling

Weather Conditions: ☒ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature 88 °F

WELL DATA

Casing: Diameter (inches) 2"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level _____ ft. (range 11.08 - 13.92)

Depth to Well Bottom _____

Feet of Water in Well _____ ft.

Screen Interval 47.5 ft

Is well in good condition? ☐ Yes ☐ No

Is well visible? ☐ Yes ☐ No

Is well accessible? ☐ Yes ☐ No

Is drainage acceptable? ☐ Yes ☐ No

Is well labeled? ☐ Yes ☐ No

Is well locked? ☐ Yes ☐ No

Concrete pad in good condition? ☐ Yes ☐ No

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

*From table due to presence of deidicated pump

Lock Type American

Key Number 65336

PURGING DATA

Purge Method: ☐ Peristaltic ☐ Bailer ☒ Sub Pump Other: _____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: _____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: _____

Purging Equipment: ☒ Dedicated ☐ Disposable ☐ Field Cleaned

Purge Start Time 1752

Purge End Time _____

Volume Purged _____ gal.

Well Evacuated? ☐ Yes ☒ No

Time Series Data

Instrument: Horiba U-52

Calibrated: Date _____

Time:	1750	1755	1800	1805	1810	1815	1820
DTW(ft)	10.1	10.2	5.00	1.6	1.85	2.2	2.52
Temp (degrees C) ±1°	20.14	19.90	20.11	19.8	18.84	18.84	18.85
pH ±0.1	5.54	5.34	5.0	5.18	5.14	5.16	5.16
COND (mS/cm) ±5%	0.155	0.158	0.162	0.162	0.162	0.162	0.161
DO (mg/L)	1.2	0.84	0.54	0.72	0.39	0.31	0.30
ORP (mV)	156	150	154	151	146	142	142
Turb. (NTU) ≤10	0.0	0.0	692	500	344	249	199

SAMPLE DATA

Sampling Method: ☐ Peristaltic ☐ Bailer ☒ Sub Pump Sample Time: 1825

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☒ Dedicated ☐ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: _____ micron

Sampling Appearance: ☒ Clear ☐ Cloudy ☐ Turbid

Color: _____

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☒ No

Number of Bottles Filled: 10

Comments C+Cl+H CSIA Sampling

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

T&M-ESI-1076594

ED_002187_00001741-00014

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: MW-25

PROJECT: Grenada Main Plant PERSONNEL: LP/TC/DK/NH Date: 6.29.17

TASK: Groundwater Sampling

Weather Conditions: ☒ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 79 °F

WELL DATA

Casing: Diameter (inches) 2"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 9.5 ft. (range 6.81 - 9.76)

Depth to Well Bottom 22.85

Feet of Water in Well 13.35 ft.

Screen Interval 10 ft

had to clear mud/debris to find

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☐ Yes ☒ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☐ Yes ☒ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☒ Yes ☐ No

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

*From table due to presence of deidicated pump

Lock Type American

Key Number 65336

PURGING DATA

Purge Method: ☐ Peristaltic ☐ Bailer ☒ Sub Pump Other:

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other:

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other:

Purging Equipment: ☒ Dedicated ☐ Disposable ☐ Field Cleaned

Purge Start Time 1340

Purge End Time 1401

Volume Purged 1.8 gal.

Well Evacuated? ☐ Yes ☒ No

Time Series Data

Instrument: Horiba U-52

Calibrated: Date 6.29.17

Time:	1345	1350	1355	1400
DTW(ft)	9.5'	9.5'	9.5'	9.5'
Temp (degrees C) ±1°	22.56	22.06	21.86	21.83
pH ±0.1	6.26	6.72	6.69	6.68
COND (mS/cm) ±5%	0.850	0.853	0.854	0.834
DO (mg/L)	0.62	0.72	0.58	0.55
ORP (mV)	38	31	31	29
Turb. (NTU) ≤10	199	7.60	8.15	9.4

SAMPLE DATA

Sampling Method: ☐ Peristaltic ☐ Bailer ☒ Sub Pump Sample Time: 1405

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☒ Dedicated ☐ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: micron

Sampling Appearance: ☒ Clear ☐ Cloudy ☐ Turbid Color:

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☒ No

Number of Bottles Filled: 10

Comments Throttle : 40

C + CL + H CS1A

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

T&M-ESI-1076595

ED_002187_00001741-00015

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: MW-20

PROJECT: Grenada Main Plant PERSONNEL: LP/TC/DK/NH/CMG Date: 6.29.17

TASK: Groundwater Sampling

Weather Conditions: ☒ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 79 °F

WELL DATA

Casing: Diameter (inches) 2"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

C+Cl+H CSIA

Depth to Static Water Level 11.22 (range 8.59 - 11.06)

Depth to Well Bottom 24.44

Feet of Water in Well 13.22 ft.

no brass fitting on brass MPSO controller connection

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☒ Yes ☐ No

Screen Interval 15 ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

*From table due to presence of deidicated pump

Lock Type American

Key Number 65336

PURGING DATA

Purge Method: ☐ Peristaltic ☐ Bailer ☒ Sub Pump Other:

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other:

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other:

Purging Equipment: ☒ Dedicated ☐ Disposable ☐ Field Cleaned

Purge Start Time 1143

Purge End Time 1202

Volume Purged ~1.5 gal.

Well Evacuated? ☐ Yes ☒ No

Time Series Data

Instrument: Horiba U-52

Calibrated: Date 6.29.17

Time:	1146	1151	1156	1201
DTW(ft)	11.22	11.22	11.22	11.22
Temp (degrees C) ±1°	23.4	22.63	22.51	22.45
pH ±0.1	6.54	6.45	6.45	6.46
COND (mS/cm) ±5%	0.360	0.302	0.280	0.281
DO (mg/L)	2.46	2.33	2.30	2.05
ORP (mV)	170	173	172	174
Turb. (NTU) ≤10	93.6	62.3	42.7	31.0

SAMPLE DATA

Sampling Method: ☐ Peristaltic ☐ Bailer ☒ Sub Pump Sample Time: 1205

(Data above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☒ Dedicated ☐ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: micron

Sampling Appearance: ☒ Clear ☐ Cloudy ☐ Turbid Color:

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☒ No

Number of Bottles Filled: 10

Comments Shuttle: 30'

C + Cl + H CSIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

T&M-ESI-1076596

ED_002187_00001741-00016

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: RT-2

PROJECT: Grenada Main Plant PERSONNEL: LP/TC/DK/NH / CMG Date: 6/29/17

TASK: Groundwater Sampling

Weather Conditions: ☐ Sun ☒ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 79 °F

WELL DATA

Casing: Diameter (inches) 2"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 13.66 ft. (range 11.08 - 13.92)

Depth to Well Bottom 22.58

Feet of Water in Well 8.92 ft.

C+Cl + H CSIA

Screen Interval 5 ft

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☒ Yes ☐ No

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

*From table due to presence of deidicated pump

Lock Type American

Key Number 65338

PURGING DATA

Purge Method: ☐ Peristaltic ☐ Bailer ☒ Sub Pump Other:

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other:

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other:

Purging Equipment: ☒ Dedicated ☐ Disposable ☐ Field Cleaned

Purge Start Time 1010

Purge End Time 1029

Volume Purged 21.5 gal.

Well Evacuated? ☐ Yes ☒ No

Time Series Data

Instrument: Horiba U-52

Calibrated: Date 6.29.17

Time:	1013	1018	1023	1028
DTW(ft)	13.66	13.66	13.66	13.66
Temp (degrees C) ±1°	21.12	20.59	20.47	20.46
pH ±0.1	6.42	6.34	6.38	6.41
COND (mS/cm) ±5%	0.553	0.535	0.544	0.548
DO (mg/L)	2.12	1.17	0.82	0.72
ORP (mV)	103	120	128	132
Turb. (NTU) ≤10	0.0	0.0	0.0	0.0

SAMPLE DATA

Sampling Method: ☐ Peristaltic ☐ Bailer ☒ Sub Pump Sample Time: 1030

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☒ Dedicated ☐ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: micron

Sampling Appearance: ☒ Clear ☐ Cloudy ☐ Turbid Color:

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☒ No

Number of Bottles Filled: 10

Comments: Throttle set @ 25-30'

C + Cl + H CSIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

Cyndi Jacobson

SIGNATURE

T&M-ESI-1076597

ED_002187_00001741-00017

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: TW-18D

PROJECT: Grenada Main Plant PERSONNEL: TC/LP/DK/NH Date: 6/29/17

TASK: Groundwater Sampling

Weather Conditions: ☒ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 82 °F

WELL DATA

Casing: Diameter (inches) 2" / 1"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 14.08 ft.

Depth to Well Bottom ____ ft.

Feet of Water in Well ____ ft.

Calculated Volume of Water in Well ____ gal. 0.16 gal/ft (2" diameter)

3 Well Volumes ____ gal. 0.04 gal/ft (1" diameter)

Screen Interval ____ ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☒ Yes ☐ No

PURGING DATA

Number of Well Volumes Purged ____ (minimum 3.0)

Purge Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Other: ____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: ____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: Silicone

Purging Equipment: ☐ Dedicated ☒ Disposable ☒ Field Cleaned

Purge Start Time 1419

Purge End Time 1433

Volume Purged ____ gal.

Well Evacuated? ☐ Yes ☐ No

Time Series Data

Instrument: Horiba U-52 Rented

Calibrated: Date 6/29/17 1420

Time	1419	1423	~~[illegible]~~	1432
Volume	1L	2	3	4
Temp (degrees C) ±1°	24.53	23.97	23.03	22.87
pH ±0.1	5.73	5.45	5.41	5.59
COND (mS/cm) ±5%	0.168	0.171	0.177	0.177
DO (mg/L)	1.51	1.48	1.52	1.49
ORP (mV)	155	215	228	244
Turb. (NTU)	71.2	26.1	6.3	1.7

SAMPLE DATA

Sampling Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Sample Time: ____

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☐ Dedicated ☒ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: ____ micron

Sampling Appearance: ☐ Clear ☐ Cloudy ☐ Turbid Color: ____

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☐ No

Number of Bottles Filled: ____

Comments Sampled @ 1435

C + Cl + H CSIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: TW-200D

PROJECT: Grenada Main Plant PERSONNEL: TC/LP/DK/NH Date: 6/29/17

TASK: Groundwater Sampling

Weather Conditions: ☐ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 82 °F

WELL DATA

Casing: Diameter (Inches) 2" / 1"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 13.03 ft.

Depth to Well Bottom _____ ft.

Feet of Water in Well _____ ft.

Calculated Volume of Water in Well _____ gal. 0.16 gal/ft (2" diameter)

3 Well Volumes _____ gal. 0.04 gal/ft (1" diameter)

Screen Interval _____ ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☒ Yes ☐ No

PURGING DATA

Number of Well Volumes Purged _____ (minimum 3.0)

Purge Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Other: _____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: _____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: Silicone

Purging Equipment: ☐ Dedicated ☒ Disposable ☒ Field Cleaned

Purge Start Time 1506

Purge End Time 1652

Volume Purged 6 L gal. 1635

Well Evacuated? ☐ Yes ☒ No

Time Series Data

Instrument: Horiba U-52

Calibrated: Date 6/29/17

Time	1610 ~~28.04~~	1615	1620	1625	1630	1635
Volume	1L	2	3	4	5	6
Temp (degrees C) ±1°	27.13	28.32	28.13	26.56	28.17	25.77
pH ±0.1	5.79	5.89	5.93	5.72	5.70	5.69
COND (mS/cm) ±5%	0.155	0.149	0.165	0.157	0.160	0.158
DO (mg/L)	0.21	0.19	0.36	0.26	0.31	0.32
ORP (mV)	114	104	98	119	~~300~~ 114	129
Turb. (NTU)	0.0	0.0	0	0.0	300	674

SAMPLE DATA

Sampling Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Sample Time: _____

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☐ Dedicated ☒ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: _____ micron

Sampling Appearance: ☐ Clear ☐ Cloudy ☐ Turbid Color: _____

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☐ No

Number of Bottles Filled: _____

Comments

C + Cl + H CSIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: TW-20A3

PROJECT: Grenada Main Plant PERSONNEL: TC/LP/DK/NH Date: 6/29/17

TASK: Groundwater Sampling

Weather Conditions: ☑ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: _____ °F

WELL DATA

Casing: Diameter (inches) 2" / 1"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 14.29 ft.

Depth to Well Bottom _____ ft.

Feet of Water in Well _____ ft.

Calculated Volume of Water in Well _____ gal. 0.16 gal/ft (2" diameter)

3 Well Volumes _____ gal. 0.04 gal/ft (1" diameter)

Screen Interval _____ ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

Is well in good condition? ☑ Yes ☐ No

Is well visible? ☑ Yes ☐ No

Is well accessible? ☑ Yes ☐ No

Is drainage acceptable? ☑ Yes ☐ No

Is well labeled? ☑ Yes ☐ No

Is well locked? ☑ Yes ☐ No

Concrete pad in good condition? ☑ Yes ☐ No

PURGING DATA

Number of Well Volumes Purged _____ (minimum 3.0)

Purge Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Other: _____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: _____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: Silicone

Purging Equipment: ☐ Dedicated ☒ Disposable ☒ Field Cleaned

Purge Start Time 1541

Purge End Time _____

Volume Purged _____ gal.

Well Evacuated? ☐ Yes ☐ No

Time Series Data

Instrument: Horiba U-52 rental

Calibrated: Date 6/29/17

Time	1541	1546	1551	1600	1610
Volume	1	1L	2L	3L	4L
Temp (degrees C) ±1°	23.20	22.14	22.16	22.14	22.5
pH ±0.1	5.89	5.68	5.64	5.52	5.53
COND (mS/cm) ±5%	0.170	0.167	0.165	0.163	0.162
DO (mg/L)	7.21	6.30	5.94	5.53	5.44
ORP (mV)	216	225	233	249	252
Turb. (NTU)	489	358	104	106	105

SAMPLE DATA

Sampling Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Sample Time: _____

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☐ Dedicated ☒ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: _____ micron

Sampling Appearance: ☐ Clear ☐ Cloudy ☐ Turbid Color: _____

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☐ No

Number of Bottles Filled: _____

Comments

C+CI+HCSIA Sample TW-20A3 taken @ 1615

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

_____

SIGNATURE

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: TW-22TS

PROJECT: Grenada Main Plant PERSONNEL: TC/LP/DK/NH Date: 6/29/17

TASK: Groundwater Sampling

Weather Conditions: ☒ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 84 °F

WELL DATA

Casing: Diameter (inches) 2" / 1"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level ~~12.59~~ ft. 13.42

Depth to Well Bottom _____ ft.

Feet of Water in Well _____ ft.

Calculated Volume of Water in Well _____ gal. 0.16 gal/ft (2" diameter)

3 Well Volumes _____ gal. 0.04 gal/ft (1" diameter)

Screen Interval _____ ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☒ Yes ☐ No

PURGING DATA

Number of Well Volumes Purged _____ (minimum 3.0)

Purge Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Other: _____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: _____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: Silicone

Purging Equipment: ☐ Dedicated ☒ Disposable ☒ Field Cleaned

Purge Start Time 1750

Purge End Time 1827 1821

Volume Purged _____ gal.

Well Evacuated? ☐ Yes ☒ No

Time Series Data

Instrument: Horiba U-52

Calibrated: Date 6/29/17

Time	1758	1803	1808	1813	1818
Volume	1	2	3	4	5
Temp (degrees C) ±1°	21.11	20.55	20.44	20.22	20.14
pH ±0.1	5.27	5.06	4.87	4.81	4.77
COND (mS/cm) ±5%	0.07	0.07	0.07	0.071	0.071
DO (mg/L)	5.25	5.08	5.08	5.14	5.06
ORP (mV)	268	289	305	310	314
Turb. (NTU)	6.0	849	547	408	296

SAMPLE DATA

Sampling Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Sample Time: _____

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☐ Dedicated ☒ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: _____ micron

Sampling Appearance: ☐ Clear ☐ Cloudy ☐ Turbid Color: _____

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☐ No

Number of Bottles Filled: _____

Comments

C + Cl + H CSIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: TW-3116

PROJECT: Grenada Main Plant PERSONNEL: TC/LP/DK/NH Date: 6/29/17

TASK: Groundwater Sampling

Weather Conditions: ☒ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 79 °F

WELL DATA

Casing: Diameter (inches) 2" / 1"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 11.7 ft.

Depth to Well Bottom _____ ft.

Feet of Water in Well _____ ft.

Calculated Volume of Water in Well _____ gal. 0.16 gal/ft (2" diameter)

3 Well Volumes _____ gal. 0.04 gal/ft (1" diameter)

Screen Interval _____ ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☒ Yes ☐ No

PURGING DATA

Number of Well Volumes Purged _____ (minimum 3.0)

Purge Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Other: _____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: _____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: Silicone

Purging Equipment: ☐ Dedicated ☒ Disposable ☒ Field Cleaned

Purge Start Time 1053

Purge End Time 1140

Volume Purged _____ gal.

Well Evacuated? ☐ Yes ☐ No

1135

Time Series Data

Instrument: Horiba U-52 rented

Calibrated: Date 6/29/17

Time	1101	1105	1110	1115	1120	1125	1130
Volume	1.4	1.5	2	2.5	3	3.5	4
Temp (degrees C) ±1°	27.08	24.23	25.12	22.27	22.33	22.25	22.51
pH ±0.1	5.84	5.93	6.00	5.79	5.83	5.87	5.88
COND (mS/cm) ±5%	0.240	0.255	0.249	0.265	0.263	0.263	0.262
DO (mg/L)	0.35	0.25	0.26	0.35	0.32	0.30	0.28
ORP (mV)	2.0	-22	-25	-8	-11	-14	-14
Turb. (NTU)	112	800	184	18.6	3.7	0.0	0

SAMPLE DATA

Sampling Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Sample Time: _____

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☐ Dedicated ☒ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: _____ micron

Sampling Appearance: ☐ Clear ☐ Cloudy ☐ Turbid Color: _____

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☐ No

Number of Bottles Filled: _____

Comments

C + Cl + H CSIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

TW-232D

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: TW-232D

PROJECT: Grenada Main Plant PERSONNEL: TC/LP/DK/NH Date: 6/29/17

TASK: Groundwater Sampling

Weather Conditions: ☐ Sun ☒ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 76 °F

WELL DATA

Casing: Diameter (inches) 2" / 1"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 14.36 ft.

Depth to Well Bottom ____ ft.

Feet of Water in Well ____ ft.

Calculated Volume of Water in Well ____ gal. 0.16 gal/ft (2" diameter)

3 Well Volumes ____ gal. 0.04 gal/ft (1" diameter)

Screen Interval ____ ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☒ Yes ☐ No

EQ Blank

PURGING DATA

Number of Well Volumes Purged ____ (minimum 3.0)

Purge Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Other: ____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: ____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: Silicone

Purging Equipment: ☐ Dedicated ☒ Disposable ☒ Field Cleaned

Purge Start Time 1159

Purge End Time 1340

Volume Purged 9 L gal.

Well Evacuated? ☐ Yes ☒ No

Time Series Data

Instrument: Horiba U-52 rented

Calibrated: Date 6/29/17

Time	1203	1213	1225	1238	12:46	102	114	136	240
Volume	0	1L	2L	3L	4L	5L	6L	7L	8L
Temp (degrees C) ±1°	28.62	25.92	25.18	25.27	24.60	25.07	25.81	25.32	25.77
pH ±0.1	6.78	6.55	6.05	6:04	6.19	6.53	6.35	6.39	6.45
COND (mS/cm) ±5%	.255	0.268	0.266	0.268	0.266	0.260	0.254	0.257	0.255
DO (mg/L)									
ORP (mV)									
Turb. (NTU)									

SAMPLE DATA

Sampling Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Sample Time: 1500 1340

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☐ Dedicated ☒ Disposable ☐ Field Cleaned? Metals Field Filtered? ☐ Yes ☒ No

Filter Size ____ micron

Sampling Appearance: ☐ Clear ☐ Cloudy ☐ Turbid Color: ____ Duplicate Collected? ☐ Yes ☐ No

Immiscible Liquid: None Number of Bottles Filled: ____

Comments SAMPLE H EQ blank taken off packer

(1340) TW-232D-H EB-101

1350 C+CT+HCSIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: MW-4

PROJECT: Grenada Main Plant PERSONNEL: LP/TC/DK/NH/CMJ Date: 6.29.17

TASK: Groundwater Sampling

Weather Conditions: ☒ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 80 °F

WELL DATA

Casing: Diameter (inches) 2"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 14.82 ft. (range 12.56 - 15.64)

Depth to Well Bottom 19.83

Feet of Water in Well 5.01 ft.

Screen Interval 4.9 ft

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☒ Yes ☐ No

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

*From table due to presence of deidicated pump

Lock Type American

Key Number 65336

PURGING DATA

Purge Method: ☐ Peristaltic ☐ Bailer ☒ Sub Pump Other:

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other:

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other:

Purging Equipment: ☒ Dedicated ☐ Disposable ☐ Field Cleaned

Purge Start Time 1505

Purge End Time 1526

Volume Purged ~2.0 gal.

Well Evacuated? ☐ Yes ☒ No

Time Series Data

Instrument: Horiba U-52

Calibrated: Date 6.29.17

Time:	1510	1515	1520	1525
DTW(ft)	14.82	14.82	14.82	14.82
Temp (degrees C) ±1°	20.62	20.48	20.26	20.30
pH ±0.1	6.34	6.32	6.31	6.30
COND (mS/cm) ±5%	0.612	0.617	0.614	0.620
DO (mg/L)	0.91	0.88	0.78	0.76
ORP (mV)	20	18	16	16
Turb. (NTU) ≤10	6.1	5.2	5.5	4.1

SAMPLE DATA

Sampling Method: ☐ Peristaltic ☐ Bailer ☒ Sub Pump Sample Time: 1530

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☒ Dedicated ☐ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: micron

Sampling Appearance: ☒ Clear ☐ Cloudy ☐ Turbid Color :

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☒ No

Number of Bottles Filled: 10

Comments

Throttle is 30'

C + Cl + H CSIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

T&M-ESI-1076604

ED_002187_00001741-00024

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: MW-6C

PROJECT: Grenada, MS PERSONNEL: Cindy Jacobs Date: 6/29/17

TASK: Groundwater Sampling

Weather Conditions: ☒ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 88 °F

WELL DATA

Casing: Diameter (inches) ~~1/2"~~ 2"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 12.90 ft.

Depth to Well Bottom 25.22 ft.

Feet of Water in Well _____ ft.

Calculated Volume of Water in Well _____ gal. 0.16 gal/ft (2" diameter)

Screen Interval _____ ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

*NO J-Plug

* no bolts for flush water

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☐ Yes ☐ No

Concrete pad in good condition? ☒ Yes ☐ No

PURGING DATA

Number of Well Volumes Purged _____

Purge Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Other: _____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: _____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: Silicone

Purging Equipment: ☐ Dedicated ☒ Disposable ☒ Field Cleaned

Purge Start Time 1659

Purge End Time 1716

Volume Purged 2.25 gal.

Well Evacuated? ☐ Yes ☒ No

Time Series Data

Instrument: Horiba U-52

Calibrated: Date 6/27/17

Time	1700	1705	1710	1715
Volume (gal)	0.50	1.0	1.5	2 gal
Temp (degrees C) ±1°	21.45	21.25	21.20	21.09
pH ±0.1	6.55	6.65	6.59	6.58
COND (mS/cm) ±5%	0.488	0.482	0.476	0.473
DO (mg/L)	1.65	1.3	1.27	1.09
ORP (mV)	58	54	59	65
Turb. (NTU)	102	68.2	48.8	22.7

SAMPLE DATA

Sampling Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Sample Time: 1720

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☐ Dedicated ☒ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: _____ micron

Sampling Appearance: ☒ Clear ☐ Cloudy ☐ Turbid Color: Clear

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☒ No

Number of Bottles Filled: 10

Comments

C + Cl + H ESIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

Cindy Jacobs

SIGNATURE

T&M-ESI-1076605

ED_002187_00001741-00025

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: TW-232S

Date: 6/29/17

PROJECT: Grenada Main Plant PERSONNEL: TC/LP/DK/NH

TASK: Groundwater Sampling

Weather Conditions: ☐ Sun ☒ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 76 °F

WELL DATA

Casing: Diameter (inches) 2" / 1"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 14.42 ft.

Depth to Well Bottom ____ ft.

Feet of Water in Well ____ ft.

Calculated Volume of Water in Well ____ gal. 0.16 gal/ft (2" diameter)

3 Well Volumes ____ gal. 0.04 gal/ft (1" diameter)

Screen Interval ____ ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☒ Yes ☐ No

PURGING DATA

Number of Well Volumes Purged ____ (minimum 3.0)

Purge Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Other: ____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: ____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: Silicone

Purging Equipment: ☐ Dedicated ☒ Disposable ☒ Field Cleaned

Purge Start Time 0944

Purge End Time ____

Volume Purged ____ gal.

Well Evacuated? ☐ Yes ☐ No

Time Series Data

Instrument: Horiba U-52 rented

Calibrated: Date ____

Time	0946	0953	0958	1003	1008	1013
Volume	1	1.5	2	2.5	3	3.5
Temp (degrees C) ±1°	25.46	24.82	24.34	24.28	24.28	24.32
pH ±0.1	5.58	5.73	5.67	5.62	5.32	5.21
COND (mS/cm) ±5%	0.161	0.163	0.164	0.164	0.164	0.164
DO (mg/L)				1.13	1.10	1.04
ORP (mV)				319	319	330
Turb. (NTU)				213	152	110

SAMPLE DATA

Sampling Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Sample Time: ____

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☐ Dedicated ☒ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: ____ micron

Sampling Appearance: ☐ Clear ☐ Cloudy ☐ Turbid Color: ____

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☐ No

Number of Bottles Filled: ____

Comments Sample TW-2325-D C + Cl + H CSIA

1340 taken off 232P

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE ____

T&M-ESI-1076606

ED_002187_00001741-00026

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: TW-DD45

PROJECT: Grenada, MS PERSONNEL: S. Blackwell & Tamara Date: 6/29/17

TASK: Groundwater Sampling Home Freight

Weather Conditions: ☒ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 87 °F

WELL DATA

Casing: Diameter (inches) 1/2"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level _____ ft.

Depth to Well Bottom _____ ft.

Feet of Water in Well _____ ft.

Calculated Volume of Water in Well _____ gal. 0.16 gal/ft (2" diameter)

Screen Interval _____ ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

Is well in good condition? ☒ Yes ☐ No

Is well visible? ~~☐ Yes~~ ☐ No

Is well accessible? ~~☐ Yes~~ ☐ No

Is drainage acceptable? ~~☐ Yes~~ ☐ No

Is well labeled? ~~☐ Yes~~ ☐ No

Is well locked? ~~☐ Yes~~ ☐ No

Concrete pad in good condition? ~~☐ Yes~~ ☐ No

PURGING DATA

Number of Well Volumes Purged _____

Purge Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Other: _____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: _____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: Silicone

Purging Equipment: ☐ Dedicated ☒ Disposable ☒ Field Cleaned

Purge Start Time 1482-1942

Purge End Time _____

Volume Purged _____ gal.

Well Evacuated? ☐ Yes ☐ No

Time Series Data

Instrument: Horiba U-52

Calibrated: Date 6/28/17

Time	1945	1950	1955	2000	2005	2010
Volume	1mL	525mL	1050	1680	2100	2625
Temp (degrees C) ±1°	24.04	21.08	20.23	20.00	20.02	20.00
pH ±0.1	5.52	5.07	4.86	5.03	4.97	5.03
COND (mS/cm) ±5%	0.040	0.040	0.044	0.047	0.050	0.054
DO (mg/L)	8.22	5.89	4.49	3.96	3.88	3.86
ORP (mV)	155	238	265	263	270	265
Turb. (NTU)	>1000	~~7000~~	~~7000~~	~~7000~~	1000	637

SAMPLE DATA

Sampling Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Sample Time: 2010

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☐ Dedicated ☒ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: _____ micron

Sampling Appearance: ☐ Clear ☒ Cloudy ☐ Turbid Color Slight orange tint

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☒ No

Number of Bottles Filled: 10

Comments Tri-1, H2O orange

C + Cl + H CSIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

T&M-ESI-1076607

ED_002187_00001741-00027

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: PZ-22

Date: 6/29/17

PROJECT: Grenada, MS PERSONNEL: S. Blanchard

TASK: Groundwater Sampling - CSIA

Weather Conditions: ☒ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 68 °F

WELL DATA

Casing: Diameter (inches) 1/2"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 10.86 ft.

Depth to Well Bottom 19.85 ft. TOC

Feet of Water in Well 8.99 ft.

Calculated Volume of Water in Well 2.2 gal. 0.16 gal/ft (2" diameter)

Screen Interval _____ ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

Is well in good condition? ☐ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☐ Yes ☒ No

PURGING DATA

Number of Well Volumes Purged _____

Purge Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Other: _____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: _____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: Silicone

Purging Equipment: ☐ Dedicated ☒ Disposable ☒ Field Cleaned

Purge Start Time 1405

Purge End Time 1425

Volume Purged 2.2L gal.

Well Evacuated? ☐ Yes ☐ No

Time Series Data

Instrument:	Horiba U-52				
Calibrated:	Date 6/29/17				
Time	1405	1410	1415	1420	1425
Volume	Init	500	1.1L	1.5L	2L
Temp (degrees C) ±1°	27.58	23.75	22.28	21.89	21.50
pH ±0.1	5.78	5.59	5.35	5.37	5.34
COND (mS/cm) ±5%	0.325	0.255	0.246	0.242	0.241
DO (mg/L)	0.64	0.00	0.00	0.00	0.00
ORP (mV)	3	62	85	114	132
Turb. (NTU)	700	592	721	607	472

SAMPLE DATA

Sampling Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Sample Time: 1426

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☒ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☐ Dedicated ☒ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: _____ micron

Sampling Appearance: ☐ Clear ☐ Cloudy ☐ Turbid Color: _____

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☒ No

Number of Bottles Filled: 10

Comments Analysis: H+Cl+C CSIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

T&M-ESI-1076608

ED_002187_00001741-00028

GROUNDWATER SAMPLING FIELD DATA

WELL NUMBER: PZ-25

PROJECT: Grenada, MS PERSONNEL: S. Blankenship Date: 6/29/17

TASK: Groundwater Sampling

Weather Conditions: ☒ Sun ☐ Partly Cloudy ☐ Cloudy ☐ Rain ☐ Snow ☐ Windy Temperature: 88 °F

WELL DATA

Casing: Diameter (inches) 1/2"

Type: ☐ Stainless Steel ☒ PVC

Intake Screen: ☐ Stainless Steel ☒ PVC

Depth to Static Water Level 11.14 ft.

Depth to Well Bottom 20.93 ft.

Feet of Water in Well 9.79 ft.

Calculated Volume of Water in Well _____ gal. 0.16 gal/ft (2" diameter)

Screen Interval _____ ft

Measurement Datum: ☒ Top of Inner Casing ☐ Procasing

Is well in good condition? ☒ Yes ☐ No

Is well visible? ☒ Yes ☐ No

Is well accessible? ☒ Yes ☐ No

Is drainage acceptable? ☒ Yes ☐ No

Is well labeled? ☒ Yes ☐ No

Is well locked? ☒ Yes ☐ No

Concrete pad in good condition? ☐ Yes ☒ No

PURGING DATA

Number of Well Volumes Purged _____

Purge Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Other: _____

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE Other: _____

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon Other: Silicone

Purging Equipment: ☐ Dedicated ☒ Disposable ☒ Field Cleaned

Purge Start Time 1504

Purge End Time _____

Volume Purged _____ gal.

Well Evacuated? ☐ Yes ☐ No

Time Series Data

Instrument: Horiba U-52

Calibrated: Date 6/29/17

Time	1505	1510	1515	1520	1525	1530
Volume	0	500 mL	1000 mL	1.5 L	2 L	2.5 L
Temp (degrees C) ±1°	24.43	21.55	21.18	20.34	20.29	20.21
pH ±0.1	6.05	6.05	6.02	5.98	5.96	5.91
COND (mS/cm) ±5%	0.320	0.329	0.328	0.331	0.331	0.331
DO (mg/L)	0.14	0.00	0.00	0.00	0.00	0.00
ORP (mV)	7	43	75	87	98	106
Turb. (NTU)	7000	444	275	217	104	71.3

SAMPLE DATA

Sampling Method: ☒ Peristaltic ☐ Bailer ☐ Sub Pump Sample Time: 1530

(Date above and time here should correspond with date and time on sample bottle)

Materials: Bailer/Pump ☐ Teflon ☒ SS ☐ PVC ☐ PE

Cord/Tubing ☐ Teflon ☒ Polyethylene ☐ Nylon

Sampling Equipment: ☐ Dedicated ☒ Disposable ☐ Field Cleaned

Metals Field Filtered? ☐ Yes ☒ No

Filter Size: _____ micron

Sampling Appearance: ☐ Clear ☐ Cloudy ☐ Turbid Color: _____

Immiscible Liquid: None

Duplicate Collected? ☐ Yes ☒ No

Number of Bottles Filled: 10

Comments

C + Cl + H CSIA

THIS SAMPLE WAS COLLECTED AND HANDLED IN ACCORDANCE WITH APPLICABLE REGULATORY AND CORPORATE PROTOCOLS

SIGNATURE

ED_002187_00001741-00030

TestAmerica Canton

Chain of Custody Record

testamerica

Client Information: BAC/Tarrant 1014 402-258-2

Lab PM: O'Meara, Patrick J
E-Mail: patrick.omeara@testamericainc.com

Carrier Tracking No(s):

COC No: 240-41126-17505.5

Client Contact: Phone: 1014 402-258-2(orig)

Due Date Requested:

TAT Requested (days):

Project Name: MDEQ-00018

Sample Identification | Sample Date | Sample Time | Sample Type (C=Comp, G=grab) | Matrix (Wastewater, Sewage, Groundwater, Surface Water, Air) | Perform MS/MSD (Y/N) | Field Filtered Sample (Yes or No) | 8260B_7470A | 7199A - Cr (VI)-Dissolved | Analysis Requested: C+Cl+H CSTA | Total Number of Containers

Special Instructions/Note: Ice to 4°C

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	C+Cl+H CSTA	Total Number of Containers
TW-232S-D	10.29.17	1014	G	Water	1	1
TW-232D-H		1350		Water		
EB101		1340		Water		
TW-13D		1435		Water		
TW-200D		1637		Water	1	
TW-204S		1615		Water		
TW-227S		1321		Water	1	
TW-311D		1135		Water		
TW-320D		1325		Water		1
TW-224S		2010		Water		
Lab-Supplied Trip Blanks				Water	8	8

Possible Hazard Identification: Non-Hazard / Flammable / Skin Irritant / Poison B / Unknown / Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): Return To Client / Disposal By Lab / Archive For: Months

Special Instructions/QC Requirements:

Relinquished by: Date: Time: Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
C. O'Meara	10.29.17 / 2030	T&M			

Custody Seal No.: Cooler Temp. (°C): Cooler Temperature(s) °C and Other Remarks:

T&M-ESI-1076634

From: James Peeples
Sent: Friday, July 7, 2017 1:36 PM
To: Regan Welch
Subject: FW: spreadsheet
Attachments: CSIA wells.xlsx

Follow Up Flag: Follow up
Flag Status: Completed

Categories: Filed by Newforma

JAMES PEEPLES, PE
VICE PRESIDENT, SENIOR TECHNICAL ENVIRONMENTAL ENGINEER

4675 Lakehurst Court, Suite 250, Columbus, OH 43016
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JPEEPLES@TANDMASSOCIATES.COM | TANDMASSOCIATES.COM

From: Laurie LaPat-Polasko [mailto:LLaPat@ramboll.com]
Sent: Friday, July 07, 2017 1:46 PM
To: James Peeples <JPeeples@tandmassociates.com>
Subject: spreadsheet

Hi Jim,

See attached.

Cheers,
Laurie LaPat-Polasko, PhD, QEP
Principal Consultant
Site Solutions
Environment & Health

D +1 602 7347735
M +1 480 2724350
LLaPat@ramboll.com

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RAMBOLL ENVIRON

Table 2. Wells Sampled for Compound Specific Isotope Analyses

Attorney Work Product, Prepared in Anticipation of Litigation, Priveleged & Confidential- DRAFT

Well Number	Screen Top (feet BGS)	Screen Bottom (feet BGS)	Screen Top (feet msl)	Screen Bottom (feel msl)	Shallow or Deep Zone Screened Interval	Plume Location Areas	Comments
MW-25	7	17	174.5	164.5	Shallow	Facility Source	
RT-2	15	20	167.27	162.27	Shallow	Facility Source	
MW-60	15	25	169.29	159.29	Shallow	Facility Downgradient of Source	
MW-4	12.6	17.5	168.07	163.17	Shallow	Further Downgradient of Facility	
TW-232D	35	56	151.18	130.18	Deep	Residential	
TW-232S	12	33	174.34	153.34	Shallow	Residential	
MW-20	10	25	172.70	157.70	shallow	Residential	
TW-311	38	48	145	135	Deep	Residential	
TW-18D	33.49	43.49	152.94	142.94	Deep	Northern Upgradient	
TW-200D	34	54	149.94	129.94	Deep	Northern Upgradient	
TW-204S	13	28	172.56	157.56	Shallow	Northern Upgradient	
TW-224S	9	24	176.65	161.65	Shallow	Northern Upgradient	
TW-227S	8	28	178.05	158.05	Shallow	East Moose Lodge Road Area	
TW-226D	33.5	51	151.20	133.70	Deep	East Moose Lodge Road Area	
PZ-2	6	16	172.84	162.84	Shallow	Buffing Compound Disposal Area	Assume 10' Screen. The screen
PZ-25	6.16	16.16	172.96	162.96	Shallow	Buffing Compound Disposal Area	Assume 10' Screen. The screen