

Tyco Fire Protection Products
Stanton Street Parking Lot Area
One Stanton Street
Marinette, Wisconsin
BRRTS # 02-38-559214
Summary of Activities

1.0 Introduction

During subsurface utility work in June 2012, a black, oily product, with a petroleum odor, was observed in the utility trench. This area will be referred to as the June 2012 Hotspot. A water sample was collected and laboratory analyzed for gasoline range organics (GRO) and diesel range organics (DRO). The analysis indicated that the water sample contained detectable concentrations of petroleum. The location of the June 2012 Hotspot in relation to the overall Tyco Fire Protection Products property, located at One Stanton Street in Marinette Wisconsin, is shown on Figure 1.

The Tyco Fire Protection Products property has been commercial/industrial since at least 1900. According to Sanborn Maps, in 1901 the area was utilized for lumber transport, including many slips and log runs (water-filled ditches). Based on the reported locations of the log runs and the soil fill observed in soil borings during the site investigation, it is assumed that soil from the property, or dredged material from the turning basin, was used to backfill the log runs. The date the log runs in the parking lot area were filled was not readily available; however, based on aerial photographs it occurred between 1938 and 1954. The trenching, dredging and filling activities are suspected to have occurred over many decades. Historic records, including aerial photographs and Sanborn Maps, show varying configurations of slips and log runs throughout the 1900s. The log runs that were present in 1938, overlain on the current aerial photograph, are shown on Figure 2. No documentation was readily available regarding these assumed cut and fill activities. The Sanborn Maps are provided as Attachment A. A review of Tyco files, Marinette County files and City of Marinette files did not indicate a likely source of the product observed in the utility trench.

2.0 Site Investigation

The nature and extent of the June 2012 Hotspot were investigated from 2012 through 2014. Shallow and deep soil borings have been advanced at the location where the black, oily product was observed. An additional ten borings were installed upgradient, sidegradient, and downgradient of the June 2012 Hotspot to delineate the nature and extent. Low levels of a number of polycyclic aromatic hydrocarbon (PAH) compounds and/or benzene were

detected in the sample collected from all but boring B-2. Ten of the twelve sample locations contained concentrations of volatile organic compounds (VOCs) and/or PAH compounds in the soil exceeding the respective regulatory limits. The contaminated soil is generally present from just below the ground surface to the water table, which is typically less than 5 feet below the ground surface. The surface soil in the borings was logged as fill of varying composition. Depth to apparent native soil was variable, ranging from 2 feet to 16 feet. The soil analytical data and the standards to which they were compared are presented on Table 1. The boring locations and the associated regulatory exceedances are shown on Figure 3.

Soil sample data indicate contaminants are present at concentrations exceeding regulatory standards for the protection of human health and the environment developed for industrial facilities. The PAH concentrations appear to be ubiquitous in nature and generally exceed the maximum contaminant level (MCL).

Ten monitoring wells, MW-1 thru MW-9 and PZ-1, have been installed. Monitoring well MW-1 contained 8 inches of free-phase product as measured on November 15, 2012, and was not sampled. During subsequent measurements the free-phase product thickness ranged from 2 inches to just a sheen. Free-phase product has not been observed in adjacent monitoring wells, therefore is not migrating at a significant rate. During a discussion with the WDNR in July 2014 O & M, Inc recommended installing a petroleum recovery sock in monitoring well MW-1, which was verbally approved by the WDNR. A petroleum recovery sock was installed in monitoring well MW-1 on August 8, 2014. The petroleum recovery sock was replaced with a fresh sock on August 26, 2014.

Groundwater collected from the nine wells that were sampled did not contain VOC concentrations above the detection limit. Groundwater samples collected from monitoring wells MW-3, MW-6, MW-7, MW-8, MW-9, and temporary well B-12 had concentrations of PAH compounds that exceeded their respective Wisconsin Department Natural Resources Enforcement Standards (WDNR ESs). The groundwater analytical data and the standards to which they were compared are presented on Table 2. The monitoring well locations, and the ES exceedances, are presented on Figure 4.

3.0 Recent Discovery

In August 2014, an additional high concentration pocket of contaminated soil was discovered during installation of fence posts. This recently discovered location, referred to as August 2014 Hotspot, is approximately 350 feet to the northeast of the June 2012 hotpot investigation area. The location is shown on Figure 1.

4.0 Conclusions and Recommendations

The location and distribution of the highest contaminant concentrations, in both soil and groundwater, indicate that the source of the contamination was not an above ground storage tank (AST), underground storage tank (UST), or spill, and is suspected to be from historic industrial use of the property, including potentially burning coal, tar or asphalt paving, filling with contaminated dredged material, or backfilling with contaminated soil fill. The distribution of contaminants is not typical of a point-source release, with a plume that diminishes away from the source; rather, small, higher concentration areas with apparent short distance migration. The general area has widespread soil PAH concentrations ranging from below detection to approximately 100 times the regulatory limit (dibenz(a,h)anthracene in soil sample B-12 4'). The general area has widespread groundwater PAH concentrations ranging from below detection to 13 times the ES (benzo(a)pyrene and chrysene in groundwater sample MW-3).

The Tyco property historically had areas where the grade was below the water table elevation. These areas appear to have been filled with soil or river dredge material, which may have been contaminated. The use of contaminated soil fill is likely the source of the ubiquitous PAH contamination. Two areas, June 2012 Hotspot and August 2014 Hotspot, contain free-phase product. This may be the result of a different type of fill being used, possibly containing asphaltic material or related substances.

It does not seem appropriate to treat each hotspot area associated with this soil fill, as a separate "release". We recommend that one well be installed in the recently identified area (MW-10). If free-phase product is present, a product recovery sock will be installed. Installation of two additional monitoring wells (MW-11 and MW-12) is also recommended along Stanton Street to monitor groundwater concentrations at the down-gradient property boundary. Migration to the north is limited by the slurry wall. The existing and proposed monitoring wells, associated with the soil fill, are shown on Figure 5.

Groundwater monitoring is recommended for MW-1 or MW-3, MW-8, MW-104S, and proposed wells MW-10, MW-11 and MW-12, semi-annually for two years. In order to monitor seasonal variations, the groundwater will be monitored the first and third quarters during the first year, and the second and fourth quarters during the second year. The semi-annual groundwater monitoring results, from the six monitoring wells sampled, will be compared to the Wisconsin Groundwater ESs. At the end of two years, if there is no material increase in groundwater concentration, Tyco will request Site Closure. The referenced area is covered by an asphalt parking lot. The asphalt surface will likely be used as a performance standard as part of the Closure Request.

FIGURES

**FIGURE 1
SITE LOCATION MAP**

Tyco Marinette FTC
Marinette, Wisconsin




 Property Boundary *

* Parcel Boundary from
MarinetteCounty Land records
data (8/1/2014)

0 65 130
Feet

Spatial Projection:

 Coordinate System:
Wisconsin State
Plane North
FIPS Zone: 4801
Units: US Survey Feet
Datum: NAD83

Plot Info:

File:
Waterboundary_1938.mxd
Project No.: 2008-0487
Date: 4 September 2014
Operator: AKR
Reviewed By: MEP

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Knoxville, Tennessee
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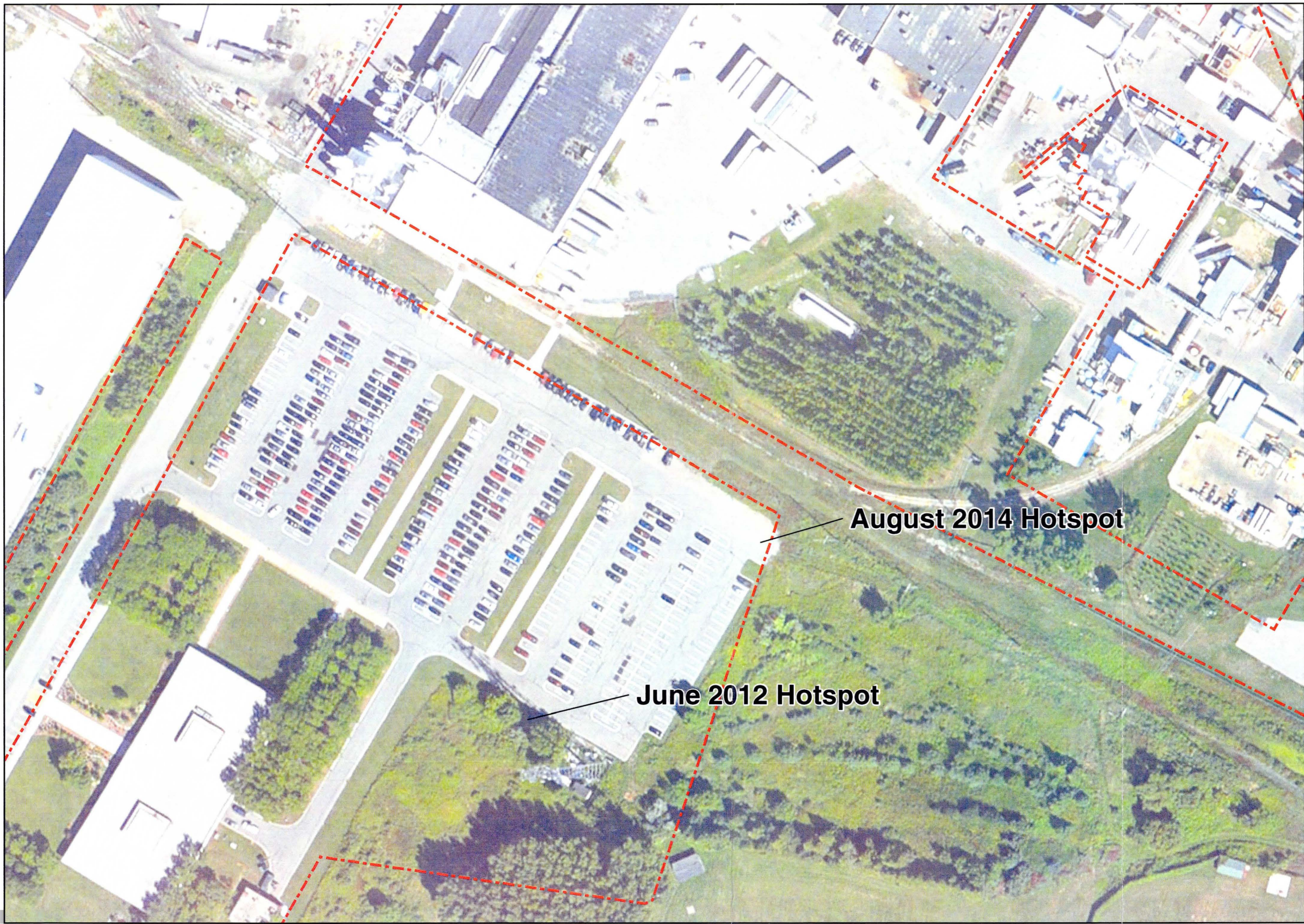
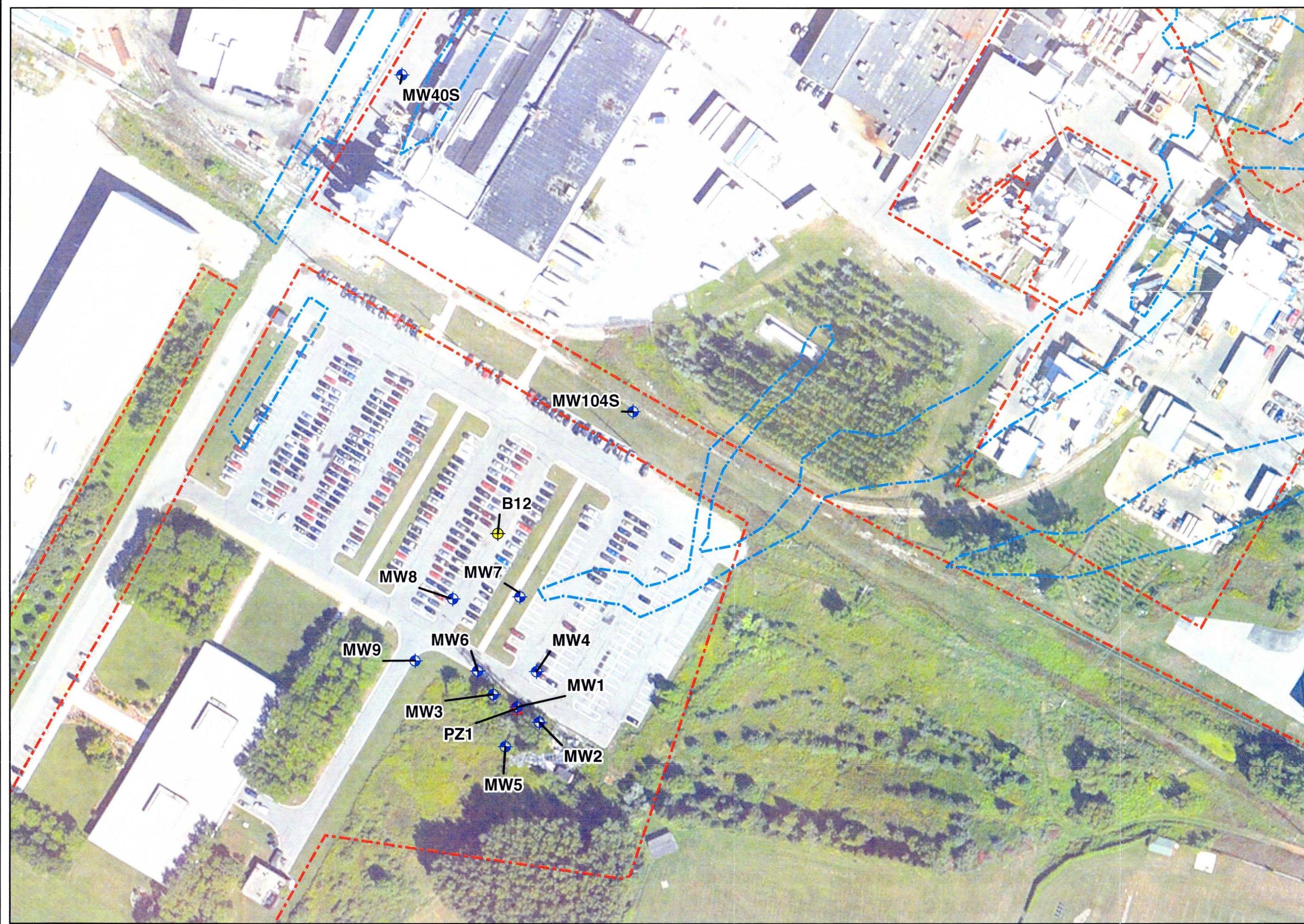
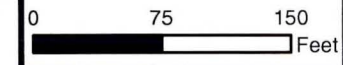


FIGURE 2
TYCO PROPERTY
BOUNDARY
HISTORIC
LOG RUN
LOCATIONS-1938
 Tyco Marinette FTC
 Marinette, Wisconsin



- Piezometer
- Monitoring
- Soil Boring
- Property Boundary *
- 1938 Waterboundary **

* Parcel Boundary from MarinetteCounty Land records data (8/1/2014)
 ** Boundary digitized from August 1938 aerial image from EDR



Spatial Projection:
 Coordinate System: Wisconsin State Plane North
 FIPS Zone: 4801
 Units: US Survey Feet
 Datum: NAD83

Plot Info:
 File: Waterboundary_1938.mxd
 Project No.: 2008-0487
 Date: 18 September 2014
 Operator: AKR
 Reviewed By: MEP

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**FIGURE 3
SOIL BORING
LOCATIONS
SOIL REGULATORY
EXCEEDANCES**

Tyco Marinette FTC
Marinette, Wisconsin

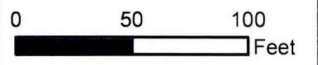


- Soil Boring
- Property Boundary *
- Parking Lot Outline
- Slurry Wall

Regulatory Exceedances ug/kg **

Location	Parameter	Result
B12	Naphthalene	4300
	Benzo(a)anthracene	12300
	Benzo(a)pyrene	10200
B9	2-Methylnaphthalene	1670
	Benzo(b)fluoranthene	17200
	Dibenz(a,h)anthracene	1130
B7	2-Methylnaphthalene	7960
	Phenanthrene	5980
	Benzene	11.6
B4	1,2,4-Trimethylbenzene	499
	Benzo(a)anthracene	4250
	Benzo(a)pyrene	4420
B1	1,3,5-Trimethylbenzene	182
	1,4-Dichlorobenzene	19.9
	Carbon disulfide	307
B6	Dibenz(a,h)anthracene	170
	Benzo(a)pyrene	1500
	Benzene	21.9
B11	Dibenz(a,h)anthracene	13.2
	Benzene	6.7
	B3	Benzene
B8	Dibenz(a,h)anthracene	22.9
	2-Methylnaphthalene	218
	Benzene	21.9
B10	Dibenz(a,h)anthracene	347
	Naphthalene	1440
	Benzene	21.9
B5	Benzene	6.7
	Dibenz(a,h)anthracene	13.2
	Benzene	6.7
B2	Benzene	6.7
	Dibenz(a,h)anthracene	13.2
	Benzene	6.7

* Parcel Boundary from MarinetteCounty Land records data (8/1/2014)
**No results = No exceedances



Spatial Projection:
Coordinate System: Wisconsin State Plane North
FIPS Zone: 4801
Units: US Survey Feet
Datum: NAD83

Plot Info:
File: BoringConcentrations.mxd
Project No.: 2008-0493
Date: 19 September 2014
Operator: AKR
Reviewed By: MEP

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BUILDING 29

Parameter	Result	Units
Naphthalene	4300	ug/kg
Benzo(a)anthracene	12300	ug/kg
Benzo(a)pyrene	10200	ug/kg
Benzo(b)fluoranthene	17200	ug/kg
Dibenz(a,h)anthracene	1130	ug/kg
Indeno(1,2,3-cd)pyrene	4520	ug/kg
Phenanthrene	2510	ug/kg

Parameter	Result	Units
2-Methylnaphthalene	1670	ug/kg

Parameter	Result	Units
Benzene	11.6	ug/kg
2-Methylnaphthalene	7960	ug/kg
Phenanthrene	5980	ug/kg

Parameter	Result	Units
1,2,4-Trimethylbenzene	499	ug/kg
Benzo(a)anthracene	4250	ug/kg
Benzo(a)pyrene	4420	ug/kg
Phenanthrene	3740	ug/kg

Parameter	Result	Units
Benzene	21.9	ug/kg
Carbon disulfide	307	ug/kg
1,4-Dichlorobenzene	19.9	ug/kg
1,2,4-Trimethylbenzene	447	ug/kg
1,3,5-Trimethylbenzene	182	ug/kg

Parameter	Result	Units
Naphthalene	1440	ug/kg
Dibenz(a,h)anthracene	347	ug/kg

Parameter	Result	Units
Dibenz(a,h)anthracene	22.9	ug/kg
2-Methylnaphthalene	218	ug/kg

Parameter	Result	Units
Benzo(a)pyrene	1500	ug/kg
Dibenz(a,h)anthracene	170	ug/kg

Parameter	Result	Units
Dibenz(a,h)anthracene	13.2	ug/kg

Parameter	Result	Units
Benzene	6.7	ug/kg

STANTON STREET

PARKING LOT

CELL TOWER

MW40S		
Parameter	Result	Units
Benzo(a)pyrene	1.5	ug/L
Benzo(b)fluoranthene	1.4	ug/L
Chrysene	1.3	ug/L

BUILDING
29

MW104S

STANTON STREET

PARKING
LOT

MW8		
Parameter	Result	Units
Benzo(a)pyrene	0.68	ug/L
Benzo(b)fluoranthene	0.49	ug/L
Chrysene	0.67	ug/L

B12		
Parameter	Result	Units
Benzo(a)pyrene	0.51	ug/L
Benzo(b)fluoranthene	0.45	ug/L

Estimated Groundwater Flow Direction

MW7		
Parameter	Result	Units
Benzo(a)pyrene	0.82	ug/L
Benzo(b)fluoranthene	0.67	ug/L
Chrysene	0.8	ug/L

MW6		
Parameter	Result	Units
Benzo(a)pyrene	1.5	ug/L
Benzo(b)fluoranthene	0.66	ug/L
Chrysene	0.84	ug/L

MW3		
Parameter	Result	Units
Benzo(a)pyrene	2.7	ug/L
Benzo(b)fluoranthene	2.1	ug/L
Chrysene	2.7	ug/L

MW9		
Parameter	Result	Units
Benzo(b)fluoranthene	0.37	ug/L
Benzo(a)pyrene	0.68	ug/L

MW1		
Parameter	Result	Units
Free Product		

CELL TOWER

**FIGURE 4
MONITORING WELL
LOCATIONS
GROUNDWATER ES
EXCEEDANCES**

Tyco Marinette FTC
Marinette, Wisconsin



- Monitoring
- Soil Boring
- Piezometer
- Groundwater Flow
- Property Boundary *
- Parking Lot Outline
- Slurry Wall

ES Excedances ug/L **

Location	Parameter	Result

* Parcel Boundary from MarinetteCounty Land records data (8/1/2014)

**No results = No exceedances
0 50 100
Feet

Spatial Projection:

Coordinate System:
Wisconsin State
Plane North
FIPS Zone: 4801
Units: US Survey Feet
Datum: NAD83



Plot Info:

File:
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Project No.: 2008-0493
Date: 19 September 2014
Operator: AKR
Reviewed By: MEP

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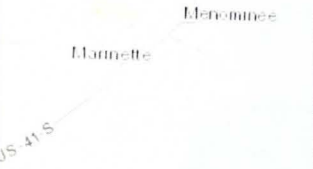
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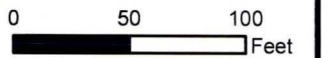
**FIGURE 5
PROPOSED
MONITORING WELL
LOCATIONS**

Tyco Marinette FTC
Marinette, Wisconsin



- Proposed Monitoring Well
- Monitoring
- Soil Boring
- Piezometer
- Parking Lot Outline
- Slurry Wall
- Property Boundary *

* Parcel Boundary from MarinetteCounty Land records data (8/1/2014)



Spatial Projection:

Coordinate System:
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Plane North
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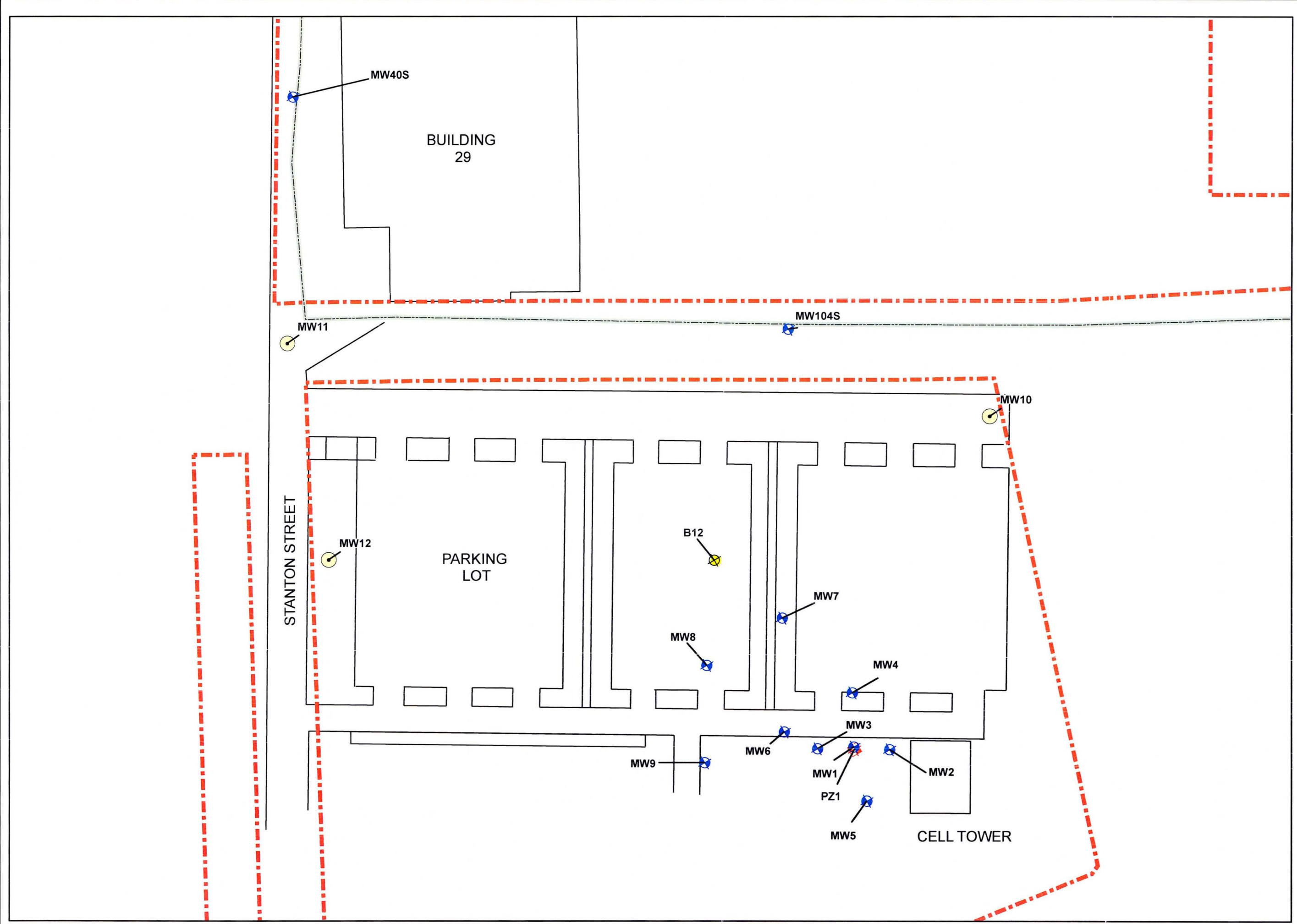
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Date: 30 September 2014
Operator: AKR
Reviewed By: MEP

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ATTACHMENT A

Tyco Diesel

One Stanton Street
Marinette, WI 54143

Inquiry Number: 3611856.1

May 21, 2013

Certified Sanborn® Map Report

Certified Sanborn® Map Report

5/21/13

Site Name:

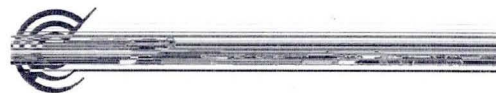
Tyco Diesel
One Stanton Street
Marinette, WI 54143

Client Name:

O & M Inc.
450 Montbrook Lane
Knoxville, TN 37919

EDR Inquiry # 3611856.1

Contact: Eric Frauen



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Certified Sanborn Results:

Site Name: Tyco Diesel
Address: One Stanton Street
City, State, Zip: Marinette, WI 54143
Cross Street:
P.O. # 487-051613
Project: 487
Certification # 5649-4091-9E3D



Sanborn® Library search results
Certification # 5649-4091-9E3D

Maps Provided:

1956 1884
1948
1935
1910
1901
1895

The Sanborn Library includes more than 1.2 million Sanborn fire insurance maps, which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

-  Library of Congress
-  University Publications of America
-  EDR Private Collection

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Sanborn Sheet Thumbnails

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.



1956 Source Sheets



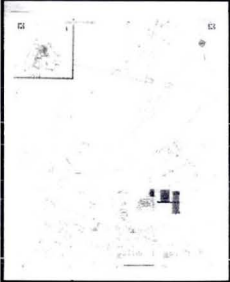
Volume 1, Sheet 13

1948 Source Sheets



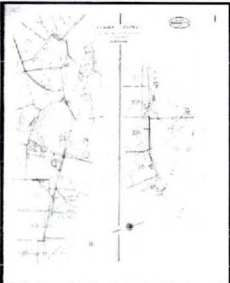
Volume 1, Sheet 13

1935 Source Sheets

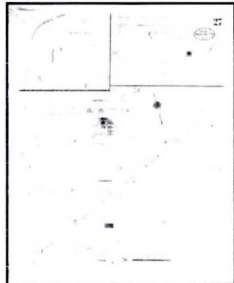


Volume 1, Sheet 13

1910 Source Sheets

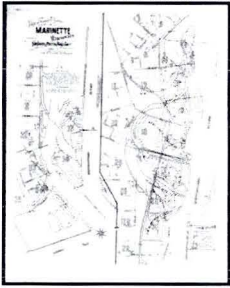


Volume 1, Sheet xxxx



Volume 1, Sheet 27

1901 Source Sheets



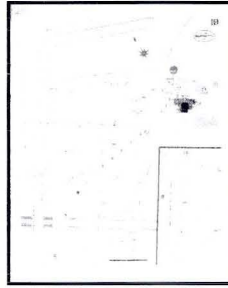
Volume 1, Sheet 1



Volume 1, Sheet 17

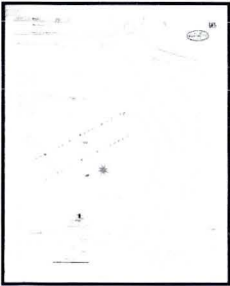


Volume 1, Sheet 18

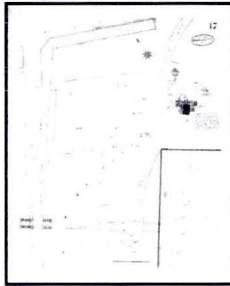


Volume 1, Sheet 19

1895 Source Sheets



Volume 1, Sheet 16



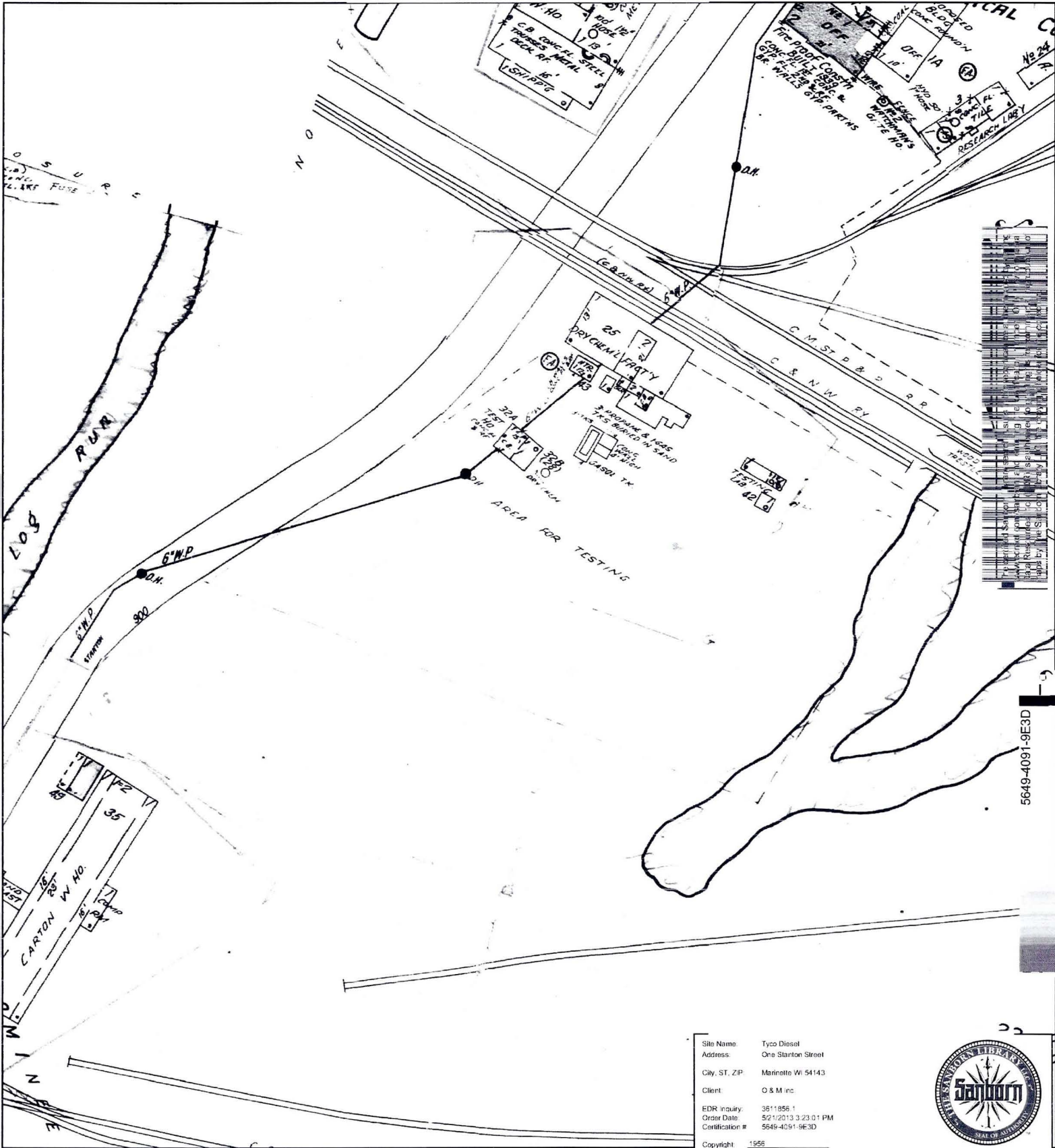
Volume 1, Sheet 17

1884 Source Sheets



Volume 1, Sheet 7

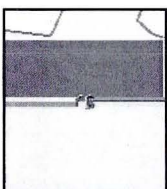
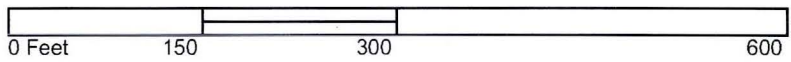
1956 Certified Sanborn Map



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 Address: One Stanton Street
 City, ST, ZIP: Marinette WI 54143
 Client: O & M inc.
 EDR Inquiry: 3611856.1
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 Certification #: 5649-4091-9E3D
 Copyright: 1956

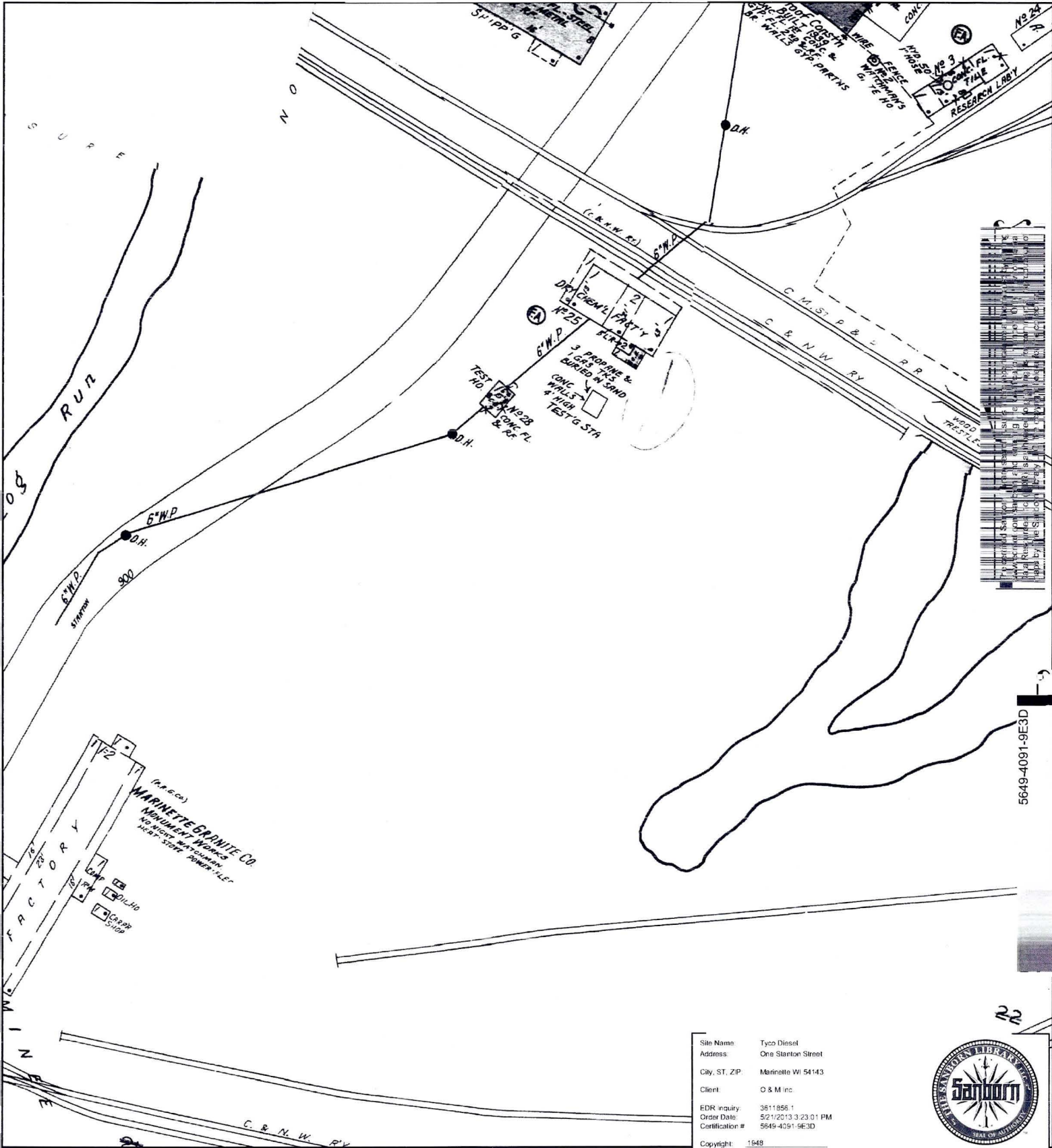


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Volume 1, Sheet 13

1948 Certified Sanborn Map



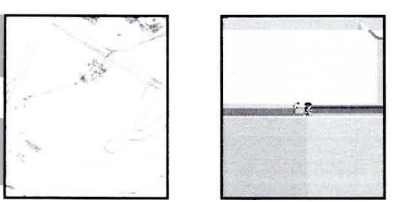
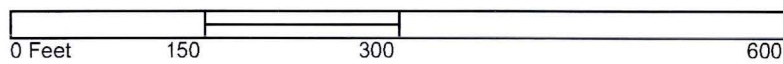
Vertical text on the right side of the map, likely a legend or scale indicator.

5649-4091-9E3D

Site Name: Tyco Diesel
 Address: One Stanton Street
 City, ST, ZIP: Marinette WI 54143
 Client: O & M Inc
 EDR Inquiry: 3611856.1
 Order Date: 5/21/2013 3:23:01 PM
 Certification #: 5649-4091-9E3D
 Copyright: 1948

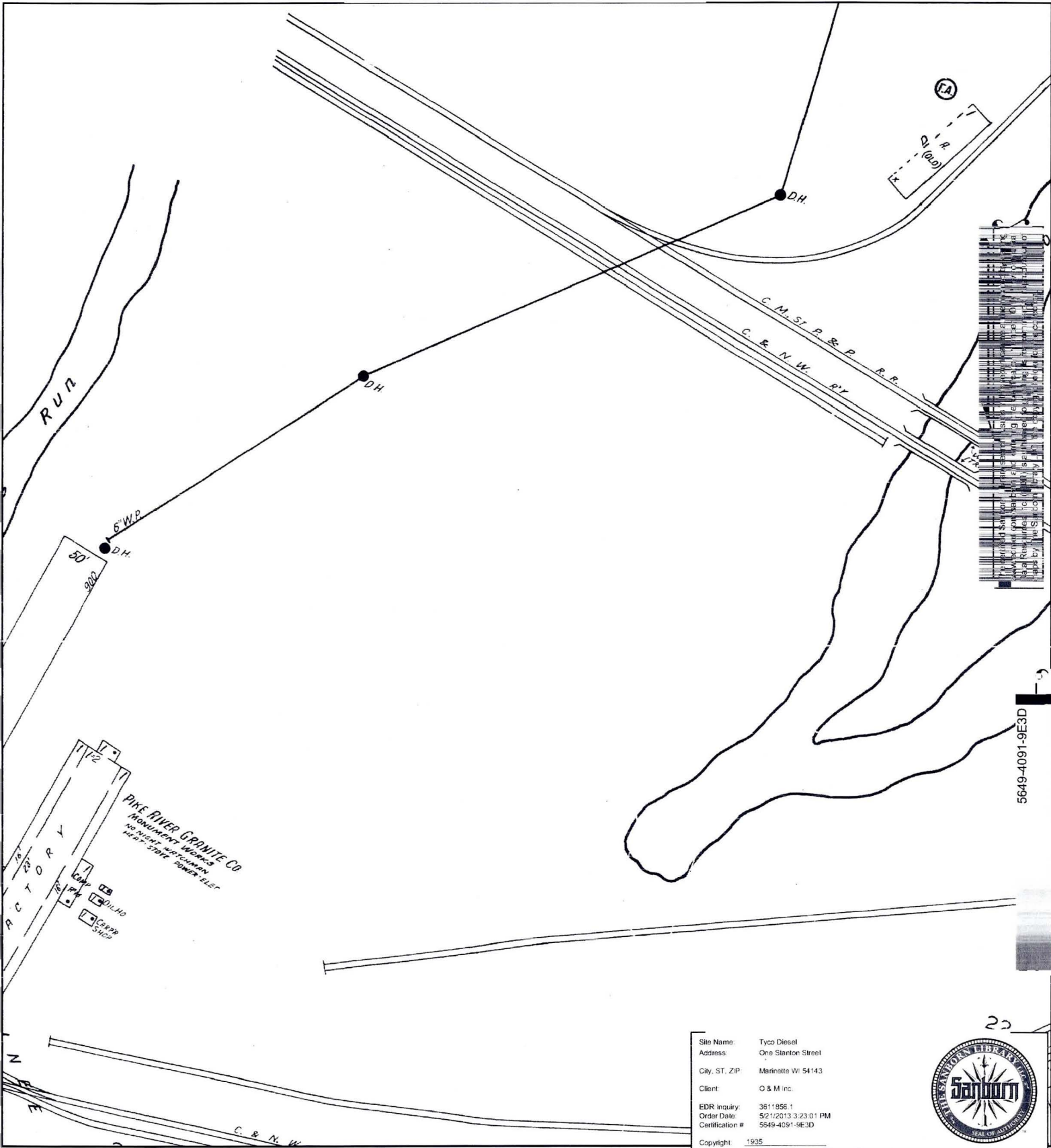


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Volume 1, Sheet 13

1935 Certified Sanborn Map

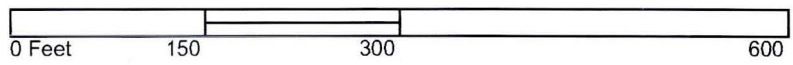


5649-4091-9E3D

Site Name: Tyco Diesel
 Address: One Stanton Street
 City, ST, ZIP: Marinette WI 54143
 Client: O & M Inc.
 EDR Inquiry: 3611856.1
 Order Date: 5/21/2013 3:23:01 PM
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 Copyright: 1935

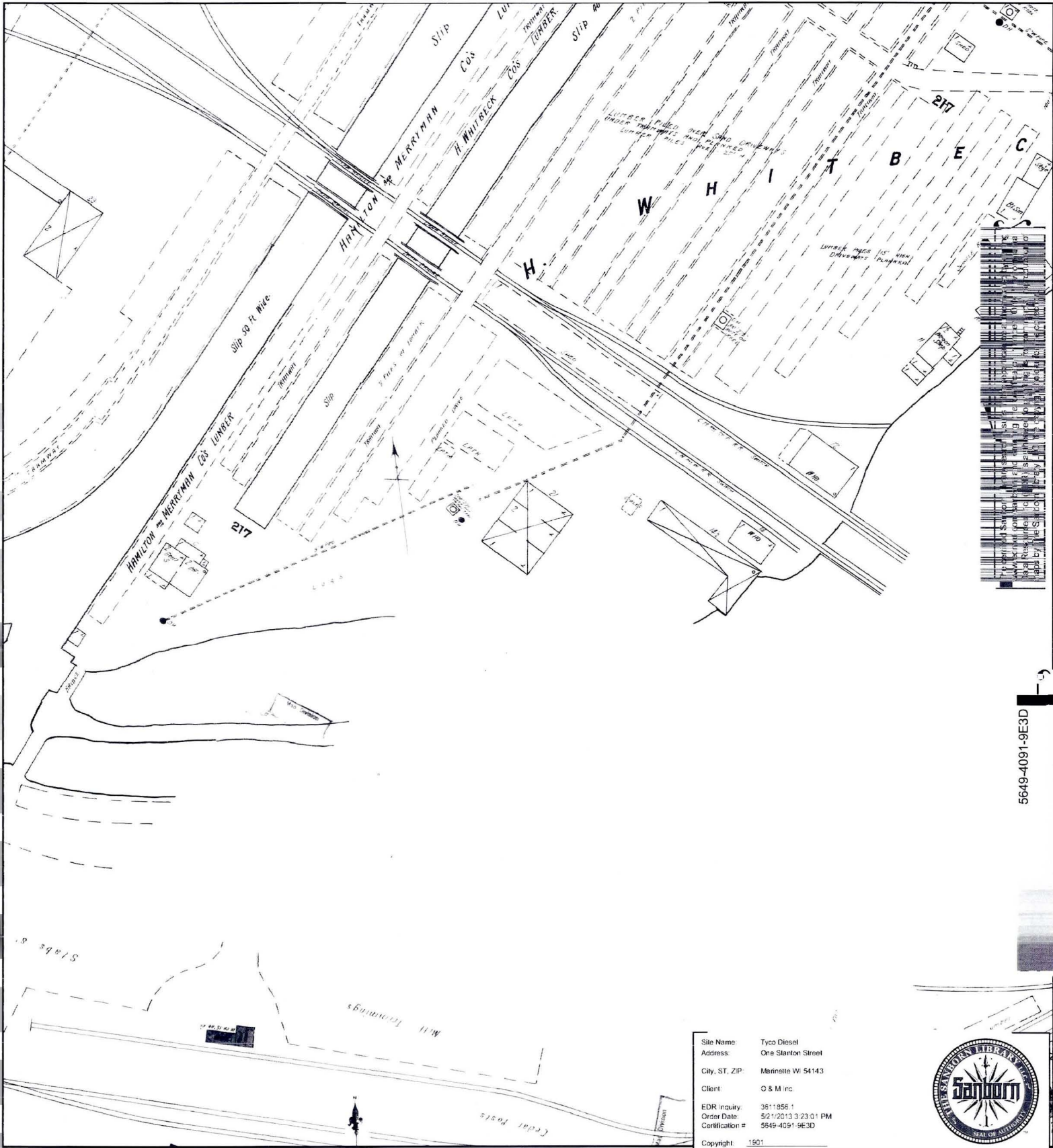


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Volume 1, Sheet 13

1901 Certified Sanborn Map

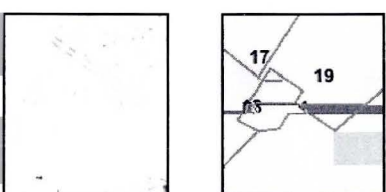
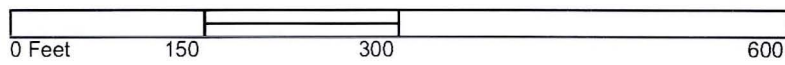


5649-4091-9E3D

Site Name: Tyco Diesel
 Address: One Stanton Street
 City, ST, ZIP: Marinette WI 54143
 Client: O & M Inc.
 EDR Inquiry: 3611856.1
 Order Date: 5/21/2013 3:23:01 PM
 Certification #: 5649-4091-9E3D
 Copyright: 1901



This Certified Sanborn Map combines the following sheets. Outlined areas indicate map sheets within the collection.



- Volume 1, Sheet 1
- Volume 1, Sheet 17
- Volume 1, Sheet 18
- Volume 1, Sheet 19

TABLES

TABLE 1
Tyco Fire Protection Products
One Stanton Street
Marinette Wisconsin
Soil Analytical Results
November 5, 2012; February 13, 2013; and July 29, 2014

	Units	RCL	B-1 4'	B-2 4'	B-3 4'	B-4 4'	B-5 4'	B-6 4'	B-7 4'	B-8 5'	B-9 5'	B-10 4'	B-11 6'	B-12 4'
Collection Date			11/5/12	11/5/12	11/5/12	11/5/12	11/5/12	2/13/13	2/13/13	7/29/14	7/29/14	7/29/14	7/29/14	7/29/14
Benzene	ug/kg	5.5 (2)	21.9	ND	6.7	ND	ND	1.6	11.6	ND	ND	ND	ND	0.47
Toluene	ug/kg	1,500 (2)	7.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Ethylbenzene	ug/kg	2,900 (2)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	ug/kg	4,100 (2)	ND	ND	ND	101	ND	ND	14.2	ND	ND	ND	ND	ND
2-Butanone	ug/kg	NS	294	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
n-Butylbenzene	ug/kg	2,500 (3)	69.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	ug/kg	NS	147	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
tert-Butylbenzene	ug/kg	NS	46.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Carbon disulfide	ug/kg	210 (3)	307	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ug/kg	0.4 (3)	19.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Isopropylbenzene	ug/kg	NS	343	ND	ND	ND	ND	ND	17.5	ND	ND	ND	ND	ND
Naphthalene	ug/kg	400 (1)	41.2	ND	ND	ND	ND	236	ND	149	ND	1440	160	4300
n-Propylbenzene	ug/kg	NS	36	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1,2,4-Trimethylbenzene	ug/kg	21 (3)	447	ND	ND	499	ND	ND	ND	ND	ND	ND	ND	ND
1,3,5-Trimethylbenzene	ug/kg	120 (3)	182	ND	ND	ND	ND	ND	18.2	ND	ND	ND	ND	ND
Acenaphthylene	ug/kg	700 (1)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	49.3	ND
Anthracene	ug/kg	3,000,000 (1)	ND	ND	ND	989	159	ND	ND	151	1280	5640	122	21600
Benzo(a)anthracene	ug/kg	3,900 (1)	ND	ND	ND	4250	ND	1420	ND	120	ND	2750	50.8	12300
Benzo(a)pyrene	ug/kg	390 (1)	ND	ND	ND	4420	ND	1500	ND	189	937	2680	138	10200
Benzo(b)fluoranthene	ug/kg	3,900 (1)	ND	ND	ND	2490	ND	982	ND	140	ND	2450	ND	17200
Benzo(ghi)perylene	ug/kg	39,000 (1)	ND	ND	ND	1910	ND	727	ND	120	614	1400	64.9	4190
Benzo(k)fluoranthene	ug/kg	39,000 (1)	ND	ND	ND	1480	ND	604	ND	68.7	ND	1120	22	4500
Chrysene	ug/kg	37,000 (1)	ND	ND	ND	3860	ND	1450	ND	138	ND	3640	ND	10100
Dibenz(a,h)anthracene	ug/kg	11 (3)	ND	ND	ND	ND	ND	170	ND	22.9	ND	347	13.2	1130
Fluoranthene	ug/kg	500,000 (1)	ND	ND	ND	9180	ND	3230	ND	286	1710	7270	141	22500
Fluorene	ug/kg	4,000 (3)	ND	ND	ND	ND	ND	225	2830	ND	269	747	9.1	ND
Indeno(1,2,3-cd)pyrene	ug/kg	3,900 (1)	ND	ND	ND	1580	ND	639	ND	102	219	1230	51.5	4520
2-Methylnaphthalene	ug/kg	140 (3)	ND	ND	ND	ND	ND	ND	7960	218	1670	ND	36.9	ND
Phenanthrene	ug/kg	1,800 (1)	ND	ND	ND	3740	ND	1420	5980	124	1100	ND	97	2510
Pyrene	ug/kg	8,700,000 (1)	ND	ND	ND	7190	ND	2540	ND	306	1880	4830	216	20700

Note:

Bold - Indicates an exceedance of the referenced regulatory Standard or Guidance

ND - Not detected

NA - Not analyzed

TMB - trimethylbenzene

(1)RCLs from the WDNR Soil Cleanup Levels for PAHs Interim Guidance - April 1997 (Most stringent of the Industrial Direct Contact and Soil to Groundwater Pathway)

(2)RCLs from WDNR NR720 - September 2007

(3)Most stringent of the USEPA Regional Screening Levels (RSLs)

TABLE 2
Tyco - Marinette Diesel
One Stanton Street
Marinette, Wisconsin
Groundwater Analytical Results

Monitoring Well			Utility Trench	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	B-12	PZ-1	MW-40S	MW-104S
	Enforcement Standard	Units	6/14/12	11/15/12	11/15/12	11/15/12	11/15/12	11/15/12	2/13/13	8/8/14	8/8/14	8/8/14	Temp well 7/29/14	11/15/12	7/2/13	7/2/13
Benzene	5	ug/L	NA	FP	ND	ND	ND	ND	ND	0.6	ND	ND	ND	ND	ND	ND
sec-Butylbenzene	NS	ug/L	NA	FP	ND	ND	ND	ND	ND	0.78	ND	ND	ND	ND	ND	ND
Carbon disulfide	1,000	ug/L	NA	FP	ND	ND	ND	ND	ND	0.73	ND	ND	ND	ND	ND	ND
Isopropylbenzene	NS	ug/L	NA	FP	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND
p-Isopropyltoluene	NS	ug/L	NA	FP	ND	ND	ND	ND	ND	0.43	ND	ND	ND	ND	ND	ND
n-Propylbenzene	NS	ug/L	NA	FP	ND	ND	ND	ND	ND	0.99	ND	ND	ND	ND	ND	ND
Toluene	800	ug/L	NA	FP	ND	ND	ND	ND	ND	0.33	ND	1.1	ND	ND	ND	ND
1,2,4-Trimethylbenzene	480	ug/L	NA	FP	ND	ND	ND	ND	ND	0.74	ND	ND	ND	ND	ND	ND
Xylenes	2,000	ug/L	NA	FP	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND
Acenaphthene	NS	ug/L	NA	FP	ND	ND	ND	ND	ND	2.1	0.37	0.99	0.65	ND	1.9	ND
Anthracene	3,000	ug/L	NA	FP	ND	6.1	ND	ND	ND	2.1	0.45	2.7	ND	ND	1.8	ND
Benzo(a)anthracene	NS	ug/L	NA	FP	ND	2.1	ND	ND	0.61	0.71	0.44	0.3	0.24	ND	0.85	ND
Benzo(a)pyrene	0.2	ug/L	NA	FP	ND	2.7	ND	ND	1.5	0.82	0.68	0.68	0.51	ND	1.5	ND
Benzo(b)fluoranthene	0.2	ug/L	NA	FP	ND	2.1	ND	ND	0.66	0.67	0.49	0.37	0.45	ND	1.4	ND
Benzo(ghi)perylene	NS	ug/L	NA	FP	ND	1.6	ND	ND	0.85	0.53	0.44	0.34	0.39	ND	1.4	ND
Benzo(k)fluoranthene	NS	ug/L	NA	FP	ND	1.1	ND	ND	0.26	0.33	0.21	0.17	0.19	ND	0.6	ND
Chrysene	0.2	ug/L	NA	FP	ND	2.7	ND	ND	0.84	0.8	0.67	ND	ND	ND	1.3	ND
Dibenz(ah)anthracene	NS	ug/L	NA	FP	ND	0.37	ND	ND	ND	0.11	0.085	0.07	ND	ND	0.24	ND
Fluoranthene	400	ug/L	NA	FP	ND	7.1	ND	ND	ND	2.9	1.6	2	0.68	ND	2.9	ND
Fluorene	400	ug/L	NA	FP	ND	ND	ND	ND	ND	1.3	0.25	0.46	0.41	ND	1.3	ND
Indeno(1,2,3-cd)pyrene	NS	ug/L	NA	FP	ND	1.5	ND	ND	0.51	0.43	0.4	ND	0.34	ND	1.1	ND
2-Methylnaphthalene	NS	ug/L	NA	FP	ND	ND	ND	ND	ND	2.3	ND	0.78	1.1	ND	ND	ND
Naphthalene	100	ug/L	NA	FP	ND	ND	ND	ND	ND	0.79	ND	0.74	ND	ND	ND	ND
Phenanthrene	NS	ug/L	NA	FP	ND	4.3	ND	ND	0.26	3.7	1.1	2.4	0.57	ND	2.3	ND
Pyrene	250	ug/L	NA	FP	ND	5.6	ND	ND	1.6	2.7	1.6	2.2	0.82	ND	2.9	ND
GRO	NS	mg/L	240	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DRO	NS	mg/L	1700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Note:

ND - Not detected

FP - Free-Phase Petroleum Observed, not sampled

NS - No standard currently exists in NR 140

ES - NR 140 Enforcement Standard

Only detected parameters are presented on this Table.

Bold indicates an exceedance of the NR 140 Enforcement Standard.