

August 24, 2016

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

RECEIVED SEP 1 2 2016 Dept of Natural Resources Rhinelander Service

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 frostheaving. 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.

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#29744

Date 8/30/16

Meridian Environmental Consulting, LLC

TABLES

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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 2Benzene and Total VOC Emissions

SVE System

Dougs/Autostop Ladysmith, Wisconsin

Meridian Nos. 05F630/786

,	Sample	Lab Result		Hours Operation	Discharge	Emission Rate	Émission Rate	Cumulative Ma (before	ss Removed (lbs) oxidizer)
Sample Date	Parameters	(ug/m3)	Hour Meter	During Reporting Period	Flow Rate (SCFM)	(ug/sec)	(lbs/br)	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	Ì.			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	
<u> </u>	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	Ì20,000	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 (scfin) * Min/Sec * Conc (ug/l) lbs/day = Grams/Microgram * Liters/Cubic Feet * Pounds/Gram * Flow Rate (scfin) * 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			
	NM	NM	NM
//30/2016	21.75	24.05	2.3
10/26/2015	NM	NM	NM
//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 - October2016 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 Maintenanc	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 mon	thly trips +	3 contingency	\$13,863.30				
Miscellaneous Materials	(PVC pi	ping, valv	/e repair,					
minor system componen	ts, etc.)			\$2,500.00				
				-				
Data Evaluation (Enginee	er)(5 hrs	per mon	th)					
Engineer	hr	60	\$109.67	\$6,580.20				
-								
Project Mgmt (4 hrs per m	onth)							
PM	hr	48	\$109.67	\$5,264.16				
Annual Report (PG/PE)	hr	24	\$109.67	\$2,632.08				
Pump Truck (remove sys	tem was	stewater/	gas mixture, re	develop				
SVE vents, dispose up to	1000 g	allons wa	astewater/gas i	nixture)				
	i l							
Minnesota Petro*	trip	1	\$4,000,00	\$4.000.00				
* Bids will be sought from a	ther cor	tractors						
			,					
Meridian - coordinate with	site bus	sinesses, t	raffic control, o	pen/close				
wells, surge wells prior to p	oumping	, 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 (c	ection/DNR							
			Total:	\$36,194.20				
]				+00)104.EU				

FIGURES





SVE System Schematic



Appendix A

Soil Vapor Extraction Vents Construction Forms

State of Wisconsin Department of Natural Resources <u>Route to:</u>	Watershed/Wastewater	Waste Management	MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 7-98
Facility/Project Name	[Local Grid Location of Well		Well Name $M-1$
Facility License, Permit or Monitoring No.	Local Grid Origin [] (estin	nated:) or Well Location	Wis. Unique Well No. DNR Well ID No.
Facility ID	St. Plane fL]	N,fı. E. S/C/N	Date Well Installed 6 / 11 / 2015
Type of Well Well Code/	Section Location of Waste/So		Well Installed By: Name (first, last) and Firm
Distance from Waste/ Enf. Stds. Sourceft. Apply	u Dupgradient s C d Downgradient n C	Sidegradient	PSI
A. Protective pipe, top elevation	fr. MSL	1. Cap and lock? 2. Protective cover p	ipe:
B. Well casing, top elevation C. Land surface elevation ($\mathcal{P}_{fl.MSL}$	a. Inside diameter: b. Length:	in. ft.
D. Surface seal, bottom ft. MSI	or ft.	c. Material:	Steel 27 04 Other D
12. USCS classification of soil near screen: GP GM GC GW SV SM SC ML MH CI Bedrock G	VEL SP C CH C	d. Additional prou If yes, describe:	Ection?
13. Sieve analysis performed?	s A No		Concrete 🖵 01 Other 🗆 🎆
14. Drilling method used: Rotan Hollow Stam Aug Oth	y □ 50 π 2 41 ar □	4. Material between v	vell casing and protective pipe: Bentonite 🖅 3 0 Other 🗆 🎆
15. Drilling fluid used: Water 0 2 A Drilling Mud 0 3 No	ir □ 01 nc Ø 99	5. Annular space seal bLbs/gal mu cLbs/gal mu	a. Granular/Chipped Bentonite 2273 3 d weight Bentonite-sand shurry 235 d weight Bentonite shurry 231
16. Drilling additives used?	: Z No	d % Bentonia e $F1^3$	e Bentonite-cement grout \Box 50 volume added for any of the above Tremie \Box 01
Describe	d):	6. Bentonite seal:	Tremie pumped [] 02 Gravity [2] 08 a. Bentunite granules [] 33
E. Bentonic scal, topft. MSL c	r_ <u>13_</u> ft.	b. □1/4 in. @3/i	$3 \text{ in.} \square 1/2 \text{ in.} Bentonfle chips \square 32$
F. Fine sand, topft. MSL of	r_13_ft.	7. Fine sand motorial:	Manufacturer, product name & mesh size
G. Filter pack, top ft. MSL o	- <u>13</u> ft.	b. Volume added8. Filter pack material:	fi ³
H. Screen joint, top ft. MSL of	ft	a b. Volumie added	
I. Well bottom ft. MSL or	ft	9. Well casing: F	lush threaded PVC schedule 40 🗹 23
J. Filter pack, bottom ft. MSL or	_30_ft	10. Screen material:	PUC Sch. 40
K. Borchole, bottom ft. MSL or	- <u></u> ft.	a. Screen type:	Factory cut 🔯 11 Continuous slot 🔲 01
L Borehole, diameter in.		b. Manufacturer	Other 🗆 🎊
M. O.D. well casing -4 in.	•	c. Slot size: d. Slotted length:	0. <u>1</u> _ in. <u>15_</u> ft.
N. I.D. well casing 4 2 in.		11. Backfill material (be)	ow filter pack): None 1 4 Other I
I hereby certify that the information on this form	is true and correct to the best Firm	t of my knowledge.	
NALY	Merid	ien Enc. CS/	1 LLC

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and buresu. 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

State of Wisconsin Department of Natural Resources

SOIL BORING LOG INFORMATION Form 4400-122

Rev. 7-98

	Route To: Watershed/Wastewater Was Remediation/Revelopment () (ste Managerne Dther 🔲 _	nt 🔲				
					Pag	e <u>l</u> of	1
Facility/Project Name	:/Flamilea Auto	License/Pe	mit/Monitori	ng Number	Boring Nurr	$^{\rm iber}\mathcal{M}-$	1
Boring Drilled By: N First Name: See	Name of crew chief (first, last) and Firm	Date Drillin	ng Started	Date Drilling	Completed	Drilling M	ethod
Firm: PSI					<u>y</u> <u>y</u> <u>y</u>	HS	A
WI Unique Well No.	DNK Well ID No. Well Name	Final Static	_Feet MSL	Surface Eleva	tion Feet MSL	Borenole D	nameter inches
Local Grid Origin 🗖 State Plane	(estimated: □) or Boring Location □ NE	Lai	0 ' "	Local Grid Lo	cation		ΠE
1/4 of1/4	4 of Section, T N, R	Long	O'''	Fe		Fee	±□ ₩
	Rusk .		Lad	-ysu. ty			
Sample					Soil Proper	ties	4
Number and Type Length Att. Recovered (Blow Count Depth in Fee	And Geologic Origin For Each Major Unit	USCS	Graphic Log Well Diagram	PID/FID Compressive Strength	Moisture Content Liquid Limit	Plasticity Index P 200	RQD/ Comments
	Earth Drill						
			PUL .				
01			THE I	241			
				5			
20	Strong gess	.her					
	oclor		12				
							•
			1				
30							
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	EOB = 30 H.						
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	•						
eby certify that the in	formation on this form is true and correct (to the best of		dge.			
alure Mat	Fir Fir	m		E	Csth	11	(
		men	.a.24	Cnu-		1	

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





runnet of Natural Resources Route to:	Watershed/Wastewate Remediation/Redevelo		Waste Mar	isgement.	MONITORING W Form 4400-113A	ELL CONSTR Rev. 7-98	UCUC
lity/Project Name	Local Grid Location	of Well			Well Name		
Doug's Tice-		r H	<u>.</u>		Fx-	4	
Hty License, Permit or Monitoring No.	Local Grid Origin	(estimate	xd: []) or	Well Location	Wis. Unique Well PT997	No. DNR Wall	ID No.
ity ID	St. Planc	fl.N,		fileS/C/N	Date Well Installed	102120	202
	Section Location of V	aste/Souro	•	/ П Е	Wall Installed Day	m d d y y	YY
Well Code <u>64</u> <u>1</u> <u>1</u> <u>64</u>	<u>SE</u> 1/4 of <u>SW</u> 1/4 Location of Well Rela	tive to Was	<u>4</u> .T. <u>39</u>	N. R. C	Jodd	Name (inst, last)	and Fir
nce from Waste/ Enf. Stas.	u 🛛 Upgradient d 🖾 Downgradient	s 🗆 S n 🗆 N	idegradient lot Known		Boart	Longyea	K
stective pipe, top elevation	ft_MSL	~		Cap and lock?		Yes [] No
i casing, top elevation	fr. MSL	-ta	2	Protective cover pi a. Inside dimineter.	£⊂:	_9	O:
al surface elevation	fLMSL			b. Longth:			OfL
			Sector Sector	c. Material:		Stoci 🖬	04
						Other C] 200
SCS dessification of soil near arean		[⊋] ध। ।।	And have a series of the serie	d. Additional prote	ction?	🛛 Yes 🖬	I No
			$\wedge \wedge$	If yes, describe:			
				Surface male		Bentonite []	1 30
and another part and a for the			1 \ "	/ / /	· •		01
				Asphalt		Other E	
The main wat Roun	y 🗆 50		4.	Marcial between w	ell casing and protect	zive pipe:	
Hollow Stan Aug						Bentonite E	30
Oth			-	· · · · · · · · · · · · · · · · · · ·			
			5. <i>1</i>	Amular space scal;	2. Gramber Chip	peri Bentonite 🖬	33
			ь.	Lbs/gai mud	weight Bononi	te-sand sharry	35
			С.	Lbs/gal mud	lweight Ba	tonie słuny 🛛	31
Time additives used?			đ.	% Bananje	Bounie		50
			c	<u>3,78</u> Ft ⁻ w	shume added for any	of the above	
cobc			f.	How inculled:	_	Tranie 🗆	01
ree of water (attach analysis, if require	£):		*~		Tre		02
					D (Gravity 🖪	80
			6. B				33
mite scal, upft MSL a	r4. Qtt.		ь. / с.	L1/4 m. B 3/8		utomie chips 🖩 Other 🛛	32
and, topft MSL o	-LL.0A		7.5	ine sand material	Manufacturer, produ	et name & mesh	size
pack, topfr. MSL or	-12.0tt		L b.	Volume added	,54 ft	3	
1 joint, 100 ft. MSL or	_14.0 m		8.FI	lice pack marriel	Manufacturer, produ	ra name & mesh	
	211		<u>ь</u>	Volume added	<u>[],4</u> fi	3	
ontonfr.MSL or	- 54.0A		9. W	dlastry: Fl	win threaded PVC s	incinic 40 📓	23
				Fb	ish threaded PVC a	iciale 80 🛛	24
here's boutannft MSL or	- DH QA		<u> </u>			Other 🛛	
	25.		`10. 5:	an marcrial:	PVC		
ic, bottomft MSL or	- 22 - 22 # ~ <		Ł	Saraa type:		Factory cut	11
10 1/4					Cont	internet store	01
le, diamater 10.17 in			_	~	. 1 4	00er 🗆	腦
			<u>ь</u>	Manifecture	etrick		۸.
well ensing _ 1.24 in.			\ <u>c</u>	Slot size	· .	0.010	<u>∠n</u>
- 390			\ d.	Stoma Kultu	_		<u>en</u>
			11. Re	chill meterial (hel	w filter pack):	None LE	14
ell casing _ 2.1 1 in.						Other 🗆	1

sompliese both Forms 4400-113A and 4400-113B and returns them to the appropriate DNR diffice and bureau. Completion of these reports is required by cits. 160, 281, 3,291,292,293,295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with cits. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file man 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 tion 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

and Wisconsin atomat of Natural Resources Route to:	Watershed/Wastewa		Waste Mar		MONITORING W Form 4400-113A	ELL CONSTR Rev. 7-98	UCTION
Lity/Project Name	Local Grid Locatio	a of Well			Well Name	······	
Doua's Tire		r H	N. S		Ex-	5	
Hty License, Permit or Monitoring No.	Local Grid Origin	u (csúmatu L	≃d:□) or mg	Well Location	Wis. Unique Well N	Io. DNR Weil	ID No.
lity ID	St. Pime	fL.N,		fl.E. S/C/N	Date Well Installed	<u> </u>	<u>203</u>
of Well	Section Location of	Waster Sourc	e ?d		Well Installed By:	n <u>d</u> d y y Name (first laat)	and Firm
Well Code _6 4 / 12	<u>SE 1/4 of SW</u>	1/4 of Scc	4_T. <u> 27</u>	N.R. <u>6</u>	Todd	(mod sald)	and L'IIII
nce from Waste/ Enf. Stds.	u DUpradient		Sideenadient	Gov. Lot Number			<u></u>
ceft_Apply	d 🛛 Downgradier	u n 🗆 l	lot Known		Bart.	-ongyea	r
Operive pipe, top elevation	fl MSL -		7 / 1	. Cop and lock?		Yes [] No
'ell essing, top elevation	fi. MSL		2	Protective cover pr	ípe:	01	
	6 M.CT			L Indeconnect.		<u> </u>	m
and surface devition				c Marriel			
rface seal, bottom ft. MSI	Lor ft.						1 04
ISCS classification of soil near success	1		See 25	d. Additional prote	ction?		No
	N 🗆 SP 🔳 🗋	<u> </u>	$\Lambda \setminus$	If yes, describe			110
MUSCOME MHO C						Berria [30
Bedrock [3.	Surface scale	· · .		01
ieve analysis performed?	≍ 🖬 No			Asphalt			
killing method used: Roun	y □ 50		4.	Material between w	cll caring and protect	ive pipes	
Hollow Stan Augo	r 🛛 <u>41</u>				•••	Bennite E	30
Oth	⊐ □ 🎆		_	· · ·			
			5.1	Amular space scal:	2. Grander Chip	ed Bentonite 🖬	33
			Ъ.	Lbs/gai mud	weight Bartonit	c-sand streny 🗌	35
			с	Lbs/gal muc	lweight Ben	omiesiany 🛛	31
tilling solditives used?			d		···· Bentonite		50
			c	<u>4,32</u> Ft m	olume added for any	of the above	
lescribe			f.	How installed:	-		01
ance of water (anoch analysis, if requires	d):		•	•	lici		02
			K R	manite seel.	· Berle		80 8
			د ۲				33
tunite scal, topft MSL or	r4.0ft		/ ~			Other 🛛	52 S
send, topft. MSL or	-12.0t		7.Fi	ine sand material:	Manufscurer, produc	rt name & mesh	nior Ersse
rpeck topfr MSL or	-13.0 ft		L b.	Volume added	0,54 ft	3	1442
			, 8.Fi	her pack mannial:	Manufacturer, produ	I nome & mesh	size
cajoint topft MSL or	-12.L#		/ _		· -		
	3500		<u>b.</u>	Volume added	<u>11.9</u> ft	3	
bottomft.MSL or			9. W	cllexing. Fi	ndi threaded PVC ed	cofule 40 📓	23
Treck bottomft MSL or	_350 ft.		<u> </u>	Fh	ush threaded PVC se	⊡ 03 sinus Duter □	24
	35~		10. So	reen material:	PVC		
bole, bottomft MSL or	<u>_</u>		1	Screen type	. E	fectory cut	11
10 1/4					Conti	D tola 2000	01
hole, diameter 10.4 in.						Other 🛛	酸素
450.			\. b.	Manufacturer	ie trick)in.
			<u>بر</u> \	Slotted length:		20 4	⊇ft.
well easing 344 in			11. Ba	chfill material (hol	The necks:	None E	14
						Other 🛛	
certify that the information on this form	is true and correct to	the best of a	ny knowled	85-			
	Firm			· · · · · · · · · · · · · · · · · · ·			
Cerniler Doncen	<u>- </u>	nund	er				

Hear Nets both Forms 4400-113A and 4400-113B and returns them to the appropriate DNR office and bareau. Completion of these reports is required by chs. 160, 251, 9.291, 292, 293, 295, and 299, Wis. Stats., and ch. NR 141, Wir. Adm. Code. In accordance with chs. 281, 289, 291, 292, 293, 295, and 299, Wis. Stats., failure to file man may result to a forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable tion 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

State of Wisconsin Department of Natural Resources <u>Route to:</u>	Watershed/Wastewater	Waste Management	MONITORING WF	LL CONSTRUC	CT
	Remediation/Redevelopmen	t Other			
Facility/Project Name Former	Local Grid Location of We	$\prod_{i=1}^{11} \sum_{j=1}^{N} \sum_{i=1}^{N} f_{i}$		1-01	
Pacility License, Permit or Monitoring No.	Local Grid Origin 📋 (es	innated:) or Well Locati	on Wis. Unique Well N	DNR Well ID) No
Facility ID	St. Plane f	ft.E.	S/C/N Date Well Installed	123,201	12
	Section Location of Waste/	Source			V 1
Well Code/	1/4 of1/4 of S	ec, TN, R		Black	na r
Distance from Waste/ Enf. Stds. Source ft Apply	u Downgradient s	Sidegradient	mber Mid	west	
A. Protective pipe, top elevation	Q	1. Cap and lo	çk?	🖄 Yes 🗆	N
	5 6 1/01	2. Protective	cover pipe:	-	
B. Well casing, top elevation	fl. MSL	A. Inside di	ameter:	8	i
		h Length:		7	f
C. Land surface clovation		Maranial Maranial		Steel 154	~ 0
D. Surface seal, bottom ft. MS	Lor ft.	C. Material		Other	38
12 HSCS classification of soil near screen		Addition	al protection?		20 N.
		Le Maando	anorihor		140
		If yes, a	escribe:	· _	-
Bedrook		3. Surface sea		Bentonite 🗆	3
Bedrock				Concrete	0
13. Sieve analysis performed?	s 🔊 No			Other 🛛	8
14. Drilling method used: Rots		4. Material be	tween well casing and protec	tive pipe:	
Hollow Stem Aug			.	Bentonite 🕅	٦
Oth					
				Other 🗆	<u>.</u>
		5. Annular spi	ice seal: a. Oranular/Chip	ped Bentonite 🔼	3
15. Drilling fluid used: Water U 0 2 4		bLbs	/gal mud weight Bentoni	te-sand slu⊓y□	3.
	$\operatorname{ne} \mathcal{K}$ 99	Lbs	gal mud weight Ben	tonite slurry	3
		d %B	entonite Bentonite-	cement grout	5
16. Drilling additives used?	s 🗆 No 🛛 🕅		Ft ³ volume a ded for any	of the above	ŗ
		E			0
Describe					0
17. Source of water (attach analysis, if require	zd):		118		0.
				Gravity 2	0
		6. Bentonite se	a. Beniur	nite granules 🔲	33
· · · · · · · · · · · · · · · · · · ·		ы. □1/4 іл	$\Box 3/8$ in. $\Box 1/2$ in. Be	ntonite chips 🙇	32
E. Bentonite seal, topft. MSL	orft.	c		Other 🗌	<u>.</u>
F. Fine sand, top ft. MSL a	<u>الح_ft \</u>	7. Fine sand m	sterial: Manufacturer, produ	ict name & mesh s	size
					<u>.</u>
Filter nack ton ft. MSL.		h Volume	didad fi	3	101.77
				at see a fe mach	
I Come a later to a ft MEL o	- 18 - 18	6. Piller pack in	laterial: Manufacturer, produ		SLD
1. Screen joint, top $$ it Malt	· _ J II.			^{\$}	<u></u>
	79	b. Volume a	idded ft	, ວ	
. Well bottom ft. MSL o	r_ <u>60_ft</u>	9. Well casing:	Flush threaded PVC sc	:hedule 40 🙇 💈	23
			Flush threaded PVC sc	hedule 80 🗆 🗘	24
Filter pack, bottom ft MSL o	rft			Other 🛛	<u>8</u> 2
· · · · · · · · · · · · · · · · · · ·		10 Screen mater	rial PVC		
Borehole bottom ft MCI n	, 29 ft.	To. Sciech Match	·····	Bactory and M	2026 ۱۱
		E Screenty	рс. С		· ·
			Conti		01
Borehole, diameter -1		\	· · · · ·	Other 🗆 🛔	
		b. Manufactu	ITCT	,	
[, O.D. well casing in.	•	c. Slot size:		0	in.
		d. Slotted ler	ngth:	:	fi.
ID well assing]] Rackfill mate	rial (below filter pack)	None 🗖 1	14
went casing m.		III DECKLUI Mail	the bolon that pack.		
					<u></u>

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, 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.

State of Wisconsin Department of Natural Resources

SOIL BORING LOG INFORMATION Form 4400-122

Rev. 7-98



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.

State of Wisconsin Department of Natural Resources Route to:	Watershed/Wastewater	Waste Management	MONITORING WELL CONSTRUCTION
- <u></u> ,	Remediation/Redevelopment	Other	Form 4400-113A Rev. 7-98
Auto Stop 1 Laure	Local Grid Location of Well		Well Name RW-Z
Facility License, Permit or Monitoring No.	Local Grid Origin [] (estin	nated:) or Well Location	Wis. Unique Well No. DNR Well ID No.
Facility ID			Date Well Installed 77 7012
	St. Flanc IL		
Type of Well	1/4 of 1/4 of Sec	⊔E 2,T N. R □ W	Well Installed By: Name (first, last) and Firm
	Location of Well Relative to	Waste/Source Gov. Lot Number	Jee Black
Sourceft. Apply	u 🗆 Upgredient s [d 🗆 Downgradient n [Sidegradient Not Known	Mid west
A. Protective pipe, top elevation	ft_MSL	l. Cap and lock?	Yes 🗆 No
B. Well casing, top elevation	ft. MSL	2. Protective cover p	sipe:
	fr) (CI	b. Length:	- <u>-</u>
C. Land surface clevation	IL MISL	c. Material:	Steel 74 04
D. Surface seal, bottom ft_MSI	or ft.	X	
12 IISCS classification of soil near screen		A dditional prol	
		IE Auditional prof	
		IT yes, describe	
Bedrock		3. Surface scal:	Bentonite 🔲 30
13 Sieve analysis performed?			Concrete Z 01
			Other 🗆 🎆
14. Drilling method used: Rotar	y 🗆 50	4. Material between 1	well casing and protective pipe:
Hollow Stem Aug	T [A 4 1]		Bentonite 🖉 30
Othe	я 🗆 🎆 📔 📓	×	Other 🗆 🎆
		5. Amular space Seal	: L Granular/Chipped Bentonite 🖉 3 3
15. Drilling fiuid used: Water 0 2 A	ir □ ′01	bLbs/gal m	ad weight Bentonite-sand slurry 🗆 35
Drilling Mud 🗆 0 3 Nor	ne 🖉 99	ka c Lbs/gal m	id weight Benionite shurry [] 31
		d % Bentonit	e Bentonite-cement grout 50
16. Drilling additives used?		FI ³	volume added for any of the above
· · · ·		E. How installed:	Tremie 🗖 🔒
Describe	🔣	I. How instance.	
17. Source of water (attach malysis, if require	d):		
		6 Bentonite seal	a Benimite granules [] 33
		\sim	R in $\Box 1/2$ in Bentonity shins $\Box 2.2$
E Bentonite and man fr MSL o			
	·		
F. Fine sand, top ft. MSL o	rfft.\險		Manufacturer, product name & mesh size
		a	
G. Filter pack, top fL MSL on		b. Volume added	£13
		8. Filter pack material	Manufacturer, product name & mesh size
H. Screen joint, top ft. MSL or	_18f		
		b Volume added	fi 3
L Well horror fL MSL or	Z8 ft 12	9 Well casing: F	Jush threaded PVC schedule 40 🐼 21
		F	Push threaded PVC schedule $80 \square 24$
I Filterpack bettern ft MSI or			
J. Finel pack, boltom is the bit			
V Deschele Live ' a ft MSI on	Z8 n.	IU. Screen material:	
K. Borenole, bottom IL MSL of	*	■ Screen type:	Factory cut A
		a	
L Borehole, diameter in.			Other 🗆 🌉
· · ·		b. Manufacturer	
M. O.D. well casing $-\underline{7}$ in.		c. Slot size:	0 in.
		\ d. Slotted length:	ft.
N. LD. well casing in.		11. Backfill material (be)	low filter pack): None ZI 14
			Other 🛛 🎆
I hereby certify that the information on this form	is true and correct to the bes	t of my knowledge.	
Signature 71	Firm	1 -	10 1 11
· OFF	Mer.	dien Environ	menter Consulting

P ease 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, 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.

State of Wisconsin Department of Natural Resources

SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

LLC

Watershed/Wastewater 🔲 Waste Management 🗌 Route To: Remediation/Revelopment Other Page Facility/Project Name License/Pennit/Monitoring Number Boring Numb tomer Clark tes top 1110 Boring Drilled By: Name of crew chief (first, last) and Firm Date Drilling Started Date Drilling C mpleted Drilling Method First Name: Last Name: Black Joe 8,23,2012 8,23,2012 HSA Midwest Fingineering '<u>a</u> <u>a</u> '<u>y</u> <u>y</u> <u>y</u> <u>y</u> mm'dd'yyyy mm Borehole Diameter Well Name Surface Elevation WI Unique Well No. DNR Well ID No. Final Static Water Level 10 Feet MSL Feet MSL inches Local Grid Origin (estimated:) or Boring Location Local Grid Location ٥ ī Lai State Plane N E $\square N$ ΠE 11 ο 1 Long Feet D S Feet□ W 1/4 of 1/4 of Section N, R Civil Town/City/ or Village Ladysmith Facility ID County Code County usk Soil Properties Sample Length Att. & Recovered (in) Depth in Feet (Below ground surfa Soil/Rock Description Blow Counts And Geologic Origin For RQD/ Comments Number and Type Compressi Strength uscs PID/FID Plasticity Index Moisture Content Log Well Diagram Graphic Each Major Unit Liquid Limit P 200 NA. Earth Fire sand 10 5 2 7 Zo Seils 30 EOB=28 P I hereby certify that the information on this form is true and correct to the best of my knowledge. Environ mente Consulters, Signature Firm Maridian

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.

State of Wisconsin		···)/	MONITORING WELL CONSTRUCTION
Department of Natural Resources <u>Koute to:</u>	Watershed/Wastewater	Waste Management	Form 4400-113A Rev. 7-98
Facility/Project Name	I ocal Grid Location of Well		Well Name
Auto Stool Clauk	ft. F		Rw-3
Facility License, Permit or Monitoring No.	Local Grid Origin [] (estim	ated:) or Well Location	Wis. Unique Well No. DNR Well ID No.
	Tat • • •	long	u or
Facility ID			Date Well Installed
	St. Planc fL N	,n.e. s/c	$\frac{-6}{29}/\frac{29}{29}/\frac{2}{29}$
Type of Well	Section Location of Waste/Sou	urce 🗌	E Well Installed By: Name (first last) and Firm
Well Code /	1/4 of 1/4 of Sec.	,TN. R□	W Tee Black
Digtore from Wagte/ Enf Stdg	Location of Well Relative to W	aste/Source Gov. Lot Number	
Source a Apply 5	u [] Upgradient s []	Sidegradieni	Midwest
	<u>d</u> Downgradient n	NOI Known	
A. Protective pipe, top elevation $$		1. Cap and lock?	
B. Well casing, top elevation	fl. MSL	- Inside diama	star: 8
		A. Inside diama	
C. Land surface elevation	II. MSL	D. Lengin.	
D. Surface seal, bottom ft MS	Lor fi	C. Matchall	
12 USCS place finition of soil part areas		(子)教授部 d Additional	
Bedrock		3. Surface scal:	
13. Sieve analysis performed?			
14. Drining method used: Kota			Bostonito 7 30
Hollow Sigm Aug			
			Other L :
15. Drilling finid used: Water [] 0.2	jr 🗆 (0 1	5. Annular space	
Drilling Mud 0 3 No	ne 🗖 99	bLos/gal	
		CLOS/gal	
16. Drilling additives used?	s □ No 😸		³ volume added for any of the above
		e	
Describe	B	f. How installe	
17. Source of water (attach analysis, if require	d):		
		6. Bentonite seal:	a. Benionite granules [] 33
		ъ □1/4 іл. □	$13/8$ in. $\Box 1/2$ in. Bentonite chins $A = 32$
E. Bentonite scal, topft. MSL of	<u>/</u> ft. Ø	× / c	
•			
F. Fine sand, top ft. MSL o	r_12ft、 \ 🗑	7. Fine sand materi	al: Manufacturer, product name & mesh size
		a	
G. Filter pack, top ft. MSL o	r_! \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	b. Volume adde	dfi ³
		8. Filter pack mater	rial: Manufacturer, product name & mesh size
H. Screen joint, top ft. MSL o		2	
	- x 1/2 1	b. Volume adde	dft ³
I. Well bottom		9. Well casing:	Flush threaded PVC schedule 40 📈 23
		×.	Flush threaded PVC schedule 80 2 4
J. Filterpack, bottom ft. MSL or	ft		Other 🗆 💥
	28 12	10. Screen material:	
K. Borchole, bottom It. MSL or	^{II}	B. Screen type:	Factory cut A 1 1
10		<u>.</u>	Continuous slot 01
L Borehole, diameter $-t_{}$ in.			Other 🛛 💥
4 *		b. Manufacturer	o [:_
M. O.D. well casing $-1 - m$.		c. Stot size:	
			$L_{I} = L_{I}$
N. I.D. well casing m.		11, Backnil matchal	(DERWY THEOR PACK): None 🕰 14
T	is take and any - the she have	of my knowledge	
1 hereby certify that the information on this form		JE HIJY KHUWIEUBE.	·
Signature	rum AA a	In Fulls	onmentel Camulter
- up a	Ivier.2	niner priver	

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.

State of Wisconsin Department of Natural Resources

SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

acility/Project Name) for	Remediation Reve	lopment 🗌 C	Other	e Perm	t/Monitor	ing Nu	inber	Borin	Pag 19 Nun	e nber	<u>of_</u> Ru	<u>ן</u> ט-3	-
First Name: Joe First Name: Joe Firm: Mill	LastNa	v chief (first, last) a me: Black Rengine	nd Firm	Date D $\frac{5}{m m}$	rilling S Z 4 /.	tarted ZO 12 y y y y			g Com	pleted L y y	Drilli	ng Me HS	zhod A	_
/I Unique Well No.	(estimated: [/ell ID No. Well □) or Boring Lo	cation 🗆	Final S	tatic W: Fo	et MSL	Surfa Local	ICE Elev	vation _Feet .ocatio	MSL n			inches	-
ate Plane 1/4 of1/4 acility ID	of Section	N, TN,	E 	La Lon County Co	1 3 de [C	ivil Town	/City/ c	F		N S _	<u></u>	_ Fee		-
Sample	(j)	KUSK		<u> </u>	<u> </u>		<u>La</u>	dys L	Soil	ہد Prope	rties	1	1	-
and Type Length Att. & Recovered (in Blow Counts Depth in Feet	(Below ground sur	Soil/Rock Desc And Geologic O Each Major	ription rigin For Unit		USCS Granhin	Log Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments	
10. Zo 30_	R	dense soil	Sand dr:the S E FL	*									strav petri ods	rg aleu r
by certify that the i	nformation	n on this form is tr	ue and correct	to the b	est of 1	ny knowl	ledge.	~					10 0	ousu.

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.

State of Wisconsin Department of Natural Resources <u>Route to:</u>	Watershed/Wastewater		MONITORING WELL CONSTRUCTION Form 4400-113A Rev. 7-98
Facility/Project Name	Remediation/Redevelopment		Wall Name
Autostal Frances	Local One Location of Well	N. <u>PE.</u>	Well Marne RID-L(
Regility Ligance Parmit or Maniforing No.			Win Unique Well No. IDNR HU-HTD M
reality Leense, realit or Montoring No.		Long or well Location	
Façility ID	St. Plane fL N	ft. E. S/C/N	Date Well Installed $6/\frac{12}{m}$, $\frac{12}{d}/\frac{2015}{v}$
Type of Well	Section Ecosition of white 300		Well Installed By: Name (first, last) and Firm
Well Code /	1/4 of 1/4 of Sec	,TN, R U W	Joe Black
Distance from Waste/ Enf. Stds	Location of Well Relative to W	aste/Source Gov. Lot Number	
Sourceft Apply	$d \square Downgradient n \square$	Not Known	
A. Protective pipe, top elevation $ \mathcal{O}$	fLMSL	1. Cap and lock?	Pres 📮 No
B. Well casing, top elevation	2ft. MSL	a. Inside diameter:	ipe: 12 in.
C. Land surface elevation	2 fr MSL	b. Length:	_ (_ ft.
		c. Material:	Steel FO4
D. Surface seal, bottom fL MS	_ or ft.	1 State	Other 🗋 🞆
12. USCS classification of soil near screen:	Ser. Salar	d Additional prote	ection?
		If yes describe	
		men \ II yes, ocseribe.	
Bedrock 🗆		3. Surface scal:	
13. Sieve analysis performed?	S KO NO		
14. Drilling method used: Rotan		20 4. Material between v	vell casing and projective pipe:
Hollow Stem Aug		×	Bentonite 30
		×	Other 🗆 🗱
15 Drilling finid mod. Water CO.		5. Annular space seal:	a. Granular/Chipped Bentonite 🛛 3 3
		bLbs/gal mu	d weight Bentonite-sand shurry 35
		cLbs/gal mu	d weight Bentonite slurry D 31
16 Drilling additions wood?		d % Bentonite	Bentonite-cement grout 🛛 50
		δFι ³ ν	volume added for any of the above
		f How installed:	Tremie 🔲 0)
Describe	(201)		
17. Source of water (attach analysis, if require		A second se	Gravity P 0.9
		6. Bentonite seal:	a. Benlonile granules \square 33
		б Ъ □1/4 in. Ш3/8	in $\Box 1/2$ in Bentonite chine $\Box -3.2$
E. Bentonic seal, topft. MSL of	r <u>13</u> ft.		Other
F. Fine sand, top fr. MSL or	- <u>1</u> 3f	7. Fine sand material:	Manufacturer, product name & mesh size
		a	W
G. Filter pack, top fl. MSL or		b. Volume added	ft ³
		8. Filter pack material:	Manufacturer, product name & mesh size
H. Screen joint, top ft. MSL or	n.	a	
		b. Volume added	fi ³
I. Well bottomfL MSL or		9. Well casing: Fi	ush threaded PVC schedule 40 🗹 2.3
:		· Fi	ush threaded PVC schedule 80 🔲 24
J. Filter pack, bottom ft. MSL or	£ K		Other 🗖 🎆
	-	10. Screen material:	PUC Sel. 40
K. Borehole, bottom ft MSL or	fl.	a Screep type:	Pactory City 5
I Borehole diameter 12 in			
		h Manufacture	
MOD well casing 4 :-		D. IVIANUI ACUITCT	
$J_{\mathbf{n}}$, O, D , well easing $-\frac{1}{2} - 1\mathbf{n}$.		d Slotted length	
N. I.D. well casing $7 - m$.		11. Backfill matchal (be)	w filter pack): None 14
T 1	· · · · · · · · · · · · · · · · · · ·		Other 🗆 🎬
1 nereby certify that the information on this form	is true and correct to the best of	my knowledge.	·
Signature	Fum	F A-li	
MAY!	Meridia	en 12 nu. LS 14	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.

State of Wisconsin Department of Natural Resources

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SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

]	Route To: Watershed/Wastewater W	este Man	agemer	nt 🗌							
			- Other 1					Page		of	1	
	Facility/Project Name	(former)	Lice	nse/Pc	rmit/Monitor	ing Number	Bori	ng Nurn	^{ber}R	w	-4	
	Boring Drilled By: Na	ame of crew chief (first, last) and Firm	Date	Drillin	g Started	Date Drill	ing Com	pleted	Drillin	g Mo	sthod	
	Firm: PSC WI Unique Well No. DNR Well ID No. Well Name			$\frac{6}{m m} \frac{7}{d} \frac{20}{y} \frac{15}{y} \frac{15}{y}$ Final Static Water Level S Feet MSL			$\frac{1}{m} \frac{1}{m} \frac{1}{d} \frac{1}{d} \frac{1}{\sqrt{y}} \frac{1}{\sqrt{y}} \frac{1}{\sqrt{y}} \frac{1}{\sqrt{y}}$ Surface Elevation Feet MSL			HSA		
										ole D	iameter	
	Local Grid Origin D ((estimated:) or Boring Location					Locatio	<u>m</u>		·		-
	1/4 of1/4	of Section, TN, R	Long 0 ' "			·				□ E Fœt□ W		
	Facility ID	County Rresk				City/ or Village				·····		
	Sample					Soil Properties					1	_
	Number and Type Length Att. & Recovered (in) Blow Counts Depth in Fect (Palow eround work	Soil/Rock Description And Geologic Origin For Each Major Unit		USCS	Jraphic .og Well Diagram	PID/FID Compressive Strength	Moisture	Liquid Livult	Plasticity Index	P 200	RQD/ Comments	
Ihe	IO ZO Jo Jo Teby certify that the info	Easte Drill	to the be	est of r		lgc.						
Sign	ature ATA	Fin		ent	line	FAU.	CI	14	L	C (-	
		-	1010	-11	ny					- 9	~	

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.

MONITORING WELL INSTALLATION



PSI

State of Wisconsin Department of Natural Resources <u>Route to:</u> V	Vatershed/Wastewater	Waste Management	MONITORING WELL CONSTRUCTIO
R	emediation/Redevelopment	Other	
Facility/Project Name	Local Grid Location of Well ft		Well Name RW-S
Pacility License, Permit or Monitoring No.	Local Grid Origin 🛛 (esti	mated: () or Well Location ()	Wis. Unique Well No. DNR Well ID No.
Facility ID	-ut	Long or	Date Well Installed
	St. Planeft.	N, h. E. S/C/N	$\frac{\mathbf{b}}{\mathbf{m}} \frac{\mathbf{d}}{\mathbf{d}} \frac{\mathbf{c}}{\mathbf{y}} \frac{\mathbf{c}}{\mathbf{z}} $
Type of Well			Well Installed By: Name (first, last) and Firm
Well Code /	1/4 of 1/4 of Sec	N.KW	Joe Black
Distance from Waste/ Enf Stds	ocation of Well Kelative to	Waste/Source Gov. Lot Number	265
Sourceft. Apply	$d \square Downgradient n [$	Not Known	<u> </u>
A. Protective pipe, top elevation D	fLMSL	1. Cap and lock?	PYes D No
B. Well casing, top elevation $ O$	fL MSL	a. Inside diameter	12 in.
C. Land surface elevation	fr MSL	b. Length:	f.
		c. Material:	Steel 🕑 04
D. Surface seal, bottom fr. MSL	or II.		Other 🗅 🌉
12. USCS classification of soil near screen:	a to the state of	d. Additional prot	ection?
GP GM GC GW SW		If yes, describe	
		3 Surface scale	Bentonite 🗆 30
		S. Burrace source	Concrete 🕒 01
13. Sieve analysis performed? Yes	KQ No	· 🛃 🔨	Other 🗆 🎆
14. Drilling method used: Rotary		4. Material between a	vell casing and protective pipe:
Hollow Stem Auger			Bentonite 2 30
Other		×	Other 🗆 🎆
IS D W. States J Water D 0.0		5. Annular space seal	e. Granular/Chipped Bentonite 2 3 3
Drilling fluid Used: Walcr L U Z An		bLbs/gal mi	id weight Bentonite-sand sharry 🗆 35
		cLbs/gal mu	d weight Benionite slurry D 31
16 Drilling additives used?		d % Bentonit	e Bentonite-cement grout 🛛 50
		FI	volume added for any of the above
Describe		f. How installed:	Iremie [] 0]
17 Source of water (attach analysis if manined			Tremie pumped 🗆 02
			Gravity 208
	巖	6. Bentonite seal:	a. Beniumite granules [] 33
		$b. \Box 1/4 \text{ in. } \Box 3/8$	$\sin \Box 1/2$ in. Bentonite chips $\Box 32$
E. Bentonic seal, topILMSL or		C	Other D
F. Fine send, top fr. MSL or	_ <u>1</u> 3ft	7. Fine sand material:	Manufacturer, product name & mesh size
G Filter pack top fr MSI or	13 +	a	
		8 Filter pack material	Manufacturer, product name & mesh size
H. Screen joint, topft. MSL or	15ft	8	
	7~	b. Volume added	fi ³
I. Well bottom ft_ MSL or _		9. Well casing: F	lush threaded PVC schedule 40 🗹 23
	70	FI	ush threaded PVC schedule 80 [] 24
J. Filterpack, bottomfLMSL or _	50 ft		Other D
V Develop Letters fr MSL or	30 ft	10. Screen material:	<u></u>
A Dorenoic, bottom		A. Screentype:	
1 Borchole diameter 12-		3	
		h Manufacturer	
MOD well carries 4	•	c. Slot size:	0. (in
-1 -1 -1 -1 -1 -1 -1 -1		d. Slotted length:	15_ ħ.
NID well casing 4 10 -		1). Backfill material (he)	w filter nack): None H 14
ive in the second secon		TI, DENCRIT, MALORAT (DEN	
Thereby certify that the information on this form is	true and correct to the best	of my knowledge.	
Signature	Firm		
NA VY	Merid	ien knu. CS 14	LLC

Please complete both Forms 4400-113A and 4400-113B and return them to the appropriate DNR office and buresu. 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.

State of Wisconsin Department of Natural Resources

SOIL BORING LOG INFORMATION Form 4400-122 Rev. 7-98

<u>Route To:</u> Watershed/Wastewater Remediation/Revelopment	W∎ste □ Oth	Мападетл	ent					
					Pag	e	of	
Facility/Project Name (For mor)		License/P	ermit/Monitor	ing Number	Boring Nur	^{nber} RU	2-5	
Boring Drilled By: Name of crew chief (first, last) and Firm	ĺ	Date Drill	ing Started	Date Drillin	ng Completed	Drilling	Method	
Firm: PSC		$\frac{6}{m m} \frac{1}{d}$		$\frac{6}{m m' d'}$	/ <u>28 (S</u>	HS	A	
WI Unique Well No. DNR Well ID No. Well Name	·	Final Stati	e Water Level Feet MSL	Surface Ele	Vation Feet MSL	Borchole	Diameter inches	
Local Grid Origin [] (estimated: []) or Boring Location [] State Plane N E		Lat	D 1. 1	Local Grid	Location			
1/4 of1/4 of Section, TN, R		Long	D 1 F	[]I		F	cct⊡ ₩	
Facility ID County Rus K	Cou	nty Code	CivilTown	City/or Villa	ис 4			
Sample g	ľ			 ∛ 	Soil Prope	rties	4	
Soil/Rock Description Soil/Rock Description And Geologic Origin For And Geologic Origin For Each Major Unit N N H un And Barl H and And Geologic Origin For Each Major Unit		USCS	Graphic Log Well Diagram	PID/FID Compressive Strength	Moisture Content Liquid Limit	Plasticity Index P 200	RQD/ Comments	
I hereby certify that the information on this form is true and corr	rect to fi	he best of	- rd ,, h - (11 - 1 (((((1 - 1 - 1)))))) my browled	dge.				
Signature Art 1	Firm			£	Pelli	11	<u> </u>	-
- IFIA/		ner	diag	ENU-	217		5	_

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.

MONITORING WELL INSTALLATION



PSI

Appendix B

SVE System Information




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	AVANA USES CHORE (*) USES CH
DRAWING STATUS DATE BY SEE BOM Cotable Consultion Corport . . . PRELIMINARY	T/31/08 SCALE: NTS DRAWN BY: DDH PROJECT/PRODUCT CATALYTIC COMBUSTION CORP. CCC RENTAL CCC RENTAL DCCC RENTAL LEGEND DCAWN BY: LEGEND DCAWN BY: DCAWN B

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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

Br. C. Hurp

Authorized for release by: 11/13/2015 3:09:25 PM

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

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

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 (HCIO4) 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 HCIO4 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.

Br C. Ant

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

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.

TestAmerica Job ID: 310-67994-1

Sample Summary

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	3
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	

Client Sample Results

Client Sample ID: Off-Gas, Date Collected: 10/26/15 18:00 Date Received: 11/02/15 08:00	10/26/15				L	ab Sample	e ID: 310-67994 Matrix: A
Sample Air Volume: 1 L			Sample (Container	: IH - Coco	nut Shell Cha	arcoal Tube, 150 n
Method: 1501 Sum - NIOSH Me	thod 1501 (Modi	ified)					
	Result	Result	Result		RL		
Analyte	ug/Sample	mg/m3	ppm	Qualifier	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) Result	Result	Result		RL		
Analyte	ug/Sample	mg/m3		Qualifier	ug/Sample	Analyzed	Dil Fac Analyst
Gasoline	43000	43000		S7	1500	11/13/15 14:38	1 JCM
Client Sample ID: Off-Gas, Date Collected: 10/27/15 16:20 Date Received: 11/02/15 08:00 Sample Air Volume: 2 L	10/27/15		Sample (Container	L : IH - Coco	.ab Sample nut Shell Cha	e ID: 310-67994 Matrix: A arcoal Tube, 150 n
Method: 1501 Sum - NIOSH Me	thod 1501 (Modi	ified)					
	Result	Result	Result		RL		
Analyte	ug/Sample	mg/m3	ppm	Qualifier	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) Result	Result	Result		RL		
Analyte	ug/Sample	mg/m3		Qualifier	ug/Sample	Analyzed	Dil Fac Analyst
Gasoline	69000	34000		S7	1500	11/13/15 14:38	1 JCM
Client Sample ID: Off-Gas, Date Collected: 10/28/15 12:00 Date Received: 11/02/15 08:00 Sample Air Volume: 2 L	10/28/15		Sample (Container	L : IH - Coco	.ab Sample nut Shell Cha	e ID: 310-67994 Matrix: A arcoal Tube, 150 m
Method: 1501 Sum - NIOSH Me	thod 1501 (Modi	ified)	Popult		Ы		
Analyte	nesuit ua/Sample	Result	nnm	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) Result	Result	Result		RL		
Analyte	ug/Sample	mg/m3		Qualifier	ug/Sample	Analyzed	Dil Fac Analyst
Gasoline	59000	29000		S7	1500	11/13/15 14:38	1 JCM

5

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
lowa	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.
¤	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

6

Method	Method Description	Protoc	ol 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

310-67994 Chain of Custory Cedar Halls, IA Lawrence, 704 Enterprise Drive Cedar Falls, IA 50613 Ph: 1-800-750-2401 or (319) 277-2401 Fax: (319) 277-2425 www.testamericainc.com Page:of Sampler: DL Project Name:	Send Report To: Da Send Invoice To: Da Company: REI E Address: 4080 N City,State, Zip: Wau Phone: 715-675 Meridiam	Laboratory Ch vid Larsen ingineering, Inc. 20th Avenue Isau, WI 54401 -9784 _{Fax:} E Project No.:	main of Cust	en@reiengineering P.O. #:).com
Lab Date Sample Number Sampled Identification (Internal use Only)	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes (s)	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
10116/15 (0:00 pm Off- 9AS		Eilo/Benzero		1L	
10/17/15		4		21	
10/29/15				71	
12:00	an a	Million and relation and see		66	
				an a	
Sample Receipt	Reporti	ng/Deliverables	Turn Arour	id Time Reques	ted
TemperaturerC	Hardcopy Results:	YesNo	Next Day by 6pm	2 Busine	ess Days
Sample Seals: YesNo	E-Mail Results: Ye	sNo	3 Business Days	4 Busin	ess Days
Sample Seals Intact: YesNo	EDD: YesN	oType	Standard 5 Busin	ess Days d Yes	No
lotal # of Samples:	Level III:	Level IV:S	ubject to scheduling and	availability (RUSH su	rcharges apply)
Instructions / Special Requirements:					
Date Time 2:30 pm	Sample Wall Ver	s Relinguished By	T.Deh	Received By	05-



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



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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

Br C. Hurp

Authorized for release by: 11/19/2015 10:54:50 AM

Brian Graettinger, Manager of Project Management (319)277-2401 brian.graettinger@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 (HCIO4) 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 HCIO4 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.

Bu C. Innop

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

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.

TestAmerica Job ID: 310-69107-1



Sample Summary

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

					3
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

Gasoline

1 JCM

1500 11/19/15 09:25

4

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) Result Result Result RL Analyte ug/Sample mg/m3 ppm Qualifier ug/Sample Analyzed Dil Fac Analyst 1 JCM 1100 360 110 S7 11 11/18/15 12:18 Benzene Method: 1550 - NIOSH Method 1550 (Modified) Result RL Result Result Analyte ug/Sample mg/m3 Qualifier ug/Sample Analyzed Dil Fac Analyst

S7

21000

5

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 Sem	i 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.
¤	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

6

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	\$

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

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

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

Page: ______ of _____ Sampler:___DL

1

104 Enterprise Drive Cedar Falls, IA 50613

Fax: (319) 277-2425

www.testamericainc.com

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

Lab Number (Internal use Oniv)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(Passive s) Monito Time (Minute)	Air Volume (Liters)	Pump ID
	11/6/15 11:20	off-6AS		GRO/Bennene		36	
						8	
	Sample	Receipt	Report	ng/Deliverables	Turn Ar	ound Time Reque	sted
Temperature		C .	F Mail Decultor Vo	resNo	Next Day by	6pm 2 Busin	ess Days
Sample Seals	Intact: Yes	No	EDD: YesN	o Type	Standard 5 E	Business Days	ess Days
Total# of San	nples:		Data Package: Stan Level III:	idant Level II	RUSH Charges Auth Subject to scheduling	orized Yes	No ucharges apply)
Instructions	/ Special Re	quirements:					
Date [// ////	11:30	Time	Sample ilter Con	s Relinquished By	Tack.	Received By	



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: mar dan

City: Lawren, WE

Date: 11/619 Receiver's Initials: 15 Time (Delivered): 3-50

COC completed correctly? Yes INO (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:	

USPS Spee-Dee

TA Courier

Client

Other:

Couriers

FedEx

FedEx Ground

The samples, as received, are acceptable for analysis

Reviewed by: Sel Date: 1116 15

Samples not received in a cooler
Temperature not taken

Comments 4

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



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

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

Attn: Mr. Dave Larsen

Br C. Hurp

Authorized for release by: 12/2/2015 2:44:55 PM

..... LINKS

Review your project results through

TotalAccess

Have a Question?

Ask-

The

www.testamericainc.com

Visit us at:

Expert

Brian Graettinger, Manager of Project Management (319)277-2401 brian.graettinger@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 (HCIO4) 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 HCIO4 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.

Bu C. Ant

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

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

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

4

Client Sample ID: Off-Gas	s, 3:20				Ĺ	_ab Sample	e ID: 31	10-69623-1
Date Collected: 11/16/15 15:20								watrix: Air
Date Received: 11/23/15 09:00			Samula (ontoinor		nut Shall Cha		uba 150 ma
			Sample C	ontainer:	IH - COCO	nut Snell Cha	ircoar i	ube, 150 mg
Method: 1501 Sum - NIOSH M	lethod 1501 (Mo	dified)						
	Result	Result	Result		RL			
Analyte	ug/Sample	mg/m3	ppm	Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	290	290	89		11	12/02/15 12:02	1	JCM
Method: 1550 - NIOSH Method	d 1550 (Modified	(b						
	Result	Result	Result		RL			
Analyte	ug/Sample	mg/m3		Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	20000	20000		•	590	12/02/15 10:52	1	JCM
Client Sample ID: Off-Gas	, 11:00				L	.ab Sample	e ID: 31	0-69623-2
Client Sample ID: Off-Gas Date Collected: 11/18/15 11:00	, 11:00				L	ab Sample	e ID: 31	10-69623-2 Matrix: Air
Client Sample ID: Off-Gas Date Collected: 11/18/15 11:00 Date Received: 11/23/15 09:00	s, 11:00				L	.ab Sample	e ID: 31	10-69623-2 Matrix: Air
Client Sample ID: Off-Gas Date Collected: 11/18/15 11:00 Date Received: 11/23/15 09:00 Sample Air Volume: 1 L	ə, 11:00		Sample (container:	L IH - Coco	.ab Sample nut Shell Cha	e ID: 31 arcoal T	10-69623-2 Matrix: Air ube, 150 mg
Client Sample ID: Off-Gas Date Collected: 11/18/15 11:00 Date Received: 11/23/15 09:00 Sample Air Volume: 1 L Method: 1501 Sum - NIOSH M	, 11:00 ethod 1501 (Mo	dified)	Sample C	container:	L IH - Coco	₋ab Sample nut Shell Cha	e ID: 31 arcoal T	10-69623-2 Matrix: Air ube, 150 mg
Client Sample ID: Off-Gas Date Collected: 11/18/15 11:00 Date Received: 11/23/15 09:00 Sample Air Volume: 1 L Method: 1501 Sum - NIOSH M	e, 11:00 ethod 1501 (Mo Result	dified) Result	Sample C Result	container:	L IH - Coco RL	.ab Sample nut Shell Cha	e ID: 31 arcoal T	10-69623-2 Matrix: Air ube, 150 mg
Client Sample ID: Off-Gas Date Collected: 11/18/15 11:00 Date Received: 11/23/15 09:00 Sample Air Volume: 1 L Method: 1501 Sum - NIOSH M Analyte	ethod 1501 (Mo Result ug/Sample	dified) Result mg/m3	Sample C Result ppm	Container: Qualifier	L IH - Coco RL ug/Sample	ab Sample. nut Shell Cha Analyzed	e ID: 31 arcoal T Dil Fac	IO-69623-2 Matrix: Air ube, 150 mg Analyst
Client Sample ID: Off-Gas Date Collected: 11/18/15 11:00 Date Received: 11/23/15 09:00 Sample Air Volume: 1 L Method: 1501 Sum - NIOSH M Analyte Benzene	ethod 1501 (Mo Result ug/Sample 200	dified) Result mg/m3 200	Sample C Result ppm 63	Container: Qualifier	L IH - Coco RL ug/Sample 11	ab Sample nut Shell Cha <u>Analyzed</u> 12/02/15 12:02	e ID: 31 arcoal T Dil Fac	IO-69623-2 Matrix: Air ube, 150 mg Analyst JCM
Client Sample ID: Off-Gas Date Collected: 11/18/15 11:00 Date Received: 11/23/15 09:00 Sample Air Volume: 1 L Method: 1501 Sum - NIOSH M Analyte Benzene Method: 1550 - NIOSH Method	ethod 1501 (Mo Result ug/Sample 200 d 1550 (Modified	dified) Result mg/m3 200	Sample C Result ppm 63	Container: Qualifier	L IH - Coco RL ug/Sample 11	ab Sample nut Shell Cha Analyzed 12/02/15 12:02	e ID: 31 arcoal T Dil Fac	IO-69623-2 Matrix: Air ube, 150 mg Analyst JCM
Client Sample ID: Off-Gas Date Collected: 11/18/15 11:00 Date Received: 11/23/15 09:00 Sample Air Volume: 1 L Method: 1501 Sum - NIOSH M Analyte Benzene Method: 1550 - NIOSH Method	ethod 1501 (Mo Result ug/Sample 200 d 1550 (Modified Result	dified) Result mg/m3 200 t) Result	Sample C Result ppm 63 Result	Container: Qualifier	L IH - Coco RL ug/Sample 11 RL	ab Sample. nut Shell Cha Analyzed 12/02/15 12:02	e ID: 31 arcoal T Dil Fac	IO-69623-2 Matrix: Air ube, 150 mg Analyst JCM
Client Sample ID: Off-Gas Date Collected: 11/18/15 11:00 Date Received: 11/23/15 09:00 Sample Air Volume: 1 L Method: 1501 Sum - NIOSH M Analyte Benzene Method: 1550 - NIOSH Method Analyte	ethod 1501 (Mo Result ug/Sample 200 d 1550 (Modified Result ug/Sample	dified) Result mg/m3 200 3) Result mg/m3	Sample C Result ppm 63 Result	Container: Qualifier Qualifier	L IH - Coco RL ug/Sample 11 RL ug/Sample	ab Sample nut Shell Cha Analyzed 12/02/15 12:02 Analyzed	e ID: 31 arcoal T Dil Fac 1 Dil Fac	IO-69623-2 Matrix: Air ube, 150 mg Analyst JCM Analyst

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Certification and Definitions Summary

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	Tanan tan	101044	11-01-16
Georgia	State Program	4	N/A	09 - 29-16
Illinois	NELAP	5	200024	11-29-16
lowa	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.
¤	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 errorratio (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)

Method Summary

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

1		
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ĩ		
	310-69623 Chain of Ci	uslody

Ph: 1-800-750-2401 or (319) 277-2401 Fax: (319) 277-2425

end Invoice	To: <u>Davi</u>	d Lar	sen

Company: REI Engineering, Inc.

Address: 4080 N 20th Avenue

end Report To: David Larsen

City, State, Zip: Wausau, WI 54401

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

Page: ___ / of / Sampler: DL

Cedar Falls, IA 50613

www.testamericainc.com

Project Name: Meridian

____ Project No.: 6763

P.O. #:_

Laboratory Chain of Custody Form

Lab Number (Internal use Oniv)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes	ទា	Passive Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
	14/16/16 3:20	OFF-GAR		GRO/BENALO			(L	
	11/18/18	OFF-GAS		GRO/Remove			14	
					an or you have been a set of the			
	Samble	Receipt	Reporti	ng/Deliverables		Turn Aroun	d Time Reques	leá
Temperature	c	c	Hardcopy Results:	YesNo		_Next Day by 6pm	2 Busine	rss Days
Sample Seal	s: Yes	No	E-Mail Results: Ye	sNo		_ 3 Business Days	4 Busine	iss Days
Sample Seat	s Intact: Yes	No	EDD: YesN	lo Type		_ Standard 5 Busin	ass Days	
Total # of Sai	mples:	مين من المحمد	Data Package: Star Level III:	idard Level II: Level IV:	RUSH Subjec	Charges Authorize	d Yes availability (RUSH su	_No (charges apply)
Instruction	s / Special Re	quirements:	ang				·····	
			A a	<u>A</u>				
Date 11/9/15	9120	Line	Sample	as Relinquished by			Received By	
	8) M ¹ / 2 M 2 M 2 M 2 M 2 M 2 M 2 M 2 M 2 M 2						anal ay ay ay aka aka aka aka aka aka aka ak	



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: <u>REF</u> C	ngineering_F	Project: <u>Band</u>	BOX
City: <u>MauSau</u>	, WI		
Date: 11/23/15	_ Receiver's Initials: BB	Time (Delivered):	<u>HD ()</u>
COC completed correct (Cite inconsistencies below)	ly? Yes I No		
Sample Checklist (Mark n	on-conformance or acceptance)	Couriers	
Received Broken	Information Missing	UPS	TA Courier
Improper Media	Missing Sample	FedEx	Client
Missing Label	Sample Past Hold Date	FedEx Ground	Other:
Temperature	Extra Sample	USPS	
COC Discrepancy	Insufficient Sample Volume	Spee-Dee	
Other:	, <u>, , , , , , , , , , , , , , , , , , </u>	Name and and appropriate static sta	internet and a second
		Samples not rece	lived in a cooler
The samples, as receiv	ed, are acceptable for analysis	Temperature not	taken
Reviewed by: 32	Date: 11/23/15		
Comments A			
			<u>— 10 — 10 — 10 — 10 — 10 — 10 — 10 — 10</u>

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

Br C. Hunt

Authorized for release by: 1/19/2016 2:44:51 PM

Brian Graettinger, Manager of Project Management (319)277-2401 brian.graettinger@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 (HCIO4) 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 HCIO4 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.

Br C. Anop

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

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.

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	01/07/1608:55
310-72256-2	Off-Gas, 01/04/16	Air	01/04/16 15:00	01/07/16 08:55

Client Sample Results

4.

Client Sample ID: Off-Gas,	Lab Sample ID: 310-7					0-72256-1		
Date Collected: 12/17/15 14:12								Matrix: Air
Date Received: 01/07/16 08:55								
Sample Air Volume: 3 L			Sample C	Container:	: IH - Coco	nut Shell Cha	arcoal T	ube, 150 mg
Mothod: 1501 Sum NIOSH M	athod 1501 (Ma	dified)						
Method. 1501 Sulli - NIOSH Me	Result	Result	Result		RI			
Analyte		ma/m3	nnm	Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst
Renzene	670	220	70	S7	11	01/19/16 13:47	1	JCM
	010	220	10	01				
Method: 1550 - NIOSH Method	1550 (Modified	d)						
	Result	Result	Result		RL			
Analyte	ug/Sample	mg/m3		Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	37000	12000		S7	590	01/19/16 14:00	1	JCM
						- 1- 0 1 -	10.24	0 700/00 0
Client Sample ID: Off-Gas.	01/04/16					an Sample	9 H J: 34	0-1/256-2
Client Sample ID: Off-Gas,	, 01/04/16				L	_ab Sample	EID: 31	Matrix: Air
Client Sample ID: Off-Gas, Date Collected: 01/04/16 15:00 Date Received: 01/07/16 08:55	, 01/04/16				L	_ab Sample	9 ID: 31	Matrix: Air
Client Sample ID: Off-Gas, Date Collected: 01/04/16 15:00 Date Received: 01/07/16 08:55 Sample Air Volume: 2 L	, 01/04/16		Sample C	Container:	IH - Coco	_ab Sample nut Shell Cha	arcoal T	Matrix: Air ube, 150 mg
Client Sample ID: Off-Gas, Date Collected: 01/04/16 15:00 Date Received: 01/07/16 08:55 Sample Air Volume: 2 L	, 01/04/16		Sample C	Container:	IH - Coco	Lab Sample	arcoal T	Matrix: Air ube, 150 mg
Client Sample ID: Off-Gas, Date Collected: 01/04/16 15:00 Date Received: 01/07/16 08:55 Sample Air Volume: 2 L Method: 1501 Sum - NIOSH Me	, 01/04/16 ethod 1501 (Mo	odified)	Sample C	Container:	IH - Coco	Lad Sample	arcoal T	0-72256-2 Matrix: Air ube, 150 mg
Client Sample ID: Off-Gas, Date Collected: 01/04/16 15:00 Date Received: 01/07/16 08:55 Sample Air Volume: 2 L Method: 1501 Sum - NIOSH Me	ethod 1501 (Mo Result	odified) Result	Sample C	Container:	IH - Coco RL	ab Sample	arcoal T	Matrix: Air ube, 150 mg
Client Sample ID: Off-Gas, Date Collected: 01/04/16 15:00 Date Received: 01/07/16 08:55 Sample Air Volume: 2 L Method: 1501 Sum - NIOSH Me Analyte	ethod 1501 (Mo Result ug/Sample	odified) Result mg/m3	Sample C Result	Container: Qualifier	IH - Coco RL ug/Sample	Analyzed	Dil Fac	Matrix: Air ube, 150 mg
Client Sample ID: Off-Gas, Date Collected: 01/04/16 15:00 Date Received: 01/07/16 08:55 Sample Air Volume: 2 L Method: 1501 Sum - NIOSH Me Analyte Benzene	, 01/04/16 ethod 1501 (Mo Result ug/Sample 580	odified) Result mg/m3 290	Sample C Result ppm 91	Container: Qualifier S7	IH - Coco RL ug/Sample 11	AD Sample nut Shell Cha Analyzed 01/19/16 13:47	nrcoal T Dil Fac	Matrix: Air ube, 150 mg Analyst JCM
Client Sample ID: Off-Gas, Date Collected: 01/04/16 15:00 Date Received: 01/07/16 08:55 Sample Air Volume: 2 L Method: 1501 Sum - NIOSH Me Analyte Benzene Method: 1550 - NIOSH Method	o 1/04/16 ethod 1501 (Mo Result ug/Sample 580 1550 (Modified	odified) Result mg/m3 290 d)	Sample C Result ppm 91	Container: Qualifier S7	IH - Coco RL ug/Sample 11	Analyzed	nrcoal T Dil Fac	Matrix: Air ube, 150 mg Analyst JCM
Client Sample ID: Off-Gas, Date Collected: 01/04/16 15:00 Date Received: 01/07/16 08:55 Sample Air Volume: 2 L Method: 1501 Sum - NIOSH Me Analyte Benzene Method: 1550 - NIOSH Method	o 1/04/16 ethod 1501 (Mo Result ug/Sample 580 1550 (Modified Result	odified) Result mg/m3 290 d) Result	Sample C Result ppm 91 Result	Container: Qualifier S7	IH - Coco RL ug/Sample 11 RL	Analyzed	Dil Fac	Matrix: Air ube, 150 mg Analyst JCM
Client Sample ID: Off-Gas, Date Collected: 01/04/16 15:00 Date Received: 01/07/16 08:55 Sample Air Volume: 2 L Method: 1501 Sum - NIOSH Me Analyte Benzene Method: 1550 - NIOSH Method Analyte	ethod 1501 (Mo Result ug/Sample 580 1550 (Modified Result ug/Sample	odified) Result mg/m3 290 d) Result mg/m3	Sample C Result ppm 91 Result	Container: Qualifier S7 Qualifier	IH - Coco RL ug/Sample 11 RL ug/Sample	Analyzed Analyzed 01/19/16 13:47	Dil Fac	Matrix: Air ube, 150 mg Analyst JCM
Certification and Definitions Summary

5

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	1	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.

G	lossarv	

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.

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

6

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

TactAmarica		Laboratory	Cha	in of Cus	tody Forn	n
	Send Report To: Da	avid Larsen				1
	Send Invoice To: Da	avid Larsen				
310-72256 Chain of Custody	Company: REI	Engineering, Ir	nc.			
Ph: 1-800-750-2401 or (319) 277-2401 Fax: (319) 277-2425	Address: 4080	N 20th Avenue				
www.testamericainc.com	City,State, Zip: Wat	usau, WI 54401				a tana di anga mangang ang ang ang ang ang ang ang ang a
Page: of	Phone: 715-675	-9784 Fax:	_ Ema	ail Address: <u>dlars</u>	en@relengineeri	ng.com
Sampler Project Name	: Meridian	Project No.	:: <u>(@</u>	165	P.O. #:	
Lab Date Sample Number Sampled Identification (Internal use Only)	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 OCF - GAS		Glo/Bennere			32	
1/4/15 3:60 OFF-GAS		Glo/Bennare			22	
				and as such about some selected by appropriate stage some some some		
	nan - Sala ayan da ana ang ang ang ang ang ang ang ang an	a Marana Marya ang mang mang mang mang mang mang mang				
Sample Receipt	Report	ng/Deliverables		Turn Arour	id Time Reque	sted
Temperature°C	Hardcopy Results:	YesNo		_ Next Day by 6pm	2 Busi	ness Days
Sample Seals: YesNo	E-Mail Results: Ye	15 No		_ 3 Business Days	4 Busi	ness Days
Sample Seals Intact: Yes No Total # of Samples:	Data Package: Star	totype;	RUSH	_ Standard 5 Busin Charges Authorize	ess Days dYes	No
	Level II	Lovel IV:	Subjec	t to scheduling and	availability (RUSH	ercharges apply)
Instructions / Special Requirements:						
Date Time 15/15 9:40	Alal h	22 Relinquished By Cauz	-{0	pmiss.	Received By	16 8:55

ent: <u>RE</u>	TH Sample Receipt	Form	
y:			
te: 1-1-1 C completed corre	ြ Receiver's Initials: <u>CH</u> ectly? X Yes □ No	Time (Delivered):	8:55
mple Checklist (Ma	rk non-conformance or acceptance)	Couriers	
Received Broken	Information Missing	X UPS	TA Courier
Improper Media	Missing Sample	FedEx	Client
Missing Label	Sample Past Hold Date	FedEx Ground	Other:
Temperature	Extra Sample	USPS	
COC Discrepancy	Insufficient Sample Volume	Spee-Dee	
Other:	an den sen an en	hamman and a superior and	n den en engene en de sam opskelsen en en de en angele en bier en angele en de Verannen
\$		Samples not recei	ved in a cooler
The samples, as rec	eived, are acceptable for analysis	Têmperature not t	aken
viewed by:	Date: 17/10		

Revision: 8 Date: 6/23/2014





Visit us at: www.testamericainc.com

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

Br. C. Shart

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

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

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

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 (HCIO4) 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 HCIO4 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.

Br C. Ant

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

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

3

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

Client Sample ID: Off-Gas Date Collected: 01/22/16 14:15 Date Received: 01/27/16 09:00 Sample Air Volume: 1 L

Lab Sample ID: 310-73289-1 Matrix: Air

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

Method: 1501 Sum - NI	OSH Method 1501 (Mo	dified)						
	Result	Result	Result		RL			
Analyte	ug/Sample	mg/m3	ppm	Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	76	76	24		11	01/28/16 15:50	1	JCM
Method: 1550 - NIOSH	Method 1550 (Modified	d)						
	Result	Result	Result		RL			
Analyte	ug/Sample	mg/m3		Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst
					and a second sec	The second	~	

Certification and Definitions Summary

5

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	make, date	101044	11-01-16
Georgia	State Program	4	N/A	09-29-16
Illinois	NELAP	5	200024	11-29-16
lowa	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.
¤	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 errorratio (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

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

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

___Project Name:__

310-73289 Chain of Custody

Laboratory	Chain	of Cu	istody	Form
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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: _____ of ____ Sampler: ____L

Cedar Falls, IA 50613

Fax: (319) 277-2425

www.testamericainc.com

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

Neridian____ Project No.: (1763_____P.O. #.

Lab Number (Internal use Only)	Date Sampled	Sample Identification	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(s	(s)	Passive Monitor Time Minutes)	Air Volume (Liters)	Pump ID	
	1/22/16	OCP-GAS		620 Benzeve			IL		
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	Sample	Receipt	Reporti	ng/Deliverables		Turn Aroun	d Time Reques	ted	
Temperature		C	Hardcopy Results:	YesNo	Ne	ext Day by 6pm	2 Busine	ss Days	
Sample Seals	: Yes	No	E-Mail Results: Yes	sNo	3 ł	Business Days	4 Busine	ss Days	
Sample Seals	Intact: Yes	No	EDD: YesN	о Туре;	Sta	andard 5 Busine	ess Days		
Total # of Samples:			Data Package: Standard Level II: RUSH			H Charges AuthorizedYesNo			
Instructions	/ Special Re	quirements:			Subject to	scheduling and	availability (RUSH sur	rchargas apply)	
			0 4 7	1		a barna barna barna da sera na sa	annan an bha an a chlainn an Anna Anna Anna Anna An Bha an an Anna Anna Anna Anna Anna Anna A		
Date		Time	Sample	s Relinquished By			Received By		
1/15/11@	11:00 pu	<u>^</u>	Adul tim	<u> </u>		- All	1.27.16	9:00	
L	, 9997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -								



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:	NET	Project:	Mer. dia
City:	Lausau, US		

Date: 1.27.16 Receiver's Initials: 15 Time (Delivered): 9:00

COC completed correctly? Z 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

Reviewed by: Sta Date: 12716

Couriers

	5 411010	
L	UPS	TA Courier
	FedEx	Client
	FedEx Ground	Other:
	USPS	
	Spee-Dee	

C Samples not received in a cooler
 C Temperature not taken

Comments

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



TestAmerica

4

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

Bu C. Hurp

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

Brian Graettinger, Manager of Project Management (319)277-2401 brian.graettinger@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 (HCIO4) 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 HCIO4 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.

Br C. Hunt

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

TestAmerica Job ID: 310-74210-1

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

					3
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	



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

4

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.

am L'hearque

Andrew L. Teague, CIH Technical Director

Enclosures



Final Report ----

Work Order U043015

TESTAMERICA ANALYTICAL TESTING CORP	Customer:	14709000	Date Received:	02/12/16
CEDAR FALLS DIVISION 704 ENTERPRISE DRIVE	Attention:	BRIAN C GRAETTINGER		
CEDAR FALLS, IA 50613	PO Number	OR #845679	Client Project ID	MERIDAN #6763
Lab ID: U043015001 Sample ID: 310-74210-1 OFF-GAS 02/08/201	16	Media: Charcoal Tube 50/100mg	Sample Date:	2/8/2016 Sampling Time

	an i fan 'n staar te berek i betrek te neerkenne seren niet en weten konne de nee	Analysis			Reporting					
Analyte	Method	Date	Volume		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

Report ID:: U043015-201602195814



That A marina	Laboratory Chain of Cust	ody Form
	Send Report To: David Larsen	
	Send Invoice To: David Larsen	
310-74210 Chain of Custody	Company:REI_Engineering, Inc.	U043015
Ph: 1-800-750-2401 or (319) 277-2401	Address: 4080 N 20th Avenue	
www.testamericainc.com	City,State, Zip: Wausau, WI 54401	
Page: of	Phone: 715-675-9784 Fax: Email Address:dlarse	en@relengineering.com
Sampler:Project Name	Meridian Project No.: 6763	P.O. #:
Lab Date Sample Number Sampled Identification (Internal use Only)	Miedia Type Analysis Passive (Filter, Tube, Mathod(s)/Analytes(s) Monitor Passive Time Monitor) (Vinutes)	Alt Volume Pump ID (Liters)
2/3/14 3310-74210-	A-1 Calp	
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6.0		
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Simple Receipt	Reporting/Deliverables Turn Around	Time Requested
Temperature°C	Hardcopy Results: YesNoNext Day by \$pm	2 Business Days
Sample Seals: YesNo	E-Mail Results: YesNo3 Business Days	4 Business Days
Sample Seals Intact: YesNo	EDD: YasNo Type: Standard 5 Busines	s Days
Total # of Samples:	Data Package: Standard Level II: RUSH Charges Authorized Level III: Level IV: Subject to accorduling and a	Yes No
Instructions / Special Requirements:		Territory C. Discrete Internet and Addition
n an		n New york and a second sec
Date Time	Samplas Relinquistned By	Contract By
2/12/16 1022	JARHETTCOOK Frances	<u> </u>
	1Y	



TestAmerica Cedar Falls

704 Enterprise Drive

Chain of Custody Record



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

Phone (319) 277-2401 Fax (319) 277-2425													0040010
Client Information (Sub Contract Lab)	Sampler			Gra	PM ettince	r. Bri	an C		Carrier Trackin	g No(3):	- Angele Angele	000 No: 310-6019 1	
Client Contact	Phone:			E-Mi	pił.				-			Page.	
Shipping/Receiving				bria	n.graet	tinge	@tastam	ericainc.com				Page 1 of 1	
Company: Analytics Corporation								Analysis Re	quested			Job#: 310-74210-1	
Address:	Due Date Requeste	ed:				1		TTTT		TTTT	T	Preservation Co	des:
10329 Stony Run Lane.	2/23/2016				上臘					are and a second	15	A HOL	M - Herane
City Ashland	TAT Requested (da	195):										B - NaOH C - Zn Aceratz	N - None O - AsNeO2
State, Zip: VA, 23005												D - Nutrie Acid E - NaHSCH	P - N#2045 Q - N#2503
Phone: 300-882-5061(Tel)	eas o.R.ª	6 84:	5679		1		de la contracta de		an ro _k y my a kata			F - MeOH G - Amehlor	R - N22S2SO3 S - H2SO4 T - TSP Dotectory
Email:	WD:a:	St	2 2/15/1	L	No)		13		and framework and		5	I - Ice J - Dt Waler	U - Acctone V - MCAA
Project Name: Moridan #6763	Project #:	10	74716		1 (Yas	1e	C.		and a second sec		ialitoj	K - EDTA L - EDA	W- ph 4.5 Z · ether (specify)
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~			Sample Type	Matrix (Wewater, Sessila,	Elllara Join MS/	(Denzane	Hd.				Numbe	A12.	Valumen
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	(C=comp, a G=grab) Bra	iewasteroil, Tosie: AmAir	Flaid	aus					Total	Special Ir	nstructions/Note:
		\geq	Preservation	Code	XX	0					X		
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Custody Seals Intact Custody Seal No a Yes a No						·	ar fariteri	i un mitter bygge by	emerka				9

Certification and Definitions Summary

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
lowa	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.
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)

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

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

TestAmerica Cedar Falls

Tart A moria		Laboratory (hain of Cuel	ody Com	
	Send Report To: Da	avid Larsen		ouy ronn	
	Send Invoice To: Da	wid Larsen		ar 19 a - San Andreas - San Angeles - San	
	Company: RET	Engineering Tr	20		
Ocude Frails, in our to Db: 1.800.750.9401 or (310) 977.9	Address: 4080 1	V 20th Avenue		and a second	
Fax: (319) 277-2425	City State Zin: Wal	usau. WT 54401		**************************************	
www.testamencainc.com	Disperse 715-675	-9784			
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Sample Receipt	Report	ing/Deliverables	Turn Aroun	d Time Requested	
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Sample Seals: YesNo	E-Mail Results: Ye	sNo	3 Business Days	4 Business Days	
otal # of Samples:N	Data Package: Star Level III:	ndard Level II:	RUSH Charges Authorize	dYesNo availability_(RUSH surcharges apply	x)
nstructions / Special Requirements	* * *********************************				
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TestAmeric 201

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: <u>REI</u>	ENCS. Pro	ject:	
City:			
Date: <u>2-11-16</u>	Receiver's Initials:	Time (Delivered):	9:05
COC completed correc Cite inconsistencies belew)	tly? Yes 🗆 No	Couriers	
	Information Missing		TA Courier
Improper Media	Missing Sample	FedEx	Client
Missing Label	Sample Past Hold Date	FedEx Ground	Other:
Temperature	Extra Sample	USPS	
COC Discrepancy	Insufficient Sample Volume	Spee-Dee	
Other:			
		Samples not rece	ved in a cooler
The samples, as recei	ved, are acceptable for analysis	Temperature not t	aken
Reviewed by: <u>8</u> 2	Date: 2/11/16		
, do			



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

Bu C. Anop

Authorized for release by: 3/4/2016 11:35:05 AM

Brian Graettinger, Manager of Project Management (319)277-2401 brian.graettinger@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 (HCIO4) 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 HCIO4 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.

Br C. Anop

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

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.

TestAmerica Job ID: 310-74846-1

Sample Summary

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

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	3
310-74846-1	Off-Gas	Air	02/15/16 12:45	02/23/16 09:10	

Client Sample Results

4

Client Sample ID: Off-Gas Date Collected: 02/15/16 12:45 Date Received: 02/23/16 09:10 Sample Air Volume: 1 L

Lab Sample ID: 310-74846-1 Matrix: Air

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

	Result	Result	Result		RL			
Analyte	ug/Sample	mg/m3	ppm	Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	340	340	110		11	03/04/16 09:58	1	JCM
Method: 1550 - NIOSH	Method 1550 (Modified Result	d) Result	Result		RL			
Method: 1550 - NIOSH Analyte	Method 1550 (Modified Result ug/Sample	d) Result mg/m3	Result	Qualifier	RL ug/Sample	Analyzed	Dil Fac	Analyst

5

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
lowa	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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CNF	Contains no Free Liquid
DER	Duplicate errorratio (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

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

310-74846 Chain of Custody 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 Page: of Sampler: DL Project Name: Lab Date Number Sampled	Send Report To: <u>Da</u> Send Invoice To: <u>Da</u> Company: <u>REI</u> Address: <u>4080 M</u> City,State, Zip: <u>Wat</u> Phone: <u>715-675</u> <u>Merridi An</u> Media Type (Filter, Tube,	Laboratory C avid Larsen avid Larsen Engineering, Inc V 20th Avenue Isau, WI 54401 -9784 _{Fax:} Project No.: Analysis Method(s)/Analytes(s)	hain of Cust 5. Email Address:diarse している	ody Form en@reiengineeting.com P.O. #: Air Volume Pump ID (Liters)
(Internal use Only) Z-15-16	Passive Monitor)	c. 10	Time (Minutes)	
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Sample Seals: YesNo	E-Mall Results: Ye	esNo	3 Business Days	4 Business Days
Sample Seals Intact: YesNo Total # of Samøles:	EDD: Yesh Data Packaoe: Sta	No Type:	Standard 5 Busine RUSH Charges Authorized	ass Days d Yes No
Instructions / Special Dequirements	Level III.	Level IV.	Subject to scheduling and	avallability (RUSH surcharges apply)
		<u></u>		
Date Time 2-19 9740 Am	Sample bour	/ es Relinquished By	(onnie/)	Received By 604 Q-23-16 9:10

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City Dat	:: e: <u>Ə-</u> Ə <u>3-</u> ((\mathcal{Q} Receiver's Initials: \mathcal{C}	Time (Delivered):	9:10
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CO Cite	C completed correct inconsistencies below) nple Checklist (Mark n Received Broken Improper Media Missing Label Temperature COC Discrepancy	Ily? Yes ■ No non-cenfermance or acceptance) Information Missing Missing Sample Sample Past Hold Date Extra Sample Insufficient Sample Volume	Couriers UPS FedEx FedEx Ground USPS Spee-Dee	TA Courier Client Other:
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CO Dite	C completed correct inconsistencies below) nple Checklist (Mark n Received Broken Improper Media Missing Label Temperature COC Discrepancy Other:	Ily? Yes ■ No non-cenfermance or acceptance) Information Missing Missing Sample Sample Past Hold Date Extra Sample Insufficient Sample Volume	Couriers UPS FedEx FedEx Ground USPS Spee-Dee Samples not rec	TA Courier Client Other:
So Contraction Con	C completed correct inconsistencies below) nple Checklist (Mark n Received Broken Improper Media Missing Label Temperature COC Discrepancy Other: The samples, as receiv	Ily? Yes ■ No non-cenfermance or acceptance) Information Missing Missing Sample Sample Past Hold Date Extra Sample Insufficient Sample Volume	Couriers UPS FedEx FedEx Ground USPS Spee-Dee Samples not rec Temperature not	TA Courier Client Other: eived in a cooler t taken

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



1

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

..... Links

Review your project results through

Total Access

Have a Ouestion?

Ask

The

www.testamericainc.com

Visit us at:

Expert

Br C. Hung

Authorized for release by: 4/8/2016 10:27:00 AM

Brian Graettinger, Manager of Project Management (319)277-2401 brian.graettinger@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 (HCIO4) 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 HCIO4 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.

Bu C. Anny

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

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.

-

					3
Lab Sample ID	Client Sample ID	Matrix	Collected	Received	
310-77395-1	Olf-Gas	Air	03/29/16 11:15	04/01/16 08:50	

Client Sample ID: Off-Gas Date Collected: 03/29/16 11:15 Date Received: 04/01/16 08:50

Lab Sample ID: 310-77395-1 Matrix: Air

4

Sample Air Volume: 3 L				Sample Container: IH - Coconut Shell Charcoal Tube, 1					
Method: 1501 Sum - NIOSH Met	hod 1501 (Modified)								
	Result	Result	Result		RL				
Analyte	ug/Sample	mg/m3	ppm	Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst	
Benzene	1300	420	130		11	04/07/16 07:29	1	JCM	
Method: 1550 - NIOSH Method 1	1550 (Modified)								
	Result	Result	Result		RL				
Analyte	ug/Sample	mg/m3		Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst	
Gasoline	26000	8800			1500	04/07/16 15:55	1	JCM	

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	
lowa	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	IA 100001	09-29-16	

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ND	Not detected at the reporting limit (or MDL or EDL if shown)
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RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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

11 (310-77395 Chain of Custody 7	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 Phone: 715-675-9784 Fax: Email Address: dlarsen@relengineering.com Meridian Project No.: 6763 P.O.#:	
Lab Date Sample Number (Internal use Only) 3/29/16 11:15 OFE-Jas	Media Type (Filter, Tube, Passive Monitor) Analysis Method(s)/Analytes(s) Passive Monitor Time (Minutes) Air Volume (Liters) Pump ID GRU/Bentero 34 -	
Sample Receipt Temperature*C Sample Seals: YesNo Sample Seals Intact: YesNo Total # of Samples: Instructions / Special Requirements: Date J/R0 //L Ø:co Mu	Reporting/Deliverables Turn Around Time Requested Hardcopy Results: Yes No	

lient: <u>REL</u>	Pro-Pro	oject:	
ity:			
ate: <u>4-1-16</u> OC completed corrective inconsistencies below)	${2} \text{Receiver's Initials: } \frac{2}{2} \text{Receiver's Initials: }$	Time (Delivered): (28:50
ample Checklist (Mark	non-conformance or accentance)	Couriers	
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Missing Label	Sample Past Hold Date	FedEx Ground	Other:
Temperature	Extra Sample	USPS	
COC Discrepancy	Insufficient Sample Volume	Spee-Dee	
Other:			
		Samples not receiv	ed in a cooler
The samples, as rece	ived, are acceptable for analysis	Temperature net ta	ken
eviewed by: <u>SC</u>	Date: 4/11/6		

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

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

Attn: Mr. Dave Larsen

Br. C. Hunt

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

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

41

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

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 (HCIO4) 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 HCIO4 utilized at any time during the analysis.

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Br C. Aup

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

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.



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	
310-790 7 0-1	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

Method: 1550 - NIOSH Method 1550 (Modified)

ug/Sample

120

Result

10000

ug/Sample

Analyte

Analyte

Gasoline

Benzene

Dil Fac Analyst

Dil Fac Analyst

1 JCM

1 JCM

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 C	ontainer: 🏽 - Coconut Shell Charcoal Tube, 150 mg
Method: 1501 Sum - NIOSH Method 1501 (Modified)			
Result	Result	Result	BL

ppm Qualifier

Qualifier

36

Result

ug/Sample

11

RL ug/Sample

290

Analyzed

05/05/16 12:29

Analyzed

05/05/16 12:28

mg/m3

Result

mg/m3

10000

120

Certification and Definitions Summary

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	
lowa	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.
<u>n</u>	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 errorratio (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)

Method Summary

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

TestAmerica Job ID: 310-79070-1

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

THE e Ct 310-79070 Chain of Custody Ce. 310-750-70 Chain of Custody Ph: 1-800-750-2401 or (319) 277-24U1 Add Fax: (319) 277-2425 www.testamericainc.com Www.testamericainc.com Cit Page: of Ph: DL Project Name:	nd Report To: <u>Da</u> nd Invoice To: <u>Da</u> mpany: <u>REI</u> dress: <u>4080</u> y,State, Zip: <u>Wau</u> one: <u>715-675</u>	Laboratory (avid Larsen Avid Larsen Engineering, In 1 20th Avenue Isau, WI 54401 -9784 _{Fax:} Project No.	Chain of Cust	tody Form sen@relengineering P.O. #;	J.COM
Lab Date Sample Number Sampled Identification (Internal use Only)	Media Type (Filter, Tube, Passive Monitor)	Analysis Method(s)/Analytes(Passive s) Monitor Time (Minutes)	Air Volume (Liters)	Pump ID
		<u>Glo/Benere</u>			
Sample Receipt	Report Hardcopy Results:	ing/Deliverables	Turn Arou	nd Time Reques	stad ess Days
Sample Seals: YesN• Sample Seals Intact: YesNo Total # of Samples: Instructions / Special Requirements:	E-Mail Results: Ye EDD: YesN Data Package: Star Level III:	esNo toType: ndard Level II: Level IV:	3 Business Days Standard 5 Busin RUSH Charges Authoriz Subject to scheduling an	s4 Busin ness Days edYes d availability (RUSH si	ess Days No #charges apply}
Date Time 4/2///L 9:35	Sample	es Relinquished By	- Call	Received By	153

Sity: Uses Date: 42516 Received correctly? Received Broken Improper Media Missing Label Sample Checklist (Mark non-conformance or acceptance) Couriers Ves No Couriers Ves No Couriers Ves Ves No Couriers Ves Ves </th <th>e (Delivered): S:S Iriers JPS TA Courier FedEx Client FedEx Ground Other: JSPS S</th>	e (Delivered): S:S Iriers JPS TA Courier FedEx Client FedEx Ground Other: JSPS S
Date: 42516 Receiver's Initials: Time (Delivered): 6 COC completed correctly? A Yes No No Cite inconsistencies below) Ark non-conformance or acceptance) Couriers Couriers Ark non-conformance or acceptance) Couriers Received Broken Information Missing VPS 1 Improper Media Missing Sample FedEx 1 Missing Label Sample Past Hold Date FedEx Ground USPS	e (Delivered): <u>Sission</u> Iriers JPS TA Courier FedEx Client FedEx Ground Other: JSPS
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COC completed correctly? Image: Second s	Iriers JPS TA Courier FedEx Client FedEx Ground Other: JSPS
COC completed correctly? A Yes No Cite inconsistencies below) ample Checklist (Mark non-conformance or acceptance) Couriers Received Broken Information Missing Improper Media UPS Improper Media Missing Sample FedEx Improper Media Missing Label Sample Past Hold Date FedEx Ground USPS	Iriers JPS TA Courier FedEx Client FedEx Ground Other: JSPS
ample Checklist (Mark non-conformance or acceptance) Couriers Received Broken Information Missing ✓ UPS Improper Media Missing Sample FedEx Missing Label Sample Past Hold Date FedEx Ground Temperature Extra Sample USPS	Iriers JPS TA Courier FedEx Client FedEx Ground Other: JSPS
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Received Broken Information Missing ✓ UPS Improper Media Missing Sample FedEx Missing Label Sample Past Hold Date FedEx Ground Temperature Extra Sample USPS	JPS TA Courier FedEx Client FedEx Ground Other: JSPS
Improper Media Missing Sample FedEx Missing Label Sample Past Hold Date FedEx Ground Temperature Extra Sample USPS	FedEx Client FedEx Ground Other: JSPS
Missing Label Sample Past Hold Date FedEx Ground Temperature Extra Sample USPS	FedEx Ground Other: JSPS
Temperature Extra Sample USPS	JSPS
COC Discrepancy Insufficient Sample Volume Spee-Dee	Spee-Dee
Other:	
Samples not received	Samples not received in a cooler
The samples, as received, are acceptable for analysis <pre>< Temperature not taker</pre>	Femperature not taken
Deter Iler II	
eviewed by: $3\sqrt{2}$ Date. $4\sqrt{2}$ To	
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omments BL	
omments BL	

Page 9 of 9



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

Br C. Hunt

Authorized for release by: 6/6/2016 9:59:08 AM

Brian Graettinger, Manager of Project Management (319)277-2401 brian.graettinger@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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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 (HCIO4) 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 HCIO4 utilized at any time during the analysis.

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Br C. Hunt

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

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.



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	

4

Client Sample ID: Off-Gas, 0	5/23/16					Lab Sam	ple 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			S	ample Cor	ntainer: IH - C	Cocornut Shell (Charcoal	Tube, 150 mg
Method: 1501 Sum - NIOSH Meti	nod 1501 (Modified)							
	Result	Result	Result		RL			
Analyte	ug/Sample	mg/m3	ppm	Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	200	99	31		11	06/03/16 09:42	1	JCM
Method: 1550 - NIOSH Method 1	550 (Modified)							
	Result	Result	Result		RL			
Analyte	ug/Sample	mg/m3		Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	15000	7300			590	06/03/16 09:43	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

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
lowa	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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CNF	Contains no Free Liquid
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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)

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

TactAmarica	Laboratory Chain of Custody	Form
	Send Report To: David Larsen	
	Send Invoice To: David Larsen	
310-81380 Chain of Custody	Company: REI Engineering, Inc.	8,848,8 1993 - 1995 1993 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1995 - 1
Ph: 1- 8 00-750-2401 or (319) 277-2401 Fax: (319) 277-2425	Address: 4080 N 20th Avenue	
www.testamericainc.com	City, State, Zip: Wausau, W1 54401	
Page: of	Phone: 115-675-9784 Fax: Email Address: dlarsen@rele	ngineering.com
Sampler,Project Name	Project No.: <u>010.</u> Project No.: <u>010.</u> P.U.	1 7
Lab Date Sample Number Sampled Identification (Internal use Only)	Media Type Analysis Passive Air v (Filter, Tube, Method(s)/Analytes(s) Monitor (Li Passive Time Monitor) (Minutes)	folume Pump ID Iters)
5/23/16 Ziavpm Off-GAS	GRO/Benzene 2	٢
		· · · · · · · · · · · · · · · · · · ·
Sample Receipt	Reporting/Deliverables Turn Around Time	Requested
Temperature4C	Hardcopy Results: YesNoNext Day by 6pm	2 Business Days
Sample Seals: YesNo	E-Mail Resufts: YesNo3 Business Days	4 Business Days
Sample Seals Intact: Yes No	EDD: Yes No Type Standard 5 Business Days	You Ma
I etal # of Samples:	Data Package: Standard Level II RUSH Charges Authorized Level III Level IV. Subject to scheduling and availability	resNO ly (RUSH surcharges apply)
Instructions / Special Requirements:		
	-120	
пате Time 5/2711/ 2+00 рыл 9:30 Aur	Mail Farmer (94 Mic 10/0	F 5-26-16 09:05

e: <u>5-26-16</u> R	eceiver's Initials:	t 1		
e: <u>5-20-1(0</u> R	eceiver's Initials:	11		
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	<i>2</i> ⁻	<u></u>		
C completed correctly?	Vives DNa			
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			Originar	
Peccilved Broken	Information Missing			TAQUUS
Improper Media	Missing Sample		FadEy	
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	Extra Sample	-		
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Other:				1 .
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The samples, as received, a	ire acceptable for analysis		X DI emperature not ta	iken
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viewed by: <u>SX</u>	Date: 5/26/11			
51				
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Page 9 of 9

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Visit us at: www.testamericainc.com

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

Br. C. Hurp

Authorized for release by: 7/14/2016 3:23:41 PM

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

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Br C. Hunt

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

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

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

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TestAmerica Job ID: 310-84261-1



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

ab 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 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) Result Result Result Result Result

	Result	Result	Result		RL				
Analyte	ug/Sample	mg/m3	ppm	Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst	
Benzene	71	71	22		11	07/14/16 13:49	1	JCM	
Method: 1550 - NIOSH Method ²	1550 (Modified)								
	Result	Result	Result		RL				
Analyte	ug/Sample	mg/m3		Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst	
Gasoline	7200	7200			290	07/14/16 13:50	1	JCM	

Certification and Definitions Summary

TestAmerica Job ID: 310-84261-1

5

Laboratory: TestAmerica Cedar Falls

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

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EDL	Estimated Detection Limit			
MDC	Minimum detectable concentration			
MDL	Method Detection Limit			
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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.

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

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

Protocol References:

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TestAmerica 310-84261 Chain of Custody Fax: (319) 277-2425 www.testamericainc.com Page: of Sampler: Project Name	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 Phone: 715-675-9784 Fax: Email Address: dlarsen@relengineering.com me: Meridam				
Lab Date Sample Number Sampled Identification (Internal use Oniy) 0-30-16 11:15 8CF-GAS	Media Type (Filter, Tube, Passive Monitor) GLO/Benzeue	s(s) Passive Air Volume Pump ID Monitor (Liters) Time (Minutes) 1/2			
Sample Receipt Temperature *C Sample Seals: Yes No Sample Seals Intact: Yes No Total # of Samples:	Report Ing/Deliverables Hardcopy Results: YesNo E-Mail Results: YesNo EDD: YesNoType: Data Package: Standard Level II Level IV:	Turn Arcound Time Requested			
Instructions / Special Requirements: Date Time 7-16 10:00 7-06-16 9:25	Somples Relinquished By	Received By Received By Received By Received By Received By			
	Page 8 of 9	Groun 7/14/20765			



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: Wangar	L, WI				
Date: 7-06-16	Receiver's Initials: GL	Time	(Delivered):	9:25	
COC completed correct (Cite inconsistencies below)	etly? Yes 🗆 No				
Sample Checklist (Mark	non-conformance or acceptance)	Courie	ers		
Received Broken	Information Missing	UP	S	TA Courier	
Improper Media	Missing Sample	Fei	JEX	Client	
Missing Label	Sample Past Hold Date	X Fee	dEx Ground	Other:	
Temperature	Extra Sample	Us	PS		
COC Discrepancy	Insufficient Sample Volume	Sp	ee-Dee		
Other:			**************************************		
	ange Mangeloofs Britsen nage Afroninskynd ^{minist} dag ^{gene} r en en en de fan	K Sa	mples not recei	ved in a cooler	
The samples, as received, are acceptable for analysis					
Reviewed by: SC	Date: 7/6/16	L <u></u>			
Comments Ola					

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

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

Br. C. Hung

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

..... LINKS

Review your project results through

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Have a Question?

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The

www.testamericainc.com

Visit us at:

Expert

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

Br C. Hus

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

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.

TestAmerica Job ID: 310-86422-1



Sample Summary

Matrix

Air

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

Client Sample ID

Off-Gas

Lab Sample ID

310-86422-1

Collected	Received

08/01/16 17:00 08/04/16 08:55

Client Sample Results

Client Sample ID: Off-Gas Date Collected: 08/01/16 17:00 Date Received: 08/04/16 08:55

Sample Air Volume: 1 L

Lab Sample ID: 310-86422-1 Matrix: Air

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

Method: 1501 Sum - NIOSH M	ethod 1501 (Modified)							
	Result	Result	Result		RL			
Analyte	ug/Sample	mg/m3	ppm	Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst
Benzene	150	150	48		11	08/12/16 13:37	1	JCM
Method: 1550 - NIOSH Method	1550 (Modified)							
	Result	Result	Result		RL			
Analyte	ug/Sample	mg/m3		Qualifier	ug/Sample	Analyzed	Dil Fac	Analyst
Gasoline	14000	14000		- 40	590	08/12/16 13:37	1	JCM

TestAmerica Cedar Falls

Certification and Definitions Summary

5

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
lowa	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.		
¤	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)		

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

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

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 Laboratory Chain of Custody Form The and Report To: David Larsen Cc and Report To: David Larsen Cc and Report To: David Larsen Ph: 1-800-750-2401 or (319) 277-2401 Fax: (319) 277-2425 www.testamericainc.com Page: of Page: DL Project Name: Mexidem Project Name: Mexidem					
Lab Date Sample Number Sampled Identification (Internal use Only) 9-1-16 5:00 pm 644-6.45	Media Type (Filter, Tube, Passive Monitor) CARD/Benzee	s) Passive Air Volume Pump ID Monitor (Liters) III (Minutes) IL			
Sample Receipt Temperature*C Sample Seals: YesNo Sample Seals Intact: YesNo Total # of Samples:	Reporting/Deliverables Hardcopy Results: YesNo E-Mail Results: YesNo EDD: YesNo Type Data Package: Standard Level II Level III:Level IV:	Turn Avound Time Requested Next Day by 6pm 2 Business Days 3 Business Days 4 Business Days 3 Business Days 4 Business Days 3 Standard 5 Business Days No Standard 5 Rusiness Days No Subject to scheduling and availability (RUSH surcharges apply)			
Date Time And Poly Relinquished By Recurrent 3y 02-14 8:45 Am hull Can Start Stalle UPS 60-14 8:55 8/4/12					

12/2016

TestAmerica

TestAmerica Sample Receipt Form - Industrial Hygiene **Cedar Falls Facility**

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

REL

Clier	nt: <u>RE</u>	Project:				
City:						
Date	: <u>8/4/16</u>	Receiver's Initials:	Time (Delivered): 855			
COC (Cite I	C completed corre	ctly? Yes 🗆 No				
Sam	ple Checklist (Mar	k non-confermance or acceptance)	Couriers			
	Received Broken	Information Missing	YUPS Grand TA Courier			

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

Couriers						
X	UPS Gran	Z	TA Courier			
	FedEx		Client			
	FedEx Ground		Other:			
	USPS					
	Spee-Dee					

Samples not received in a cooler

Temperature not taken

The samples are acceptable for analysis

Reviewed by: Sel Date: 8/2 16

ok

Comments

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