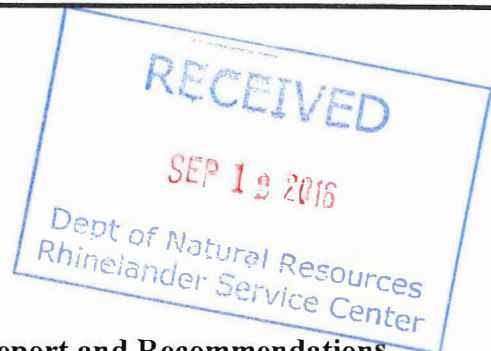




Meridian Environmental Consulting, LLC

August 24, 2016

Carrie Stoltz
Wisconsin Department of Natural Resources
107 Sutliff Avenue
Rhineland, Wisconsin 54501



Subject: Soil Vapor Extraction System: Progress Report and Recommendations

Autostop (former)
119 W. 9th Street North
Ladymith, Wisconsin 54848
BRRTS No. 03-55-282548
PECFA No. 54848-1295-19
Meridian No. 05F630

Doug's Tire (former)
811 Lake Ave W.
Ladysmith, Wisconsin 54848
BRRTS No. 03-55-000408
PECFA No. 54848-1215-11
Meridian No. 05F786

Dear Carrie:

This letter provides a summary of the remedial work completed at the above two sites in the past year. This summary includes:

- Soil Vapor Extraction System Description
- SVE System Operation and Maintenance details
- Recommendations for further operation of SVE system and remediation

The remainder of this letter describes and documents the SVE system, operation and maintenance information, and our recommendations.

Based on the data collected to date, we recommend continued operation of the SVE system. We also recommend the SVE vents be re-developed annually (especially the old vents at Doug's). The wells should be inspected for annual maintenance (due to frost-heaving).

SOIL VAPOR EXTRACTION SYSTEM

A Soil Vapor Extraction (SVE) system was installed at the two properties known as Doug's and Autostop. The intent of the SVE system is to remove as much petroleum impacts as practicable from a targeted area (known as LNAPL Focus Area).

The system was installed through a joint effort by two consulting firms: Meridian Environmental Consulting, LLC and REI. REI was responsible for system installation, operation, and maintenance. Meridian is the Prime Consultant for the project. This arrangement will be terminated as of October 1, 2016; Meridian will take over system operation and maintenance.

SVE System Description

The SVE system consists of several main components:

- SVE Extraction Wells
- Piping
- SVE system (blower and associated components)
- Flame Oxidizer for offgas treatment (first 4 months of operation)

Each component is described below.

SVE Extraction Wells

Petroleum vapors are removed from soil vapor extraction wells within the LNAPL Focus Area (Figure 1). The extraction wells currently in use are RW-1, RW-2, RW-3, RW-4, RW-5, EX-2, EX-4, EX-5, M-1.

Table 1 summarizes the construction of the soil vapor extraction wells. Appendix A contains the well construction forms. The wells are 4-inch diameter PVC screened above and into the water table (except EX-2 is a former recovery well (8-inch diameter steel)).

The wells are completed at grade inside a steel flush-grade protective manway with a bolt-down cover. Extraction wells RW-1, RW-2, RW-3, EX-2, EX-4, EX-5 had been installed as part of earlier remedial actions. Wells RW-4, RW-5, and M-1 were installed in June 2015 as part of the current SVE remedial action.

Piping

Figure 2 is a schematic diagram of the extraction wells and piping construction.

The extraction wells are individually connected to the SVE trailer via individual piping. Piping consists of 2-inch dia. PVC buried 4 feet below grade. The piping is covered with 4-inches of Styrofoam insulation. The trench was backfilled with clean sand.

Piping was installed under Highway 8 using directional boring equipment to connect to EX-2, EX-4, and EX-5, and M-1.

Due to the layout of the SVE system and surface topography, the piping could not be sloped back to the well and still remain below the frost. Therefore, a small sump was installed in the line at the SVE trailer location. This allows for the removal of condensate.

SVE System

The SVE system is housed in a trailer located at the south end of the Autostop building (Figure 1). The mechanical system consists of a blower (5 hp) which pulls soil gas (including LNAPL vapors) from the subsurface and discharges these vapors to the atmosphere. Figure 3 provides a process flow diagram for the SVE system. Appendix B contains additional details regarding the SVE system.

Offgas Treatment

The Pilot Study air samples indicated the SVE system discharge would have exceeded limits during the first four months of operation. Therefore the discharge was treated with a flame oxidizer rented from Catalytic Combustion of Bloomer, Wisconsin. Appendix B contains a schematic of the flame oxidizer.

The VOC load decreased after the initial spike which is typical of soil vapor extraction. Therefore the flame oxidizer was removed February 29, 2016 and the air discharge vented directly to the atmosphere (25 ft stack). Discharge mass is subsequently controlled by regulating the air flow rate from the system.

Installation, Operation and Maintenance

The various components of the SVE remedial action were installed June through October 2015:

- SVE Extraction wells were installed in June 2015
- Piping connecting the extraction wells to the SVE system was installed in June 2015
- Electrical service was installed in August 2015
- SVE system itself was delivered and started October 26, 2015
- SVE system has been in operation since October 26, 2015
- LP Gas was used to fuel the flame oxidizer until natural gas was hooked up December 4, 2015.

Regular (monthly) System Checks

The system was checked regularly (monthly) primarily by REI personnel. The air flow rate was measured and air samples collected. Water accumulation (i.e., condensation) in the piping sumps were removed as needed.

Air Sampling

The air discharge is subject to the following limits (25 ft stack):

Benzene	936 lbs/year
Total VOC	5.7 lb/hr

DNR Air Discharge guidance requires the following air sample schedule:

- Day 1, Day 2, Day 3 of system startup
- Week 2
- Week 3
- Monthly thereafter

Appendix C contains the analytical reports for the air samples. The results are summarized in Table 2.

No discharge limits were exceeded.

Energy Use

The system relies on electrical energy provided by Xcel Energy. The electrical service is 208 volt, 3-phase, 60 Hz. Electrical service was installed in August 2015. Zeigler Electric provided electrician services to meet electrical codes.

Off-gas treatment was initially fueled by LP gas to burn the air discharge during the first month of operation. The system was switched to natural gas (WE Energies) after one month of operation to save cost.

Ground Water and LNAPL Measurements

The depth to ground water and depth to product was measured in RW-1, -2, -3, -4, and RW-5 prior to starting the SVE System. The depth to water and product thickness in wells EX-2, EX-4, EX-5, and M-1 were not measured due to asphalt backfill over the well covers. This has been fixed and measurements can be collected as needed.

Table 3 summarizes the ground water and LNAPL measurements from the SVE vents. LNAPL is no longer measured in RW-1 and RW-5. The LNAPL thickness decreased in RW-2 but increased in RW-3.

The LNAPL thicknesses at Doug's SVE vents (i.e., EX-2, EX-4, EX-5, M-1) remain significant. We recommend these wells be re-developed to improve air flow in the wells especially at the smear zone. These wells are old and appear to have silt-clogged screens. Redevelopment will be accomplished by surging with a 3-inch bailer and then pumping the SVE vent with the vac truck (during regular trip to pump out system).

Disposal of Remediation Waste

Water which accumulates in the knockout tank and pipe sumps is temporarily stored onsite in drums (during winter) and the aboveground tank. This water will be pumped and disposed during the planned pumping event.

RECOMMENDATIONS

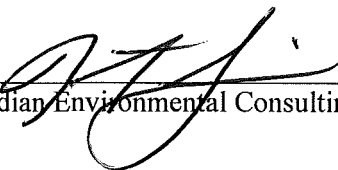
- The SVE system should continue operating. Monthly site visits should be conducted.
- Monthly air sampling will continue.
- Re-develop SVE vent wells (EX-2, EX-4, EX-5, M-1) using 3-inch bailer (surging) and then pump with vac truck whenever onsite
- Routine well maintenance. The monitoring wells should be checked to identify any frost-heaving. MW-102 and MW-5 have frost-heaved and need to be cut down and lids replaced.
- LNAPL/water level measurements: The SVE vents should be measured at least quarterly for LNAPL thickness measurements.
- Remove condensate from sumps every site visit.
- Measurements of system operation will be recorded. This includes tables summarizing date, air flow rate, air temperature, PID/LEL measurements, vacuum in vents, which vents are open, LNAPL/water level measurements, etc.
- An annual report will be prepared in September 2017 summarizing the system operation and our remedial recommendations to achieve Closure with GIS Registry for Soil and Ground Water.

COST

Table 4 is our cost estimate for the next year of operation. This budget begins October 1, 2016.

SIGNATURES

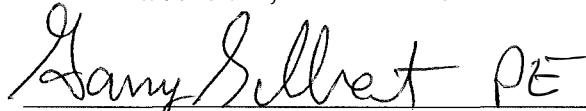
I, Kenneth Shimko (Meridian Environmental Consulting, LLC), hereby certify that I am a hydrogeologist as that term is defined in s. NR712.03(1), Wis. Adm. Code, am registered in accordance with the requirements of ch. GHSS 2, Wis. Adm. Code, or licensed in accordance with the requirements of ch. GHSS 3, Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR700 to 726, Wis. Adm. Code.



Meridian Environmental Consulting, LLC

Date 8-24-16

I, Gary Gilbert (Meridian Environmental Consulting, LLC), hereby certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with the requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR700 to 726, Wis. Adm. Code.



Meridian Environmental Consulting, LLC

Date 8/30/16

#29744

TABLES

Table: 1: Soil Vapor Extraction Well Construction

Autostop/Dougs SVE System

Ladysmith, WI

Meridian No.s 05F630/05F786

Well Name	Installation Date	Depth (ft bg)	Diameter (inch)	Screened Interval (ft bg)	Depth (ft) to Fluid(7/30/16)
RW-1	8/23/2012	28	4	18-28	20.38
RW-2	8/23/2012	28	4	18-28	21.02
RW-3	8/24/2012	28.5	4	18.5-28.5	20.84
RW-4	6/12/2015	30	4	15-30	22.3
RW-5	6/12/2015	30	4	15-30	21.05
M-1	6/11/2015	30	4	15-30	21.84
EX-2	1994?	35	8	20-35	21.1
EX-4	11/2/2002	34	4	14-34	21.25
EX-5	11/2/2002	35	4	15-30	21.75

Table 2
Benzene and Total VOC Emissions

SVE System
Doug's/Autostop
Ladysmith, Wisconsin
Meridian Nos. 05F630/786

Sample Date	Sample	Lab Result	Hour Meter	Hours Operation During Reporting Period	Discharge Flow Rate (SCFM)	Emission Rate	Emission Rate	Cumulative Mass Removed (lbs) (before oxidizer)	
	Parameters	(ug/m3)				(ug/sec)	(lbs/hr)	Benzene	Gasoline*
10/26/2015	Benzene	1,100,000	4	4	160	83,072	0.66	2.63	
	Gasoline*	43,000,000				3,247,360	25.72		102.88
10/27/2015	Benzene	650,000	12.55	8.55	160	49,088	0.39	5.96	
	Gasoline*	34,000,000				2,567,680	20.34		276.75
10/28/2015	Benzene	43,000	24.23	11.68	160	3,247	0.03	6.26	
	Gasoline*	29,000,000				2,190,080	17.35		479.34
11/6/2015	Benzene	360,000	238.62	214.39	125	21,240	0.17	42.32	
	Gasoline*	21,000,000				1,239,000	9.81		2583.13
11/16/2015	Benzene	290,000	481.5	242.88	135	18,479	0.15	77.87	
	Gasoline*	20,000,000				1,274,400	10.09		5034.58
11/18/2015	Benzene	200,000	525.32	43.82	144	13,594	0.11	82.58	
	Gasoline*	11,000,000				747,648	5.92		5294.05
12/17/2015	Benzene	220,000	1222.7	697.38	135	14,018	0.11	160.01	
	Gasoline*	12,000,000				764,640	6.06		9517.35
1/4/2016	Benzene	290,000	1537.7	315	170	23,270	0.18	218.06	
	Gasoline*	15,000,000				1,203,600	9.53		12520.09
1/22/2016	Benzene	76,000	1925.3	387.6	138	4,950	0.04	233.26	
	Gasoline*	4,700,000				306,139	2.42		13459.87
2/15/2016	Benzene	340,000	2499	573.7	125	20,060	0.16	324.41	
	Gasoline*	23,000,000				1,357,000	10.75		19625.68
Oxidizer Offgas Treatment Removed 2/29/16 - Replaced with 25 ft stack								Cumulative Discharge (untreated) (begin at zero - March 1)	
								Benzene	Gasoline*
3/29/2016	Benzene	420,000	3529	1030	90	17,842	0.14	95	
	Gasoline*	8,800,000				373,824	2.96		1990
4/20/2016	Benzene	120,000	4055	526	110	6,230	0.05	121	
	Gasoline*	10,000,000				519,200	4.11		4153
5/23/2016	Benzene	99,000	4765.8	710.8	65	3,037	0.02	138	
	Gasoline*	7,300,000				223,964	1.77		5413
6/30/2016	Benzene	71,000	5675.1	909.3	44	1,475	0.01	149	
	Gasoline*	7,200,000				149,530	1.18		6490
8/1/2016	Benzene	150,000	6180.9	505.8	50	3,540	0.03	163	
	Gasoline*	14,000,000				330,400	2.62		7814

NOTES:

* REI Lab report - "Gasoline" = Total VOC

Hour Meter wired incorrectly by vendor. Corrected January 2016. Difference is estimated to be minimal.

Discharge Limits

Benzene 936 lb/yr

Total VOCs = 5.7 lb/hr

CONVERSIONS

Liters/Cubic Feet =	28.32
Pounds/Gram =	0.0022
Min/Day =	1440
Grams/Micrograms =	0.000001
Min/Sec =	0.016666667

FORMULAS

ug/sec = Liters/Cubic Feet * Flow Rate (scfm) * Min/Sec * Conc (ug/l)
lbs/day = Grams/Microgram * Liters/Cubic Feet * Pounds/Gram * Flow Rate (scfm) * Min/Day * Conc (ug/l)
ug/l = ug/m3 / 1000

Table 3: LNAPL Thickness Measurements - SVE Vents

Autostop/Dougs

Ladysmith, Wisconsin

Meridian Nos. 05F630/786

* measurements using Interface Probe

SVE Vent	DTP	DTW	PT
RW-1			
10/26/2015	21.45	23.4	1.95
7/30/2016	20.38	20.42	0.04
RW-2			
10/26/2015	21.78	23.5	1.72
7/30/2016	21.02	22	0.98
RW-3			
10/26/2015	21.92	24	2.08
7/30/2016	20.84	23.05	2.21
RW-4			
10/26/2015	23.63	23.67	0.04
7/30/2016	22.3	22.34	0.04
RW-5			
10/26/2015	21.82	22.4	0.58
7/30/2016	21.05	21.11	0.06
EX-2			
10/26/2015	NM	NM	NM
7/30/2016	21.1	21.5	0.4
EX-4			
10/26/2015	NM	NM	NM
7/30/2016	21.25	23	1.75
EX-5			
10/26/2015	NM	NM	NM
7/30/2016	21.75	24.05	2.3
M-1			
10/26/2015	NM	NM	NM
7/30/2016	21.84	23.3	1.46

DTP - Depth to Product

DTW - Depth to Water

PT - Product Thickness

TABLE 4: Operation and Maintenance Costs - October 2016 to September 2017

AutoStop and Doug's Tire Combined System O&M
Ladysmith, Wisconsin
Meridian Nos. 05F630/786

Tasks:

- monthly site visits
- monthly air samples
- pump/dispose system water and redevelop wells (once)
- qtrly water/LNAPL measurements (SVE vents only)
- project management/data evaluation
- annual report

*Electrical Costs for SVE System Not Included with Cost Request.
Costs approximately \$2500/year*

Task	Units	#Units	Cost/Unit	Cost
Monthly Site Maintenance/Sampling				
Per Trip				
Prep/deprep	hr	1	\$91.39	\$91.39
sample/maint	hr	4	\$91.39	\$365.56
travel to/from	hr	3	\$91.39	\$274.17
mileage	mi	150	\$0.50	\$75.00
PID and LEL	day	1	\$75.00	\$75.00
Interface Probe	qtr	0.33	\$70.00	\$23.10
cell phone alarm system	month	1	\$20.00	\$20.00
			Subtotal:	\$924.22
			12 monthly trips + 3 contingency	\$13,863.30
Miscellaneous Materials (PVC piping, valve repair, minor system components, etc.)				\$2,500.00
Data Evaluation (Engineer)(5 hrs per month)				
Engineer	hr	60	\$109.67	\$6,580.20
Project Mgmt (4 hrs per month)				
PM	hr	48	\$109.67	\$5,264.16
Annual Report (PG/PE)	hr	24	\$109.67	\$2,632.08
Pump Truck (remove system wastewater/gas mixture, redevelop SVE vents, dispose up to 1000 gallons wastewater/gas mixture)				
Minnesota Petro*	trip	1	\$4,000.00	\$4,000.00
* Bids will be sought from other contractors				
Meridian - coordinate with site businesses, traffic control, open/close wells, surge wells prior to pumping, etc.				
Coord/Prep/Deprep	hr	3	\$91.39	\$274.17
onsite	hr	8	\$91.39	\$731.12
travel	hr	3	\$91.39	\$274.17
mileage	hr	150	\$0.50	\$75.00
			Subtotal:	\$1,354.46
Monitoring Well Repair (cost determined after field inspection/DNR prior approval)(U&C Cost)				
Total:				\$36,194.20

FIGURES

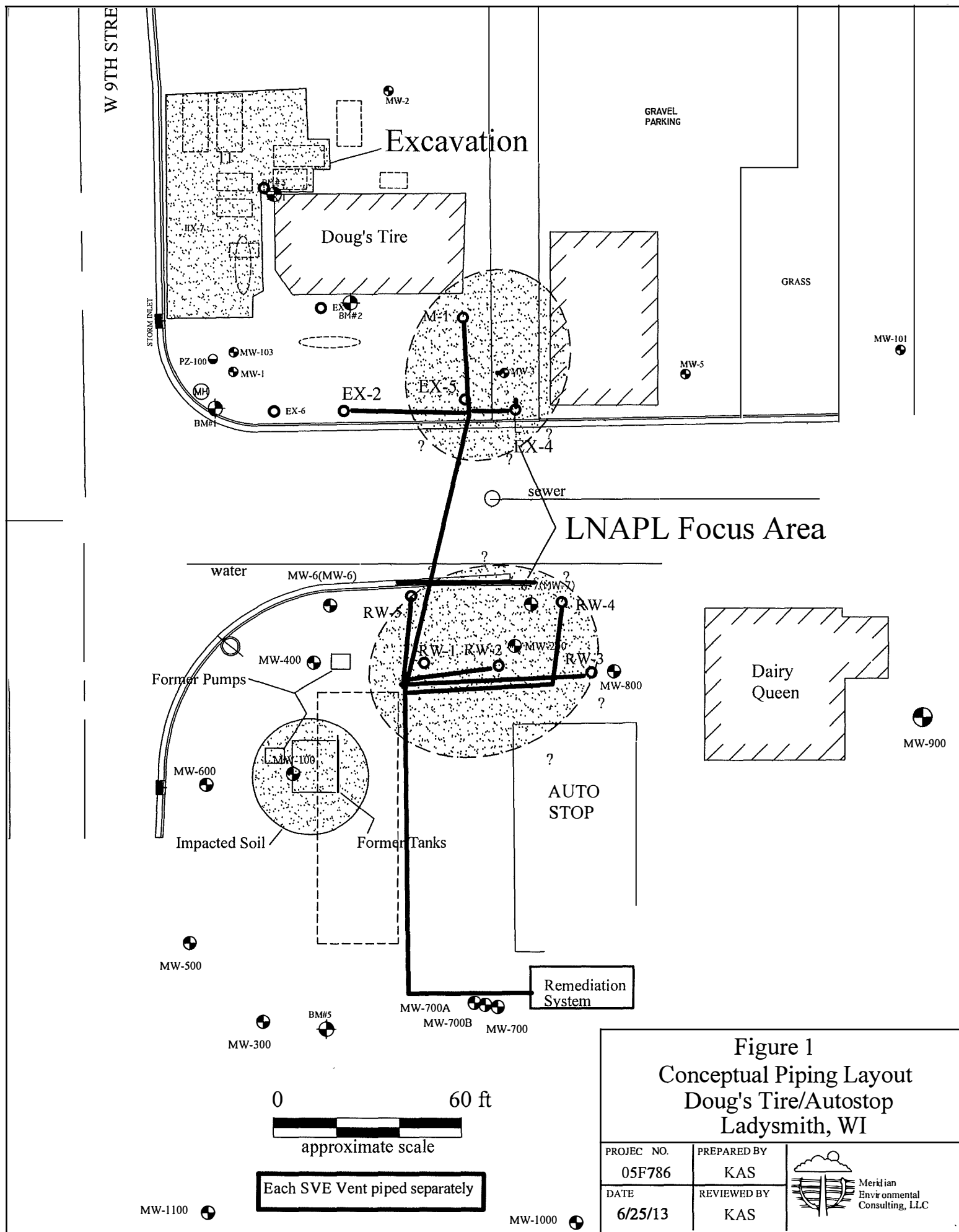


Figure 1
Conceptual Piping Layout
Doug's Tire/Autostop
Ladysmith, WI

PROJEC NO. 05F786	PREPARED BY KAS	 Meridian Environmental Consulting, LLC
DATE 6/25/13	REVIEWED BY KAS	

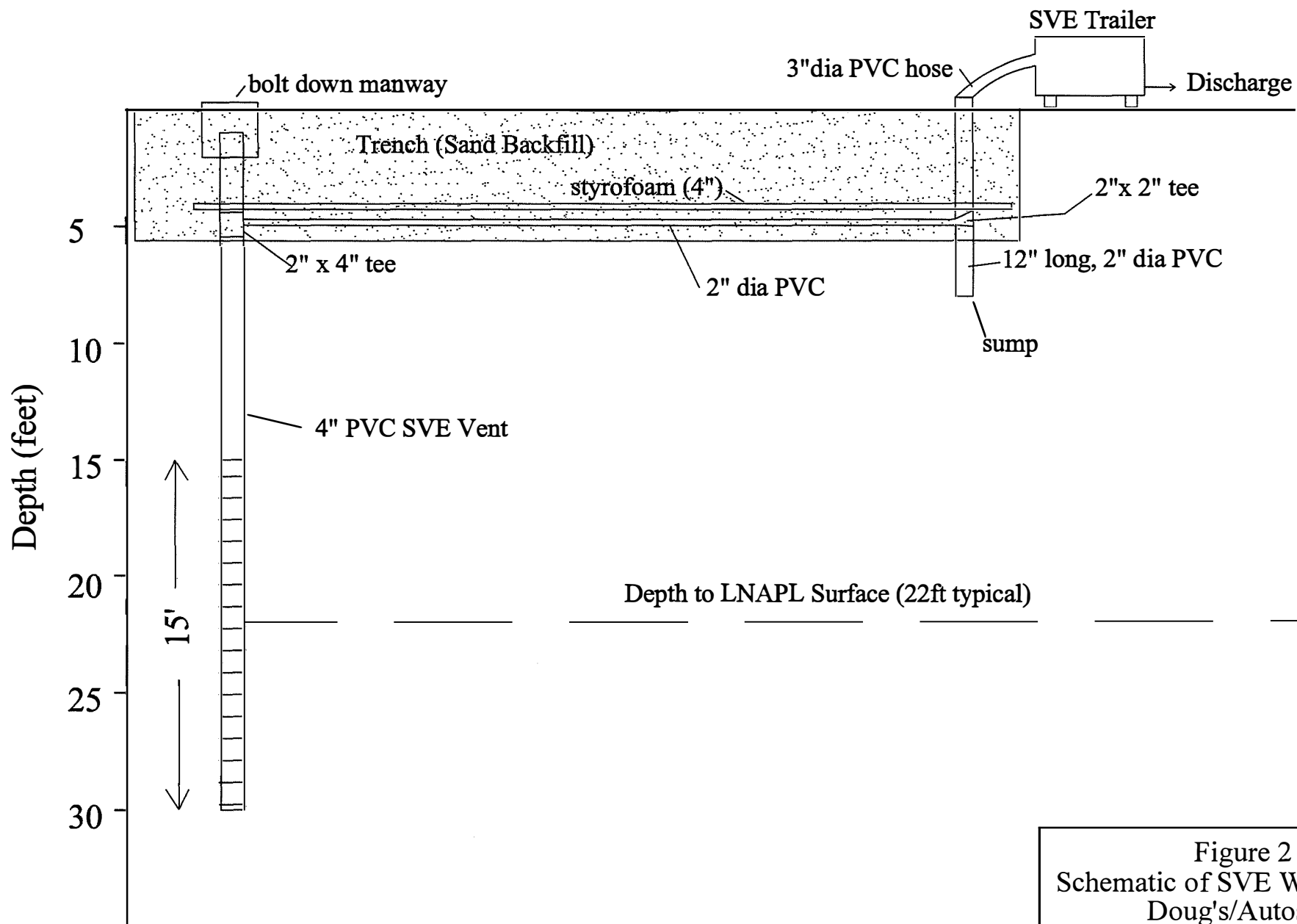
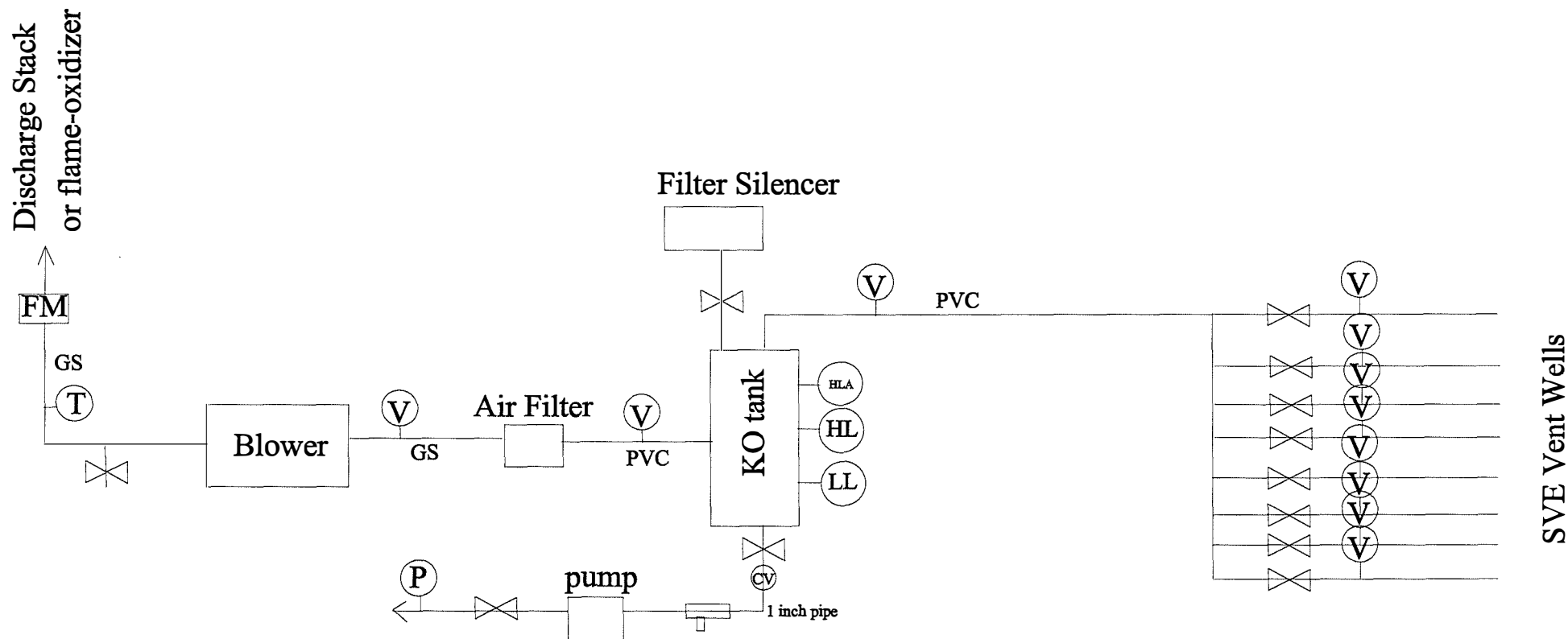


Figure 2
Schematic of SVE Wells/Piping
Doug's/Autostop
Ladysmith, Wisconsin

PROJECT NO. 05F630/786	PREPARED BY KAS	 Meridian Environmental Consulting, LLC
DATE 8/24/16	REVIEWED BY KAS	

SVE System Schematic



 Wye strainer
 GS 2 " galvanized steel pipe
 PVC 2 " Sch. 40 PVC
 HL,LL,HLA Level Floats

 Bull Valve
 vacuum gauge
 temperature gauge
 pressure gauge
 flow meter
 check valve

Figure 3
 SVE System Schematic
 Doug's/Autostop
 Ladysmith, Wisconsin

PROJECT NO.
 05F630/786

PREPARED BY
 KAS

DATE
 8/24/16

REVIEWED BY
 KAS



Appendix A

Soil Vapor Extraction Vents Construction Forms

Facility/Project Name
Douglas/Flamboro Auto
Facility License, Permit or Monitoring No.

Local Grid Location of Well
ft. ☐ N. ☐ E. ☐ S. ☐ W.

Well Name
M-1

Facility ID

Local Grid Origin ☐ (estimated: ☐) or Well Location ☐
Lat. " Long. " or

Wis. Unique Well No. DNR Well ID No.

Type of Well

St. Plane ft. N. ft. E. S/C/N

Date Well Installed 6/11/2015
m m d d y y y y

Well Code /

Section Location of Waste/Source
1/4 of 1/4 of Sec. T. N. R. ☐ E ☐ W

Well Installed By: Name (first, last) and Firm

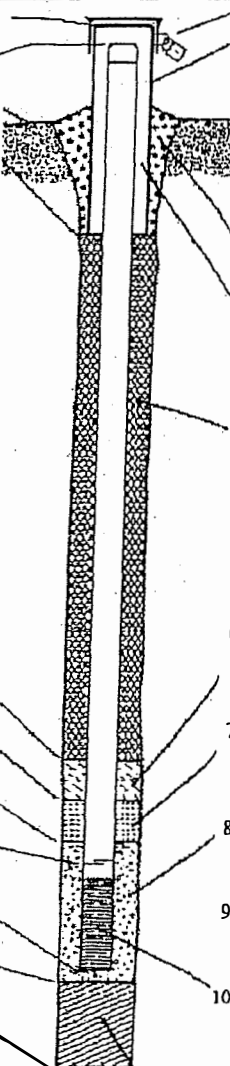
Distance from Waste/Source ft. Enf. Stds. Apply ☐

Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known Gov. Lot Number

Joe Black
PSI

- A. Protective pipe, top elevation 0 ft. MSL
B. Well casing, top elevation 0 ft. MSL
C. Land surface elevation 0 ft. MSL
D. Surface seal, bottom 1 ft. MSL or 1 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐
13. Sieve analysis performed? ☐ Yes ☒ No
14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐
15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99
16. Drilling additives used? ☐ Yes ☒ No
Describe
17. Source of water (attach analysis, if required):



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 12 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04
Other ☐
d. Additional protection? ☐ Yes ☒ No
If yes, describe:
3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
Other ☐
4. Material between well casing and protective pipe: Bentonite ☒ 30
Other ☐
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. Lbs/gal mud weight... Bentonite-sand slurry ☐ 35
c. Lbs/gal mud weight... Bentonite slurry ☐ 31
d. % Bentonite... Bentonite-cement grout ☐ 50
e. Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a.
b. Volume added ft³
8. Filter pack material: Manufacturer, product name & mesh size
a.
b. Volume added ft³
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐
10. Screen material: PVC sch. 40
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
Other ☐
b. Manufacturer
c. Slot size: 0.1 in.
d. Slotted length: 15 ft.
11. Backfill material (below filter pack): None ☒ 14
Other ☐

- E. Bentonite seal, top 13 ft. MSL or 13 ft.
F. Fine sand, top 13 ft. MSL or 13 ft.
G. Filter pack, top 13 ft. MSL or 13 ft.
H. Screen joint, top 15 ft. MSL or 15 ft.
I. Well bottom 30 ft. MSL or 30 ft.
J. Filter pack, bottom 30 ft. MSL or 30 ft.
K. Borehole, bottom 30 ft. MSL or 30 ft.
L. Borehole, diameter 12 in.
M. O.D. well casing 4 in.
N. I.D. well casing 4 in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm

Meridian Env. CS LLC

Route To: ☒ Watershed/Wastewater ☐ Waste Management ☐
☐ Remediation/Revelpment ☐ Other ☐

Page 1 of 1

Facility/Project Name Doug's / Flanigan Auto		License/Permit/Monitoring Number		Boring Number M-1							
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Joe Last Name: Black Firm: PSC		Date Drilling Started 6/11/2015 m m / d d / y y y y		Date Drilling Completed 6/11/2015 m m / d d / y y y y		Drilling Method HSA					
WT Unique Well No.		DNR Well ID No.		Well Name		Final Static Water Level Feet MSL		Surface Elevation Feet MSL		Borehole Diameter inches	
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐		State Plane <u>N</u> <u>E</u>		Lat <u>0</u> <u>0</u> <u>"</u> Long <u>0</u> <u>0</u> <u>"</u>		Local Grid Location ☐ N ☐ E ☐ S ☐ W		Feet <u>0</u> <u>0</u> <u>"</u>		Feet <u>0</u> <u>0</u> <u>"</u>	
1/4 of <u>1</u> of <u>1</u> of Section <u>1</u> , T <u>N</u> , R <u>1</u>		Facility ID		County Rusk		County Code		Civil Town/City/ or Village Ladysmith			

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					P 200	RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index			
			10	Earth Drill Strong gas-like odor EOB = 30 ft.			4" PVC (4 inch)								
			20												
			30												

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [Signature] Firm Mendota Env. Cntry, LLC

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

PSI

MONITORING WELL INSTALLATION

WELL IDENTIFICATION

M-1

BOREHOLE DIAMETER

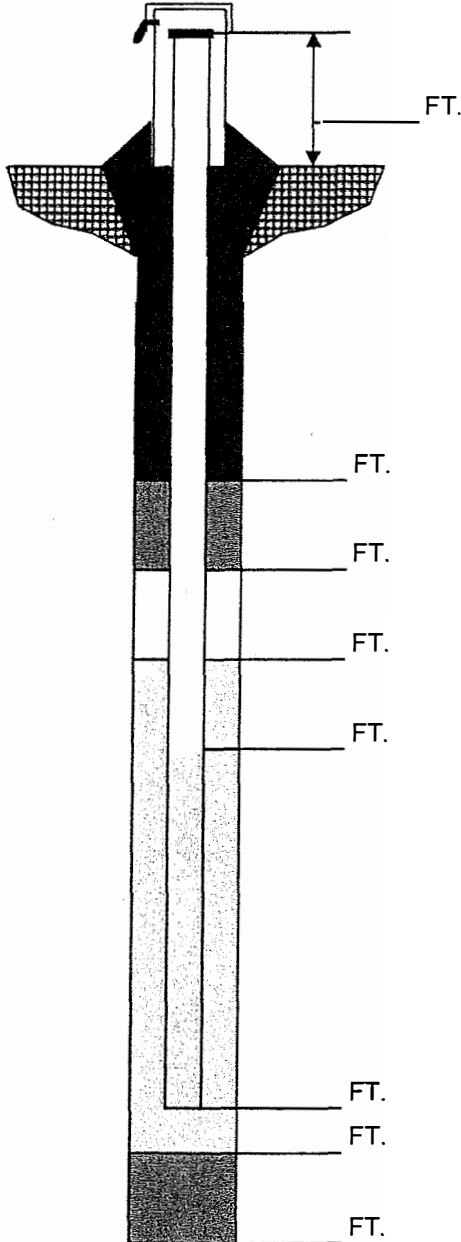
9 IN.

PROTECTIVE COVER:

5' STICK UP SLIP CAP
7' STICK UP SLIP CAP

X CLIENT SUPPLIED FLUSHMOUNT

8" FLUSHMOUNT
10" FLUSHMOUNT



EXPANDABLE
LOCKING CAP

LOCK

RISER:

FT. 2" PVC
15 FT. 4" PVC
FT. 6" PVC
FT. OTHER

SCREEN: SLOT SIZE 010

FT. 2" PVC
15 FT. 4" PVC
3 FT. 6" PVC
FT. OTHER

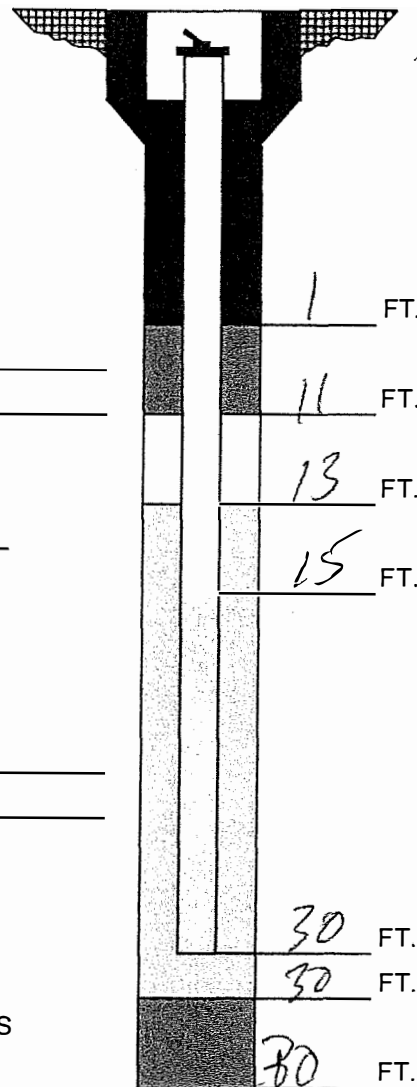
13 BAGS COARSE SAND
2 BAGS FINE SAND
4 BAGS BENTONITE CHIPS

OTHER:

BAGS OF GROUT

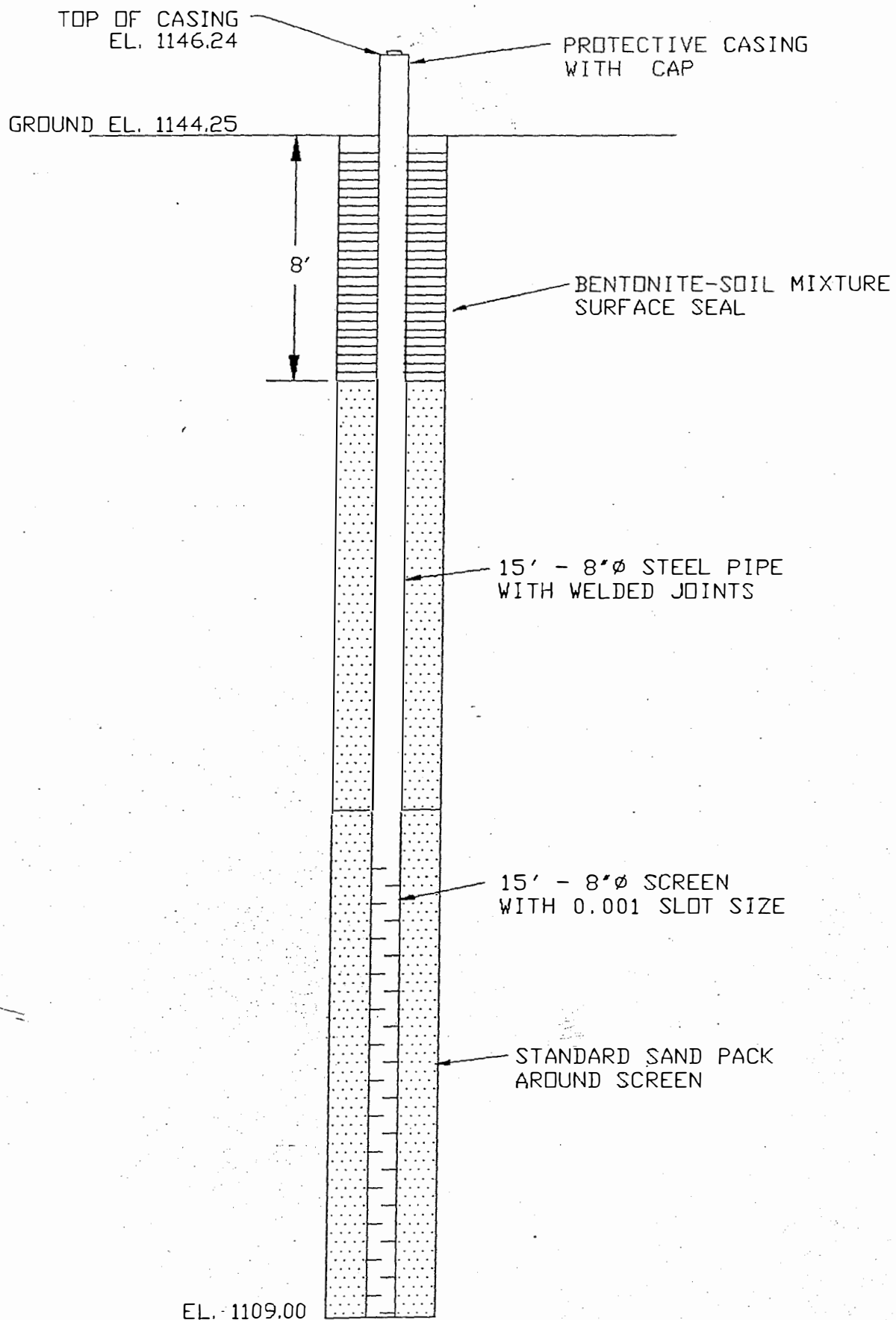
GALLONS OF WATER

DRUMS



1 FT.
11 FT.
13 FT.
15 FT.

30 FT.
30 FT.
30 FT.



EXTRACTION WELL #2



Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

City/Project Name <u>Douglas Fire</u>	Local Grid Location of Well ft. ☐ N. ☐ S. ☐ E. ☐ W.	Well Name <u>Ex-4</u>
City License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. _____ Long. _____ or _____	Wis. Unique Well No. <u>PJ997</u> DNR Well ID No. _____
City ID	St. Plane _____ ft. N. _____ ft. E. S/C/N	Date Well Installed <u>11/02/2002</u> m m d d y y y y
Type of Well Well Code <u>64, 1e</u>	Section Location of Waste/Source <u>SE 1/4 of SW 1/4 of Sec. 34, T. 34 N., R. 6 E. W</u>	Well Installed By: Name (first, last) and Firm <u>Todd Board Longyear</u>
Distance from Waste/Source _____ ft.	Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	
Enf. Stds. Apply ☐	Gov. Lot Number _____	

Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? ☒ Yes ☐ No
Casing, top elevation _____ ft. MSL	2. Protective cover pipe: a. Inside diameter: <u>9.0 in.</u> b. Length: <u>1.0 ft.</u> c. Material: Steel ☒ 04 Other ☐
Ground surface elevation _____ ft. MSL	d. Additional protection? ☐ Yes ☒ No If yes, describe: _____
Seal, bottom _____ ft. MSL or _____ ft.	3. Surface seal: Bentonite ☐ 30 Concrete ☐ 01 Other ☒
SCS classification of soil near screen: IP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒ SM ☐ SC ☐ ML ☒ MH ☐ CL ☐ CH ☐ bedrock ☐	4. Material between well casing and protective pipe: Bentonite ☒ 30 Other ☐
Soil analysis performed? ☐ Yes ☒ No	5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33 b. _____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35 c. _____ Lbs/gal mud weight ... Bentonite slurry ☐ 31 d. _____ % Bentonite ... Bentonite-cement grout ☐ 50 e. <u>3.78</u> Ft ³ volume added for any of the above f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08
Drilling method used: Rotary ☐ 50 Hollow Stem Auger ☒ 41 Other ☐	6. Bentonite seal: a. Bentonite granules ☒ 33 b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 32 c. _____ Other ☐
Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☒ 99	7. Fine sand material: Manufacturer, product name & mesh size a. _____ b. Volume added <u>0.54</u> ft ³
Drilling additives used? ☐ Yes ☒ No	8. Filter pack material: Manufacturer, product name & mesh size a. _____ b. Volume added <u>11.9</u> ft ³
Describe _____	9. Well casing: Flush threaded PVC schedule 40 ☒ 23 Flush threaded PVC schedule 80 ☐ 24 Other ☐
Source of water (attach analysis, if required): _____	10. Screen material: <u>PVC</u> a. Screen type: Factory cut ☒ 11 Continuous slot ☐ 01 Other ☐
Bentonite seal, top _____ ft. MSL or <u>4.0</u> ft.	b. Manufacturer <u>Pietrick</u> c. Slot size: <u>0.010 in.</u> d. Slotted length: <u>20.0 ft.</u>
Sand, top _____ ft. MSL or <u>11.0</u> ft.	11. Backfill material (below filter pack): None ☒ 14 Other ☐
Gravel pack, top _____ ft. MSL or <u>12.0</u> ft.	
Screen joint, top _____ ft. MSL or <u>14.0</u> ft.	
Screen bottom _____ ft. MSL or <u>34.0</u> ft.	
Gravel pack, bottom _____ ft. MSL or <u>34.0</u> ft.	
Seal, bottom _____ ft. MSL or <u>35.0</u> ft.	
Seal, diameter <u>10.74 in.</u>	
D. well casing <u>4.50 in.</u>	
Well casing <u>3.99 in.</u>	

I certify that the information on this form is true and correct to the best of my knowledge.

By: Jennifer Doncier Firm: Envirogen

Complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable data on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☒ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

City/Project Name <u>Doug's Tire</u>		Local Grid Location of Well _____ ft. ☐ N. _____ ft. ☐ E. _____ ft. ☐ S. _____ ft. ☐ W.		Well Name <u>Ex-5</u>	
City License, Permit or Monitoring No.		Local Grid Origin ☐ (estimated: ☐) or Well Location ☐		Wis. Unique Well No. DNR Well ID No.	
City ID		St. Place _____ ft. N. _____ ft. E. S/C/N		Date Well Installed <u>11/22/2002</u> m m d d y y y y	
Type of Well		Section Location of Waste/Source <u>SE 1/4 of SW 1/4 of Sec. 34, T. 34 N. R. 6</u> ☐ E ☒ W		Well Installed By: Name (first, last) and Firm <u>Todd Board Longyear</u>	
Well Code <u>64, 1e</u>		Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known		Gov. Lot Number	
Distance from Waste/Source _____ ft.		Enf. Stds. Apply ☐			

Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? ☒ Yes ☐ No
Well casing, top elevation _____ ft. MSL	2. Protective cover pipe: a. Inside diameter: <u>9.0</u> in. b. Length: <u>1.0</u> ft. c. Material: <u>Steel</u> ☒ 04 Other ☐
Land surface elevation _____ ft. MSL	d. Additional protection? ☐ Yes ☒ No If yes, describe _____
Surface seal, bottom _____ ft. MSL or _____ ft.	3. Surface seal: <u>Asphalt</u> Bentonite ☐ 30 Concrete ☐ 01 Other ☒
USCS classification of soil near screen: GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☒ SM ☐ SC ☐ ML ☒ MH ☐ CL ☐ CH ☐ Bedrock ☐	4. Material between well casing and protective pipe: Bentonite ☒ 30 Other ☐
Soil analysis performed? ☐ Yes ☒ No	5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33 b. _____ lbs/gal mud weight... Bentonite-sand slurry ☐ 35 c. _____ lbs/gal mud weight... Bentonite slurry ☐ 31 d. _____ % Bentonite... Bentonite-cement grout ☐ 50 e. <u>4.32</u> ft ³ volume added for any of the above f. How installed: <u>Tremie</u> ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08
Drilling method used: Rotary ☐ 50 Hollow Stem Auger ☒ 41 Other ☐	6. Bentonite seal: a. Bentonite granules ☐ 33 b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32 c. Other ☐
Drilling fluid used: Water ☐ 02 Air ☐ 01 Drilling Mud ☐ 03 None ☒ 99	7. Fine sand material: Manufacturer, product name & mesh size a. _____ b. Volume added <u>0.54</u> ft ³
Drilling additives used? ☐ Yes ☒ No	8. Filter pack material: Manufacturer, product name & mesh size a. _____ b. Volume added <u>11.9</u> ft ³
Describe _____	9. Well casing: <u>Flush threaded PVC schedule 40</u> ☒ 23 Flush threaded PVC schedule 80 ☐ 24 Other ☐
Source of water (attach analysis, if required):	10. Screen material: <u>PVC</u> a. Screen type: <u>Factory cut</u> ☒ 11 Continuous slot ☐ 01 Other ☐
Bentonite seal, top _____ ft. MSL or <u>4.0</u> ft.	b. Manufacturer <u>Pietrick</u> c. Slot size: <u>0.010</u> in. d. Slotted length: <u>22.0</u> ft.
Sand, top _____ ft. MSL or <u>12.0</u> ft.	11. Backfill material (below filter pack): <u>None</u> ☒ 14 Other ☐
Crack top _____ ft. MSL or <u>13.0</u> ft.	
Con joint, top _____ ft. MSL or <u>15.0</u> ft.	
Well bottom _____ ft. MSL or <u>35.0</u> ft.	
Crack bottom _____ ft. MSL or <u>35.0</u> ft.	
Gravel bottom _____ ft. MSL or <u>35.0</u> ft.	
Gravel diameter <u>10.1/4</u> in.	
D. well casing <u>4.50</u> in.	
I. well casing <u>3.99</u> in.	

I certify that the information on this form is true and correct to the best of my knowledge.
Name Jennifer Danciger Firm Envirogen

Complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name Former Auto Stop / Clark

Local Grid Location of Well
ft. ☐ N. ☐ E. ☐ W. ☐ S.

Well Name RW-1

Facility License, Permit or Monitoring No. Local Grid Origin ☐ (estimated: ☐) or Well Location ☐
Lat. " Long. " or

Wis. Unique Well No. DNR Well ID No.

Facility ID St. Plane ft. N. ft. E. S/C/N

Date Well Installed 8/23/2012
m m d d y y y y

Type of Well Well Code /
1/4 of 1/4 of Sec. T. N, R. ☐ E ☐ W

Well Installed By: Name (first, last) and Firm
Joe Black
Midwest

Distance from Waste/Source ft. Enf. Stds. Apply ☐ Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known Gov. Lot Number

A. Protective pipe, top elevation 0 ft. MSL

B. Well casing, top elevation -5 ft. MSL

C. Land surface elevation 0 ft. MSL

D. Surface seal, bottom 1 ft. MSL or 1 ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 5 0
Hollow Stem Auger ☒ 4 1
Other ☐

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1
Drilling Mud ☐ 0 3 None ☒ 9 9

16. Drilling additives used? ☐ Yes ☐ No

Describe

17. Source of water (attach analysis, if required):

E. Bentonite seal, top 15 ft. MSL or 15 ft.

F. Fine sand, top 15 ft. MSL or 15 ft.

G. Filter pack, top 15 ft. MSL or 15 ft.

H. Screen joint, top 18 ft. MSL or 18 ft.

I. Well bottom 28 ft. MSL or 28 ft.

J. Filter pack, bottom ft. MSL or ft.

K. Borehole, bottom 29 ft. MSL or 29 ft.

L. Borehole, diameter 10 in.

M. O.D. well casing 4 in.

N. I.D. well casing in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: a. Inside diameter: 8 in.

b. Length: 1 ft.

c. Material: Steel ☒ 0 4

Other ☐

d. Additional protection? ☐ Yes ☒ No

If yes, describe:

3. Surface seal: Bentonite ☐ 3 0

Concrete ☒ 0 1

Other ☐

4. Material between well casing and protective pipe: Bentonite ☒ 3 0

Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3

b. Lbs/gal mud weight... Bentonite-sand slurry ☐ 3 5

c. Lbs/gal mud weight... Bentonite slurry ☐ 3 1

d. % Bentonite... Bentonite-cement grout ☐ 5 0

e. Ft³ volume added for any of the above

f. How installed: Tremie ☐ 0 1

Tremie pumped ☐ 0 2

Gravity ☒ 0 8

6. Bentonite seal: a. Bentonite granules ☐ 3 3

b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 3 2

c. Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a.

b. Volume added ft³

8. Filter pack material: Manufacturer, product name & mesh size

a.

b. Volume added ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3

Flush threaded PVC schedule 80 ☐ 2 4

Other ☐

10. Screen material: PVC

a. Screen type: Factory cut ☒ 1 1

Continuous slot ☐ 0 1

Other ☐

b. Manufacturer

c. Slot size: 0.1 in.

d. Slotted length: ft.

11. Backfill material (below filter pack): None ☒ 1 4

Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm Meridian Environmental Consulting LLC

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name Autoslop / former Clark			License/Permit/Monitoring Number		Boring Number Rw-1	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Joe Last Name: Black Firm: Midwest Engineering			Date Drilling Started 8, 23, 2012 m m / d d / y y y y		Date Drilling Completed 8, 23, 2012 m m / d d / y y y y	
WI Unique Well No.		DNR Well ID No.		Well Name		Drilling Method HSA
Final Static Water Level		Surface Elevation		Borehole Diameter 10 inches		
Feet MSL		Feet MSL				
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐			Local Grid Location			
State Plane ☐ N ☐ E			Lat ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9			
1/4 of 1/4 of Section , T N, R			Long ☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9			
Facility ID		County Rusk		County Code		Civil Town/City/ or Village Ladysmith

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					P 200	RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index			
			10	Earth Drill blacktop surface fine sand ↓ rocky drilling dense soils ↓ EOB = 29 ft.			4" PVC								Strong petroleum odor
			20												
			30												

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [Signature] Firm Meridian Environmental Consultants, LLC

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name Former Auto Stop / Clark

Local Grid Location of Well _____ ft. ☐ N. _____ ft. ☐ E. _____ ft. ☐ S. _____ ft. ☐ W.

Well Name RW-2

Facility License, Permit or Monitoring No. _____ Local Grid Origin ☐ (estimated: ☐) or Well Location ☐
Lat. _____ "Long. _____ or _____

Wis. Unique Well No. _____ DNR Well ID No. _____

Facility ID _____ St. Plane _____ ft. N. _____ ft. E. S/C/N _____

Date Well Installed 8/23/2012
m m d d y y y y

Type of Well _____ Section Location of Waste/Source _____
1/4 of _____ 1/4 of Sec. _____ T. _____ N. R. ☐ E ☐ W

Well Installed By: Name (first, last) and Firm
Joe Black
Midwest

Well Code _____ / _____
Distance from Waste/Source _____ ft. Enf. Stds. Apply ☐ Location of Well Relative to Waste/Source
u ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known Gov. Lot Number _____

- A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation _____ ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or _____ ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

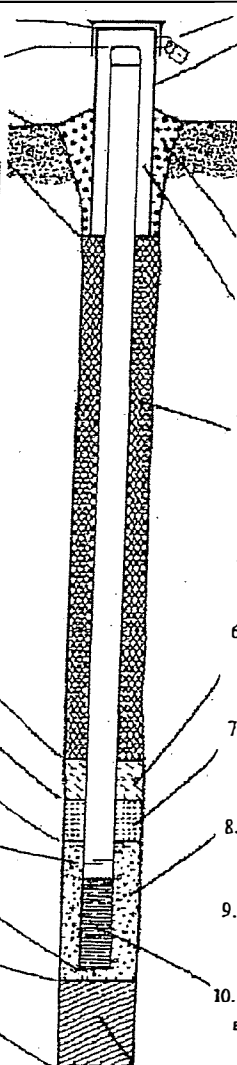
14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☐ No

Describe _____

17. Source of water (attach analysis, if required): _____



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04
Other ☐

d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30
Concrete ☒ 01
Other ☐

4. Material between well casing and protective pipe: Bentonite ☒ 30
Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. _____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ... Bentonite slurry ☐ 31
d. _____ % Bentonite ... Bentonite-cement grout ☐ 50
e. _____ Ft³ volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☐ 32
c. _____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. _____
b. Volume added _____ ft³

8. Filterpack material: Manufacturer, product name & mesh size
a. _____
b. Volume added _____ ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐

10. Screen material: PVC
a. Screen type: Factory cut ☒ 11
Continuous slot ☐ 01
Other ☐

b. Manufacturer _____
c. Slot size: 1 in.
d. Slotted length: 10 ft.

11. Backfill material (below filter pack): None ☒ 14
Other ☐

E. Bentonite seal, top _____ ft. MSL or 15 ft.

F. Fine sand, top _____ ft. MSL or 15 ft.

G. Filter pack, top _____ ft. MSL or 15 ft.

H. Screen joint, top _____ ft. MSL or 18 ft.

I. Well bottom _____ ft. MSL or 28 ft.

J. Filter pack, bottom _____ ft. MSL or _____ ft.

K. Borehole, bottom _____ ft. MSL or 28 ft.

L. Borehole, diameter 10 in.

M. O.D. well casing 4 in.

N. I.D. well casing _____ in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____

Firm _____

Meridian Environmental Consulting, LLC

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Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐

Page 1 of 1

Facility/Project Name <u>Autos top / former Clark</u>		License/Pennit/Monitoring Number		Boring Number <u>RW-2</u>	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: <u>Joe</u> Last Name: <u>Black</u> Firm: <u>Midwest Engineering</u>		Date Drilling Started <u>8/23/2012</u> m m d d y y y y		Date Drilling C mpleted <u>8/23/2012</u> m m d d y y y y	
Drilling Method <u>HSA</u>		Final Static Water Level Feet MSL		Surface Elevation Feet MSL	
WT Unique Well No.		DNR Well ID No.		Well Name	
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐		Lat <u>0</u> ' " N		Local Grid Location ☐ N ☐ E ☐ S ☐ W	
State Plane <u>N</u> <u>E</u>		Long <u>0</u> ' "		Feet <u>0</u> Feet <u>0</u>	
1/4 of <u> </u> 1/4 of Section <u> </u> , T <u> </u> N, R <u> </u>		Facility ID		County <u>Rusk</u>	
County Code		Civil Town/City/ or Village <u>Ladysmith</u>			

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					P 200	RQD/ Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index			
				Earth Drill Fine sand ↓ rocky drilling ↓ dense soils ↓ EDB = 28 ft.			4" PVC								Strong petroleum odor

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [Signature] Firm Meridian Environmental Consultants, LLC

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name Former Auto Stop / Clark

Local Grid Location of Well ☐ N. ☐ E. ☐ S. ☐ W. ft. ft. Well Name Rw-3

Facility License, Permit or Monitoring No. Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Wis. Unique Well No. DNR Well ID No.

Facility ID St. Plane ft. N. ft. E. S/C/N Date Well Installed 8/24/2012

Type of Well Section Location of Waste/Source Well Code 1/4 of 1/4 of Sec. T. N. R. Well Installed By: Name (first, last) and Firm Joe Black Mid West

Distance from Waste/Source ft. Enf. Stds. Apply ☐ Location of Well Relative to Waste/Source ☐ u ☐ Upgradient ☐ s ☐ Sidegradient ☐ d ☐ Downgradient ☐ n ☐ Not Known Gov. Lot Number

A. Protective pipe, top elevation 0 ft. MSL ☒ Yes ☐ No
B. Well casing, top elevation -0.5 ft. MSL ☐ No
C. Land surface elevation 0 ft. MSL ☐ No
D. Surface seal, bottom 1 ft. MSL or 1 ft. ☐ No

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☐ SW ☐ SP ☐
SM ☒ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50
Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☐ No

Describe

17. Source of water (attach analysis, if required):

E. Bentonite seal, top 15 ft. MSL or 15 ft.

F. Fine sand, top 15 ft. MSL or 15 ft.

G. Filter pack, top 15 ft. MSL or 15 ft.

H. Screen joint, top 16 1/2 ft. MSL or 16 1/2 ft.

I. Well bottom 28 1/2 ft. MSL or 28 1/2 ft.

J. Filter pack, bottom 28 1/2 ft. MSL or 28 1/2 ft.

K. Borehole, bottom 28 1/2 ft. MSL or 28 1/2 ft.

L. Borehole, diameter 10 in.

M. O.D. well casing 4 in.

N. I.D. well casing in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: 8 in.

a. Inside diameter: 8 in.

b. Length: 1 ft.

c. Material: Steel ☒ 04

Other ☐

d. Additional protection? ☐ Yes ☐ No

If yes, describe:

3. Surface seal: Bentonite ☐ 30

Concrete ☒ 01

Other ☐

4. Material between well casing and protective pipe: Bentonite ☒ 30

Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33

b. Lbs/gal mud weight... Bentonite-sand slurry ☐ 35

c. Lbs/gal mud weight... Bentonite slurry ☐ 31

d. % Bentonite... Bentonite-cement grout ☐ 50

e. ft³ volume added for any of the above

f. How installed: Tremie ☐ 01

Tremie pumped ☐ 02

Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33

b. ☐ 1/4 in. ☐ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32

c. Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a.

b. Volume added ft³

8. Filter pack material: Manufacturer, product name & mesh size

a.

b. Volume added ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 23

Flush threaded PVC schedule 80 ☐ 24

Other ☐

10. Screen material:

a. Screen type: Factory cut ☒ 11

Continuous slot ☐ 01

Other ☐

b. Manufacturer

c. Slot size: 0.1 in.

d. Slotted length: 10 ft.

11. Backfill material (below filter pack): None ☒ 14

Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature [Signature] Firm Meridian Environmental Consulting LLC

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and bureau. Completion of these reports is required by chs. 160, 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file these forms may result in a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on these forms is not intended to be used for any other purpose. NOTE: See the instructions for more information, including where the completed forms should be sent.

Page _____ of _____

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Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name Audstop/For men		Local Grid Location of Well ft. ☐ N. ☐ E. ☐ W.		Well Name RW-4	
Facility License, Permit or Monitoring No.		Local Grid Origin (estimated: ☐) or Well Location Lat. _____ Long. _____		Wis. Unique Well No. DNR Well ID No.	
Facility ID		St. Plane _____ ft. N. _____ ft. E. S/C/N		Date Well Installed 6/12/2015 m m d d y y y y	
Type of Well		Section Location of Waste/Source 1/4 of _____ 1/4 of Sec. _____ T. _____ N. R. ☐ E ☐ W		Well Installed By: Name (first, last) and Firm Joe Black PSI	
Well Code _____ / _____		Location of Well Relative to Waste/Source u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known		Gov. Lot Number	
Distance from Waste/Source _____ ft.		Enf. Stds. Apply ☐			

- A. Protective pipe, top elevation _____ ft. MSL
- B. Well casing, top elevation _____ ft. MSL
- C. Land surface elevation _____ ft. MSL
- D. Surface seal, bottom _____ ft. MSL or _____ ft.

12. USCS classification of soil near screen:
GP ☐ GM ☐ GC ☐ GW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No
14. Drilling method used: Rotary ☐ 5 0
Hollow Stem Auger ☒ 4 1
Other ☐

15. Drilling fluid used: Water ☐ 0 2 Air ☐ 0 1
Drilling Mud ☐ 0 3 None ☒ 9 9

16. Drilling additives used? ☐ Yes ☒ No

Describe _____

17. Source of water (attach analysis, if required):

E. Bentonite seal, top _____ ft. MSL or **13** ft.

F. Fine sand, top _____ ft. MSL or **13** ft.

G. Filter pack, top _____ ft. MSL or **13** ft.

H. Screen joint, top _____ ft. MSL or **15** ft.

I. Well bottom _____ ft. MSL or **30** ft.

J. Filter pack, bottom _____ ft. MSL or **30** ft.

K. Borehole, bottom _____ ft. MSL or **30** ft.

L. Borehole, diameter **12** in.

M. O.D. well casing **4** in.

N. I.D. well casing **4** in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: **12** in.
b. Length: **1** ft.
c. Material: Steel ☒ 0 4
Other ☐
- d. Additional protection? ☐ Yes ☒ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 3 0
Concrete ☒ 0 1
Other ☐
4. Material between well casing and protective pipe: Bentonite ☒ 3 0
Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 3 3
b. _____ Lbs/gal mud weight _____ Bentonite-sand slurry ☐ 3 5
c. _____ Lbs/gal mud weight _____ Bentonite slurry ☐ 3 1
d. _____ % Bentonite _____ Bentonite-cement grout ☐ 5 0
e. _____ Ft³ volume added for any of the above

- f. How installed: Tremie ☐ 0 1
Tremie pumped ☐ 0 2
Gravity ☒ 0 8
6. Bentonite seal: a. Bentonite granules ☐ 3 3
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 3 2
c. _____ Other ☐

7. Fine sand material: Manufacturer, product name & mesh size
a. _____
b. Volume added _____ ft³

8. Filter pack material: Manufacturer, product name & mesh size
a. _____
b. Volume added _____ ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 2 3
Flush threaded PVC schedule 80 ☐ 2 4
Other ☐

10. Screen material: **PVC sch. 40**
a. Screen type: Factory cut ☒ 1 1
Continuous slot ☐ 0 1
Other ☐

- b. Manufacturer _____
c. Slot size: **0.1** in.
d. Slotted length: **15** ft.

11. Backfill material (below filter pack): None ☒ 1 4
Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm

Meridian Env. Csly LLC

Page 1 of 1

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Firm

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PS I

R-4

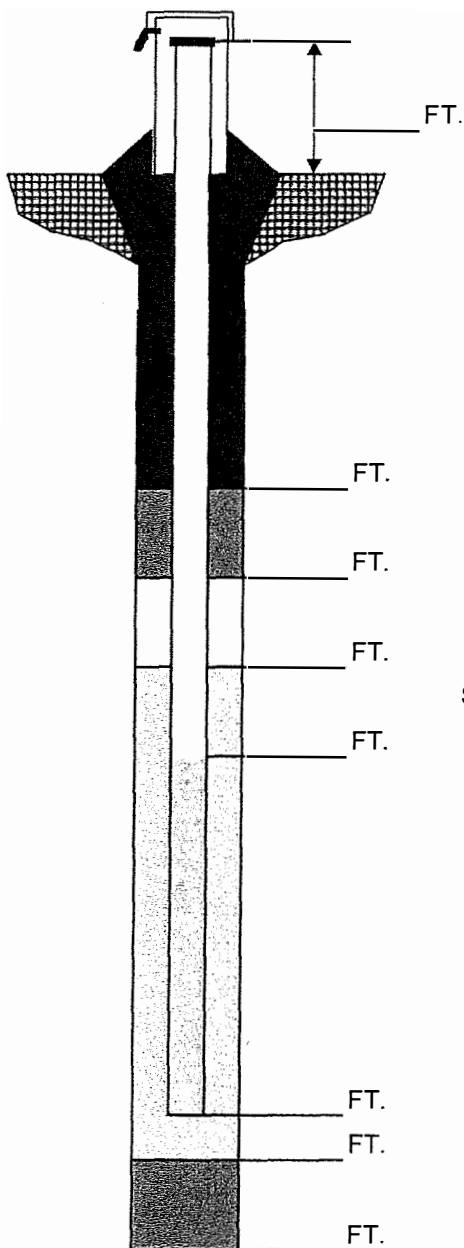


IN.

X CLIENT SUPPLIED FLUSHMOUNT

8" FLUSHMOUNT

10" FLUSHMOUNT



LOCK

 FT. 2" PVC
15 FT. 4" PVC
 FT. 6" PVC
 FT. OTHER

15 FT. 2" PVC
 FT. 4" PVC
 FT. 6" PVC
 FT. OTHER

15 BAGS COARSE SAND
2 BAGS FINE SAND
5 BAGS BENTONITE CHIPS

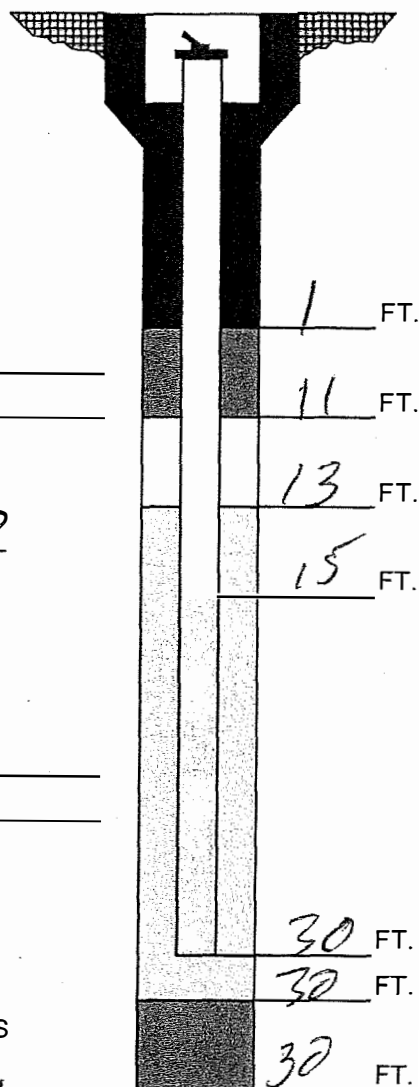
OTHER: Slip cap on top



BAGS OF GROUT

6 GALLONS OF WATER

 DRUMS



Route to: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name
Autostop Farmer

Local Grid Location of Well
ft. ☐ N. ☐ S. ☐ E. ☐ W.

Well Name
RW-S

Facility License, Permit or Monitoring No. Local Grid Origin ☐ (estimated: ☐) or Well Location ☐
Lat. " Long. " or

Wis. Unique Well No. DNR Well ID No.

Facility ID St. Plane ft. N. ft. E. S/C/N

Date Well Installed **6/12/2015**
m m d d y y y y

Type of Well Section Location of Waste/Source
1/4 of 1/4 of Sec. T. N. R. ☐ E. ☐ W.

Well Installed By: Name (first, last) and Firm
Joe Black

Well Code /
Distance from Waste/ Source ft. Enf. Stds. Apply ☐
Location of Well Relative to Waste/Source
n ☐ Upgradient s ☐ Sidegradient
d ☐ Downgradient n ☐ Not Known Gov. Lot Number

PST

A. Protective pipe, top elevation **0** ft. MSL

B. Well casing, top elevation **0** ft. MSL

C. Land surface elevation **0** ft. MSL

D. Surface seal, bottom **1** ft. MSL or **1** ft.

12. USCS classification of soil near screen:

GP ☐ GM ☐ GC ☐ GW ☐ SW ☒ SP ☐
SM ☐ SC ☐ ML ☐ MH ☐ CL ☐ CH ☐
Bedrock ☐

13. Sieve analysis performed? ☐ Yes ☒ No

14. Drilling method used: Rotary ☐ 50

Hollow Stem Auger ☒ 41
Other ☐

15. Drilling fluid used: Water ☐ 02 Air ☐ 01
Drilling Mud ☐ 03 None ☒ 99

16. Drilling additives used? ☐ Yes ☒ No

Describe

17. Source of water (attach analysis, if required):

E. Bentonite seal, top **13** ft. MSL or **13** ft.

F. Fine sand, top **13** ft. MSL or **13** ft.

G. Filter pack, top **13** ft. MSL or **13** ft.

H. Screen joint, top **15** ft. MSL or **15** ft.

I. Well bottom **30** ft. MSL or **30** ft.

J. Filterpack, bottom **30** ft. MSL or **30** ft.

K. Borehole, bottom **30** ft. MSL or **30** ft.

L. Borehole, diameter **12** in.

M. O.D. well casing **4** in.

N. I.D. well casing **4** in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe: **12** in.

a. Inside diameter: **1** ft.

b. Length: **1** ft.

c. Material: Steel ☒ 04

Other ☐

d. Additional protection? ☐ Yes ☒ No

If yes, describe:

3. Surface seal: Bentonite ☐ 30

Concrete ☒ 01

Other ☐

4. Material between well casing and protective pipe: Bentonite ☒ 30

Other ☐

5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33

b. **1** Lbs/gal mud weight... Bentonite-sand slurry ☐ 35

c. **1** Lbs/gal mud weight... Bentonite slurry ☐ 31

d. **1** % Bentonite... Bentonite-cement grout ☐ 50

e. **1** Ft³ volume added for any of the above

f. How installed: Tremie ☐ 01

Tremie pumped ☐ 02

Gravity ☒ 08

6. Bentonite seal: a. Bentonite granules ☐ 33

b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32

c. Other ☐

7. Fine sand material: Manufacturer, product name & mesh size

a. **1**

b. Volume added **1** ft³

8. Filterpack material: Manufacturer, product name & mesh size

a. **1**

b. Volume added **1** ft³

9. Well casing: Flush threaded PVC schedule 40 ☒ 23

Flush threaded PVC schedule 80 ☐ 24

Other ☐

10. Screen material: **PVC Sch. 40**

a. Screen type: Factory cut ☒ 11

Continuous slot ☐ 01

Other ☐

b. Manufacturer **1**

c. Slot size: **0.1** in.

d. Slotted length: **15** ft.

11. Backfill material (below filter pack): None ☒ 14

Other ☐

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature

Firm

Meridian Env. CS LLC

Route To: Watershed/Wastewater ☐ Waste Management ☐
Remediation/Revelopment ☐ Other ☐ _____

Page 1 of 1[illegible]

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature _____

|Firm

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PS I

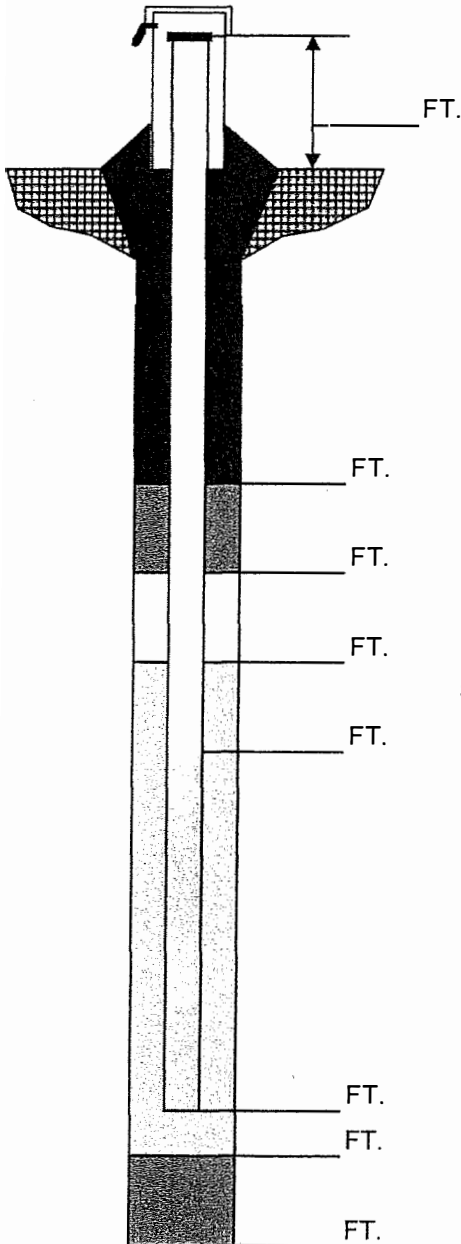
R-25

9 IN.

X CLIENT SUPPLIED FLUSHMOUNT

8" FLUSHMOUNT

_____ 10" FLUSHMOUNT

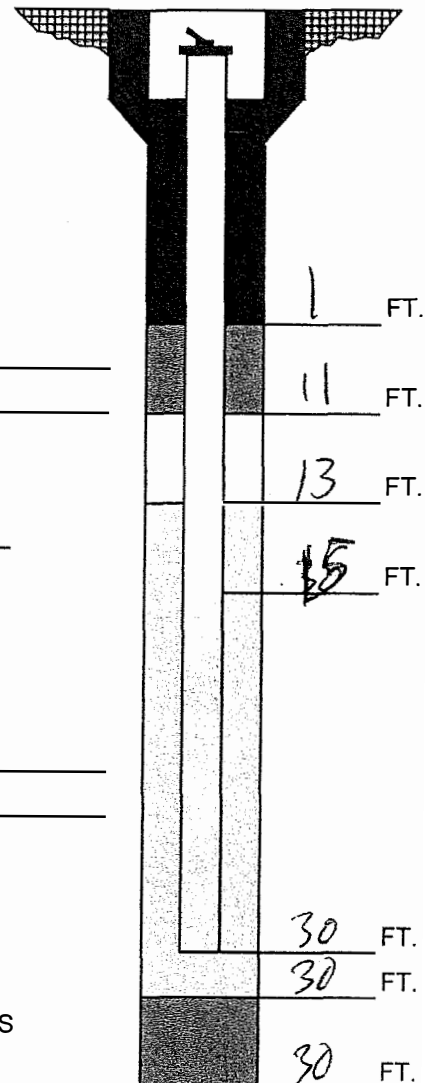


LOCK

OTHER: _____

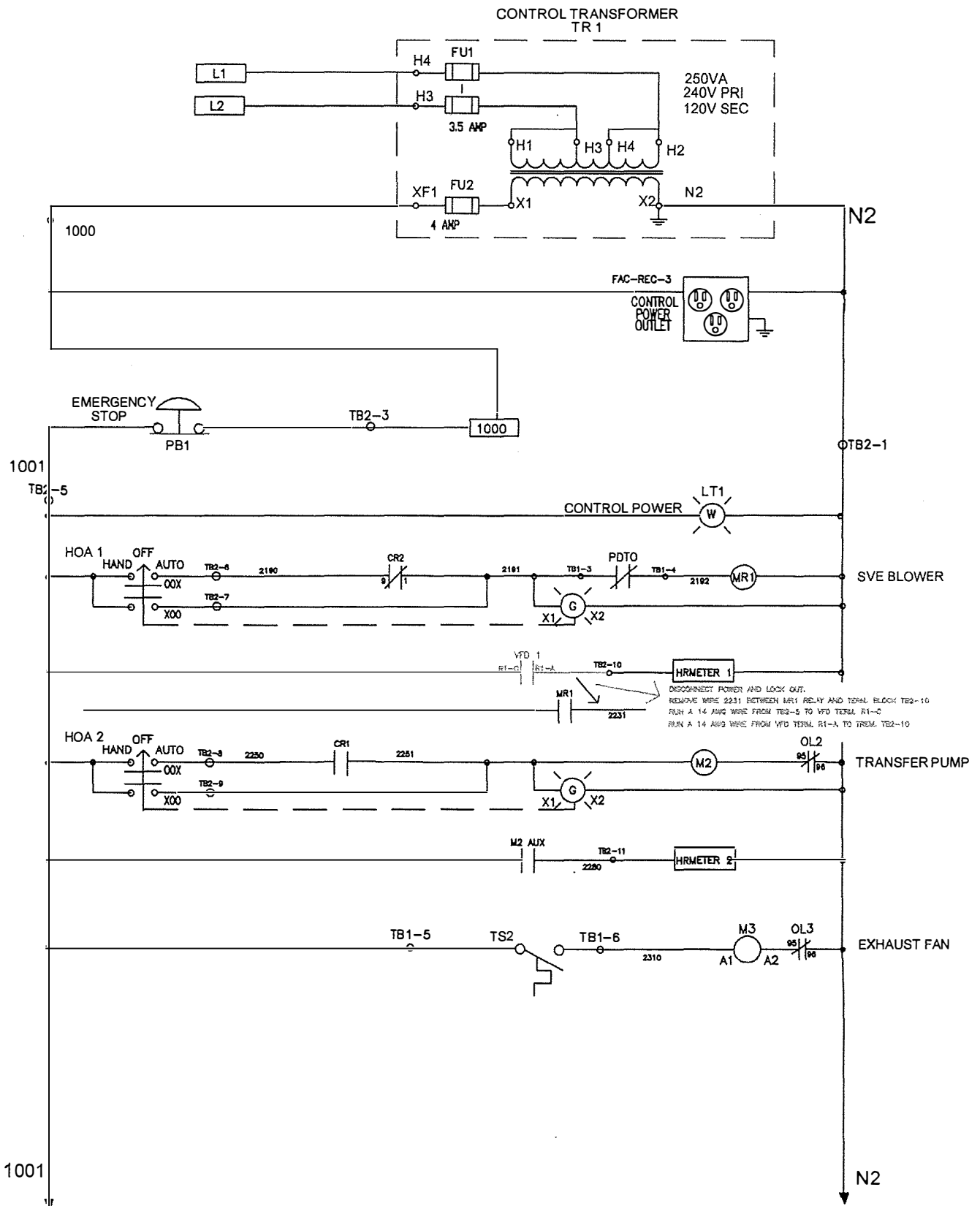
0 GALLONS OF WATER

 DRUMS

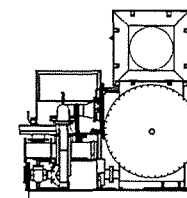
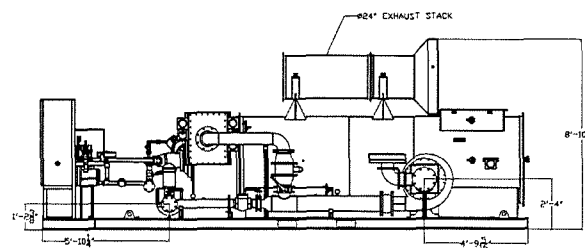
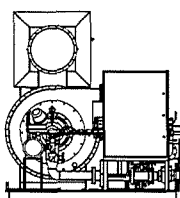
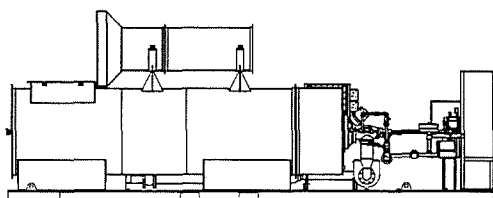
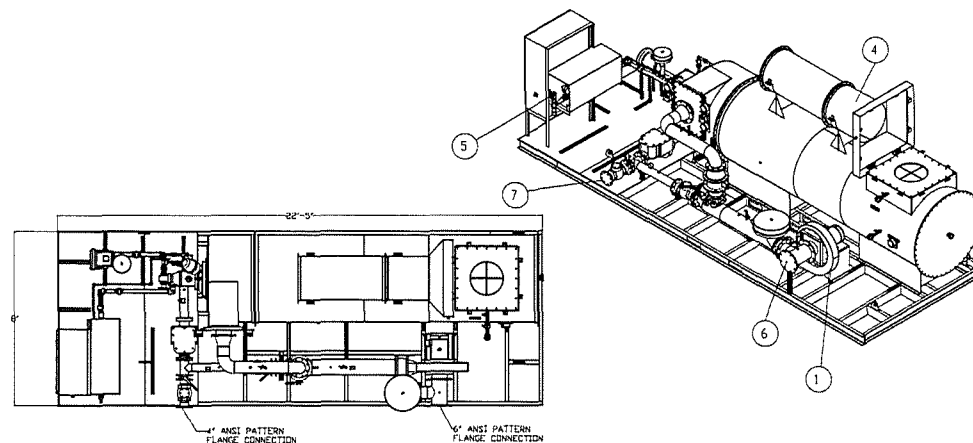
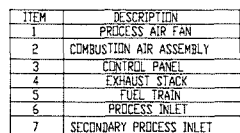


Appendix B

SVE System Information



	DATE	NAME	ENVIRO-EQUIPMENT 10120 Industrial Drive Pineville, NC 28134 704-556-7723	PROJECT:	DRAWING-NO.:
DRAWN BY	09-10-15	CKR		3057	JOB-NO.:
CKD BY				PAGE DESCRIPTION	PAGE:
					2 OF 5



THIS DRAWING IS FOR SALES PURPOSES ONLY. DIMENSIONS ARE TO BE USED FOR REFERENCE. THE CUSTOMER WILL BE SUPPLIED WITH A GENERAL ARRANGEMENT DRAWING AND ACTUAL DIMENSIONS WITH THE SUBMITTAL PACKAGE AFTER PURCHASE ORDER IS RECEIVED.

[illegible]

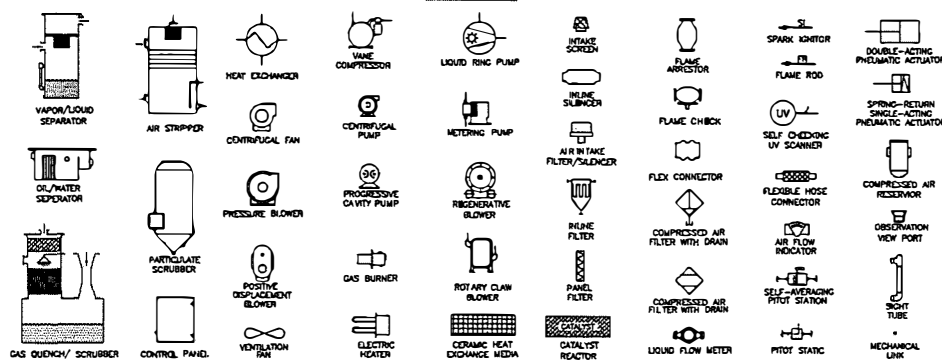
VALVES AND PIPING

	GLOBE
	BALL
	BUTTERFLY
	CHECK
	GATE
	ORIFICE METERING
	LUBRICATED PLUG
	VACUUM RELIEF
	PRESSURE RELIEF
	PRESSURE REDUCING INTERNAL RELIEF
	PRESSURE REDUCING EXTERNAL PRESSURE
	PRESSURE REDUCING DIFFERENTIAL PRESSURE
	PRESSURE REDUCING VENTED
	3 WAY
	REDUCER
	Y-STRAINER
	SAMPLE/TEST PORT
	SCREEN/CAP PORT
	FLANGE
	UNION
	ORIFICE PLATE
	VALVE NORMALLY OPEN
	VALVE NORMALLY CLOSED

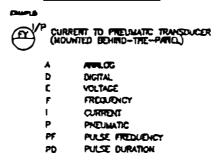
OPERATORS

	MOTOR
	MOTORED VALVE
	PNEUMATIC ACTUATOR
	PNEUMATIC VALVE
	MANUAL
	SOLENOID VALVE

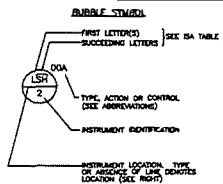
EQUIPMENT



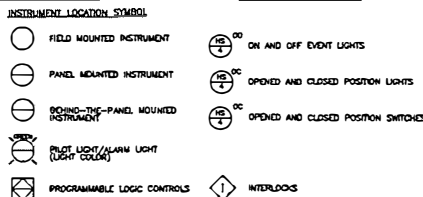
TRANSDUCERS



INSTRUMENT IDENTIFICATION



SPECIAL CASES



TYPICAL LETTER SYMBOLS USED FOR IDENTIFYING INSTRUMENTS & INSTRUMENT COMPONENTS

	MEASURING DEVICES				CONTROLLING DEVICES				ALARM RECEIVERS		CONTROL VALVES		SWITCH
VARIABLE	PRIMARY ELEMENT	RECORDING	INDICATING	TRANSMITTER	RECORDING	INDICATING	BLIND	INDICATING HIGH	INDICATING LOW				
ANALYZERS	AE	AR	AI	AT	ARC	AC	AC	ANH	AL	ACV	AS		
CONDUCTIVITY	CE	CR	CI	CT	CRC	CC	CC	CAH	CL	CCV	CS		
FLOW	FE	FR	FI	FT	FRC	FC	FC	FAH	FL	FCV	FS		
LEVEL	LE	LR	LI	LT	LRC	LIC	LC	LAH	LAL	LCV	LS		
PRESSURE	PE	PR	PI	PT	PRC	PC	PC	PAH	PAL	PCV	PS		
PRESSURE DIFFERENTIAL	PDE	PDR	PDI	PT	PDR	PDC	PDC	PAH	PAL	PDCV	PDS		
SPEED	SE	SR	SI	ST	SRC	SC	SC	SAH	SL	SCV	SS		
TEMPERATURE	TE	TR	TI	TT	TRC	TC	TC	TAH	TAL	TCV	TS		

PROCESS FLOW DIAGRAM LEGEND

	TEMPERATURE DEGREES FAHRENHEIT		VAPOR FLOW STANDARD CUBIC FEET PER MINUTE		PRESSURE POUNDS PER SQUARE INCH GAGE
	CONCENTRATION PARTS PER MILLION		WATER FLOW GALLONS PER MINUTE		PROCESS NO.

INSTRUMENT SOCIETY OF AMERICA (ISA) TABLE

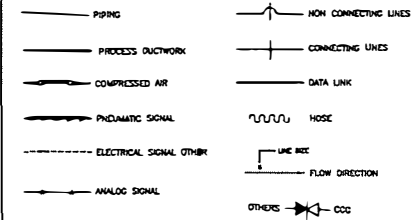
LETTER	FIRST LETTER(S)		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (+)		ALARM		ARRESTOR
B	BURNER, COMBUSTION		USERS CHOICE (+)	USERS CHOICE (+)	USERS CHOICE (+)
C	CONDUCTIVITY	CATALYST	CONNECTION	CONTROL	CLOSED
D	DENSITY	DIFFERENTIAL			ELEMENT
E	VOLTAGE	ELECTRIC	SENSOR/PRIMARY ELEMENT		
F	FLOW RATE	FAN/FILTER/FLEX			
G	GAUGE		GLASS		
H	HAND (MANUAL)	HEAT		HEATER	HIGH
I	CURRENT	INTAKE	INDICATOR		
J	POWER	SCAN			
K	TIME OR SCHEDULE	CHANGE RATE		CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW
M	MOTION		MODULE		MIDDLE
N	USERS CHOICE (+)	NORMALLY	USERS CHOICE (+)	USERS CHOICE (+)	USERS CHOICE (+)
O	USERS CHOICE (+)		ORIFICE RESTRICTION		OPEN
P	PRESSURE (OR VACUUM)		POINT (TEST CONNECTION)	PORT	
Q	QUANTITY	INTEGRATE			
R	RADIATION	RELIEF	RECORD OR PRINT	REORDER	
S	SPEED OR FREQUENCY	SOLENOID		SWITCH	SCREEN
T	TEMPERATURE			TRANSMIT	
U	MULTIFUNCTIONAL (+)		MULTIFUNCTION (+)		MULTIFUNCTION (+)
V	VIBRATION			VALVE OR DAMPER	
W	WEIGHT OR FORCE		WELL		
X	UNCLASSIFIED (+)		UNCLASSIFIED (+)		UNCLASSIFIED (+)
Y	EVENT OR STATE			RELAY OR COMPUTE (+)	
Z	POSITION, DIMENSION			DRIVE, ACTUATOR OR UNCLASSIFIED FINAL CONTROL ELEMENT	

(+) WHEN USED, EXPLANATION IS SHOWN ADJACENT TO INSTRUMENT SYMBOL. SEE ABBREVIATIONS.

TYPE, ACTION OR CONTROL ABBREVIATIONS

AC	ALTERNATING CURRENT
AI	ANALOG INPUT
AO	ANALOG OUTPUT
AM	AUTO-MANUAL
AS	ADJUSTABLE SPEED
DC	DIRECT CURRENT
DI	DIGITAL INPUT
DO	DIGITAL OUTPUT
FR	FORWARD-AUTO-REVERSE
HR	FORWARD-REVERSE
HQA	HAND-OFF-AUTO
HOR	HAND-OFF-REMOTE
HLO	HIGH-LOW-OFF
HLD	HIGH-LOW-OFF-AUTO
LCP	LOCAL CONTROL PANEL
LEL	LOWER EXPLOSIVE LIMIT
LDS	LOCKOUT STOP
LR	LOCAL-REMOTE
M	MANUAL
MA	MANUAL-AUTO
MCP	MAIN CONTROL PANEL
NC	NORMALLY CLOSED
NO	NORMALLY OPEN
OA	ON-OFF
OC	OPEN-CLOSE
OCA	OPEN-CLOSE-AUTO
OD	ON-OFF
ODA	ON-OFF-AUTO
OOR	ON-OFF-REMOTE
PLC	PROGRAMMABLE LOGIC CONTROLLER
R	RESET
SS	START-STOP
WFO	VARIABLE FREQUENCY DRIVE

LINE LEGEND



NOTES

1. SPECIFICATIONS AND DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTIFICATION.
2. THIS DRAWING SUPERSEDES DRAWING SD-232.
3. REFERENCE ANSI/ISA-S5.1 FOR SYMBOLS NOT SHOWN ON THIS LEGEND.
4. THIS IS A STANDARD LEGEND, THEREFORE, NOT ALL OF THIS INFORMATION MAY APPLY.

SHEET 1 OF 2

REV	DESCRIPTION	DATE	BY	DRAWING STATUS	DATE	BY	MAT'L	WEIGHT	TOLERANCES	INCH [mm]	DO NOT SCALE THIS DRAWING	DATE	CUSTOMER	TITLE	PROJECT/PRODUCT	DRAWING	REV	SIZE
-				PRELIMINARY	-	-	SEE BOM					7/31/08	CATALYTIC COMBUSTION CORP.	CCC RENTAL				
-				FOR APPROVAL	-	-	N/A					NTS		PROCESS & INSTRUMENTATION DIAGRAM				
-				APPROVED FOR FAB	-	-						DDH		LEGEND				
-				AS BUILT	10/03/08	DDH	X = 0.06 .XX = 0.03 .XXX = 0.015 Z = 0.5					CHECKED BY: KW			WO16813	501	0	B
-				AS FIELD MODIFIED	-	-												

CATALYTIC COMBUSTION



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Catalytic Combustion Corporation
709 - 21st Avenue
Bloomer, WI 54724
Telephone: 715-568-2882
Fax: 715-568-2884
www.catalyticcombustion.com

CUSTOMER: CATALYTIC COMBUSTION CORP.
CCC RENTAL

TITLE: PROCESS & INSTRUMENTATION DIAGRAM
LEGEND

PROJECT/PRODUCT	DRAWING	REV	SIZE
WO16813	501	0	B

Appendix C

Analytical Reports

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: (319)277-2401

TestAmerica Job ID: 310-67994-1

Client Project/Site: Meridian, #6763

For:

REI Engineering, Inc.

4080 North 20th Avenue

Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:

11/13/2015 3:09:25 PM

Brian Graettinger, Manager of Project Management

(319)277-2401

brian.graettinger@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Unless otherwise noted, analyses included in this report were performed by TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613.

TestAmerica Cedar Falls (Lab ID 101044) is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs (AIHA-LAP), LLC in the industrial hygiene program for the analytical techniques noted on the scope of accreditation for the following methods: NIOSH 0500, NIOSH 0600, NIOSH 1003, NIOSH 1005, NIOSH 1022, NIOSH 1300, NIOSH 1500, NIOSH 1501, NIOSH 1615, OSHA 07, NIOSH 7300, NIOSH 7303 and NIOSH 9102. Volatile Organic Compounds accredited for Solid Sorbent Tubes and 3M Organic Vapor Monitors.

Method Modifications: TestAmerica Cedar Falls performs NIOSH 7300 Elements by ICP with the following method modification – the ashing acid and digestion acid are Nitric Acid (HNO₃) with no Perchloric Acid (HClO₄) utilized at any time during the analysis. TestAmerica Cedar Falls performs NIOSH 9102 Elements on Wipes with the following method modification – HNO₃ is used as the digestion acid with no HClO₄ utilized at any time during the analysis.

Unless otherwise noted, all method blanks and laboratory control spikes met method and/or laboratory quality control objectives for the analyses included in this report. Gravimetric analyses are not mathematically adjusted for blank values. Unless otherwise noted, all other sample results have been mathematically adjusted for blank values. The methods utilized for the analyses are fit for the intended use.



Brian Graettinger
Manager of Project Management
11/13/2015 3:09:25 PM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-67994-1

Job ID: 310-67994-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-67994-1

Comments

No additional comments.

Receipt

The samples were received on 11/2/2015 8:00 AM in good condition.

Industrial Hygiene

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-67994-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-67994-1	Off-Gas, 10/26/15	Air	10/26/15 18:00	11/02/15 08:00
310-67994-2	Off-Gas, 10/27/15	Air	10/27/15 16:20	11/02/15 08:00
310-67994-3	Off-Gas, 10/28/15	Air	10/28/15 12:00	11/02/15 08:00

TestAmerica Cedar Falls

Client Sample Results

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-67994-1

Client Sample ID: Off-Gas, 10/26/15

Lab Sample ID: 310-67994-1

Date Collected: 10/26/15 18:00

Matrix: Air

Date Received: 11/02/15 08:00

Sample Air Volume: 1 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)								
Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	1100	1100	350	S7	11	11/13/15 14:38	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)								
Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	43000	43000		S7	1500	11/13/15 14:38	1	JCM

Client Sample ID: Off-Gas, 10/27/15

Lab Sample ID: 310-67994-2

Date Collected: 10/27/15 16:20

Matrix: Air

Date Received: 11/02/15 08:00

Sample Air Volume: 2 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)								
Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	1300	650	210	S7	11	11/13/15 14:38	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)								
Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	69000	34000		S7	1500	11/13/15 14:38	1	JCM

Client Sample ID: Off-Gas, 10/28/15

Lab Sample ID: 310-67994-3

Date Collected: 10/28/15 12:00

Matrix: Air

Date Received: 11/02/15 08:00

Sample Air Volume: 2 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)								
Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	86	43	14	S7	11	11/13/15 14:38	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)								
Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	59000	29000		S7	1500	11/13/15 14:38	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-67994-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-15
Iowa	State Program	7	007	12-01-15
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-15
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16
Wisconsin	State Program	5	999917270	08-31-16

Qualifiers

IH - GC VOA

Qualifier	Qualifier Description
S7	Sample breakthrough to second section is >10%. Results may be biased low.

IH - GC Semi VOA

Qualifier	Qualifier Description
S7	Sample breakthrough to second section is >10%. Results may be biased low.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-67994-1

Method	Method Description	Protocol	Laboratory
1501 Front	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1501 Sum	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1550	NIOSH Method 1550 (Modified)	NIOSH	TAL CF
1550 Front	NIOSH Method 1550 (Modified)	NIOSH	TAL CF

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TestAmerica Cedar Falls



Send Report To: David Larsen

Send Invoice To: David Larsen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Page: 1 of 1

Sampler: DL Project Name: Meridiam Project No.: 60763 P.O. #:

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature _____ °C	Hardcopy Results: Yes _____ No _____	_____ Next Day by 6pm _____ 2 Business Days
Sample Seals: Yes _____ No _____	E-Mail Results: Yes _____ No _____	_____ 3 Business Days _____ 4 Business Days
Sample Seals Intact: Yes _____ No _____	EDD: Yes _____ No _____ Type _____	_____ Standard 5 Business Days
Total # of Samples: _____	Data Package: Standard Level II: _____ Level III: _____ Level IV: _____	RUSH Charges Authorized _____ Yes _____ No
		Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements:

Page 8 of 9

11/13/2015

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613

Tel 319-277-2401 • Fax 319-277-2425

IH Sample Receipt Form

Client: REI Project: Murder

City: Wausau, WI

Date: 11.2.15 Receiver's Initials: TD Time (Delivered): 8:50

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

Couriers

☒	UPS	☐	TA Courier
☐	FedEx	☐	Client
☐	FedEx Ground	☐	Other:
☐	USPS	☐	
☐	Spee-Dee	☐	

☒ The samples, as received, are acceptable for analysis

☒	Samples not received in a cooler
☒	Temperature not taken

Reviewed by: slc Date: 11/3/15

Comments ok

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: (319)277-2401

TestAmerica Job ID: 310-69107-1

Client Project/Site: Meridian, #6763

For:

REI Engineering, Inc.

4080 North 20th Avenue

Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:

11/19/2015 10:54:50 AM

Brian Graettinger, Manager of Project Management

(319)277-2401

brian.graettinger@testamericainc.com

LINKS

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results through

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Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Unless otherwise noted, analyses included in this report were performed by TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613.

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Method Modifications: TestAmerica Cedar Falls performs NIOSH 7300 Elements by ICP with the following method modification – the ashing acid and digestion acid are Nitric Acid (HNO₃) with no Perchloric Acid (HClO₄) utilized at any time during the analysis. TestAmerica Cedar Falls performs NIOSH 9102 Elements on Wipes with the following method modification – HNO₃ is used as the digestion acid with no HClO₄ utilized at any time during the analysis.

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Brian Graettinger
Manager of Project Management
11/19/2015 10:54:50 AM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-69107-1

Job ID: 310-69107-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-69107-1

Comments

No additional comments.

Receipt

The sample was received on 11/16/2015 8:50 AM in good condition.

Industrial Hygiene

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-69107-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-69107-1	Off-Gas	Air	11/06/15 11:20	11/16/15 08:50

Client Sample Results

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-69107-1

Client Sample ID: Off-Gas

Lab Sample ID: 310-69107-1

Date Collected: 11/06/15 11:20

Matrix: Air

Date Received: 11/16/15 08:50

Sample Air Volume: 3 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	1100	360	110	S7	11	11/18/15 12:18	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	62000	21000		S7	1500	11/19/15 09:25	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-69107-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-15 *
Iowa	State Program	7	007	12-01-15 *
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-15
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16
Wisconsin	State Program	5	999917270	08-31-16

Qualifiers

IH - GC VOA

Qualifier	Qualifier Description
S7	Sample breakthrough to second section is >10%. Results may be biased low.

IH - GC Semi VOA

Qualifier	Qualifier Description
S7	Sample breakthrough to second section is >10%. Results may be biased low.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-69107-1

Method	Method Description	Protocol	Laboratory
1501 Front	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1501 Sum	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1550	NIOSH Method 1550 (Modified)	NIOSH	TAL CF
1550 Front	NIOSH Method 1550 (Modified)	NIOSH	TAL CF

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401



310-69107 Chain of Custody
104 Enterprise Drive
Cedar Falls, IA 50613
Ph: 1-800-750-2401 or (319) 277-2401
Fax: (319) 277-2425
www.testamericainc.com

Laboratory Chain of Custody Form

Send Report To: David Larsen

Send Invoice To: David Larsen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Page: 1 of 1

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Sampler: DL

Project Name: Meridian

Project No.: 10763

P.O. #: _____

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	11/6/15 11:20	off-gas		GR01 Benzene		3L	

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature: _____ °C	Hardcopy Results: Yes _____ No _____	Next Day by 6pm _____ 2 Business Days
Sample Seals: Yes _____ No _____	E-Mail Results: Yes _____ No _____	3 Business Days _____ 4 Business Days
Sample Seals Intact: Yes _____ No _____	EOD: Yes _____ No _____ Type _____	Standard 5 Business Days
Total # of Samples: _____	Data Package: Standard Level II _____ Level III _____ Level IV _____	RUSH Charges Authorized Yes _____ No _____ Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements:

Date	Time	Samples Relinquished By	Received By
11/16/15	11:30	<i>[Signature]</i>	<i>[Signature]</i> 11/16/15 3:50

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613

Tel 319-277-2401 • Fax 319-277-2425

IH Sample Receipt Form

Client: REI Project: max / on

City: Wausau, WI

Date: 11/16/15 Receiver's Initials: to Time (Delivered): 8:50

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

Couriers

☒	UPS	☐	TA Courier
☐	FedEx	☐	Client
☐	FedEx Ground	☐	Other:
☐	USPS	☐	
☐	Spee-Dee	☐	

☒ The samples, as received, are acceptable for analysis

☒	Samples not received in a cooler
☒	Temperature not taken

Reviewed by: sd Date: 11/16/15

Comments ok

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: (319)277-2401

TestAmerica Job ID: 310-69623-1

Client Project/Site: Meridan, #6763

For:

REI Engineering, Inc.

4080 North 20th Avenue

Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:

12/2/2015 2:44:55 PM

Brian Graettinger, Manager of Project Management

(319)277-2401

brian.graettinger@testamericainc.com

LINKS

Review your project
results through

TotalAccess

Have a Question?

 **Ask
The
Expert**

Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Brian Graettinger
Manager of Project Management
12/2/2015 2:44:55 PM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-69623-1



Job ID: 310-69623-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-69623-1

Comments

No additional comments.

Receipt

The samples were received on 11/23/2015 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice.

Industrial Hygiene

Method(s) 1550 Back, 1550 Front: The method blank for preparation batch 109939 contained Gasoline above the reporting limit (RL). No additional sample is available; therefore, re-extraction of samples was not performed.

Method(s) 1550 Front: The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) for preparation batch 310-109939 and analytical batch 310-110146 recovered outside acceptance limits for Gasoline. There was insufficient sample to perform a re-extraction or re-analysis; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-69623-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-69623-1	Off-Gas, 3:20	Air	11/16/15 15:20	11/23/15 09:00
310-69623-2	Off-Gas, 11:00	Air	11/18/15 11:00	11/23/15 09:00

Client Sample Results

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-69623-1

Client Sample ID: Off-Gas, 3:20

Lab Sample ID: 310-69623-1

Date Collected: 11/16/15 15:20

Matrix: Air

Date Received: 11/23/15 09:00

Sample Air Volume: 1 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	290	290	89		11	12/02/15 12:02	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	20000	20000			590	12/02/15 10:52	1	JCM

Client Sample ID: Off-Gas, 11:00

Lab Sample ID: 310-69623-2

Date Collected: 11/18/15 11:00

Matrix: Air

Date Received: 11/23/15 09:00

Sample Air Volume: 1 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	200	200	63		11	12/02/15 12:02	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	11000	11000			290	12/02/15 10:52	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-69623-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-15 *
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-15
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16
Wisconsin	State Program	5	999917270	08-31-16

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-69623-1

Method	Method Description	Protocol	Laboratory
1501 Front	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1501 Sum	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1550	NIOSH Method 1550 (Modified)	NIOSH	TAL CF
1550 Front	NIOSH Method 1550 (Modified)	NIOSH	TAL CF

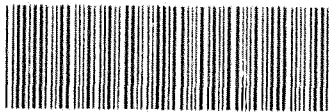
Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Laboratory Chain of Custody Form



310-69623 Chain of Custody

Cedar Falls, IA 50613
 Ph: 1-800-750-2401 or (319) 277-2401
 Fax: (319) 277-2425
 www.testamericainc.com

end Report To: David Larsen

end Invoice To: David Larsen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Page: 1 of 1

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Sampler: DL Project Name: Meridian Project No.: 6763 P.O. #: _____

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	11/16/18 3:20	off-GAS		GRO/Benmae		1L	
	11/16/18 11:00	off-GAS		GRO/Benmae		1L	

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature _____ °C Sample Seals: Yes _____ No _____ Sample Seals Intact: Yes _____ No _____ Total # of Samples: _____	Hardcopy Results: Yes _____ No _____ E-Mail Results: Yes _____ No _____ EDD: Yes _____ No _____ Type _____ Data Package: Standard Level II: _____ Level III: _____ Level IV: _____	_____ Next Day by 6pm _____ 2 Business Days _____ 3 Business Days _____ 4 Business Days _____ Standard 5 Business Days RUSH Charges Authorized Yes _____ No _____ Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements: _____

Date	Time	Samples Relinquished By	Received By
11/19/18	9:30	<u>[Signature]</u>	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613

Tel 319-277-2401 • Fax 319-277-2425

IH Sample Receipt Form

Client: REI Engineering Project: Band Box

City: WAUSAU, WI

Date: 11/23/15 Receiver's Initials: BB Time (Delivered): 9:00

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

Couriers

☒	UPS	☐	TA Courier
☐	FedEx	☐	Client
☐	FedEx Ground	☐	Other:
☐	USPS	☐	
☐	Spee-Dee	☐	

☒ The samples, as received, are acceptable for analysis

☐	Samples not received in a cooler
☐	Temperature not taken

Reviewed by: SL Date: 11/23/15

Comments de

Document: CF-LG-WI-003
Revision: 8
Date: 6/23/2014

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: (319)277-2401

TestAmerica Job ID: 310-72256-1

Client Project/Site: Meridian, Off-Gas, #6763

For:

REI Engineering, Inc.

4080 North 20th Avenue

Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:

1/19/2016 2:44:51 PM

Brian Graettinger, Manager of Project Management

(319)277-2401

brian.graettinger@testamericainc.com

LINKS

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results through

Total Access

Have a Question?



Ask
The
Expert

Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Unless otherwise noted, analyses included in this report were performed by TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613.

TestAmerica Cedar Falls (Lab ID 101044) is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs (AIHA-LAP), LLC in the industrial hygiene program for the analytical techniques noted on the scope of accreditation for the following methods: NIOSH 0500, NIOSH 0600, NIOSH 1003, NIOSH 1005, NIOSH 1022, NIOSH 1300, NIOSH 1500, NIOSH 1501, NIOSH 1615, OSHA 07, NIOSH 7300, NIOSH 7303 and NIOSH 9102. Volatile Organic Compounds accredited for Solid Sorbent Tubes and 3M Organic Vapor Monitors.

Method Modifications: TestAmerica Cedar Falls performs NIOSH 7300 Elements by ICP with the following method modification – the ashing acid and digestion acid are Nitric Acid (HNO_3) with no Perchloric Acid (HClO_4) utilized at any time during the analysis. TestAmerica Cedar Falls performs NIOSH 9102 Elements on Wipes with the following method modification – HNO_3 is used as the digestion acid with no HClO_4 utilized at any time during the analysis.

Unless otherwise noted, all method blanks and laboratory control spikes met method and/or laboratory quality control objectives for the analyses included in this report. Gravimetric analyses are not mathematically adjusted for blank values. Unless otherwise noted, all other sample results have been mathematically adjusted for blank values. The methods utilized for the analyses are fit for the intended use.



Brian Graettinger
Manager of Project Management
1/19/2016 2:44:51 PM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridian, Off-Gas, #6763

TestAmerica Job ID: 310-72256-1



Job ID: 310-72256-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-72256-1

Comments

No additional comments.

Receipt

The samples were received on 1/7/2016 8:55 AM in good condition.

Industrial Hygiene

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, Off-Gas, #6763

TestAmerica Job ID: 310-72256-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-72256-1	Off-Gas, 12/17/15	Air	12/17/15 14:12	01/07/16 08:55
310-72256-2	Off-Gas, 01/04/16	Air	01/04/16 15:00	01/07/16 08:55

Client Sample Results

Client: REI Engineering, Inc.
Project/Site: Meridian, Off-Gas, #6763

TestAmerica Job ID: 310-72256-1

Client Sample ID: Off-Gas, 12/17/15

Lab Sample ID: 310-72256-1

Date Collected: 12/17/15 14:12

Matrix: Air

Date Received: 01/07/16 08:55

Sample Air Volume: 3 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	670	220	70	S7	11	01/19/16 13:47	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	37000	12000		S7	590	01/19/16 14:00	1	JCM

Client Sample ID: Off-Gas, 01/04/16

Lab Sample ID: 310-72256-2

Date Collected: 01/04/16 15:00

Matrix: Air

Date Received: 01/07/16 08:55

Sample Air Volume: 2 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	580	290	91	S7	11	01/19/16 13:47	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	29000	15000		S7	590	01/19/16 14:00	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, Off-Gas, #6763

TestAmerica Job ID: 310-72256-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-15 *
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16
Wisconsin	State Program	5	999917270	08-31-16

Qualifiers

IH - GC VOA

Qualifier	Qualifier Description
S7	Sample breakthrough to second section is >10%. Results may be biased low.

IH - GC Semi VOA

Qualifier	Qualifier Description
S7	Sample breakthrough to second section is >10%. Results may be biased low.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, Off-Gas, #6763

TestAmerica Job ID: 310-72256-1

Method	Method Description	Protocol	Laboratory
1501 Front	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1501 Sum	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1550	NIOSH Method 1550 (Modified)	NIOSH	TAL CF
1550 Front	NIOSH Method 1550 (Modified)	NIOSH	TAL CF

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TestAmerica Cedar Falls



310-72256 Chain of Custody

Ph: 1-800-750-2401 or (319) 277-2401

Fax: (319) 277-2425

www.testamericainc.com

Send Report To: David Larsen

Send Invoice To: David Larsen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Page: 1 of 1

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Sampler: DL Project Name: Meridian Project No.: 6763 P.O. #: _____

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	12/17/15 2:12	off-Gas		Glo/Bemere		3L	
	1/4/16 3:00	off-Gas		Glo/Bemere		2L	

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature: _____ °C	Hardcopy Results: Yes _____ No _____	Next Day by 6pm _____ 2 Business Days _____
Sample Seals: Yes _____ No _____	E-Mail Results: Yes _____ No _____	3 Business Days _____ 4 Business Days _____
Sample Seals Intact: Yes _____ No _____	EDD: Yes _____ No _____ Type: _____	Standard 5 Business Days _____
Total # of Samples: _____	Data Package: Standard Level II _____ Level III _____ Level IV _____	RUSH Charges Authorized Yes _____ No _____ Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements: _____

Date	Time	Sampler Relinquished By	Received By
1/5/16	9:40	<i>David Larsen</i>	<i>John H. Best 1-7-16 8:55</i>

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613

Tel 319-277-2401 • Fax 319-277-2425

IH Sample Receipt Form

Client: REL ENG. Project: _____

City: _____

Date: 1-7-16 Receiver's Initials: CH Time (Delivered): 8:55

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

Couriers

☒	UPS	TA Courier
☐	FedEx	Client
☐	FedEx Ground	Other:
☐	USPS	
☐	Spee-Dee	

☒ The samples, as received, are acceptable for analysis

☒	Samples not received in a cooler
☒	Temperature not taken

Reviewed by: SLD Date: 1/7/16

Comments ok

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

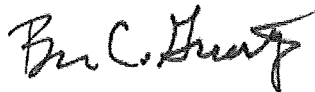
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-73289-1
TestAmerica Sample Delivery Group: 6763
Client Project/Site: Meridian

For:
REI Engineering, Inc.
4080 North 20th Avenue
Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:
1/29/2016 12:43:53 PM

Brian Graettinger, Manager of Project Management
(319)277-2401
brian.graettinger@testamericainc.com

LINKS

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Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Unless otherwise noted, analyses included in this report were performed by TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613.

TestAmerica Cedar Falls (Lab ID 101044) is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs (AIHA-LAP), LLC in the industrial hygiene program for the analytical techniques noted on the scope of accreditation for the following methods: NIOSH 0500, NIOSH 0600, NIOSH 1003, NIOSH 1005, NIOSH 1022, NIOSH 1300, NIOSH 1500, NIOSH 1501, NIOSH 1615, OSHA 07, NIOSH 7300, NIOSH 7303 and NIOSH 9102. Volatile Organic Compounds accredited for Solid Sorbent Tubes and 3M Organic Vapor Monitors.

Method Modifications: TestAmerica Cedar Falls performs NIOSH 7300 Elements by ICP with the following method modification – the ashing acid and digestion acid are Nitric Acid (HNO₃) with no Perchloric Acid (HClO₄) utilized at any time during the analysis. TestAmerica Cedar Falls performs NIOSH 9102 Elements on Wipes with the following method modification – HNO₃ is used as the digestion acid with no HClO₄ utilized at any time during the analysis.

Unless otherwise noted, all method blanks and laboratory control spikes met method and/or laboratory quality control objectives for the analyses included in this report. Gravimetric analyses are not mathematically adjusted for blank values. Unless otherwise noted, all other sample results have been mathematically adjusted for blank values. The methods utilized for the analyses are fit for the intended use.



Brian Graettinger
Manager of Project Management
1/29/2016 12:43:53 PM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridian

TestAmerica Job ID: 310-73289-1
SDG: 6763



Job ID: 310-73289-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-73289-1

Comments

No additional comments.

Receipt

The sample was received on 1/27/2016 9:00 AM in good condition.

Industrial Hygiene

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridian

TestAmerica Job ID: 310-73289-1
SDG: 6763

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-73289-1	Off-Gas	Air	01/22/16 14:15	01/27/16 09:00

Client Sample Results

Client: REI Engineering, Inc.
Project/Site: Meridian

TestAmerica Job ID: 310-73289-1
SDG: 6763

Client Sample ID: Off-Gas

Lab Sample ID: 310-73289-1

Date Collected: 01/22/16 14:15

Matrix: Air

Date Received: 01/27/16 09:00

Sample Air Volume: 1 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	76	76	24		11	01/28/16 15:50	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	4700	4700			150	01/29/16 12:24	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridian

TestAmerica Job ID: 310-73289-1
SDG: 6763

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-15 *
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16
Wisconsin	State Program	5	999917270	08-31-16

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.
Project/Site: Meridian

TestAmerica Job ID: 310-73289-1
SDG: 6763

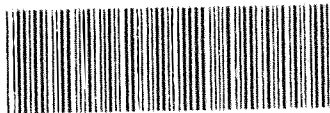
Method	Method Description	Protocol	Laboratory
1501 Front	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1501 Sum	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1550	NIOSH Method 1550 (Modified)	NIOSH	TAL CF
1550 Front	NIOSH Method 1550 (Modified)	NIOSH	TAL CF

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401



310-73289 Chain of Custody

707 Enterprise Drive
Cedar Falls, IA 50613
Ph: 1-800-750-2401 or (319) 277-2401
Fax: (319) 277-2425
www.testamericainc.com

Laboratory Chain of Custody Form

Send Report To: David Larsen

Send Invoice To: David Larsen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Page: 1 of 1

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Sampler: DL

Project Name: Meridian

Project No.: 6763

P.O. #: _____

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	1/22/16 2:15	OPP-GAS		GRO/Benzene		1L	

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature: _____ °C	Hardcopy Results: Yes _____ No _____	Next Day by 6pm _____ 2 Business Days
Sample Seals: Yes _____ No _____	E-Mail Results: Yes _____ No _____	3 Business Days _____ 4 Business Days
Sample Seals Intact: Yes _____ No _____	EDD: Yes _____ No _____ Type: _____	Standard 5 Business Days
Total # of Samples: _____	Data Package: Standard Level II: _____	RUSH Charges Authorized _____ Yes _____ No
	Level III: _____ Level IV: _____	Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements:

Date	Time	Samples Relinquished By	Received By
1/25/16	11:00 pm	<u>David Larsen</u>	<u>DL</u> 1/27/16 2:00

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613

Tel 319-277-2401 • Fax 319-277-2425

IH Sample Receipt Form

Client: NEI Project: Meridian

City: Liberty, WI

Date: 1-27-16 Receiver's Initials: TS Time (Delivered): 9:00

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

Couriers

☒	UPS	☐	TA Courier
☐	FedEx	☐	Client
☐	FedEx Ground	☐	Other:
☐	USPS	☐	
☐	Spee-Dee	☐	

☒ The samples, as received, are acceptable for analysis

☐	Samples not received in a cooler
☐	Temperature not taken

Reviewed by: SLD Date: 1/27/16

Comments SLD

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

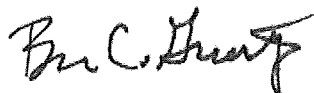
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-74210-1
Client Project/Site: Meridan, #6763

For:
REI Engineering, Inc.
4080 North 20th Avenue
Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:
2/19/2016 2:59:39 PM

Brian Graettinger, Manager of Project Management
(319)277-2401
brian.graettinger@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Unless otherwise noted, analyses included in this report were performed by TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613.

TestAmerica Cedar Falls (Lab ID 101044) is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs (AIHA-LAP), LLC in the industrial hygiene program for the analytical techniques noted on the scope of accreditation for the following methods: NIOSH 0500, NIOSH 0600, NIOSH 1003, NIOSH 1005, NIOSH 1022, NIOSH 1300, NIOSH 1500, NIOSH 1501, NIOSH 1615, OSHA 07, NIOSH 7300, NIOSH 7303 and NIOSH 9102. Volatile Organic Compounds accredited for Solid Sorbent Tubes and 3M Organic Vapor Monitors.

Method Modifications: TestAmerica Cedar Falls performs NIOSH 7300 Elements by ICP with the following method modification – the ashing acid and digestion acid are Nitric Acid (HNO_3) with no Perchloric Acid (HClO_4) utilized at any time during the analysis. TestAmerica Cedar Falls performs NIOSH 9102 Elements on Wipes with the following method modification – HNO_3 is used as the digestion acid with no HClO_4 utilized at any time during the analysis.

Unless otherwise noted, all method blanks and laboratory control spikes met method and/or laboratory quality control objectives for the analyses included in this report. Gravimetric analyses are not mathematically adjusted for blank values. Unless otherwise noted, all other sample results have been mathematically adjusted for blank values. The methods utilized for the analyses are fit for the intended use.

Brian Graettinger
Manager of Project Management
2/19/2016 2:59:39 PM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-74210-1

2

Job ID: 310-74210-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-74210-1

Comments

No additional comments.

Receipt

The sample was received on 2/11/2016 9:05 AM in good condition.

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-74210-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-74210-1	Off-Gas, 02/08/2016	Air	02/08/16 00:00	02/11/16 09:05

3

TestAmerica Cedar Falls



Analytics Corporation
10329 Stony Run Lane
Ashland, Va 23005
Phone: (804) 365-3000 Fax: (804) 365-3002
AIHA Accreditation # 176, ID 100531

February 19, 2016

BRIAN C GRAETTINGER
TESTAMERICA ANALYTICAL TESTING CORP
CEDAR FALLS DIVISION
704 ENTERPRISE DRIVE
CEDAR FALLS, IA 50613

Laboratory Workorder ID: U043015

Client Project ID: MERIDAN #6763

Received: February 12, 2016

Reported: February 19, 2016

Attached are the results we obtained on the analysis of your samples submitted to Analytics. Any Chains-of-Custody associated by this sample group are enclosed. Air concentrations are calculated as a convenience to the client and the overall accuracy of this result depends on both the accuracy of the air volume and the amount found by analysis. Theoretical air volumes for passive monitors are calculated using the sampling time submitted and the manufacture's listed sampling rate for each compound. Results provided in this report relate only to the items tested.

For blanks and non-detects the results indicated with a '<' value represents the reporting limit for the analysis. Unless otherwise noted results are not corrected for blank values.

Unless the signature of the appropriate manager(s) appears on this report, this report should be considered PRELIMINARY and is subject to change.

We appreciate your confidence in allowing Analytics to be your testing laboratory. Any questions regarding this report can be addressed by calling our customer services department at (800) 888-8061.

Andrew L. Teague, CIH
Technical Director

Enclosures



Analytics Corporation
10329 Stony Run Lane
Ashland, Va 23005
Phone: (804) 365-3000 Fax: (804) 365-3002
AIHA Accreditation # 176, ID 100531

Final Report

Work Order U043015

TESTAMERICA ANALYTICAL TESTING CORP
CEDAR FALLS DIVISION
704 ENTERPRISE DRIVE
CEDAR FALLS, IA 50613

Customer: 14709000
Attention: BRIAN C GRAETTINGER
PO Number OR #845679

Date Received: 02/12/16
Client Project ID MERIDAN #6763

Lab ID: U043015001 Sample ID: 310-74210-1 OFF-GAS 02/08/2016 Media: Charcoal Tube 50/100mg Sample Date: 2/8/2016 Sampling Time:

Analyte	Method	Analysis Date	Volume	Reporting Limit	Front	Rear	Total	Concentration
Benzene	NIOSH 1501	02/17/16	1.0 L	2.0 ug	374 ug	49.2 ug	423 ug	420 mg/M3 132 ppm
TPH-GRO - Front	NIOSH 1550	02/18/16	1.0 L	50.0 ug			21400 ug	--
TPH-GRO - Rear	NIOSH 1550	02/18/16	1.0 L	50.0 ug			5800 ug	--
TPH-GRO - Total	NIOSH 1550	02/18/16	1.0 L	50.0 ug			27200 ug	27200 mg/M3





Analytics Corporation
10329 Stony Run Lane
Ashland, Va 23005
Phone: (804) 365-3000 Fax: (804) 365-3002
AIHA Accreditation # 176, ID 100531

Final Report

Work Order U043015

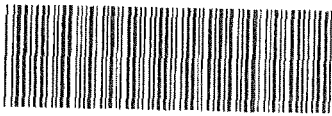
General Laboratory Comments

Abbreviations:

ug = micrograms; mg=milligrams; g = grams, ppm=parts per million (volume), ppb = parts per billion (volume), mg/M3=milligrams per cubic meter of air, ug/M3=micrograms per cubic meter of air; Min=minutes, Qual=Qualifiers



Laboratory Chain of Custody Form



310-74210 Chain of Custody

Central Falls, IN 46001

Ph: 1-800-750-2401 or (319) 277-2401

Fax: (319) 277-2425

www.testamericainc.com

Send Report To: David Larsen

Send Invoice To: David Larsen

Company: REI Engineering, Inc.

U043015

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Page: 1 of 1

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@relengineering.com

Sampler: DL Project Name: Meridian Project No.: 6763 P.O. #:

[illegible]

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature _____ °C	Hardcopy Results: Yes _____ No _____	_____ Next Day by 6pm _____ 2 Business Days
Sample Seals: Yes _____ No _____	E-Mail Results: Yes _____ No _____	_____ 3 Business Days _____ 4 Business Days
Sample Seals Intact: Yes _____ No _____	EOD: Yes _____ No _____ Type: _____	_____ Standard 5 Business Days
Total # of Samples: _____	Data Package: Standard Level II: _____ Level III: _____ Level IV: _____	☒ RUSH Charges Authorized _____ Yes _____ No
		Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements:

Date	Time	Sampler Relinquished By	Received By
2/9	10:42 AM	<i>[Signature]</i>	<i>[Signature]</i>
2/12/16	10:22	JARRETT COOK	<i>[Signature]</i> 2-11-16 405

704 Enterprise Drive
Cedar Falls, IA 50613
Phone (319) 277-2401 Fax (319) 277-2425

Test

U043015

Client Information (Sub Contract Lab)		Lab PM: Graettinger, Brian C		Carrier Tracking No(s):		DOC No: 310-8019.1					
Client Contact: Shipping/Receiving		Phone: B-Mail: brian.graettinger@testamericainc.com				Page: Page 1 of 1					
Company: Analytics Corporation				Analysis Requested							
Address: 10329 Story Run Lane.		Due Date Requested: 2/23/2016		Job #: 310-74210-1							
City: Ashland		TAT Requested (days):		Preservation Codes:							
State, Zip: VA, 23005				A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSCM F - MeOH G - Amelhor H - Ascorbic Acid I - Ice J - DI Water K - ECTA L - EDH							
Phone: 300-888-6061 (Tel)		BOL#: 0.R.# 845679		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2SO3 S - H2SO4 T - TSP Dodecylhydraz U - Acetone V - MCAA W - ph 4.5 Z - other (specify):							
Email:		WQ#: SR 2/15/16		Other:							
Project Name: Meridan, #6763		Project #: 310000000-310-74210									
Site:		SSOW#:									
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, G=soil, G=water, oil, BT=Tissue, Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	QID (Benzene/Dichloro)	TPH as P-3.	Total Number of containers	Air Volumes Special Instructions/Note:
Off Gas, 02/08/2016 (310-74210-1)		2/8/16	Central		Air		X	X		1	1.0 Liter
1-226-01											
Bronze Air T											
TPH-GRO Air T											
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)									
Unconfirmed		☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months									
Deliverable Requested: I, II, III, IV, Other (specify):		Special Instructions/DOC Requirements:									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:					
Relinquished by:		Date/Time:		Company:		Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Relinquished by:		Date/Time:		Company:	
Relinquished by:		Date/Time:		Company:		Relinquished by:		Date/Time:		Company:	
Custody Seals Intact A Yes A No		Custody Seal No:		Other Instructions/Remarks:							

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-74210-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-15 *
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
■	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-74210-1

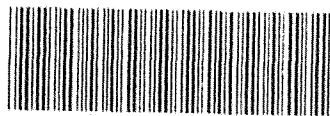
Method	Method Description	Protocol	Laboratory
Benzene	NIOSH 1501	NONE	Analytics
TPH as Gas	NIOSH 1550	NONE	Analytics

Protocol References:

NONE = NONE

Laboratory References:

Analytics = Analytics Corporation, 10329 Stony Run Lane, Ashland, VA 23005, TEL (800)888-8061



310-74210 Chain of Custody

Cedar Falls, IA 50613

Ph: 1-800-750-2401 or (319) 277-2401

Fax: (319) 277-2425

www.testamericainc.com

Send Report To: David Larsen

Send Invoice To: David Larsen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Page: 1 of 1

Sampler: DL

Project Name: Meridian

Project No.: 6763

P.O. #: _____

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	2/3/16 3:45	dl-gas		GR0/Benzene		1L	

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature: _____ °C	Hardcopy Results: Yes _____ No _____	Next Day by 6pm _____ 2 Business Days _____
Sample Seals: Yes _____ No _____	E-Mail Results: Yes _____ No _____	3 Business Days _____ 4 Business Days _____
Sample Seals Intact: Yes _____ No _____	EID: Yes _____ No _____ Type: _____	Standard 5 Business Days _____
Total # of Samples: _____	Data Package: Standard Level II: _____ Level III: _____ Level IV: _____	RUSH Charges Authorized Yes _____ No _____ Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements: _____

Date	Time	Samplee Relinquished By	Received By
2/3	10:10 AM	<i>[Signature]</i>	<i>[Signature]</i> 2-1-16 4:05

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613

Tel 319-277-2401 • Fax 319-277-2425

IH Sample Receipt Form

Client: REI ENG. Project: _____

City: _____

Date: 2-11-16 Receiver's Initials: CH Time (Delivered): 9:05

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

Couriers

☒	UPS	☐	TA Courier
☐	FedEx	☐	Client
☐	FedEx Ground	☐	Other:
☐	USPS	☐	
☐	Spee-Dee	☐	

☒ The samples, as received, are acceptable for analysis

☒	Samples not received in a cooler
☒	Temperature not taken

Reviewed by: SR Date: 2/11/16

Comments de

Document: CF-LG-WI-003

Revision: 8

Date: 6/23/2014

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: (319)277-2401

TestAmerica Job ID: 310-74846-1

Client Project/Site: Meridan, #6763

For:

REI Engineering, Inc.

4080 North 20th Avenue

Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:

3/4/2016 11:35:05 AM

Brian Graettinger, Manager of Project Management

(319)277-2401

brian.graettinger@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Unless otherwise noted, analyses included in this report were performed by TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613.

TestAmerica Cedar Falls (Lab ID 101044) is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs (AIHA-LAP), LLC in the industrial hygiene program for the analytical techniques noted on the scope of accreditation for the following methods: NIOSH 0500, NIOSH 0600, NIOSH 1003, NIOSH 1005, NIOSH 1022, NIOSH 1300, NIOSH 1500, NIOSH 1501, NIOSH 1615, OSHA 07, NIOSH 7300, NIOSH 7303 and NIOSH 9102. Volatile Organic Compounds accredited for Solid Sorbent Tubes and 3M Organic Vapor Monitors.

Method Modifications: TestAmerica Cedar Falls performs NIOSH 7300 Elements by ICP with the following method modification – the ashing acid and digestion acid are Nitric Acid (HNO₃) with no Perchloric Acid (HClO₄) utilized at any time during the analysis. TestAmerica Cedar Falls performs NIOSH 9102 Elements on Wipes with the following method modification – HNO₃ is used as the digestion acid with no HClO₄ utilized at any time during the analysis.

Unless otherwise noted, all method blanks and laboratory control spikes met method and/or laboratory quality control objectives for the analyses included in this report. Gravimetric analyses are not mathematically adjusted for blank values. Unless otherwise noted, all other sample results have been mathematically adjusted for blank values. The methods utilized for the analyses are fit for the intended use.



Brian Graettinger
Manager of Project Management
3/4/2016 11:35:05 AM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-74846-1

2

Job ID: 310-74846-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-74846-1

Comments

No additional comments.

Receipt

The sample was received on 2/23/2016 9:10 AM in good condition.

Industrial Hygiene

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-74846-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-74846-1	Off-Gas	Air	02/15/16 12:45	02/23/16 09:10

TestAmerica Cedar Falls

Client Sample Results

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-74846-1

Client Sample ID: Off-Gas

Lab Sample ID: 310-74846-1

Date Collected: 02/15/16 12:45

Matrix: Air

Date Received: 02/23/16 09:10

Sample Air Volume: 1 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result	Result	Result	Qualifier	RL	Analyzed	Dil Fac	Analyst
	ug/Sample	mg/m3	ppm		ug/Sample			
Benzene	340	340	110		11	03/04/16 09:58	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result	Result	Result	Qualifier	RL	Analyzed	Dil Fac	Analyst
	ug/Sample	mg/m3			ug/Sample			
Gasoline	23000	23000			590	03/04/16 09:58	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-74846-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-15 *
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
■	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763

TestAmerica Job ID: 310-74846-1

Method	Method Description	Protocol	Laboratory
1501 Front	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1501 Sum	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1550	NIOSH Method 1550 (Modified)	NIOSH	TAL CF
1550 Front	NIOSH Method 1550 (Modified)	NIOSH	TAL CF

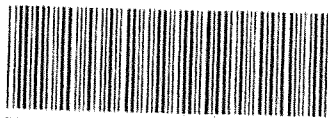
Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Laboratory Chain of Custody Form



310-74846 Chain of Custody

704 Enterprise Drive
Cedar Falls, IA 50613
Ph: 1-800-750-2401 or (319) 277-2401
Fax: (319) 277-2425
www.testamericainc.com

Send Report To: David Larsen

Send Invoice To: David Larsen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Page: 1 of 1

Sampler: DL Project Name: Meridian Project No.: 6963 P.O. #: _____

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	2-15-16 12:45	off-GAS		Geo/Benzene		1L	

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature _____ °C Sample Seals: Yes _____ No _____ Sample Seals Intact: Yes _____ No _____ Total # of Samples: _____	Hardcopy Results: Yes _____ No _____ E-Mail Results: Yes _____ No _____ EDD: Yes _____ No _____ Type: _____ Data Package: Standard Level II: _____ Level III: _____ Level IV: _____	_____ Next Day by 6pm _____ 2 Business Days _____ 3 Business Days _____ 4 Business Days _____ Standard 5 Business Days RUSH Charges Authorized _____ Yes _____ No Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements:

Date	Time	Samples Relinquished By	Received By
2-19	9:40 AM	<u>[Signature]</u>	<u>[Signature]</u> 2-23-16 9:10

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613

Tel 319-277-2401 • Fax 319-277-2425

IH Sample Receipt Form

Client: REI ENG. Project: _____

City: _____

Date: 2-23-16 Receiver's Initials: CH Time (Delivered): 9:10

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

Couriers

☒	UPS	☐	TA Courier
☐	FedEx	☐	Client
☐	FedEx Ground	☐	Other:
☐	USPS	☐	
☐	Spee-Dee	☐	

☒ The samples, as received, are acceptable for analysis

☐	Samples not received in a cooler
☐	Temperature not taken

Reviewed by: SL Date: 2/23/16

Comments SL

Document: CF-LG-WI-003

Revision: 8

Date: 6/23/2014

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: (319)277-2401

TestAmerica Job ID: 310-77395-1

Client Project/Site: Meridian, #6763

For:

REI Engineering, Inc.

4080 North 20th Avenue

Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:

4/8/2016 10:27:00 AM

Brian Graettinger, Manager of Project Management

(319)277-2401

brian.graettinger@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Unless otherwise noted, analyses included in this report were performed by TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613.

TestAmerica Cedar Falls (Lab ID 101044) is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs (AIHA-LAP), LLC in the industrial hygiene program for the analytical techniques noted on the scope of accreditation for the following methods: NIOSH 0500, NIOSH 0600, NIOSH 1003, NIOSH 1005, NIOSH 1022, NIOSH 1300, NIOSH 1500, NIOSH 1501, NIOSH 1615, OSHA 07, NIOSH 7300, NIOSH 7303 and NIOSH 9102. Volatile Organic Compounds accredited for Solid Sorbent Tubes and 3M Organic Vapor Monitors.

Method Modifications: TestAmerica Cedar Falls performs NIOSH 7300 Elements by ICP with the following method modification – the ashing acid and digestion acid are Nitric Acid (HNO₃) with no Perchloric Acid (HClO₄) utilized at any time during the analysis. TestAmerica Cedar Falls performs NIOSH 9102 Elements on Wipes with the following method modification – HNO₃ is used as the digestion acid with no HClO₄ utilized at any time during the analysis.

Unless otherwise noted, all method blanks and laboratory control spikes met method and/or laboratory quality control objectives for the analyses included in this report. Gravimetric analyses are not mathematically adjusted for blank values. Unless otherwise noted, all other sample results have been mathematically adjusted for blank values. The methods utilized for the analyses are fit for the intended use.



Brian Graettinger
Manager of Project Management
4/8/2016 10:27:00 AM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-77395-1



Job ID: 310-77395-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-77395-1

Comments

No additional comments.

Receipt

The sample was received on 4/1/2016 8:50 AM; the sample arrived in good condition, properly preserved and, where required, on ice.

Industrial Hygiene

Method(s) 1501 Front: Due to a sample injection error which stopped the instrument during an unattended run, the closing CCV was run outside of the ICV 24 hr window. (CCV 310-122913/41)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-77395-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-77395-1	Off-Gas	Air	03/29/16 11:15	04/01/16 08:50

TestAmerica Cedar Falls

Client Sample Results

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-77395-1

Client Sample ID: Off-Gas

Lab Sample ID: 310-77395-1

Date Collected: 03/29/16 11:15

Matrix: Air

Date Received: 04/01/16 08:50

Sample Air Volume: 3 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	1300	420	130		11	04/07/16 07:29	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	26000	8800			1500	04/07/16 15:55	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-77395-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-15 *
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-77395-1

Method	Method Description	Protocol	Laboratory
1501 Front	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1501 Sum	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1550	NIOSH Method 1550 (Modified)	NIOSH	TAL CF
1550 Front	NIOSH Method 1550 (Modified)	NIOSH	TAL CF

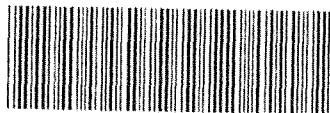
Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

Laboratory Chain of Custody Form



310-77395 Chain of Custody

Send Report To: David Larsen

Send Invoice To: David Larsen

Company: REI Engineering, Inc.

Cedar Falls, IA 50613

Ph: 1-800-750-2401 or (319) 277-2401

Fax: (319) 277-2425

www.testamericainc.com

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Page: 1 of 1

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Sampler: DL

Project Name: Meridian

Project No.: 60763

P.O. #: _____

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	3/29/16 11:15	off-gas		GLO/Benene		3L	

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature _____ °C	Hardcopy Results: Yes _____ No _____	_____ Next Day by 6pm _____ 2 Business Days
Sample Seals: Yes _____ No _____	E-Mail Results: Yes _____ No _____	_____ 3 Business Days _____ 4 Business Days
Sample Seals Intact: Yes _____ No _____	EDD: Yes _____ No _____ Type: _____	_____ Standard 5 Business Days
Total # of Samples: _____	Data Package: Standard Level II: _____ Level III: _____ Level IV: _____	RUSH Charges Authorized _____ Yes _____ No
Subject to scheduling and availability (RUSH surcharges apply)		

Instructions / Special Requirements: _____

Date	Time	Samples Relinquished By	Received By
3/29/16	9:10 AM	<u>[Signature]</u>	<u>[Signature]</u> 4-1-16 08:50

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613

Tel 319-277-2401 • Fax 319-277-2425

IH Sample Receipt Form

Client: REI ENG. Project: _____

City: _____

Date: 4-1-16 Receiver's Initials: CH Time (Delivered): 08:50

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

Couriers

☒	UPS	☐	TA Courier
☐	FedEx	☐	Client
☐	FedEx Ground	☐	Other:
☐	USPS	☐	
☐	Spee-Dee	☐	

☒ The samples, as received, are acceptable for analysis

☒	Samples not received in a cooler
☒	Temperature not taken

Reviewed by: scd Date: 4/1/16

Comments ok

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-79070-1
Client Project/Site: Meridian, #6763, GRO/Benzene Analysis

For:
REI Engineering, Inc.
4080 North 20th Avenue
Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:
5/5/2016 1:15:23 PM

Brian Graettinger, Manager of Project Management
(319)277-2401
brian.graettinger@testamericainc.com

LINKS

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results through

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Method Modifications: TestAmerica Cedar Falls performs NIOSH 7300 Elements by ICP with the following method modification – the ashing acid and digestion acid are Nitric Acid (HNO₃) with no Perchloric Acid (HClO₄) utilized at any time during the analysis. TestAmerica Cedar Falls performs NIOSH 9102 Elements on Wipes with the following method modification – HNO₃ is used as the digestion acid with no HClO₄ utilized at any time during the analysis.

Unless otherwise noted, all method blanks and laboratory control spikes met method and/or laboratory quality control objectives for the analyses included in this report. Gravimetric analyses are not mathematically adjusted for blank values. Unless otherwise noted, all other sample results have been mathematically adjusted for blank values. The methods utilized for the analyses are fit for the intended use.



Brian Graettinger
Manager of Project Management
5/5/2016 1:15:23 PM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763, GRO/Benzene Analysis

TestAmerica Job ID: 310-79070-1



Job ID: 310-79070-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-79070-1

Comments

No additional comments.

Receipt

The sample was received on 4/25/2016 8:55 AM in good condition.

Industrial Hygiene

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763, GRO/Benzene Analysis

TestAmerica Job ID: 310-79070-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-79070-1	Off-Gas, 4/20/16	Air	04/20/16 11:45	04/25/16 08:55

Client Sample Results

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763, GRO/Benzene Analysis

TestAmerica Job ID: 310-79070-1

Client Sample ID: Off-Gas, 4/20/16

Lab Sample ID: 310-79070-1

Date Collected: 04/20/16 11:45

Matrix: Air

Date Received: 04/25/16 08:55

Sample Air Volume: 1 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)								
Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	120	120	36		11	05/05/16 12:29	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)								
Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	10000	10000			290	05/05/16 12:28	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763, GRO/Benzene Analysis

TestAmerica Job ID: 310-79070-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-15 *
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
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%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.

TestAmerica Job ID: 310-79070-1

Project/Site: Meridian, #6763, GRO/Benzene Analysis

Method	Method Description	Protocol	Laboratory
1501 Front	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1501 Sum	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1550	NIOSH Method 1550 (Modified)	NIOSH	TAL CF
1550 Front	NIOSH Method 1550 (Modified)	NIOSH	TAL CF

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401

TH#

Cl

7C

Ct

310-79070 Chain of Custody

Ph: 1-800-750-2401 or (319) 277-2401

Fax: (319) 277-2425

www.testamericainc.com

end Report To: David Larsen

end Invoice To: David Larsen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Page: 1 of 1

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Sampler: DL

Project Name: Mendian

Project No.: 60763

P.O. #: _____

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	4/20/16	off-GAS		GR0/Berre		1L	
	11:05 AM						

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature: _____ °C	Hardcopy Results: Yes _____ No _____	Next Day by 6pm _____ 2 Business Days _____
Sample Seals: Yes _____ No _____	E-Mail Results: Yes _____ No _____	3 Business Days _____ 4 Business Days _____
Sample Seals Intact: Yes _____ No _____	EDD: Yes _____ No _____ Type: _____	Standard 5 Business Days _____
Total # of Samples: _____	Data Package: Standard Level II: _____ Level III: _____ Level IV: _____	RUSH Charges Authorized Yes _____ No _____ Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements:

Date	Time	Samples Relinquished By	Received By
4/20/16	9:05	<u>[Signature]</u>	<u>[Signature]</u> 4/20/16 8:55

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613

Tel 319-277-2401 • Fax 319-277-2425

IH Sample Receipt Form

Client: REI E-13 Project: Meridian

City: Wausau

Date: 4/25/16 Receiver's Initials: TD Time (Delivered): 8:55

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

Couriers

☒	UPS	☐	TA Courier
☐	FedEx	☐	Client
☐	FedEx Ground	☐	Other:
☐	USPS	☐	
☐	Spee-Dee	☐	

☒ The samples, as received, are acceptable for analysis

☒	Samples not received in a cooler
☒	Temperature not taken

Reviewed by: SLR Date: 4/25/16

Comments OK

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: (319)277-2401

TestAmerica Job ID: 310-81380-1

Client Project/Site: Meridian, #6763

For:

REI Engineering, Inc.

4080 North 20th Avenue

Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:

6/6/2016 9:59:08 AM

Brian Graettinger, Manager of Project Management

(319)277-2401

brian.graettinger@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

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Method Modifications: TestAmerica Cedar Falls performs NIOSH 7300 Elements by ICP with the following method modification – the ashing acid and digestion acid are Nitric Acid (HNO₃) with no Perchloric Acid (HClO₄) utilized at any time during the analysis. TestAmerica Cedar Falls performs NIOSH 9102 Elements on Wipes with the following method modification – HNO₃ is used as the digestion acid with no HClO₄ utilized at any time during the analysis.

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Brian Graettinger
Manager of Project Management
6/6/2016 9:59:08 AM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-81380-1

2

Job ID: 310-81380-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-81380-1

Comments

No additional comments.

Receipt

The sample was received on 5/26/2016 9:05 AM in good condition.

Industrial Hygiene

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-81380-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-81380-1	Off-Gas, 05/23/16	Air	05/23/16 14:00	05/26/16 09:05

TestAmerica Cedar Falls

Client Sample Results

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-81380-1

Client Sample ID: Off-Gas, 05/23/16

Lab Sample ID: 310-81380-1

Date Collected: 05/23/16 14:00

Matrix: Air

Date Received: 05/26/16 09:05

Sample Air Volume: 2 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	200	99	31		11	06/03/16 09:42	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	15000	7300			590	06/03/16 09:43	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-81380-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16

Glossary

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CFL	Contains Free Liquid
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DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-81380-1

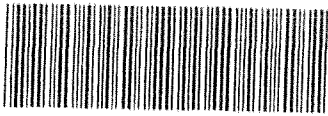
Method	Method Description	Protocol	Laboratory
1501 Front	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1501 Sum	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1550	NIOSH Method 1550 (Modified)	NIOSH	TAL CF
1550 Front	NIOSH Method 1550 (Modified)	NIOSH	TAL CF

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401



310-81380 Chain of Custody

Ph: 1-800-750-2401 or (319) 277-2401
 Fax: (319) 277-2425
 www.testamericainc.com

Send Report To: David Larsen

Send Invoice To: David Larsen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Page: 1 of 1

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Sampler: DL Project Name: Meridian Project No.: 6763 P.O. #: _____

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	5/23/16 2:00pm	off-GAS		GIPO/Benzene		2L	

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature: _____ °C	Hardcopy Results: Yes _____ No _____	Next Day by 6pm _____ 2 Business Days _____
Sample Seals: Yes _____ No _____	E-Mail Results: Yes _____ No _____	3 Business Days _____ 4 Business Days _____
Sample Seals Intact: Yes _____ No _____	EDD: Yes _____ No _____ Type _____	Standard 5 Business Days _____
Total # of Samples: _____	Data Package: Standard Level II _____ Level III _____ Level IV _____	RUSH Charges Authorized Yes _____ No _____ Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements: _____

Date	Time	Samples Relinquished By	Received By
5/24/16	7:30 AM	<i>[Signature]</i>	<i>[Signature]</i> 5-26-16 09:05



THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613

Tel 319-277-2401 • Fax 319-277-2425

IH Sample Receipt Form

Client: REI ENG. Project: _____

City: _____

Date: 5-26-16 Receiver's Initials: CH Time (Delivered): 09:05

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

☒ The samples, as received, are acceptable for analysis

Couriers

☒ UPS	☐	TA Courier
☐ FedEx	☐	Client
☐ FedEx Ground	☐	Other:
☐ USPS	☐	
☐ Spee-Dee	☐	

☒	Samples not received in a cooler
☒	Temperature not taken

Reviewed by: SEL Date: 5/26/16

Comments OK

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Cedar Falls

704 Enterprise Drive

Cedar Falls, IA 50613

Tel: (319)277-2401

TestAmerica Job ID: 310-84261-1

Client Project/Site: Meridan, #6763, GRO & Benzene

For:

REI Engineering, Inc.

4080 North 20th Avenue

Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:

7/14/2016 3:23:41 PM

Brian Graettinger, Manager of Project Management

(319)277-2401

brian.graettinger@testamericainc.com

LINKS

Review your project
results through

Total Access

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

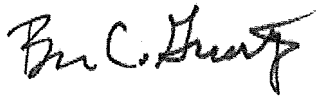
Results relate only to the items tested and the sample(s) as received by the laboratory.

Unless otherwise noted, analyses included in this report were performed by TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613.

TestAmerica Cedar Falls (Lab ID 101044) is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs (AIHA-LAP), LLC in the industrial hygiene program for the analytical techniques noted on the scope of accreditation for the following methods: NIOSH 0500, NIOSH 0600, NIOSH 1003, NIOSH 1005, NIOSH 1022, NIOSH 1300, NIOSH 1500, NIOSH 1501, NIOSH 1615, OSHA 07, NIOSH 7300, NIOSH 7303 and NIOSH 9102. Volatile Organic Compounds accredited for Solid Sorbent Tubes and 3M Organic Vapor Monitors.

Method Modifications: TestAmerica Cedar Falls performs NIOSH 7300 Elements by ICP with the following method modification – the ashing acid and digestion acid are Nitric Acid (HNO₃) with no Perchloric Acid (HClO₄) utilized at any time during the analysis. TestAmerica Cedar Falls performs NIOSH 9102 Elements on Wipes with the following method modification – HNO₃ is used as the digestion acid with no HClO₄ utilized at any time during the analysis.

Unless otherwise noted, all method blanks and laboratory control spikes met method and/or laboratory quality control objectives for the analyses included in this report. Gravimetric analyses are not mathematically adjusted for blank values. Unless otherwise noted, all other sample results have been mathematically adjusted for blank values. The methods utilized for the analyses are fit for the intended use.



Brian Graettinger
Manager of Project Management
7/14/2016 3:23:41 PM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763, GRO & Benzene

TestAmerica Job ID: 310-84261-1

2

Job ID: 310-84261-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-84261-1

Comments

No additional comments.

Receipt

The sample was received on 7/6/2016 9:25 AM in good condition.

Industrial Hygiene

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763, GRO & Benzene

TestAmerica Job ID: 310-84261-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-84261-1	Off-Gas	Air	06/30/16 11:15	07/06/16 09:25

Client Sample Results

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763, GRO & Benzene

TestAmerica Job ID: 310-84261-1

Client Sample ID: Off-Gas

Lab Sample ID: 310-84261-1

Date Collected: 06/30/16 11:15

Matrix: Air

Date Received: 07/06/16 09:25

Sample Air Volume: 1 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	71	71	22		11	07/14/16 13:49	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	7200	7200			290	07/14/16 13:50	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763, GRO & Benzene

TestAmerica Job ID: 310-84261-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-15 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dryweight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.
Project/Site: Meridan, #6763, GRO & Benzene

TestAmerica Job ID: 310-84261-1

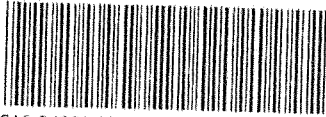
Method	Method Description	Protocol	Laboratory
1501 Sum	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1550	NIOSH Method 1550 (Modified)	NIOSH	TAL CF

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401



310-84261 Chain of Custody

Fax: (319) 277-2425
www.testamericainc.com

Send Report To: David Larsen

Send Invoice To: David Larsen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Page: 1 of 1

Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Sampler: DL

Project Name: Meriden

Project No.: 6763

P.O. #: _____

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	6-30-16 11:15	off-GAS		Fluo/Benzene		1L	

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature _____ °C Sample Seals: Yes _____ No _____ Sample Seals Intact: Yes _____ No _____ Total # of Samples: _____	Hardcopy Results: Yes _____ No _____ E-Mail Results: Yes _____ No _____ EDD: Yes _____ No _____ Type: _____ Data Package: Standard Level II _____ Level III: _____ Level IV: _____	_____ Next Day by 6pm _____ 2 Business Days _____ 3 Business Days _____ 4 Business Days _____ Standard 5 Business Days RUSH Charges Authorized _____ Yes _____ No Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements: _____

Date	Time	Samples Relinquished By	Received By
7-1-16	10:00	<i>David Larsen</i>	
7-06-16	9:25		<i>Genaro Lery</i> 7/6/16 <i>Felix</i> 9:58 <i>Ground</i> 7/14/2016

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

704 Enterprise Drive • Cedar Falls, IA 50613

Tel 319-277-2401 • Fax 319-277-2425

IH Sample Receipt Form

Client: REI Engineering Project: Meridan

City: Wausau, WI

Date: 7-06-16 Receiver's Initials: GL Time (Delivered): 9:25

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

☒ The samples, as received, are acceptable for analysis

Couriers

☒	UPS	☐	TA Courier
☒	FedEx	☐	Client
☒	FedEx Ground	☐	Other:
☐	USPS	☐	
☐	Spee-Dee	☐	

☒	Samples not received in a cooler
☒	Temperature not taken

Reviewed by: SLP Date: 7/6/16

Comments etc

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Cedar Falls
704 Enterprise Drive
Cedar Falls, IA 50613
Tel: (319)277-2401

TestAmerica Job ID: 310-86422-1
Client Project/Site: Meridian, #6763

For:
REI Engineering, Inc.
4080 North 20th Avenue
Wausau, Wisconsin 54401

Attn: Mr. Dave Larsen



Authorized for release by:
8/12/2016 3:14:39 PM

Brian Graettinger, Manager of Project Management
(319)277-2401
brian.graettinger@testamericainc.com

LINKS

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www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Unless otherwise noted, analyses included in this report were performed by TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613.

TestAmerica Cedar Falls (Lab ID 101044) is accredited by the American Industrial Hygiene Association Laboratory Accreditation Programs (AIHA-LAP), LLC in the industrial hygiene program for the analytical techniques noted on the scope of accreditation for the following methods: NIOSH 0500, NIOSH 0600, NIOSH 1003, NIOSH 1005, NIOSH 1022, NIOSH 1300, NIOSH 1500, NIOSH 1501, NIOSH 1615, OSHA 07, NIOSH 7303 and NIOSH 9102. Volatile Organic Compounds accredited for Solid Sorbent Tubes and 3M Organic Vapor Monitors.

Method Modifications: TestAmerica Cedar Falls performs NIOSH 9102 Elements on Wipes with the following method modification – HNO₃ is used as the digestion acid with no HClO₄ utilized at any time during the analysis.

Unless otherwise noted, all method blanks and laboratory control spikes met method and/or laboratory quality control objectives for the analyses included in this report. Gravimetric analyses are not mathematically adjusted for blank values. Unless otherwise noted, all other sample results have been mathematically adjusted for blank values. The methods utilized for the analyses are fit for the intended use.



Brian Graettinger
Manager of Project Management
8/12/2016 3:14:39 PM

Case Narrative

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-86422-1



Job ID: 310-86422-1

Laboratory: TestAmerica Cedar Falls

Narrative

Job Narrative
310-86422-1

Comments

No additional comments.

Receipt

The sample was received on 8/4/2016 8:55 AM in good condition.

Industrial Hygiene

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Lab Admin

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.



Sample Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-86422-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
310-86422-1	Off-Gas	Air	08/01/16 17:00	08/04/16 08:55

3

Client Sample Results

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-86422-1

Client Sample ID: Off-Gas

Lab Sample ID: 310-86422-1

Date Collected: 08/01/16 17:00

Matrix: Air

Date Received: 08/04/16 08:55

Sample Air Volume: 1 L

Sample Container: IH - Coconut Shell Charcoal Tube, 150 mg

Method: 1501 Sum - NIOSH Method 1501 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result ppm	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	150	150	48		11	08/12/16 13:37	1	JCM

Method: 1550 - NIOSH Method 1550 (Modified)

Analyte	Result ug/Sample	Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	14000	14000			590	08/12/16 13:37	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-86422-1

Laboratory: TestAmerica Cedar Falls

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
AIHA-LAP, LLC	IHLAP		101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
Iowa	State Program	7	007	12-01-17
Kansas	NELAP	7	E-10341	01-31-16 *
Minnesota	NELAP	5	019-999-319	12-31-16
Minnesota (Petrofund)	State Program	1	3349	08-22-16
North Dakota	State Program	8	R-186	09-29-16
Oregon	NELAP	10	IA100001	09-29-16

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
a	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

* Certification renewal pending - certification considered valid.

Method Summary

Client: REI Engineering, Inc.
Project/Site: Meridian, #6763

TestAmerica Job ID: 310-86422-1

Method	Method Description	Protocol	Laboratory
1501 Sum	NIOSH Method 1501 (Modified)	NIOSH	TAL CF
1550	NIOSH Method 1550 (Modified)	NIOSH	TAL CF

Protocol References:

NIOSH = NIOSH Manual Of Analytical Methods, National Institute For Occupational Safety And Health, 4th Edition, August 1994.

Laboratory References:

TAL CF = TestAmerica Cedar Falls, 704 Enterprise Drive, Cedar Falls, IA 50613, TEL (319)277-2401



THE
C
7C 310-86422 Chain of Custody
Cedar Falls, IA 50613
Ph: 1-800-750-2401 or (319) 277-2401
Fax: (319) 277-2425
www.testamericainc.com

and Report To: David Larsen

and Invoice To: David Larsen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

City, State, Zip: Wausau, WI 54401

Page: 1 of 1 Phone: 715-675-9784 Fax: _____ Email Address: dlarsen@reiengineering.com

Sampler: DL Project Name: Meridian Project No.: 60763 P.O. #: _____

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	8-1-16 5:00pm	ole-GAS		CHO/Benzene		1L	

Sample Receipt	Reporting/Deliverables	Turn Around Time Requested
Temperature _____ °C	Hardcopy Results: Yes _____ No _____	_____ Next Day by 6pm _____ 2 Business Days
Sample Seals: Yes _____ No _____	E-Mail Results: Yes _____ No _____	_____ 3 Business Days _____ 4 Business Days
Sample Seals Intact: Yes _____ No _____	EDD: Yes _____ No _____ Type _____	_____ Standard 5 Business Days
Total # of Samples: _____	Data Package: Standard Level II _____ Level III: _____ Level IV: _____	RUSH Charges Authorized _____ Yes _____ No Subject to scheduling and availability (RUSH surcharges apply)

Instructions / Special Requirements: _____

Date	Time	Relinquished By	Received By
8-2-16	8:45 AM	<i>[Signature]</i>	<i>[Signature]</i> UPS
			855 8/4/16



THE LEADER IN ENVIRONMENTAL TESTING
704 Enterprise Drive • Cedar Falls, IA 50613
Tel 319-277-2401 • Fax 319-277-2425

TestAmerica Sample Receipt Form – Industrial Hygiene
Cedar Falls Facility

Client: REI Project: _____

City: _____

Date: 8/4/16 Receiver's Initials: SEL Time (Delivered): 855

COC completed correctly? ☒ Yes ☐ No
(Cite inconsistencies below)

Sample Checklist (Mark non-conformance or acceptance)

☐	Received Broken	☐	Information Missing
☐	Improper Media	☐	Missing Sample
☐	Missing Label	☐	Sample Past Hold Date
☐	Temperature	☐	Extra Sample
☐	COC Discrepancy	☐	Insufficient Sample Volume
☐	Other:		

Couriers

☒	UPS <u>Grand</u>	TA Courier
☐	FedEx	Client
☐	FedEx Ground	Other:
☐	USPS	
☐	Spee-Dee	

☒ The samples are acceptable for analysis

☐	Samples not received in a cooler
☐	Temperature not taken

Reviewed by: SEL Date: 8/4/16

Comments ok