



Meridian Environmental Consulting, LLC

February 14, 2015

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

RECEIVED
FEB 27 2015
DNR
MILWAUKEE

Subject: Remedial Action Plan: Soil Vapor Extraction System

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 report provides a Remedial Action Plan for the above referenced sites.

Meridian originally recommended the following:

- Remove source soils (and accessible smear zone soils) at Autostop
- Soil Vapor Extraction system which extends under Highway 8 to remediate both sites at once (in LNAPL Focus Area)
- Monthly pumping to remove LNAPL accumulating in extraction and SVE wells

DNR would not approve excavation or monthly pumping. Therefore, this modified Plan only includes recommendations for the SVE system. It is our understanding that DNR will close this site with this approach. We caution that SVE Technology will remove only a portion of the petroleum impacts at the site. The remaining petroleum impacts will be left in place and addressed with GIS Registry.

This Plan recommends the following approach to achieving Closure at these two sites:

Autostop

- Soil Contamination: No Further Action. Meridian recommended removing source soils from former pump island/tank area and smear zone. The DNR responded that removal of source soils is not required to achieve Closure. The remaining soil contamination will be addressed with GIS Registry.
- Ground Water Contamination: The extent of impacted ground water and LNAPL is known; no further definition is needed. The LNAPL should be remediated to the extent practicable with the proposed SVE system. The remaining ground water contamination will be left in place and documented with GIS Registry.
- Vapor Intrusion: This will be addressed with the proposed SVE system to the extent practicable.
- Funding: There is approximately \$848,780 in PECFA funds available for this site. This should be adequate to remediate the site sufficiently to achieve Closure based on current DNR guidance.

Doug's Tire

- Soil Contamination: No Further Action. Impacted source soils in the former tank area have been removed to the extent practicable. The residual impacted soil will be documented in the GIS Registry.
- Ground Water Contamination: The extent of impacted ground water and LNAPL is known; no further definition is needed. The LNAPL should be remediated to the extent practicable with the proposed SVE system. The remaining ground water contamination will be documented with GIS Registry.
- Vapor Intrusion: This will be addressed with the proposed SVE system to the extent practicable.
- Funding: There is approximately \$160,897 in PECFA funds available for this site.

Because of the proximity of both sites and the apparent comingled plumes, and similar Remedial Objectives, this Plan proposes a system which addresses both sites. However, it must be noted that the funding limitations at the Doug's site will affect its financial participation in this joint effort.

SVE PILOT TEST

A Pilot Test was completed April 2014 to evaluate the effectiveness of SVE technology at these two sites. A blower was attached to RW-2 at Autostop and to EX-4 at Doug's. Appendix A contains summary tables of the Pilot Test measurements. The Pilot Test measurements indicate SVE technology will remove petroleum vapors at these sites. It should be noted that SVE will not remove all petroleum impacts from the ground water or subsurface.

Based on the Pilot Test at RW-2, a 25 feet radius of influence was measured. Measurements at EX-4 were not complete because water rose within the well during the test. For design purposes, a 25 feet radius of influence is used at both sites.

Air Sample

Based on the high PID readings, it became apparent offgas treatment would be necessary especially at the Autostop site. An air sample was collected from RW-2 and from EX-5 May 13, 2014. A blower (1/3 HP) was attached to RW-2 and EX-5. The blower purged the well for about 20 minutes from RW-2; about 10 minutes from EX-4 due to surface water flooding the well manway. A Tedlar bag was used to

collect an air sample. The air sample was analyzed for VOCs and THC as gasoline (Method TO-3). The analytical report is provided in Appendix A. Summary tables of the air samples are also provided in Appendix A.

The air samples indicate the LNAPL plume at Doug's (EX-4) has lower discharge concentrations than the concentrations measured in RW-2.

Air Regulations

The discharge from the SVE system is subject to DNR air limits of 228 lbs/yr of benzene if the discharge pipe is less than 25 feet high; 936 lbs/yr of benzene if the discharge pipe is greater than 25 feet high. Additionally, the discharge can not exceed 5.7 lb/hr of Total VOCs.

The SVE system will exceed these discharge limits at extraction rates greater than 15 scfm in RW-2 and 20 scfm in EX-4. Therefore, the air discharge will require offgas treatment or the SVE system will have to operate at low flow rates.

PROPOSED SVE SYSTEM

The recommended SVE system is designed to address the LNAPL Focus Area (Figure 1). Petroleum impacts away from the LNAPL Focus Area will not be affected by the proposed SVE system. Our understanding from DNR staff is this approach will be accepted by the DNR Closure Committee when Closure is requested.

SVE Extraction Wells

The SVE system will consist of an array of 4-inch diameter extraction wells located in the LNAPL Focus Area (Figure 2). The wells will be screened from 15-30 feet below grade. These extraction wells will be connected via buried piping to a central mechanical system which will apply a vacuum to the piping and extraction well.

To save costs, we plan to utilize existing extraction wells EX-2, -4, -5 at Doug's and RW-1, -2, -3 at Autostop. We plan to install two extraction wells at Doug's and three extraction wells at Autostop.

Piping

Piping will connect each SVE point to the remediation system located at the south end of the Autostop building (Figure 3). The piping will be 2-inch diameter Sch. 40 PVC installed in 4 feet deep trenches. The piping will rest in a 6-inch sand bed covered by 4 inches of high-density Styrofoam insulation. The trench will then be backfilled to grade with clean sand/gravel fill compacted in 1 foot lifts using a compactor. The trench will be topped with gravel.

The piping will be installed so that it slopes slightly to the SVE vent well where possible. Meridian will be onsite and use survey equipment (Auto Level) to confirm this pitch.

Due to the topography, piping from Doug's wells will slope (south) toward the remediation building. A 2-inch diameter by 2 feet long sump will be added at the point where the piping exits the ground. This sump will capture moisture which accumulates in the piping and will be pumped out as needed.

SVE System

A SVE system will be installed at the south end of the Autostop building (Figure 3). This system is described in more detail in Appendix B.

The mechanical system will consist of a blower which pulls soil gas (i.e., LNAPL vapors) from the subsurface and discharges these vapors to the atmosphere. This discharge will be treated to meet DNR Air limits. The LNAPL vapor concentrations will decrease over time and the offgas treatment system will then be removed. For budgeting purposes, we estimate offgas treatment will be used for 6 months. Subsequent venting without offgas treatment will likely require dilution of the air discharge to meet DNR Air limits.

It is not known how long the system will need to operate but based on similar sites, we expect the system to operate for at least 5 years. This will require ongoing maintenance including equipment repair and replacement.

Offgas Treatment

The offgas from the SVE system will be routed through a flame-oxidation unit rented from Catalytic Combustion of Bloomer, Wisconsin. This system will use LP gas to burn the offgas and remove petroleum concentration to below DNR air limits. Appendix B contains a schematic of the treatment system.

Operation and Maintenance

The remediation system will require regular maintenance visits to address any mechanical and operation issues that arise. Additionally, the air discharge will be monitored as required by DNR regulations, that is, daily for 3 days, weekly for 3 weeks, and then monthly thereafter. The air samples will be analyzed for benzene and Total VOCs. As the concentrations decrease and stabilize, the air monitoring may be completed with a PID subject to DNR approval.

Disposal of Remediation Waste

Impacted soil from installation of the extraction wells will be disposed at a landfill. The excavated soil from the trenches is expected to be clean and will be re-used (if suitable sand or gravel) or disposed at gravel pit as clean soils.

Water which accumulates in the knockout tank and pipe sumps will be temporarily stored onsite and disposed either at a POTW or by a waste hauler.

COST ESTIMATE

Appendix C contains summary tables of the estimated cost for the proposed SVE system.

The cost is for:

- SVE System
- Power hookup
- SVE Extraction wells (7)
- Piping (trenching and install)
- System start up
- Operation and Maintenance for First Year
- Reporting (As-Built Report, Two 6 month O&M Reports)

We will use U&C for installing the SVE extraction wells.

We will obtain 3 Bids for the piping (trenching and install). These Bids will be obtained after DNR approves the RAP.

We request a variance for purchase of the SVE system, power hookup, O&M for first year, and reporting.

The cost of future operation of the system will be determined at the end of the first year.

SCHEDULE

Our goal is to install the vents and piping in June of 2015. This requires the cost approval be obtained by March 2015 so that equipment can be ordered, bidding completed, contractors hired, power hookup ordered, etc. Any delays in cost approvals will delay implementation of this Plan.

PROJECT TEAM

Meridian Environmental Consulting, LLC is partnering with REI, Inc. of Wausau to complete the remediation at this site. REI installed and is operating a SVE system across the road from these two sites. This experience will help achieve cost-effective remediation.

The Project Manager and PECFA Agent is Ken Shimko of Meridian. Dave Larsen of REI will be the field supervisor in charge of system assembly, startup, operation and maintenance. Meridian has two engineers (contract employees) who will provide engineering support as needed: Gary Gilbert and Robert Evangelisti (Wisconsin PE).

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.



Date Feb. 14, 2015



I, Robert Evangelisti (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.



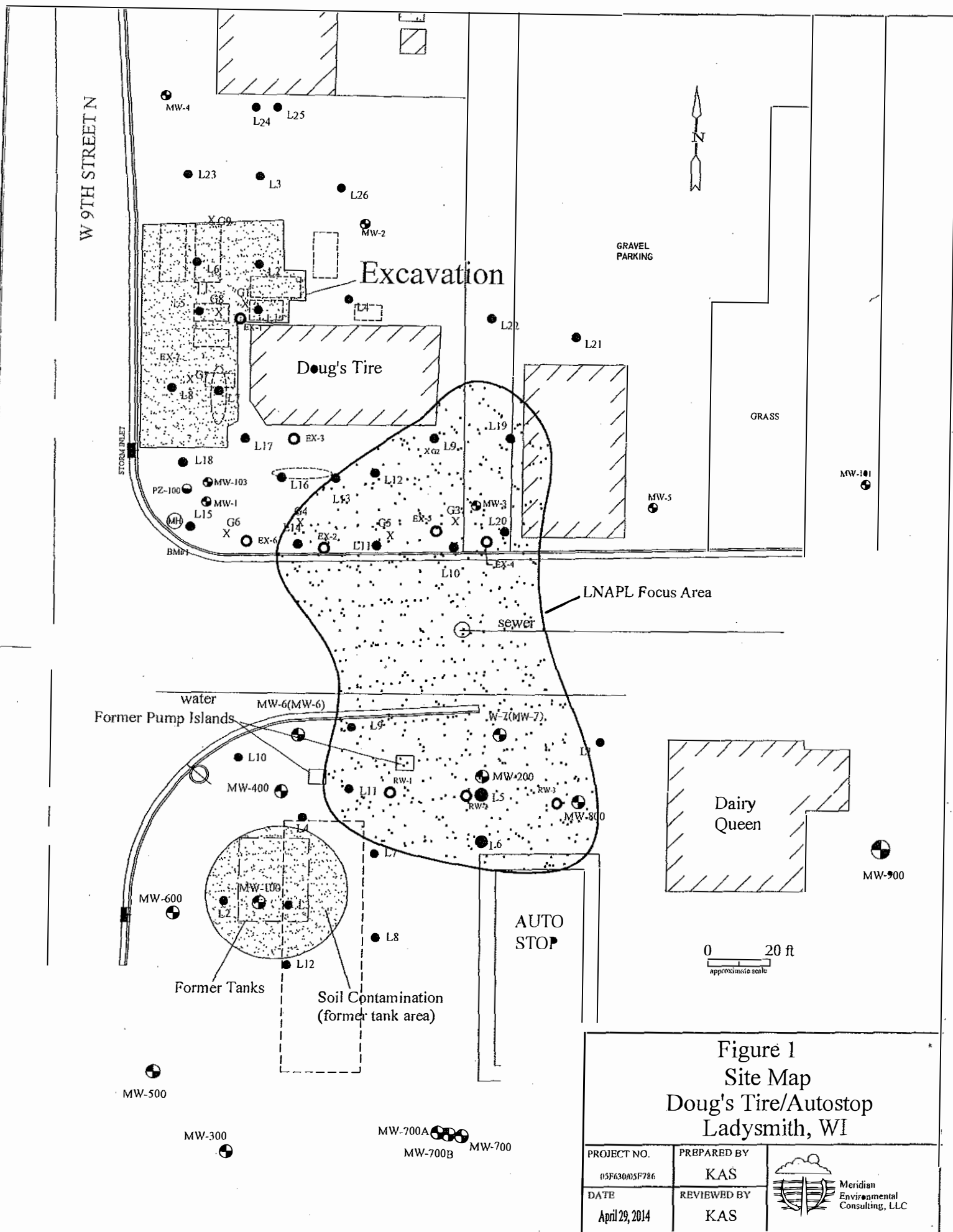
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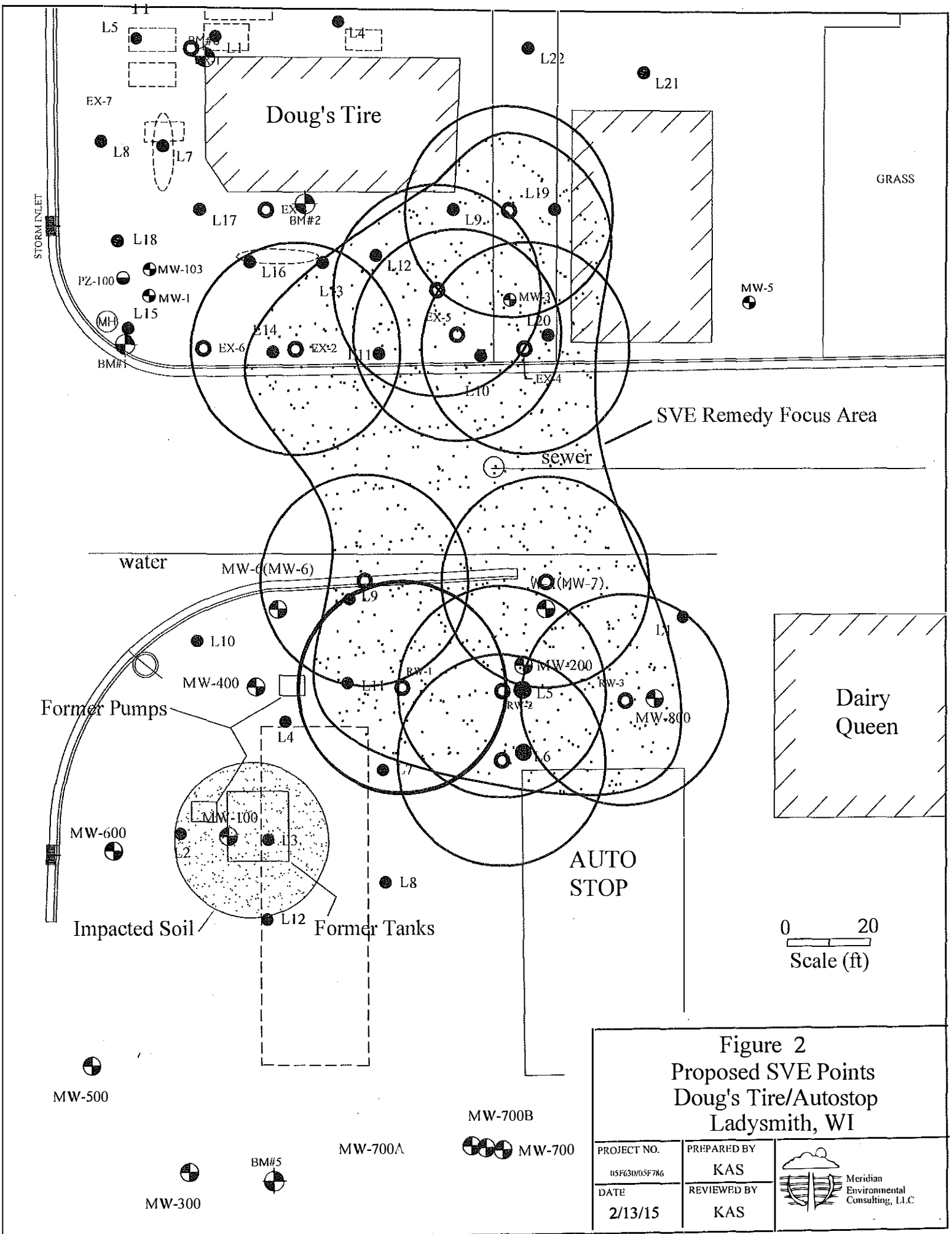
Robert Evangelisti, P.E. CEA, CHMM, CSP

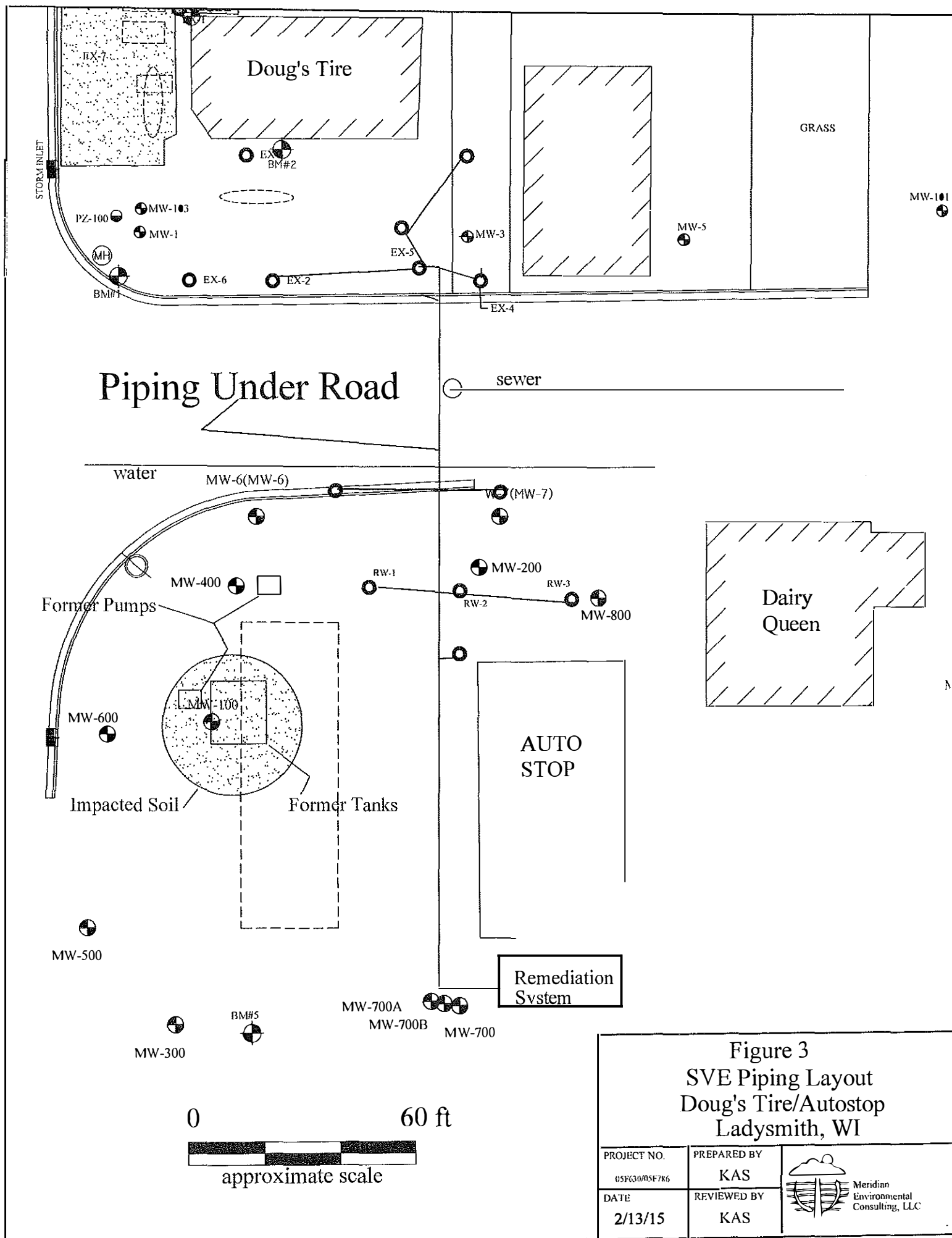


FIGURES

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Appendix A

Pilot Test Results

FIELD TEST DATA FORM - TEST @ RW2

SOIL VAPOR EXTRACTION FIELD TEST

SYSTEM / PRESSURE MEASUREMENTS

Test Date: 4/26/14

Client : Meridian Environmental Consulting, LLC.

Site Name / Location: Doug's Tire / Auto Stop - Ladysmith, WI

Site Personnel: Gary Gilbert / Ken Shimko

Weather Conditions: 50's, partly cloudy, 5-10 mph easterly wind

SYSTEM MEASUREMENTS

SVE TEST @ RW2 , START @ 1200 END @ 1400											
Data Collection Time	time	1150	1215	1300	1345	1400					
Operating Time	hr:min	Backgrnd	0:15	1:00	1:45	2:00					
Flow Rate (E)	SCFM	>100	90	75	70	70					
Blower Pressure (I)	in. H2O	8	60	68	68	68					
LEL (E)	%	0.0	70	60	59	59					
O2 (E)	%	20.9	19.1	19.0	19.1	19.1					
Dilution Air Valve	% Open	Closed	50	50	50	50					

PRESSURE MEASUREMENTS (-)

Data Collection Time	hr:min	1150	1215	1300	1345	1400					
Operating Time	hr:min	Backgrnd	0:15	1:00	1:45	2:00					
Extr. Point Pressure	in. H2O	0.0	58	66	66	66					
MW200	in. H2O	0.0	3.00	2.40	2.40	2.30					
MW7	in. H2O	0.0	0.75	0.70	0.70	0.70					
RW1	in. H2O	0.0	0.75	0.60	0.70	0.70					
EX5	in. H2O	0.0	0.40	0.45	0.45	0.45					
MW400	in. H2O	0.0	0.40	0.25	0.30	0.30					
MW3	in. H2O	0.0	0.15	0.25	0.25	0.25					
EX4	in. H2O	0.0	0.15	0.20	0.20	0.20					
RW3	in. H2O	0.0	0.10	0.10	0.10	0.10					
MW800	in. H2O	0.0	0.10	0.05	0.05	0.05					
MW100	in. H2O	0.0	0.10	0.00	0.00	0.00					
MW6	in. H2O	0.0	0.00	0.00	0.00	0.00					
EX3	in. H2O	0.0	0.00	0.00	0.00	0.00					

COMMENTS / OBSERVATIONS:

I = Blower Inlet, E = Blower Exhaust

Background = Data collected w/system running (not connected to extraction point)

Dilution Air Valve = 1 inch plastic ball valve

At 80 inches of water vacuum (approx. 35 scfm) at extraction point with closed dilution valve, system pulled up liquid from extraction point

Extraction blower = Rotron En606, 1ph/230v

FIELD TEST DATA FORM - TEST @ EX4
SOIL VAPOR EXTRACTION FIELD TEST
SYSTEM / PRESSURE MEASUREMENTS

Test Date: 4/26/14

Client : Meridian Environmental Consulting, LLC.

Site Name / Location: Doug's Tire / Auto Stop - Ladysmith, WI

Site Personnel: Gary Gilbert / Ken Shimko

Weather Conditions: 50's, partly cloudy, 5-10 mph easterly wind

SYSTEM MEASUREMENTS

SVE TEST @ EX4, START @ 1515 END @ 1600										
Data Collection Time	Time	1500	1530	1600						
Operating Time	hr:min	Backgrnd	0:15	0:45						
Flow Rate (I)	SCFM	>100	110	110						
Blower Pressure (I)	in. H2O	9	50	48						
PID (E)	PPMv	0.0	778	772						
LEL (E)	%	0.0	6	12						
O2 (E)	%	20.9	16.8	17.5						
Dilution Air Valve	% Open	Closed	50	50						

PRESSURE MEASUREMENTS (-)

Data Collection Time	hr:min	1500	1530	1600						
Operating Time	hr:min	Backgrnd	0:15	0:45						
Extr. Point Pressure	in. H2O	0.0	28	27						
EX5	in. H2O	0.0	20	20						
MW3	in. H2O	0.0	9	12						
MW5	in. H2O	0.0	1.10	1.25						
RW2	in. H2O	0.0	0.75	0.75						
MW400	in. H2O	0.0	0.50	0.50						
RW1	in. H2O	0.0	0.40	0.50						
MW200	in. H2O	0.0	0.35	0.35						
MW7	in. H2O	0.0	0.35	0.35						
103	in. H2O	0.0	0.25	0.25						
MW100	in. H2O	0.0	0.20	0.15						
EX3	in. H2O	0.0	0.15	0.15						
EX6	in. H2O	0.0	0.10	0.15						
RW3	in. H2O	0.0	0.05	0.05						
MW800	in. H2O	0.0	0.05	0.05						
EX7	in. H2O	0.0	0.00	0.00						
MW6	in. H2O	0.0	0.00	0.00						

COMMENTS / OBSERVATIONS:

I = Blower Inlet, E = Blower Exhaust

Background = Data collected w/system running (not connected to extraction point)

Dilution Air Valve = 1 inch plastic ball valve

Extraction blower = Rotron En606, 1ph/230v

Tested EX5 and MW3 : Tests could not be run due to low permeability soils and/or insufficient air flow from formation

At approximately 1630 test was discontinued due to reduced air flow and increased extraction point pressure

RW-2 EMISSION RATE INFORMATION (50 scfm)

SVE AIR RESULTS - RW2

LADYSMITH, WISCONSIN

Sample Parameters	CAS No.	Average Conc. (ug/m3)	Emission Rate (ug/sec)	Emission Rate (lbs/hr)	Emission Rate (lbs/day)	Emission Rate (lbs/yr)	Emission Rate (tons/yr)
Benzene	71-43-2	1,560,000	36,816	0.3	7.0	2,554.3	1.277
Total VOCs (THC as gas)		95,100,000	2,244,360	17.8	426.6	155,711.9	77.856

NOTES:

Air Flow Rate (SCFM) = 50

CONVERSIONS

Liters/Cubic Feet =	28.32
Pounds/Gram =	0.0022
Min/Day =	1440
Grams/Micrograms =	0.000001
Min/Sec =	0.0166667

Maximum Emissions:

Benzene = 228 lbs/yr (936 if stack is 25 ft high)
 Total VOCs = 216 lbs/day
 Total VOCs = 78,840 lbs/yr
 Total VOCs must be less than 5.7 lb/hr

FORMULAS

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

Sample collected from RW2 on 5/14/14 from Ken Shimko using smaller air blower than used during SVE test.

1 ppmv Benzene = 3,250 ug/m3
 1 ppmv THC as Gasoline = 4,340 ug/m3

2000 ppmv = 868000 ug/m3
 gasoline = 6.2 lbs/gal
 water = 8.345 lb/gal

EX-4 EMISSION RATE INFORMATION (50 scfm)

SVE AIR RESULTS - EX4 LADYSMITH, WISCONSIN

Sample Parameters	CAS No.	Average Conc. (ug/m3)	Emission Rate (ug/sec)	Emission Rate (lbs/hr)	Emission Rate (lbs/day)	Emission Rate (lbs/yr)	Emission Rate (tons/yr)	Emission Rate (gal/yr)*
Benzene	71-43-2	997,000	23,529	0.186	4.47	1,632.4	0.816	259.117
Total VOCs*(THC as gas)		65,100,000	1,536,360	12.168	292.03	106,591.4	53.296	16,919.274

NOTES:

Air Flow Rate (SCFM) = 50

*assume 6.2 lb/gal gasoline

CONVERSIONS

Liters/Cubic Feet =	28.32
Pounds/Gram =	0.0022
Min/Day =	1440
Grams/Micrograms =	0.000001
Min/Sec =	0.0166667

Maximum Emissions:

Benzene = 228 lbs/yr
Total VOCs = 216 lbs/day
Total VOCs = 78,840 lbs/yr

FORMULAS

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

Sample collected from EX4 on 5/14/14 from Ken Shimko using smaller air blower than used during SVE test.

1 ppmv Benzene = 3,250 ug/m3

1 ppmv THC as Gasoline = 4,340 ug/m3

2000 ppmv = 368000 ug/m3 0.0019096 lb/m3 0.50577666 lb/gal

gasoline = 6.2 lbs/gal

water = 8.345 lb/gal



Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

May 20, 2014

Kennith Shimko
Meridain Environmental Consulting, LLC
2711 North Elco Rd
Fall Creek, WI 54742

RE: Project: LADYSMITH
Pace Project No.: 4096321

Dear Kennith Shimko:

Enclosed are the analytical results for sample(s) received by the laboratory on May 14, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me:

Sincerely,

Brian Basten
brian.basten@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
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(920)469-2436

CERTIFICATIONS

Project: LADYSMITH

Pace Project No.: 4096321

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alabama Certification #40770

Alabama Certification #40770

Alaska Certification #: UST-078

Alaska Certification #MN00064

Arizona Certification #: AZ-0014

Arkansas Certification #: 88-0680

California Certification #: 01155CA

Colorado Certification #Pace

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: 8TMS-L

Florida/NELAP Certification #: E87605

Guam Certification #: Pace

Georgia Certification #: 959

Idaho Certification #: MN00064

Hawaii Certification #MN00064

Illinois Certification #: 200011

Indiana Certification#C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky Dept of Envi. Protection - DW #90062

Kentucky Dept of Envi. Protection - WW #:90062

Louisiana DEQ Certification #: 3086

Louisiana DHH #: LA140001

Maine Certification #: 2013011

Maryland Certification #: 322

Michigan DEPH Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: Pace

Montana Certification #: MT0092

Nebraska Certification #: Pace

New Jersey Certification #: MN-002

New Jersey Certification #: MN-002

New York Certification #: 11647

North Carolina Certification #: 530

North Carolina State Public Health #: 27700

North Dakota Certification #: R-036

Ohio EPA #: 4150

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon Certification #: MN200001

Oregon Certification #: MN300001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification

Saipan (CNMI) #MP0003

South Carolina #:74003001

Texas Certification #: T104704192

Tennessee Certification #: 02818

Utah Certification #: MN000642013-4

Virginia DGS Certification #: 251

Virginia/VELAP Certification #: Pace

Washington Certification #: C486

Wisconsin Certification #: 999407970

West Virginia Certification #: 382

West Virginia T-15 Approval

West Virginia DHHR #:9952C

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SAMPLE SUMMARY

Project: LADYSMITH

Pace Project No.: 4096321

Lab ID	Sample ID	Matrix	Date Collected	Date Received
4096321001	RW-2 (1) +(2)	Air	05/13/14 09:30	05/14/14 08:35
4096321002	EX-4 (1) +(2)	Air	05/13/14 10:15	05/14/14 08:35

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SAMPLE ANALYTE COUNT

Project: LADYSMITH

Pace Project No.: 4096321

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
4096321001	RW-2 (1) +(2)	TO-3Air	JRB	10	PASI-M
4096321002	EX-4 (1) +(2)	TO-3 Air	JRB	10	PASI-M

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PROJECT NARRATIVE

Project: LADYSMITH
Pace Project No.: 4096321

Method: TO-3 Air
Description: TO3 GCV AIR BTEX BAG
Client: Meridian Environmental Consulting, LLC
Date: May 20, 2014

General Information:

2 samples were analyzed for TO-3 Air. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Internal Standards:

All internal standards were within QC limits with any exceptions noted below.

Surrogates:

All surrogates were within QC limits with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: AIR/20265

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- EX-4 (1) +(2) (Lab ID: 4096321002)
 - THC as Gas
 - n-Hexane
- RW-2 (1) +(2) (Lab ID: 4096321001)
 - THC as Gas
 - n-Hexane

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: LADYSMITH

Pace Project No.: 4096321

Sample: RW-2 (1) +(2) Lab ID: 4096321001 Collected: 05/13/14 09:30 Received: 05/14/14 08:35 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO3 GCV AIR BTEX BAG Analytical Method: TO-3 Air									
Benzene	480	ppmv	10.0	5.0	100		05/15/14 17:32	71-43-2	
Ethylbenzene	23.6	ppmv	10.0	0.80	100		05/15/14 17:32	100-41-4	
n-Hexane	4210	ppmv	10.0	0.60	100		05/15/14 17:32	110-54-3	E
Methyl-tert-butyl ether	756	ppmv	10.0	5.0	100		05/15/14 17:32	1634-04-4	
THC as Gas	21900	ppmv	100	12.8	100		05/15/14 17:32		E
Toluene	501	ppmv	10.0	5.0	100		05/15/14 17:32	108-88-3	
1,2,4-Trimethylbenzene	16.4	ppmv	10.0	2.0	100		05/15/14 17:32	95-63-6	
1,3,5-Trimethylbenzene	1.8J	ppmv	10.0	1.7	100		05/15/14 17:32	108-67-8	
m&p-Xylene	74.4	ppmv	20.0	1.6	100		05/15/14 17:32	179601-23-1	
o-Xylene	18.8	ppmv	10.0	0.90	100		05/15/14 17:32	95-47-6	

Sample: EX-4 (1) +(2) Lab ID: 4096321002 Collected: 05/13/14 10:15 Received: 05/14/14 08:35 Matrix: Air

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
TO3 GCV AIR BTEX BAG Analytical Method: TO-3 Air									
Benzene	307	ppmv	10.0	5.0	100		05/15/14 18:03	71-43-2	
Ethylbenzene	11.2	ppmv	10.0	0.80	100		05/15/14 18:03	100-41-4	
n-Hexane	2680	ppmv	10.0	0.60	100		05/15/14 18:03	110-54-3	E
Methyl-tert-butyl ether	519	ppmv	10.0	5.0	100		05/15/14 18:03	1634-04-4	
THC as Gas	15000	ppmv	100	12.8	100		05/15/14 18:03		E
Toluene	257	ppmv	10.0	5.0	100		05/15/14 18:03	108-88-3	
1,2,4-Trimethylbenzene	5.0J	ppmv	10.0	2.0	100		05/15/14 18:03	95-63-6	
1,3,5-Trimethylbenzene	1.8J	ppmv	10.0	1.7	100		05/15/14 18:03	108-67-8	
m&p-Xylene	51.2	ppmv	20.0	1.6	100		05/15/14 18:03	179601-23-1	
o-Xylene	17.1	ppmv	10.0	0.90	100		05/15/14 18:03	95-47-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: LADYSMITH
Pace Project No.: 4096321

QC Batch: AIR/20265 Analysis Method: TO-3 Air
QC Batch Method: TO-3Air Analysis Description: T03 GCV AIR BTEX BAG
Associated Lab Samples: 4096321001, 4096321002

METHOD BLANK: 1682155 Matrix: Air
Associated Lab Samples: 4096321001, 4096321002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ppmv	<0.020	0.10	05/15/14 12:24	
1,3,5-Trimethylbenzene	ppmv	<0.017	0.10	05/15/14 12:24	
Benzene	ppmv	<0.050	0.10	05/15/14 12:24	
Ethylbenzene	ppmv	<0.0080	0.10	05/15/14 12:24	
m&p-Xylene	ppmv	<0.016	0.20	05/15/14 12:24	
Methyl-tert-butyl ether	ppmv	<0.050	0.10	05/15/14 12:24	
n-Hexane	ppmv	<0.0060	0.10	05/15/14 12:24	
o-Xylene	ppmv	<0.0090	0.10	05/15/14 12:24	
THC as Gas	ppmv	0.19J	1.0	05/15/14 12:24	
Toluene	ppmv	<0.050	0.10	05/15/14 12:24	

LABORATORY CONTROL SAMPLE & LCSD: 1682156

1682157

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ppmv	1	1.1	0.92	106	92	70-130	14	30	
1,3,5-Trimethylbenzene	ppmv	1	1.0	0.92	104	92	70-130	12	30	
Benzene	ppmv	1	0.95	0.91	95	91	70-130	4	30	
Ethylbenzene	ppmv	1	0.96	0.88	96	88	70-130	8	30	
m&p-Xylene	ppmv	2	1.9	1.8	97	89	70-130	8	30	
Methyl-tert-butyl ether	ppmv	1	0.96	0.90	96	90	70-130	6	30	
n-Hexane	ppmv	1	1.1	1.1	109	108	70-130	6	30	
o-Xylene	ppmv	1	0.98	0.89	98	89	70-130	9	30	
THC as Gas	ppmv	10	9.7	9.2	97	92	70-130	5	30	
Toluene	ppmv	1	0.94	0.90	94	90	70-130	4	30	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project LADYSMITH
Pace Project No.: 4096321

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASi-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: LADYSMITH

Pace Project No.: 4096321

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
4096321001	RW-2 (1) +(2)	TO-3 Air	AIR/20265		
4096321002	EX-4 (1) +(2)	TO-3 Air	AIR/20265		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A

Required Client Information:

Company: Meredian Env. Svc.
Address: 2711 N. El Com Rd
Fall Creek WI 54742
Email To: kshimko.meredianenv.com
Phone: 715-579-0723 Fax: 9 mar 11
Requested Due Date/TAT: _____

Section B

Required Project Information:

Report To: Ken Shimko
Copy To: _____
Purchase Order No.: _____
Project Name: Ladysmith
Project Number: _____

Section C

Invoice Information:

Attention: Ken Shimko
Company Name: Meredian E.C.
Address: _____
Pace Quote Reference: PELFA
Pace Project Manager: Scott UnzC
Pace Profile #: _____

Page: _____ of _____

409632L
1742457

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location

STATE: _____

ITEM #	Section D Required Client Information		Matrix Codes MATRIX / CODE		MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analysis Test	Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)	Pace Project No / Lab I.D.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
							COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	T	O		C	S	P	N	Fe	Mn	Cu	Zn	Cd	Cr			Hg	As	Se	Co	Ni	Mo	V	Ba	Ca	Mg	K	Na	Cl	Br	I	F	S	Si	Al	Ti	Zr	Nb	Ta	Sr	Ba	Pb	Sn	Sb	Bi	Te	Po	At	Rn	Th	Pa	U	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn	Fr	Ra	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	Yt	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Ken Shimko

SIGNATURE of SAMPLER: [Signature]

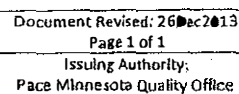
DATE Signed (MM/DD/YY): 5/13/14

Temp in °C

Received on loc (Y/N)

Custody Sealed Cooler (Y/N)

Sample Intact (Y/N)



Page 11 of 11



Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

ANALYTICAL RESULTS

Client: PASI Wisconsin
Phone: 920-321-9455

Lab Project Number: 10267237
Project Name: 4096321 Meridian Environmental

Lab Sample No: 4096321001 ProjSampleNum: 4096321001 Date Collected: 05/13/14 9:30
Client Sample ID: RW-2 (1) +(2) Matrix: Air Date Received: 05/14/14 8:35

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
------------	---------	-------	--------------	----	----------	---------	------------

Air

TO-3 Air

1,2,4-Trimethylbenzene	82000	ug/m3	50000	100	05/15/14 17:32 JRB	95-63-6	
1,3,5-Trimethylbenzene	9000J	ug/m3	50000	100	05/15/14 17:32 JRB	108-67-8	
Benzene	1560000	ug/m3	32000	100	05/15/14 17:32 JRB	71-43-2	
Ethylbenzene	104000	ug/m3	44000	100	05/15/14 17:32 JRB	100-41-4	
m&p-Xylene	328000	ug/m3	88000	100	05/15/14 17:32 JRB	179601-23-1	
Methyl-tert-butyl ether	2770000	ug/m3	37000	100	05/15/14 17:32 JRB	1634-04-4	
n-Hexane	15100000	ug/m3	36000	100	05/15/14 17:32 JRB	110-54-3	E
o-Xylene	83000	ug/m3	44000	100	05/15/14 17:32 JRB	95-47-6	
THC as Gas	95100000	ug/m3	430000	100	05/15/14 17:32 JRB		E
Toluene	1920000	ug/m3	38000	100	05/15/14 17:32 JRB	108-88-3	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT

Units Conversion Request



Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

ANALYTICAL RESULTS

Client: PASI Wisconsin
Phone: 920-321-9455

Lab Project Number: 10267237
Project Name: 4096321 Meridian Environmental

Lab Sample No: 4096321002 ProjSampleNum: 4096321002 Date Collected: 05/13/14 10:15
Client Sample ID: EX-4 (1) +(2) Matrix: Air Date Received: 05/14/14 8:35

Parameters	Results	Units	Report Limit	DF	Analyzed	CAS No.	Qualifiers
------------	---------	-------	--------------	----	----------	---------	------------

Air

TO-3 Air

1,2,4-Trimethylbenzene	25000J	ug/m3	50000	100	05/15/14 18:03 JRB	95-63-6	
1,3,5-Trimethylbenzene	9000J	ug/m3	50000	100	05/15/14 18:03 JRB	108-67-8	
Benzene	997000	ug/m3	32000	100	05/15/14 18:03 JRB	71-43-2	
Ethylbenzene	49400	ug/m3	44000	100	05/15/14 18:03 JRB	100-41-4	
m&p-Xylene	226000	ug/m3	88000	100	05/15/14 18:03 JRB	179601-23-1	
Methyl-tert-butyl ether	1900000	ug/m3	37000	100	05/15/14 18:03 JRB	1634-04-4	
n-Hexane	9600000	ug/m3	36000	100	05/15/14 18:03 JRB	110-54-3	E
o-Xylene	75500	ug/m3	44000	100	05/15/14 18:03 JRB	95-47-6	
THC as Gas	65100000	ug/m3	430000	100	05/15/14 18:03 JRB		E
Toluene	984000	ug/m3	38000	100	05/15/14 18:03 JRB	108-88-3	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

SUPPLEMENTAL REPORT

Units Conversion Request



Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

ANALYTICAL RESULTS

Client: PASI Wisconsin
Phone: 920-321-9455

Lab Project Number: 10267237
Project Name: 4096321 Meridian Environmental

PARAMETER FOOTNOTES

ND Not detected at or above adjusted reporting limit

NC Not Calculable

J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

[E] Analyte concentration exceeded the calibration range. The reported result is estimated.

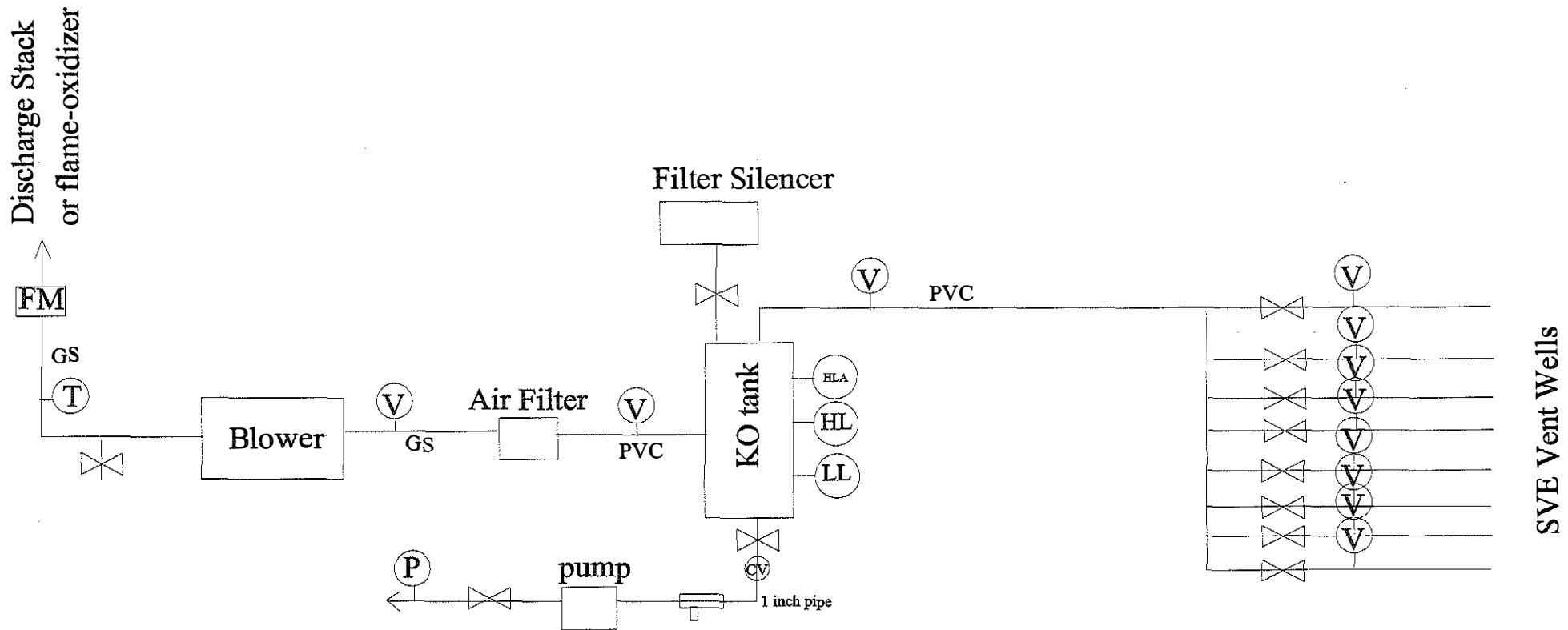
SUPPLEMENTAL REPORT

Units Conversion Request

Appendix B

SVE System Details

SVE System Schematic



- | | | | |
|---|---------------------------|--|-------------------|
|  | Wye strainer |  | Bull Valve |
| GS | 2 " galvanized steel pipe |  | vacuum gauge |
| PVC | 2 " Sch. 40 PVC |  | temperature gauge |
| HL,LL,HLA | Level Floats |  | pressure gauge |
| | |  | flow meter |
| | |  | check valve |

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

PROJECT NO.
05F630/786

PREPARED BY
KAS

DATE
2/13/15

REVIEWED BY
KAS



SVE System Trailer Description

AutoStop and Doug's Tire Combined System O&M

-----SVE EQUIPMENT-----

1 - EN6F72L Rotron EN6F72L 5HP 3PH 230/460V 3PH 50/60HZ
1-AWS120-2 Aluminum Air Water Separator, 120 Gallons, 50 Gallons Working Capacity, 2" NPT Connections, 2" Clear PVC Sight Glass with I.L HL IILA Float Tree
1-Goulds NPE Series Pump, 1/2HP 1/60/115-230 XP
1-2" Vacuum Relief Valve
1-Solberg 2" Vacuum Inlet Filter, L Style, Polyester Element, Model
1-2" Solberg Filter Silencer
1-Solberg 2" FPT Discharge Silencer
12 -Dwyer Vacuum Gauge, 0-100" W.C.
1-Bimetal thermometer, 3" dial, 2-1/2" stem length, range 50/550°F, (10/290°C), 5°F (5°C) div.
1-Ametek 2" Flow Meter 45-225 SCFM Range

Part SVE Piping:

2" Galvanized Steel Exhaust Through Roof with Silencer, Flow Meter and Temp Gauge, 1/4" Sample Port
2" SCH 40 PVC From Blower to Air Filter to KO Tank
2" SCH 40 PVC Dilution Line with Ball Valve and Filter Silencer
2" SCH 40 PVC Manifold Header with 8 x Zones
8 x 2" SCH 40 PVC Manifold Zones with Ball Valve, Vacuum Gauge, Pipe Stub Through Wall
1" SCH 40 PVC Transfer Pump Piping with Inlet Ball Valve, Check Valve, Wye Strainer, Outlet Ball Valve

-----SYSTEM ENCLOSURE-----

Trailer- New 6' x 12' Hercules w/6'6" interior height, 36" side door, rear double doors, roof vent, gravel guard, 3/8 walls, 3/4 floor, 3500 torsion axle, radial tires, wood luan ceiling, front & rear headers enclosed (for proper insulation), insulate ceiling, insulate walls, 3 year warranty, .030 aluminum exterior

1- Dayton 12inch Hazardous Location Exhaust Fan, 115/208-230V 1PH, 1/4HP Motor, 1347 CFM Max

1-XC B3 N0 Crouse Hinds 1.8KW 240V 1PH XP Heater

1- Crouse Hinds Ceiling Mount XP Light Fixture for Class 1 Div 2 Locations

1- Dayton 12" Galvanized Steel Fan Guard

1- Dayton 12" Wall

2- Crouse Hinds BiMetal Thermostat XP

1- Crouse Hinds Light Switch XP

1- Dayton Intake Louver, 12-18", Galv. Steel

Part Electrical Conduit, Wire, Boxes, Fittings, Etc. For Class 1 Div 2 Group D, Electrical Installation Inside Trailer, General Industrial Electrical, Installation of Equipment on Trailer Exterior Over Tongue

-----CONTROL PANEL-----

Control_Panel 240V 1PH Control Panel Consisting of:

1 - R9D3I00U - EATON 100A NON-FUSIBLE DISCONNECT

1 - PHB2N12F - EATON BLACK/BLUE DISC. HANDLE MECIL

1 - SF320PH10X10 - EATON 320mm DISC. SHAFT

1 - TS3R9DT - EATON DISC. TERMINAL SCREEN, TOP

1 - TS3R9DB - EATON DISC. TERMINAL SCREEN, BOTTOM

2 - LK3R9DL - EATON DISC. LUGS

2 - M22-WRLK3-2-G-K20-230G - EATON 3POS GREEN ILL.

1 - M22-L-R-230R - EATON RED PILOT LIGHT, 85-264VAC

1 - M22-L-W-230W - EATON WHITE PILOT LIGHT, 85-264VAC

1 - M22-PVT-K01 - EATON EMERGENCY STOP, INC

1 - M22-D-S-K01 - EATON BLACK PUSHBUTTON, INC

1 - GBK5 - EATON GROUNDING BAR 5 POSITION

1 - C0250E2AFB - EATON 250VA TRANSFORMER MULTI-TAP

2 - QCR1015 - EATON BREAKER, 1POLE, 15A

2 - QCR2015 - EATON BREAKER, 2POLE, 15A

1 - WMZT3D40 - EATON MCB, 3POLE, 40A, D CURVE

1 - WMZT3D10 - EATON MCB, 3POLE, 10A, D CURVE

2 - RH3B-UAC120 - IDEC 3POLE RELAY 120V

2 - SH3B-05 - IDEC 3POLE SOCKET

- 1 - SP1-240S - EATON PANEL MT SURGE PROTECTOR, 240S
- 2 - 9170/20-12-21 - DUAL CHANNEL ISOLATOR
- 1 - SCE-36EL3612LP - SAGINAW NEMA 4, 36X36X12
- 2 - SCE-36P36 - SAGINAW SUB-PANEL 36X36
- 1 - SCE-PLHG - SAGINAW PADLOCKING HOUSING LATCH
- 2 - SCE-RH44 - SAGINAW RAIN HOOD
- 1 - SCE-ELSP3 - SAGINAW SWING OUT PANEL KIT
- 1 - SCE-FA44 - SAGINAW FAN PACKAGE
- 1 - SCE-FGA44 - SAGINAW FILTER AND GRILL PACKAGE
- 1 - KLDR 3 1/2 - LITTELFUSE CLASS CC 3.5A, TIME DELAY
- 2 - KLDR 4 - LITTELFUSE CLASS CC 4A, TIME DELAY
- 1 - N3-210-C - TECO DRIVE 230V, 10HP
- 2 - 6-T-3H-508RPM-406 - E/M HR METER, 115VAC, 2.8-IN RND,
- 6 - 22 LEGENDS - CUSTOM LEGENDS, 22mm, SILVER, BLACK LETTERING
- 1 - XTCE007B10A - EATON CONTACTOR 7A, 120V COIL
- 1 - XTOB006BC1 - EATON OVERLOAD 6A
- 1 - XTCEXFAC20 - EATON AUXILIARY CONTACT, 2NO, B-C FRAME
- 1 - Sensaphone Cell 682 w/ Clear Door
- 1 - UL LISTING
- 1 - MISC ELECTRICAL

Contactor/Overload for 5HP 3PH SVE Blower

Contactor/Overload for 1/2HP 1PH Transfer Pump

2 - HOA Switch, One For Pump One for Blower

1 - Red Pilot Alarm Light

1 - White Pilot Power On Light

1 - E-Stop Push Button

1 - Alarm Reset Push Button

1 - 250VA Control Transformer

Circuit Breakers for Blower, Pump, Lights, Fan, Heater, Surge Protector

IS Relay Barriers for KO Tank Level Floats

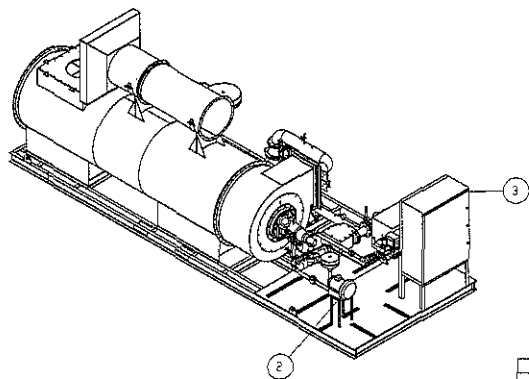
Nema 4 Control Panel Enclosure With Lockable Dead Front and Inner Swing Door

2 - Hour Meters, For Pump and Blower

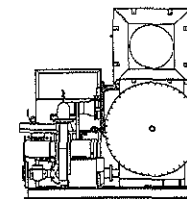
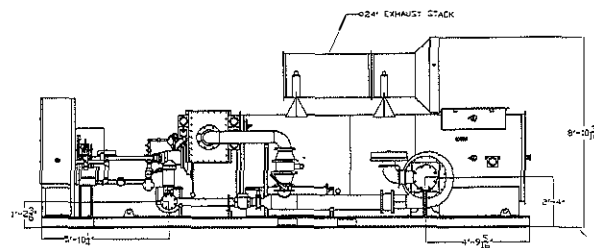
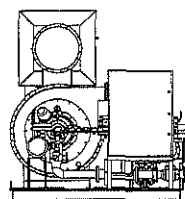
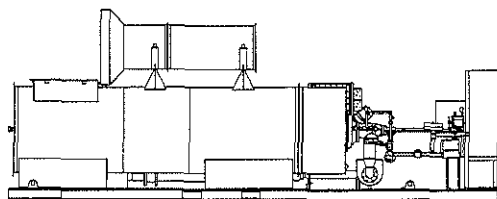
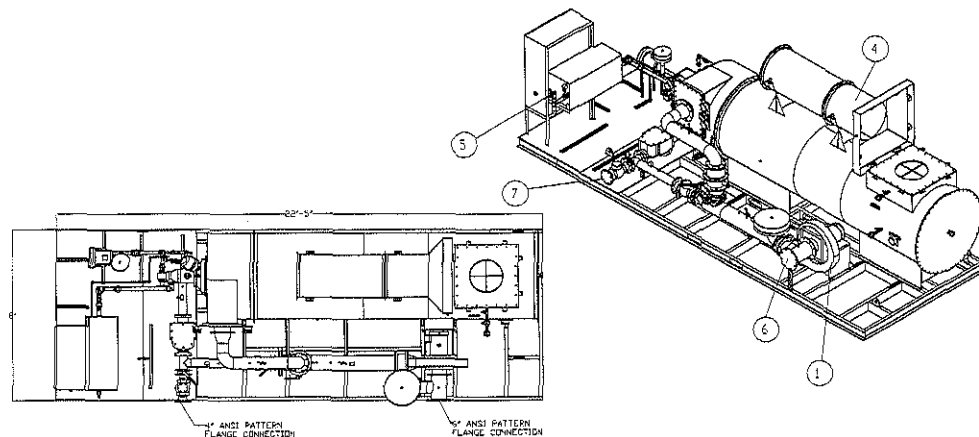
Estimated cost for Proposed Remedial System: \$45,000 (inclusive of any applicable taxes and shipping charges).

All new equipment will be warrantied for a period of one (1) year, unless manufacturer's warranty offers additional warranty coverage.

All prices are valid for a period of thirty (30) days from the date of this letter.



ITEM	DESCRIPTION
1	PROCESS AIR FAN
2	COMBUSTION AIR ASSEMBLY
3	CONTROL PANEL
4	EXHAUST STACK
5	FUEL TRAIN
6	PROCESS INLET
7	SECONDARY PROCESS INLET



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

REV	DESCRIPTION	DATE	BY	DRAWING STATUS	DATE	BY	MAT'L	SEE BOM	WEIGHT	N/A	TOLERANCES	INCH [mm]	DATE	CUSTOMER	TITLE	PROJECT/PRODUCT	DRAWING	REV	SIZE
1				X PRELIMINARY	1/13/11	DDH							1/13/11	CATALYTIC COMBUSTION	SALES DRAWING				
2				FOR APPROVAL									NTS		FLAME-OX MODEL 2				
3				APPROVED FOR FAB									DDH		GENERAL ARRANGEMENT				
4				AS BUILT									CHECKED BY:						
5				AS FIELD MODIFIED									LAC						

SYMBOL	DESCRIPTION
	CLOSE
	BALL
	BUTTERFLY
	CHECK
	GATE
	OPERATOR MEETING
	UNLOCKED PLUS
	VACUUM RELIEF
	PRESSURE RELIEF
	PRESSURE REDUCING REMOTE RELIEF
	PRESSURE REDUCING EXTERNAL PRESSURE
	PRESSURE REDUCING DIFFERENTIAL PRESSURE
	PRESSURE REDUCING VALVE
	3 WAY
	REDUCER
	Y-SPANDER
	SAMPLE/TEST PORT
	SOLOW/AIR PORT
	FLANGE
	UNION
	ORIFICE PLATE
	VALVE NORMALLY OPEN
	VALVE NORMALLY CLOSED

OPERATORS

SYMBOL	DESCRIPTION
	M
	OPERATOR
	PNEUMATIC ACTUATOR
	PNEUMATIC VALVE
	SV
	SIGNAL

LIQUID RING PUMP	INTERNAL PUMP	ROTARY VANE BLOWER	ROTARY VANE BLOWER	ROTARY VANE BLOWER
VALE COMPRESSOR	CENTRIFUGAL PUMP	PROGRESSIVE CAVITY PUMP	GAS BURNER	GAS MOTOR
HEAT EXCHANGER	CENTRIFUGAL FAN	PRESSURE BLOWER	POSITIVE DISPLACEMENT BLOWER	VENTILATION FAN
AIR STRIPPER	PARTICULATE SEPARATOR	CONTROL PANEL		
VAPOR/LIQUID SEPARATOR	GAS/LIQUID SEPARATOR	GAS/CLUSTAL SEPARATOR		

	SPARK CENTER		PNEUMATIC ACTUATOR
	FLAME ARROW		PNEUMATIC ACTUATOR
	FLAME CHECK		PNEUMATIC ACTUATOR
	FLAME CHECK		PNEUMATIC ACTUATOR
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	FLAME CHECK		

FIRST LETTER(S)		SUCCEDING LETTERS																																								
LETTER	NEASURED OR INITIATING VARIABLE	MODIFIER	PASSIVE OR POSITIVE FUNCTION	OUTPUT FUNCTION																																						
A	ANALYSIS (+)		ALARM	USERS CHOICE (+)	USERS CHOICE (+)																																					
B	BARRIER, COMBUSTION		CAUSTIC	CONNECTOR	CONTROL																																					
C	CONDUCTIVITY		CRYSTALLINE																																							
D	DENSITY		DIFFUSION	SENSOR (PRIMARY ELEMENT)																																						
E	EMF		ENVIRONMENTAL																																							
F	FLOW RATE		FAN/FILTER/AIR	GLASS	HEATER																																					
G	GAUGE		HEAT																																							
H	HAND (MANUAL)		HOIST	INDICATOR																																						
I	IDENTIFICATION		IDENTIFY	MODIFY																																						
J	JOB		JOINT																																							
K	TIME OR SCHEDULE		CHANGE RATE		CONTROL STATION																																					
L	LEVEL			LIGHT (FLUO)																																						
M	MOTION		MODIFY	MOBILE (DEVICE)	USERS CHOICE (+)																																					
N	NEUTRAL		NOISE	OFFICIAL INSTRUCTION																																						
O	USERS CHOICE (+)		NORMALLY		USERS CHOICE (+)																																					
P	PRESSURE (OR VACUUM)			POINT (TEST CONNECTION)																																						
Q	QUANTITY		INTERPRET	INTEGRATE	PORT																																					
R	REACTION		RECORD	RECORD ON PRINT	REPLACEMENT																																					
S </tr <tr> <td>T</td> <td>TEMPERATURE</td> <td></td> <td>STABILITY</td> <td>TEMPERATURE</td> <td>TRANSIT</td> </tr> <tr> <td>U</td> <td>MULTIVARIABLE (+)</td> <td></td> <td>VELOCITY</td> <td>MULTI-FUNCTION (+)</td> <td>MULTI-FUNCTION (+)</td> </tr> <tr> <td>V</td> <td>VIBRATION</td> <td></td> <td></td> <td>VALVE</td> <td>VALVE OR DAMPER</td> </tr> <tr> <td>W</td> <td>WEIGHT</td> <td></td> <td>WELL</td> <td></td> <td></td> </tr> <tr> <td>X</td> <td>EXPOSURE</td> <td></td> <td></td> <td>UNCLASSIFIED (+)</td> <td>UNCLASSIFIED (+)</td> </tr> <tr> <td>Y</td> <td>HYDROSCOPIC (+)</td> <td></td> <td></td> <td></td> <td>RELAY OR COMPUTE (+)</td> </tr> <tr> <td>Z</td> <td>EVENT OR STATE</td> <td></td> <td></td> <td></td> <td>DRIVE ACTUATOR OR CONTROL ELEMENT</td> </tr>	T	TEMPERATURE		STABILITY	TEMPERATURE	TRANSIT	U	MULTIVARIABLE (+)		VELOCITY	MULTI-FUNCTION (+)	MULTI-FUNCTION (+)	V	VIBRATION			VALVE	VALVE OR DAMPER	W	WEIGHT		WELL			X	EXPOSURE			UNCLASSIFIED (+)	UNCLASSIFIED (+)	Y	HYDROSCOPIC (+)				RELAY OR COMPUTE (+)	Z	EVENT OR STATE				DRIVE ACTUATOR OR CONTROL ELEMENT
T	TEMPERATURE		STABILITY	TEMPERATURE	TRANSIT																																					
U	MULTIVARIABLE (+)		VELOCITY	MULTI-FUNCTION (+)	MULTI-FUNCTION (+)																																					
V	VIBRATION			VALVE	VALVE OR DAMPER																																					
W	WEIGHT		WELL																																							
X	EXPOSURE			UNCLASSIFIED (+)	UNCLASSIFIED (+)																																					
Y	HYDROSCOPIC (+)				RELAY OR COMPUTE (+)																																					
Z	EVENT OR STATE				DRIVE ACTUATOR OR CONTROL ELEMENT																																					

	MODIFIER	
	MINISTER	
	DSS CHOICE (2)	
	USED	
	CARET	
	M	
	W	
	DSS CHOICE (2)	
	EN	
	FEED	
	ELECTION (2)	
	Q-ASSIST (2)	

EXAM 42

QUESTION 12

CURRENT TO PNEUMATIC TRANSDUCER (MOUNTED BEHIND THE PANEL)

A ANALOG
B DIGITAL
C VOLTAGE
D FREQUENCY
E CURRENT
F PNEUMATIC
G PULSE FREQUENCY
H PULSE DURATION

ANSWER: B

[illegible]

SIGNAL		ON AND OFF CYCLE LIGHTS
☐ INSTRUMENT		OPENED AND CLOSED POSTS
☒ INSTRUMENT		OPENED AND CLOSED POSTS
☐ PANEL MOUNTED		
ARM LIGHT		
LOGIC CONTROLS		INTERLOCKS

A1	INTERVENING CURRENT
A2	ANALOG INPUT
A3	ANALOG OUTPUT
A4	ANALOG INPUT
A5	ADJUSTABLE SPEED
D0	DIRECT CURRENT
D1	DIGITAL INPUT
D2	DIGITAL OUTPUT
D3	FORWARD-REVERSE
D4	FORWARD-REVERSE
D5	MAN-OFF-RELEASE
D6	MAN-OFF-RELEASE
D7	MAN-OFF-RELEASE
D8	MAN-OFF-RELEASE
D9	MAN-OFF-RELEASE
D10	MAN-OFF-RELEASE
D11	MAN-OFF-RELEASE
D12	MAN-OFF-RELEASE
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D145	MAN-OFF-RELEASE

 PENCIL
 PROCESS SCHEDULE
 COMPLICATED AIR
 MAGNETIC SIGNAL
 ELECTRICAL SIGNAL
 ANALOG SIGNAL
 DIGITAL

1. SPECIFICATIONS AND DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.
2. THE DRAWING SUPERSEDES DRAWING 30-21.
3. REFERENCE AWS/ISA-S3.1 FOR SYMBOLS AND DIMENSIONS.
4. THIS IS A STANDARD LEGEND, THEREFORE, IT IS NOT TO BE REPRODUCED.

[illegible]

	VAPOR FLOW STANDARD CUBIC FEET PER MINUTE	WATER FLOW GALLONS PER MINUTE
1	100	100
2	200	200
3	300	300
4	400	400
5	500	500
6	600	600
7	700	700
8	800	800
9	900	900
10	1000	1000

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DRAWING STATUS	
• PRELIMINARY	
• FOR APPROVAL	
• APPROVED FOR FAB	
X AS BUILT	
• AS FIELD MODIFIED	

DATE		B7	SEE BOM
*	*	*	WEIGHT
*	*	*	N/A
			TOLERANCES
			X = .06 XX = .03 XXX = .015 L = .05"
10/03/08		DDH	
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 **CATALYTIC
COMBUSTION**

Telephone: 715-506-2882
Fax: 715-568-2884
www.catalyticcombustion.com

703 - 214 Avenue
Bloomer, WI 54724

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DO NOT SCALE THIS DRAWING

INCH/mm?

7/31/08	NTS	TITLE: PROCESS & INSTRUMENTATION DIAGRAM			
MOORE	DRAWN BY:	LEGEND			
	DOH	PROJECT/PRODUCT	DRAWING	REV	SIZE
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Appendix C

Estimated Costs

Table 1: Summary of Costs for SVE System Installation and First Year O&M
Autostop/Doug's

Item	Cost
1. System and Installation	\$136,565.50
2. Vents/Piping	\$ 41,786.68
3. Year 1 O&M	\$ 41,607.50
4. Waste Disposal	\$ 4,284.00
Total	\$ 224,243.68

TABLE 2
System Install
AutoStop System Install

Description	Units	Quantity	Unit Cost	Total Cost	Subtotals
Commodity Services					
SVE System	ls	1	\$45,000.00	\$45,000.00	
Electrician -	ls	1	\$3,000.00	\$3,000.00	
Xcel Energy (Power Drop)	est	1	\$2,500.00	\$2,500.00	
Xcel Energy (Monthly Charge)	at cost				
Product Tank (500 gallon double wall AST)	ls	1	\$3,250.00	\$3,250.00	
Oxidizer Rental					
Delivery/Setup	ls	1	\$2,300.00	\$2,300.00	
Catox Removal	ls	1	\$2,300.00	\$2,300.00	
Lease	Month	6	\$5,000.00	\$30,000.00	
Crane Charge - Install	Est	1	\$2,500.00	\$2,500.00	
Crane Charge - Removal	Est	1	\$2,500.00	\$2,500.00	
LP Gas Usage (estimate \$500 per month)	Month	6	\$500.00	\$3,000.00	
LP Gas Hookup Charge	ls	1	\$500.00	\$500.00	
Privacy Fence	Est	1	\$5,000.00	\$5,000.00	
Phone Charge (Monthly Charge)	at cost	12	\$45.00	\$540.00	
Total Commodity Services	ls				\$102,390.00
Design					
System Design (REI)	hr	50	\$104.00	\$5,200.00	
System Design (Meridian - PE)	hr	20	\$104.00	\$2,080.00	
Total Design	ls				\$7,280.00
Construction Oversight					
Construction Coordination (REI - Senior Professional)	hr	30	\$104.00	\$3,120.00	
Construction Coordination (Meridian)	hr	20	\$104.00	\$2,080.00	
Construction Coordination (REI - Field Staff)	hr	6	\$87.00	\$522.00	
Construction Oversight - system install (REI - Senior Professional)	hr	50	\$87.00	\$4,350.00	
Construction Oversight - system install (REI - Field Staff)	hr	50	\$87.00	\$4,350.00	
Project Management (Meridian)	hr	10	\$104.00	\$1,040.00	
Travel - system install (REI)	hr	6	\$65.00	\$390.00	
Travel - system install (Meridian)	hr	2	\$65.00	\$130.00	
Mileage - system install (REI)	mi	250	\$0.60	\$150.00	
Mileage - system install (Meridian)	mi	120	\$0.60	\$72.00	
Per Diem - system install/startup (REI)	day	4	\$108.30	\$433.20	
Per Diem - system install/startup (Meridian)	day	1	\$108.30	\$108.30	
Misc PVC Piping/plumbing (REI)	ls	1	\$500.00	\$500.00	
Total Construction Oversight	ls				\$17,245.50
Remove oxidizer and switch to exhaust stack					
Coordination (REI - Senior Professional)	hr	5	\$104.00	\$520.00	
Coordination (Meridian)	hr	10	\$104.00	\$1,040.00	
Oversight - system install (REI - Senior Professional)	hr	10	\$87.00	\$870.00	
Oversight - system install (Meridian)	hr	10	\$87.00	\$870.00	
Project Management (Meridian)	hr	10	\$104.00	\$1,040.00	
Travel - Oxidizer Removal (REI)	hr	6	\$65.00	\$390.00	
Travel - Oxidizer Removal (Meridian)	hr	2	\$65.00	\$130.00	
Mileage - Oxidizer Removal (REI)	mi	250	\$0.60	\$150.00	
Mileage - Oxidizer Removal (Meridian)	mi	120	\$0.60	\$72.00	
Total Oxidizer Removal	ls				\$5,082.00
Documentation / Reporting					
As-Built and First 6 month O&M					
Reporting (REI/Meridian)	hr	35	\$104.00	\$3,640.00	
CAD Technician (REI)	hr	8	\$75.00	\$600.00	
Administrative (REI)	hr	8	\$41.00	\$328.00	
Total Documentation / Reporting	ls				\$4,568.00
Consulting					\$34,175.50
Commodity					\$102,390.00
Total					\$136,565.50

TABLE 3
Install Extraction Wells and Underground Piping
AutoStop and Doug's Tire Combined System O&M

1. Extraction Well Installation (see enclosed U&C Summary)	U&C	1	1	\$10,780.20	\$10,780.20
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2. Underground Piping

Subcontractors

Subsurface piping installation	est	1	1	\$16,370.98	\$16,370.98
Horizontal Drilling under Hwy 8	est	1	1	\$7,500.00	\$7,500.00

Field Time (Meridian)	Units	Quantity	Occurrence	Unit Cost	Total Cost
Prep	Hour	8	1	\$85.00	\$680.00
Field Time	Hour	55	1	\$85.00	\$4,675.00
travel	Hour	2	2	\$85.00	\$340.00
mileage	Mile	120	2	\$0.60	\$144.00
Per Diem (U&C Overnight)	Day	1	5	\$108.30	\$541.50
Project Management	Hour	8	1	\$85.00	\$680.00
PID	Task	1	1	\$75.00	\$75.00

Overall Total \$41,786.68

TABLE 4
System Operation
AutoStop and Doug's Tire Combined System O&M

Day 1-3, Week 1-3 and monthly thereafter

Lab		Unit sample	Quantity 1	Events 22	Rate \$45.00	Total \$990.00
Field Time						
	Prep	hour	1.5	22	\$104.00	\$3,432.00
	sample/maint	hour	3.5	22	\$87.00	\$6,699.00
	travel	hour	5	22	\$65.00	\$7,150.00
	mileage	mile	250	22	\$0.60	\$3,300.00
Management						
	PM	hour	60	1	\$104.00	\$6,240.00
Administrative						
	Clerical	hour	60	1	\$41.00	\$2,460.00
Semi-Annual Reporting (one report at end of year)						
	Reporting (REI/Meridian)	hour	24	1	\$104.00	\$2,496.00
	CAD Technician (REI)	hr	4	1	\$75.00	\$300.00
	Administrative (REI)	hr	4	1	\$41.00	\$164.00
Equipment						
	PID	day	1	22	\$75.00	\$1,650.00
	Interface Probe	day	1	22	\$70.00	\$1,540.00
	Air Sampler	day	1	22	\$55.00	\$1,210.00
Contingency Mobilizations						
Lab		sample	1	3	\$45.00	\$135.00
Field Time						
	Prep	hour	1.5	3	\$104.00	\$468.00
	sample/maint	hour	3.5	3	\$87.00	\$913.50
	travel	hour	5	3	\$65.00	\$975.00
	mileage	mile	250	3	\$0.60	\$450.00
Management						
	PM	hour	1	3	\$104.00	\$312.00
	Clerical	hour	1	3	\$41.00	\$123.00
Equipment						
	PID	day	1	3	\$75.00	\$225.00
	Interface Probe	day	1	3	\$70.00	\$210.00
	Air Sampler	day	1	3	\$55.00	\$165.00
Subtotal					\$37,631.00	
Contingency					\$3,976.50	
Total					\$41,607.50	

TABLE 5
Waste Disposal
AutoStop and Doug's Tire Combined System O&M

Commodity		Units	Events	Rate	Total
Fluid Waste Disposal (pump truck)		1	2	\$1,400.00	\$2,800.00
Field Time					
	Prep	0.5	2	\$87.00	\$87.00
	sample/maint	2	2	\$87.00	\$348.00
	travel	2.5	2	\$65.00	\$325.00
	mileage	120	2	\$0.60	\$144.00
Management					
	PM	2	2	\$104.00	\$416.00
Administrative					
	Clerical	2	2	\$41.00	\$164.00

Commodity \$2,800.00

Consulting \$1,484.00

Total \$4,284.00

Usual and Customary Standardized Invoice #16

July 2014 - December 2014



RR-989A

PECFA #: _____
 BRRT's #: _____
 Site Name: Doug's & Autostop
 Site Address: Ladysmith

Vendor Name: Change Order
 Invoice #: Change Order
 Invoice Date: Februar 2015
 Check #: Change Order

U&C Total \$ 10,780.20
 Variance to U&C Total \$ -
 Grand Total \$ 10,780.20

TASK	TASK DESCRIPTION	SERVICES	ACTIVITY CODE	ACTIVITY REFERENCE CODE DESCRIPTION	UNIT	MAX UNIT COST	UNITS	TOTAL MAX
Dispose of drill cuttings from 5 extraction wells(estimate 3 drums per well x 5 = 15 drums)								
4	Waste Disposal	Consultant	WD05	Consultant Coordination	Site	\$ 130.60	1	\$ 130.60
4	Waste Disposal	Commodity	WD10	GW Sample and/or Purge	Drum	\$ 40.10		\$ -
4	Waste Disposal	Commodity	WD15	Drill Cuttings	Drum	\$ 103.00	15	\$ 1,545.00
4	Waste Disposal	Commodity	WD17	Landfill Environmental Fee (provide documentation)	ACTUAL COST	ACTUAL COST	1	\$ 75.00
4	Waste Disposal	Commodity	WD20	Free Product	Drum	\$ 113.10		\$ -
4	Waste Disposal	Commodity	WD25	Primary Mob/Demob	Site	\$ 274.00	1	\$ 274.00
Install 5 (five) SVE extraction wells (screened 15-30 ft bg)(4-inch dia. PVC)								
13.b	Drilling In Unconsolidated Soils - Without Soil And/Or GW Sampling	Consultant	DR25	Consultant Oversight	Ft	\$ 1.50	150	\$ 225.00
13.b	Drilling In Unconsolidated Soils - Without Soil And/Or GW Sampling	Consultant	DR30	Primary Mob/Demob	Site	\$ 481.10	1	\$ 481.10
13.e	Drilling In Unconsolidated Soils - Without Soil And/Or GW Sampling	Commodity	DR60	Drilling in Unconsolidated Soils	Ft	\$ 11.40	150	\$ 1,710.00
14	Monitoring Well Installation	Consultant	MWI05	0 - 25 ft bgs	Ft	\$ 3.70	125	\$ 462.50
14	Monitoring Well Installation	Consultant	MWI10	26 - 75 ft bgs	Ft	\$ 2.60	25	\$ 65.00
14	Monitoring Well Installation	Commodity	MWI15	2 inch PVC Casing	Ft	\$ 15.90	150	\$ 2,385.00
14	Monitoring Well Installation	Commodity	MWI20	Well Development	Well	\$ 140.60	5	\$ 703.00
14	Monitoring Well Installation	Commodity	MWI25	Mob/Demob	Site	\$ 522.50		\$ -
15	Misc. Drilling Activities & Supplies		MDT05	Drill Rig Mob/Demob	Mob/Demob	\$ 917.50	1	\$ 917.50
15	Misc. Drilling Activities & Supplies		MDT10	Well Cover/flushmount	Each	\$ 193.00	5	\$ 965.00
15	Misc. Drilling Activities & Supplies		MDT25	Commodity Service Provider Per Diem (drilling and direct push)	Person	\$ 193.60	2	\$ 387.20
15	Misc. Drilling Activities & Supplies		MDT41	Private Utility Locate	Each	\$ 111.60	1	\$ 111.60
20	Soil Boring/Monitoring Well Permits		SBMWP05	Soil Boring/Monitoring Well Permit	Permit	\$ 234.40	1	\$ 234.40
31	Consultant Overnight Per Diem		COPD05	Overnight	Night	\$ 108.30	1	\$ 108.30