

# Notification For Hazardous Substance Discharge (Non-Emergency Only)

**Emergency Discharges / Spills should be reported via the 24-Hour Hotline: 1-800-943-0003**

**Notice: Hazardous substance discharges must be reported immediately** according to s. 292.11 Wis. Stats. Non-emergency hazardous substance discharges may be reported by telefaxing or e-mailing a completed report to the Department, or calling or visiting a Department office in person. If you choose to notify the Department by telefax or by email, you should use this form to be sure that all necessary information is included. However, use of this form is not mandatory. Under s. 292.99, Wis. Stats., the penalty for violating the reporting requirements of ch. 292 Wis. Stats., shall be no less than \$10 nor more than \$5000 for each violation. Each day of continued violation is a separate offense. It is not the Department's intention to use any personally identifiable information from this form for any purpose other than program administration. However, information submitted on this form may also be made available to requesters under Wisconsin's Open Records Law (ss. 19.31 – 19.39, Wis. Stats.).

Confirmatory laboratory data should be included with this form, to assist the DNR in processing this Hazardous Substance Release Notification.

Complete this form. **TYPE or PRINT LEGIBLY.** NOTIFY appropriate DNR region (see next page) **IMMEDIATELY** upon discovery of a potential release from (**check one**):

- Underground Petroleum Storage Tank System (additional information may be required for Item 6 below)
- Aboveground Petroleum Storage Tank System
- Dry Cleaner Facility
- Other - Describe: Excavated soil sample associated with work on a water main termination. Located on easement within private property.

ATTN DNR: **R & R Program Associate**

Date DNR Notified: **10/31/2016**

### 1. Discharge Reported By

Name James J. Mc Donald	Firm City of Two Rivers	Phone No. (include area code) (920) 793-5539
Mailing Address PO Box 87, Two Rivers, WI 54241-0087		Email Address jammcd@two-rivers.org

### 2. Site Information

Name of site at which discharge occurred. Include local name of site/business, **not** responsible party name, unless a residence/vacant property. Former Hamilton Industries Site, now Owned by Thermo Fisher LLC, former address of 1316 18th St., Two Rivers, WI 54241.

Location: Include street address, **not PO Box**. If no street address, describe as precisely as possible, i.e., 1/4 mile NW of CTHs 60 & 123 on E side of CTH 60. 1316 18th Street, Two Rivers, WI 54241 / Near the intersections of abandoned sections of 16th Street and East River Street.

Municipality: (City, Village, Township) Specify municipality in which the site is located, **not mailing address/city**.

City of Two Rivers, Manitowoc County

County: Manitowoc	Legal Description: <u>    </u> 1/4 <u>    </u> 1/4 Sec <u>    </u> Tn <u>    </u> Range <u>    </u> <input type="radio"/> E <input type="radio"/> W	WTM: X <u>    </u> 258139 <u>    </u> Y <u>    </u> 321168
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### 3. Responsible Party (RP) and/or RP Representative

Responsible Party Name: Business or owner name that is responsible for cleanup. If more than one, list all. Attach additional pages as necessary.

Please refer to Attachments A and B for applicable and available information..

- Reported in compliance with s. 292.11(2), Wis. Stats., by a local government exempt from liability under s. 292.11(9)(e), Wis. Stats.
- For more information see <http://dnr.wi.gov/topic/Brownfields/Liability.html>.

Contact Person Name (if different) Excavated Soils: James J. Mc Donald Additional Investigation: Thermo Fisher, LLC	Phone Number	Email Address	
Mailing Address	City	State	ZIP Code

Property owner if Different From RP: Business or owner name that is responsible for cleanup. If more than one, list all. Attach additional pages as necessary. Refer to Attachments A and B

Contact Person Name (if different)	Phone Number	Email Address	
Mailing Address	City	State	ZIP Code

(continued)

**4. Hazardous Substance Information**

Identify hazardous substance discharged (check all that apply):

- |   |   |   |
|---|---|---|
| <input checked="" type="checkbox"/> VOC's                         | <input type="checkbox"/> Diesel                 | <input type="checkbox"/> PERC (Dry Cleaners)                |
| <input type="checkbox"/> PAH's                                    | <input type="checkbox"/> Fuel Oil               | <input type="checkbox"/> RCRA Hazardous Waste               |
| <input checked="" type="checkbox"/> Metals (specify): <u>Lead</u> | <input type="checkbox"/> Gasoline               | <input type="checkbox"/> Leachate                           |
| <input type="checkbox"/> Arsenic                                  | <input type="checkbox"/> Hydraulic Oil          | <input type="checkbox"/> Fertilizer                         |
| <input type="checkbox"/> Chromium                                 | <input type="checkbox"/> Jet Fuel               | <input type="checkbox"/> Pesticide/Herbicide/Insecticide(s) |
| <input type="checkbox"/> Cyanide                                  | <input type="checkbox"/> Mineral Oil            | <input type="checkbox"/> Other (specify): _____             |
| <input checked="" type="checkbox"/> Lead                          | <input type="checkbox"/> Waste Oil              | <input type="checkbox"/> Unknown                            |
| <input type="checkbox"/> PCB's                                    | <input type="checkbox"/> Petroleum-Unknown Type |   |

**5. Impacts to the Environment Information**

Enter "K" for known/confirmed or "P" for potential for all that apply.

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Air Contamination                            | <input type="checkbox"/> Sanitary Sewer Contamination         | <input checked="" type="checkbox"/> Soil Contamination |
| <input type="checkbox"/> Co-Contamination (Petroleum & Non-Petroleum) | <input type="checkbox"/> Contamination in Right of Way        | <input type="checkbox"/> Storm Sewer                   |
| <input type="checkbox"/> Contamination Within 1 Meter of Bedrock      | <input type="checkbox"/> Fire Explosion Threat                | <input type="checkbox"/> Surface Water Contamination   |
| <input type="checkbox"/> Contaminated Private Well                    | <input type="checkbox"/> Free Product                         | <input type="checkbox"/> Within 100 ft of Private Well |
| <input type="checkbox"/> Contaminated Public Well                     | <input checked="" type="checkbox"/> Groundwater Contamination | <input type="checkbox"/> Within 1000 ft of Public Well |
| <input type="checkbox"/> Contamination in Fractured Bedrock           | <input type="checkbox"/> Off-Site Contamination               |  |
|   | <input type="checkbox"/> Other (specify): _____               |  |

Contamination was discovered as a result of:

- |  |  |  |
|--|--|--|
| <input type="checkbox"/> Tank closure assessment | <input type="checkbox"/> Site assessment | <input checked="" type="checkbox"/> Other - Describe: <u>Utility trench excavated soil sample.</u> |
| Date   _____                                     | Date   _____                             | Date   <u>10/11/2016</u>   |

Lab results:  Lab results will be faxed upon receipt  Lab results are attached

Additional Comments: Include a brief description of immediate actions taken to halt the release and contain or cleanup hazardous substances that have been discharged.

Contaminated pile will be sampled and analyzed again for contaminants defined by the landfill protocol. Site is within the former industrial site operated by Hamilton and Thermo Fisher Scientific, now owned by Thermo Fisher, LLC.

**6. Federal Energy Act Requirements (Section 9002(d) of the Solid Waste Disposal Act (SWDA))**

For all confirmed releases from UST's occurring after 9/30/2007 please provide the following information:

- |   | <u>Source</u>                                     | <u>Cause</u>   |
|---|---|--|
| <input type="checkbox"/> Tank                   | <input type="checkbox"/> Piping                   | <input type="checkbox"/> Spill                             |
| <input type="checkbox"/> Dispenser              | <input type="checkbox"/> Submersible Turbine Pump | <input type="checkbox"/> Overfill                          |
| <input type="checkbox"/> Delivery Problem       | <input type="checkbox"/> Other (specify): _____   | <input type="checkbox"/> Corrosion                         |
| <input type="checkbox"/> Other (specify): _____ |   | <input type="checkbox"/> Physical or Mechanical Damage     |
|   |   | <input type="checkbox"/> Installation Problem              |
|   |   | <input type="checkbox"/> Other (does not fit any of above) |
|   |   | <input type="checkbox"/> Unknown                           |

Contact information to report non-emergency releases in DNR's five regions are as follows:

**Northeast Region (FAX: 920-662-5197); Attention -- R&R Program Associate: DNRRRNER@wisconsin.gov**

Brown, Calumet, Door, Fond du Lac (except City of Waupun - see South Central Region), Green Lake, Kewaunee, Manitowoc, Marinette, Marquette, Menominee, Oconto, Outagamie, Shawano, Sheboygan, Waupaca, Waushara, Winnebago counties

**Northern Region (FAX: 715-623-6773); Attention -- R&R Program Associate: DNRRRNOR@wisconsin.gov**

Ashland, Barron, Bayfield, Burnett, Douglas, Forest, Florence, Iron, Langlade, Lincoln, Oneida, Polk, Price, Rusk, Sawyer, Taylor, Vilas, Washburn counties

**South Central Region (FAX: 608-273-5610); Attention -- R&R Program Associate: DNRRRSCR@wisconsin.gov**

Columbia, Dane, Dodge, Fond du Lac (City of Waupun only), Grant, Green, Iowa, Jefferson, Lafayette, Richland, Rock, Sauk, Walworth counties

**Southeast Region (FAX: 414-263-8550); Attention -- R&R Program Associate: DNRRRSER@wisconsin.gov**

Kenosha, Milwaukee, Ozaukee, Racine, Washington, Waukesha counties

**West Central Region (FAX: 715-839-6076); Attention -- R&R Program Associate: DNRRRWCR@wisconsin.gov**

Adams, Buffalo, Chippewa, Clark, Crawford, Dunn, Eau Claire, Jackson, Juneau, LaCrosse, Marathon, Monroe, Pepin, Pierce, Portage, St. Croix, Trempealeau, Vernon, Wood counties

## Attachment A

### Narrative Description

The following points are made to clarify some of the issues associated with the discovery of this spill:

- This notification arose as a result of the City performing water main repairs under its rights that exist in an existing easement on the property.
- The Property owner where the easement is located is Thermo Fisher LLC
- The property was used for over 100 years for manufacturing.
- The City generated soils as part of the excavation necessary for this water main repair work under its easement.
- The excavated cavity created by the repair work was backfilled by clean material obtained from a quarry.
- The city conducted testing of the soils to determine if the excavated soils could remain on site or need to be handled for off-site disposal as contaminated soil.
- The testing was conducted in accordance with the DNR's draft Clean Soil Guidance. <http://dnr.wi.gov/news/input/documents/guidance/DraftWA1820.pdf>
- The testing results indicated that the stockpiled excavated soils that are the subject of this notification would need to be removed for off-site disposal at a licensed landfill. See letter from McMahon and Associates dated October 31, 2016 that is attached as Exhibit B
- The City is only a responsible party under applicable law for the excavated soils that were generated by the repair project. (the "Excavated Soils Obligation")
- Other than properly managing the excavating the soil required for this project, the City did not cause any releases on the Property and is, therefore, not responsible for any preexisting contamination that may exist at the property.
- In the event the Department determines that additional investigation is required at the property based upon the information contained in this notification form, that request should be directed to the current property owner. (the "Additional Investigation Obligation")
- On October 31, 2016, the City has provided the sample results for the excavated soils that are the subject of this notification to the current property owner. See Attachment C.

**Attachment B**  
**McMahon Communication**  
**Including Laboratory Analysis**



October 31, 2016

Mr. Jim McDonald  
City of Two Rivers  
1717 East Park Street  
P.O. Box 87  
Two Rivers, WI 54241

Re: Water Main Repair Process and Soil Stockpile Results  
Thermo Fischer Property | Two Rivers, WI  
McM. No. T0007-9-16-00248.00

Dear Jim:

On October 11, 2016, the water main was repaired within the utility easement on the Thermo Fischer property, Two Rivers, Wisconsin. Two excavations were completed with approximately 3 feet of separation between the excavations. Two stockpiles were created, one for each excavation. The soil stockpiles were placed on and covered with a plastic tarp. The two excavations were backfilled with gravel aggregate supplied by a local non-metallic mine.

A soil sample was collected from each of the two soil stockpiles and submitted to a State-certified analytical laboratory for analysis of VOCs and 8 RCRA metals. The soil sample results are summarized on Table 1. The laboratory results are attached. Stockpile-01 sample contained lead at a concentration of 91.1 mg/kg, which is above the NR 720 Background Threshold Value (BTV) and NR 720 Groundwater RCL. Other metals were detected below the BTV. Trichloroethene was detected at a concentration of 0.053 mg/kg, which is above the NR 720 Groundwater RCL.

Stockpile-02 sample contained some metals that were all at concentrations below the BTV. VOCs were not detected in the sample.

NR 720 requires the City to notify the Wisconsin Department of Natural Resources (DNR) of the presence of lead and TCE detected in Stockpile-01 sample. Therefore, we advise the City to notify the DNR.

A water sample collected from the manhole was analyzed for VOCs. The laboratory results did not show any detectable VOCs.

Mr. Jim McDonald  
City of Two Rivers

McMAHON recommends disposing the stockpile with lead and TCE contamination at the Veolia Landfill in Hilbert, Wisconsin. Attached are the analytical protocol required for the landfill to accept the soil. We would not test for VOC and 8 RCRA metals since they were already analyzed. Also, we would not analyze for herbicides or pesticides since the site does not have a known history of those compounds.

Our plan is to collect another soil sample from Stockpile 1 on November 3<sup>rd</sup>, to analyze for the remaining compounds in order to receive landfill acceptance of the contaminated soil.

If you have any questions, please let me know.

Respectfully,

McMAHON

A handwritten signature in black ink, appearing to read 'Stuart A. Boerst', with a long horizontal flourish extending to the right.

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

SAB:car

Enclosures

**Table #1**

**SOIL ANALYTICAL RESULTS**  
 Detected VOCs and Total 8 RCRA Metals  
 THERMO FISCHER PROPERTY | CITY OF TWO RIVERS





October 31, 2016  
 McM. No. T0007-9-16-00248.00

Sample Name / Depth (feet)	Sample Date	Arsenic (mg/kg)	Barium (mg/kg)	Cadmium (mg/kg)	Chromium (mg/kg)	Lead (mg/kg)	Mercury (mg/kg)	Selenium (mg/kg)	Silver (mg/kg)	Trichloroethene (mg/kg)
Stockpile-01	10/11/2016	<0.67	38.6	0.157*	22.1	91.1	0.0399*	<0.55	<0.44	0.053*
Stockpile-02	10/11/2016	<0.67	19.2	<0.08	9.49	<0.52	0.0254*	<0.55	<0.44	<0.042
NR720 Industrial DC RCLs		2.39	100,000	799	100,000**	800	3.13	5,110	5,110	8.81
NR720 Non-Industrial DC RCLs		0.61	15,300	70	100,000	400	3.13	391	391	1.26
NR720 GW RCLs		0.584	164.8	0.752	360,000	27	0.208	0.52	0.8491	0.0036
NR720 Background Threshold Value		8	364	1.0	44	52	--	--	--	--

EXPLANATION:

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

 = Exceeds NR720 Industrial DC RCLs  
 = Exceeds NR720 Non-Industrial DC RCLs  
 = Exceeds NR720 GW RCLs  
 = Exceeds NR720 Background Threshold Value

## Advanced Disposal Services Hickory Meadows Landfill Protocol II Acceptance Limits

General Parameters	
pH	$2.0 \leq \text{pH} \leq 12.5$
Total Solids	
Free Liquids	No Free liquids
Acidity in %	Analyze if pH < 4
Alkalinity in %	Analyze if pH > 10
Flash Point	>140° F
Phenol	<2000 mg/l
Reactive Cyanide	<250 mg/kg
Reactive Sulfide	<500 mg/kg
PCBs	<50 mg/kg
PCB-Leachable	<10 µg/l

Metals	TCLP Limit
Arsenic	<5.0 mg/l
Barium	<100.0 mg/l
Cadmium	<1.0 mg/l
Chromium	<5.0 mg/l
Copper	<200.0 mg/l
Lead	<5.0 mg/l
Mercury	<0.2 mg/l
Nickel	<35.0 mg/l
Selenium	<1.0 mg/l
Silver	<5.0 mg/l
Zinc	<500.0 mg/l

Pesticides and Herbicides	
Chlordane	<0.03 mg/l
2,4 D	<10.0 mg/l
Endrin	<0.02 mg/l
Heptachlor	<0.02 mg/l
Lindane	<0.04 mg/l
Methoxychlor	<10.0 mg/l
Toxaphene	<0.05 mg/l
2,4,5-TP (Silvex)	<1.0 mg/l

TCLP List Organic Compounds (volatiles and semi-volatiles)	
Parameter	TCLP Limit
Benzene	<0.5 mg/l
Carbon Tetrachloride	<0.5 mg/l
Chlorobenzene	<100.0 mg/l
Chloroform	<6.0 mg/l
o-Cresol	<200.0 mg/l
m-Cresol	<200.0 mg/l
p-Cresol	<200.0 mg/l
1,4-Dichlorobenzene	<7.5 mg/l
1,2-Dichloroethane	<0.5 mg/l
1,1-Dichloroethylene	<0.7 mg/l
2,4-Dinitrotoluene	<0.13 mg/l
Hexachlorobenzene	<0.13 mg/l
Hexachloro-1,3-butadiene	<0.5 mg/l
Hexachloroethane	<3.0 mg/l
Methyl Ethyl Ketone	<200.0 mg/l
Nitrobenzene	<2.0 mg/l
Pentachlorophenol	<100.0 mg/l
Pyridine	<5.0 mg/l
Tetrachloroethylene	<0.7 mg/l
Trichloroethylene	<0.5 mg/l
2,4,5-Trichlorophenol	<400.0 mg/l
2,4,6-Trichlorophenol	<2.0 mg/l
Vinyl Chloride	<0.2 mg/l

For all constituents which are identified as TCLP analyses, it is permissible to perform a totals analysis instead of the TCLP. If the totals analysis for each parameter are < 20 times the TCLP acceptance limits, the TCLP need not be performed for the purposes of determining waste acceptance.

**Questions?** Call Kari Rabideau  
at 920-853-8553

**Advanced Disposal Services Hickory Meadows Landfill**  
W3105 Schneider Road  
Hilbert, WI 54129  
phone: 920-853-8553  
fax: 920-853-3513



*Environmental Lab, Inc.*

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

**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) *[Signature]*

Project (Name / Location): *Thermo Fischer Property, Two Rivers, WI*  
Reports To: *Stuart Berger* Invoice To: \_\_\_\_\_  
Company: *McMahon* Company: \_\_\_\_\_  
Address: *P.O. Box 1025* Address: \_\_\_\_\_  
City State Zip: *Wasson WI 54985* City State Zip: \_\_\_\_\_  
Phone: *761-4200* Phone: \_\_\_\_\_  
FAX: \_\_\_\_\_ FAX: \_\_\_\_\_

Analysis Requested		Other Analysis												
DRO (Met DRC Sep 95)	GRO (Met GRO Sep 95)	Lead	NITRATE/NITRITE	OIL & GREASE	PAH (EPA 8270)	PCB	PVOC (EPA 821)	PVOC + NAPHTHALENE	SULFATE	TOTAL SUSPENDED SOLIDS	VOC DW (EPA 542.2)	VOC (EPA 8260)	8-PCRA METALS	PID/ FID
												X	X	
												X	X	

Lab I.D.	Sample I.D.	Collection Date	Time	Comp	Grab	Filtered Y/N	No. of Containers	Sample Type (Matrix)*	Preservation
503.06	Manhole	10/11/16					4	GW	He1
	Estimate-01						3	S	He1
	Estimate-02						3	S	He1

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

*Filter on Lab*

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

Received By: (signature) *[Signature]* Time: \_\_\_\_\_ Date: *10/11/16*  
Received In Laboratory By: *[Signature]* Time: *15:10* Date: *10/11/16*

# Synergy Environmental Lab, INC.

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

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

Report Date 24-Oct-16

Project Name THERMO FISCHER PROPERTY  
Project #

Invoice # E31867

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

Project Name THERMO FISCHER PROPERTY  
 Project #

Invoice # E31867

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  
 Project #

Invoice # E31867

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	149
Lead, Total	91.1	mg/Kg	0.52	1.72	2	6010B		10/18/2016	CWT	149
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  
Project #

Invoice # E31867

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

Project Name THERMO FISCHER PROPERTY  
 Project #

Invoice # E31867

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  
 Project #

Invoice # E31867

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

