Phase II Environmental Site Assessment & Site Investigation Report

City of Two Rivers Lot F
Manitowoc County, Wisconsin

Prepared For The

FEBRUARY 16, 2017

McM. No. T0007-9-16-00248.12

SAB:car

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McMAHON
ENGINEERS ARCHITECTS

February 16, 2017

Mr. James McDonald
City of Two Rivers
1717 E. Park Street
Two Rivers, WI 54241

Re: Phase II Environmental Site Assessment & Site Investigation Report
City of Two Rivers Lot F | Manitowoc County, Wisconsin
City of Two Rivers
McM. No. T0007-9-16-00248.12

Dear Mr. McDonald:

McMAHON is pleased to provide you with the attached report titled "Phase II Environmental Site Assessment & Site Investigation Report, City of Two Rivers Lot F, Prepared for the City of Two Rivers, Manitowoc County, Wisconsin."

Based on the data collected from the Phase II ESA and Site Investigation, it appears that the source of the Chlorinated Volatile Organic Compounds (CVOCs) in the groundwater is upgradient of the City of Two Rivers properties including the Former Kahlenberg Laboratory property owned by the City. The Fisher Scientific International, LLC property is a potential source of the CVOCs.

If you have any questions or comments, please feel free to contact me.

Respectfully,

McMAHON

Stuart A. Boerst, P.S.S., P.H.
Senior Hydrogeologist

SAB:car

cc: Tauren Beggs – Wisconsin DNR – Green Bay

Enclosure: Report

Phase II Environmental Site Assessment & Site Investigation

City of Two Rivers Lot F
Manitowoc County, Wisconsin

Prepared For The

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McM. No. T0007-9-16-00248.12

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Professional Qualifications Statement

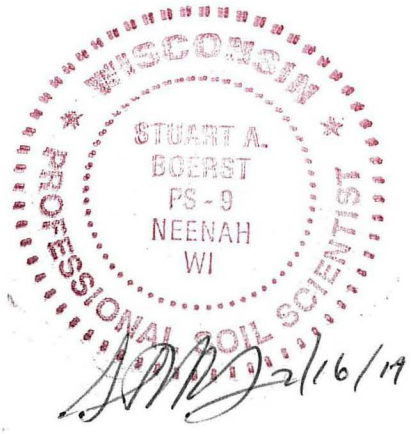
"I, Stuart A. Boerst, hereby certify that I am a Hydrogeologist as that term is defined in s. NR 712.03(1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

2/16/17

Stuart A. Boerst, P.S.S., P.H.
Senior Hydrogeologist

Date

The undersigned licensee prepared, or directed and controlled the preparation of this report.



P.S.S. Stamp (No. 9)

P.H. Stamp (No. 28)

Phase II Environmental Site Assessment & Site Investigation

City of Two Rivers Lot F
Manitowoc County, Wisconsin

Prepared For The

FEBRUARY 16, 2017
McM. No. T0007-9-16-00248.12

I. INTRODUCTION

A. Purpose

The Phase II Environmental Site Assessment (ESA) was conducted to assess the soil and groundwater in Parking Lot F in preparation for excavation activities in the future. The potential exists for subsurface contaminants due to historical industrial activities upgradient. The Site Investigation was conducted to assess the extent and source of groundwater contamination identified during the Phase II ESA. The upgradient potential sources of contamination are discussed below.

- Former Kahlenberg Laboratories Property (Currently Owned by the City)

  Based on a January 1929 Sanborn Map, Kahlenber Laboratories (chemist laboratory) existed directly upgradient of Lot F on property owned by the City. The 1966 Sanborn Map shows the building but it does not have label in terms of use. The Sanborn Maps are presented in Appendix A.

- Fisher Scientific International, LLC

  A Phase 2 report titled "Phase 2 Subsurface Exploration Report, 17th Street Bridge, City of Two Rivers, August 6, 2010, Soils & Engineering Services, Inc." includes a

summary of a Wisconsin Department of Natural Resources (DNR) file review of the property. The information is provided below and excerpts from the report are presented in Appendix B.

"The site includes the area immediately to the west of the 17th Street bridge and comprises parcels both north and south of 17th Street, west to Jefferson Street. Sanborn Maps indicate that the facility expanded from its early configuration on the east and west sides of River Street, to its current configuration extending west to Jefferson Street. Manufacturing operations have been conducted at this site since at least 1891. The operations consisted of manufacturing wooden printer's type and furniture and later wood and metal type and furniture. Based on the information on the Sanborn Maps, processes included wood fabrication and storage, painting and varnishing. Hazardous materials were historically used and stored at this facility as confirmed by the results of the Wisconsin DNR file review (see below).

The following information was obtained during review of the Wisconsin DNR files for is facility that are located in the Green Bay office. The facility is regulated under the Wisconsin DNR Hazardous Waste Program and the file contained information pertaining only to waste issues. There were no files associated with the Wisconsin DNR Remediation and Redevelopment program, which would contain information pertaining to environmental investigations and soil and/or groundwater testing. The facility was formerly a hazardous waste treatment, storage and disposal (TSD) facility from the 1970s until the mid-1980's. In 1975 Hamilton Industries received a permit from the State of Wisconsin to incinerate solvent waste and paint sludge in a solvent boiler for the purpose of treating waste and reducing natural gas consumption. The facility also accepted hazardous waste sludge from other facilities for burning. The burning of hazardous waste ceased in the mid to late 1980s. The facility held a RCRA hazardous waste storage permit but discontinued the storage of hazardous waste in 1988. Currently, the facility is a small quantity hazardous waste generator. Several RCRA violations for this facility are reported in the Environmental Data Resources (EDR) report. These violations were issued in the 1980s and apparently corrected shortly after issuance. A 2005 Wisconsin DNR inspection yielded no violations.

According to EDR and the Wisconsin DNR BRRTS database, two mineral oil spills occurred at the facility (1996, 2005) and one Underground Storage Tank (UST) was closed and removed. Both spill cases are closed and the UST closure required no site investigation. COMM lists the UST as a 200 gallon leaded gasoline tank closed in 1990; however, BRRTS indicates that the closure report was received in 1994."

B. Consultant Information

The consultant name, address, telephone number, and project manager is provided below:

Project Manager:	Stuart A. Boerst, P.S.S., P.H.
Address:	McMAHON
	1445 McMahon Drive, Neenah, WI 54956
	P.O. Box 1025, Neenah, WI 54957-1025
Telephone:	920.751.4200
Email:	sboerst@mcmgrp.com

C. Site Location

The City of Two Rivers property is located on East River Street, City of Two Rivers, Manitowoc County, Wisconsin. The site is located in the Northeast Quarter (¼) of Section One (1), Township Nineteen (19) North, Range Twenty-four (24) East. The site location is shown on Figure 1.

II. GEOLOGY & RECEPTORS

A. Topography, Hydrology, Geology & Hydrogeology

1. Topography & Hydrology

The local area gently slopes to the eastward towards Lake Michigan with a steep slope near the harbor. The grade elevation changes from approximately 602 feet above Mean Sea Level (MSL) to 586 feet above MSL.

2. Geology

The surface of the area includes grass, asphalt and concrete. The geology consists mainly of fine grained sand with some silty clay and sandy silt.

3. Hydrogeology

The groundwater elevations and monitoring well information is summarized in Table #1. Ground contours show a southeast groundwater flow direction towards Lake Michigan. Figure 4 shows groundwater contours from water level readings collected on December 12, 2016. The depth to groundwater on the property ranges from approximately 2 to 17 feet below grade depending on the geographic location on the site.

III. SITE INVESTIGATION RESULTS

A. Phase II ESA & Investigation Methods

On July 28, 2016, three soil borings were completed with a geoprobe. Temporary monitoring wells were installed in the soil borings. On November 22, 2016, five groundwater monitoring wells (MW-01 – MW-05) were installed in the parking lot and other upgradient areas owned by the City of Two Rivers. The soil boring and monitoring locations are shown on Figures 2A and 2B. The methods and procedures are presented in Appendix C. The Soil Boring Logs, Monitoring Well Construction Forms and Well Development Forms are presented in Appendix D. The Methods & Procedures are presented in Appendix C. The Soil Boring Logs are presented in Appendix D.

B. Data Discussion

The groundwater elevation and monitoring well information is summarized on Table #1. The soil sample analytical results are summarized on Table #2.

A total of three soil samples, one each from three soil borings (GP-01 – GP-03) completed with a geoprobe were analyzed for Volatile Organic Compounds (VOCs), 8 RCRA metals and molybdenum. A total of six soil samples were collected from five monitoring wells (MW-01 – MW-05) boreholes and analyzed for VOCs and/or 8 RCRA metals and/or Polychlorinated Biphenyls (PCBs). The soil sample laboratory reports are presented in Appendix E.

On July 28, 2016, three groundwater samples collected from soil borings GP-01 – GP-03 were analyzed for VOCs, Total 8 RCRA metals and molybdenum. On December 12, 2016, five groundwater samples collected from monitoring wells MW-01 – MW-05 were analyzed for VOCs and 8 RCRA metals. The groundwater sample laboratory results are presented in Appendix E.

C. Discussion of Results

1. Soil Analytical Results

The soil laboratory data from the geoprobe soil borings did not contain any VOCs and detected metals were all below the Background Threshold Value. The six soil samples collected from the monitoring well boreholes did not contain any VOCs and detected metals were all below the Background Threshold Value.

Soil samples were screened with a photoionization detector every 2 feet from the five monitoring well boreholes. The only positive PID detection was from a sample collected at 12 feet below grade from monitoring well MW-02. The soil

from 11 feet to 12 feet contained a slight diesel odor. A soil sample collected from this location did not contain any VOCs.

2. Groundwater Analytical Results

Two of the three groundwater samples collected from the three geoprobe soil borings contained Chlorinated VOCs (CVOCs). A groundwater sample from GP-01 contained Trichlorothene (TCE) at a concentration (0.67 ug/l) above the Chapter NR 140 Preventive Action Limit (PAL). Cis-1,2-dichloroethene was detected at a concentration (0.61) below the PAL. A groundwater sample from GP-02 contained TCE at a concentration (36 ug/l) above the Chapter NR 140 Enforcement Standards (ES). Cis-1,2-dichloroethene and trans-1,2-dichloroethene were detected below the PAL.

Groundwater samples collected from four of the five monitoring wells contained CVOCs. Monitoring well MW-01 contained TCE at a concentration (73 ug/l) above the ES. Monitoring well MW-02 contained TCE at a concentration (24 ug/l) above the ES. Monitoring well MW-03 did not contain VOCs. Monitoring well MW-04 contained TCE, cis-1,2-dichloroethene and vinyl chloride at concentrations (26 ug/l, 112 ug/l and 1.01 ug/l, respectively) above the ES. Trans-1,2-dichloroethene and 1,1-dichloroethene were detected at concentrations (33 ug/l and 3.8 ug/l, respectively) above the PAL but below the ES. Monitoring well MW-05 contained TCE at a concentration (0.84 ug/l) above the PAL but below the ES. Barium was detected in all five monitoring wells at concentrations above the PAL but below the ES. The Barium is likely attributed to natural background levels. The estimated extent of known chlorinated VOCs in the groundwater is shown on Figure 4.

IV. WATER MAIN REPAIR

On October 11, 2016, the City repaired a water main on the Fisher Scientific International, LLC property but within a utility easement held by the City. Two excavations were created during the project that resulted in two stockpiles of soil. A soil sample was collected from each stockpile and analyzed for VOCs and 8 RCRA metals. Stockpile-01 soil sample contained TCE at concentration of 53 ug/kg. The soil sample was a grab sample collected at 8 feet below grade since this area represented the most likely area of contamination since it was likely below the water table. Stockpile-02 soil sample did not contain VOCs. The metals detected in both soil samples are indicative of natural background conditions, except lead was detected in Stockpile-02 soil sample at a concentration of 91.1 mg/kg, which is above the Background Threshold Value of 52 mg/kg.

The soil from Stockpile 1 was transported to Advanced Disposal Hickory Meadows Landfill, Hilbert, Wisconsin. The soil from stockpile 02 will be spread on-site in the spring.

V. CONCLUSIONS & RECOMMENDATIONS

Based on the distribution of CVOCs in the groundwater and the groundwater flow direction, it appears the Former Kahlenberg Laboratories property is not the source of CVOCs since the upgradient monitoring well (MW-01) contains substantially higher concentrations of CVOCs. The Fisher Scientific International, LLC property may be a source of the contaminants. However, additional monitoring wells would be required to assess whether that is the case.

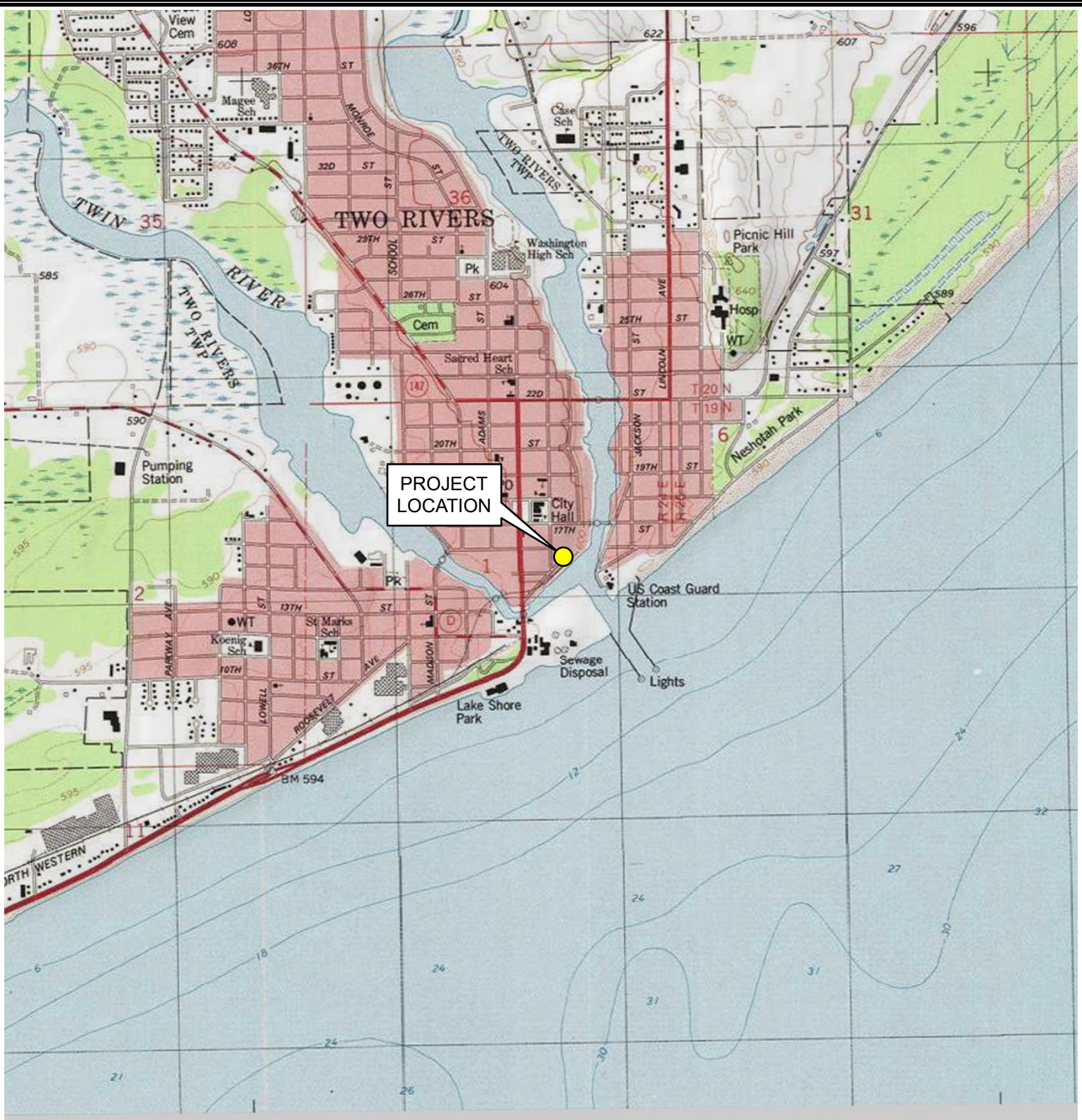
VI. QUALIFICATIONS

The work performed in conjunction with the assessment and the data development is intended as a description of available information at the dates and locations given.

Data collected from the subsurface does not reveal all subsurface conditions, but rather reflects the specific collection point. Therefore, some subsurface conditions may not be identified or discovered. Additionally, the passage of time may result in a change in the environmental conditions of the site and adjacent properties.

Soil and groundwater quality standards established by the regulatory agencies may change over time and affect the remedial action requirements.

McMAHON's professional services have been performed, our findings obtained and our recommendations prepared in accordance with customary principles and practices in the field of science and engineering. McMAHON is not responsible for the independent conclusions, opinions or recommendations made by others, based upon the field exploration and the data presented in this report.



N:\GIS\Templates\WetlandFig1.mxd

1 inch = 2,000 feet

CITY OF TWO RIVERS

McMAHON ENGINEERS ARCHITECTS

FIGURE 1
SITE LOCATION & TOPOGRAPHIC MAP
CITY OF TWO RIVERS LOT F
CITY OF TWO RIVERS
MANITOWOC COUNTY, WI

T0007-9-16-00248.12 FEBRUARY, 2017

17TH STREET

16TH STREET

15TH STREET

STREET

JEFFERSON STREET

E. RIVER ST.

16th ST.

EAST

PARKING

PARK NG

PKNG

OWNER: TR HISTORICAL SOCIETY INC
PARCEL 0000880118

OWNER: FISCHER SCIENTIFIC INTL LLC
PARCEL 0000660127

OWNER: 1402 JEFFERSON ST.
PARCEL 0000660127

OWNER: FISCHER SCIENTIFIC INTL LLC
PARCEL 0000520305

OWNER: SUETTINGER HARDWARE INC
PARCEL 0000710210

OWNER: SUETTINGER HARDWARE INC
PARCEL 0000710118

OWNER: CITY OF TWO RIVERS
PARCEL 0000710127

OWNER: RANDALL J. LIPPOLD
PARCEL 0000711206

OWNER: MALLEY PRINTING CO INC
PARCEL 0000711224

OWNER: CITY OF TWO RIVERS
PARCEL 0000700501

OWNER: DARWIN J. WHITMAN
PARCEL 0000700657

OWNER: CITY OF TWO RIVERS
PARCEL 0000690416

MW-01
MW-02
MW-03
MW-04
MW-05
GP-01
GP-02
GP-03
STOCKPILE-01

NORTH

80 40 0 80

SCALE – FEET

LEGEND

- HYDRANT
- MW-04 ◆ – MONITORING WELL
- GP-01 ● – GEOPROBE SOIL BORING
- STOCKPILE-01 ■ – STOCKPILE SOIL SAMPLE (COLLECTED AT 8' BELOW GRADE)
- ——— – PROPERTY LINE

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SITE LAYOUT & MONITORING WELL LOCATIONS
CITY OF TWO RIVERS, MANITOWOC CO., WI

DESIGNED	DRAWN
SAB	MJA

PROJECT NO.
T0007 9-16-00248.12

DATE
JAN., 2017

SHEET NO.
FIG 2A

OWNER: 1402 JEFFERSON ST. PARCEL 0000660127

OWNER: FISCHER SCIENTIFIC INTL LLC PARCEL 0000520305

STOCKPILE-01

MW-01

16th ST.

OWNER: SUETTINGER HARDWARE INC PARCEL 0000710210

OWNER: CITY OF TWO RIVERS PARCEL 0000700501

OWNER: FISCHER SCIENTIFIC INTL LLC PARCEL 0000520305

MW-02

OWNER: CITY OF TWO RIVERS PARCEL 0000700501

MW-03

MW-05

GP-01

OWNER: SUETTINGER HARDWARE INC PARCEL 0000710118

OWNER: CITY OF TWO RIVERS PARCEL 0000710127

JEFFERSON

E. RIVER ST.

OWNER: RANDALL J. LIPPOLD PARCEL 0000711206

OWNER: DARWIN J. WHITMAN PARCEL 0000700637

MW-04

GP-02

OWNER: CITY OF TWO RIVERS PARCEL 0000690418

PARKING

OWNER: MALLEY PRINTING CO INC PARCEL 0000711224

GP-03

LEGEND

- STOCKPILE-01 ■ –STOCKPILE SOIL SAMPLE (COLLECTED AT 8' BELOW GRADE)
- GP-01 • –GEOPROBE SOIL BORING
- MW-04 ⊕ –MONITORING WELL
- –HYDRANT
- –PROPERTY LINE

NORTH

40 20 0 40

SCALE – FEET

SITE LAYOUT & MONITORING WELL LOCATIONS
CITY OF TWO RIVERS, MANITOWOC CO., WI

DESIGNED	DRAWN
SAB	MJA

PROJECT NO. T0007 9-16-00248.12

DATE JAN., 2017

SHEET NO. FIG 2B

McMAHON
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OWNER: 1402 JEFFERSON ST. PARCEL 0000660127

MW-01
586.71

16th ST.

OWNER: FISCHER SCIENTIFIC INTL LLC
PARCEL 0000520305

STOCKPILE-01

586.0

585.5

585.0

584.5

584.0

586.5

OWNER: SUETTINGER HARDWARE INC
PARCEL 0000710210

OWNER: CITY OF TWO RIVERS
PARCEL 0000700501

OWNER: FISCHER SCIENTIFIC INTL LLC
PARCEL 0000520305

MW-02
585.82

OWNER: CITY OF TWO RIVERS
PARCEL 0000700501

MW-03
584.32

MW-05
583.65

GP-01

OWNER: SUETTINGER HARDWARE INC
PARCEL 0000710118

OWNER: CITY OF TWO RIVERS
PARCEL 0000710127

OWNER: RANDALL J. LIPPOLD
PARCEL 0000711206

JEFFERSON

E. RIVER ST.

MW-04
584.24

GP-02

OWNER: DARWIN J. WHITMAN
PARCEL 0000700637

OWNER: MALLEY PRINTING CO INC
PARCEL 0000711224

PARKING

OWNER: CITY OF TWO RIVERS
PARCEL 0000690416

GP-03

NORTH

LEGEND

MW-03 -HYDRANT
584.32 -MONITORING WELL
GP-01 -GEOPROBE SOIL BORING
STOCKPILE-01 -STOCKPILE SOIL SAMPLE (COLLECTED AT 8' BELOW GRADE)
-PROPERTY LINE
-ESTIMATED GROUNDWATER FLOW
584.0 -GROUNDWATER CONTOUR

40 20 0 40
SCALE – FEET

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GROUNDWATER CONTOURS DEC., 12, 2016
CITY OF TWO RIVERS, MANITOWOC CO., WI

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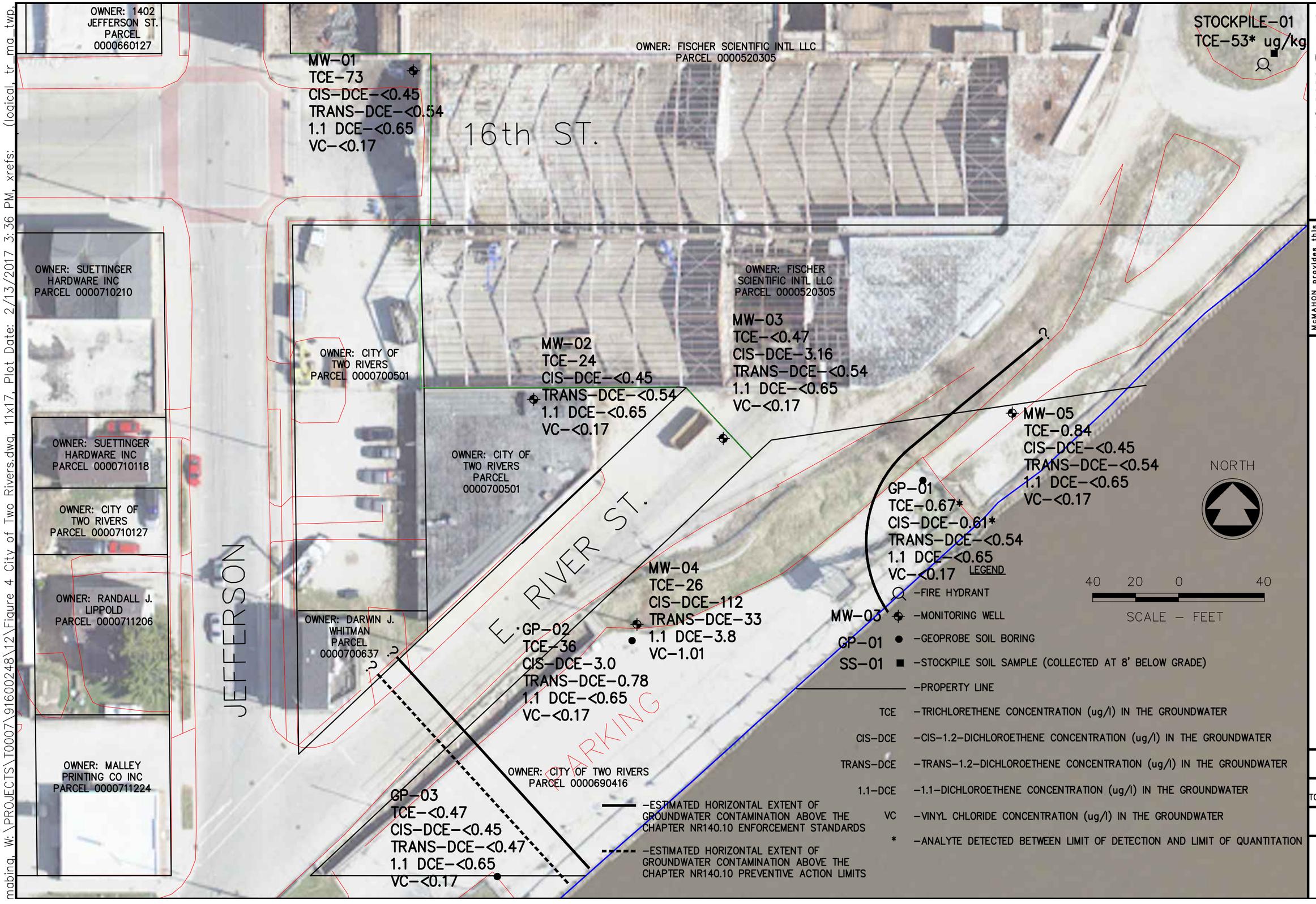
T0007 9-16-00248.12

DATE
JAN., 2017

SHEET NO.
FIG 3



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HORIZONTAL EXTENT OF CHLORINATED VOCS IN THE GROUNDWATER
CITY OF TWO RIVERS, MANITOWOC CO., WI

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T0007 9-16-00248.12

DATE
JAN., 2017

SHEET NO.
FIG 4

Table #1

GROUNDWATER ELEVATION & MONITORING WELL INFORMATION SUMMARY

CITY OF TWO RIVERS | LOT F

February 13, 2017

McM. No. T0007-9-16-00248.00

Well Name	**Date Measured**	**Depth To Groundwater** (PVC Top)(Ft)	**Groundwater Elevation** (feet)	**Water Depth Below Ground Surface** (feet)	**Reference Elevation** (PVC Top)(Ft)	**Ground Elevation** (feet)	**Length Of Screen** (feet)
MW-01	12/12/2016	17.03	586.71	15.17	603.74	601.88	10
MW-02	12/12/2016	16.62	585.82	14.86	602.44	600.68	10
MW-03	12/12/2016	13.18	584.32	13.53	597.50	597.85	10
MW-04	12/12/2016	6.21	584.24	4.32	590.45	588.56	10
MW-05	12/12/2016	2.23	583.65	2.61	585.88	586.26	10

Table #2

SOIL ANALYTICAL RESULTS

Detected VOCs, Total 8 RCRA Metals, Total Molybdenum, and PCBs
CITY OF TWO RIVERS | LOT F

February 13, 2017
McM. No. T0007-9-16-00248.00

Sample Name / Depth (feet)	**Sample Date**	**TCE** (mg/kg)	**Arsenic** (mg/kg)	**Barium** (mg/kg)	**Cadmium** (mg/kg)	**Chromium** (mg/kg)	**Lead** (mg/kg)	**Mercury** (mg/kg)	**Selenium** (mg/kg)	**Silver** (mg/kg)	**Molybdenum** (mg/kg)	**PCB's** (mg/kg)
GP-01 / 2'	7/28/2016	<0.042	1.39	72.9	0.389*	19.3	44.5	0.081	<0.74	<0.28	<0.16	NA
GP-02 / 2.5'	7/28/2016	<0.042	<0.65	28.0	0.114*	9.02	4.71	0.234	<0.74	<0.28	<0.16	NA
GP-03 / 3'	7/28/2016	<0.042	0.99*	26.0	<0.07	5.01	17.1	0.038	<0.74	<0.28	<0.16	NA
MW-01 / 3.5'	11/22/2016	<0.042	1.3*	24.4	0.104*	6.17	18.2	0.068	<0.74	<0.28	NA	NA
MW-02 / 3.5'	11/22/2016	<0.042	<0.65	7.49	<0.07	3.76	1.11	<0.0028	<0.74	<0.28	NA	<0.0054***
MW-02 / 12'	11/22/2016	<0.042	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-03 / 3.5'	11/22/2016	<0.042	1.26*	9.52	<0.07	3.43	1.21	<0.0064*	<0.74	<0.28	NA	<0.0054***
MW-04 / 3'	11/22/2016	<0.042	4.26	64.5	0.117*	22.5	7.10	0.0157	<0.74	<0.28	NA	NA
MW-05 / 3'	11/22/2016	<0.042	2.69	53.8	0.435	11.0	41.5	0.057	<0.74	<0.28	NA	NA
Stockpile-01****	10/11/2016	0.053*	<0.67	38.6	0.157*	22.1	91.1	0.0399*	<0.55	<0.44	NA	NA
Stockpile-02	10/11/2016	<0.042	<0.67	19.2	<0.08	9.49	<0.52	0.0254*	<0.55	<0.44	NA	NA
Industrial DC RCLs		8.81	2.39	100,000	799	100,000**	800	3.13	5,110	5,110	5,110	
Non-Industrial DC RCLs		1.26	0.61	15,300	70	100,000	400	3.13	391	391	391	
GW RCLs		0.0036	0.584	164.8	0.752	360,000	27	0.208	0.52	0.8491	1.6192	
Background Threshold Value			8	364	1.0	44	52	--	--	--	--	

EXPLANATION:

TCE = Trichloroethene
VOC = Volatile Organic Compounds
mg/kg = Milligram/Kilogram (ppm)
< = Less Than
DC = Direct Contact
RCL = Residual Contaminant Level
GW = Groundwater
* = Analyte Detected Between Limit of Detection & Limit of Quantitation
** = Standard for Chromium III
*** = Highest Detection Limit of 7 PCB's Analyzed
**** = Stockpile-01 was collected approximately 8' below grade.

= Exceeds Industrial DC RCLs

= Exceeds Non-Industrial DC RCLs

= Exceeds GW RCLs

Table #3

GROUNDWATER ANALYTICAL RESULTS

Detected VOCs, 8 RCRA Metals and Total Molybdenum
CITY OF TWO RIVERS | LOT F

February 13, 2017
McM. No. T0007-9-16-00248.00

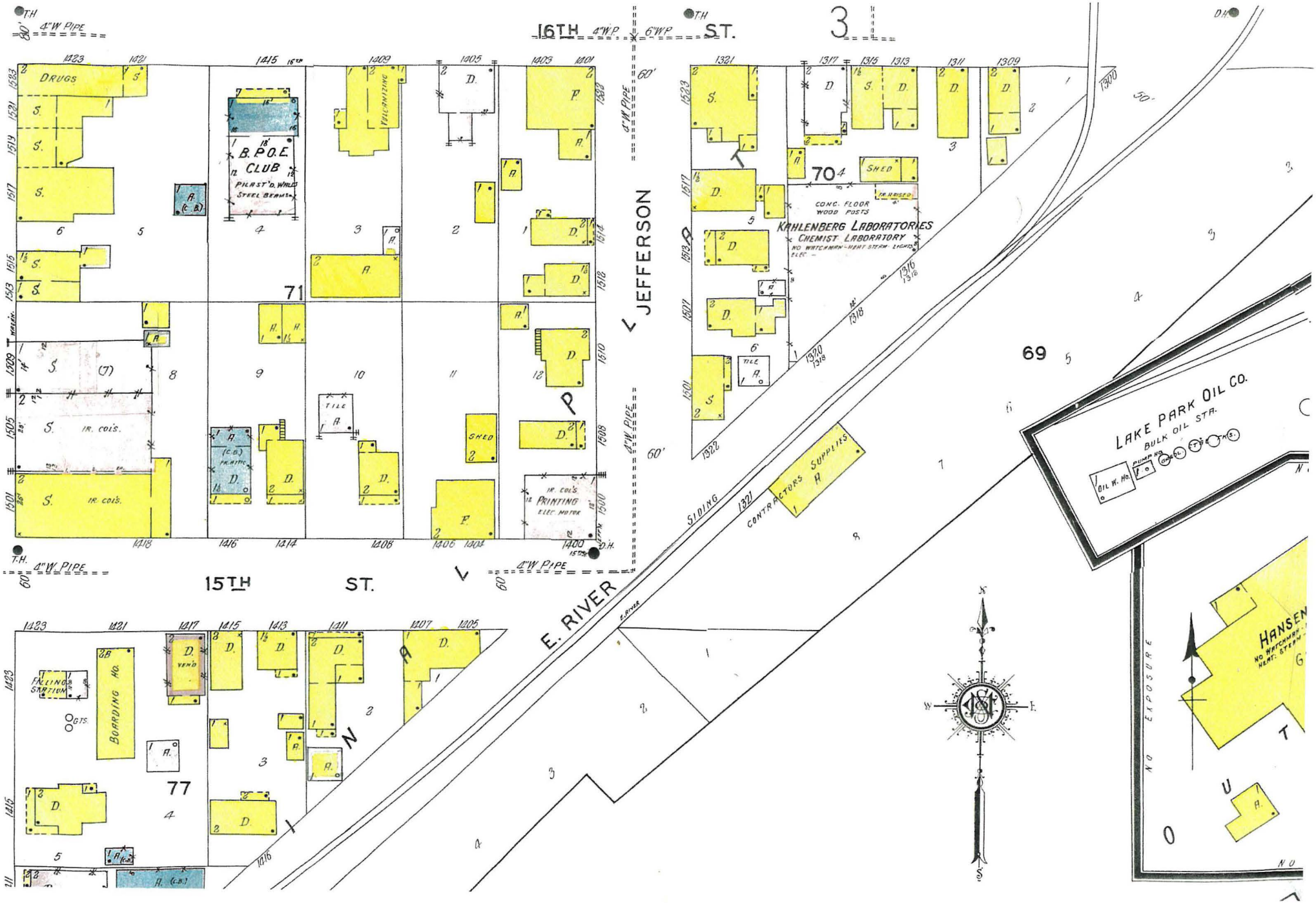
Well Name	Sample Date	Tricholoroethene (ug/l)	cis-1,2,-Dichloroethene (ug/l)	trans-1,2,-Dichloroethene (ug/l)	1.1-Dichloroethene	Vinyl Chloride	Arsenic (ug/l)	Barium (ug/l)	Cadmium (ug/l)	Chromium (ug/l)	Lead (ug/l)	Mercury (ug/l)	Selenium (ug/l)	Silver (ug/l)	Molybdenum (ug/l)
GP-01**	7/28/2016	0.67*	0.61*	<0.54	<0.65	<0.17	3.6	81.4	<0.3	<1.8	64.1	<0.11	<1.1	<8.4	11.0
GP-02**	7/28/2016	36	3.0	0.78*	<0.65	<0.17	13.1	41.9	<0.3	<1.8	31.9	<0.11	2.3*	<8.4	8.0
GP-03**	7/28/2016	<0.47	<0.45	<0.47	<0.65	<0.17	3.9	127	0.4*	<1.8	34.1	<0.11	<1.1	<8.4	6.4
MW-01	12/12/2016	73	<0.45	<0.54	<0.65	<0.17	<0.6	80.4	<0.3	2.5	<0.8	<0.11	1.3*	<1.9	NA
MW-02	12/12/2016	24	<0.45	<0.54	<0.65	<0.17	<0.6	66.2	<0.3	1.3*	<0.8	<0.11	4.0	<1.9	NA
MW-03	12/12/2016	<0.47	3.16	<0.54	<0.65	<0.17	<0.6	239	<0.3	1.1*	<0.8	<0.11	1.5*	<1.9	NA
MW-04	12/12/2016	26	112	33	3.8	1.01	<0.6	117	<0.3	1.4*	<0.8	<0.11	1.5*	<1.9	NA
MW-05	12/12/2016	0.84	<0.45	<0.54	<0.65	<0.17	<0.6	186	<0.3	1.4*	<0.8	<0.11	1.8*	<1.9	NA
Enforcement Standard, Chapter NR 140.10		5.0	70	100	7.0	0.2	10	2,000	5.0	100	15	2.0	50	50	40
Preventive Action Limit, Chapter NR 140.10		0.5	7	20	0.7	0.02	1	40	0.5	10	1.5	0.2	10	10	8

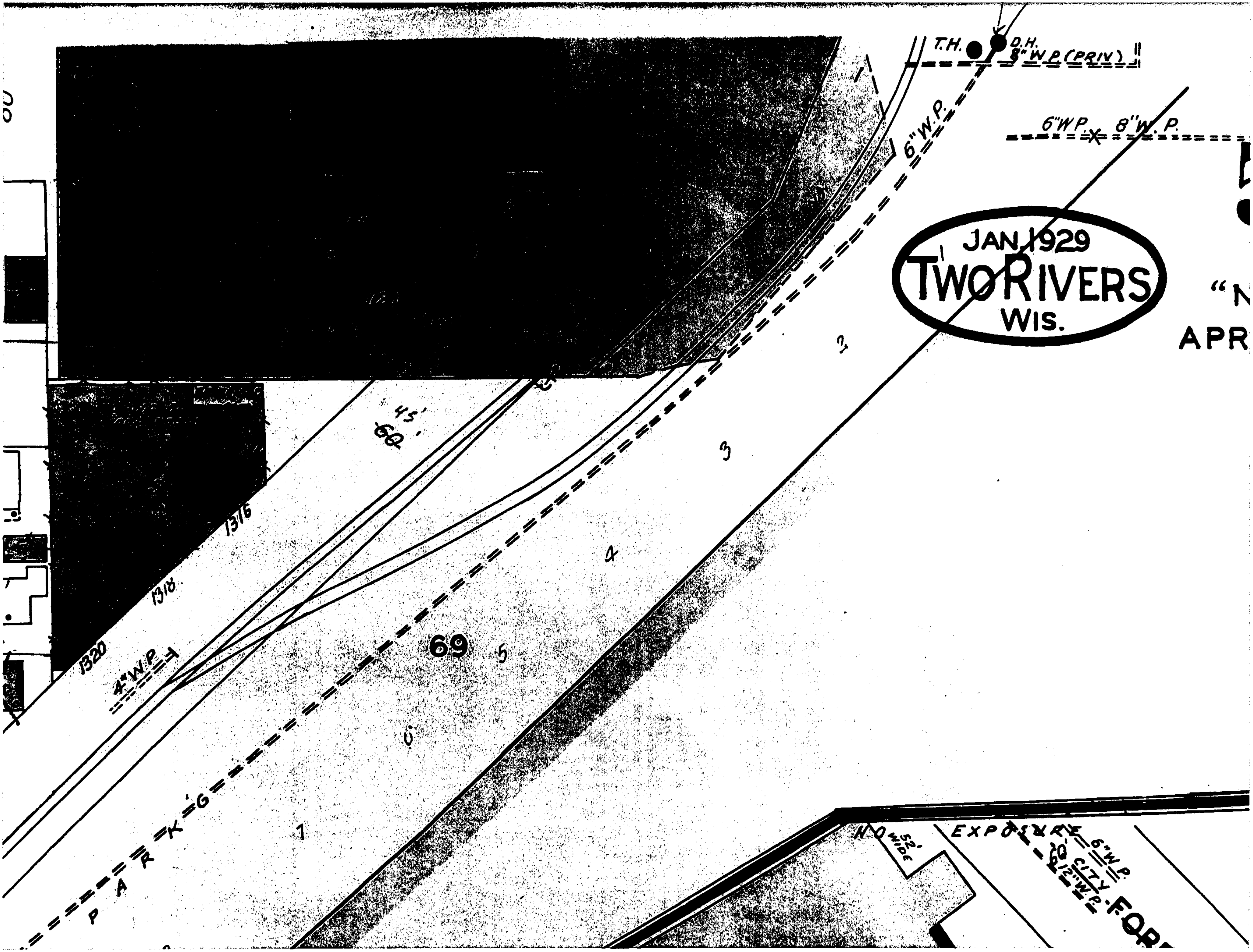
EXPLANATION:

VOC = Volatile Organic Compounds
-- = No Established State Groundwater Standard
* = Analyte Detected Between Limit of Detection & Limit of Quantitation
** = The NR 140 Standards to not apply since the groundwater results are totals (not filtered).
ug/l = Microgram/Liter (ppb)
= Exceeds Enforcement Standards (ES)
= Exceeds Preventive Action Limit (PAL)

APPENDIX A

Sanborn Maps


16TH ST.
15TH ST.
JEFFERSON
E. RIVER
DRUGS
B.P.O.E. CLUB
PILAST'D. WALL STEEL BEAMS
KAHLENBERG LABORATORIES
CHEMIST. LABORATORY
CONC. FLOOR WOOD POSTS
SHED
CONTRACTORS SUPPLIES
LAKE PARK OIL CO.
BULK OIL STA.
OIL W. HO.
PUMP HO.
HANSEN
NO EXPOSURE
BOARDING HO.
FILLING STATION
IR. COL'S.
PRINTING
ELEC. MOTOR
SIDING
69
70
71
77


JAN 1929
TWO RIVERS
WIS.
T.H.
D.H.
8" W.P. (PRIV.)
6" W.P.
8" W.P.
45'
1316
1318
1320
4" W.P.
69
P A R K
EXPOSURE
6" W.P.
CITY
12" W.P.
52' WIDE
APR

JEFFERSON

APPENDIX B

Excerpt From "Phase 2 Subsurface Exploration Report, 17th Street Bridge, City of Two Rivers, Manitowoc County, Wisconsin" | August 6, 2010

PHASE 2 SUBSURFACE EXPLORATION REPORT

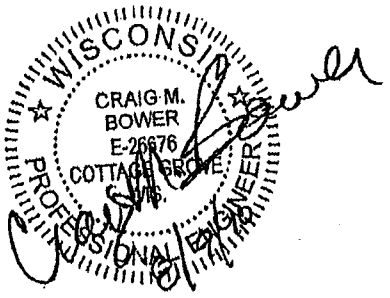
17TH STREET BRIDGE
CITY OF TWO RIVERS
MANITOWOC COUNTY, WISCONSIN
WisDOT Project ID 4998-02-00
SES Project Number 12840

Regarding the Property
FISHER HAMILTON SCIENTIFIC
1316 18TH STREET

Prepared By

Soils & Engineering Services, Inc.
1102 Stewart Street
Madison, Wisconsin 53713-4648
phone: (608) 274-7600
facsimile: (608) 274-7511
e-mail: soils@soils.ws

Craig M. Bower, P.E.



Submitted To Design Consultant

URS Corporation
6737 W. Washington Street, Suite 2265
Milwaukee, Wisconsin 53214
phone: (608) 273-6380
facsimile: (608) 273-6391
e-mail: robert.fieldbinder@urscorp.com

Mr. Robert Fieldbinder, P.E.

August 6, 2010

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II. PROJECT DESCRIPTION ..... Page 2

III. PURPOSE AND SCOPE OF SERVICES ..... Page 2

V. SITE HISTORY ..... Page 3

VI. STANDARD SOIL BORINGS ..... Page 4
- A. Location & Elevations ..... Page 4
- B. Drilling Procedure ..... Page 4
- C. Soil Field Screening ..... Page 5
- D. Soil Stratification ..... Page 5
- E. Groundwater ..... Page 5

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DEFINITIONS OF ACRONYMS

$^{\mu g}/_{L}$ = micrograms per liter which is the equivalent of one part per billion.

ASTM = American Society of Testing and Materials

GWP = Generic Groundwater Direct Contact Pathway

HMA = Hot-mix asphalt

Ind = Industrial Direct Contact Pathway

LOD = limit of detection

LOQ = limit of quantitation

$^{mg}/_{kg}$ = milligrams per kilogram which is the equivalent of one part per million.

$^{mg}/_{L}$ = milligrams per liter which is the equivalent of one part per million.

Non-Ind = Non-Industrial Direct Contact Pathway

PAH = Polynuclear aromatic hydrocarbons

PID = Photoionization detector

RCL = Residual Conaminant Level

RCRA = Resource Conservation & Recovery Act

SES = Soils & Engineering Services, Inc.

TCLP = Toxicity characteristic leachate procedure

VOC = Volatile organic compound

WDNR = Wisconsin Department of Natural Resources

WisDOT = Wisconsin Department of Transportation

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I. INTRODUCTION

This *Phase 2 Subsurface Exploration Report* relates to the property located at 1316 18th Street (**Fisher Hamilton Scientific**), City of Two Rivers, Manitowoc County, Wisconsin. This property is located adjacent to the planned reconstruction of the 17th Street Bridge. The existing 17th Street Bridge Over East Twin River (PROJECT) is proposed for bridge and approach reconstruction with the installation of some underground utility lines.

The proposed project will include the replacement of the existing storm sewer line, the existing bridge abutment, and the retaining walls along the north and south sides of the bridge approach embankment. Temporary easements along the PROJECT will be obtained. Minor adjustments to the existing vertical alignment are planned to be made. The horizontal alignment is planned to remain unchanged.

URS Corporation performed a Phase I Hazardous Materials Assessment for the properties along the PROJECT which resulted in this property adjacent the PROJECT being recommended for Phase II work. The PROJECT location is shown on enclosed Figures 1 and 2.

This report was requested by URS Corporation, engineering design consultants to WisDOT for the reconstruction of this portion of 17th Street Bridge Over East Twin River.

We completed this report in general conformance to the WisDOT Facilities Development Manual. We have based the conclusions of this report primarily upon the soil borings performed, field screening of the soil samples recovered by the borings, and the laboratory analyses results obtained from selected soil samples recovered during the performance of the borings.

We completed the Phase II exploration for this report at 1316 18th Street (**Fisher Hamilton Scientific**). The results of the Phase II exploration did find indications of contamination in the soil at Borings E1 through E6. Based on the boring and analytical results and the locations of the borings with respect to the proposed work, additional Hazardous Material Exploration is not warranted for this property for the proposed bridge and approach reconstruction. Due to the indicated presence of the contaminated soil present in the existing approach embankment, we recommend Special Standard Provisions be written to provide for proper disposal of any soils excavated during the proposed bridge and approach embankment reconstruction work along 17th Street from approximately Station 16+67 to Station 18+50. Field monitoring to determine if the excavated soils are contaminated will be ineffective due to the low volatility of the contamination. We recommend any soils disturbed by the proposed reconstruction effort be considered contaminated and be properly disposed in a licensed landfill.

A copy of this report should be provided to the current property owner.

II. PROJECT DESCRIPTION

The proposed project consists of the reconstruction of 17th Street Bridge Over East Twin River adjacent to the subject property. The PROJECT will consist of replacing the existing bridge, bridge abutments, retaining walls of the bridge approaches on the west side of the East Twin River, and storm sewer. We understand the proposed vertical alignment of the bridge and approaches will be similar to the existing alignment. The anticipate excavation depth to accommodate the proposed storm sewer and bridge abutment is approximately 8 feet. Temporary limited easements are planned along the west bridge approach.

III. PURPOSE AND SCOPE OF SERVICES

This exploration was performed to determine whether an adverse environmental condition existed adjacent to the PROJECT due to the previous use of the adjacent properties. This Phase II exploration was not performed to determine the extent of hazardous wastes or materials, but was performed to confirm whether hazardous wastes or materials were present beneath the proposed roadway that could affect the proposed reconstruction work. The scope of services included the following:

- Perform six soil borings in the right-of-way at the selected locations. The soil borings were planned to be extended to a depth of 10 feet below existing grade.
- Perform PID field screening of soil samples obtained by the soil borings for the presence of VOC.
- Perform VOC, PAH, and RCRA metals chemical analyses on one selected soil samples from each soil boring performed.[1] We will select the soil sample submitted for chemical analyses based on the field observations and PID screening.
- Perform Protocol B disposal chemical analyses on one selected soil sample with the highest contamination concentrations or a composite soil sample.[2]

---

[1]RCRA metals chemical analyses includes the determination of the total concentration of arsenic, barium, cadmium, chromium, lead, mercury, selenium, and silver.

[2]Protocol B disposal chemical analyses consists of determining the pH, free liquids percentage, flash point temperature, concentration of chlorine, reactive cyanide, reactive sulfide, PCBs, phenols, and the TCLP concentration of (continued...)

- Obtain a groundwater sample at one soil boring if groundwater is within 10 feet below existing grade.

- Perform VOC chemical analyses on any groundwater samples obtained.

IV. PROPERTY LOCATION

This property is located at 1316 18th Street. The property is split by 17th Street with parking lots located adjacent north and south of 17th Street and a small building located adjacent north of 17th Street near the proposed bridge and approach reconstruction project. Please refer to Figures 1 and 2 which show where this property is located along the PROJECT. A Plan and Profile drawing provided by URS Corporation is included in Appendix A.

V. SITE HISTORY

The following is excerpted from page 6 from Section 6.1 Summary of Findings of the *Phase I Hazardous Materials Assessment* Report for the subject site:[1]

> "... The facility was formerly a hazardous waste treatment, storage and disposal (TSD) facility from the 1970s until the mid-1980s. In 1975 Hamilton Industries received a permit from the State of Wisconsin to incinerate solvent waste and paint sludge in a solvent boiler for the purpose of treating waste and reducing natural gas consumption. The facility also accepted hazardous waste sludge from other facilities for burning. The burning of hazardous waste ceased in the mid- to late 1980s. The facility held a RCRA hazardous waste storage permit but discontinued the storage of hazardous waste in 1988. Currently, the facility is a small quantity hazardous waste generator. Several RCRA violations for this facility are reported in the EDR report. These violations were issued in the 1980s and apparently corrected shortly after issuance. A 2005 DNR inspection yielded no violations.
>
> According to EDR and the WDNR BRRTS database, two mineral oil spills occurred at the facility (1996, 2005) and one UST was closed and removed. Both spill cases are closed and the UST closure required no site investigation. COMM

---

[2](...continued)
arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, copper, nickel, zinc, benzene, carbon tetrachloride, chlorobenzene, chloroform, o-cresol, m-cresol, p-cresol, 1,4-dichlorobenzene, 1,2-dichloroethane, 1,1-dicholorethylene, 2-4-dinitrotoluene, hexachlorobenzene, hexachloro-1,3-butadiene, hexachloroehtane, methyl ethyl ketone, nitrobenzene, pentachlorophenol, pyridine, tetrachloroethylene, trichloroethylene, 2,4,5-trichlorophenol, 2,4,6-trichlorophenol, and vinyl chloride.

6.0 FINDINGS AND CONCLUSIONS

Based upon the record search, the Fisher Hamilton Scientific site, located at 1316 18th Street was the only property in the subject area identified as having had or having the potential for hazardous material releases.

6.1 Summary of Findings

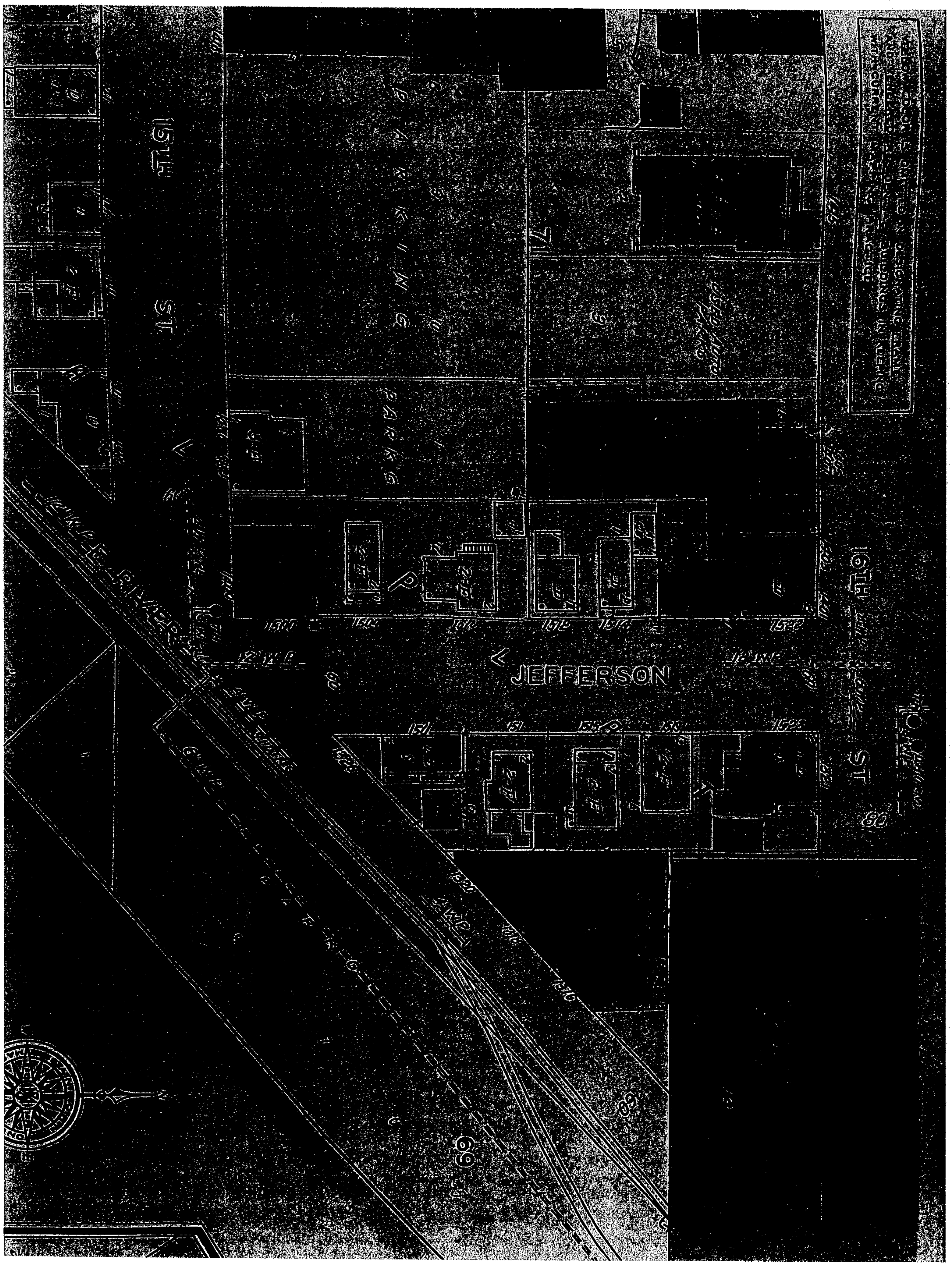
Fisher Hamilton Scientific: 1316 18th Street

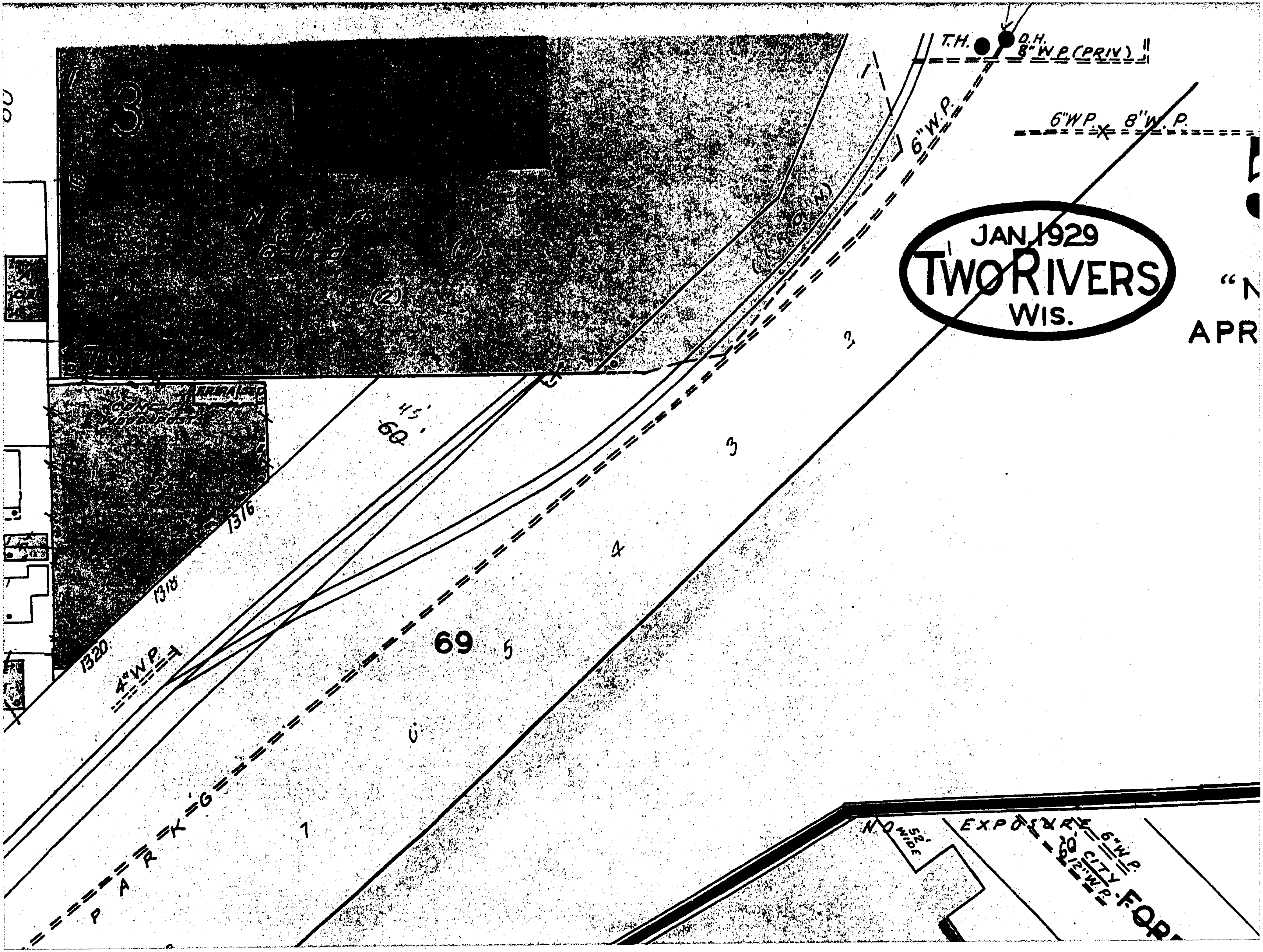
This site includes the area immediately to the west of the 17th Street bridge and comprises parcels both north and south of 17th Street, west to Jefferson Street. Sanborn Maps indicate that the facility expanded from its early configuration on the east and west sides of River Street, to its current configuration extending west to Jefferson Street. Manufacturing operations have been conducted at this site since at least 1891. The operations consisted of manufacturing wooden printer's type and furniture and later wood and metal type and furniture. Based on the information on the Sanborn maps, processes included wood fabrication and storage, painting and varnishing. Hazardous materials were historically used and stored at this facility as confirmed by the results of the WDNR file review (see below).

The following information was obtained during review of the WDNR files for is facility that are located in the Green Bay office. The facility is regulated under the WDNR Hazardous Waste Program, and the file contained information pertaining only to waste issues. There were no files associated with the WDNR Remediation and Redevelopment program, which would contain information pertaining to environmental investigations and soil and/or groundwater testing. The facility was formerly a hazardous waste treatment, storage and disposal (TSD) facility from the 1970s until the mid-1980s. In 1975 Hamilton Industries received a permit from the State of Wisconsin to incinerate solvent waste and paint sludge in a solvent boiler for the purpose of treating waste and reducing natural gas consumption. The facility also accepted hazardous waste sludge from other facilities for burning. The burning of hazardous waste ceased in the mid- to late 1980s. The facility held a RCRA hazardous waste storage permit but discontinued the storage of hazardous waste in 1988. Currently, the facility is a small quantity hazardous waste generator. Several RCRA violations for this facility are reported in the EDR report. These violations were issued in the 1980s and apparently corrected shortly after issuance. A 2005 DNR inspection yielded no violations.

According to EDR and the WDNR BRRTS database, two mineral oil spills occurred at the facility (1996, 2005) and one UST was closed and removed. Both spill cases are closed and the UST closure required no site investigation. COMM lists the UST as a 200 gallon leaded gasoline tank closed in 1990, however BRRTS indicates that the closure report was received in 1994.

31
16TH ST.
15TH ST.
JEFFERSON
E. RIVER
SIDING
DRUGS
B.P.O.E. CLUB
PILAST'D. WALLS STEEL BEAMS
VULCANIZING
PRINTING
ELEC MOTOR
KAHLENBERG LABORATORIES
CHEMIST LABORATORY
CONC. FLOOR WOOD POSTS
SHED
TILE
CONTRACTORS SUPPLIES
LAKE PARK OIL CO.
BULK OIL STR.
OIL W. HO.
FILLING STATION
BOARDING HO.
HANSEN
NO EXPOSURE
71
70
69
77
4" W PIPE


JEFFERSON
16TH ST
15TH ST
PARKING


JAN 1929
TWO RIVERS
WIS.
APR
T.H.
D.H.
8" W.P. (PRIV.)
6" W.P.
6" W.P.
8" W.P.
69
4" W.P.
1316
1318
1320
45'
60
PARK
52' WIDE
EXPOSURE
6" W.P.
20 CITY
12" W.P.
FOR

PID FIELD SCREENING

The soil samples were screened with a Photoionization Detector (PID) equipped with a 10.6 eV lamp, calibrated for direct response to a isobutylene standard. PID calibration was performed prior to use and periodically throughout the day as field conditions warranted it. PID's detect Volatile Organic Compounds (VOCs), such as those contained in petroleum fuels. A soil sample was prepared for screening by placing a representative portion of the soil into a 1-quart size Ziplock® bag. The bag was then sealed and shaken to separate large soil aggregates. The headspace was then allowed to equilibrate, based on the following temperature conditions:

Minimum Sample Headspace Equilibration Time

Ambient Outside Air Temperature at Time of Sample Collection*	Minimum Time Sample MUST Equilibrate at 70°F or Greater
<40°F	40 minutes
40° - 55°F	20 minutes
56° - 59°F	10 minutes
>70°F	5 minutes

*Headspace samples shall be warmed out of direct sunlight by bringing them into a heated environment. At temperatures less than 55°F, headspace sample equilibration can be reduced to 10 minutes through the use of a 70°F water bath.

The soil samples were screened with the PID by puncturing the Ziplock® bag with the instrument probe. The highest meter response was recorded on the respective boring log.

SOIL & SATURATED MATERIAL ANALYTICAL PROCEDURES

Soil and saturated material samples were submitted to a laboratory for analysis. The laboratory samples were collected by placing a portion of the soil sample into a laboratory supplied sampling container by a clean, vinyl-gloved hand, and immediately placed in an ice-packed cooler. The soil samples were delivered to Synergy Environmental Lab, Inc. A Chain-Of-Custody form was maintained during sample transportation.

DECONTAMINATION

All the down hole geoprobe and sampling equipment was steam cleaned prior to use on-site. Soil sampling equipment was washed with detergent and double rinsed with potable water between sampling events. No lubricants or similar substances were used on the geoprobe or sampling equipment.

WELL CONSTRUCTION

The wells were constructed under the observation of McMAHON personnel.

GROUNDWATER SAMPLING & ANALYTICAL PROCEDURES

All the monitoring wells were sampled in accordance with Wisconsin Department of Natural Resoruces guidelines. The groundwater samples collected from the permanent monitoring wells were collected with disposable bailers. The groundwater samples were placed in sterile, laboratory-supplied, sampling containers and immediately placed in an ice-packed cooler. The groundwater samples were delivered to Synergy Environmental Lab, Inc. A Chain-Of-Custody record was maintained during sample transportation.

WATER LEVEL READINGS

Groundwater level measurements were obtained using a water level indicator, which sounds when the indicator probe contacts the water. Water level measurements were recorded to the nearest .01-foot from the highest surface on the monitoring well PVC riser pipe when the water level indicator sounded. The water level device was rinsed with potable water between monitoring wells.

SURVEYING PROCEDURES

The City of Two Rivers surveyed the monitoring wells.

APPENDIX C

Methods & Procedures

PID FIELD SCREENING

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SURVEYING PROCEDURES

The City of Two Rivers surveyed the monitoring wells.

APPENDIX D

Soil Boring Logs, Monitoring Well Construction,
& Borehole Abandonment Forms

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
City of Two Rivers	_ _ _ _ _ _ _ _	GP01

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Last Name: Firm: On-site Environmental Services	m m / d d / 1 2 0 1 6	m m / d d / 1 2 0 1 6	Geoprobe

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_ _ _ _ _ _	_ _ _		_____ Feet MSL	_____ Feet MSL	2 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S/C/N
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W
_____ 1/4 of _____ 1/4 of Section 6, T 19 N, R 24 ☐E ☐W

Facility ID	County	County Code	Civil Town/City/or Village
	Manitowoc	_ _ _	Two Rivers

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	32		0	0-9" 3/4" gravel, loose										
			2	9-19" Sand, f.g., brown, friable and loose, no odor										
2	48		4											
			6	19"-7' sand, f.g., loose, saturated @ 3', no odor										
			8	7-8' clay, red-brown, high plasticity, soft, no odor										
			10											
			12	EOB - 8'										
			14											
			16											
			18											
			20											
			22											

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

Signature	Firm
	McMahon

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

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
City of Two Rivers	_____	GP-02

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Last Name: Firm: On-site Environmental Services	m m / d d / 1 2 y y y y	m m / d d / 1 2 y y y y	geoprobe

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_____	_____	_____	_____ Feet MSL	_____ Feet MSL	2 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S/C/N
_____ 1/4 of _____ 1/4 of Section 6, T 19 N, R 24 E/W
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility ID	County	County Code	Civil Town/City/or Village
	Manitowoc	_____	Two Rivers

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	38		0	0-9"- 3/4" gravel, loose										
			2	9-2.5'- sand, f.g, brown & d. brown, loose, no odor										
2	31		4	2.5-3.2'- Silt, brown, soft, no odor										
			6	3.2-4.5'- red-brown clay, high plasticity, no odor, saturated @ 3.5'										
			8											
			10											
			12	4.5-8'- sand, f.g, loose, saturated, no odor										
			14											
				EOB- 8'										
			16											
			18											
			20											
			22											

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

Signature	Firm
	McMahon

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
City of Two Rivers	_ _ _ _ _ _ _ _	GP-03

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Last Name: Firm: On-site Environmental Service	m m / d d / 12 y y y y	m m / d d / 12 y y y y	geoprobe

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_ _ _ _ _ _	_ _ _ _		_____ Feet MSL	_____ Feet MSL	2 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S/C/N
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W
_____ 1/4 of _____ 1/4 of Section 6, T 19 N, R 24 E W

Facility ID	County	County Code	Civil Town/City/or Village
	Manitowoc	_ _ _	Two Rivers

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	30		0	0-13"- gravel, loose										
			2	13"-8'- loamy sand,										
2	41		4	@3.5'-wet, @4'-										
			6	saturated, loose, brown										
			8	no odor										
			10	EOB-8'										
			12											
			14											
			16											
			18											
			20											
			22											

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

Signature	Firm
	McMahon

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
City of Two Rivers	_____	MW-01

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Last Name: Firm: On-site Environmental Services	11/22/2016 (m m d d y y y y)	11/22/2016 (m m d d y y y y)	4.25" ID HSA 2" Geoprobe

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_____	_____	_____	_____ Feet MSL	_____ Feet MSL	8 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S/C/N
Lat ° ' " Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W
_____ 1/4 of _____ 1/4 of Section 6, T 19 N, R 24 ☐E ☐W

Facility ID	County	County Code	Civil Town/City/or Village
	Manitowoc	_____	Two Rivers

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	40		0	0-3.5' Sandy silt, brown, soft, no odor, dry				2'-0						
			2											
			4	3.5-8.5' silty sand, brown, soft, no odor, dry				4'-0						
2	38		6	8.5-10' silty clay, firm, wet				6'-0						
			8	10-13.6' As above, wet, soft				8'-0						
3	36		10	13.6'-15' v. f.g. sandy silt, wet, soft-firm, no odor				10'-0						
			12					12'-0						
			14					14'-0						
			16	EOB-16'										
			18	Set well @ 16'										
			20											
			22											

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Signature	Firm
	McMahon

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State of Wisconsin
Department of Natural Resources

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

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

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
City of Two Rivers	_____	MW-02

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Last Name: Firm: On-site Environmental Services	11/22/2016 (mm dd yyyy)	11/22/2016 (mm dd yyyy)	4.25" ID HSA 2" Geoprobe

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_____	_____	_____	_____ Feet MSL	_____ Feet MSL	8 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S/C/N
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W
_____ 1/4 of _____ 1/4 of Section 6, T 19 N, R 24 ☐E ☐W

Facility ID	County	County Code	Civil Town/City/or Village
	Manitowoc	_____	Two Rivers

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	38"		0	0-2'- silty sand, loose, dry, no odor				2'- 0						
			2	2-8.5'- f.g. sand, brown, loose, no odor				4'- 0						
			4											
2	27"		6	8.5-13'- silty clay, red-brown, firm, @ 10'- wet, @ 11'- slight diesel odor				6'- 0						
			8					8' 0						
				13-14.2'- sandy silt, brown, soft, slight diesel odor				10'- 0						
3	40"		10	14.2'-20'- V.f.g. silty sand, no odor, wet, soft, gray				12'- 11						
			12											
			14					14'- 0						
								16'- 0						
4	38		16											
			18					18'- 0						
			20					20'- 0						
				EOB-20'										
			22	Set well @ 18'										

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

Signature	Firm
[signature]	McMahon

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
City of Two Rivers	_ _ _ _ _ _ _	MW-03

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Last Name: Firm: On-site Environmental Services	11/22/2016 (m m d d y y y y)	11/22/2016 (m m d d y y y y)	4.25" ID HSA 2" Geo Probe

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_ _ _ _ _ _	_ _ _ _		_____ Feet MSL	_____ Feet MSL	8 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S/C/N
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W
_____ 1/4 of _____ 1/4 of Section 6, T 19 N, R 24 ☐E ☐W

Facility ID	County	County Code	Civil Town/City/or Village
	Manitowoc	_ _	Two Rivers

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	32"		0	0-17.5'- f.g. sand, @13' wet, brown, loose, no odor				2'-	0					
			2					4'-	0					
2	28"		4					6'-	0					
			6					8'-	0					
			8											
3	28"		10					10'-	0					
			12					12'-	0					
			14					14'-	0					
4	57		16	17.5'-20'- silty v.f.g. sand, wet, gray, no odor @18-19'- some natural organic matter				16'-	0					
			18					18'-	0					
			20	EOB- 20' Set well @ 20'				20'-	0					
			22											

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

Signature	Firm
	McMahon

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State of Wisconsin
Department of Natural Resources

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

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number	
City of Two Rivers		MW-04	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: Last Name: Firm: On-site Environmental Services	Date Drilling Started 1/12/2006 (mm dd yyyy)	Date Drilling Completed 1/12/2006 (mm dd yyyy)	Drilling Method 4.25" ID HSA 2" Geoprobe
WI Unique Well No. / DNR Well ID No. / Well Name	Final Static Water Level ____ Feet MSL	Surface Elevation ____ Feet MSL	Borehole Diameter 8 inches
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane ____ N, ____ E S/C/N ____ 1/4 of ____ 1/4 of Section 6, T 19 N, R 24 E/W	Lat ° ' " Long ° ' "	Local Grid Location ____ Feet ☐ N ☐ S	____ Feet ☐ E ☐ W
Facility ID / County: Manitowoc	County Code	Civil Town/City/or Village: Two Rivers	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	42		0	0-4' sandy silt, brown, moist, firm, no odor										
			2					2' - 0						
			4	4'-10' silty v.f.g. sand, wet, soft, no odor				4' - 0						
2	34													
			6					6' - 0						
			8					8' - 0						
			10					10' - 0						
			12											
			14	EOB - 13.5										
			16	Set well @ 13'										
			18											
			20											
			22											

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

Signature: [signature] Firm: McMahon

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 Rev. 7-98

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

Page 1 of 1

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
City of Two Rivers	_____	MW-05

Boring Drilled By: Name of crew chief (first, last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: Last Name: Firm: On-site Environmental Services	m m / d d / 12 y y y y	m m / d d / 12 y y y y	4.25" ID HSA 2" Geoprobe

WI Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Diameter
_____	_____	_____	_____ Feet MSL	_____ Feet MSL	8 inches

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐
State Plane _____ N, _____ E S/C/N
Lat ° ' "
Long ° ' "
Local Grid Location ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W
_____ 1/4 of _____ 1/4 of Section 6, T 19 N, R 24 E/W

Facility ID	County	County Code	Civil Town/City/or Village
	Manitowoc	_____	Two Rivers

Sample Number and Type	Sample Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/ Comments
1	26"		0	0-15" 3/4" gravel, 10" silty f.g. sand, d. brown, no odor, @ 4' wet.				2'	0					
			2											
			4					4'	0					
2	3"													
			6					6'	0					
			8					8'	0					
3	50"		10	10'-14.5' v.f.g. sand, wet, brown, no odor				10'	0					
			12					12'	0					
			14	14.5-15' v. f.g. sandy silt, wet, no odor				14'	0					
			16	EOB-15'										
			18	Set well @ 13'										
			20											
			22											

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

Signature	Firm
	McMahon

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State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Two Rivers-Lot F	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-01
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 11/22/2016 (m m d d y y y y)
Type of Well: Well Code ____/____	Section Location of Waste/Source: ____1/4 of ____ 1/4 of Sec. 1, T. 19 N, R. 24 ■E ☐W	Well Installed By: Name (first, last) and Firm: Tony Kapusi, On-Site Env. Services
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number: _____

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.0 ft.

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

13. Sieve analysis performed? ☐ Yes ■ No

14. Drilling method used: Rotary ☐ 50; Hollow Stem Auger ■ 41; Other ☐ _____

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

16. Drilling additives used? ☐ Yes ■ No

Describe _____

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

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.

F. Fine sand, top _____ ft. MSL or 4.0 ft.

G. Filter pack, top _____ ft. MSL or 5.0 ft.

H. Screen joint, top _____ ft. MSL or 6.0 ft.

I. Well bottom _____ ft. MSL or 16.0 ft.

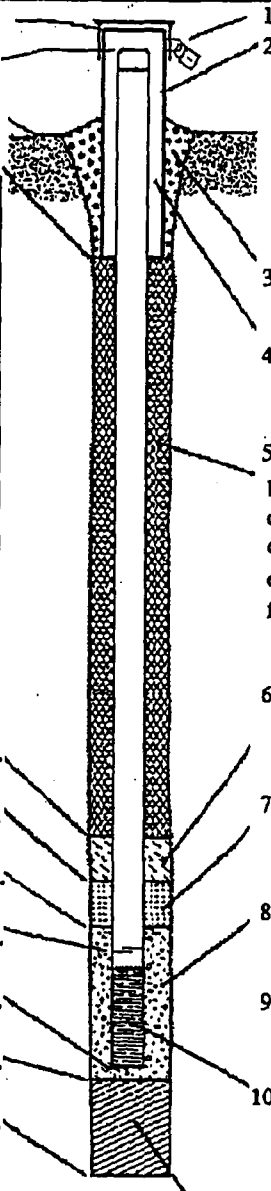
J. Filter pack, bottom _____ ft. MSL or 16.5 ft.

K. Borehole, bottom _____ ft. MSL or 16.5 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.2 in.

N. I.D. well casing 2.0 in.



1. Cap and lock? ■ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 2.0 ft.
c. Material: Steel ■ 04; Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ■ 30; Concrete ☐ 01; Other ☐ _____

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

5. Annular space seal: a. Granular/Chipped Bentonite ■ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☐ 08

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

7. Fine sand material: Manufacturer, product name & mesh size
a. 30/100 Sand
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. 10/20 Sand
b. Volume added _____ ft^3

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

10. Screen material: PVC
a. Screen type: Factory cut ■ 11; Continuous slot ☐ 01; Other ☐ _____
b. Manufacturer _____
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.

11. Backfill material (below filter pack): None ■ 14; Other ☐ _____

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

Signature _____ Firm McMahon

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

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Two Rivers-Lot F	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-02
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 11/12/2016 (m m d d y y y y)
Type of Well: Well Code 1	Section Location of Waste/Source: 1/4 of 1/4 of Sec. 1, T. 19 N, R. 24 ☐E ☐W	Well Installed By: Name (first, last) and Firm: Tony Kapugi, On-Site Envi. Services
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number: _____

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.0 ft.

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

13. Sieve analysis performed? ☐ Yes ■ No

14. Drilling method used: Rotary ☐ 50; Hollow Stem Auger ■ 41; Other ☐ _____

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

16. Drilling additives used? ☐ Yes ■ No

Describe _____

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

_____

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.

F. Fine sand, top _____ ft. MSL or 6.0 ft.

G. Filter pack, top _____ ft. MSL or 7.0 ft.

H. Screen joint, top _____ ft. MSL or 8.0 ft.

I. Well bottom _____ ft. MSL or 18.0 ft.

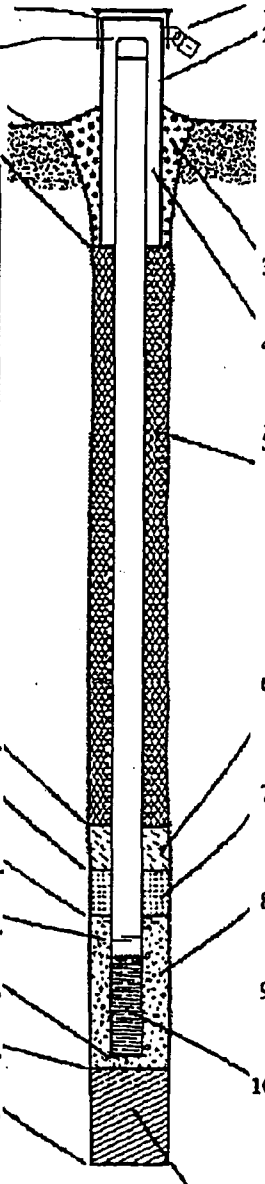
J. Filter pack, bottom _____ ft. MSL or 18.5 ft.

K. Borehole, bottom _____ ft. MSL or 18.5 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.2 in.

N. I.D. well casing 2.0 in.



1. Cap and lock? ■ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 2.0 ft.
c. Material: Steel ■ 04; Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☐ 30; Concrete ☐ 01; Other ☐ _____

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

5. Annular space seal: a. Granular/Chipped Bentonite ■ 33
b. _____ Lbs/gal mud weight ... Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight ..... Bentonite slurry ☐ 31
d. _____ % Bentonite ..... Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☐ 08

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

7. Fine sand material: Manufacturer, product name & mesh size
a. 30/100 Sil/ey
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. 10/20 Sil/ey
b. Volume added _____ ft^3

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

10. Screen material: PVC
a. Screen type: Factory cut ■ 11; Continuous slot ☐ 01; Other ☐ _____
b. Manufacturer _____
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.

11. Backfill material (below filter pack): None ■ 14; Other ☐ _____

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

Signature	Firm
[signature]	McMahon

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.

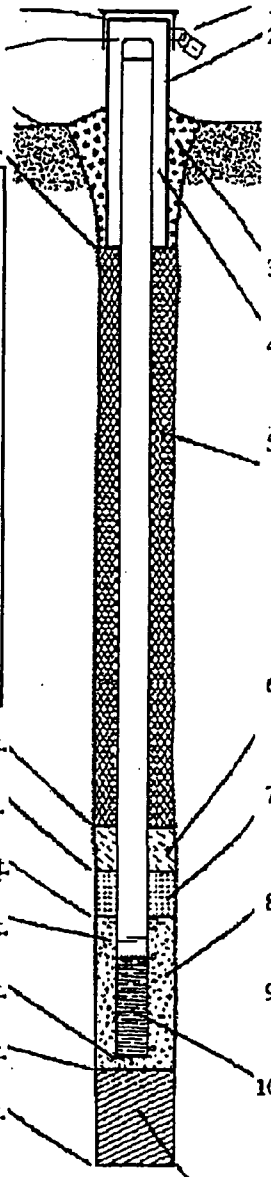
State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Two Rivers-Lot F	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-03
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: _____ DNR Well ID No.: _____
Facility ID: _____	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 11/22/2016 (m m d d y y y y)
Type of Well: Well Code 1	Section Location of Waste/Source: ___ 1/4 of ___ 1/4 of Sec. 1, T. 19 N, R. 24 ■E ☐W	Well Installed By: Name (first, last) and Firm: Tony Kapusi On-Site Env. Services
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number: _____



A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.0 ft.

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

13. Sieve analysis performed? ☐ Yes ■ No

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

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

16. Drilling additives used? ☐ Yes ■ No

Describe _____

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

_____

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.

F. Fine sand, top _____ ft. MSL or 6.0 ft.

G. Filter pack, top _____ ft. MSL or 8.0 ft.

H. Screen joint, top _____ ft. MSL or 10.0 ft.

I. Well bottom _____ ft. MSL or 20.0 ft.

J. Filter pack, bottom _____ ft MSL or 20.5 ft.

K. Borehole, bottom _____ ft MSL or 20.5 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.2 in.

N. I.D. well casing 2.0 in.

1. Cap and lock? ■ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 9.0 in.
b. Length: 1.0 ft.
c. Material: Steel ■ 04
Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

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

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

5. Annular space seal: a. Granular/Chipped Bentonite ■ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☐ 08

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

7. Fine sand material: Manufacturer, product name & mesh size
a. 30/100 Sidley
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. 10/20 Sidley
b. Volume added _____ ft^3

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

10. Screen material: PVC
a. Screen type: Factory cut ■ 11
Continuous slot ☐ 01
Other ☐ _____
b. Manufacturer _____
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.

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

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

Signature	Firm
[signature]	McMahon

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

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Two Rivers-Lot F	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-04
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No.: _____ DNR Well ID No.: _____
Facility ID: _____	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 11/12/2016 (m m d d y y y y)
Type of Well: Well Code 1	Section Location of Waste/Source: ___ 1/4 of ___ 1/4 of Sec. 1, T. 19 N, R. 24 ■E ☐W	Well Installed By: Name (first, last) and Firm: Tony Kapugi, On-Site Env. Services
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number: _____

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 2.0 ft.

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

13. Sieve analysis performed? ☐ Yes ■ No

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

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

16. Drilling additives used? ☐ Yes ■ No

Describe _____

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

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.

F. Fine sand, top _____ ft. MSL or N/A ft.

G. Filter pack, top _____ ft. MSL or 2.5 ft.

H. Screen joint, top _____ ft. MSL or 3.0 ft.

I. Well bottom _____ ft. MSL or 13.0 ft.

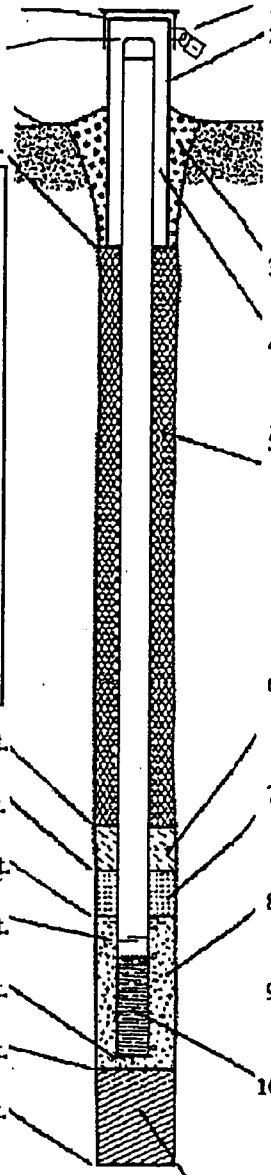
J. Filter pack, bottom _____ ft. MSL or 13.5 ft.

K. Borehole, bottom _____ ft. MSL or 13.5 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.2 in.

N. I.D. well casing 2.0 in.



1. Cap and lock? ■ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 4.0 in.
b. Length: 2.0 ft.
c. Material: Steel ☐ 04
_____ Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

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

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

5. Annular space seal: a. Granular/Chipped Bentonite ■ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☐ 08

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

7. Fine sand material: Manufacturer, product name & mesh size
a. _____
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. 20/20 Sidley
b. Volume added _____ ft^3

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

10. Screen material: PVC
a. Screen type: Factory cut ■ 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer _____
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.

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

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

Signature	Firm
[signature]	McMahon

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

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: Two Rivers-Lot F	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: MW-05
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 11/22/2016 (m m d d y y y y)
Type of Well: Well Code 1	Section Location of Waste/Source: 1/4 of 1/4 of Sec. 1, T. 19 N, R. 24 ■E ☐W	Well Installed By: Name (first, last) and Firm: Tony Kapugi, On-Site Env. Services
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number: _____

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation _____ ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or 1.0 ft.

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

13. Sieve analysis performed? ☐ Yes ■ No

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

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

16. Drilling additives used? ☐ Yes ■ No

Describe _____

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

E. Bentonite seal, top _____ ft. MSL or 1.0 ft.

F. Fine sand, top _____ ft. MSL or N/A ft.

G. Filter pack, top _____ ft. MSL or 2.5 ft.

H. Screen joint, top _____ ft. MSL or 3.0 ft.

I. Well bottom _____ ft. MSL or 13.0 ft.

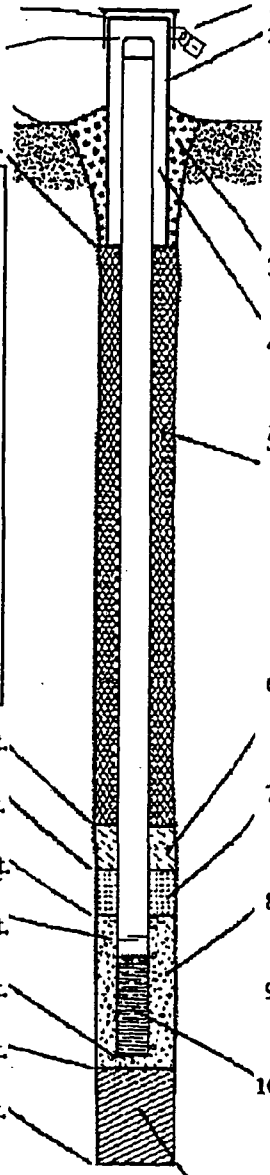
J. Filter pack, bottom _____ ft MSL or 13.5 ft.

K. Borehole, bottom _____ ft MSL or 13.5 ft.

L. Borehole, diameter 8.0 in.

M. O.D. well casing 2.2 in.

N. I.D. well casing 2.0 in.



1. Cap and lock? ■ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 9.0 in.
b. Length: 1.0 ft.
c. Material: Steel ■ 04
_____ Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

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

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

5. Annular space seal: a. Granular/Chipped Bentonite ■ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☐ 08

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

7. Fine sand material: Manufacturer, product name & mesh size
a. _____
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. 10/20 Sidley
b. Volume added _____ ft^3

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

10. Screen material: PVC
a. Screen type: Factory cut ■ 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer _____
c. Slot size: 0.010 in.
d. Slotted length: 10.0 ft.

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

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

Signature	Firm
[signature]	McMahon

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.

tate of Wisconsin
epartment of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

acility/Project Name	County Name	Well Name
Two Rivers Lot F	Manitowoc	MW-01

acility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	__	_____	____

. Can this well be purged dry? ■ Yes ☐ No

. Well development method

surged with bailer and bailed	■ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

. Time spent developing well _____ min.

. Depth of well (from top of well casisng) 18.__ ft.

. Inside diameter of well 2.0 in.

. Volume of water in filter pack and well casing 0.2 gal.

. Volume of water removed from well 0.5 gal.

. Volume of water added (if any) 0.0 gal.

. Source of water added _____

0. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 17.03 ft.	____.__ ft.
Date	b. 12/12/2016 (m m d d y y y y)	12/12/2016 (m m d d y y y y)
Time	c. ____: ____ ☐ a.m. ☐ p.m.	____: ____ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Stuart Last Name: Boerst
Firm: McMahon

7. Additional comments on development:

ame and Address of Facility Contact/Owner/Responsible Party
irst ame: James Last Name: McDonald
acility/Firm: City of Two Rivers
treet: _____
ity/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: [signature]
Print Name: Stuart Boerst
Firm: McMahon

NOTE: See instructions for more information including a list of county codes and well type codes.

tate of Wisconsin
epartment of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

acility/Project Name	County Name	Well Name
Two Rivers Lot F	Manitowoc	MW-02

acility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	__	_____	____

. Can this well be purged dry? ■ Yes ☐ No

. Well development method

surged with bailer and bailed	■	41
surged with bailer and pumped	☐	61
surged with block and bailed	☐	42
surged with block and pumped	☐	62
surged with block, bailed and pumped	☐	70
compressed air	☐	20
bailed only	☐	10
pumped only	☐	51
pumped slowly	☐	50
Other _____	☐	▒▒

. Time spent developing well ____ min.

. Depth of well (from top of well casing) 19.8 ft.

. Inside diameter of well 2.0 in.

. Volume of water in filter pack and well casing 0.6 gal.

. Volume of water removed from well 1.3 gal.

. Volume of water added (if any) 0.0 gal.

. Source of water added _____

). Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 16.62 ft.	____.__ ft.
Date	b. 12/12/2016 (m m d d y y y y)	12/12/2016 (m m d d y y y y)
Time	c. ___:___ ☐ a.m. ☐ p.m.	___:___ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)

Fill in if drilling fluids were used and well is at solid waste facility:

14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

16. Well developed by: Name (first, last) and Firm
First Name: Stuart Last Name: Boerst
Firm: McMahon

. Additional comments on development:

ame and Address of Facility Contact/Owner/Responsible Party
rst ame: James Last Name: McDonald
cility/Firm: City of Two Rivers
reet: _____
ity/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: _____
Print Name: Stuart Boerst
Firm: McMahon

OTE: See instructions for more information including a list of county codes and well type codes.

tate of Wisconsin
epartment of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

acility/Project Name	County Name	Well Name
Two Rivers Lot F	Manitowoc	MW-03

acility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	__	_____	____

. Can this well be purged dry? ☐ Yes ■ No

. Well development method

surged with bailer and bailed	■ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

. Time spent developing well _____ min.

. Depth of well (from top of well casisng) 20.3 ft.

. Inside diameter of well 2.0 in.

. Volume of water in filter pack and well casing 1.2 gal.

. Volume of water removed from well 6.0 gal.

. Volume of water added (if any) 0.0 gal.

. Source of water added _____

). Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 13.18 ft.	____.__ ft.
Date	b. 12/12/2016 (m m d d y y y y)	12/12/2016 (m m d d y y y y)
Time	c. ___:___ ☐ a.m. ☐ p.m.	___:___ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Stuart Last Name: Boerst
Firm: McMahon

7. Additional comments on development:

ame and Address of Facility Contact/Owner/Responsible Party
rst ame: James Last Name: McDonald
cility/Firm: City of Two Rivers
reet: _____
ity/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: _____
Print Name: Stuart Boerst
Firm: McMahon

NOTE: See instructions for more information including a list of county codes and well type codes.

tate of Wisconsin
epartment of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

acility/Project Name	County Name	Well Name
Two Rivers Lot F	Manitowoc	MW-04

acility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	__	_____	____

. Can this well be purged dry? ☐ Yes ☐ No

. Well development method

surged with bailer and bailed	■ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

. Time spent developing well _____ min.

. Depth of well (from top of well casing) 15.0 ft.

. Inside diameter of well 2.0 in.

. Volume of water in filter pack and well casing 1.5 gal.

. Volume of water removed from well 6.0 gal.

. Volume of water added (if any) 0.0 gal.

. Source of water added _____

0. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 6.21 ft.	____.__ ft.
Date	b. 12/12/2016 (m m d d y y y y)	12/12/2016 (m m d d y y y y)
Time	c. ___:___ ☐ a.m. ☐ p.m.	___:___ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Stuart Last Name: Boerst
Firm: McMahon

7. Additional comments on development:

ame and Address of Facility Contact/Owner/Responsible Party
rst ame: James Last Name: McDonald
acility/Firm: City of Two Rivers
reet: _____
ity/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: [signature]
Print Name: Stuart Boerst
Firm: McMahon

NOTE: See instructions for more information including a list of county codes and well type codes.

tate of Wisconsin
epartment of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

acility/Project Name	County Name	Well Name
Two Rivers Lot F	Manitowoc	MW05

acility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	__	_____	____

. Can this well be purged dry? ☐ Yes ☐ No

. Well development method

surged with bailer and bailed	■ 41
surged with bailer and pumped	☐ 61
surged with block and bailed	☐ 42
surged with block and pumped	☐ 62
surged with block, bailed and pumped	☐ 70
compressed air	☐ 20
bailed only	☐ 10
pumped only	☐ 51
pumped slowly	☐ 50
Other _____	☐

. Time spent developing well ____ min.

. Depth of well (from top of well casisng) 13.4 ft.

. Inside diameter of well 2.0 in.

. Volume of water in filter pack and well casing 1.9 gal.

. Volume of water removed from well 6.0 gal.

. Volume of water added (if any) 0.0 gal.

. Source of water added _____

0. Analysis performed on water added? ☐ Yes ☐ No
(If yes, attach results)

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 2.23 ft.	____.__ ft.
Date	b. 12/12/2016 (m m d d y y y y)	12/12/2016 (m m d d y y y y)
Time	c. ___:___ ☐ a.m. ☐ p.m.	___:___ ☐ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☐ 15 (Describe)	Clear ☐ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids	_____.__ mg/l	_____.__ mg/l
15. COD	_____.__ mg/l	_____.__ mg/l

Fill in if drilling fluids were used and well is at solid waste facility:

16. Well developed by: Name (first, last) and Firm
First Name: Stuart Last Name: Boerst
Firm: McMahon

7. Additional comments on development:

ame and Address of Facility Contact/Owner/Responsible Party
irst ame: James Last Name: McDonald
acility/Firm: City of Two Rivers
treet: _____
ity/State/Zip: _____

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: _____
Print Name: Stuart Boerst
Firm: McMahon

NOTE: See instructions for more information including a list of county codes and well type codes.

APPENDIX E

Laboratory Data

CHAIN OF CUSTODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # Nº 2940

Page 1 of 1

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #:	
Sampler: (signature)	

Project (Name / Location):	Two Rivers, Loft		
Reports To:	Stuart Boost	Invoice To:	City of Two Rivers
Company	McMahon	Company	Attn: Jim McDonald
Address	P.O. Box 1025	Address	
City State Zip	Neenah, WI 54957	City State Zip	
Phone		Phone	
FAX		FAX	

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	MO	PID/FID
503453A	GP-01	7/28/16			X		3	GW	HCl													X	X	X	
B	GP-02						3	GW	HCl													X	X	X	
C	GP-03						3	GW	HCl													X	X	X	
D	GP-01/2'						2	S	MeOH													X	X	X	
E	GP-02/2.5'						2	S	MeOH													X	X	X	
F	GP-03/3'						2	S	MeOH													X	X	X	

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Client
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
	3:31pm	7/29/16			

Received in Laboratory By: Time: 1513 Date: 7/29/16

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

STUART BOERST
MCMAHON ASSOCIATES
PO BOX 1025
NEENAH WI 54957-1025

Report Date *12-Aug-16*

Project Name TWO RIVERS
Project # LOT F

Invoice # E31453

Lab Code 5031453A
Sample ID GP-01
Sample Matrix Water
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Arsenic, Total	3.6	ug/L	0.6	1.9	1	7060A		8/5/2016	CWT	1
Barium, Total	81.4	ug/L	7.8	25	1	200.7		8/2/2016	CWT	1
Cadmium, Total	< 0.3	ug/L	0.3	1	1	200.7		8/2/2016	CWT	1
Chromium, Total	< 1.8	ug/L	1.8	5.6	1	200.7		8/2/2016	CWT	1
Lead, Total	64.1	ug/L	4	13	5	7421		8/5/2016	CWT	1
Mercury, Total	< 0.11	ug/l	0.11	0.35	1	245.1		8/3/2016	CWT	1
Molybdenum, Total	11.0	ug/L	1.5	5.1	1	200.7		8/2/2016	CWT	1
Selenium, Total	< 1.1	ug/l	1.1	3.7	1	7740		8/10/2016	MJR	1
Silver, Total	< 8.4	ug/L	8.4	27.9	1	200.7		8/2/2016	CWT	1
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		8/2/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		8/2/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		8/2/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		8/2/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		8/2/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		8/2/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		8/2/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		8/2/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		8/2/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		8/2/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		8/2/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		8/2/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		8/2/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		8/2/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		8/2/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		8/2/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		8/2/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		8/2/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		8/2/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		8/2/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		8/2/2016	CJR	1

Project Name TWO RIVERS
Project # LOT F

Invoice # E31453

Lab Code 5031453A
Sample ID GP-01
Sample Matrix Water
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		8/2/2016	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		8/2/2016	CJR	1
cis-1,2-Dichloroethene	0.61 "J"	ug/l	0.45	1.4	1	8260B		8/2/2016	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		8/2/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		8/2/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		8/2/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		8/2/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		8/2/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		8/2/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		8/2/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		8/2/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		8/2/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		8/2/2016	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		8/2/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		8/2/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		8/2/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		8/2/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		8/2/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		8/2/2016	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		8/2/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		8/2/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		8/2/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		8/2/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		8/2/2016	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		8/2/2016	CJR	1
Trichloroethene (TCE)	0.67 "J"	ug/l	0.47	1.5	1	8260B		8/2/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		8/2/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		8/2/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		8/2/2016	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		8/2/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		8/2/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		8/2/2016	CJR	1
SUR - 4-Bromofluorobenzene	100	REC %			1	8260B		8/2/2016	CJR	1
SUR - Dibromofluoromethane	103	REC %			1	8260B		8/2/2016	CJR	1
SUR - Toluene-d8	96	REC %			1	8260B		8/2/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	92	REC %			1	8260B		8/2/2016	CJR	1

Project Name TWO RIVERS
Project # LOT F

Invoice # E31453

Lab Code 5031453B
Sample ID GP-02
Sample Matrix Water
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Arsenic, Total	13.1	ug/L	0.6	1.9	1	7060A		8/5/2016	CWT	1
Barium, Total	41.9	ug/L	7.8	25	1	200.7		8/2/2016	CWT	1
Cadmium, Total	< 0.3	ug/L	0.3	1	1	200.7		8/2/2016	CWT	1
Chromium, Total	< 1.8	ug/L	1.8	5.6	1	200.7		8/2/2016	CWT	1
Lead, Total	31.9	ug/L	4	13	5	7421		8/5/2016	CWT	1 49
Mercury, Total	< 0.11	ug/l	0.11	0.35	1	245.1		8/3/2016	CWT	1
Molybdenum, Total	8.0	ug/L	1.5	5.1	1	200.7		8/2/2016	CWT	1
Selenium, Total	2.3 "J"	ug/l	1.1	3.7	1	7740		8/10/2016	MJR	1
Silver, Total	< 8.4	ug/L	8.4	27.9	1	200.7		8/2/2016	CWT	1
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		8/2/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		8/2/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		8/2/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		8/2/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		8/2/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		8/2/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		8/2/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		8/2/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		8/2/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		8/2/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		8/2/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		8/2/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		8/2/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		8/2/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		8/2/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		8/2/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		8/2/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		8/2/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		8/2/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		8/2/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		8/2/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		8/2/2016	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		8/2/2016	CJR	1
cis-1,2-Dichloroethene	3.0	ug/l	0.45	1.4	1	8260B		8/2/2016	CJR	1
trans-1,2-Dichloroethene	0.78 "J"	ug/l	0.54	1.7	1	8260B		8/2/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		8/2/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		8/2/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		8/2/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		8/2/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		8/2/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		8/2/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		8/2/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		8/2/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		8/2/2016	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		8/2/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		8/2/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		8/2/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		8/2/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		8/2/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		8/2/2016	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		8/2/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		8/2/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		8/2/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		8/2/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		8/2/2016	CJR	1

Project Name TWO RIVERS
Project # LOT F

Invoice # E31453

Lab Code 5031453B
Sample ID GP-02
Sample Matrix Water
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		8/2/2016	CJR	1
Trichloroethene (TCE)	36	ug/l	0.47	1.5	1	8260B		8/2/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		8/2/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		8/2/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		8/2/2016	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		8/2/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		8/2/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		8/2/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	92	REC %			1	8260B		8/2/2016	CJR	1
SUR - 4-Bromofluorobenzene	101	REC %			1	8260B		8/2/2016	CJR	1
SUR - Dibromofluoromethane	105	REC %			1	8260B		8/2/2016	CJR	1
SUR - Toluene-d8	97	REC %			1	8260B		8/2/2016	CJR	1

Project Name TWO RIVERS **Invoice #** E31453
Project # LOT F

Lab Code 5031453C
Sample ID GP-03
Sample Matrix Water
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Arsenic, Total	3.9	ug/L	0.6	1.9	1	7060A		8/5/2016	CWT	1
Barium, Total	127	ug/L	7.8	25	1	200.7		8/2/2016	CWT	1
Cadmium, Total	0.4 "J"	ug/L	0.3	1	1	200.7		8/2/2016	CWT	1
Chromium, Total	< 1.8	ug/L	1.8	5.6	1	200.7		8/2/2016	CWT	1
Lead, Total	34.1	ug/L	1.6	5.2	2	7421		8/5/2016	CWT	1
Mercury, Total	< 0.11	ug/l	0.11	0.35	1	245.1		8/3/2016	CWT	1
Molybdenum, Total	6.4	ug/L	1.5	5.1	1	200.7		8/2/2016	CWT	1
Selenium, Total	< 1.1	ug/l	1.1	3.7	1	7740		8/10/2016	MJR	1
Silver, Total	< 8.4	ug/L	8.4	27.9	1	200.7		8/2/2016	CWT	1
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		8/2/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		8/2/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		8/2/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		8/2/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		8/2/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		8/2/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		8/2/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		8/2/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		8/2/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		8/2/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		8/2/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		8/2/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		8/2/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		8/2/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		8/2/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		8/2/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		8/2/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		8/2/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		8/2/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		8/2/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		8/2/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		8/2/2016	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		8/2/2016	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		8/2/2016	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		8/2/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		8/2/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		8/2/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		8/2/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		8/2/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		8/2/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		8/2/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		8/2/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		8/2/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		8/2/2016	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		8/2/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		8/2/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		8/2/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		8/2/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		8/2/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		8/2/2016	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		8/2/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		8/2/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		8/2/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		8/2/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		8/2/2016	CJR	1

Project Name TWO RIVERS
Project # LOT F

Invoice # E31453

Lab Code 5031453C
Sample ID GP-03
Sample Matrix Water
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		8/2/2016	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		8/2/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		8/2/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		8/2/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		8/2/2016	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		8/2/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		8/2/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		8/2/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	82	REC %			1	8260B		8/2/2016	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			1	8260B		8/2/2016	CJR	1
SUR - Dibromofluoromethane	97	REC %			1	8260B		8/2/2016	CJR	1
SUR - Toluene-d8	95	REC %			1	8260B		8/2/2016	CJR	1

Project Name TWO RIVERS
Project # LOT F

Invoice # E31453

Lab Code 5031453D
Sample ID GP-01/2'
Sample Matrix Soil
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	74.8	%			1	5021		8/1/2016	NJC	1
Inorganic										
Metals										
Arsenic, Total	1.39	mg/kg	0.65	2	1	6010B		8/5/2016	ESC	1
Barium, Total	72.9	mg/kg	0.17	0.5	1	6010B		8/5/2016	ESC	1
Cadmium, Total	0.389 "J"	mg/kg	0.07	0.5	1	6010B		8/5/2016	ESC	1
Chromium, Total	19.3	mg/kg	0.14	1	1	6010B		8/5/2016	ESC	1
Lead, Total	44.5	mg/kg	0.19	0.5	1	6010B		8/5/2016	ESC	1
Mercury, Total	0.081	mg/kg	0.0028	0.0093	1	7471		8/4/2016	CWT	1
Molybdenum, Total	< 0.160	mg/kg	0.16	0.533	1	6010B		8/5/2016	ESC	1
Selenium, Total	< 0.74	mg/kg	0.74	2	1	6010B		8/5/2016	ESC	1
Silver, Total	< 0.28	mg/kg	0.28	1	1	6010B		8/5/2016	ESC	1
Organic										
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		8/8/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		8/8/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		8/8/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		8/8/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		8/8/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		8/8/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		8/8/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		8/8/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		8/8/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		8/8/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		8/8/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		8/8/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		8/8/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		8/8/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		8/8/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		8/8/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		8/8/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		8/8/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		8/8/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		8/8/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		8/8/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		8/8/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		8/8/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		8/8/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		8/8/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		8/8/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		8/8/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		8/8/2016	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		8/8/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		8/8/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		8/8/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		8/8/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		8/8/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		8/8/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		8/8/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		8/8/2016	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		8/8/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		8/8/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		8/8/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		8/8/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		8/8/2016	CJR	1

Project Name TWO RIVERS
Project # LOT F

Invoice # E31453

Lab Code 5031453D
Sample ID GP-01/2'
Sample Matrix Soil
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		8/8/2016	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		8/8/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		8/8/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		8/8/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		8/8/2016	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		8/8/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		8/8/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		8/8/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		8/8/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		8/8/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		8/8/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		8/8/2016	CJR	1
SUR - Toluene-d8	102	Rec %			1	8260B		8/8/2016	CJR	1
SUR - Dibromofluoromethane	99	Rec %			1	8260B		8/8/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	80	Rec %			1	8260B		8/8/2016	CJR	1
SUR - 4-Bromofluorobenzene	105	Rec %			1	8260B		8/8/2016	CJR	1

Project Name TWO RIVERS **Invoice #** E31453
Project # LOT F

Lab Code 5031453E
Sample ID GP-02/2.5'
Sample Matrix Soil
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	87.5	%			1	5021		8/1/2016	NJC	1
Inorganic										
Metals										
Arsenic, Total	< 0.65	mg/kg	0.65	2	1	6010B		8/5/2016	ESC	1
Barium, Total	28.0	mg/kg	0.17	0.5	1	6010B		8/5/2016	ESC	1
Cadmium, Total	0.114 "J"	mg/kg	0.07	0.5	1	6010B		8/5/2016	ESC	1
Chromium, Total	9.02	mg/kg	0.14	1	1	6010B		8/5/2016	ESC	1
Lead, Total	4.71	mg/kg	0.19	0.5	1	6010B		8/5/2016	ESC	1
Mercury, Total	0.234	mg/kg	0.0028	0.0093	1	7471		8/4/2016	CWT	1
Molybdenum, Total	< 0.160	mg/kg	0.16	0.533	1	6010B		8/5/2016	ESC	1
Selenium, Total	< 0.74	mg/kg	0.74	2	1	6010B		8/5/2016	ESC	1
Silver, Total	< 0.28	mg/kg	0.28	1	1	6010B		8/5/2016	ESC	1
Organic										
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		8/8/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		8/8/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		8/8/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		8/8/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		8/8/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		8/8/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		8/8/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		8/8/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		8/8/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		8/8/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		8/8/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		8/8/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		8/8/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		8/8/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		8/8/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		8/8/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		8/8/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		8/8/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		8/8/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		8/8/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		8/8/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		8/8/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		8/8/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		8/8/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		8/8/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		8/8/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		8/8/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		8/8/2016	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		8/8/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		8/8/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		8/8/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		8/8/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		8/8/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		8/8/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		8/8/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		8/8/2016	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		8/8/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		8/8/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		8/8/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		8/8/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		8/8/2016	CJR	1

Project Name TWO RIVERS
Project # LOT F

Invoice # E31453

Lab Code 5031453E
Sample ID GP-02/2.5'
Sample Matrix Soil
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		8/8/2016	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		8/8/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		8/8/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		8/8/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		8/8/2016	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		8/8/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		8/8/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		8/8/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		8/8/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		8/8/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		8/8/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		8/8/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	97	Rec %			1	8260B		8/8/2016	CJR	1
SUR - 4-Bromofluorobenzene	119	Rec %			1	8260B		8/8/2016	CJR	1
SUR - Dibromofluoromethane	100	Rec %			1	8260B		8/8/2016	CJR	1
SUR - Toluene-d8	101	Rec %			1	8260B		8/8/2016	CJR	1

Project Name TWO RIVERS
Project # LOT F

Invoice # E31453

Lab Code 5031453F
Sample ID GP-03/3'
Sample Matrix Soil
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	86.5	%			1	5021		8/1/2016	NJC	1
Inorganic										
Metals										
Arsenic, Total	0.99 "J"	mg/kg	0.65	2	1	6010B		8/5/2016	ESC	1
Barium, Total	26.0	mg/kg	0.17	0.5	1	6010B		8/5/2016	ESC	1
Cadmium, Total	< 0.07	mg/kg	0.07	0.5	1	6010B		8/5/2016	ESC	1
Chromium, Total	5.01	mg/kg	0.14	1	1	6010B		8/5/2016	ESC	1
Lead, Total	17.1	mg/kg	0.19	0.5	1	6010B		8/5/2016	ESC	1
Mercury, Total	0.038	mg/kg	0.0028	0.0093	1	7471		8/4/2016	CWT	1
Molybdenum, Total	< 0.160	mg/kg	0.16	0.533	1	6010B		8/5/2016	ESC	1
Selenium, Total	< 0.74	mg/kg	0.74	2	1	6010B		8/5/2016	ESC	1
Silver, Total	< 0.28	mg/kg	0.28	1	1	6010B		8/5/2016	ESC	1
Organic										
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		8/8/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		8/8/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		8/8/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		8/8/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		8/8/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		8/8/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		8/8/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		8/8/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		8/8/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		8/8/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		8/8/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		8/8/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		8/8/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		8/8/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		8/8/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		8/8/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		8/8/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		8/8/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		8/8/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		8/8/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		8/8/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		8/8/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		8/8/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		8/8/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		8/8/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		8/8/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		8/8/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		8/8/2016	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		8/8/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		8/8/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		8/8/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		8/8/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		8/8/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		8/8/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		8/8/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		8/8/2016	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		8/8/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		8/8/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		8/8/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		8/8/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		8/8/2016	CJR	1

Project Name TWO RIVERS
Project # LOT F

Invoice # E31453

Lab Code 5031453F
Sample ID GP-03/3'
Sample Matrix Soil
Sample Date 7/28/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		8/8/2016	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		8/8/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		8/8/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		8/8/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		8/8/2016	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		8/8/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		8/8/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		8/8/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		8/8/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		8/8/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		8/8/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		8/8/2016	CJR	1
SUR - Toluene-d8	103	Rec %			1	8260B		8/8/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	89	Rec %			1	8260B		8/8/2016	CJR	1
SUR - 4-Bromofluorobenzene	114	Rec %			1	8260B		8/8/2016	CJR	1
SUR - Dibromofluoromethane	95	Rec %			1	8260B		8/8/2016	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

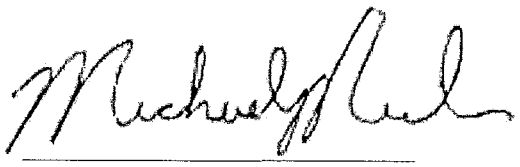
Code	*Comment*
1	Laboratory QC within limits.
49	Sample diluted to compensate for matrix interference.

CWT denotes sub contract lab - Certification #445126660

ESC denotes sub contract lab - Certification #998093910

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



CHAIN OF CUSTODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # No 292

Page ____ of ____

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
X Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #:	
Sampler: (signature)	
Project (Name / Location):	Thermo Fisher Property, Two Rivers, WI
Reports To: Stuart Boerst	Invoice To:
Company Mc Melon	Company
Address P.O. Box 1025	Address
City State Zip Neenah, WI 54957	City State Zip
Phone 721-4200	Phone
FAX	FAX

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS								PID/ FID
503867	Manhole	10/11/16			—		4	GW	HCl													X									
B	Stockpile-01						3	S	MeOH													X	X								
C	Stockpile-02	↓					3	S	MeOH													X	X								

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Filter in Lab

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Client
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
		10/11/16			

Received in Laboratory By: [signature] Time: 1520 Date: 10/11/16

Project Name THERMO FISCHER PROPERTY **Invoice #** E31867
Project #

Lab Code 5031867B
Sample ID STOCKPILE-01
Sample Matrix Soil
Sample Date 10/11/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	76.6	%			1	5021		10/12/2016	NJC	1
Inorganic										
Metals										
Arsenic, Total	< 0.67	mg/Kg	0.67	2.22	1	6010B		10/18/2016	CWT	1
Barium, Total	38.6	mg/Kg	0.19	0.63	1	6010B		10/18/2016	CWT	1
Cadmium, Total	0.157 "J"	mg/Kg	0.08	0.25	1	6010B		10/18/2016	CWT	1
Chromium, Total	22.1	mg/Kg	0.32	1.02	2	6010B		10/18/2016	CWT	1 49
Lead, Total	91.1	mg/Kg	0.52	1.72	2	6010B		10/18/2016	CWT	1 49
Mercury, Total	0.0399 "J"	mg/kg	0.0131	0.0435	1	7471		10/21/2016	CWT	1
Selenium, Total	< 0.55	mg/Kg	0.55	1.81	1	6010B		10/18/2016	CWT	1
Silver, Total	< 0.44	mg/Kg	0.44	1.38	1	6010B		10/18/2016	CWT	1
Organic										
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		10/19/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		10/19/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		10/19/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		10/19/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		10/19/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		10/19/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		10/19/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		10/19/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		10/19/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		10/19/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		10/19/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		10/19/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		10/19/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		10/19/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		10/19/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		10/19/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		10/19/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		10/19/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		10/19/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		10/19/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		10/19/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		10/19/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		10/19/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		10/19/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		10/19/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		10/19/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		10/19/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		10/19/2016	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		10/19/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		10/19/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		10/19/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		10/19/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		10/19/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		10/19/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		10/19/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		10/19/2016	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		10/19/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		10/19/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		10/19/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		10/19/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		10/19/2016	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		10/19/2016	CJR	1

Project Name THERMO FISCHER PROPERTY **Invoice #** E31867
Project #

Lab Code 5031867B
Sample ID STOCKPILE-01
Sample Matrix Soil
Sample Date 10/11/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		10/19/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		10/19/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		10/19/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		10/19/2016	CJR	1
Trichloroethene (TCE)	0.053 "J"	mg/kg	0.042	0.13	1	8260B		10/19/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		10/19/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		10/19/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		10/19/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		10/19/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		10/19/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		10/19/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	103	Rec %			1	8260B		10/19/2016	CJR	1
SUR - 4-Bromofluorobenzene	96	Rec %			1	8260B		10/19/2016	CJR	1
SUR - Dibromofluoromethane	102	Rec %			1	8260B		10/19/2016	CJR	1
SUR - Toluene-d8	100	Rec %			1	8260B		10/19/2016	CJR	1

Synergy Environmental Lab, INC.

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PO BOX 1025
NEENAH WI 54957-1025

Report Date *24-Oct-16*

Project Name THERMO FISCHER PROPERTY **Invoice #** E31867
Project #

Lab Code 5031867A
Sample ID MANHOLE
Sample Matrix Water
Sample Date 10/11/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 22	ug/l	22	70	50	8260B		10/18/2016	CJR	1
Bromobenzene	< 24	ug/l	24	75	50	8260B		10/18/2016	CJR	1
Bromodichloromethane	< 23	ug/l	23	75	50	8260B		10/18/2016	CJR	1
Bromoform	< 23	ug/l	23	75	50	8260B		10/18/2016	CJR	1
tert-Butylbenzene	< 55	ug/l	55	170	50	8260B		10/18/2016	CJR	1
sec-Butylbenzene	< 60	ug/l	60	190	50	8260B		10/18/2016	CJR	1
n-Butylbenzene	< 50	ug/l	50	165	50	8260B		10/18/2016	CJR	1
Carbon Tetrachloride	< 25.5	ug/l	25.5	80	50	8260B		10/18/2016	CJR	1
Chlorobenzene	< 23	ug/l	23	70	50	8260B		10/18/2016	CJR	1
Chloroethane	< 32.5	ug/l	32.5	105	50	8260B		10/18/2016	CJR	1
Chloroform	< 21.5	ug/l	21.5	70	50	8260B		10/18/2016	CJR	1
Chloromethane	< 95	ug/l	95	300	50	8260B		10/18/2016	CJR	1
2-Chlorotoluene	< 20	ug/l	20	65	50	8260B		10/18/2016	CJR	1
4-Chlorotoluene	< 31.5	ug/l	31.5	100	50	8260B		10/18/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 70	ug/l	70	225	50	8260B		10/18/2016	CJR	1
Dibromochloromethane	< 22.5	ug/l	22.5	70	50	8260B		10/18/2016	CJR	1
1,4-Dichlorobenzene	< 24.5	ug/l	24.5	80	50	8260B		10/18/2016	CJR	1
1,3-Dichlorobenzene	< 26	ug/l	26	80	50	8260B		10/18/2016	CJR	1
1,2-Dichlorobenzene	< 23	ug/l	23	75	50	8260B		10/18/2016	CJR	1
Dichlorodifluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/18/2016	CJR	1
1,2-Dichloroethane	< 24	ug/l	24	75	50	8260B		10/18/2016	CJR	1
1,1-Dichloroethane	< 55	ug/l	55	180	50	8260B		10/18/2016	CJR	1
1,1-Dichloroethene	< 32.5	ug/l	32.5	105	50	8260B		10/18/2016	CJR	1
cis-1,2-Dichloroethene	< 22.5	ug/l	22.5	70	50	8260B		10/18/2016	CJR	1
trans-1,2-Dichloroethene	< 27	ug/l	27	85	50	8260B		10/18/2016	CJR	1
1,2-Dichloropropane	< 21.5	ug/l	21.5	68.5	50	8260B		10/18/2016	CJR	1
2,2-Dichloropropane	< 155	ug/l	155	490	50	8260B		10/18/2016	CJR	1
1,3-Dichloropropane	< 21	ug/l	21	65	50	8260B		10/18/2016	CJR	1
Di-isopropyl ether	< 22	ug/l	22	70	50	8260B		10/18/2016	CJR	1
EDB (1,2-Dibromoethane)	< 31.5	ug/l	31.5	100	50	8260B		10/18/2016	CJR	1
Ethylbenzene	< 35.5	ug/l	35.5	115	50	8260B		10/18/2016	CJR	1
Hexachlorobutadiene	< 110	ug/l	110	355	50	8260B		10/18/2016	CJR	1
Isopropylbenzene	< 41	ug/l	41	130	50	8260B		10/18/2016	CJR	1

Project Name THERMO FISCHER PROPERTY **Invoice #** E31867
Project #

Lab Code 5031867A
Sample ID MANHOLE
Sample Matrix Water
Sample Date 10/11/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
p-Isopropyltoluene	< 55	ug/l	55	175	50	8260B		10/18/2016	CJR	1
Methylene chloride	< 65	ug/l	65	210	50	8260B		10/18/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 55	ug/l	55	185	50	8260B		10/18/2016	CJR	1
Naphthalene	< 80	ug/l	80	260	50	8260B		10/18/2016	CJR	1
n-Propylbenzene	< 38.5	ug/l	38.5	120	50	8260B		10/18/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 26	ug/l	26	85	50	8260B		10/18/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 24	ug/l	24	75	50	8260B		10/18/2016	CJR	1
Tetrachloroethene	< 24.5	ug/l	24.5	75	50	8260B		10/18/2016	CJR	1
Toluene	< 22	ug/l	22	70	50	8260B		10/18/2016	CJR	1
1,2,4-Trichlorobenzene	< 85	ug/l	85	280	50	8260B		10/18/2016	CJR	1
1,2,3-Trichlorobenzene	< 135	ug/l	135	430	50	8260B		10/18/2016	CJR	1
1,1,1-Trichloroethane	< 42	ug/l	42	135	50	8260B		10/18/2016	CJR	1
1,1,2-Trichloroethane	< 24	ug/l	24	76	50	8260B		10/18/2016	CJR	1
Trichloroethene (TCE)	< 23.5	ug/l	23.5	75	50	8260B		10/18/2016	CJR	1
Trichlorofluoromethane	< 43.5	ug/l	43.5	140	50	8260B		10/18/2016	CJR	1
1,2,4-Trimethylbenzene	< 80	ug/l	80	250	50	8260B		10/18/2016	CJR	1
1,3,5-Trimethylbenzene	< 75	ug/l	75	240	50	8260B		10/18/2016	CJR	1
Vinyl Chloride	< 8.5	ug/l	8.5	27	50	8260B		10/18/2016	CJR	1
m&p-Xylene	< 110	ug/l	110	345	50	8260B		10/18/2016	CJR	1
o-Xylene	< 45	ug/l	45	145	50	8260B		10/18/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	99	REC %			50	8260B		10/18/2016	CJR	1
SUR - 4-Bromofluorobenzene	93	REC %			50	8260B		10/18/2016	CJR	1
SUR - Dibromofluoromethane	108	REC %			50	8260B		10/18/2016	CJR	1
SUR - Toluene-d8	97	REC %			50	8260B		10/18/2016	CJR	1

Project Name THERMO FISCHER PROPERTY **Invoice #** E31867
Project #

Lab Code 5031867C
Sample ID STOCKPILE-02
Sample Matrix Soil
Sample Date 10/11/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	74.3	%			1	5021		10/12/2016	NJC	1
Inorganic										
Metals										
Arsenic, Total	< 0.67	mg/Kg	0.67	2.22	1	6010B		10/19/2016	CWT	1
Barium, Total	19.2	mg/Kg	0.19	0.63	1	6010B		10/19/2016	CWT	1
Cadmium, Total	< 0.08	mg/Kg	0.08	0.25	1	6010B		10/19/2016	CWT	1
Chromium, Total	9.49	mg/Kg	0.32	1.02	2	6010B		10/19/2016	CWT	1 49
Lead, Total	< 0.52	mg/Kg	0.52	1.72	2	6010B		10/19/2016	CWT	1 49
Mercury, Total	0.0254 "J"	mg/kg	0.0131	0.0435	1	7471		10/21/2016	CWT	1
Selenium, Total	< 0.55	mg/Kg	0.55	1.81	1	6010B		10/19/2016	CWT	1
Silver, Total	< 0.44	mg/Kg	0.44	1.38	1	6010B		10/19/2016	CWT	1
Organic										
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		10/19/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		10/19/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		10/19/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		10/19/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		10/19/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		10/19/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		10/19/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		10/19/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		10/19/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		10/19/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		10/19/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		10/19/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		10/19/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		10/19/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		10/19/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		10/19/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		10/19/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		10/19/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		10/19/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		10/19/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		10/19/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		10/19/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		10/19/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		10/19/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		10/19/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		10/19/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		10/19/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		10/19/2016	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		10/19/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		10/19/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		10/19/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		10/19/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		10/19/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		10/19/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		10/19/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		10/19/2016	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		10/19/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		10/19/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		10/19/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		10/19/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		10/19/2016	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		10/19/2016	CJR	1

Project Name THERMO FISCHER PROPERTY **Invoice #** E31867
Project #

Lab Code 5031867C
Sample ID STOCKPILE-02
Sample Matrix Soil
Sample Date 10/11/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		10/19/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		10/19/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		10/19/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		10/19/2016	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		10/19/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		10/19/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		10/19/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		10/19/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		10/19/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		10/19/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		10/19/2016	CJR	1
SUR - Toluene-d8	99	Rec %			1	8260B		10/19/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	108	Rec %			1	8260B		10/19/2016	CJR	1
SUR - 4-Bromofluorobenzene	97	Rec %			1	8260B		10/19/2016	CJR	1
SUR - Dibromofluoromethane	99	Rec %			1	8260B		10/19/2016	CJR	1

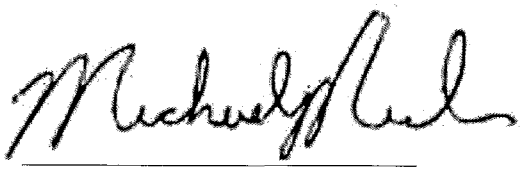
"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.
49	Sample diluted to compensate for matrix interference.

CWT denotes sub contract lab - Certification #445126660

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



CHAIN OF STODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # № 3147

Page 1 of 1

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
✓ Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #:	
Sampler: (signature)	

Project (Name / Location):	Berno Fischer Property, Two Rivers WI		
Reports To:	Stuart Boerst	Invoice To:	Jim McDonald
Company	McMahon	Company	City of Two Rivers
Address	P.O. Box 1025	Address	
City State Zip	Neenah, WI 54957	City State Zip	
Phone		Phone	
FAX		FAX	

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	Sel Iron *						PID/ FID
503203 A	Stockpile-01A	11/03/16			✓		9	S	MeoH															X						
B	Trip Blank	11/03/16					1	MeoH	MeoH													X								

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

* Vertia Protocol - However, do not analyze for 8 RCRA Metals, Herbacides and pesticides.

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Courier
Temp. of Temp. Blank ___ °C On Ice: X
Cooler seal intact upon receipt: ___ Yes ___ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
	2:12 pm	11/03/16			

Received in Laboratory By: Time: 14:12 Date: 11/3/16

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

STUART BOERST
MCMAHON ASSOCIATES
PO BOX 1025
NEENAH WI 54957-1025

Report Date *23-Nov-16*

Project Name THERMO FISHER PROPERTY **Invoice #** E32013
Project #

Lab Code 5032013A
Sample ID STOCKPILE-01A
Sample Matrix Soil
Sample Date 11/3/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
TCLP Copper	< 0.1	mg/l	0.1		1	6010B		11/10/2016	ESC	1
TCLP Nickel	< 0.1	mg/l	0.1		1	6010B		11/10/2016	ESC	1
TCLP Zinc	< 0.5	mg/l	0.5		1	6010B		11/10/2016	ESC	1
Organic										
PCB'S										
PCB-1016	< 0.0035	mg/kg	0.0035	0.0117	1	EPA 8082A		11/9/2016	ESC	1
PCB-1221	< 0.0054	mg/kg	0.0054	0.0179	1	EPA 8082A		11/9/2016	ESC	1
PCB-1232	< 0.0042	mg/kg	0.0042	0.0139	1	EPA 8082A		11/9/2016	ESC	1
PCB-1242	< 0.0032	mg/kg	0.0032	0.0106	1	EPA 8082A		11/9/2016	ESC	1
PCB-1248	< 0.0032	mg/kg	0.0032	0.0105	1	EPA 8082A		11/9/2016	ESC	1
PCB-1254	< 0.0047	mg/kg	0.0047	0.0157	1	EPA 8082A		11/9/2016	ESC	1
PCB-1260	< 0.0049	mg/kg	0.0049	0.0165	1	EPA 8082A		11/9/2016	ESC	1
TCLP SVOC's										
TCLP o-Cresol	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP m & p-Cresol	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP 1,4-Dichlorobenzene	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP 2,4-Dinitrotoluene	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP Hexachlorobenzene	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP Hexachlorobutadiene	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP Hexachloroethane	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP Nitrobenzene	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP Pentachlorophenol	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP Phenol	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP Pyridine	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP 2,4,6-Trichlorophenol	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP 2,4,5-Trichlorophenol	< 0.1	mg/l	0.1		1	8270C		11/11/2016	ESC	1
TCLP VOC's										
TCLP Benzene	< 0.05	mg/l	0.05		1	8260B		11/10/2016	ESC	1
TCLP Carbon Tetrachloride	< 0.05	mg/l	0.05		1	8260B		11/10/2016	ESC	1
TCLP Chlorobenzene	< 0.05	mg/l	0.05		1	8260B		11/10/2016	ESC	1
TCLP Chloroform	< 0.25	mg/l	0.25		1	8260B		11/10/2016	ESC	1

Project Name THERMO FISHER PROPERTY **Invoice #** E32013
Project #

Lab Code 5032013A
Sample ID STOCKPILE-01A
Sample Matrix Soil
Sample Date 11/3/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
TCLP 1,2-Dichloroethane	< 0.05	mg/l	0.05		1	8260B		11/10/2016	ESC	1
TCLP 1,1-Dichloroethene	< 0.05	mg/l	0.05		1	8260B		11/10/2016	ESC	1
TCLP Methyl Ethyl Ketone	< 0.5	mg/l	0.5		1	8260B		11/10/2016	ESC	1
TCLP Tetrachloroethene	< 0.05	mg/l	0.05		1	8260B		11/10/2016	ESC	1
TCLP Trichloroethene	< 0.05	mg/l	0.05		1	8260B		11/10/2016	ESC	1
TCLP Vinyl Chloride	< 0.05	mg/l	0.05		1	8260B		11/10/2016	ESC	1
Wet Chemistry										
General										
Specific Gravity	2.08	g/cm3			1	2710F		11/7/2016	ESC	1
Reactive Cyanide	< 1.3	mg/kg	0.413	1.3	10	9012B		11/11/2016	ESC	1
Reactive Sulfide	54.2	mg/kg	8.3	25	1	EPA 9034		11/11/2016	ESC	1
Free Liquid	none				1	9095A		11/9/2016	ESC	1
Solids, Total %	80.7	%			1	2540B		11/10/2016	ESC	1
pH	8.25	su			1	EPA 9045D		11/11/2016	ESC	1
Chlorides, Unfiltered	203	mg/kg	2.65	2.65	1	9056		11/10/2016	ESC	1
Flash Point	> 170	Deg. F			1	D93		11/8/2016	ESC	1

Project Name THERMO FISHER PROPERTY **Invoice #** E32013
Project #

Lab Code 5032013B
Sample ID TRIP BLANK
Sample Matrix Soil
Sample Date 11/3/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		11/8/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		11/8/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		11/8/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		11/8/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		11/8/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		11/8/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		11/8/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		11/8/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		11/8/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		11/8/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		11/8/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		11/8/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		11/8/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		11/8/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		11/8/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		11/8/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		11/8/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		11/8/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		11/8/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		11/8/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		11/8/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		11/8/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		11/8/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		11/8/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		11/8/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		11/8/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		11/8/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		11/8/2016	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		11/8/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		11/8/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		11/8/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		11/8/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		11/8/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		11/8/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		11/8/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		11/8/2016	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		11/8/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		11/8/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		11/8/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		11/8/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		11/8/2016	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		11/8/2016	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		11/8/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		11/8/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		11/8/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		11/8/2016	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		11/8/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		11/8/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		11/8/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		11/8/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		11/8/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		11/8/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		11/8/2016	CJR	1
SUR - Toluene-d8	94	Rec %			1	8260B		11/8/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	134	Rec %			1	8260B		11/8/2016	CJR	1
SUR - 4-Bromofluorobenzene	96	Rec %			1	8260B		11/8/2016	CJR	1
SUR - Dibromofluoromethane	116	Rec %			1	8260B		11/8/2016	CJR	1

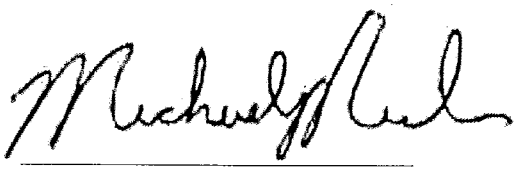
"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

ESC denotes sub contract lab - Certification #998093910

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



CHAIN OF STODY RECORD

Synergy

Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # № 3150

Page ____ of ____

Sample Handling Request
____ Rush Analysis Date Required ____
(Rushes accepted only with prior authorization)
✓ Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #:	
Sampler: (signature)	
Project (Name / Location):	Two Rivers, Lot F Two Rivers, WI
Reports To:	Stu Hoerst
Company	McMahon
Address	P.O. Box 1025
City State Zip	Neenah WI 54957
Phone	
FAX	
Invoice To:	City of Two Rivers
Company	c/o McMahon
Address	
City State Zip	
Phone	
FAX	

Analysis Requested | **Other Analysis**

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation	DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/FID
S-32141-A	MW-01/3.5'	11/22	/16		✓		3	Soil	MeOH													X	X	0
B	MW-02/3.5'	11/22	/16		✓		4		MeOH							X						X	X	0
C	MW-02/12'	11/22	/16		✓		2		MeOH													X		11
D	MW-03/3.5	11/22	/16		✓		4		MeOH							X						X	X	0
E	MW-04/3'	11/23	/16		✓		3		MeOH													X	X	0
F	MW-05/3'	11/23	/16		✓		3		MeOH													X	X	0
G	Trip Blank	11/22	/16				1		MeOH													X		

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Client
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: X Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
	246pm	11/23/16			

Received in Laboratory By: [signature] Time: 2:46 Date: 11/23/16

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

STUART BOERST
MCMAHON ASSOCIATES
PO BOX 1025
NEENAH WI 54957-1025

Report Date *12-Dec-16*

Project Name TWO RIVERS Z AT F **Invoice #** E32141
Project #

Lab Code 5032141A
Sample ID MW-01/3.5'
Sample Matrix Soil
Sample Date 11/22/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	94.8	%			1	5021		11/25/2016	NJC	1
Inorganic										
Metals										
Arsenic, Total	1.30 "J"	mg/kg	0.65	2.17	1	6010B		12/1/2016	ESC	1
Barium, Total	24.4	mg/kg	0.17	0.567	1	6010B		12/1/2016	ESC	1
Cadmium, Total	0.104 "J"	mg/kg	0.07	0.233	1	6010B		12/1/2016	ESC	1
Chromium, Total	6.17	mg/kg	0.14	0.467	1	6010B		12/1/2016	ESC	1
Lead, Total	18.2	mg/kg	0.19	0.633	1	6010B		12/1/2016	ESC	1
Mercury, Total	0.0680	mg/kg	0.0028	0.0093	1	7471		11/30/2016	ESC	1
Selenium, Total	< 0.74	mg/kg	0.74	2.47	1	6010B		12/1/2016	ESC	1
Silver, Total	< 0.28	mg/kg	0.28	0.933	1	6010B		12/1/2016	ESC	1
Organic										
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		12/2/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		12/2/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		12/2/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		12/2/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		12/2/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		12/2/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		12/2/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		12/2/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		12/2/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		12/2/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F
Project #

Invoice # E32141

Lab Code 5032141A
Sample ID MW-01/3.5'
Sample Matrix Soil
Sample Date 11/22/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		12/2/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		12/2/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		12/2/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		12/2/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		12/2/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		12/2/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		12/2/2016	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		12/2/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		12/2/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		12/2/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		12/2/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		12/2/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		12/2/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		12/2/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		12/2/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		12/2/2016	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		12/2/2016	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		12/2/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		12/2/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		12/2/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		12/2/2016	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		12/2/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		12/2/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		12/2/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		12/2/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		12/2/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		12/2/2016	CJR	1
SUR - Toluene-d8	98	Rec %			1	8260B		12/2/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	96	Rec %			1	8260B		12/2/2016	CJR	1
SUR - 4-Bromofluorobenzene	95	Rec %			1	8260B		12/2/2016	CJR	1
SUR - Dibromofluoromethane	100	Rec %			1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F
Project #

Invoice # E32141

Lab Code 5032141B
Sample ID MW-02/3.5'
Sample Matrix Soil
Sample Date 11/22/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	93.5	%			1	5021		11/25/2016	NJC	1
Inorganic										
Metals										
Arsenic, Total	< 0.65	mg/kg	0.65	2.17	1	6010B		12/1/2016	ESC	1
Barium, Total	7.49	mg/kg	0.17	0.567	1	6010B		12/1/2016	ESC	1
Cadmium, Total	< 0.07	mg/kg	0.07	0.233	1	6010B		12/1/2016	ESC	1
Chromium, Total	3.76	mg/kg	0.14	0.467	1	6010B		12/1/2016	ESC	1
Lead, Total	1.11	mg/kg	0.19	0.633	1	6010B		12/1/2016	ESC	1
Mercury, Total	< 0.0028	mg/kg	0.0028	0.0093	1	7471		11/30/2016	ESC	1
Selenium, Total	< 0.74	mg/kg	0.74	2.47	1	6010B		12/1/2016	ESC	1
Silver, Total	< 0.28	mg/kg	0.28	0.933	1	6010B		12/1/2016	ESC	1
Organic										
PCB'S										
PCB-1016	< 0.0035	mg/kg	0.0035	0.0117	1	EPA 8082A		11/30/2016	ESC	1
PCB-1221	< 0.0054	mg/kg	0.0054	0.0179	1	EPA 8082A		11/30/2016	ESC	1
PCB-1232	< 0.0042	mg/kg	0.0042	0.0139	1	EPA 8082A		11/30/2016	ESC	1
PCB-1242	< 0.0032	mg/kg	0.0032	0.0106	1	EPA 8082A		11/30/2016	ESC	1
PCB-1248	< 0.0032	mg/kg	0.0032	0.0105	1	EPA 8082A		11/30/2016	ESC	1
PCB-1254	< 0.0047	mg/kg	0.0047	0.0157	1	EPA 8082A		11/30/2016	ESC	1
PCB-1260	< 0.0049	mg/kg	0.0049	0.0165	1	EPA 8082A		11/30/2016	ESC	1
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		12/2/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		12/2/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		12/2/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		12/2/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		12/2/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		12/2/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		12/2/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		12/2/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		12/2/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		12/2/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		12/2/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		12/2/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		12/2/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		12/2/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		12/2/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		12/2/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F
Project #

Invoice # E32141

Lab Code 5032141B
Sample ID MW-02/3.5'
Sample Matrix Soil
Sample Date 11/22/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		12/2/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		12/2/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		12/2/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		12/2/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		12/2/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		12/2/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		12/2/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		12/2/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		12/2/2016	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		12/2/2016	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		12/2/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		12/2/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		12/2/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		12/2/2016	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		12/2/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		12/2/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		12/2/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		12/2/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		12/2/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		12/2/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	92	Rec %			1	8260B		12/2/2016	CJR	1
SUR - 4-Bromofluorobenzene	94	Rec %			1	8260B		12/2/2016	CJR	1
SUR - Dibromofluoromethane	102	Rec %			1	8260B		12/2/2016	CJR	1
SUR - Toluene-d8	99	Rec %			1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F **Invoice #** E32141
Project #

Lab Code 5032141C
Sample ID MW-02/12'
Sample Matrix Soil
Sample Date 11/22/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	81.1	%			1	5021		11/25/2016	NJC	1
Organic										
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		12/2/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		12/2/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		12/2/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		12/2/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		12/2/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		12/2/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		12/2/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		12/2/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		12/2/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		12/2/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		12/2/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		12/2/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		12/2/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		12/2/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		12/2/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		12/2/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		12/2/2016	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		12/2/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		12/2/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		12/2/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		12/2/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		12/2/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		12/2/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		12/2/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		12/2/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		12/2/2016	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		12/2/2016	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		12/2/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		12/2/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		12/2/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F
Project #

Invoice # E32141

Lab Code 5032141C
Sample ID MW-02/12'
Sample Matrix Soil
Sample Date 11/22/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		12/2/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		12/2/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		12/2/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		12/2/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		12/2/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		12/2/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	88	Rec %			1	8260B		12/2/2016	CJR	1
SUR - 4-Bromofluorobenzene	96	Rec %			1	8260B		12/2/2016	CJR	1
SUR - Dibromofluoromethane	99	Rec %			1	8260B		12/2/2016	CJR	1
SUR - Toluene-d8	98	Rec %			1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F **Invoice #** E32141
Project #

Lab Code 5032141D
Sample ID MW-03/3.5'
Sample Matrix Soil
Sample Date 11/22/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	94.7	%			1	5021		11/25/2016	NJC	1
Inorganic										
Metals										
Arsenic, Total	1.26 "J"	mg/kg	0.65	2.17	1	6010B		12/1/2016	ESC	1
Barium, Total	9.52	mg/kg	0.17	0.567	1	6010B		12/1/2016	ESC	1
Cadmium, Total	< 0.07	mg/kg	0.07	0.233	1	6010B		12/1/2016	ESC	1
Chromium, Total	3.43	mg/kg	0.14	0.467	1	6010B		12/1/2016	ESC	1
Lead, Total	1.21	mg/kg	0.19	0.633	1	6010B		12/1/2016	ESC	1
Mercury, Total	0.0064 "J"	mg/kg	0.0028	0.0093	1	7471		11/30/2016	ESC	1
Selenium, Total	< 0.74	mg/kg	0.74	2.47	1	6010B		12/1/2016	ESC	1
Silver, Total	< 0.28	mg/kg	0.28	0.933	1	6010B		12/1/2016	ESC	1
Organic										
PCB'S										
PCB-1016	< 0.0035	mg/kg	0.0035	0.0117	1	EPA 8082A		11/30/2016	ESC	1
PCB-1221	< 0.0054	mg/kg	0.0054	0.0179	1	EPA 8082A		11/30/2016	ESC	1
PCB-1232	< 0.0042	mg/kg	0.0042	0.0139	1	EPA 8082A		11/30/2016	ESC	1
PCB-1242	< 0.0032	mg/kg	0.0032	0.0106	1	EPA 8082A		11/30/2016	ESC	1
PCB-1248	< 0.0032	mg/kg	0.0032	0.0105	1	EPA 8082A		11/30/2016	ESC	1
PCB-1254	< 0.0047	mg/kg	0.0047	0.0157	1	EPA 8082A		11/30/2016	ESC	1
PCB-1260	< 0.0049	mg/kg	0.0049	0.0165	1	EPA 8082A		11/30/2016	ESC	1
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		12/2/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		12/2/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		12/2/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		12/2/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		12/2/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		12/2/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		12/2/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		12/2/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		12/2/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		12/2/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		12/2/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		12/2/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		12/2/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		12/2/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		12/2/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		12/2/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F **Invoice #** E32141
Project #

Lab Code 5032141D
Sample ID MW-03/3.5'
Sample Matrix Soil
Sample Date 11/22/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		12/2/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		12/2/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		12/2/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		12/2/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		12/2/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		12/2/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		12/2/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		12/2/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		12/2/2016	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		12/2/2016	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		12/2/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		12/2/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		12/2/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		12/2/2016	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		12/2/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		12/2/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		12/2/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		12/2/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		12/2/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		12/2/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	83	Rec %			1	8260B		12/2/2016	CJR	1
SUR - 4-Bromofluorobenzene	95	Rec %			1	8260B		12/2/2016	CJR	1
SUR - Dibromofluoromethane	95	Rec %			1	8260B		12/2/2016	CJR	1
SUR - Toluene-d8	99	Rec %			1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F **Invoice #** E32141
Project #

Lab Code 5032141E
Sample ID MW-04/3'
Sample Matrix Soil
Sample Date 11/23/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	81.3	%			1	5021		11/25/2016	NJC	1
Inorganic										
Metals										
Arsenic, Total	4.26	mg/kg	0.65	2.17	1	6010B		12/1/2016	ESC	1
Barium, Total	64.5	mg/kg	0.17	0.567	1	6010B		12/1/2016	ESC	1
Cadmium, Total	0.117 "J"	mg/kg	0.07	0.233	1	6010B		12/1/2016	ESC	1
Chromium, Total	22.5	mg/kg	0.14	0.467	1	6010B		12/1/2016	ESC	1
Lead, Total	7.10	mg/kg	0.19	0.633	1	6010B		12/1/2016	ESC	1
Mercury, Total	0.0157	mg/kg	0.0028	0.0093	1	7471		11/30/2016	ESC	1
Selenium, Total	< 0.74	mg/kg	0.74	2.47	1	6010B		12/1/2016	ESC	1
Silver, Total	< 0.28	mg/kg	0.28	0.933	1	6010B		12/1/2016	ESC	1
Organic										
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		12/2/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		12/2/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		12/2/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		12/2/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		12/2/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		12/2/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		12/2/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		12/2/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		12/2/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		12/2/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		12/2/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		12/2/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		12/2/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		12/2/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		12/2/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		12/2/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		12/2/2016	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		12/2/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		12/2/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		12/2/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		12/2/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		12/2/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		12/2/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F
Project #

Invoice # E32141

Lab Code 5032141E
Sample ID MW-04/3'
Sample Matrix Soil
Sample Date 11/23/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		12/2/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		12/2/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		12/2/2016	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		12/2/2016	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		12/2/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		12/2/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		12/2/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		12/2/2016	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		12/2/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		12/2/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		12/2/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		12/2/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		12/2/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		12/2/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	82	Rec %			1	8260B		12/2/2016	CJR	1
SUR - 4-Bromofluorobenzene	98	Rec %			1	8260B		12/2/2016	CJR	1
SUR - Dibromofluoromethane	95	Rec %			1	8260B		12/2/2016	CJR	1
SUR - Toluene-d8	98	Rec %			1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F **Invoice #** E32141
Project #

Lab Code 5032141F
Sample ID MW-05/3'
Sample Matrix Soil
Sample Date 11/23/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
General										
General										
Solids Percent	89.8	%			1	5021		11/25/2016	NJC	1
Inorganic										
Metals										
Arsenic, Total	2.69	mg/kg	0.65	2.17	1	6010B		12/1/2016	ESC	1
Barium, Total	53.8	mg/kg	0.17	0.567	1	6010B		12/1/2016	ESC	1
Cadmium, Total	0.435	mg/kg	0.07	0.233	1	6010B		12/1/2016	ESC	1
Chromium, Total	11.0	mg/kg	0.14	0.467	1	6010B		12/1/2016	ESC	1
Lead, Total	41.5	mg/kg	0.19	0.633	1	6010B		12/1/2016	ESC	1
Mercury, Total	0.0570	mg/kg	0.0028	0.0093	1	7471		11/30/2016	ESC	1
Selenium, Total	< 0.74	mg/kg	0.74	2.47	1	6010B		12/1/2016	ESC	1
Silver, Total	< 0.28	mg/kg	0.28	0.933	1	6010B		12/1/2016	ESC	1
Organic										
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		12/2/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		12/2/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		12/2/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		12/2/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		12/2/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		12/2/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		12/2/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		12/2/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		12/2/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		12/2/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		12/2/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		12/2/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		12/2/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		12/2/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		12/2/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		12/2/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		12/2/2016	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		12/2/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		12/2/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		12/2/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		12/2/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		12/2/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		12/2/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F
Project #

Invoice # E32141

Lab Code 5032141F
Sample ID MW-05/3'
Sample Matrix Soil
Sample Date 11/23/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		12/2/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		12/2/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		12/2/2016	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		12/2/2016	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		12/2/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		12/2/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		12/2/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		12/2/2016	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		12/2/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		12/2/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		12/2/2016	CJR	1
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		12/2/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		12/2/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		12/2/2016	CJR	1
SUR - Dibromofluoromethane	100	Rec %			1	8260B		12/2/2016	CJR	1
SUR - Toluene-d8	98	Rec %			1	8260B		12/2/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	94	Rec %			1	8260B		12/2/2016	CJR	1
SUR - 4-Bromofluorobenzene	98	Rec %			1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F **Invoice #** E32141
Project #

Lab Code 5032141G
Sample ID TRIP BLANK
Sample Matrix Soil
Sample Date 11/22/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.016	mg/kg	0.016	0.049	1	8260B		12/2/2016	CJR	1
Bromobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Bromodichloromethane	< 0.015	mg/kg	0.015	0.048	1	8260B		12/2/2016	CJR	1
Bromoform	< 0.023	mg/kg	0.023	0.073	1	8260B		12/2/2016	CJR	1
tert-Butylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
sec-Butylbenzene	< 0.036	mg/kg	0.036	0.11	1	8260B		12/2/2016	CJR	1
n-Butylbenzene	< 0.086	mg/kg	0.086	0.27	1	8260B		12/2/2016	CJR	1
Carbon Tetrachloride	< 0.021	mg/kg	0.021	0.067	1	8260B		12/2/2016	CJR	1
Chlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Chloroethane	< 0.045	mg/kg	0.045	0.14	1	8260B		12/2/2016	CJR	1
Chloroform	< 0.026	mg/kg	0.026	0.081	1	8260B		12/2/2016	CJR	1
Chloromethane	< 0.25	mg/kg	0.25	0.78	1	8260B		12/2/2016	CJR	1
2-Chlorotoluene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
4-Chlorotoluene	< 0.032	mg/kg	0.032	0.1	1	8260B		12/2/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
Dibromochloromethane	< 0.031	mg/kg	0.031	0.098	1	8260B		12/2/2016	CJR	1
1,4-Dichlorobenzene	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,3-Dichlorobenzene	< 0.03	mg/kg	0.03	0.097	1	8260B		12/2/2016	CJR	1
1,2-Dichlorobenzene	< 0.039	mg/kg	0.039	0.12	1	8260B		12/2/2016	CJR	1
Dichlorodifluoromethane	< 0.043	mg/kg	0.043	0.14	1	8260B		12/2/2016	CJR	1
1,2-Dichloroethane	< 0.03	mg/kg	0.03	0.096	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethane	< 0.025	mg/kg	0.025	0.079	1	8260B		12/2/2016	CJR	1
1,1-Dichloroethene	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
cis-1,2-Dichloroethene	< 0.021	mg/kg	0.021	0.068	1	8260B		12/2/2016	CJR	1
trans-1,2-Dichloroethene	< 0.024	mg/kg	0.024	0.076	1	8260B		12/2/2016	CJR	1
1,2-Dichloropropane	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
2,2-Dichloropropane	< 0.1	mg/kg	0.1	0.33	1	8260B		12/2/2016	CJR	1
1,3-Dichloropropane	< 0.031	mg/kg	0.031	0.097	1	8260B		12/2/2016	CJR	1
Di-isopropyl ether	< 0.012	mg/kg	0.012	0.04	1	8260B		12/2/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
Ethylbenzene	< 0.027	mg/kg	0.027	0.086	1	8260B		12/2/2016	CJR	1
Hexachlorobutadiene	< 0.11	mg/kg	0.11	0.36	1	8260B		12/2/2016	CJR	1
Isopropylbenzene	< 0.037	mg/kg	0.037	0.12	1	8260B		12/2/2016	CJR	1
p-Isopropyltoluene	< 0.056	mg/kg	0.056	0.18	1	8260B		12/2/2016	CJR	1
Methylene chloride	< 0.22	mg/kg	0.22	0.7	1	8260B		12/2/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 0.025	mg/kg	0.025	0.078	1	8260B		12/2/2016	CJR	1
Naphthalene	< 0.087	mg/kg	0.087	0.28	1	8260B		12/2/2016	CJR	1
n-Propylbenzene	< 0.035	mg/kg	0.035	0.11	1	8260B		12/2/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.013	mg/kg	0.013	0.04	1	8260B		12/2/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.029	mg/kg	0.029	0.093	1	8260B		12/2/2016	CJR	1
Tetrachloroethene	< 0.054	mg/kg	0.054	0.17	1	8260B		12/2/2016	CJR	1
Toluene	< 0.031	mg/kg	0.031	0.099	1	8260B		12/2/2016	CJR	1
1,2,4-Trichlorobenzene	< 0.085	mg/kg	0.085	0.27	1	8260B		12/2/2016	CJR	1
1,2,3-Trichlorobenzene	< 0.12	mg/kg	0.12	0.38	1	8260B		12/2/2016	CJR	1
1,1,1-Trichloroethane	< 0.04	mg/kg	0.04	0.13	1	8260B		12/2/2016	CJR	1
1,1,2-Trichloroethane	< 0.033	mg/kg	0.033	0.11	1	8260B		12/2/2016	CJR	1
Trichloroethene (TCE)	< 0.042	mg/kg	0.042	0.13	1	8260B		12/2/2016	CJR	1
Trichlorofluoromethane	< 0.06	mg/kg	0.06	0.19	1	8260B		12/2/2016	CJR	1
1,2,4-Trimethylbenzene	< 0.078	mg/kg	0.078	0.25	1	8260B		12/2/2016	CJR	1
1,3,5-Trimethylbenzene	< 0.089	mg/kg	0.089	0.28	1	8260B		12/2/2016	CJR	1

Project Name TWO RIVERS Z AT F
Proiect #

Invoice # E32141

Lab Code 5032141G
Sample ID TRIP BLANK
Sample Matrix Soil
Sample Date 11/22/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Vinyl Chloride	< 0.01	mg/kg	0.01	0.031	1	8260B		12/2/2016	CJR	1
m&p-Xylene	< 0.07	mg/kg	0.07	0.22	1	8260B		12/2/2016	CJR	1
o-Xylene	< 0.029	mg/kg	0.029	0.092	1	8260B		12/2/2016	CJR	1
SUR - Toluene-d8	98	Rec %			1	8260B		12/2/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	91	Rec %			1	8260B		12/2/2016	CJR	1
SUR - 4-Bromofluorobenzene	99	Rec %			1	8260B		12/2/2016	CJR	1
SUR - Dibromofluoromethane	102	Rec %			1	8260B		12/2/2016	CJR	1

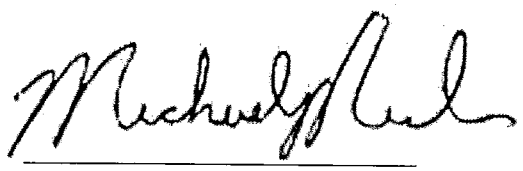
"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.

ESC denotes sub contract lab - Certification #998093910

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature



CHAIN OF CUSTODY RECORD

Synergy Environmental Lab, Inc.

1990 Prospect Ct. • Appleton, WI 54914
920-830-2455 • FAX 920-733-0631

Chain # No 315

Page 1 of 1

Sample Handling Request
_____ Rush Analysis Date Required _____
(Rushes accepted only with prior authorization)
/ Normal Turn Around

Lab I.D. #	
Account No. :	Quote No.:
Project #:	
Sampler: (signature)	
Project (Name / Location):	Two Rivers, Left, Two Rivers, WI
Reports To:	Stuart Boerst
Company	McMahon
Address	P.O Box 1025
City State Zip	Neenah, WI 54957
Phone	
FAX	
Invoice To:	City of Two Rivers
Company	
Address	
City State Zip	
Phone	
FAX	

Lab I.D.	Sample I.D.	Collection Date	Collection Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
503223-1	MW-01	12/12/16			/	N	4	GW	HCl
2	MW-02				/				
3	MW-03				/				
4	MW-04				/				
5	MW-05				/				
6	TB								

Analysis Requested

DRO (Mod DRO Sep 95)	GRO (Mod GRO Sep 95)	LEAD	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 8021)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-RCRA METALS	PID/ FID
												X	X	
												X	X	
												X	X	
												X	X	
												X	X	
												X		

Other Analysis

Comments/Special Instructions (*Specify groundwater "GW", Drinking Water "DW", Waste Water "WW", Soil "S", Air "A", Oil, Sludge etc.)

* The water samples must be filtered by the lab prior to preservation for 8 RCRA Metals.

TB Rec'd-CAR 12/13/16

Sample Integrity - To be completed by receiving lab.
Method of Shipment: Client
Temp. of Temp. Blank ____ °C On Ice: X
Cooler seal intact upon receipt: ____ Yes ____ No

Relinquished By: (sign)	Time	Date	Received By: (sign)	Time	Date
	9:20AM	12/13/16			

Received in Laboratory By: Time: 9:20 Date: 12/13/16

Synergy Environmental Lab, INC.

1990 Prospect Ct., Appleton, WI 54914 *P 920-830-2455 * F 920-733-0631

STUART BOERST
MCMAHON ASSOCIATES
PO BOX 1025
NEENAH WI 54957-1025

Report Date *23-Dec-16*

Project Name TWO RIVERS LOT F
Project #

Invoice # E32231

Lab Code 5032231A
Sample ID MW-01
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Arsenic, Dissolved	< 0.6	ug/L	0.6	1.9	1	7060A		12/14/2016	CWT	1
Barium, Dissolved	80.4	ug/L	9.4	31.5	1	200.7		12/16/2016	CWT	1
Cadmium, Dissolved	< 0.3	ug/L	0.3	1.1	1	200.7		12/16/2016	CWT	1
Chromium, Dissolved	2.5	ug/L	0.7	2.4	1	200.7		12/16/2016	CWT	1
Lead, Dissolved	< 0.8	ug/L	0.8	2.6	1	7421		12/16/2016	CWT	1
Mercury, Dissolved	< 0.11	ug/L	0.11	0.35	1	245.1		12/19/2016	CWT	1
Selenium, Dissolved	1.3 "J"	ug/L	1.1	3.7	1	7740		12/21/2016	CWT	1 45
Silver, Dissolved	< 1.9	ug/L	1.9	1.9	1	200.7		12/16/2016	CWT	1
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		12/15/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		12/15/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		12/15/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		12/15/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		12/15/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		12/15/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		12/15/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		12/15/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		12/15/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		12/15/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		12/15/2016	CJR	1

Project Name TWO RIVERS LOT F
Project #

Invoice # E32231

Lab Code 5032231A
Sample ID MW-01
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		12/15/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		12/15/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		12/15/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		12/15/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		12/15/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		12/15/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		12/15/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		12/15/2016	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		12/15/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		12/15/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		12/15/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		12/15/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		12/15/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		12/15/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		12/15/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		12/15/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		12/15/2016	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		12/15/2016	CJR	1
Trichloroethene (TCE)	73	ug/l	0.47	1.5	1	8260B		12/15/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		12/15/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		12/15/2016	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		12/15/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		12/15/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		12/15/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	92	REC %			1	8260B		12/15/2016	CJR	1
SUR - 4-Bromofluorobenzene	97	REC %			1	8260B		12/15/2016	CJR	1
SUR - Dibromofluoromethane	101	REC %			1	8260B		12/15/2016	CJR	1
SUR - Toluene-d8	100	REC %			1	8260B		12/15/2016	CJR	1

Project Name TWO RIVERS LOT F **Invoice #** E32231
Project #

Lab Code 5032231B
Sample ID MW-02
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Arsenic, Dissolved	< 0.6	ug/L	0.6	1.9	1	7060A		12/14/2016	CWT	1
Barium, Dissolved	66.2	ug/L	9.4	31.5	1	200.7		12/16/2016	CWT	1
Cadmium, Dissolved	< 0.3	ug/L	0.3	1.1	1	200.7		12/16/2016	CWT	1
Chromium, Dissolved	1.3 "J"	ug/L	0.7	2.4	1	200.7		12/16/2016	CWT	1
Lead, Dissolved	< 0.8	ug/L	0.8	2.6	1	7421		12/16/2016	CWT	1
Mercury, Dissolved	< 0.11	ug/L	0.11	0.35	1	245.1		12/19/2016	CWT	1
Selenium, Dissolved	4.0	ug/L	1.1	3.7	1	7740		12/21/2016	CWT	1
Silver, Dissolved	< 1.9	ug/L	1.9	1.9	1	200.7		12/16/2016	CWT	1
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		12/15/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		12/15/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		12/15/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		12/15/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		12/15/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		12/15/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		12/15/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		12/15/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		12/15/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		12/15/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		12/15/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		12/15/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		12/15/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		12/15/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		12/15/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		12/15/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		12/15/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		12/15/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		12/15/2016	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		12/15/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		12/15/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		12/15/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		12/15/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		12/15/2016	CJR	1

Project Name TWO RIVERS LOT F
Project #

Invoice # E32231

Lab Code 5032231B
Sample ID MW-02
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		12/15/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		12/15/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		12/15/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		12/15/2016	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		12/15/2016	CJR	1
Trichloroethene (TCE)	24	ug/l	0.47	1.5	1	8260B		12/15/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		12/15/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		12/15/2016	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		12/15/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		12/15/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		12/15/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	89	REC %			1	8260B		12/15/2016	CJR	1
SUR - 4-Bromofluorobenzene	102	REC %			1	8260B		12/15/2016	CJR	1
SUR - Dibromofluoromethane	99	REC %			1	8260B		12/15/2016	CJR	1
SUR - Toluene-d8	103	REC %			1	8260B		12/15/2016	CJR	1

Project Name TWO RIVERS LOT F **Invoice #** E32231
Project #

Lab Code 5032231C
Sample ID MW-03
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Arsenic, Dissolved	< 0.6	ug/L	0.6	1.9	1	7060A		12/14/2016	CWT	1
Barium, Dissolved	239	ug/L	9.4	31.5	1	200.7		12/16/2016	CWT	1
Cadmium, Dissolved	< 0.3	ug/L	0.3	1.1	1	200.7		12/16/2016	CWT	1
Chromium, Dissolved	1.1 "J"	ug/L	0.7	2.4	1	200.7		12/16/2016	CWT	1
Lead, Dissolved	< 0.8	ug/L	0.8	2.6	1	7421		12/16/2016	CWT	1
Mercury, Dissolved	< 0.11	ug/L	0.11	0.35	1	245.1		12/19/2016	CWT	1
Selenium, Dissolved	1.5 "J"	ug/L	1.1	3.7	1	7740		12/21/2016	CWT	1
Silver, Dissolved	< 1.9	ug/L	1.9	1.9	1	200.7		12/16/2016	CWT	1
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		12/15/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		12/15/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		12/15/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		12/15/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		12/15/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		12/15/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		12/15/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		12/15/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		12/15/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		12/15/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		12/15/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
cis-1,2-Dichloroethene	3.16	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		12/15/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		12/15/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		12/15/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		12/15/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		12/15/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		12/15/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		12/15/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		12/15/2016	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		12/15/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		12/15/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		12/15/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		12/15/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		12/15/2016	CJR	1

Project Name TWO RIVERS LOT F
Project #

Invoice # E32231

Lab Code 5032231C
Sample ID MW-03
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		12/15/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		12/15/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		12/15/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		12/15/2016	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		12/15/2016	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		12/15/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		12/15/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		12/15/2016	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		12/15/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		12/15/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		12/15/2016	CJR	1
SUR - 4-Bromofluorobenzene	103	REC %			1	8260B		12/15/2016	CJR	1
SUR - Dibromofluoromethane	96	REC %			1	8260B		12/15/2016	CJR	1
SUR - Toluene-d8	101	REC %			1	8260B		12/15/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	96	REC %			1	8260B		12/15/2016	CJR	1

Project Name TWO RIVERS LOT F **Invoice #** E32231
Project #

Lab Code 5032231D
Sample ID MW-04
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Arsenic, Dissolved	< 0.6	ug/L	0.6	1.9	1	7060A		12/14/2016	CWT	1
Barium, Dissolved	117	ug/L	9.4	31.5	1	200.7		12/16/2016	CWT	1
Cadmium, Dissolved	< 0.3	ug/L	0.3	1.1	1	200.7		12/16/2016	CWT	1
Chromium, Dissolved	1.4 "J"	ug/L	0.7	2.4	1	200.7		12/16/2016	CWT	1
Lead, Dissolved	< 0.8	ug/L	0.8	2.6	1	7421		12/16/2016	CWT	1
Mercury, Dissolved	< 0.11	ug/L	0.11	0.35	1	245.1		12/19/2016	CWT	1
Selenium, Dissolved	1.5 "J"	ug/L	1.1	3.7	1	7740		12/21/2016	CWT	1
Silver, Dissolved	< 1.9	ug/L	1.9	1.9	1	200.7		12/16/2016	CWT	1
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		12/15/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		12/15/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		12/15/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		12/15/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		12/15/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		12/15/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		12/15/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		12/15/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		12/15/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		12/15/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		12/15/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethene	3.8	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
cis-1,2-Dichloroethene	112	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
trans-1,2-Dichloroethene	33	ug/l	0.54	1.7	1	8260B		12/15/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		12/15/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		12/15/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		12/15/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		12/15/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		12/15/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		12/15/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		12/15/2016	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		12/15/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		12/15/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		12/15/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		12/15/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		12/15/2016	CJR	1

Project Name TWO RIVERS LOT F
Project #

Invoice # E32231

Lab Code 5032231D
Sample ID MW-04
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		12/15/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		12/15/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		12/15/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		12/15/2016	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		12/15/2016	CJR	1
Trichloroethene (TCE)	26	ug/l	0.47	1.5	1	8260B		12/15/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		12/15/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		12/15/2016	CJR	1
Vinyl Chloride	1.01	ug/l	0.17	0.54	1	8260B		12/15/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		12/15/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		12/15/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	89	REC %			1	8260B		12/15/2016	CJR	1
SUR - 4-Bromofluorobenzene	98	REC %			1	8260B		12/15/2016	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		12/15/2016	CJR	1
SUR - Toluene-d8	99	REC %			1	8260B		12/15/2016	CJR	1

Project Name TWO RIVERS LOT F
Project #

Invoice # E32231

Lab Code 5032231E
Sample ID MW-05
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Inorganic										
Metals										
Arsenic, Dissolved	< 0.6	ug/L	0.6	1.9	1	7060A		12/14/2016	CWT	1
Barium, Dissolved	186	ug/L	9.4	31.5	1	200.7		12/16/2016	CWT	1
Cadmium, Dissolved	< 0.3	ug/L	0.3	1.1	1	200.7		12/16/2016	CWT	1
Chromium, Dissolved	1.4 "J"	ug/L	0.7	2.4	1	200.7		12/16/2016	CWT	1
Lead, Dissolved	< 0.8	ug/L	0.8	2.6	1	7421		12/16/2016	CWT	1
Mercury, Dissolved	< 0.11	ug/L	0.11	0.35	1	245.1		12/19/2016	CWT	1
Selenium, Dissolved	1.8 "J"	ug/L	1.1	3.7	1	7740		12/21/2016	CWT	1
Silver, Dissolved	< 1.9	ug/L	1.9	1.9	1	200.7		12/16/2016	CWT	1
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		12/15/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		12/15/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		12/15/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		12/15/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		12/15/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		12/15/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		12/15/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		12/15/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		12/15/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		12/15/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		12/15/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		12/15/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		12/15/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		12/15/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		12/15/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		12/15/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		12/15/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		12/15/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		12/15/2016	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		12/15/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		12/15/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		12/15/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		12/15/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		12/15/2016	CJR	1

Project Name TWO RIVERS LOT F
Project #

Invoice # E32231

Lab Code 5032231E
Sample ID MW-05
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		12/15/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		12/15/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		12/15/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		12/15/2016	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		12/15/2016	CJR	1
Trichloroethene (TCE)	0.84 "J"	ug/l	0.47	1.5	1	8260B		12/15/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		12/15/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		12/15/2016	CJR	1
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		12/15/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		12/15/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		12/15/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	88	REC %			1	8260B		12/15/2016	CJR	1
SUR - Toluene-d8	102	REC %			1	8260B		12/15/2016	CJR	1
SUR - 4-Bromofluorobenzene	100	REC %			1	8260B		12/15/2016	CJR	1
SUR - Dibromofluoromethane	100	REC %			1	8260B		12/15/2016	CJR	1

Project Name TWO RIVERS LOT F **Invoice #** E32231
Project #

Lab Code 5032231F
Sample ID TB
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Organic										
VOC's										
Benzene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
Bromobenzene	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Bromodichloromethane	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Bromoform	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
tert-Butylbenzene	< 1.1	ug/l	1.1	3.4	1	8260B		12/15/2016	CJR	1
sec-Butylbenzene	< 1.2	ug/l	1.2	3.8	1	8260B		12/15/2016	CJR	1
n-Butylbenzene	< 1	ug/l	1	3.3	1	8260B		12/15/2016	CJR	1
Carbon Tetrachloride	< 0.51	ug/l	0.51	1.6	1	8260B		12/15/2016	CJR	1
Chlorobenzene	< 0.46	ug/l	0.46	1.4	1	8260B		12/15/2016	CJR	1
Chloroethane	< 0.65	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
Chloroform	< 0.43	ug/l	0.43	1.4	1	8260B		12/15/2016	CJR	1
Chloromethane	< 1.9	ug/l	1.9	6	1	8260B		12/15/2016	CJR	1
2-Chlorotoluene	< 0.4	ug/l	0.4	1.3	1	8260B		12/15/2016	CJR	1
4-Chlorotoluene	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
1,2-Dibromo-3-chloropropane	< 1.4	ug/l	1.4	4.5	1	8260B		12/15/2016	CJR	1
Dibromochloromethane	< 0.45	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
1,4-Dichlorobenzene	< 0.49	ug/l	0.49	1.6	1	8260B		12/15/2016	CJR	1
1,3-Dichlorobenzene	< 0.52	ug/l	0.52	1.6	1	8260B		12/15/2016	CJR	1
1,2-Dichlorobenzene	< 0.46	ug/l	0.46	1.5	1	8260B		12/15/2016	CJR	1
Dichlorodifluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2-Dichloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethane	< 1.1	ug/l	1.1	3.6	1	8260B		12/15/2016	CJR	1
1,1-Dichloroethene	< 0.65	ug/l	0.65	2.1	1	8260B		12/15/2016	CJR	1
cis-1,2-Dichloroethene	< 0.45	ug/l	0.45	1.4	1	8260B		12/15/2016	CJR	1
trans-1,2-Dichloroethene	< 0.54	ug/l	0.54	1.7	1	8260B		12/15/2016	CJR	1
1,2-Dichloropropane	< 0.43	ug/l	0.43	1.37	1	8260B		12/15/2016	CJR	1
2,2-Dichloropropane	< 3.1	ug/l	3.1	9.8	1	8260B		12/15/2016	CJR	1
1,3-Dichloropropane	< 0.42	ug/l	0.42	1.3	1	8260B		12/15/2016	CJR	1
Di-isopropyl ether	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
EDB (1,2-Dibromoethane)	< 0.63	ug/l	0.63	2	1	8260B		12/15/2016	CJR	1
Ethylbenzene	< 0.71	ug/l	0.71	2.3	1	8260B		12/15/2016	CJR	1
Hexachlorobutadiene	< 2.2	ug/l	2.2	7.1	1	8260B		12/15/2016	CJR	1
Isopropylbenzene	< 0.82	ug/l	0.82	2.6	1	8260B		12/15/2016	CJR	1
p-Isopropyltoluene	< 1.1	ug/l	1.1	3.5	1	8260B		12/15/2016	CJR	1
Methylene chloride	< 1.3	ug/l	1.3	4.2	1	8260B		12/15/2016	CJR	1
Methyl tert-butyl ether (MTBE)	< 1.1	ug/l	1.1	3.7	1	8260B		12/15/2016	CJR	1
Naphthalene	< 1.6	ug/l	1.6	5.2	1	8260B		12/15/2016	CJR	1
n-Propylbenzene	< 0.77	ug/l	0.77	2.4	1	8260B		12/15/2016	CJR	1
1,1,2,2-Tetrachloroethane	< 0.52	ug/l	0.52	1.7	1	8260B		12/15/2016	CJR	1
1,1,1,2-Tetrachloroethane	< 0.48	ug/l	0.48	1.5	1	8260B		12/15/2016	CJR	1
Tetrachloroethene	< 0.49	ug/l	0.49	1.5	1	8260B		12/15/2016	CJR	1
Toluene	< 0.44	ug/l	0.44	1.4	1	8260B		12/15/2016	CJR	1
1,2,4-Trichlorobenzene	< 1.7	ug/l	1.7	5.6	1	8260B		12/15/2016	CJR	1
1,2,3-Trichlorobenzene	< 2.7	ug/l	2.7	8.6	1	8260B		12/15/2016	CJR	1
1,1,1-Trichloroethane	< 0.84	ug/l	0.84	2.7	1	8260B		12/15/2016	CJR	1
1,1,2-Trichloroethane	< 0.48	ug/l	0.48	1.52	1	8260B		12/15/2016	CJR	1
Trichloroethene (TCE)	< 0.47	ug/l	0.47	1.5	1	8260B		12/15/2016	CJR	1
Trichlorofluoromethane	< 0.87	ug/l	0.87	2.8	1	8260B		12/15/2016	CJR	1
1,2,4-Trimethylbenzene	< 1.6	ug/l	1.6	5	1	8260B		12/15/2016	CJR	1
1,3,5-Trimethylbenzene	< 1.5	ug/l	1.5	4.8	1	8260B		12/15/2016	CJR	1

Project Name TWO RIVERS LOT F
Project #

Invoice # E32231

Lab Code 5032231F
Sample ID TB
Sample Matrix Water
Sample Date 12/12/2016

	Result	Unit	LOD	LOQ	Dil	Method	Ext Date	Run Date	Analyst	Code
Vinyl Chloride	< 0.17	ug/l	0.17	0.54	1	8260B		12/15/2016	CJR	1
m&p-Xylene	< 2.2	ug/l	2.2	6.9	1	8260B		12/15/2016	CJR	1
o-Xylene	< 0.9	ug/l	0.9	2.9	1	8260B		12/15/2016	CJR	1
SUR - Toluene-d8	104	REC %			1	8260B		12/15/2016	CJR	1
SUR - 1,2-Dichloroethane-d4	105	REC %			1	8260B		12/15/2016	CJR	1
SUR - 4-Bromofluorobenzene	120	REC %			1	8260B		12/15/2016	CJR	1
SUR - Dibromofluoromethane	98	REC %			1	8260B		12/15/2016	CJR	1

"J" Flag: Analyte detected between LOD and LOQ LOD Limit of Detection LOQ Limit of Quantitation

Code	*Comment*
1	Laboratory QC within limits.
45	Method of Standard Additions used to perform this test.
	CWT denotes sub contract lab - Certification #445126660

All solid sample results reported on a dry weight basis unless otherwise indicated. All LOD's and LOQ's are adjusted for dilutions but not dry weight. Subcontracted results are denoted by SUB in the analyst field.

Authorized Signature