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2015 Annual Site Summary

**Tyco Fire Protection Products
One Stanton Street, Marinette, Wisconsin**

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2015 Annual Site Summary

For:

Tyco Fire Protection Products
One Stanton Street
Marinette, Wisconsin 54143

Submitted to:

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1.0 Introduction

During subsurface utility work in June 2012 at the Tyco Fire Protection Products property located at One Stanton Street in Marinette, Wisconsin, a black, oily substance, with a petroleum-like odor, was observed in a utility trench. This area, located approximately 260 feet east of the eastern corner of the FX Building (Figure 1), will be referred to as the "June 2012 Hotspot". A water sample was collected from the utility trench and laboratory analyzed for Total Petroleum Hydrocarbons - Gasoline Range Organics (TPH-GRO) and Total Petroleum Hydrocarbons - Diesel Range Organics (TPH-DRO). The results of analysis indicated that the water sample contained detectable concentrations of petroleum compounds. This document presents a summary of the data collected prior to 2015, and reported previously; and work performed in 2015, in support of site investigation completion.

2.0 Background

The Tyco property has served commercial/industrial purposes since at least 1900. According to historical Sanborn Fire Insurance Map (Sanborn Map), in 1901 the area was utilized for lumber transport and developed with many slips and log runs (water-filled ditches). These features were depicted on the 1901 Sanborn Map and observed on a 1938 aerial photograph to extend into the vicinity of the referenced investigation activity; however, review of a 1954 aerial photograph indicated that these features had been filled by this time. The historical trenching, dredging and filling activities are suspected to have occurred over many decades. Review of additional aerial photographs and Sanborn Maps, show varying configurations of slips and log runs throughout the early and mid-1900s. No documentation was readily available regarding these assumed cut and fill activities. A review of Tyco files, Marinette County files and City of Marinette files did not indicate a likely source of the oily substance observed in the utility trench.

The property is located at One Stanton Street, in Marinette, Wisconsin. It is in the NE $\frac{1}{4}$ of the SE $\frac{1}{4}$ of Section 5, Township 30N, Range 24E of the Marinette East quadrangle. Figure 1 illustrates the site location.

The Site is defined as the area of impacted soil and groundwater in the main parking lot, and consists of about 50,000 square feet which is part of the much larger Tyco Fire Protection Products property consisting of 60.64 acres. The property is zoned industrial. The site surface is primarily asphalt parking lot with some areas of vegetative cover, and is adjacent to the FX Building. Figure 2 shows the referenced Site location within the larger Tyco Fire Protection Products property.

3.0 Investigation History

Observations made during trenching for utility work in June 2012 revealed a black oily liquid that had a petroleum-like odor. Tyco personnel collected a water sample from the utility trench in June 2012 and submitted it to Northern Lakes Services – Analytical Laboratory, a Wisconsin Department of Natural Resources (WDNR)-certified Laboratory, for analysis of TPH-DRO and TPH-GRO. Laboratory analysis of the water sample collected from the utility trench documented the presence of hydrocarbons. The results of water sample collected during the June 2012 event are summarized on Table 2. Two additional areas with black soil possessing a petroleum-like odor were identified during fence post installation in August 2014 and utility trenching in August 2015. No samples were collected from the August 2014 or the August 2015 open excavations. The “June 2012 Hotspot”, “August 2014 Hotspot”, and “August 2015 Hotspot” locations are shown on Figure 2. & M, Inc. submitted a Site Investigation Work Plan to the WDNR in October 2012, which was approved by the WDNR that same month. Investigation activities began in November 2012 to assess the source, nature, degree, and extent of petroleum impacts identified at the site. The site investigation activities were consistent with the WDNR approved Site Investigation Work Plan.

3.1 Discussion of Previous Soil Sampling Activities

On November 5 and 6, 2012 and February 13, 2013, O & M, Inc. completed subsurface investigation activities at the Site in order to assess the nature and extent of impacts identified during utility trenching (“Hot Spot 2012”). Seven soil borings (B-1 thru B-5 on November 5 and 6, 2012, and B-6 and B-7 on February 13, 2013) were advanced at the location where the non-aqueous phase liquid (NAPL) was observed and radially out from there, using Geoprobe Direct-Push soil sampling technique. One soil sample was collected from each boring at 4 feet below ground surface (bgs), at the groundwater interface. Soil at each of the soil boring locations was logged continuously to the termination depth; however, recovery was very limited. The soil boring logs are presented in Appendix A.

The samples were collected in laboratory-provided sample containers preserved in accordance with the required analytical methodology. All reusable sampling equipment was decontaminated between sampling locations by scrubbing the equipment with an Alconox solution and rinsing with bottled water. The samples were placed in ice-filled coolers and submitted to Accutest Laboratories (Accutest), a WDNR-certified laboratory, under chain-of-custody protocols, via overnight carrier.

The soil sample collected from the groundwater interface of each boring was submitted for volatile organic compound (VOC) and polycyclic aromatic hydrocarbon (PAH) analysis.

O & M, Inc. compared the soil sample analytical data that was generated during the site investigation activities to the WDNR residual contaminant levels (RCLs) developed for the protection of human health from direct contact with the soil, and standards developed for the protection of groundwater quality. Standards exist for both non-industrial and industrial properties. The property is zoned for industrial use; therefore, O & M, Inc. compared the data to standards developed for industrial properties.

Benzene and/or various PAH compounds were detected at concentrations exceeding one or more of the standards in samples collected from borings B-1, B-3, B-4, B-5, B-6, and B-7.

The soil analytical data and the standards to which they were compared are presented on Table 1 and the laboratory analytical report is presented in Appendix B. The soil sample locations and RCL exceedances are shown on Figure 3.

The results of the investigation activities were documented in a Site Investigation Report that was submitted to the WDNR on February 27, 2014. WDNR Comments to the February 2014 Site Investigation Report, received April 23, 2014, stated that additional soil borings were necessary to define the limits of impact.

A plan was developed by O & M, Inc. to collect soil samples at locations further from the suspected source area, "June 2012 Hot Spot", in directions in which a clean margin had not yet been achieved.

In July 2014, soil borings B-8 thru B-12 were advanced using Geoprobe Direct-Push soil sampling technique. A soil sample was collected from each of the borings from 4 to 6 feet bgs, at the groundwater interface. The soil boring logs are presented in Appendix A.

The samples were collected following the soil sampling procedures outlined above. The soil sample collected from the groundwater interface of each boring was submitted for VOC and PAH analysis.

O & M, Inc. compared the soil sample analytical data that was generated during the site investigation activities to the RCLs. The soil samples collected from borings B-9, B-10 and B-12 had concentrations of VOCs and/or PAHs that exceeded the WDNR Industrial RCLs.

The soil analytical data and the standards to which they were compared are presented on Table 1 and the laboratory analytical report is presented in Appendix B. The soil sample locations and RCL exceedances are shown on Figure 3.

This information was summarized in a Site Summary Report, which was submitted to the WDNR on October 10, 2014. The WDNR provided comments on March 3, 2015 approving the Scope of Work recommended in the Site Summary report, three additional soil borings, with a few minor modifications. With regard to soil investigation, the WDNR suggested one additional soil boring west/southwest of monitoring well MW-1.

The soil sampling locations, as well as exceedances of the RCLs are shown on Figure 3.

3.2 Discussion of Previous Groundwater Sampling Activities

On November 6, 2012, O & M, Inc. installed water table monitoring wells MW-1 thru MW-5 and piezometer PZ-1. Deep and shallow monitoring wells MW-1 and PZ-1, were installed as a nested pair in the area where free-phase petroleum was observed in the utility trench ("June 2012 Hot Spot"). The wells were installed with a drill rig using hollow-stem auger. The deep well was screened from 17 to 22 feet bgs. The remaining monitoring wells were screened from approximately 2 to 12 feet bgs. The monitoring wells were constructed of two-inch diameter PVC riser pipe with 0.010-inch slot screens. Annular space between the well casing and borehole was filled with sand filter pack to approximately 1-foot above the top of each screen followed by granular bentonite to the ground surface. Depending on location, either a stickup or flush well box was installed to protect each monitoring well. Monitoring Well Construction forms are included in Appendix A.

All monitoring wells were developed in accordance with WDNR guidance. The wells were alternately surged and purged for a minimum of 30 minutes. The surging consisted of moving a bailer gently up and down within the well and adjacent to the screened section. The wells were purged using either a submersible or centrifugal pump until the well produced sediment free water. Well development forms are included in Appendix C.

Depth to groundwater measurements were collected prior to initiation of purging or sampling activities. Upon arriving at the Site, each well was opened and allowed to equilibrate with ambient atmospheric pressure before measurements were initiated. O & M, Inc. then measured depth-to-water in each well from a reference mark at the top of each monitoring well casing to 0.01-foot accuracy using an electronic water level indicator. The water level probe was decontaminated between well locations to prevent cross-contamination.

Groundwater sampling activities were completed the week of November 15, 2012 in accordance with WDNR guidance. Monitoring wells were purged using low-flow sampling techniques. Groundwater parameters,

including pH, temperature, conductivity, dissolved oxygen, and oxidation reduction potential were measured and recorded during purging activities.

Following stabilization of field parameters, O & M, Inc. collected groundwater samples from newly installed monitoring wells/piezometers PZ-1, MW-2, MW-3, MW-4, and MW-5. Monitoring well MW-1 contained 8 inches of NAPL, as measured in a bailer. Therefore, MW-1 was not sampled for groundwater laboratory analysis. The samples were collected using low-flow sampling techniques, in laboratory-provided sample containers preserved in accordance with the required analytical methodology. All reusable sampling equipment was decontaminated between sampling locations by scrubbing the equipment with an Alconox solution and rinsing with bottled water. The samples were placed in ice-filled coolers and submitted to Accutest, a WDNR-certified laboratory, under chain-of-custody protocols, via overnight carrier. The groundwater samples collected from the remaining monitoring wells and the piezometer were submitted for VOC and PAH analysis.

O & M, Inc. compared the groundwater sample analytical data that was generated during the site investigation activities to the WDNR ESs. The groundwater sample collected from monitoring well MW-3 had concentrations of PAH compounds that exceeded WDNR ESs.

The groundwater analytical data and the standards to which they were compared are presented on Table 2 and the laboratory analytical report is presented in Appendix B. The monitoring well locations, and the ES exceedances, are presented on Figure 4.

On February 13, 2013, O & M, Inc. installed water table monitoring well MW-6 using a drill rig and hollow-stem auger, to further delineate the groundwater impacts. The monitoring well was installed and developed using the procedures outline above.

Groundwater sampling activities were completed the week of February 13, 2013, in accordance with WDNR guidance. Depth to groundwater was measured, and the monitoring well was purged until field parameters were stable, following the procedures outlined above.

Following stabilization of field parameters, O & M, Inc. collected one groundwater sample from newly installed monitoring well MW-6, using low-flow sampling techniques. The groundwater sample was submitted to Accutest for VOC and PAH analysis.

O & M, Inc. compared the groundwater sample analytical data that was generated during the site investigation activities to the WDNR ESs. The groundwater sample collected from monitoring well MW-6 had concentrations of PAH compounds that exceeded WDNR ESs.

The groundwater analytical data and the standards to which they were compared are presented on Table 2 and the laboratory analytical report is presented in Appendix B. The monitoring well locations, and the ES exceedances, are presented on Figure 4.

The results of the investigation activities were documented in a Site Investigation Report that was submitted to the WDNR on February 27, 2014.

WDNR Comments to the February 2014 Site Investigation Report stated that additional soil borings and monitoring wells were necessary to define the limits of these impacts.

In July 2014, monitoring wells MW-7, MW-8, and MW-9 were installed with a drill rig using hollow-stem auger. The monitoring wells were installed and developed using the procedures outline above. Monitoring Well Construction forms are included in Appendix A.

Groundwater sampling activities were completed the week of August 4, 2014, in accordance with WDNR guidance. Depth to groundwater was measured, and the monitoring wells were purged until field parameters were stable, following the procedures outlined above.

Following stabilization of field parameters, O & M, Inc. collected groundwater samples from newly installed monitoring wells MW-7, MW-8, and MW-9, using low-flow sampling techniques. The groundwater samples were submitted for VOC and PAH analysis.

O & M, Inc. compared the groundwater sample analytical data that was generated during the site investigation activities to the WDNR ESs. Groundwater samples collected from monitoring wells MW-7, MW-8 and MW-9 had concentrations of PAH compounds that exceeded WDNR ESs.

The groundwater analytical data and the standards to which they were compared are presented on Table 2 and the laboratory analytical report is presented in Appendix B. The monitoring well locations, and the ES exceedances, are presented on Figure 4.

This information was summarized in a Site Summary Report, which was submitted to the WDNR on October 10, 2014. O & M, Inc. recommendations included installation of three additional monitoring wells and semi-annual, rather than quarterly, groundwater sampling from only select monitoring wells.

The WDNR provided comments on March 3 and 20, 2015 recommending an additional, fourth, monitoring well; collecting soil samples during

monitoring well installation, and implementing a Quarterly Groundwater Sampling Plan including all monitoring wells.

4.0 Additional Investigation - 2015

On April 29, 2015, O & M, Inc. completed additional subsurface investigation activities at the Site in order to further assess the nature and extent of impacts identified.

Four additional monitoring wells, MW-10 thru MW-13, were installed side-gradient, and downgradient of the "June 2012 Hot Spot" to further delineate the nature and extent, as suggested by the WDNR. Also as suggested by the WDNR, a soil sample was collected from just above the water table at each of the four locations.

4.1 Additional Soil Investigation

The four soil samples collected during the monitoring well installation (designated MW-10, MW-11, MW-12, and MW-13) were collected using split-spoon soil sampling technique. The soil samples were collected from 3 feet bgs, at the groundwater interface. Soil at each of the well locations was logged continuously to the terminal depth; however, recovery was very limited. The soil boring logs are presented in Appendix A.

The samples were collected following the soil sampling procedures outlined above. The soil samples collected from the groundwater interface of each boring were submitted for petroleum volatile organic compounds (PVOCs), PAHs, and metals analysis.

O & M, Inc. compared the soil sample analytical data to the RCLs. Various PAH compounds and metals (cadmium, lead, and selenium) were detected at concentrations exceeding one or more of the RCLs in soil samples MW-10 and MW-13.

The soil analytical data and the standards to which they were compared are presented on Table 1 and the laboratory analytical report is presented in Appendix B. The soil sample locations are presented on Figure 3.

4.2 Additional Groundwater Investigation

On April 29, 2015, O & M, Inc. installed water table monitoring wells MW-10 thru MW-13. The wells were installed with a drill rig and hollow-stem auger. The monitoring wells were screened from approximately 2 to 12 feet bgs. The monitoring wells were constructed of two-inch diameter PVC riser pipe with 0.010-inch slot screens. Annular space between the well casing and borehole was filled with sand filter pack to approximately 1-foot above the top of each screen followed by granular bentonite to the

ground surface. Stickup or flush well boxes were installed to protect the monitoring wells. Monitoring Well Construction forms are included in Appendix A.

All monitoring wells were developed in accordance with WDNR guidance, as discussed previously. Well development forms are included in Appendix C.

As stated above, in March 2015 the WDNR suggested a Quarterly Groundwater Sampling Plan. Quarterly groundwater sampling was completed the weeks of May 11, 2015, September 21, 2015, and November 23, 2015 in accordance with WDNR guidance.

During the three quarterly groundwater sampling events, depth to groundwater measurements were collected prior to initiation of purging or sampling activities, following the procedures outline previously. The top-of-casing elevations, depth to water measurements, and calculated groundwater elevations are presented in Table 3. The potentiometric surface and flow direction for the most recent sampling event, November 23, 2015, is shown on Figure 5.

Groundwater sampling activities were completed following procedures discussed previously. Following stabilization of field parameters, O & M, Inc. collected groundwater samples from monitoring wells PZ-1, and MW-2 thru MW-13. In addition, several monitoring wells, associated with an unrelated groundwater investigation at the property, were sampled in May 2015, as requested by the WDNR. These monitoring wells were MW-013S, MW-013M, MW-013D, and MW-40S. During the three quarterly sampling events, a layer of NAPL, which has been as much as 8 inches, was not observed in monitoring well MW-1. However, thick, oily globules were observed in the water removed from monitoring well MW-1. Therefore, MW-1 was not sampled for groundwater laboratory analysis. The groundwater samples collected from the monitoring wells and the piezometer were submitted to Accutest for PVOC, PAH, and metals analysis.

O & M, Inc. compared the groundwater sample analytical data from the three 2015 groundwater sampling events to the WDNR ESs. Groundwater samples collected from monitoring wells MW-8, MW-10 and MW-13 had concentrations that exceeded WDNR ESs during one or more of the sampling events.

The groundwater analytical data and the standards to which they were compared are presented on Table 2 and the laboratory analytical reports are presented in Appendix B. The monitoring well locations, and the ES exceedances, are presented on Figure 4.

5.0 Free-Phase Petroleum Abatement

NAPL has been recovered from monitoring well MW-1 using a petroleum recovery sock since August 8, 2014. The petroleum recovery sock is replaced with a fresh recovery sock quarterly. Due to the thick, sticky nature of the NAPL, it was not possible to squeeze the NAPL from the recovery sock to quantify the volume removed. Currently only globules of NAPL remain. An immiscible layer of NAPL has not been recorded since February 13, 2013.

6.0 Investigation Derived Waste Management

The soil cuttings generated during drilling were containerized in open-top drums with lids, and properly labeled. Disposal of the soil through Heritage Environmental Services was coordinated by Tyco personnel.

Groundwater removed from the monitoring wells during well development was contained in 55-gallon open-top drums with lids, properly labeled and disposed through Heritage Environmental Services as coordinated by Tyco personnel.

Groundwater removed from the monitoring wells during purging was contained in 55-gallon open-top drums with lids, properly labeled and disposed through Heritage Environmental Services as coordinated by Tyco personnel.

Used petroleum recovery socks have been placed in a 5 gallon pail with a lid, properly labeled, and disposed by Tyco at Heritage Environmental Services.

7.0 Conclusions and Recommendations

The distribution of impacts 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 70 times the regulatory limit (Chrysene in soil sample B-12 4'). The general area has also historically had widespread groundwater PAH concentrations ranging from below detection to 10 times the ES (Benzo(a)pyrene in MW-10, November 2015). During the 3 years of groundwater sampling, concentrations within individual wells have been highly variable. During the more recent 3rd and 4th quarters 2015, monitoring wells MW-2, MW-7, MW-8, and MW-10 had concentrations exceeding the WDNR ESs, with the highest concentrations in MW-2 and MW-10.

The Tyco property historically had areas where the grade was below the water table elevation. These areas may have been filled with material that was impacted. This area of Marinette has historically been used for manufacturing and although not in all locations, low level impacts seem to be widespread. The presence of PAH compounds are considered to be ubiquitous in this general area. Based on the data, the extent of petroleum products in the soil is defined to the extent practicable.

Quarterly groundwater monitoring of all the monitoring wells is recommended, as suggested by the WDNR. The next round, 1st Quarter 2016, is scheduled for late March 2016. Periodic replacement of the petroleum recovery sock will continue. At the end of two years (March 2017), 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.

TABLE 1
Tyco Fire Protection Products
One Stanton Street
Marinette Wisconsin
Soil Analytical Results

	Units	WDNR RCLs	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'	MW-10	MW-11	MW-12	MW-13
Sample Collection Depth (ft bgs)			4	4	4	4	4	4	4	5	5	4	6	4	3	3	3	3
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	4/29/15	4/29/15	4/29/15	4/29/15
Benzene	ug/kg	5.1	21.9	<0.24	6.7	<15	0.42	1.6	11.6	<0.39	<60	<23	0.52	0.47	<44	<23	<28	<46
Toluene	ug/kg	1,107	7.6	<0.68	<0.94	<42	<0.81	<1.5	<2.5	<0.24	<37	<14	0.84	<0.14	<46	<24	<30	<49
Ethylbenzene	ug/kg	1,570	<0.33	<0.19	<0.27	<12	<0.23	<0.44	<0.70	<0.79	<120	<47	<1.0	<0.47	<44	<23	<29	<47
Xylene	ug/kg	3,940	<0.33	<0.19	<0.27	101	<0.23	<0.44	14.2	<0.25	<39	<15	<0.32	<0.15	<41	<21	<26	<43
2-Butanone	ug/kg	NS	294	<1.0	<1.4	<62	<1.2	<2.3	<3.6	<3.5	<550	<210	<4.4	<2.1	NA	NA	NA	NA
n-Butylbenzene	ug/kg	NS	69.4	<0.15	<0.20	<9.2	<0.18	<0.34	2.2	<0.28	<43	76.3	<0.35	<0.17	NA	NA	NA	NA
sec-Butylbenzene	ug/kg	NS	147	<0.18	<0.26	<11	<0.22	<0.42	3.4	<0.86	<130	<51	<1.1	<0.51	NA	NA	NA	NA
tert-Butylbenzene	ug/kg	NS	46.9	<0.71	<0.98	<44	<0.84	<1.6	<2.6	<0.24	<38	<14	<0.30	<0.15	NA	NA	NA	NA
Carbon disulfide	ug/kg	592	307	<0.13	<0.18	<8.2	0.9	<0.30	5	0.91	<23	<8.9	4.1	0.23	NA	NA	NA	NA
1,4-Dichlorobenzene	ug/kg	144	19.9	<0.17	<0.23	<11	<0.20	<0.38	<0.61	<0.40	<62	<23	<0.50	<0.24	NA	NA	NA	NA
Isopropylbenzene	ug/kg	NS	343	<0.18	<0.25	<11	<0.22	<0.42	17.5	<0.19	<30	<11	<0.24	<0.12	NA	NA	NA	NA
Naphthalene	ug/kg	658	41.2	<1.0	<1.4	<62	<1.2	236	<3.6	149	1100	1440	160	4300	308	<2.2	<2.3	610
n-Propylbenzene	ug/kg	NS	36	<0.82	<1.1	<51	<0.97	<1.9	5.4	<0.18	<27	<10	<0.22	<0.10	NA	NA	NA	NA
Total TMBs	ug/kg	1,382	629	<0.17	<0.24	499	<0.20	<0.41	22.5	<1.6	<260	214	<2.1	<0.98	<37	<19	<24	<39
Acenaphthylene	ug/kg	NS	<1400	<58	<56	<45	<5.9	<4.4	<120	<4.3	<4.1	<3.8	49.3	<4.5	<6.8	<3.1	<3.3	<4.3
Anthracene	ug/kg	196,949	<1700	<69	<67	989	159	<5.2	<140	151	1280	5640	122	21600	228	<2.0	<2.2	220
Benzo(a)anthracene	ug/kg	2,100	<1800	<75	<74	4250	90.4	1420	<150	120	<4.6	2750	50.8	12300	466	<3.0	9.2J	640
Benzo(a)pyrene	ug/kg	470	<2000	<81	<79	4420	94.4	1500	<170	189	937	2680	138	10200	399	<3.8	11.1J	854
Benzo(b)fluoranthene	ug/kg	479	<1900	<76	<75	2490	72.8	982	<160	140	<3.0	2450	<3.6	17200	321	<3.5	12.5J	710
Benzo(ghi)perylene	ug/kg	NS	<2100	<88	<86	1910	56.6	727	<180	120	614	1400	64.9	4190	191	<8.7	11.3J	462
Benzo(k)fluoranthene	ug/kg	21,100	<2000	<83	<81	1480	43.9	604	<170	68.7	<3.0	1120	22	4500	184	<4.6	5.7J	352
Chrysene	ug/kg	145	<2100	<87	<85	3860	81.4	1450	<180	138	<4.2	3640	<5.1	10100	659	<2.8	27.4J	790
Dibenz(a,h)anthracene	ug/kg	211	<2100	<88	<86	<69	11.8	170	<180	22.9	<2.8	347	13.2	1130	57.6J	<8.1	<8.5	110
Fluoranthene	ug/kg	88,878	<1700	<68	<66	9180	205	3230	<140	286	1710	7270	141	22500	1170	<6.7	32.8J	1990
Fluorene	ug/kg	14,830	<2200	<90	<88	<71	17	225	2830	<3.3	269	747	9.1	<3.5	123	<2.0	<2.1	176
Indeno(1,2,3-cd)pyrene	ug/kg	2,110	<2000	<83	<81	1580	54.8	639	<170	102	219	1230	51.5	4520	221	<13	<14	485
2-Methylnaphthalene	ug/kg	2,200,000	<1300	<55	<53	<43	92	<4.2	7960	218	1670	<4.5	36.9	<5.3	828	<3.2	<3.4	1210
Phenanthrene	ug/kg	NS	<1600	<65	<64	3740	91.9	1420	5980	124	1100	3340	97	2510	743	<3.6	18.2J	815
Pyrene	ug/kg	54,545	<1900	<79	<77	7190	186	2540	<160	306	1880	4830	216	20700	959	<8.8	30.9J	1510
Arsenic	mg/kg	8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	17.4	1.5	1.3	16.5
Barium	mg/kg	364	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	310	7.7	18.8	357
Cadmium	mg/kg	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.2	<0.03	<0.032	2
Chromium	mg/kg	360000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	46	5.2	6.5	26.9
Lead	mg/kg	52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	312	1.9	2.2	792
Mercury	mg/kg	0.208	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.086	<0.009	0.011	0.18
Selenium	mg/kg	0.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1.7	0.24B	<0.25	1.4
Silver	mg/kg	0.85	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.27B	<0.04	<0.043	0.64B

Note:

Bold - Indicates an exceedance of the WDNR Residual Contaminant Level (RCL)

The RCL for metals may be a Background Threshold Value (BTV)

ug/kg - micrograms per kilogram

mg/kg - milligram per kilogram

NA - Not analyzed

TMB - trimethylbenzene

NS - No Standard

TABLE 2
Tyco Fire Protection Products
One Stanton Street
Marinette Wisconsin
Groundwater Analytical Results

Monitoring Well	Enforcement Standard	Units	Utility Trench 6/14/12	MW-013M 5/13/15	MW-013S 5/13/15	MW-013D 5/13/15	MW-1 11/15/12	MW-1 2/13/13	MW-1 8/8/14	MW-1 5/13/15	MW-1 9/22/15	MW-1 11/23/15	MW-1 3/29/16	MW-2 11/15/12	MW-2 5/13/15	MW-2 9/22/15	MW-2 11/23/15	MW-2 3/29/16
Free-product Thickness							8"	4"	Globules	Globules	Globules	Globules						
Benzene	5	ug/l	NA	<0.27	<0.27	<0.27	FP	FP	FP	FP	FP	FP	<0.45	<3.0	<0.27	<0.27	<0.27	<0.45
sec-Butylbenzene	NS	ug/l	NA	NA	NA	NA	FP	FP	FP	FP	FP	FP	NA	<0.55	NA	NA	NA	NA
Carbon disulfide	1,000	ug/l	NA	NA	NA	NA	FP	FP	FP	FP	FP	FP	NA	<0.61	NA	NA	NA	NA
Isopropylbenzene	NS	ug/l	NA	NA	NA	NA	FP	FP	FP	FP	FP	FP	NA	<0.50	NA	NA	NA	NA
p-Isopropyltoluene	NS	ug/l	NA	NA	NA	NA	FP	FP	FP	FP	FP	FP	NA	<0.57	NA	NA	NA	NA
n-Propylbenzene	NS	ug/l	NA	NA	NA	NA	FP	FP	FP	FP	FP	FP	NA	<0.58	NA	NA	NA	NA
Toluene	800	ug/l	NA	<0.29	<0.29	<0.29	FP	FP	FP	FP	FP	FP	<0.49	<0.51	<0.29	<0.66	<0.66	<0.49
1,2,4-Trimethylbenzene	480	ug/l	NA	<0.29	<0.29	<0.29	FP	FP	FP	FP	FP	FP	<0.24	<0.35	<0.29	<0.24	<0.24	<0.24
Xylenes	2,000	ug/l	NA	<0.22	<0.22	<0.22	FP	FP	FP	FP	FP	FP	<0.22	<0.58	<0.22	<0.22	<0.22	<0.22
Acenaphthene	NS	ug/l	NA	<0.11	<0.11	<0.11	FP	FP	FP	FP	FP	FP	<0.060	<0.031	<0.11	<0.061	<0.062	<0.060
Anthracene	3,000	ug/l	NA	<0.10	<0.10	<0.10	FP	FP	FP	FP	FP	FP	<0.045	<0.030	<0.10	<0.045	0.21	<0.045
Benzo(a)anthracene	NS	ug/l	NA	0.016	<0.013	<0.013	FP	FP	FP	FP	FP	FP	<0.024	<0.033	0.013	<0.024	0.78	<0.024
Benzo(a)pyrene	0.2	ug/l	NA	0.042	<0.014	<0.014	FP	FP	FP	FP	FP	FP	<0.052	<0.12	<0.014	<0.052	0.82	<0.052
Benzo(b)fluoranthene	0.2	ug/l	NA	0.036	<0.011	<0.011	FP	FP	FP	FP	FP	FP	<0.017	<0.049	<0.011	<0.017	0.82	<0.017
Benzo(ghi)perylene	NS	ug/l	NA	<0.023	<0.023	<0.023	FP	FP	FP	FP	FP	FP	<0.017	<0.10	<0.023	<0.018	0.83	<0.017
Benzo(k)fluoranthene	NS	ug/l	NA	0.019	<0.018	<0.018	FP	FP	FP	FP	FP	FP	<0.017	<0.037	<0.018	<0.017	0.82	<0.017
Chrysene	0.2	ug/l	NA	0.031	<0.016	<0.016	FP	FP	FP	FP	FP	FP	<0.021	<0.040	0.019	<0.021	0.88	<0.021
Dibenz(ah)anthracene	NS	ug/l	NA	<0.014	<0.014	<0.014	FP	FP	FP	FP	FP	FP	<0.026	<0.040	<0.014	<0.026	0.84	<0.026
Fluoranthene	400	ug/l	NA	<0.018	<0.018	<0.018	FP	FP	FP	FP	FP	FP	<0.025	<0.015	0.033	<0.026	0.13	<0.025
Fluorene	400	ug/l	NA	<0.014	<0.014	<0.014	FP	FP	FP	FP	FP	FP	<0.062	<0.025	<0.014	<0.063	<0.064	<0.062
Indeno(1,2,3-cd)pyrene	NS	ug/l	NA	<0.017	<0.017	<0.017	FP	FP	FP	FP	FP	FP	<0.031	<0.054	<0.017	<0.032	0.82	<0.031
2-Methylnaphthalene	NS	ug/l	NA	<0.017	<0.017	<0.017	FP	FP	FP	FP	FP	FP	<0.096	<0.054	<0.017	<0.097	<0.099	<0.096
Naphthalene	100	ug/l	NA	<0.0092	<0.0092	<0.0092	FP	FP	FP	FP	FP	FP	<0.048	<0.065	<0.0092	<0.048	<0.049	<0.048
Phenanthrene	NS	ug/l	NA	0.021	<0.015	<0.015	FP	FP	FP	FP	FP	FP	<0.041	<0.082	0.018	<0.041	0.051	<0.041
Pyrene	250	ug/l	NA	0.039	<0.014	<0.014	FP	FP	FP	FP	FP	FP	<0.030	<0.029	0.033	<0.030	0.14	<0.030
Arsenic	10	ug/l	NA	2	3.1	11.3	FP	FP	FP	FP	FP	FP	<2.0	NA	2	<1.7	<1.7	<2.0
Barium	2,000	ug/l	NA	143	67.8	67.9	FP	FP	FP	FP	FP	FP	NA	NA	208	NA	NA	NA
Cadmium	5	ug/l	NA	<0.43	<0.43	0.06	FP	FP	FP	FP	FP	FP	NA	NA	<0.43	NA	NA	NA
Chromium	100	ug/l	NA	1.1	0.9	5.6	FP	FP	FP	FP	FP	FP	NA	NA	1.4	NA	NA	NA
Lead	15	ug/l	NA	<1.7	<1.7	<1.7	FP	FP	FP	FP	FP	FP	<1.1	NA	5.1	<1.7	<1.7	<1.1
Mercury	2	ug/l	NA	<0.096	<0.096	<0.096	FP	FP	FP	FP	FP	FP	NA	NA	<0.096	NA	NA	NA
Selenium	50	ug/l	NA	<2.0	<2.0	<2.0	FP	FP	FP	FP	FP	FP	NA	NA	<2.0	NA	NA	NA
Silver	50	ug/l	NA	<1.0	<1.0	<1.0	FP	FP	FP	FP	FP	FP	NA	NA	<1.0	NA	NA	NA
GRO	NS	mg/l	240	NA	NA	NA	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	NA
DRO	NS	mg/l	1700	NA	NA	NA	FP	FP	FP	FP	FP	FP	NA	NA	NA	NA	NA	NA

Note:

ug/l - micrograms per liter

mg/l - milligrams per liter

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 - exceedance of the NR 140 ES

TABLE 2
Tyco Fire Protection Products
One Stanton Street
Marinette Wisconsin
Groundwater Analytical Results

Monitoring Well	Enforcement Standard	Units	MW-3 11/15/12	MW-3 5/13/15	MW-3 9/22/15	MW-3 11/23/15	MW-3 3/29/16	MW-4 11/15/12	MW-4 5/16/15	MW-4 9/22/15	MW-4 11/23/15	MW-4 3/29/16	MW-5 11/15/12	MW-5 5/13/15	MW-5 9/22/15	MW-5 11/23/15	MW-5 3/29/16
Free-product Thickness																	
Benzene	5	ug/l	<3.0	<0.27	<0.27	<0.27	<0.45	<3.0	<0.27	<0.27	<0.27	<0.45	<3.0	<0.27	<0.27	<0.27	<0.45
sec-Butylbenzene	NS	ug/l	<0.55	NA	NA	NA	NA	<0.55	NA	NA	NA	NA	<0.55	NA	NA	NA	NA
Carbon disulfide	1,000	ug/l	<0.61	NA	NA	NA	NA	<0.61	NA	NA	NA	NA	<0.61	NA	NA	NA	NA
Isopropylbenzene	NS	ug/l	<0.50	NA	NA	NA	NA	<0.50	NA	NA	NA	NA	<0.50	NA	NA	NA	NA
p-Isopropyltoluene	NS	ug/l	<0.57	NA	NA	NA	NA	<0.57	NA	NA	NA	NA	<0.57	NA	NA	NA	NA
n-Propylbenzene	NS	ug/l	<0.58	NA	NA	NA	NA	<0.58	NA	NA	NA	NA	<0.58	NA	NA	NA	NA
Toluene	800	ug/l	<0.51	<0.29	<0.29	<0.66	<0.49	<0.51	<0.29	<0.29	<0.66	<0.49	<0.51	<0.29	<0.29	<0.66	<0.49
1,2,4-Trimethylbenzene	480	ug/l	<0.35	<0.29	<0.24	<0.24	<0.24	<0.35	<0.29	<0.24	<0.24	<0.24	<0.35	<0.29	<0.24	<0.24	<0.24
Xylenes	2,000	ug/l	<0.58	<0.22	<0.22	<0.22	<0.22	<0.58	<0.22	<0.22	<0.22	<0.22	<0.58	<0.22	<0.22	<0.22	<0.22
Acenaphthene	NS	ug/l	<0.034	<0.11	<0.061	<0.063	<0.061	<0.029	<0.11	<0.061	<0.064	<0.062	<0.033	<0.11	<0.061	<0.067	<0.061
Anthracene	3,000	ug/l	6.1	<0.10	<0.045	<0.047	<0.045	<0.028	<0.10	<0.045	<0.048	<0.046	<0.032	<0.10	<0.045	<0.050	<0.045
Benzo(a)anthracene	NS	ug/l	2.1	<0.014	<0.024	<0.025	<0.024	<0.031	<0.013	<0.024	<0.025	<0.025	<0.035	0.035	<0.024	<0.027	<0.024
Benzo(a)pyrene	0.2	ug/l	2.7	<0.015	<0.052	<0.054	<0.052	<0.11	<0.014	<0.052	<0.055	<0.053	<0.13	0.056	<0.052	<0.058	<0.052
Benzo(b)fluoranthene	0.2	ug/l	2.1	0.021	<0.017	<0.018	<0.017	<0.046	<0.011	<0.017	<0.018	<0.018	<0.052	0.031	<0.017	<0.019	<0.017
Benzo(ghi)perylene	NS	ug/l	1.6	<0.024	<0.018	<0.018	<0.018	<0.096	<0.023	<0.018	<0.018	<0.018	<0.11	0.038	<0.018	<0.019	<0.018
Benzo(k)fluoranthene	NS	ug/l	1.1	<0.019	<0.017	<0.018	<0.017	<0.034	<0.018	<0.017	<0.018	<0.018	<0.039	<0.018	<0.017	<0.019	<0.017
Chrysene	0.2	ug/l	2.7	<0.017	<0.021	<0.022	<0.021	<0.037	<0.016	<0.021	<0.022	<0.022	<0.042	0.046	<0.021	<0.023	<0.021
Dibenz(ah)anthracene	NS	ug/l	0.37	<0.015	<0.026	<0.027	<0.026	<0.037	<0.014	<0.026	<0.028	<0.027	<0.042	<0.014	<0.026	<0.029	<0.026
Fluoranthene	400	ug/l	7.1	<0.019	<0.026	<0.026	<0.026	<0.014	<0.018	<0.026	<0.027	<0.026	<0.016	0.044	<0.026	<0.028	<0.026
Fluorene	400	ug/l	<0.027	<0.015	<0.063	<0.065	<0.063	<0.023	<0.014	<0.063	<0.066	<0.064	<0.026	<0.014	<0.063	<0.069	<0.063
Indeno(1,2,3-cd)pyrene	NS	ug/l	1.5	<0.018	<0.032	<0.033	<0.032	<0.050	<0.017	<0.032	<0.033	<0.032	<0.057	<0.017	<0.032	<0.035	<0.032
2-Methylnaphthalene	NS	ug/l	<0.058	<0.018	<0.097	<0.10	<0.097	<0.050	<0.017	<0.097	<0.10	<0.099	<0.057	<0.017	<0.097	0.2	<0.097
Naphthalene	100	ug/l	<0.070	<0.0094	<0.048	<0.050	<0.048	<0.060	<0.0092	<0.048	<0.051	0.052	<0.068	<0.0092	<0.048	0.097	<0.048
Phenanthrene	NS	ug/l	4.3	0.017	<0.041	<0.042	<0.041	<0.076	<0.015	<0.041	<0.043	<0.042	<0.086	0.021	<0.041	<0.045	<0.041
Pyrene	250	ug/l	5.6	<0.015	<0.030	<0.031	<0.030	<0.027	<0.014	<0.030	<0.032	<0.031	<0.031	0.072	<0.030	<0.034	<0.030
Arsenic	10	ug/l	NA	<1.7	<1.7	<1.7	<2.0	NA	<1.7	<1.7	<1.7	<2.0	NA	4.3	2.2	<1.7	<2.0
Barium	2,000	ug/l	NA	133	NA	NA	NA	NA	215	NA	NA	NA	NA	143	NA	NA	NA
Cadmium	5	ug/l	NA	<0.43	NA	NA	NA	NA	<0.43	NA	NA	NA	NA	<0.43	NA	NA	NA
Chromium	100	ug/l	NA	<0.48	NA	NA	NA	NA	0.6	NA	NA	NA	NA	1.1	NA	NA	NA
Lead	15	ug/l	NA	<1.7	<1.7	<1.7	<1.1	NA	<1.7	<1.7	<1.7	<1.1	NA	<1.7	<1.7	<1.7	<1.1
Mercury	2	ug/l	NA	<0.096	NA	NA	NA	NA	<0.096	NA	NA	NA	NA	<0.096	NA	NA	NA
Selenium	50	ug/l	NA	<2.0	NA	NA	NA	NA	<2.0	NA	NA	NA	NA	<2.0	NA	NA	NA
Silver	50	ug/l	NA	<1.0	NA	NA	NA	NA	<1.0	NA	NA	NA	NA	<1.0	NA	NA	NA
GRO	NS	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DRO	NS	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Note:
ug/l - micrograms per liter
mg/l - milligrams per liter
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 - exceedance of the NR 140 ES

TABLE 2
Tyco Fire Protection Products
One Stanton Street
Marinette Wisconsin
Groundwater Analytical Results

Monitoring Well	Enforcement Standard	Units	MW-6 2/13/13	MW-6 5/13/15	MW-6 9/22/15	MW-6 11/23/15	MW-6 3/29/16	MW-7 8/8/14	MW-7 5/13/15	MW-7 9/22/15	MW-7 11/23/15	MW-7 3/29/16	MW-8 8/8/14	MW-8 5/13/15	MW-8 9/22/15	MW-8 11/23/15	MW-8 3/29/16
Free-product Thickness																	
Benzene	5	ug/l	<3.0	<0.27	<0.27	<0.27	<0.45	0.6	<0.27	<0.27	<0.27	<0.45	<0.32	<0.27	<0.27	<0.27	<0.45
sec-Butylbenzene	NS	ug/l	<0.55	NA	NA	NA	NA	0.78	NA	NA	NA	NA	<0.42	NA	NA	NA	NA
Carbon disulfide	1,000	ug/l	<0.61	NA	NA	NA	NA	0.73	NA	NA	NA	NA	<0.46	NA	NA	NA	NA
Isopropylbenzene	NS	ug/l	<0.50	NA	NA	NA	NA	1.5	NA	NA	NA	NA	<0.35	NA	NA	NA	NA
p-Isopropyltoluene	NS	ug/l	<0.57	NA	NA	NA	NA	0.43	NA	NA	NA	NA	<0.37	NA	NA	NA	NA
n-Propylbenzene	NS	ug/l	<0.58	NA	NA	NA	NA	0.99	NA	NA	NA	NA	<0.49	NA	NA	NA	NA
Toluene	800	ug/l	<0.51	<0.29	<0.29	<0.66	<0.49	0.33	<0.29	<0.29	<0.66	<0.49	<0.33	<0.29	<0.29	<0.66	<0.49
1,2,4-Trimethylbenzene	480	ug/l	<0.35	<0.29	<0.24	<0.24	<0.24	0.74	<0.29	<0.24	<0.24	<0.24	<0.32	<0.29	<0.24	<0.24	<0.24
Xylenes	2,000	ug/l	<0.58	<0.22	<0.22	<0.22	<0.22	1	<0.22	<0.22	<0.22	<0.22	<0.36	<0.22	<0.22	<0.22	<0.22
Acenaphthene	NS	ug/l	<0.031	<0.11	<0.061	<0.062	<0.062	2.1	<0.11	<0.061	<0.063	<0.061	0.37	<0.11	<0.061	<0.059	<0.062
Anthracene	3,000	ug/l	<0.029	<0.10	<0.045	<0.046	<0.046	2.1	<0.10	<0.045	0.47	<0.045	0.45	<0.10	<0.045	0.06	<0.046
Benzo(a)anthracene	NS	ug/l	0.61	<0.013	<0.024	0.081	<0.025	0.71	0.018	0.027	0.7	<0.024	0.44	0.59	0.12	0.03	<0.025
Benzo(a)pyrene	0.2	ug/l	1.5	<0.014	<0.052	0.061	<0.053	0.82	0.023	<0.052	0.71	<0.052	0.68	0.72	0.21	<0.051	<0.053
Benzo(b)fluoranthene	0.2	ug/l	0.66	<0.011	<0.017	0.083	<0.018	0.67	<0.011	0.039	0.68	<0.017	0.49	0.63	0.15	0.025	<0.018
Benzo(ghi)perylene	NS	ug/l	0.85	<0.023	<0.018	0.073	<0.018	0.53	<0.023	0.037	0.71	<0.018	0.44	0.39	0.13	0.026	<0.018
Benzo(k)fluoranthene	NS	ug/l	0.26	<0.018	<0.017	0.075	<0.018	0.33	<0.018	0.021	0.68	<0.017	0.21	0.32	0.075	<0.017	<0.018
Chrysene	0.2	ug/l	0.84	<0.016	<0.021	0.075	<0.022	0.8	0.025	0.052	0.78	<0.021	0.67	0.56	0.18	0.028	<0.022
Dibenz(ah)anthracene	NS	ug/l	<0.039	<0.014	<0.026	0.067	<0.027	0.11	<0.014	<0.026	0.68	<0.026	0.085	0.076	0.029	<0.026	<0.027
Fluoranthene	400	ug/l	<0.015	<0.018	<0.026	0.038	<0.026	2.9	0.06	0.15	0.23	0.038	1.6	0.35	0.37	0.061	<0.026
Fluorene	400	ug/l	<0.024	<0.014	<0.063	<0.064	<0.064	1.3	0.016	<0.063	<0.065	<0.063	0.25	0.026	<0.063	<0.061	<0.064
Indeno(1,2,3-cd)pyrene	NS	ug/l	0.51	<0.017	<0.032	0.08	<0.032	0.43	<0.017	0.038	0.69	<0.032	0.4	0.4	0.11	<0.031	<0.032
2-Methylnaphthalene	NS	ug/l	<0.053	<0.017	<0.097	<0.099	<0.099	2.3	<0.017	<0.097	<0.10	<0.097	<0.018	<0.017	<0.097	<0.094	<0.099
Naphthalene	100	ug/l	<0.063	<0.0092	<0.048	<0.049	0.052	0.79	<0.0092	<0.048	<0.050	<0.048	<0.0095	<0.0092	<0.048	<0.047	0.052
Phenanthrene	NS	ug/l	0.26	<0.015	<0.041	<0.042	<0.042	3.7	0.06	0.077	0.11	<0.041	1.1	<0.015	0.2	0.044	<0.042
Pyrene	250	ug/l	1.6	<0.014	<0.030	0.052	<0.031	2.7	0.07	0.12	0.22	0.048	1.6	0.36	0.43	0.054	<0.031
Arsenic	10	ug/l	NA	<1.7	<1.7	<1.7	<2.0	NA	2	<1.7	<1.7	<2.0	NA	<1.7	<1.7	<1.7	<2.0
Barium	2,000	ug/l	NA	198	NA	NA	NA	NA	182	NA	NA	NA	NA	216	NA	NA	NA
Cadmium	5	ug/l	NA	<0.43	NA	NA	NA	NA	<0.43	NA	NA	NA	NA	<0.43	NA	NA	NA
Chromium	100	ug/l	NA	0.7	NA	NA	NA	NA	1	NA	NA	NA	NA	<0.48	NA	NA	NA
Lead	15	ug/l	NA	<1.7	<1.7	<1.7	<1.1	NA	2.5	<1.7	<1.7	<1.1	NA	<1.7	<1.7	<1.7	<1.1
Mercury	2	ug/l	NA	<0.096	NA	NA	NA	NA	<0.096	NA	NA	NA	NA	<0.096	NA	NA	NA
Selenium	50	ug/l	NA	2.1	NA	NA	NA	NA	<2.0	NA	NA	NA	NA	<2.0	NA	NA	NA
Silver	50	ug/l	NA	<1.0	NA	NA	NA	NA	<1.0	NA	NA	NA	NA	<1.0	NA	NA	NA
GRO	NS	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DRO	NS	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Note:
ug/l - micrograms per liter
mg/l - milligrams per liter
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Marinette Wisconsin
Groundwater Analytical Results

Monitoring Well	Enforcement Standard	Units	MW-9 8/8/14	MW-9 5/13/15	MW-9 9/22/15	MW-9 11/23/15	MW-9 3/29/16	MW-10 5/13/15	MW-10 9/22/15	MW-10 11/23/15	MW-10 3/29/16	MW-11 5/13/15	MW-11 9/22/15	MW-11 11/23/15	MW-11 3/29/16	MW-12 5/13/15	MW-12 9/22/15	MW-12 11/23/15	MW-12 3/29/16
Free-product Thickness																			
Benzene	5	ug/l	<0.32	<0.27	<0.27	<0.27	<0.45	<0.27	<0.27	<0.27	<0.45	<0.27	<0.27	<0.27	<0.45	<0.27	<0.27	<0.27	<0.45
sec-Butylbenzene	NS	ug/l	<0.42	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	1,000	ug/l	<0.46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NS	ug/l	<0.35	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	NS	ug/l	<0.37	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NS	ug/l	<0.49	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Toluene	800	ug/l	1.1	<0.29	<0.29	<0.66	<0.49	<0.29	<0.29	<0.66	<0.49	2	<0.29	<0.66	<0.49	<0.29	<0.29	<0.66	<0.49
1,2,4-Trimethylbenzene	480	ug/l	<0.32	<0.29	<0.24	<0.24	<0.24	<0.29	<0.24	<0.24	<0.24	<0.29	<0.24	<0.24	<0.24	<0.29	<0.24	<0.24	<0.24
Xylenes	2,000	ug/l	<0.36	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
Acenaphthene	NS	ug/l	0.99	0.46	0.3	0.28	<0.062	<0.11	<0.061	<0.062	<0.061	<0.11	0.28	0.15	0.23	<0.11	<0.060	<0.069	<0.061
Anthracene	3,000	ug/l	2.7	0.84	<0.045	1	0.41	0.45	<0.045	1.6	<0.045	<0.10	<0.10	<0.046	<0.047	<0.10	<0.045	<0.052	<0.046
Benzo(a)anthracene	NS	ug/l	0.3	0.022	0.043	<0.026	<0.025	0.3	0.13	<0.025	<0.024	<0.013	<0.013	<0.025	<0.025	<0.013	<0.024	<0.028	<0.024
Benzo(a)pyrene	0.2	ug/l	0.68	0.024	0.064	<0.056	<0.053	0.44	0.19	2	<0.052	<0.014	<0.014	<0.053	<0.054	<0.014	<0.052	<0.060	<0.053
Benzo(b)fluoranthene	0.2	ug/l	0.37	<0.011	<0.017	<0.019	<0.018	0.32	0.15	1.1	<0.017	<0.011	<0.011	<0.018	<0.018	<0.011	<0.017	<0.020	<0.018
Benzo(ghi)perylene	NS	ug/l	0.34	<0.024	0.028	<0.019	<0.018	0.32	0.11	1.1	<0.018	<0.023	<0.023	<0.018	<0.018	<0.023	<0.017	<0.020	<0.018
Benzo(k)fluoranthene	NS	ug/l	0.17	<0.019	<0.017	<0.019	<0.018	0.2	0.075	0.54	<0.017	<0.018	<0.018	<0.018	<0.018	<0.018	<0.017	<0.020	<0.018
Chrysene	0.2	ug/l	<0.019	0.044	0.058	<0.023	0.022	0.4	0.074	<0.022	<0.021	<0.016	<0.016	<0.022	<0.022	<0.016	<0.021	<0.024	<0.021
Dibenz(ah)anthracene	NS	ug/l	0.07	<0.015	<0.026	<0.028	<0.027	<0.014	<0.026	0.23	<0.026	<0.014	<0.014	<0.027	<0.027	<0.014	<0.026	<0.030	<0.027
Fluoranthene	400	ug/l	2	0.22	0.35	0.18	0.2	0.66	0.21	2.2	<0.026	<0.018	<0.018	<0.026	<0.026	<0.018	<0.025	<0.029	<0.026
Fluorene	400	ug/l	0.46	0.089	0.11	0.076	<0.064	<0.014	<0.063	<0.064	<0.063	<0.014	<0.014	<0.064	<0.065	<0.014	<0.062	<0.072	<0.063
Indeno(1,2,3-cd)pyrene	NS	ug/l	<0.018	<0.018	<0.032	<0.034	<0.032	0.26	0.092	1	<0.032	<0.017	<0.017	<0.032	<0.033	<0.017	<0.031	<0.036	<0.032
2-Methylnaphthalene	NS	ug/l	0.78	<0.018	0.2	0.14	<0.099	<0.017	<0.097	<0.099	<0.097	<0.017	<0.017	<0.099	<0.10	<0.017	<0.096	<0.11	<0.098
Naphthalene	100	ug/l	0.74	0.13	<0.048	<0.052	0.052	0.12	<0.048	<0.049	<0.048	<0.0092	<0.0092	<0.049	<0.050	<0.0092	<0.048	<0.055	<0.049
Phenanthrene	NS	ug/l	2.4	0.45	0.44	0.2	0.26	0.25	0.1	0.66	<0.041	<0.015	<0.041	<0.042	<0.042	0.017	<0.040	<0.047	<0.041
Pyrene	250	ug/l	2.2	0.35	0.38	0.22	0.31	0.84	0.32	1.7	<0.030	<0.014	<0.030	<0.031	<0.031	0.032	<0.030	<0.035	<0.031
Arsenic	10	ug/l	NA	<1.7	1.8	<1.7	<2.0	13	<1.7	<1.7	<2.0	6.9	4.9	5	<2.0	<1.7	<1.7	<1.7	<2.0
Barium	2,000	ug/l	NA	231	NA	NA	NA	572	NA	NA	NA	303	NA	NA	NA	98.7	NA	NA	NA
Cadmium	5	ug/l	NA	<0.43	NA	NA	NA	1.3	NA	NA	NA	<0.43	NA	NA	NA	<0.43	NA	NA	NA
Chromium	100	ug/l	NA	0.7	NA	NA	NA	15.6	NA	NA	NA	4.6	NA	NA	NA	1.6	NA	NA	NA
Lead	15	ug/l	NA	11.9	<1.7	<1.7	<1.1	321	<1.7	<1.7	1.5	<1.7	<1.7	<1.7	<1.1	<1.7	<1.7	<1.7	<1.1
Mercury	2	ug/l	NA	<0.096	NA	NA	NA	0.19	NA	NA	NA	<0.096	NA	NA	NA	<0.096	NA	NA	NA
Selenium	50	ug/l	NA	<2.0	NA	NA	NA	3.8	NA	NA	NA	4.2	NA	NA	NA	<2.0	NA	NA	NA
Silver	50	ug/l	NA	<1.0	NA	NA	NA	<1.0	NA	NA	NA	<1.0	NA	NA	NA	<1.0	NA	NA	NA
GRO	NS	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DRO	NS	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Note:
ug/l - micrograms per liter
mg/l - milligrams per liter
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 - exceedance of the NR 140 ES

TABLE 2
Tyco Fire Protection Products
One Stanton Street
Marinette Wisconsin
Groundwater Analytical Results

Monitoring Well	Enforcement Standard	Units	MW-13 5/13/15	MW-13 9/22/15	MW-13 11/23/15	MW-13 3/29/16	B-12 Temp well 7/29/14	PZ-1 11/15/12	PZ-1 5/13/15	PZ-1 9/22/15	PZ-1 11/23/15	PZ-1 3/29/16	MW-40S 7/2/13	MW-40S 5/13/15	MW-104S 7/2/13
Free-product Thickness															
Benzene	5	ug/l	<0.27	<0.27	<0.27	<0.45	<0.32	<3.0	<0.27	0.27	<0.27	<0.45	NA	<0.27	NA
sec-Butylbenzene	NS	ug/l	NA	NA	NA	NA	<0.42	<0.55	NA	NA	NA	NA	NA	NA	NA
Carbon disulfide	1,000	ug/l	NA	NA	NA	NA	<0.46	<0.61	NA	NA	NA	NA	NA	NA	NA
Isopropylbenzene	NS	ug/l	NA	NA	NA	NA	<0.35	<0.50	NA	NA	NA	NA	NA	NA	NA
p-Isopropyltoluene	NS	ug/l	NA	NA	NA	NA	<0.37	<0.57	NA	NA	NA	NA	NA	NA	NA
n-Propylbenzene	NS	ug/l	NA	NA	NA	NA	<0.49	<0.58	NA	NA	NA	NA	NA	NA	NA
Toluene	800	ug/l	<0.29	<0.29	<0.66	<0.49	<0.33	<0.51	<0.29	<0.29	<0.66	<0.49	NA	<0.29	NA
1,2,4-Trimethylbenzene	480	ug/l	<0.29	<0.24	<0.24	<0.24	<0.32	<0.35	<0.29	<0.24	<0.24	<0.24	NA	<0.29	NA
Xylenes	2,000	ug/l	<0.22	<0.22	<0.22	<0.22	<0.36	<0.58	<0.22	<0.22	<0.22	<0.22	NA	<0.22	NA
Acenaphthene	NS	ug/l	<0.11	<0.060	<0.065	<0.061	0.65	<0.030	<0.11	<0.065	<0.063	<0.061	1.9	0.67	<0.029
Anthracene	3,000	ug/l	<0.10	<0.045	<0.049	<0.045	<0.10	<0.029	<0.10	<0.049	<0.047	<0.045	1.8	1.2	<0.028
Benzo(a)anthracene	NS	ug/l	0.35	<0.024	<0.026	0.042	0.24	<0.032	<0.014	<0.026	<0.025	<0.024	0.85	0.031	<0.031
Benzo(a)pyrene	0.2	ug/l	0.55	<0.052	<0.056	<0.052	0.51	<0.12	<0.015	<0.056	<0.054	<0.052	1.5	0.027	<0.11
Benzo(b)fluoranthene	0.2	ug/l	0.28	<0.017	0.028	0.046	0.45	<0.047	0.022	<0.019	<0.018	<0.017	1.4	<0.011	<0.046
Benzo(ghi)perylene	NS	ug/l	0.48	0.024	0.034	0.031	0.39	<0.098	<0.024	<0.019	<0.018	<0.018	1.4	<0.023	<0.096
Benzo(k)fluoranthene	NS	ug/l	0.13	<0.017	0.023	0.023	0.19	<0.035	<0.019	<0.019	<0.018	<0.017	0.6	<0.018	<0.034
Chrysene	0.2	ug/l	0.44	0.028	<0.023	0.045	<0.016	<0.038	0.025	<0.023	<0.022	<0.021	1.3	0.05	<0.037
Dibenz(ah)anthracene	NS	ug/l	<0.014	<0.026	<0.028	<0.026	<0.014	<0.038	<0.015	<0.028	<0.027	<0.026	0.24	<0.014	<0.037
Fluoranthene	400	ug/l	0.56	<0.025	0.031	0.08	0.68	<0.014	0.037	<0.026	<0.026	<0.026	2.9	0.32	<0.014
Fluorene	400	ug/l	0.043	<0.062	<0.068	<0.063	0.41	<0.023	<0.015	<0.068	<0.065	<0.063	1.3	0.46	<0.023
Indeno(1,2,3-cd)pyrene	NS	ug/l	0.39	<0.031	<0.034	0.035	0.34	<0.051	<0.018	<0.034	<0.033	<0.032	1.1	<0.017	<0.050
2-Methylnaphthalene	NS	ug/l	<0.017	<0.096	0.29	<0.097	1.1	<0.051	<0.018	<0.10	<0.10	<0.097	<0.050	<0.017	<0.050
Naphthalene	100	ug/l	0.027	<0.048	0.1	<0.048	<0.0091	<0.061	<0.0094	<0.052	<0.050	<0.048	<0.060	<0.0092	<0.060
Phenanthrene	NS	ug/l	0.22	<0.040	<0.044	<0.041	0.57	<0.078	0.023	<0.044	<0.042	<0.041	2.3	0.37	<0.076
Pyrene	250	ug/l	0.8	0.051	<0.033	0.088	0.82	<0.028	0.044	<0.033	<0.031	<0.030	2.9	0.3	<0.027
Arsenic	10	ug/l	5.4	<1.7	<1.7	<2.0	NA	NA	4.1	2.2	<1.7	<2.0	NA	55.5	NA
Barium	2,000	ug/l	355	NA	NA	NA	NA	NA	472	NA	NA	NA	NA	286	NA
Cadmium	5	ug/l	0.9	NA	NA	NA	NA	NA	<0.43	NA	NA	NA	NA	0.7	NA
Chromium	100	ug/l	13.3	NA	NA	NA	NA	NA	1.1	NA	NA	NA	NA	4.4	NA
Lead	15	ug/l	159	<1.7	<1.7	<1.1	NA	NA	<1.7	<1.7	<1.7	<1.1	NA	3.5	NA
Mercury	2	ug/l	0.17	NA	NA	NA	NA	NA	<0.096	NA	NA	NA	NA	<0.096	NA
Selenium	50	ug/l	<2.0	NA	NA	NA	NA	2.8	NA	NA	NA	NA	6	NA	NA
Silver	50	ug/l	<1.0	NA	NA	NA	NA	<1.0	NA	NA	NA	NA	<1.0	NA	NA
GRO	NS	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DRO	NS	mg/l	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

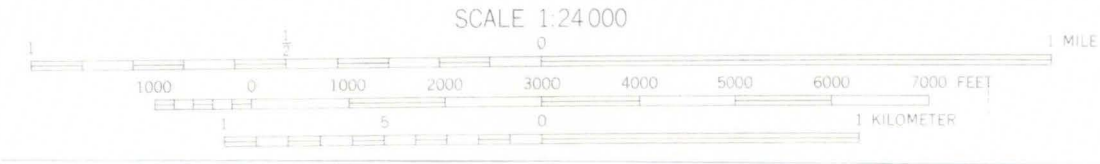
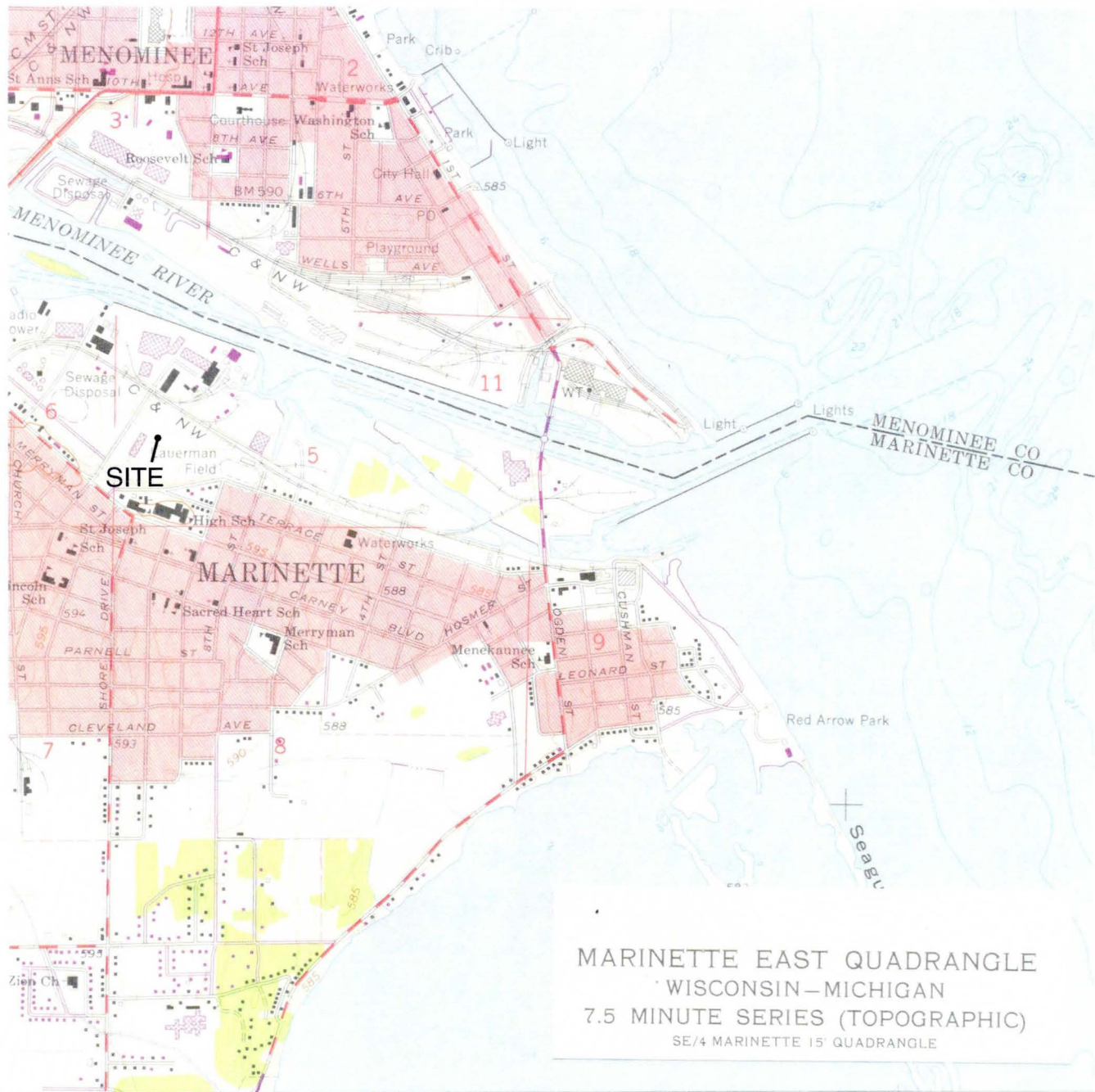
Note:
ug/l - micrograms per liter
mg/l - milligrams per liter
FP - Free-Phase Petroleum Observed, not sampled
NS - No standard currently exists in NR 140
ES - NR 140 Enforcement Standard
Only detected parameters are presented on this Table.
Bold - exceedance of the NR 140 ES

TABLE 3
Tyco Fire Protection Products
One Stanton Street
Marinette Wisconsin
Groundwater Elevations
November 23, 2015

Well Name	Depth to Water (ft)	Top of Casing Elevation	Groundwater Elevation
MW-1	4.37	590.79	586.42
PZ-1	3.97	590.50	586.53
MW-2	3.53	590.01	586.48
MW-3	4.45	590.61	586.16
MW-4	1.02	587.36	586.34
MW-5	3.78	590.62	586.84
MW-6	1.85	588.14	586.29
MW-7	2.22	588.10	585.88
MW-8	1.50	587.58	586.08
MW-9	2.78	588.60	585.82
MW-10	2.02	Not Measured	
MW-11	5.00	589.86	584.86
MW-12	4.36	589.76	585.40
MW-13	4.57	590.76	586.19

Vertical Datum: NAVD 88

Survey Date: March 14, 2016



O & M, Inc.
Environmental Solutions



Tyco Fire Protection Products
Diesel Release Site
One Stanton Street
Marinette, Wisconsin

Figure 1
Site Location Map
Project No. 487

**FIGURE 2
SITE LOCATION MAP**

Tyco Marinette FTC
Marinette, Wisconsin




 Property Boundary *
 Slurry Wall

* 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:

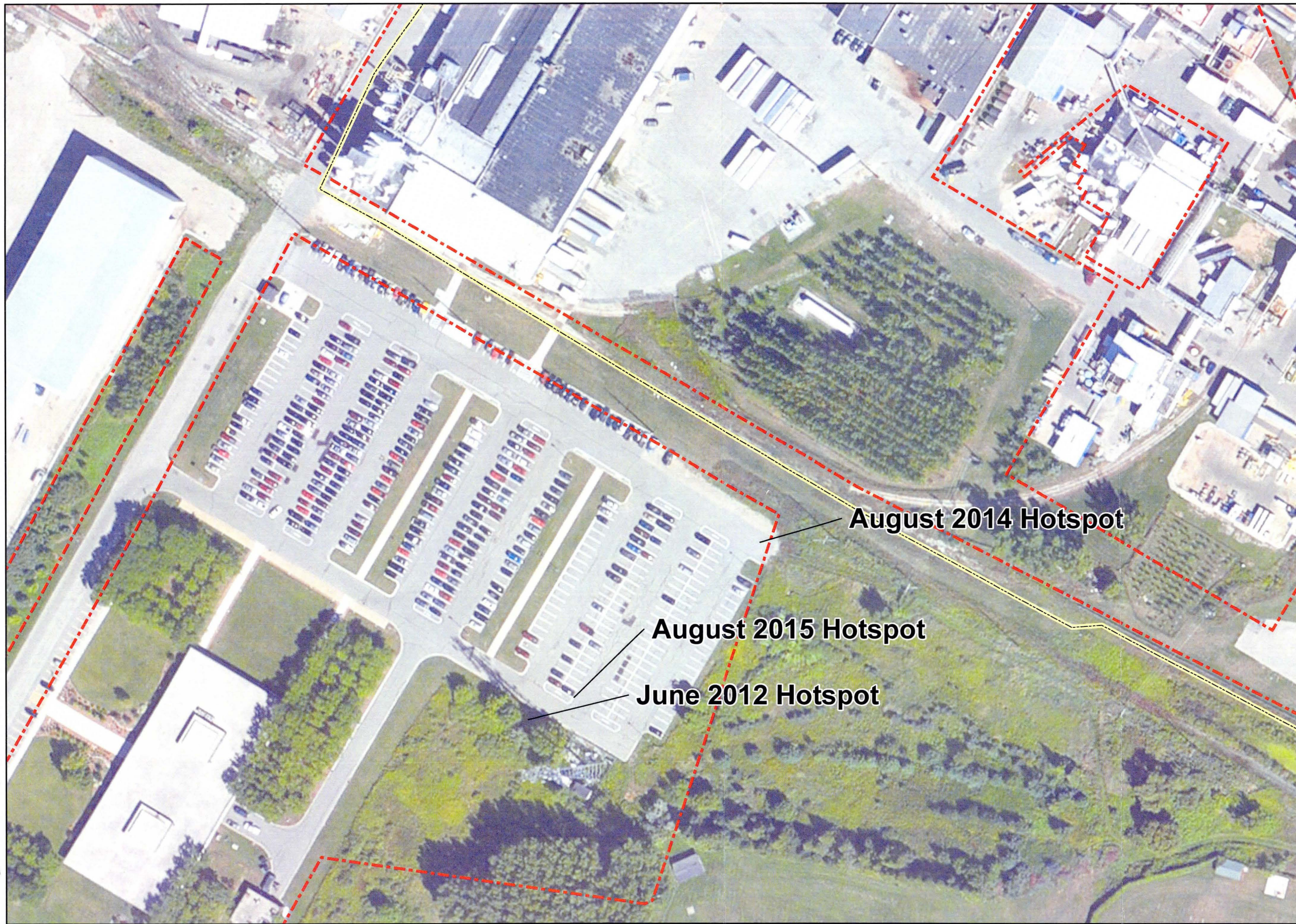
File:
SiteLocation.mxd
Project No.: 2008-0487
Date: 4 February 2016
Operator: AKR
Reviewed By: MEP

O&M, Inc.

450 Montbrook Lane
Knoxville, Tennessee
37919 www.oandm-inc.com

 **ddms**

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Saint Paul, Minnesota
55108 www.ddmsinc.com



**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
B4	Benzo(a)anthracene	4250
	Benzo(a)pyrene	4420
	Benzo (b) fluoranthene	2490
	Chrysene	3860

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

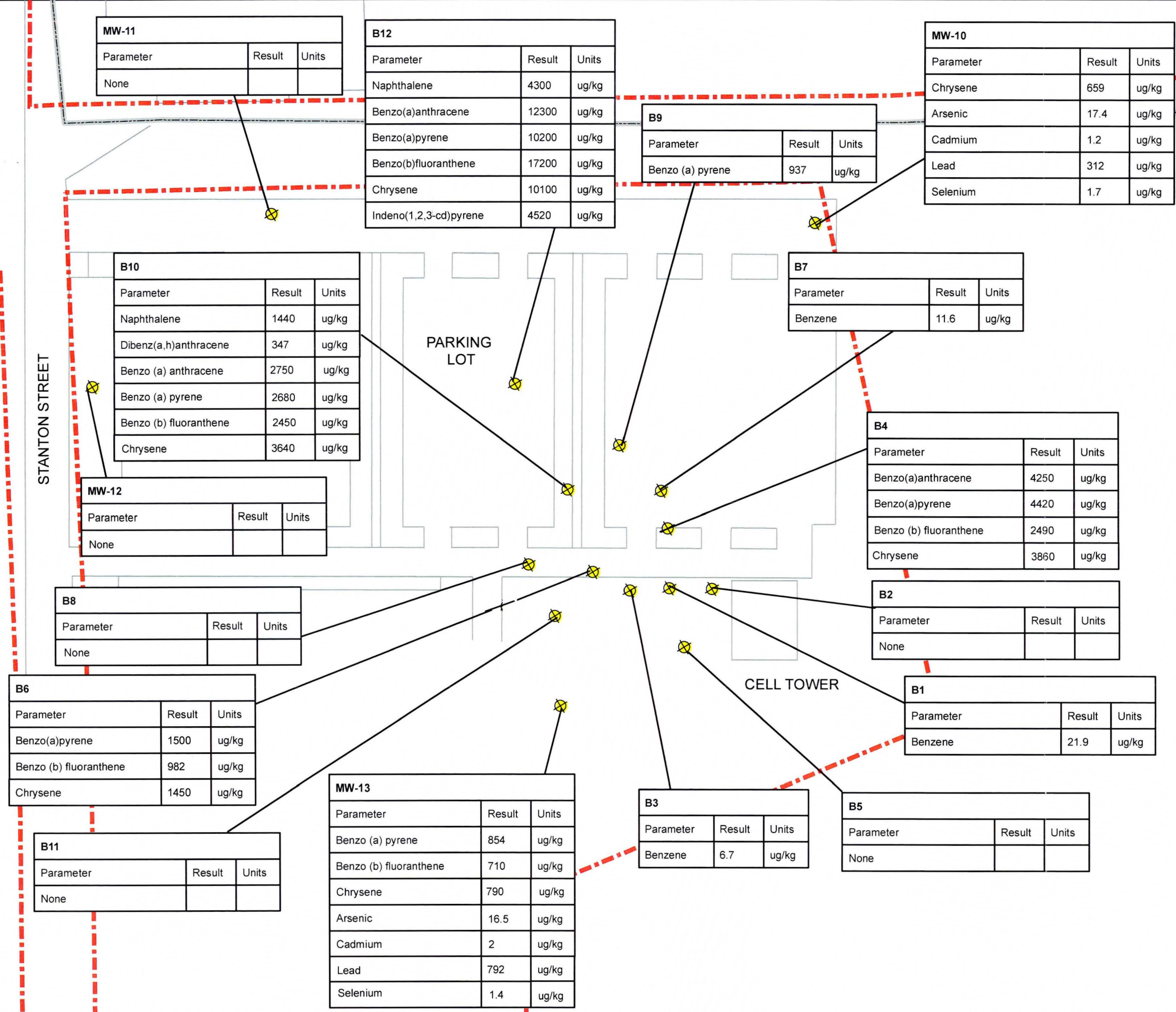


Spatial Projection:
Coordinate System: Wisconsin State Plane North
FIPS Zone: 4801
Units: US Survey Feet
Datum: NAD83

Plot Info:
File: BoringConcentrations.mxd
Project No.: 2008-0493
Date: 21 December 2014
Operator: CLB
Reviewed By: AKR

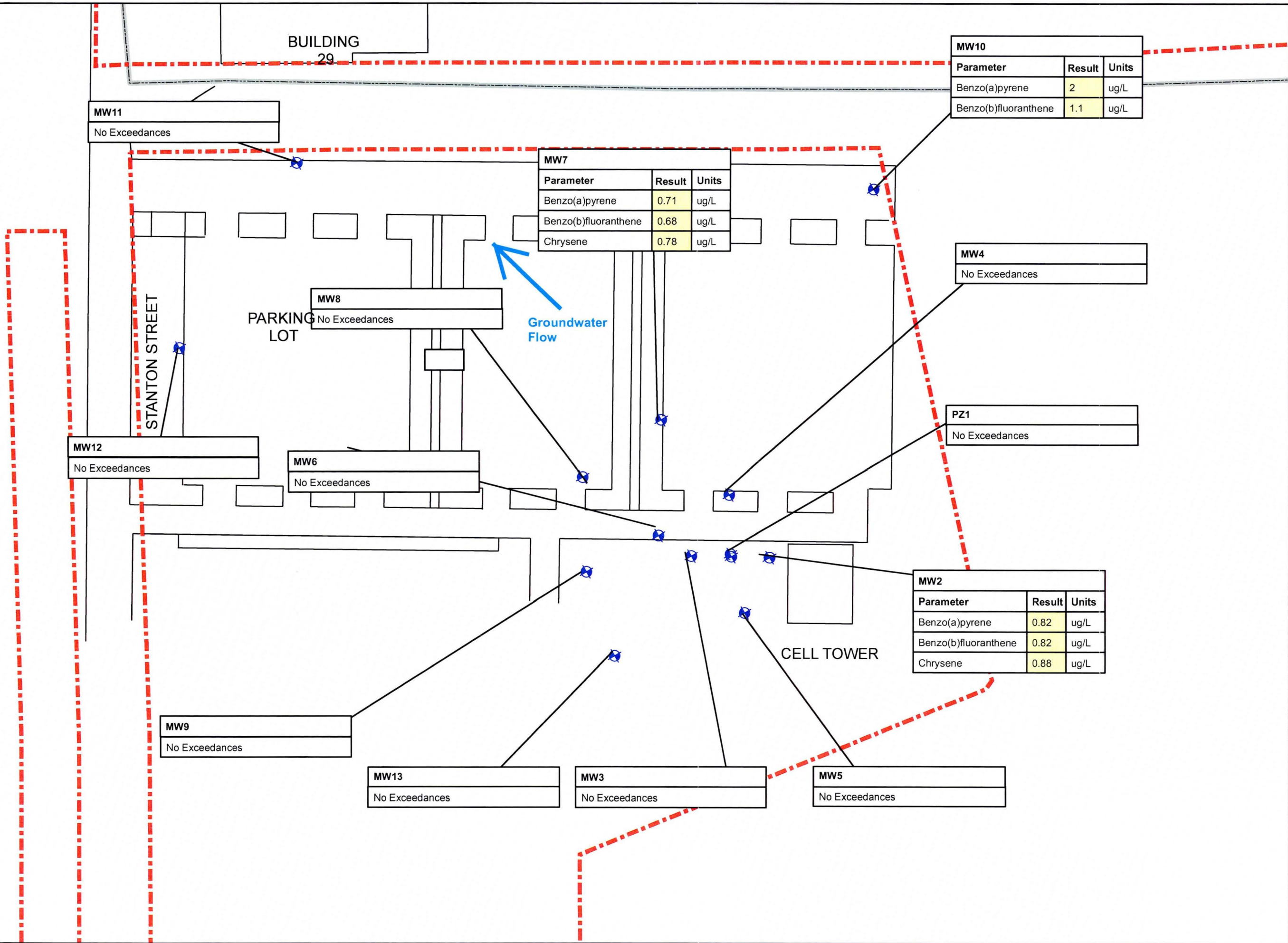
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55108 www.ddmsinc.com



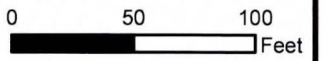
**Figure 4
GROUNDWATER
MONITORING
RESULTS
NOVEMBER 2015**

Tyco Marinette FTC
Marinette, Wisconsin



- Monitoring
- Piezometer
- Parking Lot Outline
- Slurry Wall
- Property Boundary
- Indicates an exceedance of the ES

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



Spatial Projection:

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



Plot Info:

File:
ProposedLocations.mxd
Project No.: 2008-0493
Date: 17 March 2016
Operator: CLB
Reviewed By: AKR

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FIGURE 5
POTENTIOMETRIC
SURFACE MAP.
NOVEMBER 23,
2015

Tyco Marinette FTC
 Marinette, Wisconsin



Monitoring
 Potentiometric Surface
 Property Boundary *
 Parking Lot Outline
 Slurry Wall
 (585.88) Groundwater Elevations
 Vertical Datum NAVD88

0 50 100 Feet

Spatial Projection:

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

Plot Info:

File:
 Locations_20160309.mxd
 Project No.: 2008-0493
 Date: 18 March 2016
 Operator: CLB
 Reviewed By: AKR

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Appendix A

Boring Logs

Monitoring Well Construction Forms

One Stanton Street - Parking Lot
Marinette, Wisconsin

B-1/MW-1

Route To: Remediation/Redevelopment
BRRTS #02-38-559214

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	585.58 Feet
Date Drilled	11/5/2012	Total Depth of Borehole	24 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	469295.259	2583881.746	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.

Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Fill	0 - 5		15.0	CH	
	Medium, Well Sorted Sand, Brown	5 - 20			SP	
	Silty Clay	20 - 25			CL	
		25 - 35				

One Stanton Street - Parking Lot
Marinette, Wisconsin

B-2/MW-2

Route To: Remediation/Redevelopment
BRRTS #02-38-559214

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	585.49 Feet
Date Drilled	11/5/2012	Total Depth of Borehole	8 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	46927.756	2583909.636	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.

Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Fill				CH	
	Medium, Well Sorted Sand, Brown	5		0.1	SP	
		10				
		15				
		20				
		25				
		30				
		35				

**One Stanton Street - Parking Lot
Marinette, Wisconsin**

B-3/MW-3

**Route To: Remediation/Redevelopment
BRRTS #02-38-559214**

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	588.06 Feet
Date Drilled	11/5/2012	Total Depth of Borehole	8 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	469310.979	2583851.609	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.

Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Fill				CH	
	Medium, Well Sorted Sand, Brown	5		2.7	SP	
		10				
		15				
		20				
		25				
		30				
		35				

One Stanton Street - Parking Lot
Marinette, Wisconsin

B-4/MW-4

Route To: Remediation/Redevelopment
BRRTS #02-38-559214

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	584.76 Feet
Date Drilled	11/5/2012	Total Depth of Borehole	8 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	469340.038	2583906.775	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.

Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Fill				CH	
	Medium, Well Sorted Sand, Brown	5		0.6	SP	
		10				
		15				
		20				
		25				
		30				
		35				

One Stanton Street - Parking Lot
Marinette, Wisconsin

B-5/MW-5

Route To: Remediation/Redevelopment
BRRTS #02-38-559214

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	587.93 Feet
Date Drilled	11/6/2012	Total Depth of Borehole	8 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	469245.367	2583867.004	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.

Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Fill				CH	
	Medium, Well Sorted Sand, Brown	5		0.0	SP	
		10				
		15				
		20				
		25				
		30				
		35				

One Stanton Street - Parking Lot
Marinette, Wisconsin

B-6/MW-6

Route To: Remediation/Redevelopment
BRRTS #02-38-559214

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	Feet
Date Drilled	2/13/2012	Total Depth of Borehole	14 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	469336.32	2583838.28	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.





Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Silty gravel (Fill), light brown				GM	
				0.2		
	Silty fine sand, dark brown				SM	
	Silt, gray	5		0.7		
		10		0.0	ML	
		15				
		20				
		25				
		30				
		35				

One Stanton Street - Parking Lot
Marinette, Wisconsin

B-7

Route To: Remediation/Redevelopment
BRRTS #02-38-559214

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	Feet
Date Drilled	2/13/2012	Total Depth of Borehole	8 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.		

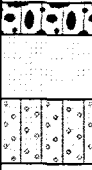


Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Silty gravel, glass (Fill), light brown			0.0	GM	
				10.6		
	Gravel, black	5			GP	
		10				
		15				
		20				
		25				
		30				
		35				

**One Stanton Street - Parking Lot
Marinette, Wisconsin**

B-8

**Route To: Remediation/Redevelopment
BRRTS #02-38-559214**

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	Feet
Date Drilled	7/29/2014	Total Depth of Borehole	10 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.		




Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Silty gravel, dark gray				GM	
	Sand, fine to medium, yellowish brown			0.1	SP	
	Silty sand, medium, dark gray			0.2	SM	
	No recovery	5				
		10				
		15				
		20				
		25				
		30				
		35				

One Stanton Street - Parking Lot
Marinette, Wisconsin

B-9/MW-7

Route To: Remediation/Redevelopment
BRRTS #02-38-559214

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	Feet
Date Drilled	7/29/2014	Total Depth of Borehole	10 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	469421.16	2583890.96	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.





Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Silty gravel, dark gray				GM	
	Sand with gravel, fine to medium, dark gray			4.8	SP	
		5		6.7		
	No recovery					
		10				
		15				
		20				
		25				
		30				
		35				

**One Stanton Street - Parking Lot
Marinette, Wisconsin**

B-10

**Route To: Remediation/Redevelopment
BRRTS #02-38-559214**

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	Feet
Date Drilled	7/29/2014	Total Depth of Borehole	10 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.		

Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Silty gravel, dark gray				GM	
	Sand, fine to medium, yellow brown				SP	
	Silty sand with gravel, fine to medium, dark gray				SM	
	No recovery	5		3.6		
		10				
		15				
		20				
		25				
		30				
		35				

**One Stanton Street - Parking Lot
Marinette, Wisconsin**

B-11

**Route To: Remediation/Redevelopment
BRRTS #02-38-559214**

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	Feet
Date Drilled	7/29/2014	Total Depth of Borehole	10 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.		




Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Sand, fine to medium, yellow brown No recovery				SP	
	Silty sand with gravel, fine to medium, dark gray No recovery	5		0.1	SM	
		10				
		15				
		20				
		25				
		30				
		35				

**One Stanton Street - Parking Lot
Marinette, Wisconsin**

B-12

**Route To: Remediation/Redevelopment
BRRTS #02-38-559214**

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	Feet
Date Drilled	7/29/2014	Total Depth of Borehole	10 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet
Survey Coordinates	NE 1/4 of SE 1/4 of Section 5, T. 30 N., R. 24 E.		



Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Gravel, gray			2.4	GP	
	 Silty sand, fine, w/ angular gravel, dark gray				SM	
	Poor Recovery					
		5				
		10				
		15				
		20				
		25				
		30				
		35				

MW-10

One Stanton Street - Parking Lot

Marinette, 54143

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	Feet
Date Drilled	4/29/2015	Total Depth of Borehole	10 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet


Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Silty sand with gravel, dark gray					
	No recovery			0.2	SM	
		5				
		10				
		15				
		20				
		25				
		30				
		35				

MW-11

One Stanton Street - Parking Lot

Marinette, 54143

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	Feet
Date Drilled	4/29/2015	Total Depth of Borehole	10 Feet
Borehole Diameter	2.25 Inches	Depth to Water	4 Feet

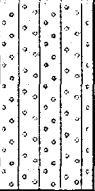


Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Silty sand, fine to medium, light brown	0		0.1	SM	
	Poor recovery	5				
		10				
		15				
		20				
		25				
		30				
		35				

MW-12

One Stanton Street - Parking Lot

Marinette, 54143

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	Feet
Date Drilled	4/29/2015	Total Depth of Borehole	10 Feet
Borehole Diameter	2.25 Inches	Depth to Water	5 Feet


Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Silty sand, light brown	0		0.0	SM	
		5		0.0		
	Poor recovery	10				
		15				
		20				
		25				
		30				
		35				

MW-13

One Stanton Street - Parking Lot

Marinette, 54143

Project Number	487	Drill Rig	Geoprobe Direct Push
Geologist	Eric Frauen	Ground Elevation	Feet
Date Drilled	4/29/2015	Total Depth of Borehole	10 Feet
Borehole Diameter	2.25 Inches	Depth to Water	5 Feet

Graphic Log	Description	Depth	Sample	PID	USCS	Completion
	Silty gravel, dark gray			4.2	GM	
				3.1		
	No recovery	5				
		10				
		15				
		20				
		25				
		30				
		35				

Facility/Project Name: Tyco - Diesel Release Local Grid Location of Well: 469295.259 N. 2583881.746 E. Well Name: MW-1
 Facility License, Permit or Monitoring No.: _____ Local Grid Origin (estimated:) or Well Location Wis. Unique Well No. / DNR Well ID No.: _____
 Facility ID: BRRTS # 0238559214 St. Plane _____ ft. N. _____ ft. E. S/C/N _____ Date Well Installed: 11/05/2012
 Type of Well: _____ Section Location of Waste/Source: NE 1/4 of SE 1/4 of Sec. 5, T. 30 N, R. 24 E W Well Installed By: Name (first, last) and Firm: Darren Geiss Drilling
 Well Code: 1 Location of Well Relative to Waste/Source: u Upgradient s Sidegradient Gov. Lot Number _____
 Distance from Waste/Source: 0 ft. Apply d Downgradient n Not Known

A. Protective pipe, top elevation 588.43 ft. MSL Yes No
 B. Well casing, top elevation 588.16 ft. MSL
 C. Land surface elevation 585.58 ft. MSL
 D. Surface seal, bottom _____ ft. MSL or 2 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 0 ft.
 F. Fine sand, top _____ ft. MSL or _____ ft.
 G. Filter pack, top _____ ft. MSL or 2 ft.
 H. Screen joint, top _____ ft. MSL or 2.5 ft.
 I. Well bottom _____ ft. MSL or 12.5 ft.
 J. Filter pack, bottom _____ ft. MSL or 12.5 ft.
 K. Borehole, bottom _____ ft. MSL or 12.5 ft.
 L. Borehole, diameter 6 in.
 M. O.D. well casing 2.5 in.
 N. I.D. well casing 2 in.

1. Cap and lock? Yes No
 2. Protective cover pipe:
 a. Inside diameter: 4 in.
 b. Length: 6 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. _____ Ft³ 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 _____ ft³
 8. Filter pack material: Manufacturer, product name & mesh size
 a. # 40
 b. Volume added _____ ft³
 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 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: [Signature] Firm: D&M, Inc.

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.

Facility/Project Name TYCO	Local Grid Location of Well 469275.756 ft N. 2583109.634 ft E.	Well Name MW-2
Facility License, Permit or Monitoring No.	Local Grid Origin (estimated) or Well Location Lat. _____ Long. _____	Wis. Unique Well No. _____ DNR Well ID No. _____
Facility ID BRRTS 0238559214	St. Plane _____ ft. N, _____ ft. E. S/C/N _____	Date Well Installed 11/05/2012
Type of Well Well Code _____	Section Location of Waste/Source NE 1/4 of SE 1/4 of Sec. 5, T.30 N., R.24 W.	Well Installed By: Name (first, last) and Firm Darren Geiss Drilling
Distance from Waste/Source _____ ft.	Enf. Stds. Apply <input type="checkbox"/>	
	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

- A. Protective pipe, top elevation 587.89 ft. MSL
- B. Well casing, top elevation 587.67 ft. MSL
- C. Land surface elevation 585.49 ft. MSL
- D. Surface seal, bottom _____ ft. MSL or 2 ft.

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

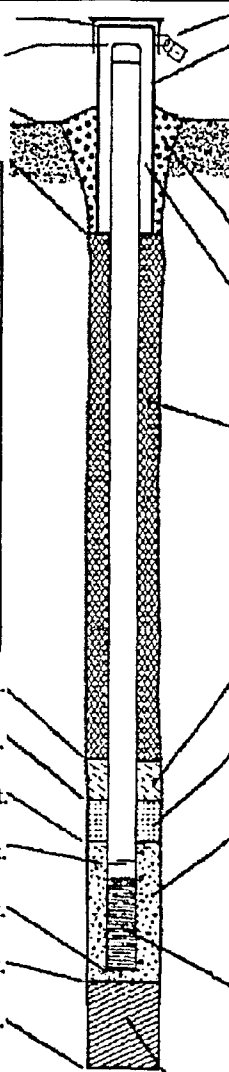
13. Sieve analysis performed? Yes No

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): _____



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: 4 in.
 - b. Length: 6 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. _____ Ft³ volume added for any of the above
 - f. How installed: Tremie pumped 01
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 _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
 - a. #40
 - b. Volume added _____ ft³
- 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: 0.10 in.
 - d. Slotted length: 10 ft.
- 11. Backfill material (below filter pack): None 14
 Other

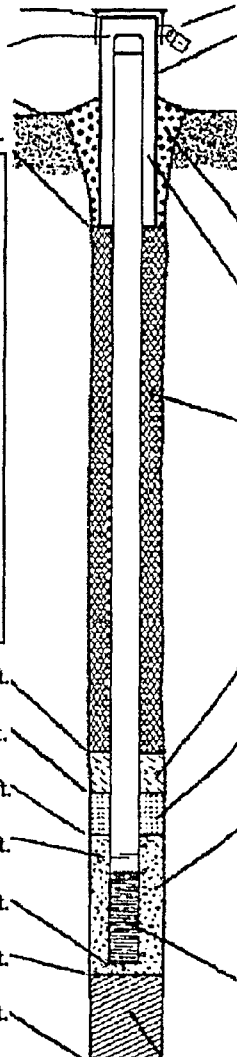
- E. Bentonite seal, top _____ ft. MSL or 0 ft.
- F. Fine sand, top _____ ft. MSL or _____ ft.
- G. Filter pack, top _____ ft. MSL or 2 ft.
- H. Screen joint, top _____ ft. MSL or 2.5 ft.
- I. Well bottom _____ ft. MSL or 12.5 ft.
- J. Filter pack, bottom _____ ft. MSL or 12.5 ft.
- K. Borehole, bottom _____ ft. MSL or 12.5 ft.
- L. Borehole, diameter 6 in.
- M. O.D. well casing 2.5 in.
- N. I.D. well casing 2 in.

I hereby certify that the information on this form is true and correct to the best of my knowledge.
 Signature: [Signature] Firm: DM, Inc.

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 if more information, including where the completed forms should be sent.

Facility/Project Name <u>TWC</u>	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <u>MW-3</u>
Facility License, Permit or Monitoring No.	Local Grid Origin (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>	Wis. Unique Well No. DNR Well ID No.
Facility ID <u>BRR13 0238559214</u>	Lat. _____ " Long. _____ or _____	Date Well Installed <u>11/05/2012</u> m m d d y y v v y y
Type of Well Well Code <u>1</u>	St. Plane <u>469310.97</u> ft. N, <u>2583851.69</u> ft. E. S/C/N	Well Installed By: Name (first, last) and Firm <u>Darren Geiss Drilling</u>
Distance from Waste/Source _____ ft.	Section Location of Waste/Source <u>NE 1/4 of SE 1/4 of Sec. 5, T. 30 N, R. 24 E W</u>	
Enf. Stds. Apply <input type="checkbox"/>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation <u>588.39</u> ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation <u>588.06</u> ft. MSL	2. Protective cover pipe: a. Inside diameter: <u>4</u> in. b. Length: _____ ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
C. Land surface elevation <u>585.66</u> ft. MSL	d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: _____
D. Surface seal, bottom _____ ft. MSL or <u>2</u> ft.	3. Surface seal: Bentonite <input checked="" type="checkbox"/> 30 Concrete <input type="checkbox"/> 01 Other <input type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Other <input type="checkbox"/>
13. Sieve analysis performed? <input type="checkbox"/> Yes <input type="checkbox"/> No	5. Annular space seal: a. Granular/Chipped Bentonite <input type="checkbox"/> 33 b. _____ Lbs/gal mud weight ... Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight ... Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite ... Bentonite-cement grout <input type="checkbox"/> 50 e. _____ Ft ³ volume added for any of the above f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input type="checkbox"/> 08
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input type="checkbox"/> 41 Other <input type="checkbox"/>	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input checked="" type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 32 c. Other <input type="checkbox"/>
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input type="checkbox"/> 99	7. Fine sand material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft ³
16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe _____	8. Filter pack material: Manufacturer, product name & mesh size a. <u>#40</u> b. Volume added _____ ft ³
17. Source of water (attach analysis, if required): _____	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
E. Bentonite seal, top _____ ft. MSL or <u>0</u> ft.	10. Screen material: <u>PVC</u> a. Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
F. Fine sand, top _____ ft. MSL or _____ ft.	b. Manufacturer _____ c. Slot size: <u>0.010</u> in. d. Slotted length: <u>10</u> ft.
G. Filter pack, top _____ ft. MSL or <u>2</u> ft.	11. Backfill material (below filter pack): None <input type="checkbox"/> 14 Other <input type="checkbox"/>
H. Screen joint, top _____ ft. MSL or <u>2.5</u> ft.	
I. Well bottom _____ ft. MSL or <u>12.5</u> ft.	
J. Filter pack, bottom _____ ft. MSL or <u>12.5</u> ft.	
K. Borehole, bottom _____ ft. MSL or <u>12.5</u> ft.	
L. Borehole, diameter <u>6</u> in.	
M. O.D. well casing <u>2.5</u> in.	
N. I.D. well casing <u>2</u> in.	



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

Signature [Signature] Firm O+M, Inc.

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Facility/Project Name TJCO	Local Grid Location of Well _____ ft. <input type="checkbox"/> N. _____ ft. <input type="checkbox"/> E. _____ ft. <input type="checkbox"/> S. _____ ft. <input type="checkbox"/> W.	Well Name MW-4
Facility License, Permit or Monitoring No. BRR15 0238559214	Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. _____ "Long. _____ " or _____	Wis. Unique Well No. _____ DNR Well ID No. _____
Facility ID 0238559214	St. Plane 469340.03 ft. N. 2583906.77 ft. E. S/C/N	Date Well Installed 11/06/2012 m m d d y y y y
Type of Well Well Code _____	Section Location of Waste/Source NE 1/4 of SE 1/4 of Sec. 5, T. 30 N R. 24 E W	Well Installed By: Name (first, last) and Firm Darren Geiss Drilling
Distance from Waste/Source _____ ft.	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation 585.14 ft. MSL		1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation 584.76 ft. MSL		2. Protective cover pipe: a. Inside diameter: 4 in. b. Length: _____ ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
C. Land surface elevation 585.14 ft. MSL		d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: _____
D. Surface seal, bottom _____ ft. MSL or 2 ft.		3. Surface seal: Bentonite <input checked="" type="checkbox"/> 30 Concrete <input type="checkbox"/> 01 Other <input type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>		4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Other <input type="checkbox"/>
13. Sieve analysis performed? <input type="checkbox"/> Yes <input type="checkbox"/> No		5. Annular space seal: a. Granular/Chipped Bentonite <input type="checkbox"/> 33 b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite Bentonite-cement grout <input type="checkbox"/> 50 e. _____ Ft ³ volume added for any of the above
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input type="checkbox"/> 41 Other <input type="checkbox"/>		f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input type="checkbox"/> 08
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input type="checkbox"/> 99		6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input checked="" type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 32 c. _____ Other <input type="checkbox"/>
16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe _____		7. Fine sand material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft ³
17. Source of water (attach analysis, if required): _____		8. Filter pack material: Manufacturer, product name & mesh size a. #40 b. Volume added _____ ft ³
E. Bentonite seal, top _____ ft. MSL or 0 ft.		9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
F. Fine sand, top _____ ft. MSL or _____ ft.		10. Screen material: PVC a. Screen type: Factory cut <input checked="" type="checkbox"/> 1.1 Continuous slot <input type="checkbox"/> 0.1 Other <input type="checkbox"/>
G. Filter pack, top _____ ft. MSL or 2 ft.		b. Manufacturer _____ c. Slot size: 0.010 in. d. Slotted length: 10 ft.
H. Screen joint, top _____ ft. MSL or 2.5 ft.		11. Backfill material (below filter pack): None <input type="checkbox"/> 14 Other <input type="checkbox"/>
I. Well bottom _____ ft. MSL or 12.5 ft.		
J. Filter pack, bottom _____ ft. MSL or 12.5 ft.		
K. Borehole, bottom _____ ft. MSL or 12.5 ft.		
L. Borehole, diameter 6 in.		
M. O.D. well casing 2.5 in.		
N. I.D. well casing 2 in.		

I hereby certify that the information on this form is true and correct to the best of my knowledge.
Signature *[Signature]* Firm **O+M, Inc.**

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Facility/Project Name <u>TYCO</u>	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name <u>MW-5</u>
Facility License, Permit or Monitoring No.	Local Grid Origin (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. _____ " Long. _____ " or	Wis. Unique Well No. <input type="checkbox"/> DNR Well ID No. <input type="checkbox"/>
Facility ID <u>BRRIS 0238559214</u>	St. Plane <u>469245.367</u> ft. N. <u>2583867.004</u> ft. E. <u>SJC/N</u>	Date Well Installed <u>11/06/2012</u> m m d d y y y y
Type of Well Well Code <u>1</u>	Section Location of Waste/Source <u>NE 1/4 of SE 1/4 of Sec. 5, T. 30 N R. 24 E W</u>	Well Installed By: Name (first, last) and Firm <u>Darren Geiss Drilling</u>
Distance from Waste/Source _____ ft.	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation <u>588.23</u> ft. MSL	1. Cup and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation <u>587.43</u> ft. MSL	2. Protective cover pipe: a. Inside diameter: <u>4</u> in.
C. Land surface elevation <u>585.69</u> ft. MSL	b. Length: _____ ft.
D. Surface seal, bottom _____ ft. MSL or <u>2</u> ft.	c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: _____
13. Sieve analysis performed? <input type="checkbox"/> Yes <input type="checkbox"/> No	3. Surface seal: Bentonite <input checked="" type="checkbox"/> 30 Concrete <input type="checkbox"/> 01 Other <input type="checkbox"/>
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input type="checkbox"/> 41 Other <input type="checkbox"/>	4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Other <input type="checkbox"/>
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input type="checkbox"/> 99	5. Annular space seal: a. Granular/Chipped Bentonite <input type="checkbox"/> 33 b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite Bentonite-cement grout <input type="checkbox"/> 50 e. _____ Ft ³ volume added for any of the above
16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe _____	f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input type="checkbox"/> 08
17. Source of water (attach analysis, if required): _____	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input checked="" type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 32 c. _____ Other <input type="checkbox"/>
E. Bentonite seal, top _____ ft. MSL or <u>0</u> ft.	7. Fine sand material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft ³
F. Fine sand, top _____ ft. MSL or _____ ft.	8. Filter pack material: Manufacturer, product name & mesh size a. <u>#40</u> b. Volume added _____ ft ³
G. Filter pack, top _____ ft. MSL or <u>2</u> ft.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
H. Screen joint, top _____ ft. MSL or <u>2.5</u> ft.	10. Screen material: <u>PVC</u> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1.1 Continuous slot <input type="checkbox"/> 0.1 Other <input type="checkbox"/>
I. Well bottom _____ ft. MSL or <u>12.5</u> ft.	b. Manufacturer _____ c. Slot size: <u>0.010</u> in. d. Slotted length: <u>10</u> ft.
J. Filter pack, bottom _____ ft. MSL or <u>12.5</u> ft.	11. Backfill material (below filter pack): None <input type="checkbox"/> 14 Other <input type="checkbox"/>
K. Borehole, bottom _____ ft. MSL or <u>12.5</u> ft.	
L. Borehole, diameter <u>6</u> in.	
M. O.D. well casing <u>2.5</u> in.	
N. I.D. well casing <u>2</u> in.	

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

Signature [Signature] Firm O+M, Inc.

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Facility/Project Name <u>TJCO</u>	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. ft. <input type="checkbox"/> S. <input type="checkbox"/> W.		Well Name <u>M6-6</u>
Facility License, Permit or Monitoring No.	Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>	Wis. Unique Well No.	DNR Well ID No.
Facility ID <u>BRR15 0238559214</u>	Lat. _____ "Long. _____ or	Date Well Installed <u>02/13/2013</u> m m d d y y y y	
Type of Well Well Code <u>1</u>	St. Plane <u>469336.32</u> ft. N, <u>2583838.28</u> ft. E. S/C/N	Well Installed By: Name (first, last) and Firm <u>Darren Geiss Drilling</u>	
Distance from Waste/Source _____ ft.	Section Location of Waste/Source <u>NE 1/4 of SE 1/4 of Sec. 5, T. 30 N R. 24 E W</u>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation <u>588.14</u> ft. MSL	2. Protective cover pipe: <u>4</u> in.
C. Land surface elevation _____ ft. MSL	a. Inside diameter: _____ in.
D. Surface seal, bottom _____ ft. MSL or <u>2</u> ft.	b. Length: _____ ft.
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
13. Sieve analysis performed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: _____
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/>	3. Surface seal: Bentonite <input checked="" type="checkbox"/> 30 Concrete <input type="checkbox"/> 01 Other <input type="checkbox"/>
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99	4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Other <input type="checkbox"/>
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Annular space seal: a. Granular/Chipped Bentonite <input type="checkbox"/> 33 b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite Bentonite-cement grout <input type="checkbox"/> 50 e. _____ Ft. ³ volume added for any of the above
17. Source of water (attach analysis, if required): _____	f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input type="checkbox"/> 08
E. Bentonite seal, top _____ ft. MSL or <u>0</u> ft.	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input checked="" type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 32 c. _____ Other <input type="checkbox"/>
F. Fine sand, top _____ ft. MSL or _____ ft.	7. Fine sand material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft. ³
G. Filter pack, top _____ ft. MSL or <u>2</u> ft.	8. Filter pack material: Manufacturer, product name & mesh size a. <u>#40</u> b. Volume added _____ ft. ³
H. Screen joint, top _____ ft. MSL or <u>2.5</u> ft.	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
I. Well bottom _____ ft. MSL or <u>12.5</u> ft.	10. Screen material: <u>PVC</u> a. Screen type: Factory cut <input checked="" type="checkbox"/> 1.1 Continuous slot <input type="checkbox"/> 0.1 Other <input type="checkbox"/>
J. Filter pack, bottom _____ ft. MSL or <u>12.5</u> ft.	b. Manufacturer _____ c. Slot size: <u>0.010</u> in. d. Slotted length: <u>10</u> ft.
K. Borehole, bottom _____ ft. MSL or <u>12.5</u> ft.	11. Backfill material (below filter pack): None <input type="checkbox"/> 14 Other <input type="checkbox"/>
L. Borehole, diameter <u>6</u> in.	
M. O.D. well casing <u>2.5</u> in.	
N. I.D. well casing <u>2</u> in.	

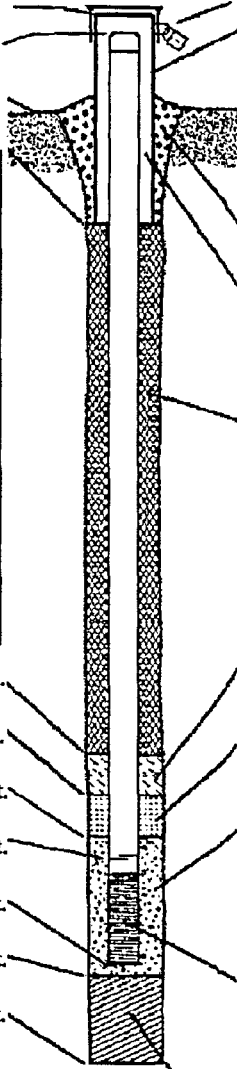
I hereby certify that the information on this form is true and correct to the best of my knowledge:
Signature [Signature] Firm O+M, Inc.

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TYCO - Stanton St. Parking Lot

Facility/Project Name TYCO - Stanton St. Parking Lot	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.	Well Name MW-7
Facility License, Permit or Monitoring No.	Local Grid Origin (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. _____ " Long. _____ " or	Wis. Unique Well No. _____ DNR Well ID No. _____
Facility ID BRRTS # 0238559214	St. Plane 469420.91 ft. N, 2583896.12 ft. E. S/C/N	Date Well Installed 07/29/2014 m m d d y y y y
Type of Well Well Code 11, MW	Section Location of Waste/Source NE 1/4 of SE 1/4 of Sec. 5, T. 30 N. R. 24 E. W.	Well Installed By: Name (first, last) and Firm Adam Sweet Horizon Construction
Distance from Waste/Source 140 ft.	Enf. Stds. Apply <input type="checkbox"/>	
	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input checked="" type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation _____ ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation 588.10 ft. MSL	2. Protective cover pipe: a. Inside diameter: 8.0 in. b. Length: 1.0 ft. c. Material: Flush Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
C. Land surface elevation _____ ft. MSL	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____
D. Surface seal, bottom _____ ft. MSL or .5 ft.	3. Surface seal: Bentonite <input checked="" type="checkbox"/> 30 Concrete <input checked="" type="checkbox"/> 01 Other <input type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input checked="" type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Other <input type="checkbox"/>
13. Sieve analysis performed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Annular space seal: a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 33 b. _____ Lbs/gal mud weight ... Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight ... Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite ... Bentonite-cement grout <input type="checkbox"/> 50 e. 0.4 Ft ³ volume added for any of the above f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input type="checkbox"/> 08
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/>	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input checked="" type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 32 c. _____ Other <input type="checkbox"/>
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99	7. Fine sand material: Manufacturer, product name & mesh size a. None b. Volume added _____ ft ³
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____	8. Filter pack material: Manufacturer, product name & mesh size a. #40 b. Volume added 3.5 ft ³
17. Source of water (attach analysis, if required): _____	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
E. Bentonite seal, top _____ ft. MSL or .5 ft.	10. Screen material: PVC a. Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
F. Fine sand, top _____ ft. MSL or NA ft.	b. Manufacturer _____ c. Slot size: 0.010 in. d. Slotted length: 10 ft.
G. Filter pack, top _____ ft. MSL or 1.5 ft.	11. Backfill material (below filter pack): None <input type="checkbox"/> 14 Other <input type="checkbox"/>
H. Screen joint, top _____ ft. MSL or 2.0 ft.	
I. Well bottom _____ ft. MSL or 12.0 ft.	
J. Filter pack, bottom _____ ft. MSL or 12.0 ft.	
K. Borehole, bottom _____ ft. MSL or 12.0 ft.	
L. Borehole, diameter 7.625 in.	
M. O.D. well casing 2.375 in.	
N. I.D. well casing 2.0 in.	



I hereby certify that the information on this form is true and correct to the best of my knowledge.
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Tyco-Stanton St. Parking Lot

Facility/Project Name	Local Grid Location of Well	Well Name
Facility License, Permit or Monitoring No.	Local Grid Origin (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>	Wis. Unique Well No. DNR Well ID No.
Facility ID	Lat. " Long. " or	Date Well Installed
BRRTS# 0238559214	St. Plane 469413.02 ft. N, 2583806.96 ft. E. S/C/N	07/29/2014
Type of Well	Section Location of Waste/Source	Well Installed By: Name (first, last) and Firm
Well Code 11, MW	NE 1/4 of SE 1/4 of Sec. 5, T. 30 N, R. 24 E/W	Adam Sweet
Distance from Waste/Source 160 ft.	Location of Well Relative to Waste/Source	Horizon Construction
Enf. Stds. Apply <input type="checkbox"/>	u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient	
	d <input checked="" type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

- A. Protective pipe, top elevation ----- ft. MSL
- B. Well casing, top elevation 587.50 ft. MSL
- C. Land surface elevation ----- ft. MSL
- D. Surface seal, bottom ----- ft. MSL or 5 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

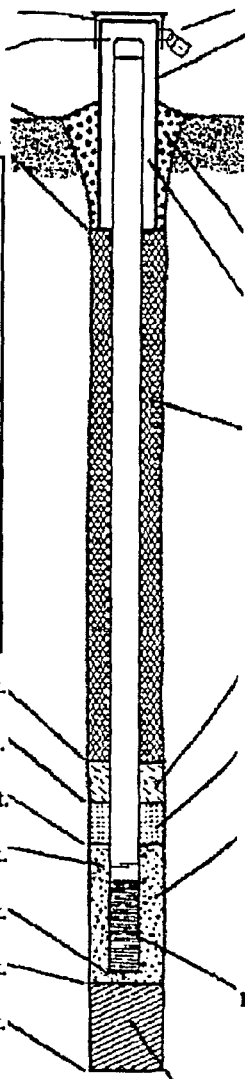
14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
 Other

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 5 ft.
- F. Fine sand, top ----- ft. MSL or NA ft.
- G. Filter pack, top ----- ft. MSL or 1.5 ft.
- H. Screen joint, top ----- ft. MSL or 2.0 ft.
- I. Well bottom ----- ft. MSL or 12.0 ft.
- J. Filter pack, bottom ----- ft. MSL or 12.0 ft.
- K. Borehole, bottom ----- ft. MSL or 12.0 ft.
- L. Borehole, diameter 7.75 in.
- M. O.D. well casing 2.375 in.
- N. I.D. well casing 2.0 in.

- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: 8.0 in.
 - b. Length: 6.0 ft.
 - c. Material: Steel 04
Other
- 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. 0.4 Ft³ 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. None Other
- 7. Fine sand material: Manufacturer, product name & mesh size
 a. None
 b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
 a. #40
 b. Volume added 3.5 ft³
- 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 Johnson
 c. Slot size: 0.010 in.
 d. Slotted length: 10 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 ET Flower Firm O+M, Inc.

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Tyco-Stanton St. Parking Lot

Facility/Project Name	Local Grid Location of Well	Well Name
Facility License, Permit or Monitoring No.	Local Grid Origin (estimated:) or Well Location	Wis. Unique Well No. DNR Well ID No.
Facility ID	Lat. " Long. " or	Date Well Installed
BRRTS# 0238559214	St. Plane 469340.91 ft. N, 2583768.46 ft. E. S/C/N	m m d d y y y y
Type of Well	Section Location of Waste/Source	Well Installed By: Name (first, last) and Firm
Well Code 11, MW	NE 1/4 of SE 1/4 of Sec. 5, T. 30 N, R. 24 W	Adam Sweet
Distance from Waste/Source 140 ft.	Location of Well Relative to Waste/Source	Horizon Construction
Enf. Stds. Apply <input type="checkbox"/>	u <input type="checkbox"/> Upgradient s <input checked="" type="checkbox"/> Sidegradient	
	d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

- A. Protective pipe, top elevation ----- ft. MSL
- B. Well casing, top elevation 588.60 ft. MSL
- C. Land surface elevation ----- ft. MSL
- D. Surface seal, bottom ----- ft. MSL or 5 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

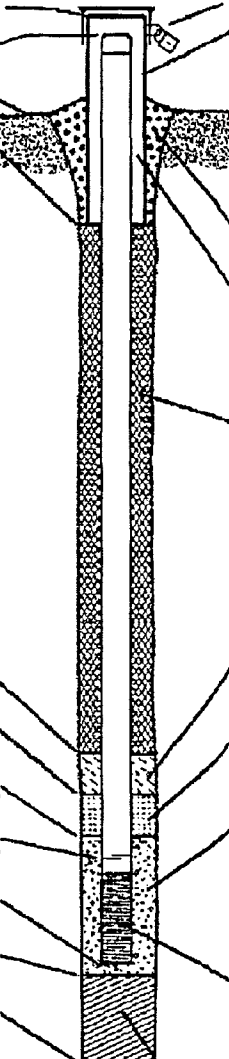
14. Drilling method used: Rotary 50
 Hollow Stem Auger 41
 Other

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): _____



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: 8.0 in.
 - b. Length: 60 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. 0.4 Ft³ 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. None Other
- 7. Fine sand material: Manufacturer, product name & mesh size
 a. None
 b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
 a. #40
 b. Volume added 3.5 ft³
- 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 Johnson
 - c. Slot size: 0.010 in.
 - d. Slotted length: 10 ft.
- 11. Backfill material (below filter pack): None 14
 Other

- E. Bentonite seal, top ----- ft. MSL or 5 ft.
- F. Fine sand, top ----- ft. MSL or NA ft.
- G. Filter pack, top ----- ft. MSL or 1.5 ft.
- H. Screen joint, top ----- ft. MSL or 2.0 ft.
- I. Well bottom ----- ft. MSL or 12.0 ft.
- J. Filter pack, bottom ----- ft. MSL or 12.0 ft.
- K. Borehole, bottom ----- ft. MSL or 12.0 ft.
- L. Borehole, diameter 7.75 in.
- M. O.D. well casing 2.375 in.
- N. I.D. well casing 2.0 in.

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Signature ET Flower Firm O+M, Inc.

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Tyco-Stanton St. Parking Lot

Facility/Project Name Tyco-Stanton St. Parking Lot	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name MW-10
Facility License, Permit or Monitoring No.	Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/>	Wis. Unique Well No. DNR Well ID No.
Facility ID BRRTS# 0238559214	St. Plane _____ ft. N. _____ ft. E. S/C/N	Date Well Installed 04/29/2015 m m d d y y y y
Type of Well Well Code 11, MW	Section Location of Waste/Source NE 1/4 of SE 1/4 of Sec. 5, T. 30 N., R. 24 E. W.	Well Installed By: Name (first, last) and Firm Adam Sweet Horizon Construction
Distance from Waste/Source 340 ft.	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input checked="" type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

- 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 **5** ft.

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

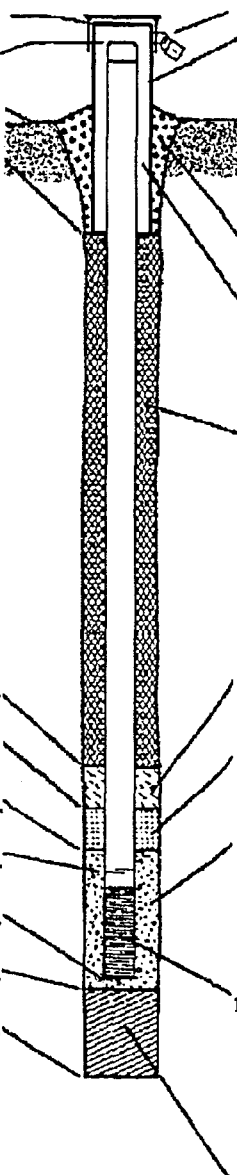
13. Sieve analysis performed? Yes No

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): _____



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: **8.0** in.
 - b. Length: **6.0** 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. **0.4** Ft³ 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. **None** Other
- 7. Fine sand material: Manufacturer, product name & mesh size
a. **None**
- b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
a. **#40**
- b. Volume added **3.5** ft³
- 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 **Johnson**
 - c. Slot size: **0.010** in.
 - d. Slotted length: **1.0** ft.
- 11. Backfill material (below filter pack): None 14
Other

- E. Bentonite seal, top _____ ft. MSL or **5** ft.
- F. Fine sand, top _____ ft. MSL or **NA** ft.
- G. Filter pack, top _____ ft. MSL or **1.5** ft.
- H. Screen joint, top _____ ft. MSL or **2.0** ft.
- I. Well bottom _____ ft. MSL or **12.0** ft.
- J. Filter pack, bottom _____ ft. MSL or **12.0** ft.
- K. Borehole, bottom _____ ft. MSL or **12.0** ft.
- L. Borehole, diameter **7.75** in.
- M. O.D. well casing **2.375** in.
- N. I.D. well casing **2.0** in.

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

Signature *E. J. Flauer*

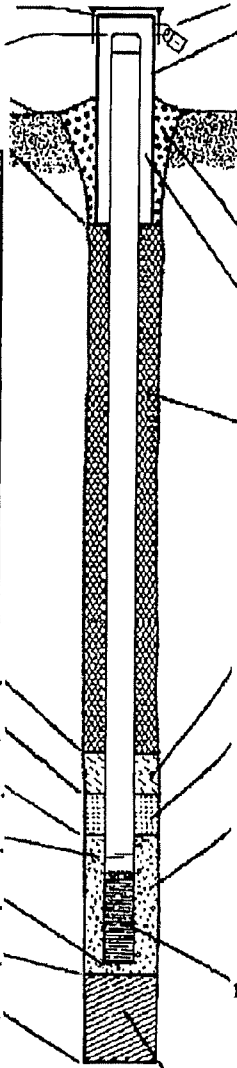
Firm **O & M, Inc.**

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Tyco - Stauton St. Parking Lot

Facility/Project Name Tyco - Stauton St. Parking Lot	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> E. <input type="checkbox"/> S. <input type="checkbox"/> W.	Well Name MW-11
Facility License, Permit or Monitoring No.	Local Grid Origin (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. " Long. " or " or "	Wis. Unique Well No. DNR Well ID No.
Facility ID BRRTS# 0238559214	St. Plane 469771.87 ft. N, 2583730.83 ft. E. S/C/N	Date Well Installed 07/29/2015 m m d d y y v v
Type of Well Well Code 11, MW	Section Location of Waste/Source NE 1/4 of SE 1/4 of Sec. 5, T. 30 N., R. 24 W	Well Installed By: Name (first, last) and Firm Adam Sweet Horizon Construction
Distance from Waste/Source 470 ft.	Enf. Stds. Apply <input type="checkbox"/>	
	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input checked="" type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	
	Jov. Lot Number	

A. Protective pipe, top elevation ----- ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation 589.86 ft. MSL	2. Protective cover pipe: a. Inside diameter: 8.0 in. b. Length: 6.0 ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
C. Land surface elevation ----- ft. MSL	d. Additional protection? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, describe: _____
D. Surface seal, bottom ----- ft. MSL or .5 ft.	3. Surface seal: Bentonite <input type="checkbox"/> 30 Concrete <input checked="" type="checkbox"/> 01 Other <input type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input checked="" type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	4. Material between well casing and protective pipe: Bentonite <input type="checkbox"/> 30 Other <input type="checkbox"/>
13. Sieve analysis performed? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	5. Annular space seal: a. Granular/Chipped Bentonite <input checked="" type="checkbox"/> 33 b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite Bentonite-cement grout <input type="checkbox"/> 50 e. 0.4 Ft ³ volume added for any of the above f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input type="checkbox"/> 08
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input checked="" type="checkbox"/> 41 Other <input type="checkbox"/>	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input checked="" type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input type="checkbox"/> 32 c. None Other <input type="checkbox"/>
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input checked="" type="checkbox"/> 99	7. Fine sand material: Manufacturer, product name & mesh size a. None b. Volume added _____ ft ³
16. Drilling additives used? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Describe _____	8. Filter pack material: Manufacturer, product name & mesh size a. #40 b. Volume added 3.5 ft ³
17. Source of water (attach analysis, if required): _____	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
E. Bentonite seal, top ----- ft. MSL or .5 ft.	10. Screen material: PVC- a. Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
F. Fine sand, top ----- ft. MSL or NA ft.	b. Manufacturer Johnson c. Slot size: 0.010 in. d. Slotted length: 10 ft.
G. Filter pack, top ----- ft. MSL or 1.5 ft.	11. Backfill material (below filter pack): None <input checked="" type="checkbox"/> 14 Other <input type="checkbox"/>
H. Screen joint, top ----- ft. MSL or 2.0 ft.	
I. Well bottom ----- ft. MSL or 12.0 ft.	
J. Filter pack, bottom ----- ft. MSL or 12.0 ft.	
K. Borehole, bottom ----- ft. MSL or 12.0 ft.	
L. Borehole, diameter 7.75 in.	
M. O.D. well casing 2.375 in.	
N. I.D. well casing 2.0 in.	



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Signature E. J. Flauer Firm O+M, Inc.

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Tyco - Stanton St. Parking Lot

Facility/Project Name Tyco - Stanton St. Parking Lot	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name MW-12
Facility License, Permit or Monitoring No.	Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. _____ " Long. _____ " or	Wis. Unique Well No. DNR Well ID No.
Facility ID BRRTS# 0238559214	St. Plane 49685.73 ft. N, 258356.96 ft. E. S/C/N	Date Well Installed 07/29/2015 m m d d y y v v y
Type of Well Well Code 11, MW	Section Location of Waste/Source NE 1/4 of SE 1/4 of Sec. 5, T. 30 N, R. 24 E W	Well Installed By: Name (first, last) and Firm Adam Sweet Horizon Construction
Distance from Waste/Source 530 ft.	Enf. Stds. Apply <input type="checkbox"/>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input checked="" type="checkbox"/> Sidegradient d <input checked="" type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known

- A. Protective pipe, top elevation _____ ft. MSL
- B. Well casing, top elevation **589.76** ft. MSL
- C. Land surface elevation _____ ft. MSL
- D. Surface seal, bottom _____ ft. MSL or **.5** ft.

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

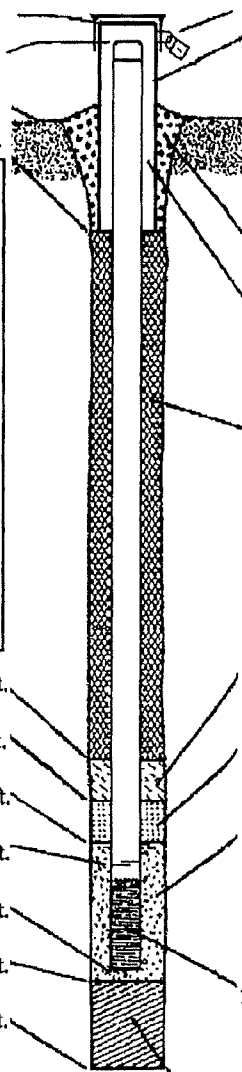
13. Sieve analysis performed? Yes No

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): _____



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: **8.0** in.
 - b. Length: **6.0** 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. **0.4** Ft³ 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. **None** Other
- 7. Fine sand material: Manufacturer, product name & mesh size
a. **None**
- b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
a. **#40**
- b. Volume added **3.5** ft³
- 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 **Johnson**
 - c. Slot size: **0.010** in.
 - d. Slotted length: **1.0** ft.
- 11. Backfill material (below filter pack): None 14
Other

- E. Bentonite seal, top _____ ft. MSL or **.5** ft.
- F. Fine sand, top _____ ft. MSL or **NA** ft.
- G. Filter pack, top _____ ft. MSL or **1.5** ft.
- H. Screen joint, top _____ ft. MSL or **2.0** ft.
- I. Well bottom _____ ft. MSL or **12.0** ft.
- J. Filter pack, bottom _____ ft. MSL or **12.0** ft.
- K. Borehole, bottom _____ ft. MSL or **12.0** ft.
- L. Borehole, diameter **7.75** in.
- M. O.D. well casing **2.375** in.
- N. I.D. well casing **2.0** in.

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

Signature *E. J. Flauer* Firm *O+M, Inc.*

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Tyco - Stanton St. Parking Lot

BRRTS# 0238559214

Facility/Project Name Tyco - Stanton St. Parking Lot	Local Grid Location of Well ft. <input type="checkbox"/> N. <input type="checkbox"/> S. <input type="checkbox"/> E. <input type="checkbox"/> W.	Well Name MW-13
Facility License, Permit or Monitoring No.	Local Grid Origin (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. "Long. " or	Wis. Unique Well No. DNR Well ID No.
Facility ID BRRTS# 0238559214	St. Plane ft. N. ft. E. S/C/N	Date Well Installed 07/29/2015
Type of Well Well Code 11, MW	Section Location of Waste/Source NE 1/4 of SE 1/4 of Sec. 5, T. 30 N., R. 24 W.	Well Installed By: Name (first, last) and Firm Adam Sweet Horizon Construction
Distance from Waste/Source 140 ft.	Enf. Stds. Apply <input type="checkbox"/>	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input checked="" type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known

- 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 5 ft.

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

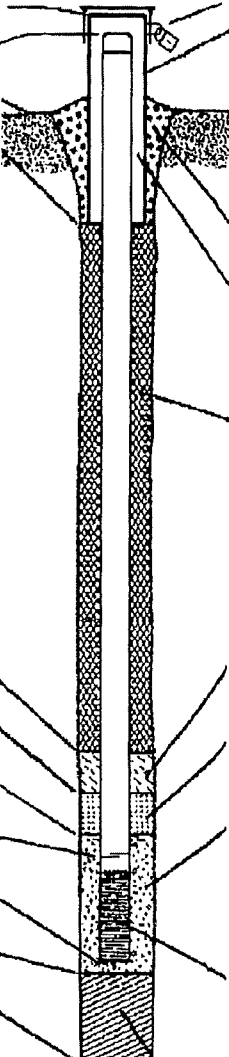
13. Sieve analysis performed? Yes No

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):



- 1. Cap and lock? Yes No
- 2. Protective cover pipe:
 - a. Inside diameter: 8.0 in.
 - b. Length: 6.0 ft.
 - c. Material: Steel 04
Other
- 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. 0.4 Ft³ 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. None Other
- 7. Fine sand material: Manufacturer, product name & mesh size
 a. None
 b. Volume added _____ ft³
- 8. Filter pack material: Manufacturer, product name & mesh size
 a. #40
 b. Volume added 3.5 ft³
- 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 Johnson
 c. Slot size: 0.010 in.
 d. Slotted length: 10 ft.
- 11. Backfill material (below filter pack): None 14
 Other

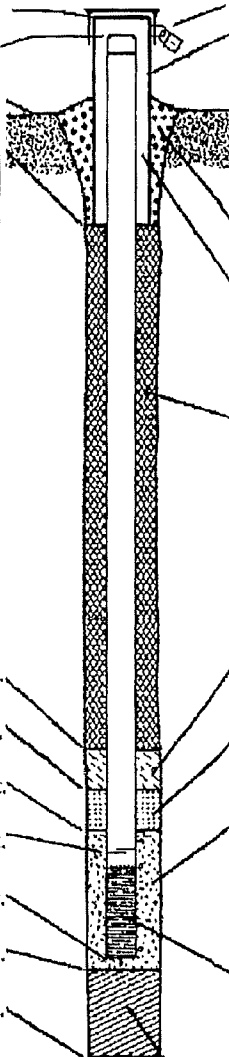
- E. Bentonite seal, top ----- ft. MSL or 5 ft.
- F. Fine sand, top ----- ft. MSL or NA ft.
- G. Filter pack, top ----- ft. MSL or 1.5 ft.
- H. Screen joint, top ----- ft. MSL or 2.0 ft.
- I. Well bottom ----- ft. MSL or 12.0 ft.
- J. Filter pack, bottom ----- ft. MSL or 12.0 ft.
- K. Borehole, bottom ----- ft. MSL or 12.0 ft.
- L. Borehole, diameter 7.75 in.
- M. O.D. well casing 2.375 in.
- N. I.D. well casing 2.0 in.

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 Signature E. J. Flower Firm O+M, Inc.

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Facility/Project Name Tyco	Local Grid Location of Well 469292.854 ft <input checked="" type="checkbox"/> N. 2583881.338 <input checked="" type="checkbox"/> E. <input type="checkbox"/> W.	Well Name PZ-1
Facility License, Permit or Monitoring No. BRTS 0238559214	Local Grid Origin (estimated: <input type="checkbox"/>) or Well Location <input type="checkbox"/> Lat. _____ " Long. _____ "	Wis. Unique Well No. _____ DNR Well ID No. _____
Facility ID 0238559214	St. Plane _____ ft. N. _____ ft. E. S/C/N	Date Well Installed 11052012 m m d d y y y y
Type of Well Well Code 1	Section Location of Waste/Source NE 1/4 of SE 1/4 of Sec. 5, T. 30 N. R. 24 <input checked="" type="checkbox"/> W	Well Installed By: Name (first, last) and Firm Darren Geiss Drilling
Distance from Waste/Source 0 ft.	Enf. Stds. Apply <input type="checkbox"/>	
	Location of Well Relative to Waste/Source u <input type="checkbox"/> Upgradient s <input type="checkbox"/> Sidegradient d <input type="checkbox"/> Downgradient n <input type="checkbox"/> Not Known	

A. Protective pipe, top elevation 588.24 ft. MSL	1. Cap and lock? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
B. Well casing, top elevation 588.00 ft. MSL	2. Protective cover pipe: a. Inside diameter: 4 in. b. Length: 6 ft. c. Material: Steel <input checked="" type="checkbox"/> 04 Other <input type="checkbox"/>
C. Land surface elevation 585.52 ft. MSL	d. Additional protection? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, describe: _____
D. Surface seal, bottom _____ ft. MSL or 7 ft.	3. Surface seal: Bentonite <input checked="" type="checkbox"/> 30 Concrete <input type="checkbox"/> 01 Other <input type="checkbox"/>
12. USCS classification of soil near screen: GP <input type="checkbox"/> GM <input type="checkbox"/> GC <input type="checkbox"/> GW <input type="checkbox"/> SW <input type="checkbox"/> SP <input type="checkbox"/> SM <input type="checkbox"/> SC <input type="checkbox"/> ML <input type="checkbox"/> MH <input type="checkbox"/> CL <input type="checkbox"/> CH <input type="checkbox"/> Bedrock <input type="checkbox"/>	4. Material between well casing and protective pipe: Bentonite <input checked="" type="checkbox"/> 30 Other <input type="checkbox"/>
13. Sieve analysis performed? <input type="checkbox"/> Yes <input type="checkbox"/> No	5. Annular space seal: a. Granular/Chipped Bentonite <input type="checkbox"/> 33 b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry <input type="checkbox"/> 35 c. _____ Lbs/gal mud weight Bentonite slurry <input type="checkbox"/> 31 d. _____ % Bentonite Bentonite-cement grout <input type="checkbox"/> 50 e. _____ Ft ³ volume added for any of the above f. How installed: Tremie <input type="checkbox"/> 01 Tremie pumped <input type="checkbox"/> 02 Gravity <input type="checkbox"/> 08
14. Drilling method used: Rotary <input type="checkbox"/> 50 Hollow Stem Auger <input type="checkbox"/> 41 Other <input type="checkbox"/>	6. Bentonite seal: a. Bentonite granules <input type="checkbox"/> 33 b. <input checked="" type="checkbox"/> 1/4 in. <input type="checkbox"/> 3/8 in. <input type="checkbox"/> 1/2 in. Bentonite chips <input checked="" type="checkbox"/> 32 c. _____ Other <input type="checkbox"/>
15. Drilling fluid used: Water <input type="checkbox"/> 02 Air <input type="checkbox"/> 01 Drilling Mud <input type="checkbox"/> 03 None <input type="checkbox"/> 99	7. Fine sand material: Manufacturer, product name & mesh size a. _____ b. Volume added _____ ft ³
16. Drilling additives used? <input type="checkbox"/> Yes <input type="checkbox"/> No Describe _____	8. Filter pack material: Manufacturer, product name & mesh size a. #40 b. Volume added _____ ft ³
17. Source of water (attach analysis, if required): _____	9. Well casing: Flush threaded PVC schedule 40 <input checked="" type="checkbox"/> 23 Flush threaded PVC schedule 80 <input type="checkbox"/> 24 Other <input type="checkbox"/>
E. Bentonite seal, top _____ ft. MSL or 0 ft.	10. Screen material: PVC a. Screen type: Factory cut <input checked="" type="checkbox"/> 11 Continuous slot <input type="checkbox"/> 01 Other <input type="checkbox"/>
F. Fine sand, top _____ ft. MSL or 13 ft.	b. Manufacturer _____ c. Slot size: 0.010 in. d. Slotted length: 14 ft.
G. Filter pack, top _____ ft. MSL or 715 ft.	11. Backfill material (below filter pack): None <input type="checkbox"/> 14 Other <input type="checkbox"/>
H. Screen joint, top _____ ft. MSL or 817 ft.	
I. Well bottom _____ ft. MSL or 22 ft.	
J. Filter pack, bottom _____ ft. MSL or 24 ft.	
K. Borehole, bottom _____ ft. MSL or 24 ft.	
L. Borehole, diameter 6 in.	
M. O.D. well casing 2.5 in.	
N. I.D. well casing 2 in.	



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

Signature *[Signature]* Firm **O&M, Inc.**

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.

Appendix B

Laboratory Reports

Technical Report for

O&M, Inc.

**Tyco - Diesel, One Stanton Street, Marinette, WI
487**

Accutest Job Number: MC38401

Sampling Date: 04/29/15

Report to:

O&M, Inc.

efrauen@oandm-inc.com

ATTN: Eric Frauen

Total number of pages in report: 52



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.


**Reza Fand
Lab Director**

Client Service contact: Matthew Morrell 508-481-6200

Certifications: MA (M-MA136,SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories.

Test results relate only to samples analyzed.

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Sample Summary

O&M, Inc.

Job No: MC38401

Tyco - Diesel, One Stanton Street, Marinette, WI
 Project No: 487

Sample Number	Collected		Time By	Matrix		Client Sample ID
	Date			Received	Code Type	
MC38401-1	04/29/15	13:45	CF	05/01/15	SO Soil	MW-10
MC38401-2	04/29/15	14:45	CF	05/01/15	SO Soil	MW-11
MC38401-3	04/29/15	15:15	CF	05/01/15	SO Soil	MW-12
MC38401-4	04/29/15	12:45	CF	05/01/15	SO Soil	MW-13

The reported LOD and LOQ values have been adjusted for dry weight unless otherwise indicated on the results page. The reported LOD and LOQ values have been adjusted for the same dilution factor as that used for the sample result unless otherwise indicated on the results page. LOD = MDL and LOQ = RL.

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: O&M, Inc.

Job No MC38401

Site: Tyco - Diesel, One Stanton Street, Marinette, WI

Report Date 5/15/2015 4:30:53 PM

4 Sample(s) were collected on 04/29/2015 and were received at Accutest on 05/01/2015 properly preserved, at 4 Deg. C and intact. These Samples received an Accutest job number of MC38401. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260C

Matrix SO	Batch ID: MSK2735
------------------	--------------------------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846 8310

Matrix SO	Batch ID: OP42932
------------------	--------------------------

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC38401-2MS, MC38401-2MSD were used as the QC samples indicated.
- MC38401-1: Elevated RL due to dilution required for matrix interference.
- MC38401-4 for 2-Methylnaphthalene: Confirmation value >40% RPD.
- MC38401-4 for Naphthalene: Confirmation value >40% RPD.
- MC38401-1 for Benzo (g,h,i) perylene, Fluorene, 2-Methylnaphthalene, Naphthalene: Confirmation value >40% RPD.

Metals By Method SW846 6010C

Matrix SO	Batch ID: MP24568
------------------	--------------------------

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC38401-2MS, MC38401-2MSD, MC38401-2SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic, Lead, Selenium are outside control limits for sample MP24568-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7471B

Matrix SO	Batch ID: MP24567
------------------	--------------------------

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC38409-3MS, MC38409-3MSD were used as the QC samples for metals.

Wet Chemistry By Method SM 2540G-97 MOD

Matrix SO

Batch ID: GN50553

- Sample(s) MC38399-1DUP were used as the QC samples for Solids, Percent.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report (MC38401).

Summary of Hits

Job Number: MC38401
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 04/29/15

Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method	
MC38401-1		MW-10					
		Anthracene ^a	228	86	4.4	ug/kg	SW846 8310
		Benzo (a) anthracene ^a	466	86	6.6	ug/kg	SW846 8310
		Benzo (a) pyrene ^a	399	86	8.3	ug/kg	SW846 8310
		Benzo (b) fluoranthene ^a	321	86	7.7	ug/kg	SW846 8310
		Benzo (g,h,i) perylene ^b	191	86	19	ug/kg	SW846 8310
		Benzo (k) fluoranthene ^a	184	86	9.9	ug/kg	SW846 8310
		Chrysene ^a	659	86	6.1	ug/kg	SW846 8310
		Dibenz(a,h)anthracene ^a	57.6 J	86	17	ug/kg	SW846 8310
		Fluoranthene ^a	1170	86	14	ug/kg	SW846 8310
		Fluorene ^b	123	86	4.3	ug/kg	SW846 8310
		Indeno (1,2,3-cd) pyrene ^a	221	86	29	ug/kg	SW846 8310
		2-Methylnaphthalene ^b	828	86	7.0	ug/kg	SW846 8310
		Naphthalene ^b	308	86	4.8	ug/kg	SW846 8310
		Phenanthrene ^a	743	86	7.8	ug/kg	SW846 8310
		Pyrene ^a	959	86	19	ug/kg	SW846 8310
		Arsenic	17.4	1.1	0.21	mg/kg	SW846 6010C
		Barium	310	5.5	0.071	mg/kg	SW846 6010C
		Cadmium	1.2	0.44	0.034	mg/kg	SW846 6010C
		Chromium	46.0	1.1	0.056	mg/kg	SW846 6010C
		Lead	312	1.1	0.12	mg/kg	SW846 6010C
		Mercury	0.086	0.043	0.010	mg/kg	SW846 7471B
		Selenium	1.7	1.1	0.26	mg/kg	SW846 6010C
		Silver	0.27 B	0.55	0.046	mg/kg	SW846 6010C
MC38401-2		MW-11					
		Arsenic	1.5	0.96	0.18	mg/kg	SW846 6010C
		Barium	7.7	4.8	0.062	mg/kg	SW846 6010C
		Chromium	5.2	0.96	0.049	mg/kg	SW846 6010C
		Lead	1.9	0.96	0.11	mg/kg	SW846 6010C
		Selenium	0.24 B	0.96	0.23	mg/kg	SW846 6010C
MC38401-3		MW-12					
		Benzo (a) anthracene	9.2 J	42	3.2	ug/kg	SW846 8310
		Benzo (a) pyrene	11.1 J	42	4.0	ug/kg	SW846 8310
		Benzo (b) fluoranthene	12.5 J	42	3.7	ug/kg	SW846 8310
		Benzo (g,h,i) perylene	11.3 J	42	9.1	ug/kg	SW846 8310
		Benzo (k) fluoranthene	5.7 J	42	4.8	ug/kg	SW846 8310
		Chrysene	27.4 J	42	3.0	ug/kg	SW846 8310
		Fluoranthene	32.8 J	42	7.0	ug/kg	SW846 8310
		Phenanthrene	18.2 J	42	3.8	ug/kg	SW846 8310
		Pyrene	30.9 J	42	9.3	ug/kg	SW846 8310

Summary of Hits

Job Number: MC38401
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 04/29/15

Lab Sample ID Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Arsenic		1.3	1.0	0.19	mg/kg	SW846 6010C
Barium		18.8	5.1	0.066	mg/kg	SW846 6010C
Chromium		6.5	1.0	0.052	mg/kg	SW846 6010C
Lead		2.2	1.0	0.11	mg/kg	SW846 6010C
Mercury		0.011 B	0.038	0.0091	mg/kg	SW846 7471B

MC38401-4 MW-13

Anthracene	220	55	2.8	ug/kg	SW846 8310
Benzo (a) anthracene	640	55	4.2	ug/kg	SW846 8310
Benzo (a) pyrene	854	55	5.3	ug/kg	SW846 8310
Benzo (b) fluoranthene	710	55	4.9	ug/kg	SW846 8310
Benzo (g,h,i) perylene	462	55	12	ug/kg	SW846 8310
Benzo (k) fluoranthene	352	55	6.3	ug/kg	SW846 8310
Chrysene	790	55	3.9	ug/kg	SW846 8310
Dibenz(a,h)anthracene	110	55	11	ug/kg	SW846 8310
Fluoranthene	1990	55	9.2	ug/kg	SW846 8310
Fluorene	176	55	2.8	ug/kg	SW846 8310
Indeno (1,2,3-cd) pyrene	485	55	18	ug/kg	SW846 8310
2-Methylnaphthalene ^c	1210	55	4.4	ug/kg	SW846 8310
Naphthalene ^c	610	55	3.0	ug/kg	SW846 8310
Phenanthrene	815	55	4.9	ug/kg	SW846 8310
Pyrene	1510	55	12	ug/kg	SW846 8310
Arsenic	16.5	1.3	0.25	mg/kg	SW846 6010C
Barium	357	6.7	0.087	mg/kg	SW846 6010C
Cadmium	2.0	0.53	0.041	mg/kg	SW846 6010C
Chromium	26.9	1.3	0.068	mg/kg	SW846 6010C
Lead	792	1.3	0.15	mg/kg	SW846 6010C
Mercury	0.18	0.047	0.011	mg/kg	SW846 7471B
Selenium	1.4	1.3	0.32	mg/kg	SW846 6010C
Silver	0.64 B	0.67	0.056	mg/kg	SW846 6010C

(a) Elevated RL due to dilution required for matrix interference.

(b) Elevated RL due to dilution required for matrix interference. Confirmation value > 40% RPD.

(c) Confirmation value > 40% RPD.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-10	Date Sampled: 04/29/15
Lab Sample ID: MC38401-1	Date Received: 05/01/15
Matrix: SO - Soil	Percent Solids: 73.3
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K87778.D	1	05/13/15	JM	n/a	n/a	MSK2735
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	17.0 g	10.0 ml	50.0 ul
Run #2			

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	58	44	ug/kg	
108-88-3	Toluene	ND	580	46	ug/kg	
100-41-4	Ethylbenzene	ND	230	44	ug/kg	
1330-20-7	Xylene (total)	ND	230	41	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	230	76	ug/kg	
91-20-3	Naphthalene	ND	580	70	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	580	44	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	580	37	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	92%		65-141%
2037-26-5	Toluene-D8	98%		65-129%
460-00-4	4-Bromofluorobenzene	92%		63-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID: MW-10	Date Sampled: 04/29/15
Lab Sample ID: MC38401-1	Date Received: 05/01/15
Matrix: SO - Soil	Percent Solids: 73.3
Method: SW846 8310 SW846 3546	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	SU11006.D	2	05/13/15	PN	05/04/15	OP42932	GSU630
Run #2							

	Initial Weight	Final Volume
Run #1	15.9 g	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	86	6.9	ug/kg	
208-96-8	Acenaphthylene	ND	86	6.8	ug/kg	
120-12-7	Anthracene	228	86	4.4	ug/kg	
56-55-3	Benzo (a) anthracene	466	86	6.6	ug/kg	
50-32-8	Benzo (a) pyrene	399	86	8.3	ug/kg	
205-99-2	Benzo (b) fluoranthene	321	86	7.7	ug/kg	
191-24-2	Benzo (g,h,i) perylene ^b	191	86	19	ug/kg	
207-08-9	Benzo (k) fluoranthene	184	86	9.9	ug/kg	
218-01-9	Chrysene	659	86	6.1	ug/kg	
53-70-3	Dibenz(a,h)anthracene	57.6	86	17	ug/kg	J
206-44-0	Fluoranthene	1170	86	14	ug/kg	
86-73-7	Fluorene ^b	123	86	4.3	ug/kg	
193-39-5	Indeno (1,2,3-cd) pyrene	221	86	29	ug/kg	
91-57-6	2-Methylnaphthalene ^b	828	86	7.0	ug/kg	
91-20-3	Naphthalene ^b	308	86	4.8	ug/kg	
85-01-8	Phenanthrene	743	86	7.8	ug/kg	
129-00-0	Pyrene	959	86	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	66%		13-139%
84-15-1	o-Terphenyl	65%		13-139%

(a) Elevated RL due to dilution required for matrix interference.

(b) Confirmation value > 40% RPD.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-10	Date Sampled: 04/29/15
Lab Sample ID: MC38401-1	Date Received: 05/01/15
Matrix: SO - Soil	Percent Solids: 73.3
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.1

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	17.4	1.1	0.21	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Barium	310	5.5	0.071	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Cadmium	1.2	0.44	0.034	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Chromium	46.0	1.1	0.056	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Lead	312	1.1	0.12	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.086	0.043	0.010	mg/kg	1	05/05/15	05/05/15 SA	SW846 7471B ¹	SW846 7471B ³
Selenium	1.7	1.1	0.26	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Silver	0.27 B	0.55	0.046	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA18107
- (2) Instrument QC Batch: MA18116
- (3) Prep QC Batch: MP24567
- (4) Prep QC Batch: MP24568

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-11	Date Sampled: 04/29/15
Lab Sample ID: MC38401-2	Date Received: 05/01/15
Matrix: SO - Soil	Percent Solids: 81.6
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K87779.D	1	05/13/15	JM	n/a	n/a	MSK2735
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	12.4 g	10.0 ml	100 ul
Run #2			

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	30	23	ug/kg	
108-88-3	Toluene	ND	300	24	ug/kg	
100-41-4	Ethylbenzene	ND	120	23	ug/kg	
1330-20-7	Xylene (total)	ND	120	21	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	120	40	ug/kg	
91-20-3	Naphthalene	ND	300	37	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	300	23	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	300	19	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		65-141%
2037-26-5	Toluene-D8	99%		65-129%
460-00-4	4-Bromofluorobenzene	89%		63-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.2
4

Report of Analysis

Client Sample ID: MW-11		Date Sampled: 04/29/15
Lab Sample ID: MC38401-2		Date Received: 05/01/15
Matrix: SO - Soil		Percent Solids: 81.6
Method: SW846 8310 SW846 3546		
Project: Tyco - Diesel, One Stanton Street, Marinette, WI		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11000.D	1	05/13/15	PN	05/04/15	OP42932	GSU630
Run #2							

Run #	Initial Weight	Final Volume
Run #1	15.4 g	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	40	3.2	ug/kg	
208-96-8	Acenaphthylene	ND	40	3.1	ug/kg	
120-12-7	Anthracene	ND	40	2.0	ug/kg	
56-55-3	Benzo (a) anthracene	ND	40	3.0	ug/kg	
50-32-8	Benzo (a) pyrene	ND	40	3.8	ug/kg	
205-99-2	Benzo (b) fluoranthene	ND	40	3.5	ug/kg	
191-24-2	Benzo (g, h, i) perylene	ND	40	8.7	ug/kg	
207-08-9	Benzo (k) fluoranthene	ND	40	4.6	ug/kg	
218-01-9	Chrysene	ND	40	2.8	ug/kg	
53-70-3	Dibenz(a, h)anthracene	ND	40	8.1	ug/kg	
206-44-0	Fluoranthene	ND	40	6.7	ug/kg	
86-73-7	Fluorene	ND	40	2.0	ug/kg	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	40	13	ug/kg	
91-57-6	2-Methylnaphthalene	ND	40	3.2	ug/kg	
91-20-3	Naphthalene	ND	40	2.2	ug/kg	
85-01-8	Phenanthrene	ND	40	3.6	ug/kg	
129-00-0	Pyrene	ND	40	8.8	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	58%		13-139%
84-15-1	o-Terphenyl	58%		13-139%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-11	Date Sampled: 04/29/15
Lab Sample ID: MC38401-2	Date Received: 05/01/15
Matrix: SO - Soil	Percent Solids: 81.6
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.5	0.96	0.18	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Barium	7.7	4.8	0.062	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Cadmium	0.030 U	0.38	0.030	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Chromium	5.2	0.96	0.049	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Lead	1.9	0.96	0.11	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.0090 U	0.038	0.0090	mg/kg	1	05/05/15	05/05/15 SA	SW846 7471B ¹	SW846 7471B ³
Selenium	0.24 B	0.96	0.23	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Silver	0.040 U	0.48	0.040	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA18107
- (2) Instrument QC Batch: MA18116
- (3) Prep QC Batch: MP24567
- (4) Prep QC Batch: MP24568

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

4.2
4

Report of Analysis

Client Sample ID: MW-12	Date Sampled: 04/29/15
Lab Sample ID: MC38401-3	Date Received: 05/01/15
Matrix: SO - Soil	Percent Solids: 77.6
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K87780.D	1	05/13/15	JM	n/a	n/a	MSK2735
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	10.6 g	10.0 ml	100 ul
Run #2			

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	38	28	ug/kg	
108-88-3	Toluene	ND	380	30	ug/kg	
100-41-4	Ethylbenzene	ND	150	29	ug/kg	
1330-20-7	Xylene (total)	ND	150	26	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	150	49	ug/kg	
91-20-3	Naphthalene	ND	380	46	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	380	29	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	380	24	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		65-141%
2037-26-5	Toluene-D8	98%		65-129%
460-00-4	4-Bromofluorobenzene	90%		63-137%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.3
4

Report of Analysis

Client Sample ID: MW-12	Date Sampled: 04/29/15
Lab Sample ID: MC38401-3	Date Received: 05/01/15
Matrix: SO - Soil	Percent Solids: 77.6
Method: SW846 8310 SW846 3546	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11001.D	1	05/13/15	PN	05/04/15	OP42932	GSU630
Run #2							

Run #	Initial Weight	Final Volume
Run #1	15.4 g	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	42	3.4	ug/kg	
208-96-8	Acenaphthylene	ND	42	3.3	ug/kg	
120-12-7	Anthracene	ND	42	2.2	ug/kg	
56-55-3	Benzo (a) anthracene	9.2	42	3.2	ug/kg	J
50-32-8	Benzo (a) pyrene	11.1	42	4.0	ug/kg	J
205-99-2	Benzo (b) fluoranthene	12.5	42	3.7	ug/kg	J
191-24-2	Benzo (g,h,i) perylene	11.3	42	9.1	ug/kg	J
207-08-9	Benzo (k) fluoranthene	5.7	42	4.8	ug/kg	J
218-01-9	Chrysene	27.4	42	3.0	ug/kg	J
53-70-3	Dibenz(a,h)anthracene	ND	42	8.5	ug/kg	
206-44-0	Fluoranthene	32.8	42	7.0	ug/kg	J
86-73-7	Fluorene	ND	42	2.1	ug/kg	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	42	14	ug/kg	
91-57-6	2-Methylnaphthalene	ND	42	3.4	ug/kg	
91-20-3	Naphthalene	ND	42	2.3	ug/kg	
85-01-8	Phenanthrene	18.2	42	3.8	ug/kg	J
129-00-0	Pyrene	30.9	42	9.3	ug/kg	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	56%		13-139%
84-15-1	o-Terphenyl	56%		13-139%

ND = Not detected MDL = Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-12		Date Sampled: 04/29/15
Lab Sample ID: MC38401-3		Date Received: 05/01/15
Matrix: SO - Soil		Percent Solids: 77.6
Project: Tyco - Diesel, One Stanton Street, Marinette, WI		

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.3	1.0	0.19	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Barium	18.8	5.1	0.066	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Cadmium	0.032 U	0.41	0.032	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Chromium	6.5	1.0	0.052	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Lead	2.2	1.0	0.11	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.011 B	0.038	0.0091	mg/kg	1	05/05/15	05/05/15 SA	SW846 7471B ¹	SW846 7471B ³
Selenium	0.25 U	1.0	0.25	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Silver	0.043 U	0.51	0.043	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA18107
- (2) Instrument QC Batch: MA18116
- (3) Prep QC Batch: MP24567
- (4) Prep QC Batch: MP24568

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

4.3
4

Report of Analysis

Client Sample ID: MW-13	Date Sampled: 04/29/15
Lab Sample ID: MC38401-4	Date Received: 05/01/15
Matrix: SO - Soil	Percent Solids: 59.9
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	K87781.D	1	05/13/15	JM	n/a	n/a	MSK2735
Run #2							

Run #	Initial Weight	Final Volume	Methanol Aliquot
Run #1	9.33 g	10.0 ml	100 ul
Run #2			

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	61	46	ug/kg	
108-88-3	Toluene	ND	610	49	ug/kg	
100-41-4	Ethylbenzene	ND	250	47	ug/kg	
1330-20-7	Xylene (total)	ND	250	43	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	250	80	ug/kg	
91-20-3	Naphthalene	ND	610	74	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	610	47	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	610	39	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		65-141%
2037-26-5	Toluene-D8	98%		65-129%
460-00-4	4-Bromofluorobenzene	92%		63-137%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-13		Date Sampled: 04/29/15
Lab Sample ID: MC38401-4		Date Received: 05/01/15
Matrix: SO - Soil		Percent Solids: 59.9
Method: SW846 8310 SW846 3546		
Project: Tyco - Diesel, One Stanton Street, Marinette, WI		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11002.D	1	05/13/15	PN	05/04/15	OP42932	GSU630
Run #2							

Run #	Initial Weight	Final Volume
Run #1	15.3 g	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	55	4.4	ug/kg	
208-96-8	Acenaphthylene	ND	55	4.3	ug/kg	
120-12-7	Anthracene	220	55	2.8	ug/kg	
56-55-3	Benzo (a) anthracene	640	55	4.2	ug/kg	
50-32-8	Benzo (a) pyrene	854	55	5.3	ug/kg	
205-99-2	Benzo (b) fluoranthene	710	55	4.9	ug/kg	
191-24-2	Benzo (g, h, i) perylene	462	55	12	ug/kg	
207-08-9	Benzo (k) fluoranthene	352	55	6.3	ug/kg	
218-01-9	Chrysene	790	55	3.9	ug/kg	
53-70-3	Dibenz(a, h)anthracene	110	55	11	ug/kg	
206-44-0	Fluoranthene	1990	55	9.2	ug/kg	
86-73-7	Fluorene	176	55	2.8	ug/kg	
193-39-5	Indeno (1,2,3-cd) pyrene	485	55	18	ug/kg	
91-57-6	2-Methylnaphthalene ^a	1210	55	4.4	ug/kg	
91-20-3	Naphthalene ^a	610	55	3.0	ug/kg	
85-01-8	Phenanthrene	815	55	4.9	ug/kg	
129-00-0	Pyrene	1510	55	12	ug/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	47%		13-139%
84-15-1	o-Terphenyl	40%		13-139%

(a) Confirmation value > 40% RPD.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-13	Date Sampled: 04/29/15
Lab Sample ID: MC38401-4	Date Received: 05/01/15
Matrix: SO - Soil	Percent Solids: 59.9
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	16.5	1.3	0.25	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Barium	357	6.7	0.087	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Cadmium	2.0	0.53	0.041	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Chromium	26.9	1.3	0.068	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Lead	792	1.3	0.15	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Mercury	0.18	0.047	0.011	mg/kg	1	05/05/15	05/05/15 SA	SW846 7471B ¹	SW846 7471B ³
Selenium	1.4	1.3	0.32	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴
Silver	0.64 B	0.67	0.056	mg/kg	1	05/06/15	05/07/15 EAL	SW846 6010C ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA18107
- (2) Instrument QC Batch: MA18116
- (3) Prep QC Batch: MP24567
- (4) Prep QC Batch: MP24568

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

4.4
4

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



FED-Ex Tracking # _____
Accutest Quote # _____
Billing Order Control # **MC38401**
Accutest Job # _____

Client / Reporting Information		Project Information				Requested Analysis (see TEST CODE sheet)										Matrix Codes																
Company Name O+M, Inc		Project Name Stanton				<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Street Address 4830 N. Berkeley Blvd</p> <p>City State Zip Waukegan IL 60091</p> <p>Project Contact Eric Frauen</p> <p>Phone # (414) 963-6210</p> <p>Sampler(s) Name(s) Chris Frauen</p> </div> <div style="width: 45%;"> <p>Street One Stanton St.</p> <p>City State Zip Marquette WI 54871</p> <p>Project # 487</p> <p>Client POE Eric Frauen</p> <p>Project Manager Eric Frauen</p> </div> <div style="width: 45%;"> <p>Billing Information (If different from Report to)</p> <p>Company Name O+M, Inc</p> <p>Street Address 450 Montbrook Ln</p> <p>City State Zip Knoxville TN 37919</p> <p>Attention: Lori Sillinger</p> </div> <div style="width: 45%;"> <p>Matrix Codes</p> <p>DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Waste FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank</p> </div> </div>										<p>LAB USE ONLY</p>																
Street Address 4830 N. Berkeley Blvd		Street One Stanton St.																														
City State Zip Waukegan IL 60091		City State Zip Marquette WI 54871																														
Project Contact Eric Frauen		Project # 487																														
Phone # (414) 963-6210		Client POE Eric Frauen				<p>Number of preserved bottles</p> <table border="1"> <tr> <th>MECH</th> <th>IN03</th> <th>PR04</th> <th>NO06</th> <th>DI Water</th> <th>ME08</th> <th>EN09</th> <th>Residue</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										MECH	IN03	PR04	NO06	DI Water	ME08	EN09	Residue									<p>LAB USE ONLY</p>
MECH	IN03	PR04	NO06	DI Water	ME08	EN09	Residue																									
Sampler(s) Name(s) Chris Frauen		Project Manager Eric Frauen				<p>Attention: Lori Sillinger</p>										<p>LAB USE ONLY</p>																
Field ID / Point of Collection		MECH/ID		Date		Time		Sampled by		Matrix		# of bottles		Number of preserved bottles				Matrix Codes														
-1 MW-10				4/29/15		13:45		CF		S		4		<p>MECH IN03 PR04 NO06 DI Water ME08 EN09 Residue</p> <p>2 2 2 2</p>				<p>DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Waste FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank</p>														
-2 MW-11				↓		14:45		↓		↓		↓		<p>2 2</p>				<p>LAB USE ONLY</p>														
-3 MW-12				↓		15:15		↓		↓		↓		<p>2 2</p>				<p>LAB USE ONLY</p>														
-4 MW-13				↓		12:45		↓		↓		↓		<p>2 2</p>				<p>LAB USE ONLY</p>														

Metals + PAH's
PDOC's

11E, 10A4

Turnaround Time (Business days)		Approved By (Accutest PM): / Date:		Data Deliverable Information				Comments / Special Instructions			
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> Std. 5 Business Days (By Contract only) <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY		_____ _____ _____		<input checked="" type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULL T1 (Level 3+4) <input type="checkbox"/> CT RCP <input type="checkbox"/> MA MCP				<input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input type="checkbox"/> Other _____			
Emergency & Rush T/A data available VIA Lablink				Commercial "A" = Results Only Commercial "B" = Results + QC Summary							

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by: Sampler	Date/Time	Received By:	Relinquished By:	Date/Time	Received By:
<i>Chris Frauen</i>	4/29/15 11:00	1			

CUSTODY SEAL # _____
 Intact
 Not Intact
 Preserved where applicable
 On Ice Cooler Temp **4.0°**



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC38401 Client: O&M Project: STAUNTON 487
 Date / Time Received: 5/1/2015 9:30:00 AM Delivery Method: _____ Airbill #s: _____
 Cooler Temps (Initial/Adjusted): #1: (4/4):

Cooler Security

	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. SmpI Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

Cooler Temperature

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Thermometer ID:	<u>G1;</u>		
3. Cooler media:	<u>Ice (Bag)</u>		
4. No. Coolers:	<u>1</u>		

Quality Control Preservation

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. VOCs headspace free:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Sample Integrity - Documentation

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

Sample Integrity - Condition

	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	<u>Intact</u>		

Sample Integrity - Instructions

	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

Accutest Laboratories
V: (508) 481-6200

495 Technology Center West, Bldg One
F: (508) 481-7753

Marlborough, MA 01752
www.accutest.com

5.1
5

GC/MS Volatiles

9

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC38401
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSK2735-MB	K87777.D	1	05/13/15	JM	n/a	n/a	MSK2735

The QC reported here applies to the following samples:

Method: SW846 8260C

MC38401-1, MC38401-2, MC38401-3, MC38401-4

6.1.1



CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	25	19	ug/kg	
100-41-4	Ethylbenzene	ND	100	19	ug/kg	
1634-04-4	Methyl Tert Butyl Ether	ND	100	33	ug/kg	
91-20-3	Naphthalene	ND	250	30	ug/kg	
108-88-3	Toluene	ND	250	20	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	250	19	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	250	16	ug/kg	
1330-20-7	Xylene (total)	ND	100	17	ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	95% 65-141%
2037-26-5	Toluene-D8	100% 65-129%
460-00-4	4-Bromofluorobenzene	90% 63-137%

CAS No.	Tentatively Identified Compounds	R.T.	Est. Conc.	Units	Q
	Total TIC, Volatile		0	ug/kg	

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38401
 Account: OMIWIWF O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSK2735-BS	K87774.D	1	05/13/15	JM	n/a	n/a	MSK2735
MSK2735-BSD	K87775.D	1	05/13/15	JM	n/a	n/a	MSK2735

The QC reported here applies to the following samples:

Method: SW846 8260C

MC38401-1, MC38401-2, MC38401-3, MC38401-4

6.2.1



CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	BSD ug/kg	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	2500	2180	87	2180	87	0	67-124/25
100-41-4	Ethylbenzene	2500	2370	95	2370	95	0	75-120/25
1634-04-4	Methyl Tert Butyl Ether	2500	2080	83	2080	83	0	64-126/25
91-20-3	Naphthalene	2500	2060	82	1880	75	9	51-164/25
108-88-3	Toluene	2500	2350	94	2370	95	1	76-122/25
95-63-6	1,2,4-Trimethylbenzene	2500	2070	83	2050	82	1	73-124/25
108-67-8	1,3,5-Trimethylbenzene	2500	2120	85	2100	84	1	69-122/25
1330-20-7	Xylene (total)	7500	7310	97	7320	98	0	78-121/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	93%	93%	65-141%
2037-26-5	Toluene-D8	100%	101%	65-129%
460-00-4	4-Bromofluorobenzene	92%	92%	63-137%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC38401
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Method: SW846 8260C	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC38401-1	K87778.D	92	98	92
MC38401-2	K87779.D	95	99	89
MC38401-3	K87780.D	94	98	90
MC38401-4	K87781.D	96	98	92
MSK2735-BS	K87774.D	93	100	92
MSK2735-BSD	K87775.D	93	101	92
MSK2735-MB	K87777.D	95	100	90

Surrogate Compounds	Recovery Limits
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S1 = Dibromofluoromethane	65-141%
S2 = Toluene-D8	65-129%
S3 = 4-Bromofluorobenzene	63-137%

6.3.1
6

GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC38401
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42932-MB	SU10994.D	1	05/13/15	PN	05/04/15	OP42932	GSU630

The QC reported here applies to the following samples:

Method: SW846 8310

MC38401-1, MC38401-2, MC38401-3, MC38401-4

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	32	2.6	ug/kg	
208-96-8	Acenaphthylene	ND	32	2.5	ug/kg	
120-12-7	Anthracene	ND	32	1.7	ug/kg	
56-55-3	Benzo (a) anthracene	ND	32	2.5	ug/kg	
50-32-8	Benzo (a) pyrene	ND	32	3.1	ug/kg	
205-99-2	Benzo (b) fluoranthene	ND	32	2.9	ug/kg	
191-24-2	Benzo (g,h,i) perylene	ND	32	7.0	ug/kg	
207-08-9	Benzo (k) fluoranthene	ND	32	3.7	ug/kg	
218-01-9	Chrysene	ND	32	2.3	ug/kg	
53-70-3	Dibenz(a,h)anthracene	ND	32	6.5	ug/kg	
206-44-0	Fluoranthene	ND	32	5.4	ug/kg	
86-73-7	Fluorene	ND	32	1.6	ug/kg	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	32	11	ug/kg	
91-57-6	2-Methylnaphthalene	ND	32	2.6	ug/kg	
91-20-3	Naphthalene	ND	32	1.8	ug/kg	
85-01-8	Phenanthrene	ND	32	2.9	ug/kg	
129-00-0	Pyrene	ND	32	7.1	ug/kg	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	66%	13-139%
84-15-1	o-Terphenyl	65%	13-139%

7.1.1
7

Blank Spike Summary

Job Number: MC38401
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42932-BS	SU10995.D	1	05/13/15	PN	05/04/15	OP42932	GSU630

The QC reported here applies to the following samples:

Method: SW846 8310

MC38401-1, MC38401-2, MC38401-3, MC38401-4

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	634	340	54	35-97
208-96-8	Acenaphthylene	634	348	55	36-99
120-12-7	Anthracene	634	422	67	38-110
56-55-3	Benzo (a) anthracene	634	403	64	41-118
50-32-8	Benzo (a) pyrene	634	412	65	41-116
205-99-2	Benzo (b) fluoranthene	634	406	64	41-119
191-24-2	Benzo (g,h,i) perylene	634	408	64	43-120
207-08-9	Benzo (k) fluoranthene	634	407	64	41-119
218-01-9	Chrysene	634	412	65	41-125
53-70-3	Dibenz(a,h)anthracene	634	415	65	42-120
206-44-0	Fluoranthene	634	388	61	38-113
86-73-7	Fluorene	634	354	56	33-104
193-39-5	Indeno (1,2,3-cd) pyrene	634	402	63	42-120
91-57-6	2-Methylnaphthalene	634	324	51	33-99
91-20-3	Naphthalene	634	345	54	34-93
85-01-8	Phenanthrene	634	375	59	36-107
129-00-0	Pyrene	634	389	61	40-113

CAS No.	Surrogate Recoveries	BSP	Limits
84-15-1	o-Terphenyl	68%	13-139%
84-15-1	o-Terphenyl	68%	13-139%

* = Outside of Control Limits.

7.2.1
7

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: MC38401
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP42932-MS	SU10998.D	1	05/13/15	PN	05/04/15	OP42932	GSU630
OP42932-MSD	SU10999.D	1	05/13/15	PN	05/04/15	OP42932	GSU630
MC38401-2	SU11000.D	1	05/13/15	PN	05/04/15	OP42932	GSU630

The QC reported here applies to the following samples:

Method: SW846 8310

MC38401-1, MC38401-2, MC38401-3, MC38401-4

CAS No.	Compound	MC38401-2 ug/kg	Spike Q	MS ug/kg	MS %	Spike ug/kg	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND	816	386	47	789	428	54	10	10-195/30
208-96-8	Acenaphthylene	ND	816	399	49	789	447	57	11	20-129/30
120-12-7	Anthracene	ND	816	487	60	789	523	66	7	10-200/30
56-55-3	Benzo (a) anthracene	ND	816	500	61	789	522	66	4	10-194/30
50-32-8	Benzo (a) pyrene	ND	816	502	62	789	532	67	6	10-185/30
205-99-2	Benzo (b) fluoranthene	ND	816	498	61	789	523	66	5	10-163/30
191-24-2	Benzo (g,h,i) perylene	ND	816	496	61	789	519	66	5	10-141/30
207-08-9	Benzo (k) fluoranthene	ND	816	499	61	789	526	67	5	10-133/30
218-01-9	Chrysene	ND	816	504	62	789	532	67	5	10-200/30
53-70-3	Dibenz(a,h)anthracene	ND	816	507	62	789	533	68	5	28-114/30
206-44-0	Fluoranthene	ND	816	472	58	789	497	63	5	16-126/30
86-73-7	Fluorene	ND	816	408	50	789	442	56	8	10-119/30
193-39-5	Indeno (1,2,3-cd) pyrene	ND	816	495	61	789	516	65	4	10-172/30
91-57-6	2-Methylnaphthalene	ND	816	378	46	789	417	53	10	10-200/30
91-20-3	Naphthalene	ND	816	350	43	789	426	54	20	10-154/30
85-01-8	Phenanthrene	ND	816	446	55	789	471	60	5	10-200/30
129-00-0	Pyrene	ND	816	472	58	789	496	63	5	10-186/30

CAS No.	Surrogate Recoveries	MS	MSD	MC38401-2	Limits
84-15-1	o-Terphenyl	58%	63%	58%	13-139%
84-15-1	o-Terphenyl	58%	62%	58%	13-139%

* = Outside of Control Limits.

7.3.1
7

Semivolatile Surrogate Recovery Summary

Job Number: MC38401

Account: OMIWIWF O&M, Inc.

Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Method: SW846 8310	Matrix: SO
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b
MC38401-1	SU11006.D	66	65
MC38401-2	SU11000.D	58	58
MC38401-3	SU11001.D	56	56
MC38401-4	SU11002.D	47	40
OP42932-BS	SU10995.D	68	68
OP42932-MB	SU10994.D	66	65
OP42932-MS	SU10998.D	58	58
OP42932-MSD	SU10999.D	63	62

Surrogate Compounds

Recovery Limits

S1 = o-Terphenyl

13-139%

(a) Recovery from GC signal #2

(b) Recovery from GC signal #1

7.4.1
7

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC38401
Account: OMIWIWF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24567
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 05/05/15

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.033	.0063	.008	-0.0017	<0.033

Associated samples MP24567: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.1.1

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38401
Account: OMIWIF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24567
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 05/05/15

Metal	MC38409-3 Original MS	Spikelot HGRWS1	% Rec	QC Limits
Mercury	0.053	0.65	0.557	107.2 80-120

Associated samples MP24567: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

8.1.2



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38401
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24567
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 05/05/15

Metal	MC38409-3 Original MSD	Spikelot HGRWS1	% Rec	MSD RPD	QC Limit
Mercury	0.053	0.65	0.557	107.2	0.0 20

Associated samples MP24567: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

8.1.2
8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC38401
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24567
 Matrix Type: SOLID

Methods: SW846 7471B
 Units: mg/kg

Prep Date: 05/05/15 05/05/15

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	0.53	0.5	106.0	80-120	0.52	0.5	104.0	1.9	20

Associated samples MP24567: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

8.1.3


SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC38401
Account: OMIWIWF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24567
Matrix Type: SOLID

Methods: SW846 7471B
Units: mg/kg

Prep Date: 05/05/15

Metal	LCS Result	Spikelot HGLCS81	% Rec	QC Limits
Mercury	3.8	3.98	95.5	75-126

Associated samples MP24567: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.1.3

8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC38401
Account: OMIWIWF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 05/06/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	20	1.3	2.7		
Antimony	1.0	.11	.12		
Arsenic	1.0	.16	.19	0.040	<1.0
Barium	5.0	.022	.065	0.060	<5.0
Beryllium	0.40	.017	.017		
Bismuth	5.0	.13	.15		
Boron	10	.093	.12		
Cadmium	0.40	.016	.031	0.0	<0.40
Calcium	500	.81	.87		
Chromium	1.0	.035	.051	0.030	<1.0
Cobalt	5.0	.022	.022		
Copper	2.5	.16	.16		
Gold	5.0	.11	.14		
Iron	10	.38	1.3		
Lead	1.0	.11	.11	0.030	<1.0
Lithium	50	.19	.22		
Magnesium	500	2.7	3.4		
Manganese	1.5	.002	.065		
Molybdenum	10	.078	.52		
Nickel	4.0	.032	.056		
Palladium	5.0	.14	.16		
Platinum	5.0	.46	.48		
Potassium	500	4	4.1		
Selenium	1.0	.18	.24	0.070	<1.0
Silicon	10	1.2	1.2		
Silver	0.50	.042	.042	-0.050	<0.50
Sodium	500	1.4	4.4		
Sulfur	5.0	.2	.4		
Strontium	1.0	.004	.017		
Thallium	1.0	.16	.22		
Tin	10	.073	.086		
Titanium	5.0	.05	.06		
Tungsten	10	.18	.54		

8.2.1
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC38401
Account: OMIWIWF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 05/06/15

Metal	RL	IDL	MDL	MB	
				raw	final
Vanadium	1.0	.036	.041		
Zinc	2.0	.099	.21		
Zirconium	5.0	.019	.17		

Associated samples MP24568: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.2.1
8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38401
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 05/06/15

Metal	MC38401-2 Original MS	Spikelot MPICP7	% Rec	QC Limits	
Aluminum	anr				
Antimony	anr				
Arsenic	1.5	47.1	48.6	93.8	75-125
Barium	7.7	177	195	87.0	75-125
Beryllium	anr				
Bismuth					
Boron					
Cadmium	0.0	45.2	48.6	92.9	75-125
Calcium	anr				
Chromium	5.2	48.1	48.6	88.2	75-125
Cobalt	anr				
Copper	anr				
Gold					
Iron	anr				
Lead	1.9	90.9	97.3	91.5	75-125
Lithium					
Magnesium	anr				
Manganese	anr				
Molybdenum					
Nickel	anr				
Palladium					
Platinum					
Potassium	anr				
Selenium	0.24	45.4	48.6	92.9	75-125
Silicon					
Silver	0.0	17.4	19.5	89.4	75-125
Sodium	anr				
Sulfur					
Strontium					
Thallium	anr				
Tin					
Titanium					
Tungsten					

8.2.2
 8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38401
Account: OMIWIF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 05/06/15

Metal	MC38401-2 Original MS	Spikelot MPICP7	% Rec	QC Limits
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Vanadium anr

Zinc anr

Zirconium

Associated samples MP24568: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

8.2.2



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38401
 Account: OMIWIF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 05/06/15

Metal	MC38401-2 Original MSD	Spikelot MPICP7	% Rec	MSD RPD	QC Limit	
Aluminum	anr					
Antimony	anr					
Arsenic	1.5	46.8	48.2	93.9	0.6	20
Barium	7.7	178	193	88.2	0.6	20
Beryllium	anr					
Bismuth						
Boron						
Cadmium	0.0	45.5	48.2	94.3	0.7	20
Calcium	anr					
Chromium	5.2	48.6	48.2	90.0	1.0	20
Cobalt	anr					
Copper	anr					
Gold						
Iron	anr					
Lead	1.9	90.6	96.5	91.9	0.3	20
Lithium						
Magnesium	anr					
Manganese	anr					
Molybdenum						
Nickel	anr					
Palladium						
Platinum						
Potassium	anr					
Selenium	0.24	44.6	48.2	91.9	1.8	20
Silicon						
Silver	0.0	17.6	19.3	91.2	1.1	20
Sodium	anr					
Sulfur						
Strontium						
Thallium	anr					
Tin						
Titanium						
Tungsten						

8.2.2

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38401
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 05/06/15

Metal	MC38401-2 Original MSD	Spikelot MPICP7	% Rec	MSD RPD	QC Limit
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Vanadium anr

Zinc anr

Zirconium

Associated samples MP24568: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (N) Matrix Spike Rec. outside of QC limits
 (anr) Analyte not requested

8.2.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC38401
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 05/06/15 05/06/15

Metal	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	BSD RPD	QC Limit
Aluminum	anr								
Antimony	anr								
Arsenic	46.7	50	93.4	80-120	46.6	50	93.2	0.2	20
Barium	179	200	89.5	80-120	177	200	88.5	1.1	20
Beryllium	anr								
Bismuth									
Boron									
Cadmium	46.3	50	92.6	80-120	45.2	50	90.4	2.4	20
Calcium	anr								
Chromium	46.7	50	93.4	80-120	46.5	50	93.0	0.4	20
Cobalt	anr								
Copper	anr								
Gold									
Iron	anr								
Lead	92.2	100	92.2	80-120	91.9	100	91.9	0.3	20
Lithium									
Magnesium	anr								
Manganese	anr								
Molybdenum									
Nickel	anr								
Palladium									
Platinum									
Potassium	anr								
Selenium	45.9	50	91.8	80-120	46.0	50	92.0	0.2	20
Silicon									
Silver	17.8	20	89.0	80-120	17.3	20	86.5	2.8	20
Sodium	anr								
Sulfur									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									

8.2.3


SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC38401
 Account: OMIWIF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 05/06/15 05/06/15

Metal	BSP Result	Spikelot MPICP7	% Rec	QC Limits	BSD Result	Spikelot MPICP7	% Rec	BSD RPD	QC Limit
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Vanadium anr

Zinc anr

Zirconium

Associated samples MP24568: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (anr) Analyte not requested

8.2.3

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC38401
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: mg/kg

Prep Date: 05/06/15

Metal	LCS Result	SpikeLot MPLCS81	% Rec	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	112	122	91.8	78-122
Barium	142	167	85.0	82-117
Beryllium	anr			
Bismuth				
Boron				
Cadmium	80.7	88	91.7	82-118
Calcium	anr			
Chromium	91.3	102	89.5	79-121
Cobalt	anr			
Copper	anr			
Gold				
Iron	anr			
Lead	86.3	94.5	91.3	81-119
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Palladium				
Platinum				
Potassium	anr			
Selenium	144	157	91.7	77-122
Silicon				
Silver	32.0	34.2	93.6	74-125
Sodium	anr			
Sulfur				
Strontium				
Thallium	anr			
Tin				
Titanium				
Tungsten				

8.2.3

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC38401
Account: OMIWIWF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
Matrix Type: SOLID

Methods: SW846 6010C
Units: mg/kg

Prep Date: 05/06/15

Metal	LCS Result	Spikelot MPLCS81	% Rec	QC Limits
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Vanadium anr

Zinc anr

Zirconium

Associated samples MP24568: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

8.2.3



SERIAL DILUTION RESULTS SUMMARY

Login Number: MC38401
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date: 05/06/15

Metal	MC38401-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony	anr			
Arsenic	15.9	18.1	13.8 (a)	0-10
Barium	80.0	81.0	1.3	0-10
Beryllium	anr			
Bismuth				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium	anr			
Chromium	54.7	55.7	1.8	0-10
Cobalt	anr			
Copper	anr			
Gold				
Iron	anr			
Lead	20.2	15.6	22.8 (a)	0-10
Lithium				
Magnesium	anr			
Manganese	anr			
Molybdenum				
Nickel	anr			
Palladium				
Platinum				
Potassium	anr			
Selenium	2.50	9.50	280.0 (a)	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium	anr			
Sulfur				
Strontium				
Thallium	anr			
Tin				
Titanium				
Tungsten				

8.2.4

8

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC38401
Account: OMIWIF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
Matrix Type: SOLID

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/06/15

Metal	MC38401-2 Original SDL 1:5	%DIF	QC Limits
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Vanadium anr

Zinc anr

Zirconium

Associated samples MP24568: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

8.2.4

8

POST DIGESTATE SPIKE SUMMARY

Login Number: MC38401
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date:

05/06/15

Metal	Sample ml	Final ml	MC38401-2 Raw	PS Corr.** ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic									
Barium									
Beryllium									
Bismuth									
Boron									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Gold									
Iron									
Lead									
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Palladium									
Platinum									
Potassium									
Selenium									
Silicon									
Silver									
Sodium									
Sulfur									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									

8.2.5


POST DIGESTATE SPIKE SUMMARY

Login Number: MC38401
 Account: OMIWIF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24568
 Matrix Type: SOLID

Methods: SW846 6010C
 Units: ug/l

Prep Date:

05/06/15

Metal	Sample ml	Final ml	MC38401-2 Raw	PS Corr.**	ug/l	Spike ml	Spike ug/ml	Spike ug/l	% Rec	QC Limits
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Vanadium

Zinc

Zirconium

Associated samples MP24568: MC38401-1, MC38401-2, MC38401-3, MC38401-4

Results < IDL are shown as zero for calculation purposes
 (*) Outside of QC limits
 (**) Corr. sample result = Raw * (sample volume / final volume)
 (anr) Analyte not requested

8.2.5


Technical Report for

O&M, Inc.

Tyco - Diesel, One Stanton Street, Marinette, WI
487

Accutest Job Number: MC38720

Sampling Dates: 05/13/15 - 05/14/15

Report to:

O&M, Inc.

efrauen@oandm-inc.com

ATTN: Eric Frauen

Total number of pages in report: **95**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.


Reza Fand
Lab Director

Client Service contact: Frank DAgostino 508-481-6200

Certifications: MA (M-MA136, SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579)
NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220)
DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

O&M, Inc.

Job No: MC38720

Tyco - Diesel, One Stanton Street, Marinette, WI
 Project No: 487

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
MC38720-1	05/13/15	12:35 CF	05/16/15	AQ	Ground Water	MW-13
MC38720-2	05/13/15	13:15 CF	05/16/15	AQ	Ground Water	MW-10
MC38720-3	05/13/15	14:15 CF	05/16/15	AQ	Ground Water	MW-2
MC38720-4	05/13/15	15:00 CF	05/16/15	AQ	Ground Water	MW-5
MC38720-5	05/13/15	16:15 CF	05/16/15	AQ	Ground Water	MW013M
MC38720-6	05/13/15	16:35 CF	05/16/15	AQ	Ground Water	MW013S
MC38720-7	05/13/15	17:00 CF	05/16/15	AQ	Ground Water	MW013D
MC38720-8	05/14/15	11:45 CF	05/16/15	AQ	Ground Water	MW-11
MC38720-9	05/14/15	12:30 CF	05/16/15	AQ	Ground Water	MW-4
MC38720-10	05/14/15	13:30 CF	05/16/15	AQ	Ground Water	MW-6
MC38720-11	05/14/15	14:16 CF	05/16/15	AQ	Ground Water	MW-7
MC38720-12	05/14/15	14:50 CF	05/16/15	AQ	Ground Water	MW-8
MC38720-13	05/14/15	15:18 CF	05/16/15	AQ	Ground Water	MW-3



Sample Summary

(continued)

O&M, Inc.

Job No: MC38720

Tyco - Diesel, One Stanton Street, Marinette, WI
 Project No: 487

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
MC38720-14	05/14/15	15:45 CF	05/16/15	AQ	Ground Water	PZ-1
MC38720-15	05/14/15	16:42 CF	05/16/15	AQ	Ground Water	MW-9
MC38720-16	05/14/15	17:15 CF	05/16/15	AQ	Ground Water	MW-12
MC38720-17	05/14/15	17:40 CF	05/16/15	AQ	Ground Water	MW040S



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: O&M, Inc.

Job No MC38720

Site: Tyco - Diesel, One Stanton Street, Marinette, WI

Report Date 6/4/2015 6:04:13 PM

17 Sample(s) were collected on between 05/13/2015 and 05/14/2015 and were received at Accutest on 05/16/2015 properly preserved, at 2.9 Deg. C and intact. These Samples received an Accutest job number of MC38720. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260C

Matrix	AQ	Batch ID:	MSN3576
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- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Matrix	AQ	Batch ID:	MSU1216
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- All method blanks for this batch meet method specific criteria.
- MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17, MC38720-8, MC38720-9: Sample reanalyzed outside holding time.

Matrix	AQ	Batch ID:	MSV1421
--------	----	-----------	---------

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846 8310

Matrix	AQ	Batch ID:	OP43095
--------	----	-----------	---------

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) MC38720-1, MC38720-12, MC38720-15, MC38720-2 have compound(s) reported with a "B" qualifier, indicating analyte is found in the associated method blank.
- MC38720-15 for Naphthalene: Confirmation value >40% RPD.
- MC38720-15 for Anthracene: Confirmation value >40% RPD.
- MC38720-17 for Anthracene: Confirmation value >40% RPD.
- MC38720-1 for Indeno (1,2,3-cd) pyrene: Confirmation value >40% RPD.
- MC38720-2 for Dibenz(a,h)anthracene: Confirmation value >40% RPD.

Metals By Method SW846 6010C

Matrix	AQ	Batch ID:	MP24617
--------	----	-----------	---------

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC38720-5MS, MC38720-5MSD, MC38720-5SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Arsenic, Chromium, Lead are outside control limits for sample MP24617-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

Metals By Method SW846 7470A

Matrix AQ	Batch ID: MP24636
------------------	--------------------------

2

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC38720-7MS, MC38720-7MSD were used as the QC samples for metals.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report (MC38720).

Summary of Hits

Job Number: MC38720
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 05/13/15 thru 05/14/15



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
MC38720-1		MW-13					
		Benzo (a) anthracene	0.35	0.15	0.013	ug/l	SW846 8310
		Benzo (a) pyrene	0.55	0.15	0.014	ug/l	SW846 8310
		Benzo (b) fluoranthene	0.28	0.15	0.011	ug/l	SW846 8310
		Benzo (g,h,i) perylene	0.48	0.15	0.023	ug/l	SW846 8310
		Benzo (k) fluoranthene	0.13 J	0.15	0.018	ug/l	SW846 8310
		Chrysene	0.44	0.15	0.016	ug/l	SW846 8310
		Fluoranthene	0.56	0.15	0.018	ug/l	SW846 8310
		Fluorene	0.043 J	0.15	0.014	ug/l	SW846 8310
		Indeno (1,2,3-cd) pyrene ^a	0.39	0.15	0.017	ug/l	SW846 8310
		Naphthalene	0.027 JB	0.15	0.0092	ug/l	SW846 8310
		Phenanthrene	0.22	0.15	0.015	ug/l	SW846 8310
		Pyrene	0.80	0.15	0.014	ug/l	SW846 8310
		Arsenic	5.4	4.0	1.7	ug/l	SW846 6010C
		Barium	355	50	1.0	ug/l	SW846 6010C
		Cadmium	0.90 B	4.0	0.43	ug/l	SW846 6010C
		Chromium	13.3	10	0.48	ug/l	SW846 6010C
		Lead	159	5.0	1.7	ug/l	SW846 6010C
		Mercury	0.17 B	0.20	0.096	ug/l	SW846 7470A
MC38720-2		MW-10					
		Anthracene	0.45	0.15	0.10	ug/l	SW846 8310
		Benzo (a) anthracene	0.30	0.15	0.013	ug/l	SW846 8310
		Benzo (a) pyrene	0.44	0.15	0.014	ug/l	SW846 8310
		Benzo (b) fluoranthene	0.32	0.15	0.011	ug/l	SW846 8310
		Benzo (g,h,i) perylene	0.32	0.15	0.023	ug/l	SW846 8310
		Benzo (k) fluoranthene	0.20	0.15	0.018	ug/l	SW846 8310
		Chrysene	0.40	0.15	0.016	ug/l	SW846 8310
		Dibenz(a,h)anthracene ^a	0.019 JB	0.15	0.014	ug/l	SW846 8310
		Fluoranthene	0.66	0.15	0.018	ug/l	SW846 8310
		Indeno (1,2,3-cd) pyrene	0.26	0.15	0.017	ug/l	SW846 8310
		Naphthalene	0.12 JB	0.15	0.0092	ug/l	SW846 8310
		Phenanthrene	0.25	0.15	0.015	ug/l	SW846 8310
		Pyrene	0.84	0.15	0.014	ug/l	SW846 8310
		Arsenic	13.0	4.0	1.7	ug/l	SW846 6010C
		Barium	572	50	1.0	ug/l	SW846 6010C
		Cadmium	1.3 B	4.0	0.43	ug/l	SW846 6010C
		Chromium	15.6	10	0.48	ug/l	SW846 6010C
		Lead	321	5.0	1.7	ug/l	SW846 6010C
		Mercury	0.19 B	0.20	0.096	ug/l	SW846 7470A
		Selenium	3.8 B	10	2.0	ug/l	SW846 6010C

Summary of Hits

Job Number: MC38720
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 05/13/15 thru 05/14/15



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
MC38720-3		MW-2					
		Benzo (a) anthracene	0.013 J	0.15	0.013	ug/l	SW846 8310
		Chrysene	0.019 J	0.15	0.016	ug/l	SW846 8310
		Fluoranthene	0.033 J	0.15	0.018	ug/l	SW846 8310
		Phenanthrene	0.018 J	0.15	0.015	ug/l	SW846 8310
		Pyrene	0.033 J	0.15	0.014	ug/l	SW846 8310
		Arsenic	2.0 B	4.0	1.7	ug/l	SW846 6010C
		Barium	208	50	1.0	ug/l	SW846 6010C
		Chromium	1.4 B	10	0.48	ug/l	SW846 6010C
		Lead	5.1	5.0	1.7	ug/l	SW846 6010C
MC38720-4		MW-5					
		Benzo (a) anthracene	0.035 J	0.15	0.013	ug/l	SW846 8310
		Benzo (a) pyrene	0.056 J	0.15	0.014	ug/l	SW846 8310
		Benzo (b) fluoranthene	0.031 J	0.15	0.011	ug/l	SW846 8310
		Benzo (g,h,i) perylene	0.038 J	0.15	0.023	ug/l	SW846 8310
		Chrysene	0.046 J	0.15	0.016	ug/l	SW846 8310
		Fluoranthene	0.044 J	0.15	0.018	ug/l	SW846 8310
		Phenanthrene	0.021 J	0.15	0.015	ug/l	SW846 8310
		Pyrene	0.072 J	0.15	0.014	ug/l	SW846 8310
		Arsenic	4.3	4.0	1.7	ug/l	SW846 6010C
		Barium	155	50	1.0	ug/l	SW846 6010C
		Chromium	1.6 B	10	0.48	ug/l	SW846 6010C
		Lead	7.5	5.0	1.7	ug/l	SW846 6010C
MC38720-5		MW013M					
		Benzo (a) anthracene	0.016 J	0.15	0.013	ug/l	SW846 8310
		Benzo (a) pyrene	0.042 J	0.15	0.014	ug/l	SW846 8310
		Benzo (b) fluoranthene	0.036 J	0.15	0.011	ug/l	SW846 8310
		Benzo (k) fluoranthene	0.019 J	0.15	0.018	ug/l	SW846 8310
		Chrysene	0.031 J	0.15	0.016	ug/l	SW846 8310
		Phenanthrene	0.021 J	0.15	0.015	ug/l	SW846 8310
		Pyrene	0.039 J	0.15	0.014	ug/l	SW846 8310
		Arsenic	2.0 B	4.0	1.7	ug/l	SW846 6010C
		Barium	143	50	1.0	ug/l	SW846 6010C
		Chromium	1.1 B	10	0.48	ug/l	SW846 6010C
MC38720-6		MW013S					
		Arsenic	3.1 B	4.0	1.7	ug/l	SW846 6010C
		Barium	67.8	50	1.0	ug/l	SW846 6010C
		Chromium	0.90 B	10	0.48	ug/l	SW846 6010C

Summary of Hits

Job Number: MC38720
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 05/13/15 thru 05/14/15



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
MC38720-7	MW013D						
		Arsenic	11.3	4.0	1.7	ug/l	SW846 6010C
		Barium	67.9	50	1.0	ug/l	SW846 6010C
		Cadmium	0.60 B	4.0	0.43	ug/l	SW846 6010C
		Chromium	5.6 B	10	0.48	ug/l	SW846 6010C
MC38720-8	MW-11						
		Toluene	2.0	1.0	0.29	ug/l	SW846 8260C
		Arsenic	6.9	4.0	1.7	ug/l	SW846 6010C
		Barium	303	50	1.0	ug/l	SW846 6010C
		Chromium	4.6 B	10	0.48	ug/l	SW846 6010C
		Selenium	4.2 B	10	2.0	ug/l	SW846 6010C
MC38720-9	MW-4						
		Barium	215	50	1.0	ug/l	SW846 6010C
		Chromium	0.60 B	10	0.48	ug/l	SW846 6010C
MC38720-10	MW-6						
		Barium	198	50	1.0	ug/l	SW846 6010C
		Chromium	0.70 B	10	0.48	ug/l	SW846 6010C
		Selenium	2.1 B	10	2.0	ug/l	SW846 6010C
MC38720-11	MW-7						
		Benzo (a) anthracene	0.018 J	0.15	0.013	ug/l	SW846 8310
		Benzo (a) pyrene	0.023 J	0.15	0.014	ug/l	SW846 8310
		Chrysene	0.025 J	0.15	0.016	ug/l	SW846 8310
		Fluoranthene	0.060 J	0.15	0.018	ug/l	SW846 8310
		Fluorene	0.016 J	0.15	0.014	ug/l	SW846 8310
		Phenanthrene	0.060 J	0.15	0.015	ug/l	SW846 8310
		Pyrene	0.070 J	0.15	0.014	ug/l	SW846 8310
		Arsenic	2.0 B	4.0	1.7	ug/l	SW846 6010C
		Barium	182	50	1.0	ug/l	SW846 6010C
		Chromium	1.0 B	10	0.48	ug/l	SW846 6010C
		Lead	2.5 B	5.0	1.7	ug/l	SW846 6010C
MC38720-12	MW-8						
		Benzo (a) anthracene	0.59	0.15	0.013	ug/l	SW846 8310
		Benzo (a) pyrene	0.72	0.15	0.014	ug/l	SW846 8310

Summary of Hits

Job Number: MC38720
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 05/13/15 thru 05/14/15



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
		Benzo (b) fluoranthene	0.63	0.15	0.011	ug/l	SW846 8310
		Benzo (g,h,i) perylene	0.39	0.15	0.023	ug/l	SW846 8310
		Benzo (k) fluoranthene	0.32	0.15	0.018	ug/l	SW846 8310
		Chrysene	0.56	0.15	0.016	ug/l	SW846 8310
		Dibenz(a,h)anthracene	0.076 JB	0.15	0.014	ug/l	SW846 8310
		Fluoranthene	0.35	0.15	0.018	ug/l	SW846 8310
		Fluorene	0.026 J	0.15	0.014	ug/l	SW846 8310
		Indeno (1,2,3-cd) pyrene	0.40	0.15	0.017	ug/l	SW846 8310
		Pyrene	0.36	0.15	0.014	ug/l	SW846 8310
		Barium	216	50	1.0	ug/l	SW846 6010C
		Chromium	0.70 B	10	0.48	ug/l	SW846 6010C
MC38720-13		MW-3					
		Benzo (b) fluoranthene	0.021 J	0.16	0.011	ug/l	SW846 8310
		Phenanthrene	0.017 J	0.16	0.016	ug/l	SW846 8310
		Barium	133	50	1.0	ug/l	SW846 6010C
MC38720-14		PZ-1					
		Benzo (b) fluoranthene	0.022 J	0.16	0.011	ug/l	SW846 8310
		Chrysene	0.025 J	0.16	0.017	ug/l	SW846 8310
		Fluoranthene	0.037 J	0.16	0.019	ug/l	SW846 8310
		Phenanthrene	0.023 J	0.16	0.016	ug/l	SW846 8310
		Pyrene	0.044 J	0.16	0.015	ug/l	SW846 8310
		Arsenic	4.1	4.0	1.7	ug/l	SW846 6010C
		Barium	472	50	1.0	ug/l	SW846 6010C
		Chromium	1.1 B	10	0.48	ug/l	SW846 6010C
		Selenium	2.8 B	10	2.0	ug/l	SW846 6010C
MC38720-15		MW-9					
		Acenaphthene	0.46 J	1.0	0.11	ug/l	SW846 8310
		Anthracene ^a	0.84	0.16	0.10	ug/l	SW846 8310
		Benzo (a) anthracene	0.022 J	0.16	0.014	ug/l	SW846 8310
		Benzo (a) pyrene	0.024 J	0.16	0.015	ug/l	SW846 8310
		Chrysene	0.044 J	0.16	0.017	ug/l	SW846 8310
		Fluoranthene	0.22	0.16	0.019	ug/l	SW846 8310
		Fluorene	0.089 J	0.16	0.015	ug/l	SW846 8310
		2-Methylnaphthalene	0.14 JB	0.16	0.018	ug/l	SW846 8310
		Naphthalene ^a	0.13 JB	0.16	0.0094	ug/l	SW846 8310
		Phenanthrene	0.45	0.16	0.016	ug/l	SW846 8310
		Pyrene	0.35	0.16	0.015	ug/l	SW846 8310
		Barium	231	50	1.0	ug/l	SW846 6010C
		Chromium	0.70 B	10	0.48	ug/l	SW846 6010C

Summary of Hits

Job Number: MC38720
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 05/13/15 thru 05/14/15



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Lead		11.9	5.0	1.7	ug/l	SW846 6010C
MC38720-16						
	MW-12					
Phenanthrene		0.017 J	0.15	0.015	ug/l	SW846 8310
Pyrene		0.032 J	0.15	0.014	ug/l	SW846 8310
Barium		98.7	50	1.0	ug/l	SW846 6010C
Chromium		1.6 B	10	0.48	ug/l	SW846 6010C
MC38720-17						
	MW040S					
Acenaphthene		0.67 J	1.0	0.11	ug/l	SW846 8310
Anthracene ^a		1.2	0.15	0.10	ug/l	SW846 8310
Benzo (a) anthracene		0.031 J	0.15	0.013	ug/l	SW846 8310
Benzo (a) pyrene		0.027 J	0.15	0.014	ug/l	SW846 8310
Chrysene		0.050 J	0.15	0.016	ug/l	SW846 8310
Fluoranthene		0.32	0.15	0.018	ug/l	SW846 8310
Fluorene		0.46	0.15	0.014	ug/l	SW846 8310
Phenanthrene		0.37	0.15	0.015	ug/l	SW846 8310
Pyrene		0.30	0.15	0.014	ug/l	SW846 8310
Arsenic		55.5	4.0	1.7	ug/l	SW846 6010C
Barium		286	50	1.0	ug/l	SW846 6010C
Cadmium		0.70 B	4.0	0.43	ug/l	SW846 6010C
Chromium		4.4 B	10	0.48	ug/l	SW846 6010C
Lead ^b		3.5 B	10	3.4	ug/l	SW846 6010C
Selenium		6.0 B	10	2.0	ug/l	SW846 6010C

(a) Confirmation value > 40% RPD.

(b) Elevated RL due to dilution required for matrix interference.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-13	Date Sampled: 05/13/15
Lab Sample ID: MC38720-1	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V39436.D	1	05/27/15	KD	n/a	n/a	MSV1421
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		72-133%
2037-26-5	Toluene-D8	99%		85-114%
460-00-4	4-Bromofluorobenzene	115%		70-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-13	Date Sampled: 05/13/15
Lab Sample ID: MC38720-1	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11054.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	0.35	0.15	0.013	ug/l	
50-32-8	Benzo (a) pyrene	0.55	0.15	0.014	ug/l	
205-99-2	Benzo (b) fluoranthene	0.28	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	0.48	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	0.13	0.15	0.018	ug/l	J
218-01-9	Chrysene	0.44	0.15	0.016	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	0.56	0.15	0.018	ug/l	
86-73-7	Fluorene	0.043	0.15	0.014	ug/l	J
193-39-5	Indeno (1,2,3-cd) pyrene ^a	0.39	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	0.027	0.15	0.0092	ug/l	JB
85-01-8	Phenanthrene	0.22	0.15	0.015	ug/l	
129-00-0	Pyrene	0.80	0.15	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	106%		40-133%
84-15-1	o-Terphenyl	105%		40-133%

(a) Confirmation value > 40% RPD.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID: MW-13	Date Sampled: 05/13/15
Lab Sample ID: MC38720-1	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	5.4	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	355	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.90 B	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	13.3	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	159	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.17 B	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-10	Date Sampled: 05/13/15
Lab Sample ID: MC38720-2	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V39437.D	1	05/27/15	KD	n/a	n/a	MSV1421
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		72-133%
2037-26-5	Toluene-D8	100%		85-114%
460-00-4	4-Bromofluorobenzene	116%		70-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID: MW-10	Date Sampled: 05/13/15
Lab Sample ID: MC38720-2	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11056.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene	0.45	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	0.30	0.15	0.013	ug/l	
50-32-8	Benzo (a) pyrene	0.44	0.15	0.014	ug/l	
205-99-2	Benzo (b) fluoranthene	0.32	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	0.32	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	0.20	0.15	0.018	ug/l	
218-01-9	Chrysene	0.40	0.15	0.016	ug/l	
53-70-3	Dibenz(a,h)anthracene ^a	0.019	0.15	0.014	ug/l	JB
206-44-0	Fluoranthene	0.66	0.15	0.018	ug/l	
86-73-7	Fluorene	ND	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	0.26	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	0.12	0.15	0.0092	ug/l	JB
85-01-8	Phenanthrene	0.25	0.15	0.015	ug/l	
129-00-0	Pyrene	0.84	0.15	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	87%		40-133%
84-15-1	o-Terphenyl	87%		40-133%

(a) Confirmation value > 40% RPD.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-10	Date Sampled: 05/13/15
Lab Sample ID: MC38720-2	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	13.0	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	572	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	1.3 B	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	15.6	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	321	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.19 B	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	3.8 B	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-2	Date Sampled: 05/13/15
Lab Sample ID: MC38720-3	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V39438.D	1	05/27/15	KD	n/a	n/a	MSV1421
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		72-133%
2037-26-5	Toluene-D8	100%		85-114%
460-00-4	4-Bromofluorobenzene	116%		70-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

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Report of Analysis

Client Sample ID: MW-2	Date Sampled: 05/13/15
Lab Sample ID: MC38720-3	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11058.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	0.013	0.15	0.013	ug/l	J
50-32-8	Benzo (a) pyrene	ND	0.15	0.014	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.018	ug/l	
218-01-9	Chrysene	0.019	0.15	0.016	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	0.033	0.15	0.018	ug/l	J
86-73-7	Fluorene	ND	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0092	ug/l	
85-01-8	Phenanthrene	0.018	0.15	0.015	ug/l	J
129-00-0	Pyrene	0.033	0.15	0.014	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	108%		40-133%
84-15-1	o-Terphenyl	107%		40-133%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.3
4

Report of Analysis

Client Sample ID: MW-2	Date Sampled: 05/13/15
Lab Sample ID: MC38720-3	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.0 B	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	208	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	1.4 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	5.1	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-5	Date Sampled: 05/13/15
Lab Sample ID: MC38720-4	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V39439.D	1	05/27/15	KD	n/a	n/a	MSV1421
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		72-133%
2037-26-5	Toluene-D8	100%		85-114%
460-00-4	4-Bromofluorobenzene	114%		70-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-5	Date Sampled: 05/13/15
Lab Sample ID: MC38720-4	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11060.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	990 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.025	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	0.035	0.15	0.013	ug/l	J
50-32-8	Benzo (a) pyrene	0.056	0.15	0.014	ug/l	J
205-99-2	Benzo (b) fluoranthene	0.031	0.15	0.011	ug/l	J
191-24-2	Benzo (g,h,i) perylene	0.038	0.15	0.023	ug/l	J
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.018	ug/l	
218-01-9	Chrysene	0.046	0.15	0.016	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	0.044	0.15	0.018	ug/l	J
86-73-7	Fluorene	ND	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0091	ug/l	
85-01-8	Phenanthrene	0.021	0.15	0.015	ug/l	J
129-00-0	Pyrene	0.072	0.15	0.014	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	109%		40-133%
84-15-1	o-Terphenyl	108%		40-133%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.4


Report of Analysis

Client Sample ID: MW-5	Date Sampled: 05/13/15
Lab Sample ID: MC38720-4	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.4
4

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	4.3	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	155	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	1.6 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	7.5	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW013M	Date Sampled: 05/13/15
Lab Sample ID: MC38720-5	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.5
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	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V39448.D	1	05/27/15	KD	n/a	n/a	MSV1421
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		72-133%
2037-26-5	Toluene-D8	99%		85-114%
460-00-4	4-Bromofluorobenzene	117%		70-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW013M	Date Sampled: 05/13/15
Lab Sample ID: MC38720-5	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11061.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	0.016	0.15	0.013	ug/l	J
50-32-8	Benzo (a) pyrene	0.042	0.15	0.014	ug/l	J
205-99-2	Benzo (b) fluoranthene	0.036	0.15	0.011	ug/l	J
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	0.019	0.15	0.018	ug/l	J
218-01-9	Chrysene	0.031	0.15	0.016	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	ND	0.15	0.018	ug/l	
86-73-7	Fluorene	ND	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0092	ug/l	
85-01-8	Phenanthrene	0.021	0.15	0.015	ug/l	J
129-00-0	Pyrene	0.039	0.15	0.014	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	104%		40-133%
84-15-1	o-Terphenyl	105%		40-133%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.5
4

Report of Analysis

Client Sample ID: MW013M	Date Sampled: 05/13/15
Lab Sample ID: MC38720-5	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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4

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.0 B	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	143	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	1.1 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW013S	Date Sampled: 05/13/15
Lab Sample ID: MC38720-6	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V39449.D	1	05/27/15	KD	n/a	n/a	MSV1421
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	100%		72-133%
2037-26-5	Toluene-D8	99%		85-114%
460-00-4	4-Bromofluorobenzene	115%		70-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.6
4

Report of Analysis

Client Sample ID: MW013S	Date Sampled: 05/13/15
Lab Sample ID: MC38720-6	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11062.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.15	0.013	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.15	0.014	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.018	ug/l	
218-01-9	Chrysene	ND	0.15	0.016	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	ND	0.15	0.018	ug/l	
86-73-7	Fluorene	ND	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0092	ug/l	
85-01-8	Phenanthrene	ND	0.15	0.015	ug/l	
129-00-0	Pyrene	ND	0.15	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	102%		40-133%
84-15-1	o-Terphenyl	102%		40-133%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.6
4

Report of Analysis

Client Sample ID: MW013S	Date Sampled: 05/13/15
Lab Sample ID: MC38720-6	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.6
4

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	3.1 B	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	67.8	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	0.90 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW013D	Date Sampled: 05/13/15
Lab Sample ID: MC38720-7	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	V39450.D	1	05/27/15	KD	n/a	n/a	MSV1421
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		72-133%
2037-26-5	Toluene-D8	99%		85-114%
460-00-4	4-Bromofluorobenzene	117%		70-134%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.7
4

Report of Analysis

Client Sample ID: MW013D	Date Sampled: 05/13/15
Lab Sample ID: MC38720-7	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11063.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.15	0.013	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.15	0.014	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.024	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.019	ug/l	
218-01-9	Chrysene	ND	0.15	0.016	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	ND	0.15	0.019	ug/l	
86-73-7	Fluorene	ND	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.018	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.018	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0093	ug/l	
85-01-8	Phenanthrene	ND	0.15	0.015	ug/l	
129-00-0	Pyrene	ND	0.15	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	118%		40-133%
84-15-1	o-Terphenyl	118%		40-133%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.7

Report of Analysis

Client Sample ID: MW013D	Date Sampled: 05/13/15
Lab Sample ID: MC38720-7	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.7
4

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	11.3	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	67.9	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.60 B	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	5.6 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-11	Date Sampled: 05/14/15
Lab Sample ID: MC38720-8	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N97185.D	1	05/27/15	JB	n/a	n/a	MSN3576
Run #2	U29205.D	1	06/03/15	GK	n/a	n/a	MSU1216

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	2.0	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND ^a	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%	98%	72-133%
2037-26-5	Toluene-D8	96%	104%	85-114%
460-00-4	4-Bromofluorobenzene	103%	101%	70-134%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-11	Date Sampled: 05/14/15
Lab Sample ID: MC38720-8	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11064.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.025	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.15	0.013	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.15	0.014	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.018	ug/l	
218-01-9	Chrysene	ND	0.15	0.016	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	ND	0.15	0.018	ug/l	
86-73-7	Fluorene	ND	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0090	ug/l	
85-01-8	Phenanthrene	ND	0.15	0.015	ug/l	
129-00-0	Pyrene	ND	0.15	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	75%		40-133%
84-15-1	o-Terphenyl	74%		40-133%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-11	Date Sampled: 05/14/15
Lab Sample ID: MC38720-8	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	6.9	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	303	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	4.6 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	4.2 B	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-4	Date Sampled: 05/14/15
Lab Sample ID: MC38720-9	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N97186.D	1	05/27/15	JB	n/a	n/a	MSN3576
Run #2	U29206.D	1	06/03/15	GK	n/a	n/a	MSU1216

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND ^a	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%	108%	72-133%
2037-26-5	Toluene-D8	96%	97%	85-114%
460-00-4	4-Bromofluorobenzene	102%	92%	70-134%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-4	Date Sampled: 05/14/15
Lab Sample ID: MC38720-9	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11065.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.15	0.013	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.15	0.014	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.018	ug/l	
218-01-9	Chrysene	ND	0.15	0.016	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	ND	0.15	0.018	ug/l	
86-73-7	Fluorene	ND	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0092	ug/l	
85-01-8	Phenanthrene	ND	0.15	0.015	ug/l	
129-00-0	Pyrene	ND	0.15	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	112%		40-133%
84-15-1	o-Terphenyl	111%		40-133%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound



Report of Analysis

Client Sample ID: MW-4	Date Sampled: 05/14/15
Lab Sample ID: MC38720-9	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	215	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	0.60 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-6	Date Sampled: 05/14/15
Lab Sample ID: MC38720-10	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N97187.D	1	05/27/15	JB	n/a	n/a	MSN3576
Run #2	U29207.D	1	06/03/15	GK	n/a	n/a	MSU1216

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND ^a	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%	111%	72-133%
2037-26-5	Toluene-D8	97%	95%	85-114%
460-00-4	4-Bromofluorobenzene	97%	90%	70-134%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-6	Date Sampled: 05/14/15
Lab Sample ID: MC38720-10	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11066.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.15	0.013	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.15	0.014	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.018	ug/l	
218-01-9	Chrysene	ND	0.15	0.016	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	ND	0.15	0.018	ug/l	
86-73-7	Fluorene	ND	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0092	ug/l	
85-01-8	Phenanthrene	ND	0.15	0.015	ug/l	
129-00-0	Pyrene	ND	0.15	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	93%		40-133%
84-15-1	o-Terphenyl	93%		40-133%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-6	Date Sampled: 05/14/15
Lab Sample ID: MC38720-10	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

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Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	198	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	0.70 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.1 B	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

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Client Sample ID: MW-7	Date Sampled: 05/14/15
Lab Sample ID: MC38720-11	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N97188.D	1	05/28/15	JB	n/a	n/a	MSN3576
Run #2	U29208.D	1	06/03/15	GK	n/a	n/a	MSU1216

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND ^a	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	111%	72-133%
2037-26-5	Toluene-D8	95%	99%	85-114%
460-00-4	4-Bromofluorobenzene	98%	95%	70-134%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-7	Date Sampled: 05/14/15
Lab Sample ID: MC38720-11	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11067.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	0.018	0.15	0.013	ug/l	J
50-32-8	Benzo (a) pyrene	0.023	0.15	0.014	ug/l	J
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.018	ug/l	
218-01-9	Chrysene	0.025	0.15	0.016	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	0.060	0.15	0.018	ug/l	J
86-73-7	Fluorene	0.016	0.15	0.014	ug/l	J
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0092	ug/l	
85-01-8	Phenanthrene	0.060	0.15	0.015	ug/l	J
129-00-0	Pyrene	0.070	0.15	0.014	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	117%		40-133%
84-15-1	o-Terphenyl	117%		40-133%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.11
4

Report of Analysis

Client Sample ID: MW-7	Date Sampled: 05/14/15
Lab Sample ID: MC38720-11	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.11
4

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.0 B	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	182	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	1.0 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	2.5 B	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

4.12
4

Client Sample ID: MW-8	Date Sampled: 05/14/15
Lab Sample ID: MC38720-12	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N97189.D	1	05/28/15	JB	n/a	n/a	MSN3576
Run #2	U29209.D	1	06/03/15	GK	n/a	n/a	MSU1216

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND ^a	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%	111%	72-133%
2037-26-5	Toluene-D8	98%	106%	85-114%
460-00-4	4-Bromofluorobenzene	100%	93%	70-134%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

4.12
4

Client Sample ID: MW-8	Date Sampled: 05/14/15
Lab Sample ID: MC38720-12	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11068.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	0.59	0.15	0.013	ug/l	
50-32-8	Benzo (a) pyrene	0.72	0.15	0.014	ug/l	
205-99-2	Benzo (b) fluoranthene	0.63	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	0.39	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	0.32	0.15	0.018	ug/l	
218-01-9	Chrysene	0.56	0.15	0.016	ug/l	
53-70-3	Dibenz(a,h)anthracene	0.076	0.15	0.014	ug/l	JB
206-44-0	Fluoranthene	0.35	0.15	0.018	ug/l	
86-73-7	Fluorene	0.026	0.15	0.014	ug/l	J
193-39-5	Indeno (1,2,3-cd) pyrene	0.40	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0092	ug/l	
85-01-8	Phenanthrene	ND	0.15	0.015	ug/l	
129-00-0	Pyrene	0.36	0.15	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	113%		40-133%
84-15-1	o-Terphenyl	113%		40-133%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-8	Date Sampled: 05/14/15
Lab Sample ID: MC38720-12	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.12
4

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	216	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	0.70 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-3	Date Sampled: 05/14/15
Lab Sample ID: MC38720-13	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N97190.D	1	05/28/15	JB	n/a	n/a	MSN3576
Run #2	U29210.D	1	06/03/15	GK	n/a	n/a	MSU1216

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND ^a	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	108%	105%	72-133%
2037-26-5	Toluene-D8	99%	111%	85-114%
460-00-4	4-Bromofluorobenzene	100%	95%	70-134%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.13 4

Report of Analysis

4.13
4

Client Sample ID: MW-3	Date Sampled: 05/14/15
Lab Sample ID: MC38720-13	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11071.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.026	ug/l	
120-12-7	Anthracene	ND	0.16	0.10	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.014	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.015	ug/l	
205-99-2	Benzo (b) fluoranthene	0.021	0.16	0.011	ug/l	J
191-24-2	Benzo (g,h,i) perylene	ND	0.16	0.024	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.019	ug/l	
218-01-9	Chrysene	ND	0.16	0.017	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.015	ug/l	
206-44-0	Fluoranthene	ND	0.16	0.019	ug/l	
86-73-7	Fluorene	ND	0.16	0.015	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.018	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.018	ug/l	
91-20-3	Naphthalene	ND	0.16	0.0094	ug/l	
85-01-8	Phenanthrene	0.017	0.16	0.016	ug/l	J
129-00-0	Pyrene	ND	0.16	0.015	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	114%		40-133%
84-15-1	o-Terphenyl	113%		40-133%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-3	Date Sampled: 05/14/15
Lab Sample ID: MC38720-13	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.13
4

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	133	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	0.48 U	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: PZ-1	Date Sampled: 05/14/15
Lab Sample ID: MC38720-14	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N97191.D	1	05/28/15	JB	n/a	n/a	MSN3576
Run #2	U29211.D	1	06/03/15	GK	n/a	n/a	MSU1216

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND ^a	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%	108%	72-133%
2037-26-5	Toluene-D8	99%	112%	85-114%
460-00-4	4-Bromofluorobenzene	101%	94%	70-134%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.14
4

Report of Analysis

Client Sample ID: PZ-1	Date Sampled: 05/14/15
Lab Sample ID: MC38720-14	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11072.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.026	ug/l	
120-12-7	Anthracene	ND	0.16	0.10	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.014	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.015	ug/l	
205-99-2	Benzo (b) fluoranthene	0.022	0.16	0.011	ug/l	J
191-24-2	Benzo (g,h,i) perylene	ND	0.16	0.024	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.019	ug/l	
218-01-9	Chrysene	0.025	0.16	0.017	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.015	ug/l	
206-44-0	Fluoranthene	0.037	0.16	0.019	ug/l	J
86-73-7	Fluorene	ND	0.16	0.015	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.018	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.018	ug/l	
91-20-3	Naphthalene	ND	0.16	0.0094	ug/l	
85-01-8	Phenanthrene	0.023	0.16	0.016	ug/l	J
129-00-0	Pyrene	0.044	0.16	0.015	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	106%		40-133%
84-15-1	o-Terphenyl	105%		40-133%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.14
 4

Report of Analysis

Client Sample ID: PZ-1	Date Sampled: 05/14/15
Lab Sample ID: MC38720-14	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.14
4

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	4.1	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	472	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	1.1 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.8 B	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-9	Date Sampled: 05/14/15
Lab Sample ID: MC38720-15	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N97192.D	1	05/28/15	JB	n/a	n/a	MSN3576
Run #2	U29212.D	1	06/03/15	GK	n/a	n/a	MSU1216

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND ^a	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%	117%	72-133%
2037-26-5	Toluene-D8	98%	109%	85-114%
460-00-4	4-Bromofluorobenzene	100%	91%	70-134%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.15


Report of Analysis

Client Sample ID: MW-9	Date Sampled: 05/14/15
Lab Sample ID: MC38720-15	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11073.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.46	1.0	0.11	ug/l	J
208-96-8	Acenaphthylene	ND	0.16	0.026	ug/l	
120-12-7	Anthracene ^a	0.84	0.16	0.10	ug/l	
56-55-3	Benzo (a) anthracene	0.022	0.16	0.014	ug/l	J
50-32-8	Benzo (a) pyrene	0.024	0.16	0.015	ug/l	J
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.16	0.024	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.019	ug/l	
218-01-9	Chrysene	0.044	0.16	0.017	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.015	ug/l	
206-44-0	Fluoranthene	0.22	0.16	0.019	ug/l	
86-73-7	Fluorene	0.089	0.16	0.015	ug/l	J
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.018	ug/l	
91-57-6	2-Methylnaphthalene	0.14	0.16	0.018	ug/l	JB
91-20-3	Naphthalene ^a	0.13	0.16	0.0094	ug/l	JB
85-01-8	Phenanthrene	0.45	0.16	0.016	ug/l	
129-00-0	Pyrene	0.35	0.16	0.015	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	114%		40-133%
84-15-1	o-Terphenyl	114%		40-133%

(a) Confirmation value > 40% RPD.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-9	Date Sampled: 05/14/15
Lab Sample ID: MC38720-15	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.15
4

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	231	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	0.70 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	11.9	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

4.16
4

Client Sample ID: MW-12	Date Sampled: 05/14/15
Lab Sample ID: MC38720-16	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N97193.D	1	05/28/15	JB	n/a	n/a	MSN3576
Run #2	U29213.D	1	06/03/15	GK	n/a	n/a	MSU1216

Run #	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND ^a	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%	114%	72-133%
2037-26-5	Toluene-D8	99%	113%	85-114%
460-00-4	4-Bromofluorobenzene	100%	89%	70-134%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

4.16
4

Client Sample ID: MW-12	Date Sampled: 05/14/15
Lab Sample ID: MC38720-16	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11074.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.15	0.013	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.15	0.014	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.018	ug/l	
218-01-9	Chrysene	ND	0.15	0.016	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	ND	0.15	0.018	ug/l	
86-73-7	Fluorene	ND	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0092	ug/l	
85-01-8	Phenanthrene	0.017	0.15	0.015	ug/l	J
129-00-0	Pyrene	0.032	0.15	0.014	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	105%		40-133%
84-15-1	o-Terphenyl	105%		40-133%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-12	Date Sampled: 05/14/15
Lab Sample ID: MC38720-16	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.16
4

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Barium	98.7	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Cadmium	0.43 U	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Chromium	1.6 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁴
Selenium	2.0 U	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ³

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Prep QC Batch: MP24617
- (4) Prep QC Batch: MP24636

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW040S	Date Sampled: 05/14/15
Lab Sample ID: MC38720-17	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	N97194.D	1	05/28/15	JB	n/a	n/a	MSN3576
Run #2	U29214.D	1	06/03/15	GK	n/a	n/a	MSU1216

	Purge Volume
Run #1	5.0 ml
Run #2	5.0 ml

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND ^a	5.0	2.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%	110%	72-133%
2037-26-5	Toluene-D8	98%	112%	85-114%
460-00-4	4-Bromofluorobenzene	98%	93%	70-134%

(a) Result is from Run# 2

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.17
4

Report of Analysis

Client Sample ID: MW040S	Date Sampled: 05/14/15
Lab Sample ID: MC38720-17	Date Received: 05/16/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.17
4

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU11075.D	1	05/20/15	PN	05/18/15	OP43095	GSU634
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.67	1.0	0.11	ug/l	J
208-96-8	Acenaphthylene	ND	0.15	0.026	ug/l	
120-12-7	Anthracene ^a	1.2	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	0.031	0.15	0.013	ug/l	J
50-32-8	Benzo (a) pyrene	0.027	0.15	0.014	ug/l	J
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.018	ug/l	
218-01-9	Chrysene	0.050	0.15	0.016	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.014	ug/l	
206-44-0	Fluoranthene	0.32	0.15	0.018	ug/l	
86-73-7	Fluorene	0.46	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.017	ug/l	
91-20-3	Naphthalene	ND	0.15	0.0092	ug/l	
85-01-8	Phenanthrene	0.37	0.15	0.015	ug/l	
129-00-0	Pyrene	0.30	0.15	0.014	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	74%		40-133%
84-15-1	o-Terphenyl	74%		40-133%

(a) Confirmation value > 40% RPD.

ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW040S Lab Sample ID: MC38720-17 Matrix: AQ - Ground Water Project: Tyco - Diesel, One Stanton Street, Marinette, WI	Date Sampled: 05/14/15 Date Received: 05/16/15 Percent Solids: n/a
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4.17
4

Total Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	55.5	4.0	1.7	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ⁴
Barium	286	50	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ⁴
Cadmium	0.70 B	4.0	0.43	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ⁴
Chromium	4.4 B	10	0.48	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ⁴
Lead ^a	3.5 B	10	3.4	ug/l	2	05/19/15	05/22/15 EAL	SW846 6010C ³	SW846 3010A ⁴
Mercury	0.096 U	0.20	0.096	ug/l	1	05/21/15	05/21/15 EAL	SW846 7470A ¹	SW846 7470A ⁵
Selenium	6.0 B	10	2.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ⁴
Silver	1.0 U	5.0	1.0	ug/l	1	05/19/15	05/21/15 EAL	SW846 6010C ²	SW846 3010A ⁴

- (1) Instrument QC Batch: MA18151
- (2) Instrument QC Batch: MA18152
- (3) Instrument QC Batch: MA18154
- (4) Prep QC Batch: MP24617
- (5) Prep QC Batch: MP24636

(a) Elevated RL due to dilution required for matrix interference.

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Misc. Forms



Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Client / Reporting Information		Project Information				Requested Analysis (see TEST CODE sheet)										Matrix Codes																					
Company Name DFM, Inc.		Project Name Tyco - Stanton				PVDs PAFs RCRA Metals										DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Waste FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank																					
Street Address 4830 N Berkeley		Street One Stanton St																																			
City Whitfish Bay WI		City Marinette																																			
Project Contact Eric Frazer		Company Name DFM, Inc																																			
Phone #		Project # 487				Street Address				City				State		Zip																					
Fax #		Client PO# 487				City				State		Zip																									
Sampler(s) Name(s) Eric Frazer		Phone #		Project Manager Eric Frazer		Attention:		PO#																													
Field ID / Point of Collection		MECH/VDI Val #		Date		Time		Sampled by		Matrix		# of bottles		HCl		NaOH		HNO3		H2O2		H2SO4		HNO2		HNO16		DI Water		MEDA		ENIGORE		Bioscience		LAB USE ONLY	
-13 MW-3				5/14/15		15:18		EF W		G		3																									
-14 PZ-1						15:45		↓																													
-15 MW-9						16:42		↓																													
-16 MW-12						17:15		↓																													
-17 MW0403						17:40		↓																													
Turnaround Time (Business days)		Approved By (Accutest PM) / Date:		Commercial "A" (Level 1)		Commercial "B" (Level 2)		FULLT1 (Level 3+4)		CT RCP		MA MCP		NYASP Category A		NYASP Category B		State Forms		EDD Format		Other		Comments / Special Instructions													
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> Std. 5 Business Days (By Contract only) <input type="checkbox"/> 3 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY				<input checked="" type="checkbox"/> Commercial "A" (Level 1) <input type="checkbox"/> Commercial "B" (Level 2) <input type="checkbox"/> FULLT1 (Level 3+4) <input type="checkbox"/> CT RCP <input type="checkbox"/> MA MCP		<input type="checkbox"/> NYASP Category A <input type="checkbox"/> NYASP Category B <input type="checkbox"/> State Forms <input type="checkbox"/> EDD Format <input type="checkbox"/> Other		Commercial "A" = Results Only Commercial "B" = Results + QC Summary																													
Emergency & Rush TIA (only available VIA Lablink)		Sample Custody must be documented below each time samples change possession, including courier delivery.		CHICAGO SC																																	
Relinquished by Sampler: EF		Date/Time: 5/15/15 9:00		Received By: 1		Relinquished By: FP		Date/Time: 5/15/15 10:00		Received By: 2		Relinquished By: 3		Date/Time:		Received By: 4		Relinquished By: 5		Date/Time:		Custody Seal #		<input type="checkbox"/> Intact <input type="checkbox"/> Not intact		<input type="checkbox"/> Preserved where applicable <input type="checkbox"/> On Ice <input type="checkbox"/> Cooler Temp.											

5.1
5



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC38720 Client: O&M INC. Project: TYCO - STATION

Date / Time Received: 5/16/2015 10:00:00 AM Delivery Method: _____ Airbill #'s: _____

Cooler Temps (Initial/Adjusted): #1: (1/1); #2: (2.1/2.1); #3: (0.6/0.6); #4: (1.1/1.1); #5: (2.9/2.9);

<u>Cooler Security</u>	<u>Y</u>	<u>or</u>	<u>N</u>		<u>Y</u>	<u>or</u>	<u>N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	3. COC Present:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	4. Smpl Dates/Time OK	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Cooler Temperature</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Thermometer ID:	<u>G1;</u>		
3. Cooler media:	<u>Ice (Bag)</u>		
4. No. Coolers:	<u>5</u>		

<u>Quality Control Preservation</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Trip Blank listed on COC:	<input type="checkbox"/>		<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Samples preserved properly:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>
4. VOCs headspace free:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>

<u>Sample Integrity - Documentation</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/>		<input type="checkbox"/>

<u>Sample Integrity - Condition</u>	<u>Y</u>	<u>or</u>	<u>N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/>		<input type="checkbox"/>
3. Condition of sample:	<u>Intact</u>		

<u>Sample Integrity - Instructions</u>	<u>Y</u>	<u>or</u>	<u>N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
2. Bottles received for unspecified tests	<input type="checkbox"/>		<input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/>		<input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/>		<input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

5.1
5

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

Method Blank Summary

Job Number: MC38720
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1421-MB	V39434.D	1	05/27/15	KD	n/a	n/a	MSV1421

The QC reported here applies to the following samples:

Method: SW846 8260C

MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7

6.1.1
6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	100% 72-133%
2037-26-5	Toluene-D8	101% 85-114%
460-00-4	4-Bromofluorobenzene	114% 70-134%

Method Blank Summary

Job Number: MC38720
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3576-MB	N97184.D	1	05/27/15	JB	n/a	n/a	MSN3576

The QC reported here applies to the following samples:

Method: SW846 8260C

MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

6.1.2



CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	100% 72-133%
2037-26-5	Toluene-D8	97% 85-114%
460-00-4	4-Bromofluorobenzene	104% 70-134%

Method Blank Summary

Job Number: MC38720
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU1216-MB	U29199.D	1	06/03/15	GK	n/a	n/a	MSU1216

The QC reported here applies to the following samples:

Method: SW846 8260C

MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

CAS No.	Compound	Result	RL	MDL	Units	Q
91-20-3	Naphthalene	ND	5.0	2.0	ug/l	

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	107%	72-133%
2037-26-5	Toluene-D8	102%	85-114%
460-00-4	4-Bromofluorobenzene	97%	70-134%

6.1.3



Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38720
 Account: OMIWIWF O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSV1421-BS	V39431.D	1	05/27/15	KD	n/a	n/a	MSV1421
MSV1421-BSD	V39432.D	1	05/27/15	KD	n/a	n/a	MSV1421

The QC reported here applies to the following samples:

Method: SW846 8260C

MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7

6.2.1



CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	40.0	80	42.6	85	6	68-127/25
100-41-4	Ethylbenzene	50	48.9	98	51.3	103	5	71-129/25
1634-04-4	Methyl Tert Butyl Ether	50	43.6	87	47.3	95	8	46-151/25
91-20-3	Naphthalene	50	34.2	68	37.0	74	8	39-176/25
108-88-3	Toluene	50	46.2	92	49.0	98	6	75-126/25
95-63-6	1,2,4-Trimethylbenzene	50	55.3	111	58.5	117	6	76-129/25
108-67-8	1,3,5-Trimethylbenzene	50	56.6	113	60.0	120	6	71-127/25
1330-20-7	Xylene (total)	150	149	99	156	104	5	67-129/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	95%	96%	72-133%
2037-26-5	Toluene-D8	106%	105%	85-114%
460-00-4	4-Bromofluorobenzene	114%	113%	70-134%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38720
 Account: OMIWIWF O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN3576-BS	N97181.D	1	05/27/15	JB	n/a	n/a	MSN3576
MSN3576-BSD	N97182.D	1	05/27/15	JB	n/a	n/a	MSN3576

The QC reported here applies to the following samples:

Method: SW846 8260C

MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

6.2.2

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	54.8	110	50.1	100	9	68-127/25
100-41-4	Ethylbenzene	50	53.2	106	51.5	103	3	71-129/25
1634-04-4	Methyl Tert Butyl Ether	50	59.2	118	48.8	98	19	46-151/25
108-88-3	Toluene	50	52.8	106	49.0	98	7	75-126/25
95-63-6	1,2,4-Trimethylbenzene	50	51.1	102	50.3	101	2	76-129/25
108-67-8	1,3,5-Trimethylbenzene	50	53.3	107	52.4	105	2	71-127/25
1330-20-7	Xylene (total)	150	158	105	152	101	4	67-129/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	98%	72-133%
2037-26-5	Toluene-D8	101%	98%	85-114%
460-00-4	4-Bromofluorobenzene	96%	96%	70-134%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38720
 Account: OMIWIWF O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU1216-BS	U29196.D	1	06/03/15	GK	n/a	n/a	MSU1216
MSU1216-BSD	U29197.D	1	06/03/15	GK	n/a	n/a	MSU1216

The QC reported here applies to the following samples:

Method: SW846 8260C

MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
91-20-3	Naphthalene	50	52.9	106	45.3	91	15	39-176/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	107%	98%	72-133%
2037-26-5	Toluene-D8	101%	111%	85-114%
460-00-4	4-Bromofluorobenzene	99%	103%	70-134%

* = Outside of Control Limits.

6.2.3

Volatile Surrogate Recovery Summary

Job Number: MC38720
Account: OMIWIF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC38720-1	V39436.D	100	99	115
MC38720-2	V39437.D	100	100	116
MC38720-3	V39438.D	103	100	116
MC38720-4	V39439.D	102	100	114
MC38720-5	V39448.D	100	99	117
MC38720-6	V39449.D	100	99	115
MC38720-7	V39450.D	101	99	117
MC38720-8	U29205.D	98	104	101
MC38720-8	N97185.D	103	96	103
MC38720-9	U29206.D	108	97	92
MC38720-9	N97186.D	101	96	102
MC38720-10	U29207.D	111	95	90
MC38720-10	N97187.D	105	97	97
MC38720-11	U29208.D	111	99	95
MC38720-11	N97188.D	106	95	98
MC38720-12	U29209.D	111	106	93
MC38720-12	N97189.D	106	98	100
MC38720-13	U29210.D	105	111	95
MC38720-13	N97190.D	108	99	100
MC38720-14	U29211.D	108	112	94
MC38720-14	N97191.D	111	99	101
MC38720-15	U29212.D	117	109	91
MC38720-15	N97192.D	107	98	100
MC38720-16	U29213.D	114	113	89
MC38720-16	N97193.D	109	99	100
MC38720-17	U29214.D	110	112	93
MC38720-17	N97194.D	110	98	98
MSN3576-BS	N97181.D	100	101	96
MSN3576-BSD	N97182.D	98	98	96
MSN3576-MB	N97184.D	100	97	104
MSU1216-BS	U29196.D	107	101	99
MSU1216-BSD	U29197.D	98	111	103
MSU1216-MB	U29199.D	107	102	97
MSV1421-BS	V39431.D	95	106	114
MSV1421-BSD	V39432.D	96	105	113
MSV1421-MB	V39434.D	100	101	114

Surrogate Compounds Recovery Limits

6.3.1
6

Volatile Surrogate Recovery Summary

Job Number: MC38720
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Method: SW846 8260C	Matrix: AQ
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Samples and QC shown here apply to the above method

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	72-133%
S2 = Toluene-D8	85-114%
S3 = 4-Bromofluorobenzene	70-134%

6.3.1



GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

7

Method Blank Summary

Job Number: MC38720
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43095-MB	SU11049.D	1	05/19/15	PN	05/18/15	OP43095	GSU634

The QC reported here applies to the following samples:

Method: SW846 8310

MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7, MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

7.1.1
7

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	1.0	0.11	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.025	ug/l	
120-12-7	Anthracene	ND	0.15	0.10	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.15	0.013	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.15	0.014	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.011	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.023	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.018	ug/l	
218-01-9	Chrysene	ND	0.15	0.016	ug/l	
53-70-3	Dibenz(a,h)anthracene	0.029	0.15	0.014	ug/l	J
206-44-0	Fluoranthene	ND	0.15	0.018	ug/l	
86-73-7	Fluorene	ND	0.15	0.014	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.017	ug/l	
91-57-6	2-Methylnaphthalene	0.059	0.15	0.017	ug/l	J
91-20-3	Naphthalene	0.017	0.15	0.0090	ug/l	J
85-01-8	Phenanthrene	ND	0.15	0.015	ug/l	
129-00-0	Pyrene	ND	0.15	0.014	ug/l	

CAS No.	Surrogate Recoveries	Limits	
84-15-1	o-Terphenyl	98%	40-133%
84-15-1	o-Terphenyl	98%	40-133%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC38720
 Account: OMIWIWF O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP43095-BS	SU11050.D	1	05/19/15	PN	05/18/15	OP43095	GSU634
OP43095-BSD	SU11051.D	1	05/19/15	PN	05/18/15	OP43095	GSU634

The QC reported here applies to the following samples:

Method: SW846 8310

MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7, MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

7.2.1
7

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	10	8.7	87	8.1	81	7	49-120/30
208-96-8	Acenaphthylene	10	7.8	78	9.0	90	14	44-120/30
120-12-7	Anthracene	10	6.9	69	7.7	77	11	27-136/30
56-55-3	Benzo (a) anthracene	10	8.5	85	8.7	87	2	58-120/30
50-32-8	Benzo (a) pyrene	10	8.5	85	8.2	82	4	38-125/30
205-99-2	Benzo (b) fluoranthene	10	8.7	87	9.0	90	3	52-121/30
191-24-2	Benzo (g,h,i) perylene	10	9.0	90	9.0	90	0	30-125/30
207-08-9	Benzo (k) fluoranthene	10	8.9	89	9.0	90	1	44-125/30
218-01-9	Chrysene	10	9.0	90	9.0	90	0	59-120/30
53-70-3	Dibenz(a,h)anthracene	10	9.0	90	9.2	92	2	30-125/30
206-44-0	Fluoranthene	10	8.8	88	8.8	88	0	60-120/30
86-73-7	Fluorene	10	8.3	83	8.7	87	5	39-122/30
193-39-5	Indeno (1,2,3-cd) pyrene	10	8.9	89	9.0	90	1	23-123/30
91-57-6	2-Methylnaphthalene	10	7.3	73	7.2	72	1	47-120/30
91-20-3	Naphthalene	10	6.5	65	6.5	65	0	47-120/30
85-01-8	Phenanthrene	10	8.6	86	9.0	90	5	52-122/30
129-00-0	Pyrene	10	9.1	91	8.8	88	3	57-120/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	99%	99%	40-133%
84-15-1	o-Terphenyl	98%	99%	40-133%

* = Outside of Control Limits.

Semivolatile Surrogate Recovery Summary

Job Number: MC38720
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Method: SW846 8310

Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b
MC38720-1	SU11054.D	106	105
MC38720-2	SU11056.D	87	87
MC38720-3	SU11058.D	108	107
MC38720-4	SU11060.D	109	108
MC38720-5	SU11061.D	104	105
MC38720-6	SU11062.D	102	102
MC38720-7	SU11063.D	118	118
MC38720-8	SU11064.D	75	74
MC38720-9	SU11065.D	112	111
MC38720-10	SU11066.D	93	93
MC38720-11	SU11067.D	117	117
MC38720-12	SU11068.D	113	113
MC38720-13	SU11071.D	114	113
MC38720-14	SU11072.D	106	105
MC38720-15	SU11073.D	114	114
MC38720-16	SU11074.D	105	105
MC38720-17	SU11075.D	74	74
OP43095-BS	SU11050.D	99	98
OP43095-BSD	SU11051.D	99	99
OP43095-MB	SU11049.D	98	98

Surrogate Compounds

Recovery Limits

S1 = o-Terphenyl

40-133%

- (a) Recovery from GC signal #2
- (b) Recovery from GC signal #1

7.3.1

7

Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC38720
Account: OMIWIWF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24617
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/19/15

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	28		
Antimony	6.0	1.1	2		
Arsenic	4.0	1.6	1.7	0.40	<4.0
Barium	50	.35	1	0.10	<50
Beryllium	4.0	.15	.25		
Bismuth	50	1.3	2.1		
Boron	100	.9	1.1		
Cadmium	4.0	.16	.43	0.10	<4.0
Calcium	5000	6.9	15		
Chromium	10	.36	.48	0.50	<10
Cobalt	50	.15	.28		
Copper	25	.59	2.4		
Gold	50	1.1	1.5		
Iron	100	3.3	17		
Lead	5.0	.78	1.7	0.20	<5.0
Lithium	500	2.3	2.5		
Magnesium	5000	23	54		
Manganese	15	.056	1.4		
Molybdenum	100	1.7	3.6		
Nickel	40	.21	.5		
Palladium	50	.92	2.6		
Platinum	50	4.6	5.4		
Potassium	5000	41	49		
Selenium	10	1.5	2	0.60	<10
Silicon	100	1.1	30		
Silver	5.0	.56	1	-0.60	<5.0
Sodium	5000	17	77		
Sulfur	50	2.3	4.6		
Strontium	10	.2	.22		
Thallium	5.0	.54	1.7		
Tin	100	.39	.81		
Titanium	50	.34	.51		
Tungsten	100	3.1	22		

8.1.1



BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC38720
Account: OMIWIWF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24617
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/19/15

Metal	RL	IDL	MDL	MB raw	final
Vanadium	10	.61	.51		
Inc	20	.53	1		
Zirconium	50	.19	1.2		

Associated samples MP24617: MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7, MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

Results < IDL are shown as zero for calculation purposes
☐☐☐ Outside of QC limits
☐anr☐ Analyte not requested

8.1.1



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38720
 Account: OMIWIF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24617
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 05/19/15

Metal	MC38720-5 Original MS		Spikelot MPICP7	<input type="checkbox"/> Rec	QC Limits
Aluminum					
Antimony					
Arsenic	2.0	569	500	113.4	75-125
Barium	143	2180	2000	101.9	75-125
Beryllium					
Bismuth					
Boron					
Cadmium	0.0	546	500	109.2	75-125
Calcium					
Chromium	1.1	532	500	106.2	75-125
Cobalt					
Copper					
Gold					
Iron					
Lead	0.80	1040	1000	103.9	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Palladium					
Platinum					
Potassium	anr				
Selenium	0.0	554	500	110.8	75-125
Silicon					
Silver	0.0	195	200	97.5	75-125
Sodium					
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					

8.1.2


MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38720
Account: OMIWIF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24617
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/19/15

Metal	MC38720-5 Original MS	Spikelot MPICP7	<input type="checkbox"/> Rec	QC Limits
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Vanadium

Zinc

Zirconium

Associated samples MP24617: MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7, MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

Results < IDL are shown as zero for calculation purposes

Outside of QC limits

Matrix Spike Rec. outside of QC limits

Analyte not requested

8.1.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38720
 Account: OMIWIF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24617
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 05/19/15

Metal	MC38720-5 Original MSD		SpikeLot MPICP7	<input type="checkbox"/> Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	2.0	563	500	112.2	1.1	20
Barium	143	2160	2000	100.9	0.9	20
Beryllium						
Bismuth						
Boron						
Cadmium	0.0	538	500	107.6	1.5	20
Calcium						
Chromium	1.1	528	500	105.4	0.8	20
Cobalt						
Copper						
Gold						
Iron						
Lead	0.80	1040	1000	103.9	0.0	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Palladium						
Platinum						
Potassium	anr					
Selenium	0.0	549	500	109.8	0.9	20
Silicon						
Silver	0.0	194	200	97.0	0.5	20
Sodium						
Sulfur						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						

8.1.2


MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38720
Account: OMIWIWF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24617
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/19/15

Metal	MC38720-5 Original MSD	Spikelot MPICP7	<input type="checkbox"/> Rec	MSD RFD	QC Limit
-------	---------------------------	--------------------	------------------------------	------------	-------------

Cadmium

Zinc

Zirconium

Associated samples MP24617: MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7, MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

Results < IDL are shown as Zero for calculation purposes

Outside of QC limits

Matrix Spike Rec. outside of QC limits

Analyte not requested

8.1.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC38720
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24617
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 05/19/15 05/19/15

Metal	BSP Result	Spikelot MPICP7	<input type="checkbox"/> Rec	QC Limits	BSD Result	Spikelot MPICP7	<input type="checkbox"/> Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic	546	500	109.2	80-120	553	500	110.6	1.3	20
Barium	2000	2000	100.0	80-120	2050	2000	102.5	2.5	20
Beryllium									
Bismuth									
Boron									
Cadmium	531	500	106.2	80-120	536	500	107.2	0.9	20
Calcium									
Chromium	524	500	104.8	80-120	540	500	108.0	3.0	20
Cobalt									
Copper									
Gold									
Iron									
Lead	1040	1000	104.0	80-120	1050	1000	105.0	1.0	20
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Palladium									
Platinum									
Potassium	anr								
Selenium	532	500	106.4	80-120	541	500	108.2	1.7	20
Silicon									
Silver	186	200	93.0	80-120	191	200	95.5	2.7	20
Sodium									
Sulfur									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									

8.1.3


SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC38720
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24617
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 05/19/15 05/19/15

Metal	BSP Result	Spikelot MPICP7	<input type="checkbox"/> Rec	QC Limits	BSD Result	Spikelot MPICP7	<input type="checkbox"/> Rec	BSD RPD	QC Limit
-------	---------------	--------------------	------------------------------	--------------	---------------	--------------------	------------------------------	------------	-------------

Vanadium

Zinc

Zirconium

Associated samples MP24617: MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7, MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

Results < IDL are shown as zero for calculation purposes

Outside of QC limits

Analyte not requested

8.1.3
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC38720
 Account: OMIWIF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24617
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 05/19/15

Metal	MC38720-5 Original	SDL 1:5	CDIF	QC Limits
Aluminum				
Antimony				
Arsenic	2.00	0.00	100.0	0-10
Barium	143	146	2.5	0-10
Beryllium				
Bismuth				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	1.10	3.00	172.7	0-10
Cobalt				
Copper				
Gold				
Iron				
Lead	0.800	0.00	100.0	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Palladium				
Platinum				
Potassium	anz			
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				

8.1.4
8

SERIAL DILUTION RESULTS SUMMARY

Login Number: MC38720
Account: OMIWIWF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24617
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 05/19/15

Metal	MC38720-5	QC
	Original SDL 1:5	CDIF Limits

Vanadium

Zinc

Zirconium

Associated samples MP24617: MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7, MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

Results < IDL are shown as zero for calculation purposes

Outside of QC limits

Analyte not requested

Percent difference acceptable due to low initial sample concentration < 50 times IDL.

8.1.4



BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC38720
Account: OMIWIF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24636
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 05/21/15

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.038	.096	-0.026	<0.20

Associated samples MP24636: MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7, MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

Results < IDL are shown as Zero for calculation purposes
 Outside of QC limits
 Analyte not requested

8.2.1



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38720
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24636
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 05/21/15

Metal	MC38720-7 Original MS	Spikelot <input type="checkbox"/> GRWS1	<input type="checkbox"/> Rec	QC Limits
Mercury	0.0	3.2	3	106,7 75-125

Associated samples MP24636: MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7, MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

Results < IDL are shown as ero for calculation purposes
 Outside of QC limits
 Matrix Spike Rec. outside of QC limits
 Analyte not requested

8.2.2


MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC38720
 Account: OMIWIF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24636
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 05/21/15

Metal	MC38720-7 Original MSD	Spikelot <input type="checkbox"/> GRWS1 <input type="checkbox"/> Rec	MSD RPD	QC Limit
Mercury	0.0 3.3	3	110.0	3.1 20

Associated samples MP24636: MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7, MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

Results < IDL are shown as zero for calculation purposes
 Outside of QC limits
 Matrix Spike Rec. outside of QC limits
 Analyte not requested

8.2.2


SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC38720
 Account: OMIWIF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP24636
 Matrix Type: AQUEOUS

Methods: SW846 7470A
 Units: ug/l

Prep Date: 05/21/15 05/21/15

Metal	BSP Result	Spikelot <input type="checkbox"/> GRWS1	<input type="checkbox"/> Rec	QC Limits	BSD Result	Spikelot <input type="checkbox"/> GRWS1	<input type="checkbox"/> Rec	BSD RPD	QC Limit
Mercury	3.2	3	<input checked="" type="checkbox"/>	106.7	80-120	3.1	3	103.3	3.2 20

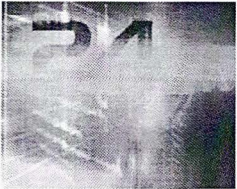
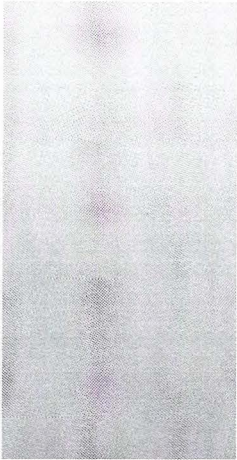
Associated samples MP24636: MC38720-1, MC38720-2, MC38720-3, MC38720-4, MC38720-5, MC38720-6, MC38720-7, MC38720-8, MC38720-9, MC38720-10, MC38720-11, MC38720-12, MC38720-13, MC38720-14, MC38720-15, MC38720-16, MC38720-17

Results < IDL are shown as ero for calculation purposes
 Outside of QC limits
 Analyte not requested

8.2.3




10/16/15



Technical Report for

O&M, Inc.

Tyco - Diesel, One Stanton Street, Marinette, WI

487

Accutest Job Number: MC41741

Sampling Dates: 09/22/15 - 09/23/15

Report to:

O&M, Inc.

etfrauen@hotmail.com

ATTN: Eric Frauen

Total number of pages in report: 74



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.


Reza Fand
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136, SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

O&M, Inc.

Job No: MC41741

Tyco - Diesel, One Stanton Street, Marinette, WI
 Project No: 487

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
MC41741-1	09/22/15	04:25 ETF	09/25/15	AQ	Ground Water	PZ-1
MC41741-1F	09/22/15	04:25 ETF	09/25/15	AQ	Groundwater Filtered	PZ-1
MC41741-2	09/22/15	16:50 ETF	09/25/15	AQ	Ground Water	MW-2
MC41741-2F	09/22/15	16:50 ETF	09/25/15	AQ	Groundwater Filtered	MW-2
MC41741-3	09/22/15	17:30 ETF	09/25/15	AQ	Ground Water	MW-3
MC41741-3F	09/22/15	17:30 ETF	09/25/15	AQ	Groundwater Filtered	MW-3
MC41741-4	09/22/15	18:05 ETF	09/25/15	AQ	Ground Water	MW-4
MC41741-4F	09/22/15	18:05 ETF	09/25/15	AQ	Groundwater Filtered	MW-4
MC41741-5	09/23/15	08:15 ETF	09/25/15	AQ	Ground Water	MW-11
MC41741-5F	09/23/15	08:15 ETF	09/25/15	AQ	Groundwater Filtered	MW-11
MC41741-6	09/23/15	09:35 ETF	09/25/15	AQ	Ground Water	MW-7
MC41741-6F	09/23/15	09:35 ETF	09/25/15	AQ	Groundwater Filtered	MW-7
MC41741-7	09/23/15	09:05 ETF	09/25/15	AQ	Ground Water	MW-5



Sample Summary

(continued)

O&M, Inc.

Job No: MC41741

Tyco - Diesel, One Stanton Street, Marinette, WI
 Project No: 487

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
MC41741-7F	09/23/15	09:05 ETF	09/25/15	AQ	Groundwater Filtered	MW-5
MC41741-8	09/23/15	10:25 ETF	09/25/15	AQ	Ground Water	MW-6
MC41741-8F	09/23/15	10:25 ETF	09/25/15	AQ	Groundwater Filtered	MW-6
MC41741-9	09/23/15	11:30 ETF	09/25/15	AQ	Ground Water	MW-13
MC41741-9F	09/23/15	11:30 ETF	09/25/15	AQ	Groundwater Filtered	MW-13
MC41741-10	09/23/15	12:05 ETF	09/25/15	AQ	Ground Water	MW-8
MC41741-10F	09/23/15	12:05 ETF	09/25/15	AQ	Groundwater Filtered	MW-8
MC41741-11	09/23/15	12:40 ETF	09/25/15	AQ	Ground Water	MW-10
MC41741-11F	09/23/15	12:40 ETF	09/25/15	AQ	Groundwater Filtered	MW-10
MC41741-12	09/23/15	10:55 ETF	09/25/15	AQ	Ground Water	MW-9
MC41741-12F	09/23/15	10:55 ETF	09/25/15	AQ	Groundwater Filtered	MW-9
MC41741-13	09/23/15	00:00 ETF	09/25/15	AQ	Ground Water	MW-12
MC41741-13F	09/23/15	00:00 ETF	09/25/15	AQ	Groundwater Filtered	MW-12

Summary of Hits

Job Number: MC41741
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 09/22/15 thru 09/23/15



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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MC41741-1 PZ-1

No hits reported in this sample.

MC41741-1F PZ-1

Arsenic	2.2 B	4.0	1.7	ug/l	SW846 6010C
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MC41741-2 MW-2

No hits reported in this sample.

MC41741-2F MW-2

No hits reported in this sample.

MC41741-3 MW-3

No hits reported in this sample.

MC41741-3F MW-3

No hits reported in this sample.

MC41741-4 MW-4

No hits reported in this sample.

MC41741-4F MW-4

No hits reported in this sample.

MC41741-5 MW-11

Acenaphthene	0.28	0.16	0.061	ug/l	SW846 8310
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MC41741-5F MW-11

Arsenic	4.9	4.0	1.7	ug/l	SW846 6010C
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MC41741-6 MW-7

Benzo (a) anthracene	0.027 J	0.16	0.024	ug/l	SW846 8310
Benzo (b) fluoranthene	0.039 J	0.16	0.018	ug/l	SW846 8310
Benzo (g,h,i) perylene	0.037 J	0.16	0.018	ug/l	SW846 8310

Summary of Hits

Job Number: MC41741
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 09/22/15 thru 09/23/15



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
		0.021 J	0.16	0.018	ug/l	SW846 8310
Benzo (k) fluoranthene		0.052 J	0.16	0.021	ug/l	SW846 8310
Chrysene		0.15 J	0.16	0.026	ug/l	SW846 8310
Fluoranthene		0.038 J	0.16	0.032	ug/l	SW846 8310
Indeno (1,2,3-cd) pyrene		0.077 J	0.16	0.041	ug/l	SW846 8310
Phenanthrene		0.12 J	0.16	0.031	ug/l	SW846 8310
Pyrene						

MC41741-6F MW-7

No hits reported in this sample.

MC41741-7 MW-5

No hits reported in this sample.

MC41741-7F MW-5

Arsenic	2.2 B	4.0	1.7	ug/l	SW846 6010C
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MC41741-8 MW-6

No hits reported in this sample.

MC41741-8F MW-6

No hits reported in this sample.

MC41741-9 MW-13

Benzo (g,h,i) perylene	0.024 J	0.16	0.018	ug/l	SW846 8310
Chrysene	0.028 J	0.16	0.021	ug/l	SW846 8310
Pyrene	0.051 J	0.16	0.031	ug/l	SW846 8310

MC41741-9F MW-13

No hits reported in this sample.

MC41741-10 MW-8

Benzo (a) anthracene	0.12 J	0.16	0.024	ug/l	SW846 8310
Benzo (a) pyrene	0.21	0.16	0.053	ug/l	SW846 8310
Benzo (b) fluoranthene	0.15 J	0.16	0.018	ug/l	SW846 8310
Benzo (g,h,i) perylene	0.13 J	0.16	0.018	ug/l	SW846 8310
Benzo (k) fluoranthene	0.075 J	0.16	0.018	ug/l	SW846 8310
Chrysene	0.18	0.16	0.021	ug/l	SW846 8310

Summary of Hits

Job Number: MC41741
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 09/22/15 thru 09/23/15



Lab Sample ID	Client Sample ID	Result/ Analyte Qual	RL	MDL	Units	Method
		0.029 J	0.16	0.027	ug/l	SW846 8310
		0.37	0.16	0.026	ug/l	SW846 8310
		0.11 J	0.16	0.032	ug/l	SW846 8310
		0.20	0.16	0.041	ug/l	SW846 8310
		0.43	0.16	0.031	ug/l	SW846 8310

MC41741-10F MW-8

No hits reported in this sample.

MC41741-11 MW-10

Benzo (a) anthracene	0.13 J	0.16	0.024	ug/l	SW846 8310
Benzo (a) pyrene	0.19	0.16	0.053	ug/l	SW846 8310
Benzo (b) fluoranthene	0.15 J	0.16	0.018	ug/l	SW846 8310
Benzo (g,h,i) perylene	0.11 J	0.16	0.018	ug/l	SW846 8310
Benzo (k) fluoranthene	0.075 J	0.16	0.018	ug/l	SW846 8310
Chrysene	0.074 J	0.16	0.021	ug/l	SW846 8310
Fluoranthene	0.21	0.16	0.026	ug/l	SW846 8310
Indeno (1,2,3-cd) pyrene	0.092 J	0.16	0.032	ug/l	SW846 8310
Phenanthrene	0.10 J	0.16	0.041	ug/l	SW846 8310
Pyrene	0.32	0.16	0.031	ug/l	SW846 8310

MC41741-11F MW-10

Arsenic	3.0 B	4.0	1.7	ug/l	SW846 6010C
Lead	10.0	5.0	1.7	ug/l	SW846 6010C

MC41741-12 MW-9

Acenaphthene	0.30	0.16	0.061	ug/l	SW846 8310
Benzo (a) anthracene	0.043 J	0.16	0.024	ug/l	SW846 8310
Benzo (a) pyrene	0.064 J	0.16	0.053	ug/l	SW846 8310
Benzo (g,h,i) perylene	0.028 J	0.16	0.018	ug/l	SW846 8310
Chrysene	0.058 J	0.16	0.021	ug/l	SW846 8310
Fluoranthene	0.35	0.16	0.026	ug/l	SW846 8310
Fluorene	0.11 J	0.16	0.063	ug/l	SW846 8310
2-Methylnaphthalene	0.20	0.16	0.098	ug/l	SW846 8310
Phenanthrene	0.44	0.16	0.041	ug/l	SW846 8310
Pyrene	0.38	0.16	0.031	ug/l	SW846 8310

MC41741-12F MW-9

Arsenic	1.8 B	4.0	1.7	ug/l	SW846 6010C
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Summary of Hits

Job Number: MC41741
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 09/22/15 thru 09/23/15



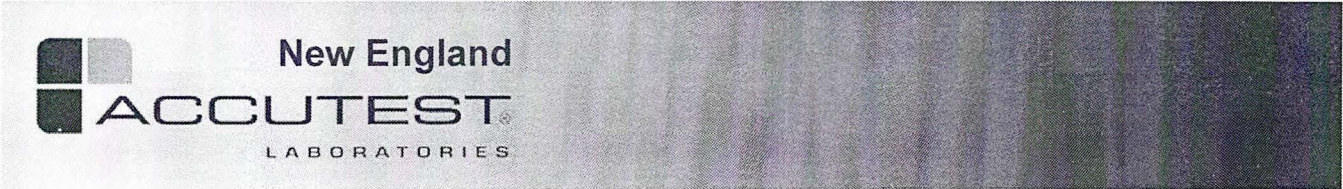
Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
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MC41741-13 MW-12

No hits reported in this sample.

MC41741-13F MW-12

No hits reported in this sample.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: PZ-1		Date Sampled: 09/22/15
Lab Sample ID: MC41741-1		Date Received: 09/25/15
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: Tyco - Diesel, One Stanton Street, Marinette, WI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U32638.D	1	10/03/15	AD	n/a	n/a	MSU1339
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		79-127%
2037-26-5	Toluene-D8	96%		80-116%
460-00-4	4-Bromofluorobenzene	88%		77-124%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID: PZ-1		Date Sampled: 09/22/15
Lab Sample ID: MC41741-1		Date Received: 09/25/15
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8310 SW846 3510C		
Project: Tyco - Diesel, One Stanton Street, Marinette, WI		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12969.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.065	ug/l	
208-96-8	Acenaphthylene	ND	0.17	0.083	ug/l	
120-12-7	Anthracene	ND	0.17	0.049	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.17	0.026	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.17	0.056	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.17	0.019	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.17	0.019	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.17	0.019	ug/l	
218-01-9	Chrysene	ND	0.17	0.023	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.17	0.028	ug/l	
206-44-0	Fluoranthene	ND	0.17	0.028	ug/l	
86-73-7	Fluorene	ND	0.17	0.068	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.17	0.034	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.17	0.10	ug/l	
91-20-3	Naphthalene	ND	0.17	0.052	ug/l	
85-01-8	Phenanthrene	ND	0.17	0.044	ug/l	
129-00-0	Pyrene	ND	0.17	0.033	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		30-151%
84-15-1	o-Terphenyl	88%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID: PZ-1	Date Sampled: 09/22/15
Lab Sample ID: MC41741-1F	Date Received: 09/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.2
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.2 B	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530

(2) Prep QC Batch: MP25233

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-2	Date Sampled: 09/22/15
Lab Sample ID: MC41741-2	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.3
4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U32639.D	1	10/03/15	AD	n/a	n/a	MSU1339
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		79-127%
2037-26-5	Toluene-D8	99%		80-116%
460-00-4	4-Bromofluorobenzene	89%		77-124%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-2	Date Sampled: 09/22/15
Lab Sample ID: MC41741-2	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12970.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

	Initial Volume	Final Volume
Run #1	970 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.15	0.061	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.077	ug/l	
120-12-7	Anthracene	ND	0.15	0.045	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.15	0.024	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.15	0.052	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.017	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.017	ug/l	
218-01-9	Chrysene	ND	0.15	0.021	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.026	ug/l	
206-44-0	Fluoranthene	ND	0.15	0.026	ug/l	
86-73-7	Fluorene	ND	0.15	0.063	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.032	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.097	ug/l	
91-20-3	Naphthalene	ND	0.15	0.048	ug/l	
85-01-8	Phenanthrene	ND	0.15	0.041	ug/l	
129-00-0	Pyrene	ND	0.15	0.030	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		30-151%
84-15-1	o-Terphenyl	89%		30-151%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.3
4

Report of Analysis

Client Sample ID: MW-2	Date Sampled: 09/22/15
Lab Sample ID: MC41741-2F	Date Received: 09/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.4
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530

(2) Prep QC Batch: MP25233

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-3	Date Sampled: 09/22/15
Lab Sample ID: MC41741-3	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.5
4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U32640.D	1	10/03/15	AD	n/a	n/a	MSU1339
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		79-127%
2037-26-5	Toluene-D8	100%		80-116%
460-00-4	4-Bromofluorobenzene	89%		77-124%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-3	Date Sampled: 09/22/15
Lab Sample ID: MC41741-3	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12971.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.061	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.024	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.018	ug/l	
218-01-9	Chrysene	ND	0.16	0.021	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	ND	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.063	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.032	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.098	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	ND	0.16	0.041	ug/l	
129-00-0	Pyrene	ND	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	85%		30-151%
84-15-1	o-Terphenyl	84%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.5
 4

Report of Analysis

Client Sample ID: MW-3 Lab Sample ID: MC41741-3F Matrix: AQ - Groundwater Filtered Project: Tyco - Diesel, One Stanton Street, Marinette, WI	Date Sampled: 09/22/15 Date Received: 09/25/15 Percent Solids: n/a
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4.6
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530
 (2) Prep QC Batch: MP25233

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-4	
Lab Sample ID: MC41741-4	Date Sampled: 09/22/15
Matrix: AQ - Ground Water	Date Received: 09/25/15
Method: SW846 8260C	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.7
4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U32641.D	1	10/03/15	AD	n/a	n/a	MSU1339
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	102%		79-127%
2037-26-5	Toluene-D8	97%		80-116%
460-00-4	4-Bromofluorobenzene	90%		77-124%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-4	Date Sampled: 09/22/15
Lab Sample ID: MC41741-4	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12972.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.061	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.024	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.018	ug/l	
218-01-9	Chrysene	ND	0.16	0.021	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	ND	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.063	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.032	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.098	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	ND	0.16	0.041	ug/l	
129-00-0	Pyrene	ND	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		30-151%
84-15-1	o-Terphenyl	89%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.7

Report of Analysis

Client Sample ID: MW-4	Date Sampled: 09/22/15
Lab Sample ID: MC41741-4F	Date Received: 09/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.8
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530

(2) Prep QC Batch: MP25233

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-11	Date Sampled: 09/23/15
Lab Sample ID: MC41741-5	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	U32763.D	10	10/06/15	AD	n/a	n/a	MSU1343
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	2.7	ug/l	
108-88-3	Toluene	ND	10	2.9	ug/l	
100-41-4	Ethylbenzene	ND	10	2.4	ug/l	
1330-20-7	Xylene (total)	ND	10	2.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	3.5	ug/l	
91-20-3	Naphthalene	ND	50	6.1	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	50	2.9	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	50	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		79-127%
2037-26-5	Toluene-D8	104%		80-116%
460-00-4	4-Bromofluorobenzene	95%		77-124%

(a) Elevated RL due to dilution required for matrix interference.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.9
4

Report of Analysis

Client Sample ID: MW-11 Lab Sample ID: MC41741-5 Matrix: AQ - Ground Water Method: SW846 8310 SW846 3510C Project: Tyco - Diesel, One Stanton Street, Marinette, WI	Date Sampled: 09/23/15 Date Received: 09/25/15 Percent Solids: n/a
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	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12973.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.28	0.16	0.061	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.024	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.018	ug/l	
218-01-9	Chrysene	ND	0.16	0.021	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	ND	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.063	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.032	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.098	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	ND	0.16	0.041	ug/l	
129-00-0	Pyrene	ND	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		30-151%
84-15-1	o-Terphenyl	78%		30-151%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.9

Report of Analysis

Client Sample ID: MW-11	Date Sampled: 09/23/15
Lab Sample ID: MC41741-5F	Date Received: 09/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.10
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	4.9	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530

(2) Prep QC Batch: MP25233

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-7	Date Sampled: 09/23/15
Lab Sample ID: MC41741-6	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U32756.D	1	10/06/15	AD	n/a	n/a	MSU1343
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		79-127%
2037-26-5	Toluene-D8	93%		80-116%
460-00-4	4-Bromofluorobenzene	88%		77-124%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.11

Report of Analysis

Client Sample ID: MW-7	Date Sampled: 09/23/15
Lab Sample ID: MC41741-6	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12976.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.061	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	0.027	0.16	0.024	ug/l	J
50-32-8	Benzo (a) pyrene	ND	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene	0.039	0.16	0.018	ug/l	J
191-24-2	Benzo (g,h,i) perylene	0.037	0.16	0.018	ug/l	J
207-08-9	Benzo (k) fluoranthene	0.021	0.16	0.018	ug/l	J
218-01-9	Chrysene	0.052	0.16	0.021	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	0.15	0.16	0.026	ug/l	J
86-73-7	Fluorene	ND	0.16	0.063	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	0.038	0.16	0.032	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.16	0.098	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	0.077	0.16	0.041	ug/l	J
129-00-0	Pyrene	0.12	0.16	0.031	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	87%		30-151%
84-15-1	o-Terphenyl	86%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.11
4

Report of Analysis

Client Sample ID: MW-7	Date Sampled: 09/23/15
Lab Sample ID: MC41741-6F	Date Received: 09/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.12
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530
 (2) Prep QC Batch: MP25233

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-5	Date Sampled: 09/23/15
Lab Sample ID: MC41741-7	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U32757.D	1	10/06/15	AD	n/a	n/a	MSU1343
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		79-127%
2037-26-5	Toluene-D8	93%		80-116%
460-00-4	4-Bromofluorobenzene	90%		77-124%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.13 4

Report of Analysis

Client Sample ID: MW-5		
Lab Sample ID: MC41741-7		Date Sampled: 09/23/15
Matrix: AQ - Ground Water		Date Received: 09/25/15
Method: SW846 8310 SW846 3510C		Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12977.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.061	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.024	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.018	ug/l	
218-01-9	Chrysene	ND	0.16	0.021	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	ND	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.063	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.032	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.098	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	ND	0.16	0.041	ug/l	
129-00-0	Pyrene	ND	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		30-151%
84-15-1	o-Terphenyl	88%		30-151%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.13
4

Report of Analysis

Client Sample ID: MW-5 Lab Sample ID: MC41741-7F Matrix: AQ - Groundwater Filtered Project: Tyco - Diesel, One Stanton Street, Marinette, WI	Date Sampled: 09/23/15 Date Received: 09/25/15 Percent Solids: n/a
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4.14
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	2.2 B	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530
 (2) Prep QC Batch: MP25233

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-6	Date Sampled: 09/23/15
Lab Sample ID: MC41741-8	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.15
4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U32758.D	1	10/06/15	AD	n/a	n/a	MSU1343
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	99%		79-127%
2037-26-5	Toluene-D8	89%		80-116%
460-00-4	4-Bromofluorobenzene	86%		77-124%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-6	Date Sampled: 09/23/15
Lab Sample ID: MC41741-8	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12978.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.061	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.024	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.018	ug/l	
218-01-9	Chrysene	ND	0.16	0.021	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	ND	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.063	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.032	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.098	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	ND	0.16	0.041	ug/l	
129-00-0	Pyrene	ND	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	96%		30-151%
84-15-1	o-Terphenyl	95%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-6 Lab Sample ID: MC41741-8F Matrix: AQ - Groundwater Filtered Project: Tyco - Diesel, One Stanton Street, Marinette, WI	Date Sampled: 09/23/15 Date Received: 09/25/15 Percent Solids: n/a
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4.16
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530
 (2) Prep QC Batch: MP25233

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-13	Date Sampled: 09/23/15
Lab Sample ID: MC41741-9	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U32759.D	1	10/06/15	AD	n/a	n/a	MSU1343
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	97%		79-127%
2037-26-5	Toluene-D8	92%		80-116%
460-00-4	4-Bromofluorobenzene	90%		77-124%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.17
4

Report of Analysis

Client Sample ID: MW-13	Date Sampled: 09/23/15
Lab Sample ID: MC41741-9	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12979.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.061	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.024	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	0.024	0.16	0.018	ug/l	J
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.018	ug/l	
218-01-9	Chrysene	0.028	0.16	0.021	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	ND	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.063	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.032	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.098	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	ND	0.16	0.041	ug/l	
129-00-0	Pyrene	0.051	0.16	0.031	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	94%		30-151%
84-15-1	o-Terphenyl	93%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-13	Date Sampled: 09/23/15
Lab Sample ID: MC41741-9F	Date Received: 09/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.18
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530
 (2) Prep QC Batch: MP25233

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-8	Date Sampled: 09/23/15
Lab Sample ID: MC41741-10	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U32760.D	1	10/06/15	AD	n/a	n/a	MSU1343
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	94%		79-127%
2037-26-5	Toluene-D8	91%		80-116%
460-00-4	4-Bromofluorobenzene	90%		77-124%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.19
4

Report of Analysis

Client Sample ID: MW-8	Date Sampled: 09/23/15
Lab Sample ID: MC41741-10	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12980.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.061	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	0.12	0.16	0.024	ug/l	J
50-32-8	Benzo (a) pyrene	0.21	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene	0.15	0.16	0.018	ug/l	J
191-24-2	Benzo (g,h,i) perylene	0.13	0.16	0.018	ug/l	J
207-08-9	Benzo (k) fluoranthene	0.075	0.16	0.018	ug/l	J
218-01-9	Chrysene	0.18	0.16	0.021	ug/l	
53-70-3	Dibenz(a,h)anthracene	0.029	0.16	0.027	ug/l	J
206-44-0	Fluoranthene	0.37	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.063	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	0.11	0.16	0.032	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.16	0.098	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	0.20	0.16	0.041	ug/l	
129-00-0	Pyrene	0.43	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	102%		30-151%
84-15-1	o-Terphenyl	101%		30-151%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.19



Report of Analysis

Client Sample ID: MW-8 Lab Sample ID: MC41741-10F Matrix: AQ - Groundwater Filtered Project: Tyco - Diesel, One Stanton Street, Marinette, WI	Date Sampled: 09/23/15 Date Received: 09/25/15 Percent Solids: n/a
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4.20
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530

(2) Prep QC Batch: MP25233

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-10	Date Sampled: 09/23/15
Lab Sample ID: MC41741-11	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	U32764.D	10	10/06/15	AD	n/a	n/a	MSU1343
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	2.7	ug/l	
108-88-3	Toluene	ND	10	2.9	ug/l	
100-41-4	Ethylbenzene	ND	10	2.4	ug/l	
1330-20-7	Xylene (total)	ND	10	2.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	3.5	ug/l	
91-20-3	Naphthalene	ND	50	6.1	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	50	2.9	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	50	2.0	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	89%		79-127%
2037-26-5	Toluene-D8	104%		80-116%
460-00-4	4-Bromofluorobenzene	98%		77-124%

(a) Elevated RL due to dilution required for matrix interference.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.21
4

Report of Analysis

Client Sample ID: MW-10		Date Sampled: 09/23/15
Lab Sample ID: MC41741-11		Date Received: 09/25/15
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8310 SW846 3510C		
Project: Tyco - Diesel, One Stanton Street, Marinette, WI		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12981.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.061	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	0.13	0.16	0.024	ug/l	J
50-32-8	Benzo (a) pyrene	0.19	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene	0.15	0.16	0.018	ug/l	J
191-24-2	Benzo (g,h,i) perylene	0.11	0.16	0.018	ug/l	J
207-08-9	Benzo (k) fluoranthene	0.075	0.16	0.018	ug/l	J
218-01-9	Chrysene	0.074	0.16	0.021	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	0.21	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.063	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	0.092	0.16	0.032	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.16	0.098	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	0.10	0.16	0.041	ug/l	J
129-00-0	Pyrene	0.32	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	80%		30-151%
84-15-1	o-Terphenyl	79%		30-151%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-10	Date Sampled: 09/23/15
Lab Sample ID: MC41741-11F	Date Received: 09/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.22
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	3.0 B	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	10.0	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530
 (2) Prep QC Batch: MP25233

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-9	Date Sampled: 09/23/15
Lab Sample ID: MC41741-12	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.23
4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U32761.D	1	10/06/15	AD	n/a	n/a	MSU1343
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	95%		79-127%
2037-26-5	Toluene-D8	92%		80-116%
460-00-4	4-Bromofluorobenzene	90%		77-124%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-9	Date Sampled: 09/23/15
Lab Sample ID: MC41741-12	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12982.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

Run #	Initial Volume	Final Volume
Run #1	960 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.30	0.16	0.061	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	0.043	0.16	0.024	ug/l	J
50-32-8	Benzo (a) pyrene	0.064	0.16	0.053	ug/l	J
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	0.028	0.16	0.018	ug/l	J
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.018	ug/l	
218-01-9	Chrysene	0.058	0.16	0.021	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	0.35	0.16	0.026	ug/l	
86-73-7	Fluorene	0.11	0.16	0.063	ug/l	J
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.032	ug/l	
91-57-6	2-Methylnaphthalene	0.20	0.16	0.098	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	0.44	0.16	0.041	ug/l	
129-00-0	Pyrene	0.38	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	96%		30-151%
84-15-1	o-Terphenyl	96%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.23
4

Report of Analysis

Client Sample ID: MW-9	Date Sampled: 09/23/15
Lab Sample ID: MC41741-12F	Date Received: 09/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.24



Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.8 B	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530
 (2) Prep QC Batch: MP25233

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-12	Date Sampled: 09/23/15
Lab Sample ID: MC41741-13	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	U32762.D	1	10/06/15	AD	n/a	n/a	MSU1343
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	101%		79-127%
2037-26-5	Toluene-D8	93%		80-116%
460-00-4	4-Bromofluorobenzene	89%		77-124%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.25
4

Report of Analysis

Client Sample ID: MW-12	Date Sampled: 09/23/15
Lab Sample ID: MC41741-13	Date Received: 09/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.25
4

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU12983.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
Run #2							

Run #	Initial Volume	Final Volume
Run #1	980 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.15	0.060	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.076	ug/l	
120-12-7	Anthracene	ND	0.15	0.045	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.15	0.024	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.15	0.052	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.017	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.017	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.017	ug/l	
218-01-9	Chrysene	ND	0.15	0.021	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.026	ug/l	
206-44-0	Fluoranthene	ND	0.15	0.025	ug/l	
86-73-7	Fluorene	ND	0.15	0.062	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.031	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.096	ug/l	
91-20-3	Naphthalene	ND	0.15	0.048	ug/l	
85-01-8	Phenanthrene	ND	0.15	0.040	ug/l	
129-00-0	Pyrene	ND	0.15	0.030	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	91%		30-151%
84-15-1	o-Terphenyl	91%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-12 Lab Sample ID: MC41741-13F Matrix: AQ - Groundwater Filtered Project: Tyco - Diesel, One Stanton Street, Marinette, WI	Date Sampled: 09/23/15 Date Received: 09/25/15 Percent Solids: n/a
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4.26
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	10/02/15	10/06/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18530
 (2) Prep QC Batch: MP25233

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Misc. Forms



Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

Client / Reporting Information		Project Information		Requested Analysis (see TEST CODE sheet)										Matrix Codes																										
Company Name OEM, Inc.		Project Name Tyco - Stanton St.		<div style="display: flex; justify-content: space-between;"> <div style="width: 40%;"> <p>Street Address 4830 N. Berkeley</p> <p>City State Zip Whitefish Bay WI 53217</p> <p>Project Contact Eric Frauen</p> <p>Phone # 414-983-6210</p> <p>Fax # </p> <p>Sanplers Name(s) Eric Frauen</p> </div> <div style="width: 40%;"> <p>Street One Stanton St.</p> <p>City Marinette</p> <p>Project # 487</p> <p>Client PO# 487</p> <p>Project Manager Eric Frauen</p> </div> <div style="width: 40%;"> <p>Billing Information (If different from Report to)</p> <p>Company Name O+M Inc.</p> <p>Street Address 450 Montbrook Ln</p> <p>City State Zip Knoxville TN 37919</p> <p>Attention LOC</p> <p>PO# 487</p> </div> </div>										<p>DW - Drinking Water GW - Ground Water WW - Water SW - Surface Water SO - Soil SL - Sludge SED - Sediment OI - Oil LIQ - Other Liquid AIR - Air SOL - Other Solid WP - Wipe FB - Field Blank EB - Equipment Blank RB - Rinse Blank TB - Trip Blank</p>																										
Street Address 4830 N. Berkeley		Street One Stanton St.																																						
City State Zip Whitefish Bay WI 53217		City Marinette																																						
Project Contact Eric Frauen		Project # 487																																						
Phone # 414-983-6210		Client PO# 487																																						
Fax # 		Project Manager Eric Frauen		<p>Number of preserved Bottles</p> <table border="1"> <tr> <th>Method</th> <th>PCB</th> <th>HMO</th> <th>HMO2</th> <th>HMO3</th> <th>HMO4</th> <th>NOPE</th> <th>NOPE2</th> <th>NOPE3</th> <th>NOPE4</th> <th>MEHQ</th> <th>ENCORE</th> <th>Blankfiller</th> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>										Method	PCB	HMO	HMO2	HMO3	HMO4	NOPE	NOPE2	NOPE3	NOPE4	MEHQ	ENCORE	Blankfiller														LAB USE ONLY
Method	PCB	HMO	HMO2	HMO3	HMO4	NOPE	NOPE2	NOPE3	NOPE4	MEHQ	ENCORE	Blankfiller																												
Access Sample #	Field ID / Point of Collection	MEQ/MDI Val #	Date	Time	Sampled by	Matrix	# of bottles	PCB	HMO	HMO2	HMO3	HMO4	NOPE	NOPE2	NOPE3	NOPE4	MEHQ	ENCORE	Blankfiller																					
-1F	PZ-1		9/22/15	4:25	ETF	W	6	3																																
-2F	MW-2		9/22/15	16:50	ETF	W	6	3																																
-3F	MW-3		9/22/15	17:30	ETF	W	6	3																																
-4F	MW-4		9/22/15	18:05	ETF	W	6	3													180																			
-5F	MW-11		9/23/15	8:15	ETF	W	6	3													60																			
-6F	MW-7		9/23/15	9:05	ETF	W	6	3													115																			
-7F	MW-5		9/23/15	9:05	ETF	W	6	3													361																			
-8F	MW-6		9/23/15	10:25	ETF	W	6	3																																
-9F	MW-13		9/23/15	11:30	ETF	W	6	3																																
-10F	MW-8		9/23/15	12:05	ETF	W	6	3																																
-11F	MW-10		9/23/15	12:40	ETF	W	6	3																																
-12F	MW-9		9/23/15	10:55	ETF	W	6	3																																
-13F	MW-12		9/23/15		ETF	W																																		
Turnaround Time (Business days)		Approved By (Accutest PM): / Date:		<p>Commercial "A" (Level 1) <input checked="" type="checkbox"/> NYASP Category A</p> <p>Commercial "B" (Level 2) <input type="checkbox"/> NYASP Category B</p> <p>FULLT1 (Level 3+4) <input type="checkbox"/> State Forms</p> <p>CT RCP <input type="checkbox"/> EDD Format</p> <p>MA MCP <input type="checkbox"/> Other _____</p> <p>Commercial "A" = Results Only</p> <p>Commercial "B" = Results + QC Summary</p>																																				
<input checked="" type="checkbox"/> Std. 10 Business Days <input type="checkbox"/> Std. 5 Business Days (By Contract only) <input type="checkbox"/> 5 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY																																								
Emergency & Rush Turnaround available VIA Lablink																																								
Sample Custody must be documented below each time samples change possession, including courier delivery.																																								
Relinquished by: <i>[Signature]</i>		Date Time: 9/24/15 11:15		Received by: <i>[Signature]</i>		Date Time: 9/24/15		Relinquished by: <i>[Signature]</i>		Date Time: 9-29-15		Received by: <i>[Signature]</i>		Date Time: 9-29-15		Received by: <i>[Signature]</i>		Date Time: 9-29-15		Received by: <i>[Signature]</i>																				
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Received By:		Date Time:		Received By:																				
3		3		3		3		4		4		4		4		4		4		4																				
5		5		5		5		5		5		5		5		5		5		5																				
Custody Seal #		Intact <input type="checkbox"/>		Not Intact <input type="checkbox"/>		Preserved where applicable <input type="checkbox"/>		On Ice <input type="checkbox"/>		Cooler Temp. <input type="checkbox"/>		3.6°C		1.2°C		1.3°C																								

5.1
5



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC41741 Client: MC41741 Immediate Client Services Action Required: No
 Date / Time Received: 9/25/2015 9:30:00 AM Delivery Method: _____
 Project: _____ No. Coolers: 3 Airbill #'s: _____

Cooler Security Y or N Y or N
 1. Custody Seals Present: 3. COC Present:
 2. Custody Seals Intact: 4. Smpl Dates/Time OK

Cooler Temperature Y or N
 1. Temp criteria achieved:
 2. Cooler temp verification: Infrared Gun
 3. Cooler media: Ice (Bag)

Quality Control Preservation Y N N/A
 1. Trip Blank present / cooler:
 2. Trip Blank listed on COC:
 3. Samples preserved properly:
 4. VOCs headspace free:

Sample Integrity - Documentation Y or N
 1. Sample labels present on bottles:
 2. Container labeling complete:
 3. Sample container label / COC agree:

Sample Integrity - Condition Y or N
 1. Sample rec'd within HT:
 2. All containers accounted for:
 3. Condition of sample: Intact

Sample Integrity - Instructions Y N N/A
 1. Analysis requested is clear:
 2. Bottles received for unspecified tests:
 3. Sufficient volume rec'd for analysis:
 4. Compositing instructions clear:
 5. Filtering instructions clear:

Comments

MC41741-2 REC 1-40ML BROKEN
 LAB FILTER?

5.1



Sample Receipt Summary - Problem Resolution

Accutest Job Number: MC41741

CSR: Jeremy Vienneau

Response Date: 9/25/2015

Response: The client requested that Accutest lab filter the dissolved metals. See phone log in file.

5.1
5

Accutest Laboratories
V:508.481.6200

495 Technology Center West, Bldg One
F: 508.481.7753

Marlborough, MA
www.accutest.com

MC41741: Chain of Custody
Page 3 of 3

GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries



Method Blank Summary

Job Number: MC41741
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU1339-MB	U32628.D	1	10/03/15	AD	n/a	n/a	MSU1339

The QC reported here applies to the following samples:

Method: SW846 8260C

MC41741-1, MC41741-2, MC41741-3, MC41741-4

6.1.1
6

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	92% 79-127%
2037-26-5	Toluene-D8	100% 80-116%
460-00-4	4-Bromofluorobenzene	93% 77-124%

Method Blank Summary

Page 1 of 1

Job Number: MC41741
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU1343-MB	U32745.D	1	10/06/15	AD	n/a	n/a	MSU1343

The QC reported here applies to the following samples:

Method: SW846 8260C

MC41741-5, MC41741-6, MC41741-7, MC41741-8, MC41741-9, MC41741-10, MC41741-11, MC41741-12, MC41741-13

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene	ND	5.0	0.61	ug/l	
108-88-3	Toluene	ND	1.0	0.29	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	1.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	1.0	0.20	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	94% 79-127%
2037-26-5	Toluene-D8	95% 80-116%
460-00-4	4-Bromofluorobenzene	89% 77-124%

6.1.2



Blank Spike/Blank Spike Duplicate Summary

Job Number: MC41741
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU1339-BS	U32625.D	1	10/03/15	AD	n/a	n/a	MSU1339
MSU1339-BSD	U32626.D	1	10/03/15	AD	n/a	n/a	MSU1339

The QC reported here applies to the following samples:

Method: SW846 8260C

MC41741-1, MC41741-2, MC41741-3, MC41741-4

6.2.1



CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	49.9	100	48.1	96	4	74-124/25
100-41-4	Ethylbenzene	50	54.5	109	55.3	111	1	76-125/25
1634-04-4	Methyl Tert Butyl Ether	50	49.2	98	45.8	92	7	67-145/25
91-20-3	Naphthalene	50	44.9	90	45.6	91	2	24-164/25
108-88-3	Toluene	50	51.2	102	48.6	97	5	80-122/25
95-63-6	1,2,4-Trimethylbenzene	50	50.5	101	50.1	100	1	79-124/25
108-67-8	1,3,5-Trimethylbenzene	50	54.2	108	53.8	108	1	80-130/25
1330-20-7	Xylene (total)	150	167	111	168	112	1	74-122/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	100%	93%	79-127%
2037-26-5	Toluene-D8	101%	96%	80-116%
460-00-4	4-Bromofluorobenzene	91%	92%	77-124%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC41741
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSU1343-BS	U32741.D	1	10/06/15	AD	n/a	n/a	MSU1343
MSU1343-BSD	U32742.D	1	10/06/15	AD	n/a	n/a	MSU1343

The QC reported here applies to the following samples:

Method: SW846 8260C

MC41741-5, MC41741-6, MC41741-7, MC41741-8, MC41741-9, MC41741-10, MC41741-11, MC41741-12, MC41741-13

6.2.2


CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
71-43-2	Benzene	50	47.2	94	45.0	90	5	74-124/25
100-41-4	Ethylbenzene	50	53.9	108	52.0	104	4	76-125/25
1634-04-4	Methyl Tert Butyl Ether	50	45.3	91	44.0	88	3	67-145/25
91-20-3	Naphthalene	50	43.5	87	43.9	88	1	24-164/25
108-88-3	Toluene	50	48.9	98	47.3	95	3	80-122/25
95-63-6	1,2,4-Trimethylbenzene	50	49.5	99	48.1	96	3	79-124/25
108-67-8	1,3,5-Trimethylbenzene	50	53.0	106	51.3	103	3	80-130/25
1330-20-7	Xylene (total)	150	164	109	158	105	4	74-122/25

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	96%	95%	79-127%
2037-26-5	Toluene-D8	98%	98%	80-116%
460-00-4	4-Bromofluorobenzene	92%	91%	77-124%

* = Outside of Control Limits.

Volatile Surrogate Recovery Summary

Job Number: MC41741
 Account: OMIWIWF O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Method: SW846 8260C Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
MC41741-1	U32638.D	102	96	88
MC41741-2	U32639.D	102	99	89
MC41741-3	U32640.D	102	100	89
MC41741-4	U32641.D	102	97	90
MC41741-5	U32763.D	90	104	95
MC41741-6	U32756.D	95	93	88
MC41741-7	U32757.D	94	93	90
MC41741-8	U32758.D	99	89	86
MC41741-9	U32759.D	97	92	90
MC41741-10	U32760.D	94	91	90
MC41741-11	U32764.D	89	104	98
MC41741-12	U32761.D	95	92	90
MC41741-13	U32762.D	101	93	89
MSU1339-BS	U32625.D	100	101	91
MSU1339-BSD	U32626.D	93	96	92
MSU1339-MB	U32628.D	92	100	93
MSU1343-BS	U32741.D	96	98	92
MSU1343-BSD	U32742.D	95	98	91
MSU1343-MB	U32745.D	94	95	89

Surrogate Compounds	Recovery Limits
S1 = Dibromofluoromethane	79-127%
S2 = Toluene-D8	80-116%
S3 = 4-Bromofluorobenzene	77-124%

6.3.1



GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries

7

Method Blank Summary

Job Number: MC41741
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP44778-MB	SU12965.D	1	10/15/15	PN	09/27/15	OP44778	GSU741

The QC reported here applies to the following samples:

Method: SW846 8310

MC41741-1, MC41741-2, MC41741-3, MC41741-4, MC41741-5, MC41741-6, MC41741-7, MC41741-8, MC41741-9, MC41741-10, MC41741-11, MC41741-12, MC41741-13

7.1.1
7

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.15	0.059	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.074	ug/l	
120-12-7	Anthracene	ND	0.15	0.044	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.15	0.023	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.15	0.051	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.15	0.017	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.15	0.017	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.017	ug/l	
218-01-9	Chrysene	ND	0.15	0.021	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.026	ug/l	
206-44-0	Fluoranthene	ND	0.15	0.025	ug/l	
86-73-7	Fluorene	ND	0.15	0.061	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.031	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.094	ug/l	
91-20-3	Naphthalene	ND	0.15	0.047	ug/l	
85-01-8	Phenanthrene	ND	0.15	0.040	ug/l	
129-00-0	Pyrene	ND	0.15	0.030	ug/l	

CAS No.	Surrogate Recoveries		Limits
84-15-1	o-Terphenyl	80%	30-151%
84-15-1	o-Terphenyl	80%	30-151%

Blank Spike/Blank Spike Duplicate Summary

Job Number: MC41741
Account: OMIWIWF O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP44778-BS	SU12966.D	1	10/15/15	PN	09/27/15	OP44778	GSU741
OP44778-BSD	SU12967.D	1	10/15/15	PN	09/27/15	OP44778	GSU741

The QC reported here applies to the following samples:

Method: SW846 8310

MC41741-1, MC41741-2, MC41741-3, MC41741-4, MC41741-5, MC41741-6, MC41741-7, MC41741-8, MC41741-9, MC41741-10, MC41741-11, MC41741-12, MC41741-13

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	10	6.4	64	6.9	69	8	39-110/30
208-96-8	Acenaphthylene	10	6.8	68	7.4	74	8	37-110/30
120-12-7	Anthracene	10	8.3	83	8.9	89	7	39-123/30
56-55-3	Benzo (a) anthracene	10	8.4	84	8.9	89	6	57-120/30
50-32-8	Benzo (a) pyrene	10	8.8	88	9.2	92	4	53-114/30
205-99-2	Benzo (b) fluoranthene	10	8.5	85	9.0	90	6	59-121/30
191-24-2	Benzo (g,h,i) perylene	10	8.6	86	9.1	91	6	59-120/30
207-08-9	Benzo (k) fluoranthene	10	8.5	85	9.0	90	6	60-120/30
218-01-9	Chrysene	10	8.8	88	9.3	93	6	61-126/30
53-70-3	Dibenz(a,h)anthracene	10	8.6	86	9.1	91	6	60-121/30
206-44-0	Fluoranthene	10	8.1	81	8.9	89	9	56-116/30
86-73-7	Fluorene	10	7.2	72	7.7	77	7	47-112/30
193-39-5	Indeno (1,2,3-cd) pyrene	10	8.4	84	8.9	89	6	59-121/30
91-57-6	2-Methylnaphthalene	10	5.5	55	6.1	61	10	30-111/30
91-20-3	Naphthalene	10	5.2	52	5.7	57	9	44-95/30
85-01-8	Phenanthrene	10	7.9	79	8.5	85	7	52-114/30
129-00-0	Pyrene	10	8.2	82	8.8	88	7	56-119/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
84-15-1	o-Terphenyl	85%	89%	30-151%
84-15-1	o-Terphenyl	85%	88%	30-151%

* = Outside of Control Limits.

7.2.1 7

Semivolatile Surrogate Recovery Summary

Job Number: MC41741
 Account: OMIWIWF O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

Method: SW846 8310	Matrix: AQ
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Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 ^a	S1 ^b
MC41741-1	SU12969.D	88	88
MC41741-2	SU12970.D	89	89
MC41741-3	SU12971.D	85	84
MC41741-4	SU12972.D	89	89
MC41741-5	SU12973.D	79	78
MC41741-6	SU12976.D	87	86
MC41741-7	SU12977.D	89	88
MC41741-8	SU12978.D	96	95
MC41741-9	SU12979.D	94	93
MC41741-10	SU12980.D	102	101
MC41741-11	SU12981.D	80	79
MC41741-12	SU12982.D	96	96
MC41741-13	SU12983.D	91	91
OP44778-BS	SU12966.D	85	85
OP44778-BSD	SU12967.D	89	88
OP44778-MB	SU12965.D	80	80

Surrogate Compounds	Recovery Limits
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S1 = o-Terphenyl	30-151%
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(a) Recovery from GC signal #2
 (b) Recovery from GC signal #1

7.3.1
7

Metals Analysis

QC Data Summaries



Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC41741
Account: OMIWIF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP25233
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/02/15 10/02/15

Metal	RL	IDL	MDL	MB raw	final	MB raw	final
Aluminum	200	15	28				
Antimony	6.0	.76	2				
Arsenic	4.0	1.3	1.7	0.0	<4.0	0.10	<4.0
Barium	50	.24	1				
Beryllium	4.0	.18	.25				
Bismuth	50	.9	2.1				
Boron	100	.43	1.1				
Cadmium	4.0	.14	.43				
Calcium	5000	5.3	15				
Chromium	10	.37	.48				
Cobalt	50	.14	.28				
Copper	25	.48	2.4				
Gold	50	.95	1.5				
Iron	100	3.2	17				
Lead	5.0	.56	1.7	-0.10	<5.0	1.3	<5.0
Lithium	500	2	2.5				
Magnesium	5000	22	54				
Manganese	15	.04	1.4				
Molybdenum	100	2	3.6				
Nickel	40	.19	.5				
Palladium	50	1.2	2.6				
Platinum	50	3.8	5.4				
Potassium	5000	40	49				
Selenium	10	1	2				
Silicon	100	13	30				
Silver	5.0	.6	1				
Sodium	5000	10	77				
Sulfur	50	1.6	4.6				
Strontium	10	.15	.22				
Thallium	5.0	.47	1.7				
Tin	100	.26	.81				
Titanium	50	.38	.51				
Tungsten	100	3.1	22				

8.1.1
8

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: MC41741
Account: OMIWIF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP25233
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/02/15 10/02/15

Metal	RL	IDL	MDL	MB raw	final	MB raw	final
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Vanadium	10	.36	.51				
Zinc	20	.096	1				
Zirconium	50	.29	1.2				

Associated samples MP25233: MC41741-1F, MC41741-2F, MC41741-3F, MC41741-4F, MC41741-5F, MC41741-6F, MC41741-7F, MC41741-8F, MC41741-9F, MC41741-10F, MC41741-11F, MC41741-12F, MC41741-13F

Results < IDL are shown as zero for calculation purposes
 Outside of QC limits
 Analyte not requested

8.1.1

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC41741
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP25233
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 10/02/15

Metal	MC41811-9 Original MS		Spikelet MPICP7		QC Limits
			<input type="checkbox"/> Rec		
Aluminum					
Antimony					
Arsenic	0.0	532	500	106.4	75-125
Barium					
Beryllium					
Bismuth					
Boron					
Cadmium					
Calcium					
Chromium					
Cobalt					
Copper					
Gold					
Iron					
Lead	0.0	975	1000	97.5	75-125
Lithium					
Magnesium					
Manganese					
Molybdenum					
Nickel					
Palladium					
Platinum					
Potassium					
Selenium					
Silicon					
Silver					
Sodium					
Sulfur					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					

8.1.2


MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC41741
Account: OMIWIF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP25233
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/02/15

Metal	MC41811-9 Original MS	Spikelot MPICP7	<input type="checkbox"/> Rec	QC Limits
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Vanadium

Zinc

Zirconium

Associated samples MP25233: MC41741-1F, MC41741-2F, MC41741-3F, MC41741-4F, MC41741-5F, MC41741-6F, MC41741-7F, MC41741-8F, MC41741-9F, MC41741-10F, MC41741-11F, MC41741-12F, MC41741-13F

Results < IDL are shown as ero for calculation purposes

Outside of QC limits

Matrix Spike Rec. outside of QC limits

Analyte not requested

8.1.2

8

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC41741
 Account: OMIWIF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP25233
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 10/02/15

Metal	MC41811-9 Original MSD	Spikelot MPICP7	<input type="checkbox"/> Rec	MSD RPD	QC Limit	
Aluminum						
Antimony						
Arsenic	0.0	531	500	106.2	0.2	20
Barium						
Beryllium						
Bismuth						
Boron						
Cadmium						
Calcium						
Chromium						
Cobalt						
Copper						
Gold						
Iron						
Lead	0.0	973	1000	97.3	0.2	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Palladium						
Platinum						
Potassium						
Selenium						
Silicon						
Silver						
Sodium						
Sulfur						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						

8.1.2


MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: MC41741
Account: OMIWIWF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP25233
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/02/15

Metal	MC41811-9 Original MSD	Spikelot MPICP7	<input type="checkbox"/> Rec	MSD RPD	QC Limit
-------	---------------------------	--------------------	------------------------------	------------	-------------

Cadmium

Zinc

Zirconium

Associated samples MP25233: MC41741-1F, MC41741-2F, MC41741-3F, MC41741-4F, MC41741-5F, MC41741-6F, MC41741-7F, MC41741-8F, MC41741-9F, MC41741-10F, MC41741-11F, MC41741-12F, MC41741-13F

Results < IDL are shown as zero for calculation purposes

Outside of QC limits

Matrix Spike Rec. outside of QC limits

Analyte not requested

8.1.2

8

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC41741
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP25233
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 10/02/15 10/02/15

Metal	BSP Result	Spikelot MPICP7	<input type="checkbox"/> Rec	QC Limits	BSD Result	Spikelot MPICP7	<input type="checkbox"/> Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic	525	500	105.0	80-120	524	500	104.8	0.2	20
Barium									
Beryllium									
Bismuth									
Boron									
Cadmium									
Calcium									
Chromium									
Cobalt									
Copper									
Gold									
Iron									
Lead	978	1000	97.8	80-120	972	1000	97.2	0.6	20
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Palladium									
Platinum									
Potassium									
Selenium									
Silicon									
Silver									
Sodium									
Sulfur									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									

8.1.3


SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: MC41741
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP25233
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 10/02/15 10/02/15

Metal	BSP Result	Spikelot MPICP7	<input type="checkbox"/> Rec	QC Limits	BSD Result	Spikelot MPICP7	<input type="checkbox"/> Rec	BSD RPD	QC Limit
-------	---------------	--------------------	------------------------------	--------------	---------------	--------------------	------------------------------	------------	-------------

Canadium

Zinc

Zirconium

Associated samples MP25233: MC41741-1F, MC41741-2F, MC41741-3F, MC41741-4F, MC41741-5F, MC41741-6F, MC41741-7F, MC41741-8F, MC41741-9F, MC41741-10F, MC41741-11F, MC41741-12F, MC41741-13F

Results < IDL are shown as ero for calculation purposes
 Outside of QC limits
anr Analyte not reuested

8.1.3



SERIAL DILUTION RESULTS SUMMARY

Login Number: MC41741
 Account: OMIWIWF - O&M, Inc.
 Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP25233
 Matrix Type: AQUEOUS

Methods: SW846 6010C
 Units: ug/l

Prep Date: 10/02/15

Metal	MC41811-9	QC
	Original SDL 1:5	Limits

Metal	Original	SDL 1:5	QC	Limits
Aluminum				
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium				
Beryllium				
Bismuth				
Boron				
Cadmium				
Calcium				
Chromium				
Cobalt				
Copper				
Gold				
Iron				
Lead	0.00	0.00	NC	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Palladium				
Platinum				
Potassium				
Selenium				
Silicon				
Silver				
Sodium				
Sulfur				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				

8.1.4


SERIAL DILUTION RESULTS SUMMARY

Login Number: MC41741
Account: OMIWIF - O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI

QC Batch ID: MP25233
Matrix Type: AQUEOUS

Methods: SW846 6010C
Units: ug/l

Prep Date: 10/02/15

Metal	MC41811-9 Original SDL 1:5	<input type="checkbox"/> DIF	QC Limits
-------	-------------------------------	------------------------------	--------------

Vanadium

Cobalt

Zirconium

Associated samples MP25233: MC41741-1F, MC41741-2F, MC41741-3F, MC41741-4F, MC41741-5F, MC41741-6F, MC41741-7F, MC41741-8F, MC41741-9F, MC41741-10F, MC41741-11F, MC41741-12F, MC41741-13F

Results < IDL are shown as Zero for calculation purposes

Outside of QC limits

Analyte not requested

8.1.4



Technical Report for

O&M, Inc.

Tyco - Diesel, One Stanton Street, Marinette, WI

487

SGS Accutest Job Number: MC43127

Sampling Date: 11/23/15

Report to:

O&M, Inc.

efrauen@oandm-inc.com

ATTN: Eric Frauen

Total number of pages in report: **53**



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

H. (Brad) Madadian
Lab Director

Client Service contact: Jeremy Vienneau 508-481-6200

Certifications: MA (M-MA136, SW846 NELAC) CT (PH-0109) NH (250210) RI (00071) ME (MA00136) FL (E87579) NY (11791) NJ (MA926) PA (6801121) ND (R-188) CO MN (11546AA) NC (653) IL (002337) WI (399080220) DoD ELAP (L-A-B L2235)

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Test results relate only to samples analyzed.

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Sample Summary

O&M, Inc.

Job No: MC43127

Tyco - Diesel, One Stanton Street, Marinette, WI
 Project No: 487

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
MC43127-1	11/23/15	08:00 ETF	11/25/15	AQ	Ground Water	MW-12
MC43127-1F	11/23/15	08:00 ETF	11/25/15	AQ	Groundwater Filtered	MW-12
MC43127-2	11/23/15	08:54 ETF	11/25/15	AQ	Ground Water	PZ-1
MC43127-2F	11/23/15	08:54 ETF	11/25/15	AQ	Groundwater Filtered	PZ-1
MC43127-3	11/23/15	09:30 ETF	11/25/15	AQ	Ground Water	MW-2
MC43127-3F	11/23/15	09:30 ETF	11/25/15	AQ	Groundwater Filtered	MW-2
MC43127-4	11/23/15	10:10 ETF	11/25/15	AQ	Ground Water	MW-5
MC43127-4F	11/23/15	10:10 ETF	11/25/15	AQ	Groundwater Filtered	MW-5
MC43127-5	11/23/15	10:50 ETF	11/25/15	AQ	Ground Water	MW-3
MC43127-5F	11/23/15	10:50 ETF	11/25/15	AQ	Groundwater Filtered	MW-3
MC43127-6	11/23/15	11:20 ETF	11/25/15	AQ	Ground Water	MW-6
MC43127-6F	11/23/15	11:20 ETF	11/25/15	AQ	Groundwater Filtered	MW-6
MC43127-7	11/23/15	12:00 ETF	11/25/15	AQ	Ground Water	MW-4

Sample Summary (continued)

O&M, Inc.

Job No: MC43127

Tyco - Diesel, One Stanton Street, Marinette, WI
Project No: 487

Sample Number	Collected		Received	Matrix		Client Sample ID
	Date	Time By		Code	Type	
MC43127-7F	11/23/15	12:00 ETF	11/25/15	AQ	Groundwater Filtered	MW-4
MC43127-8	11/23/15	13:30 ETF	11/25/15	AQ	Ground Water	MW-7
MC43127-8F	11/23/15	13:30 ETF	11/25/15	AQ	Groundwater Filtered	MW-7
MC43127-9	11/23/15	14:25 ETF	11/25/15	AQ	Ground Water	MW-13
MC43127-9F	11/23/15	14:25 ETF	11/25/15	AQ	Groundwater Filtered	MW-13
MC43127-10	11/23/15	15:05 ETF	11/25/15	AQ	Ground Water	MW-9
MC43127-10F	11/23/15	15:05 ETF	11/25/15	AQ	Groundwater Filtered	MW-9
MC43127-11	11/23/15	15:45 ETF	11/25/15	AQ	Ground Water	MW-8
MC43127-11F	11/23/15	15:45 ETF	11/25/15	AQ	Groundwater Filtered	MW-8
MC43127-12	11/23/15	16:25 ETF	11/25/15	AQ	Ground Water	MW-11
MC43127-12F	11/23/15	16:25 ETF	11/25/15	AQ	Groundwater Filtered	MW-11
MC43127-13	11/23/15	17:05 ETF	11/25/15	AQ	Ground Water	MW-10
MC43127-13F	11/23/15	17:05 ETF	11/25/15	AQ	Groundwater Filtered	MW-10



SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: O&M, Inc.

Job No MC43127

Site: Tyco - Diesel, One Stanton Street, Marinette, WI

Report Date 12/15/2015 3:35:57 PM

13 Sample(s) were collected on 11/23/2015 and were received at Accutest on 11/25/2015 properly preserved, at 2.4 Deg. C and intact. These Samples received an Accutest job number of MC43127. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260C

Matrix: AQ **Batch ID:** MSG5558

- MC43127-12: Elevated RL due to dilution required for matrix interference (foaming).
- MC43127-1,2,3, MC43127-5 through MC43127-12 for Naphthalene: Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.
- All method blanks for this batch meet method specific criteria.
- All samples were analyzed within the recommended method holding time.

Matrix: AQ **Batch ID:** MSG5560

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- MC43127-4 for Naphthalene: Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

Matrix: AQ **Batch ID:** MSN3597

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- MC43127-13: Elevated RL due to dilution required for matrix interference (foaming).

Extractables by GC By Method SW846 8310

Matrix: AQ **Batch ID:** OP45560

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- MC43127-5,8,10 for Anthracene: Confirmation value >40% RPD.
- MC43127-13 for Anthracene, Dibenz(a,h)anthracene, Benzo (b) fluoranthene, Benzo (k) fluoranthene: Confirmation value >40% RPD.

Metals By Method SW846 6010C

Matrix: AQ

Batch ID: MP25532

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC43127-1FMS, MC43127-1FMSD, MC43127-1FSDL were used as the QC samples for metals.

Matrix: AQ

Batch ID: MP25546

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) MC43172-3FMS, MC43172-3FMSD, MC43172-3FSDL were used as the QC samples for metals.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(MC43127).

Summary of Hits

Job Number: MC43127
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 11/23/15



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

MC43127-1 MW-12

No hits reported in this sample.

MC43127-1F MW-12

No hits reported in this sample.

MC43127-2 PZ-1

No hits reported in this sample.

MC43127-2F PZ-1

No hits reported in this sample.

MC43127-3 MW-2

No hits reported in this sample.

MC43127-3F MW-2

No hits reported in this sample.

MC43127-4 MW-5

2-Methylnaphthalene	0.20	0.17	0.11	ug/l	SW846 8310
Naphthalene	0.097 J	0.17	0.053	ug/l	SW846 8310

MC43127-4F MW-5

No hits reported in this sample.

MC43127-5 MW-3

Anthracene ^a	0.21	0.16	0.047	ug/l	SW846 8310
Benzo (a) anthracene	0.78	0.16	0.025	ug/l	SW846 8310
Benzo (a) pyrene	0.82	0.16	0.055	ug/l	SW846 8310
Benzo (b) fluoranthene	0.82	0.16	0.018	ug/l	SW846 8310
Benzo (g,h,i) perylene	0.83	0.16	0.018	ug/l	SW846 8310
Benzo (k) fluoranthene	0.82	0.16	0.018	ug/l	SW846 8310
Chrysene	0.88	0.16	0.022	ug/l	SW846 8310
Dibenz(a,h)anthracene	0.84	0.16	0.027	ug/l	SW846 8310
Fluoranthene	0.13 J	0.16	0.027	ug/l	SW846 8310
Indeno (1,2,3-cd) pyrene	0.82	0.16	0.033	ug/l	SW846 8310

Summary of Hits

Job Number: MC43127
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 11/23/15



Lab Sample ID	Client Sample ID	Result/ Analyte	Qual	RL	MDL	Units	Method
---------------	------------------	--------------------	------	----	-----	-------	--------

Phenanthrene		0.051 J		0.16	0.043	ug/l	SW846 8310
Pyrene		0.14 J		0.16	0.032	ug/l	SW846 8310

MC43127-5F MW-3

No hits reported in this sample.

MC43127-6 MW-6

Benzo (a) anthracene		0.081 J		0.16	0.025	ug/l	SW846 8310
Benzo (a) pyrene		0.061 J		0.16	0.053	ug/l	SW846 8310
Benzo (b) fluoranthene		0.083 J		0.16	0.018	ug/l	SW846 8310
Benzo (g,h,i) perylene		0.073 J		0.16	0.018	ug/l	SW846 8310
Benzo (k) fluoranthene		0.075 J		0.16	0.018	ug/l	SW846 8310
Chrysene		0.075 J		0.16	0.022	ug/l	SW846 8310
Dibenz(a,h)anthracene		0.067 J		0.16	0.027	ug/l	SW846 8310
Fluoranthene		0.038 J		0.16	0.026	ug/l	SW846 8310
Indeno (1,2,3-cd) pyrene		0.080 J		0.16	0.032	ug/l	SW846 8310
Pyrene		0.052 J		0.16	0.031	ug/l	SW846 8310

MC43127-6F MW-6

No hits reported in this sample.

MC43127-7 MW-4

No hits reported in this sample.

MC43127-7F MW-4

No hits reported in this sample.

MC43127-8 MW-7

Anthracene ^a		0.47		0.16	0.047	ug/l	SW846 8310
Benzo (a) anthracene		0.70		0.16	0.025	ug/l	SW846 8310
Benzo (a) pyrene		0.71		0.16	0.055	ug/l	SW846 8310
Benzo (b) fluoranthene		0.68		0.16	0.018	ug/l	SW846 8310
Benzo (g,h,i) perylene		0.71		0.16	0.018	ug/l	SW846 8310
Benzo (k) fluoranthene		0.68		0.16	0.018	ug/l	SW846 8310
Chrysene		0.78		0.16	0.022	ug/l	SW846 8310
Dibenz(a,h)anthracene		0.68		0.16	0.027	ug/l	SW846 8310
Fluoranthene		0.23		0.16	0.027	ug/l	SW846 8310
Indeno (1,2,3-cd) pyrene		0.69		0.16	0.033	ug/l	SW846 8310
Phenanthrene		0.11 J		0.16	0.043	ug/l	SW846 8310

Summary of Hits

Job Number: MC43127
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 11/23/15



Lab Sample ID	Client Sample ID	Result/ Analyte	RL	MDL	Units	Method
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Pyrene		0.22	0.16	0.032	ug/l	SW846 8310
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MC43127-8F MW-7

No hits reported in this sample.

MC43127-9 MW-13

Benzo (b) fluoranthene	0.028 J	0.17	0.019	ug/l	SW846 8310
Benzo (g,h,i) perylene	0.034 J	0.17	0.019	ug/l	SW846 8310
Benzo (k) fluoranthene	0.023 J	0.17	0.019	ug/l	SW846 8310
Fluoranthene	0.031 J	0.17	0.028	ug/l	SW846 8310
2-Methylnaphthalene	0.29	0.17	0.10	ug/l	SW846 8310
Naphthalene	0.10 J	0.17	0.052	ug/l	SW846 8310

MC43127-9F MW-13

No hits reported in this sample.

MC43127-10 MW-9

Acenaphthene	0.28	0.17	0.065	ug/l	SW846 8310
Anthracene ^a	1.0	0.17	0.049	ug/l	SW846 8310
Fluoranthene	0.18	0.17	0.028	ug/l	SW846 8310
Fluorene	0.076 J	0.17	0.068	ug/l	SW846 8310
2-Methylnaphthalene	0.14 J	0.17	0.10	ug/l	SW846 8310
Phenanthrene	0.20	0.17	0.044	ug/l	SW846 8310
Pyrene	0.22	0.17	0.033	ug/l	SW846 8310

MC43127-10F MW-9

No hits reported in this sample.

MC43127-11 MW-8

Anthracene	0.060 J	0.15	0.044	ug/l	SW846 8310
Benzo (a) anthracene	0.033 J	0.15	0.023	ug/l	SW846 8310
Benzo (b) fluoranthene	0.025 J	0.15	0.017	ug/l	SW846 8310
Benzo (g,h,i) perylene	0.026 J	0.15	0.017	ug/l	SW846 8310
Chrysene	0.028 J	0.15	0.021	ug/l	SW846 8310
Fluoranthene	0.061 J	0.15	0.025	ug/l	SW846 8310
Phenanthrene	0.044 J	0.15	0.040	ug/l	SW846 8310
Pyrene	0.054 J	0.15	0.030	ug/l	SW846 8310

Summary of Hits

Job Number: MC43127
Account: O&M, Inc.
Project: Tyco - Diesel, One Stanton Street, Marinette, WI
Collected: 11/23/15



Lab Sample ID	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
---------------	------------------	-----------------	----	-----	-------	--------

MC43127-11F MW-8

No hits reported in this sample.

MC43127-12 MW-11

Acenaphthene	0.15 J	0.16	0.062	ug/l	SW846 8310
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MC43127-12F MW-11

Arsenic	5.0	4.0	1.7	ug/l	SW846 6010C
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MC43127-13 MW-10

Anthracene ^a	1.6	0.16	0.046	ug/l	SW846 8310
Benzo (a) pyrene	2.0	0.16	0.053	ug/l	SW846 8310
Benzo (b) fluoranthene ^a	1.1	0.16	0.018	ug/l	SW846 8310
Benzo (g,h,i) perylene	1.1	0.16	0.018	ug/l	SW846 8310
Benzo (k) fluoranthene ^a	0.54	0.16	0.018	ug/l	SW846 8310
Dibenz(a,h)anthracene ^a	0.23	0.16	0.027	ug/l	SW846 8310
Fluoranthene	2.2	0.16	0.026	ug/l	SW846 8310
Indeno (1,2,3-cd) pyrene	1.0	0.16	0.032	ug/l	SW846 8310
Phenanthrene	0.66	0.16	0.042	ug/l	SW846 8310
Pyrene	1.7	0.16	0.031	ug/l	SW846 8310

MC43127-13F MW-10

No hits reported in this sample.

(a) Confirmation value > 40% RPD.

Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: MW-12	Date Sampled: 11/23/15
Lab Sample ID: MC43127-1	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148320.D	1	12/05/15	CB	n/a	n/a	MSG5558
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene ^a	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		79-127%
2037-26-5	Toluene-D8	97%		80-116%
460-00-4	4-Bromofluorobenzene	107%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.1
4

Report of Analysis

Client Sample ID: MW-12	Date Sampled: 11/23/15
Lab Sample ID: MC43127-1	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13950.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	850 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.18	0.069	ug/l	
208-96-8	Acenaphthylene	ND	0.18	0.088	ug/l	
120-12-7	Anthracene	ND	0.18	0.052	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.18	0.028	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.18	0.060	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.18	0.020	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.18	0.020	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.18	0.020	ug/l	
218-01-9	Chrysene	ND	0.18	0.024	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.18	0.030	ug/l	
206-44-0	Fluoranthene	ND	0.18	0.029	ug/l	
86-73-7	Fluorene	ND	0.18	0.072	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.18	0.036	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.18	0.11	ug/l	
91-20-3	Naphthalene	ND	0.18	0.055	ug/l	
85-01-8	Phenanthrene	ND	0.18	0.047	ug/l	
129-00-0	Pyrene	ND	0.18	0.035	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	116%		30-151%
84-15-1	o-Terphenyl	115%		30-151%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.1
 4

Report of Analysis

Client Sample ID: MW-12 Lab Sample ID: MC43127-1F Matrix: AQ - Groundwater Filtered Project: Tyco - Diesel, One Stanton Street, Marinette, WI	Date Sampled: 11/23/15 Date Received: 11/25/15 Percent Solids: n/a
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4.2
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18716
 (2) Prep QC Batch: MP25532

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: PZ-1	Date Sampled: 11/23/15
Lab Sample ID: MC43127-2	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148321.D	1	12/05/15	CB	n/a	n/a	MSG5558
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene ^a	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		79-127%
2037-26-5	Toluene-D8	97%		80-116%
460-00-4	4-Bromofluorobenzene	108%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.3
4

Report of Analysis

Client Sample ID: PZ-1	Date Sampled: 11/23/15
Lab Sample ID: MC43127-2	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13951.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	940 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.063	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.079	ug/l	
120-12-7	Anthracene	ND	0.16	0.047	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.025	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.054	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.018	ug/l	
218-01-9	Chrysene	ND	0.16	0.022	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	ND	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.065	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.033	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.10	ug/l	
91-20-3	Naphthalene	ND	0.16	0.050	ug/l	
85-01-8	Phenanthrene	ND	0.16	0.042	ug/l	
129-00-0	Pyrene	ND	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	107%		30-151%
84-15-1	o-Terphenyl	106%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.3
4

Report of Analysis

Client Sample ID: PZ-1	Date Sampled: 11/23/15
Lab Sample ID: MC43127-2F	Date Received: 11/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.4
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18716
 (2) Prep QC Batch: MP25532

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-2	Date Sampled: 11/23/15
Lab Sample ID: MC43127-3	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148322.D	1	12/05/15	CB	n/a	n/a	MSG5558
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene ^a	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		79-127%
2037-26-5	Toluene-D8	96%		80-116%
460-00-4	4-Bromofluorobenzene	108%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.5
4

Report of Analysis

Client Sample ID: MW-2	Date Sampled: 11/23/15
Lab Sample ID: MC43127-3	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13952.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.062	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.025	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.018	ug/l	
218-01-9	Chrysene	ND	0.16	0.022	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	ND	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.064	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.032	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.099	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	ND	0.16	0.042	ug/l	
129-00-0	Pyrene	ND	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	104%		30-151%
84-15-1	o-Terphenyl	103%		30-151%

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.5
4

Report of Analysis

Client Sample ID: MW-2	Date Sampled: 11/23/15
Lab Sample ID: MC43127-3F	Date Received: 11/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.6
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18716
 (2) Prep QC Batch: MP25532

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-5	Date Sampled: 11/23/15
Lab Sample ID: MC43127-4	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.7
4

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148377.D	1	12/07/15	CB	n/a	n/a	MSG5560
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene ^a	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	90%		79-127%
2037-26-5	Toluene-D8	91%		80-116%
460-00-4	4-Bromofluorobenzene	93%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-5	Date Sampled: 11/23/15
Lab Sample ID: MC43127-4	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13953.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	880 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.067	ug/l	
208-96-8	Acenaphthylene	ND	0.17	0.085	ug/l	
120-12-7	Anthracene	ND	0.17	0.050	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.17	0.027	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.17	0.058	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.17	0.019	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.17	0.019	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.17	0.019	ug/l	
218-01-9	Chrysene	ND	0.17	0.023	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.17	0.029	ug/l	
206-44-0	Fluoranthene	ND	0.17	0.028	ug/l	
86-73-7	Fluorene	ND	0.17	0.069	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.17	0.035	ug/l	
91-57-6	2-Methylnaphthalene	0.20	0.17	0.11	ug/l	
91-20-3	Naphthalene	0.097	0.17	0.053	ug/l	J
85-01-8	Phenanthrene	ND	0.17	0.045	ug/l	
129-00-0	Pyrene	ND	0.17	0.034	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	109%		30-151%
84-15-1	o-Terphenyl	108%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.7

Report of Analysis

Client Sample ID: MW-5	Date Sampled: 11/23/15
Lab Sample ID: MC43127-4F	Date Received: 11/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.8
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18716

(2) Prep QC Batch: MP25532

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-3	Date Sampled: 11/23/15
Lab Sample ID: MC43127-5	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148324.D	1	12/05/15	CB	n/a	n/a	MSG5558
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene ^a	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		79-127%
2037-26-5	Toluene-D8	97%		80-116%
460-00-4	4-Bromofluorobenzene	107%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.9
4

Report of Analysis

Client Sample ID: MW-3	Date Sampled: 11/23/15
Lab Sample ID: MC43127-5	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13954.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.063	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.080	ug/l	
120-12-7	Anthracene ^a	0.21	0.16	0.047	ug/l	
56-55-3	Benzo (a) anthracene	0.78	0.16	0.025	ug/l	
50-32-8	Benzo (a) pyrene	0.82	0.16	0.055	ug/l	
205-99-2	Benzo (b) fluoranthene	0.82	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	0.83	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	0.82	0.16	0.018	ug/l	
218-01-9	Chrysene	0.88	0.16	0.022	ug/l	
53-70-3	Dibenz(a,h)anthracene	0.84	0.16	0.027	ug/l	
206-44-0	Fluoranthene	0.13	0.16	0.027	ug/l	J
86-73-7	Fluorene	ND	0.16	0.065	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	0.82	0.16	0.033	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.10	ug/l	
91-20-3	Naphthalene	ND	0.16	0.050	ug/l	
85-01-8	Phenanthrene	0.051	0.16	0.043	ug/l	J
129-00-0	Pyrene	0.14	0.16	0.032	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	116%		30-151%
84-15-1	o-Terphenyl	115%		30-151%

(a) Confirmation value > 40% RPD.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

4.9
4

Report of Analysis

Client Sample ID: MW-3	Date Sampled: 11/23/15
Lab Sample ID: MC43127-5F	Date Received: 11/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.10
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18716
 (2) Prep QC Batch: MP25532

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-6	Date Sampled: 11/23/15
Lab Sample ID: MC43127-6	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148325.D	1	12/05/15	CB	n/a	n/a	MSG5558
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene ^a	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		79-127%
2037-26-5	Toluene-D8	96%		80-116%
460-00-4	4-Bromofluorobenzene	109%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

4.11
4

Report of Analysis

Client Sample ID: MW-6	Date Sampled: 11/23/15
Lab Sample ID: MC43127-6	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13957.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.062	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	0.081	0.16	0.025	ug/l	J
50-32-8	Benzo (a) pyrene	0.061	0.16	0.053	ug/l	J
205-99-2	Benzo (b) fluoranthene	0.083	0.16	0.018	ug/l	J
191-24-2	Benzo (g,h,i) perylene	0.073	0.16	0.018	ug/l	J
207-08-9	Benzo (k) fluoranthene	0.075	0.16	0.018	ug/l	J
218-01-9	Chrysene	0.075	0.16	0.022	ug/l	J
53-70-3	Dibenz(a,h)anthracene	0.067	0.16	0.027	ug/l	J
206-44-0	Fluoranthene	0.038	0.16	0.026	ug/l	J
86-73-7	Fluorene	ND	0.16	0.064	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	0.080	0.16	0.032	ug/l	J
91-57-6	2-Methylnaphthalene	ND	0.16	0.099	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	ND	0.16	0.042	ug/l	
129-00-0	Pyrene	0.052	0.16	0.031	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	115%		30-151%
84-15-1	o-Terphenyl	114%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.11
4

Report of Analysis

Client Sample ID: MW-6 Lab Sample ID: MC43127-6F Matrix: AQ - Groundwater Filtered Project: Tyco - Diesel, One Stanton Street, Marinette, WI	Date Sampled: 11/23/15 Date Received: 11/25/15 Percent Solids: n/a
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4.12
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	11/30/15	12/02/15 EC	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ³

- (1) Instrument QC Batch: MA18716
- (2) Instrument QC Batch: MA18721
- (3) Prep QC Batch: MP25532

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-4	Date Sampled: 11/23/15
Lab Sample ID: MC43127-7	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.13
4

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148326.D	1	12/05/15	CB	n/a	n/a	MSG5558
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene ^a	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		79-127%
2037-26-5	Toluene-D8	96%		80-116%
460-00-4	4-Bromofluorobenzene	109%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-4	Date Sampled: 11/23/15
Lab Sample ID: MC43127-7	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13958.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	920 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.064	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.081	ug/l	
120-12-7	Anthracene	ND	0.16	0.048	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.025	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.055	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	ND	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.018	ug/l	
218-01-9	Chrysene	ND	0.16	0.022	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.16	0.028	ug/l	
206-44-0	Fluoranthene	ND	0.16	0.027	ug/l	
86-73-7	Fluorene	ND	0.16	0.066	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.033	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.10	ug/l	
91-20-3	Naphthalene	ND	0.16	0.051	ug/l	
85-01-8	Phenanthrene	ND	0.16	0.043	ug/l	
129-00-0	Pyrene	ND	0.16	0.032	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	111%		30-151%
84-15-1	o-Terphenyl	110%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.13
 4

Report of Analysis

Client Sample ID: MW-4	Date Sampled: 11/23/15
Lab Sample ID: MC43127-7F	Date Received: 11/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.14
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	11/30/15	12/02/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/02/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18721
 (2) Prep QC Batch: MP25532

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-7	Date Sampled: 11/23/15
Lab Sample ID: MC43127-8	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.15
4

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148327.D	1	12/05/15	CB	n/a	n/a	MSG5558
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene ^a	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		79-127%
2037-26-5	Toluene-D8	98%		80-116%
460-00-4	4-Bromofluorobenzene	106%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-7	Date Sampled: 11/23/15
Lab Sample ID: MC43127-8	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13959.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	930 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.063	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.080	ug/l	
120-12-7	Anthracene ^a	0.47	0.16	0.047	ug/l	
56-55-3	Benzo (a) anthracene	0.70	0.16	0.025	ug/l	
50-32-8	Benzo (a) pyrene	0.71	0.16	0.055	ug/l	
205-99-2	Benzo (b) fluoranthene	0.68	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	0.71	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	0.68	0.16	0.018	ug/l	
218-01-9	Chrysene	0.78	0.16	0.022	ug/l	
53-70-3	Dibenz(a,h)anthracene	0.68	0.16	0.027	ug/l	
206-44-0	Fluoranthene	0.23	0.16	0.027	ug/l	
86-73-7	Fluorene	ND	0.16	0.065	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	0.69	0.16	0.033	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.10	ug/l	
91-20-3	Naphthalene	ND	0.16	0.050	ug/l	
85-01-8	Phenanthrene	0.11	0.16	0.043	ug/l	J
129-00-0	Pyrene	0.22	0.16	0.032	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	109%		30-151%
84-15-1	o-Terphenyl	107%		30-151%

(a) Confirmation value > 40% RPD.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.15
4

Report of Analysis

Client Sample ID: MW-7	Date Sampled: 11/23/15
Lab Sample ID: MC43127-8F	Date Received: 11/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.16
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	11/30/15	12/02/15 EC	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ³

- (1) Instrument QC Batch: MA18716
- (2) Instrument QC Batch: MA18721
- (3) Prep QC Batch: MP25532

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL



Report of Analysis

4.17
4

Client Sample ID: MW-13	Date Sampled: 11/23/15
Lab Sample ID: MC43127-9	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148328.D	1	12/05/15	CB	n/a	n/a	MSG5558
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene ^a	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		79-127%
2037-26-5	Toluene-D8	99%		80-116%
460-00-4	4-Bromofluorobenzene	107%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-13	Date Sampled: 11/23/15
Lab Sample ID: MC43127-9	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13960.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.17	0.065	ug/l	
208-96-8	Acenaphthylene	ND	0.17	0.083	ug/l	
120-12-7	Anthracene	ND	0.17	0.049	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.17	0.026	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.17	0.056	ug/l	
205-99-2	Benzo (b) fluoranthene	0.028	0.17	0.019	ug/l	J
191-24-2	Benzo (g,h,i) perylene	0.034	0.17	0.019	ug/l	J
207-08-9	Benzo (k) fluoranthene	0.023	0.17	0.019	ug/l	J
218-01-9	Chrysene	ND	0.17	0.023	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.17	0.028	ug/l	
206-44-0	Fluoranthene	0.031	0.17	0.028	ug/l	J
86-73-7	Fluorene	ND	0.17	0.068	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.17	0.034	ug/l	
91-57-6	2-Methylnaphthalene	0.29	0.17	0.10	ug/l	
91-20-3	Naphthalene	0.10	0.17	0.052	ug/l	J
85-01-8	Phenanthrene	ND	0.17	0.044	ug/l	
129-00-0	Pyrene	ND	0.17	0.033	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	115%		30-151%
84-15-1	o-Terphenyl	115%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.17

4

Report of Analysis

Client Sample ID: MW-13 Lab Sample ID: MC43127-9F Matrix: AQ - Groundwater Filtered Project: Tyco - Diesel, One Stanton Street, Marinette, WI	Date Sampled: 11/23/15 Date Received: 11/25/15 Percent Solids: n/a
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4.18
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	11/30/15	12/02/15 EC	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ³

- (1) Instrument QC Batch: MA18716
- (2) Instrument QC Batch: MA18721
- (3) Prep QC Batch: MP25532

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-9		Date Sampled: 11/23/15
Lab Sample ID: MC43127-10		Date Received: 11/25/15
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: Tyco - Diesel, One Stanton Street, Marinette, WI		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148329.D	1	12/05/15	CB	n/a	n/a	MSG5558
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene ^a	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	106%		79-127%
2037-26-5	Toluene-D8	96%		80-116%
460-00-4	4-Bromofluorobenzene	106%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

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Report of Analysis

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Client Sample ID: MW-9	Date Sampled: 11/23/15
Lab Sample ID: MC43127-10	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13961.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	900 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.28	0.17	0.065	ug/l	
208-96-8	Acenaphthylene	ND	0.17	0.083	ug/l	
120-12-7	Anthracene ^a	1.0	0.17	0.049	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.17	0.026	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.17	0.056	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.17	0.019	ug/l	
191-24-2	Benzo (g, h, i) perylene	ND	0.17	0.019	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.17	0.019	ug/l	
218-01-9	Chrysene	ND	0.17	0.023	ug/l	
53-70-3	Dibenz(a,h)anthracene	ND	0.17	0.028	ug/l	
206-44-0	Fluoranthene	0.18	0.17	0.028	ug/l	
86-73-7	Fluorene	0.076	0.17	0.068	ug/l	J
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.17	0.034	ug/l	
91-57-6	2-Methylnaphthalene	0.14	0.17	0.10	ug/l	J
91-20-3	Naphthalene	ND	0.17	0.052	ug/l	
85-01-8	Phenanthrene	0.20	0.17	0.044	ug/l	
129-00-0	Pyrene	0.22	0.17	0.033	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	118%		30-151%
84-15-1	o-Terphenyl	116%		30-151%

(a) Confirmation value > 40% RPD.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-9	Date Sampled: 11/23/15
Lab Sample ID: MC43127-10F	Date Received: 11/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.20
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	11/30/15	12/02/15 EC	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ³

- (1) Instrument QC Batch: MA18716
- (2) Instrument QC Batch: MA18721
- (3) Prep QC Batch: MP25532

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

4.21
4

Client Sample ID: MW-8	Date Sampled: 11/23/15
Lab Sample ID: MC43127-11	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	G148330.D	1	12/05/15	CB	n/a	n/a	MSG5558
Run #2							

Run #	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	0.50	0.27	ug/l	
108-88-3	Toluene	ND	1.0	0.66	ug/l	
100-41-4	Ethylbenzene	ND	1.0	0.24	ug/l	
1330-20-7	Xylene (total)	ND	1.0	0.22	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	0.35	ug/l	
91-20-3	Naphthalene ^a	ND	5.0	0.61	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.29	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	1.2	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	103%		79-127%
2037-26-5	Toluene-D8	98%		80-116%
460-00-4	4-Bromofluorobenzene	108%		77-124%

(a) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-8	Date Sampled: 11/23/15
Lab Sample ID: MC43127-11	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13962.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.15	0.059	ug/l	
208-96-8	Acenaphthylene	ND	0.15	0.074	ug/l	
120-12-7	Anthracene	0.060	0.15	0.044	ug/l	J
56-55-3	Benzo (a) anthracene	0.033	0.15	0.023	ug/l	J
50-32-8	Benzo (a) pyrene	ND	0.15	0.051	ug/l	
205-99-2	Benzo (b) fluoranthene	0.025	0.15	0.017	ug/l	J
191-24-2	Benzo (g,h,i) perylene	0.026	0.15	0.017	ug/l	J
207-08-9	Benzo (k) fluoranthene	ND	0.15	0.017	ug/l	
218-01-9	Chrysene	0.028	0.15	0.021	ug/l	J
53-70-3	Dibenz(a,h)anthracene	ND	0.15	0.026	ug/l	
206-44-0	Fluoranthene	0.061	0.15	0.025	ug/l	J
86-73-7	Fluorene	ND	0.15	0.061	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.15	0.031	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.15	0.094	ug/l	
91-20-3	Naphthalene	ND	0.15	0.047	ug/l	
85-01-8	Phenanthrene	0.044	0.15	0.040	ug/l	J
129-00-0	Pyrene	0.054	0.15	0.030	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	88%		30-151%
84-15-1	o-Terphenyl	87%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.21
4

Report of Analysis

Client Sample ID: MW-8	Date Sampled: 11/23/15
Lab Sample ID: MC43127-11F	Date Received: 11/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.22
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	11/30/15	12/02/15 EC	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ³

- (1) Instrument QC Batch: MA18716
- (2) Instrument QC Batch: MA18721
- (3) Prep QC Batch: MP25532

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL

Report of Analysis

Client Sample ID: MW-11	Date Sampled: 11/23/15
Lab Sample ID: MC43127-12	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8260C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	G148331.D	10	12/05/15	CB	n/a	n/a	MSG5558
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	2.7	ug/l	
108-88-3	Toluene	ND	10	6.6	ug/l	
100-41-4	Ethylbenzene	ND	10	2.4	ug/l	
1330-20-7	Xylene (total)	ND	10	2.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	3.5	ug/l	
91-20-3	Naphthalene ^b	ND	50	6.1	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	50	2.9	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	50	12	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	104%		79-127%
2037-26-5	Toluene-D8	99%		80-116%
460-00-4	4-Bromofluorobenzene	107%		77-124%

(a) Elevated RL due to dilution required for matrix interference (foaming).

(b) Continuing Calibration Confirmation outside of acceptance criteria. Reporting Limit response verified by low-level standard.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-11	Date Sampled: 11/23/15
Lab Sample ID: MC43127-12	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13965.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

Run #	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	0.15	0.16	0.062	ug/l	J
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene	ND	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.025	ug/l	
50-32-8	Benzo (a) pyrene	ND	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene	ND	0.16	0.018	ug/l	
191-24-2	Benzo (g, h, i) perylene	ND	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene	ND	0.16	0.018	ug/l	
218-01-9	Chrysene	ND	0.16	0.022	ug/l	
53-70-3	Dibenz(a, h)anthracene	ND	0.16	0.027	ug/l	
206-44-0	Fluoranthene	ND	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.064	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	ND	0.16	0.032	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.099	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	ND	0.16	0.042	ug/l	
129-00-0	Pyrene	ND	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	79%		30-151%
84-15-1	o-Terphenyl	79%		30-151%

ND = Not detected MDL = Method Detection Limit J = Indicates an estimated value
 RL = Reporting Limit B = Indicates analyte found in associated method blank
 E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

4.23 4

Report of Analysis

Client Sample ID: MW-11	Date Sampled: 11/23/15
Lab Sample ID: MC43127-12F	Date Received: 11/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.24
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	5.0	4.0	1.7	ug/l	1	11/30/15	12/02/15 EC	SW846 6010C ²	SW846 3010A ³
Lead	1.7 U	5.0	1.7	ug/l	1	11/30/15	12/01/15 EC	SW846 6010C ¹	SW846 3010A ³

- (1) Instrument QC Batch: MA18716
- (2) Instrument QC Batch: MA18721
- (3) Prep QC Batch: MP25532

RL = Reporting Limit
MDL = Method Detection Limit

U = Indicates a result < MDL
B = Indicates a result > = MDL but < RL



Report of Analysis

Client Sample ID: MW-10		Date Sampled: 11/23/15
Lab Sample ID: MC43127-13		Date Received: 11/25/15
Matrix: AQ - Ground Water		Percent Solids: n/a
Method: SW846 8260C		
Project: Tyco - Diesel, One Stanton Street, Marinette, WI		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	N98279.D	10	12/05/15	KD	n/a	n/a	MSN3597
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

Aromatic Volatiles

CAS No.	Compound	Result	RL	MDL	Units	Q
71-43-2	Benzene	ND	5.0	2.7	ug/l	
108-88-3	Toluene	ND	10	6.6	ug/l	
100-41-4	Ethylbenzene	ND	10	2.4	ug/l	
1330-20-7	Xylene (total)	ND	10	2.2	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	3.5	ug/l	
91-20-3	Naphthalene	ND	50	6.1	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	50	2.9	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	50	12	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	105%		79-127%
2037-26-5	Toluene-D8	101%		80-116%
460-00-4	4-Bromofluorobenzene	96%		77-124%

(a) Elevated RL due to dilution required for matrix interference (foaming).

ND = Not detected	MDL = Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

4.25
4

Report of Analysis

Client Sample ID: MW-10	Date Sampled: 11/23/15
Lab Sample ID: MC43127-13	Date Received: 11/25/15
Matrix: AQ - Ground Water	Percent Solids: n/a
Method: SW846 8310 SW846 3510C	
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	SU13966.D	1	12/07/15	PN	11/28/15	OP45560	GSU782
Run #2							

	Initial Volume	Final Volume
Run #1	950 ml	1.0 ml
Run #2		

Polynuclear Aromatic Hydrocarbons

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.16	0.062	ug/l	
208-96-8	Acenaphthylene	ND	0.16	0.078	ug/l	
120-12-7	Anthracene ^a	1.6	0.16	0.046	ug/l	
56-55-3	Benzo (a) anthracene	ND	0.16	0.025	ug/l	
50-32-8	Benzo (a) pyrene	2.0	0.16	0.053	ug/l	
205-99-2	Benzo (b) fluoranthene ^a	1.1	0.16	0.018	ug/l	
191-24-2	Benzo (g,h,i) perylene	1.1	0.16	0.018	ug/l	
207-08-9	Benzo (k) fluoranthene ^a	0.54	0.16	0.018	ug/l	
218-01-9	Chrysene	ND	0.16	0.022	ug/l	
53-70-3	Dibenz(a,h)anthracene ^a	0.23	0.16	0.027	ug/l	
206-44-0	Fluoranthene	2.2	0.16	0.026	ug/l	
86-73-7	Fluorene	ND	0.16	0.064	ug/l	
193-39-5	Indeno (1,2,3-cd) pyrene	1.0	0.16	0.032	ug/l	
91-57-6	2-Methylnaphthalene	ND	0.16	0.099	ug/l	
91-20-3	Naphthalene	ND	0.16	0.049	ug/l	
85-01-8	Phenanthrene	0.66	0.16	0.042	ug/l	
129-00-0	Pyrene	1.7	0.16	0.031	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
84-15-1	o-Terphenyl	89%		30-151%
84-15-1	o-Terphenyl	89%		30-151%

(a) Confirmation value > 40% RPD.

ND = Not detected MDL = Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: MW-10	Date Sampled: 11/23/15
Lab Sample ID: MC43127-13F	Date Received: 11/25/15
Matrix: AQ - Groundwater Filtered	Percent Solids: n/a
Project: Tyco - Diesel, One Stanton Street, Marinette, WI	

4.26
4

Dissolved Metals Analysis

Analyte	Result	RL	MDL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	1.7 U	4.0	1.7	ug/l	1	12/02/15	12/03/15 EC	SW846 6010C ¹	SW846 3010A ²
Lead	1.7 U	5.0	1.7	ug/l	1	12/02/15	12/03/15 EC	SW846 6010C ¹	SW846 3010A ²

(1) Instrument QC Batch: MA18726
 (2) Prep QC Batch: MP25546

RL = Reporting Limit
 MDL = Method Detection Limit

U = Indicates a result < MDL
 B = Indicates a result > = MDL but < RL

Misc. Forms

**Custody Documents and Other Forms**

Includes the following where applicable:

- Chain of Custody



Accutest Laboratories Sample Receipt Summary

Accutest Job Number: MC43127 Client: O&M Project: _____

Date / Time Received: 11/25/2015 10:00:00 AM Delivery Method: _____ Airbill #'s: _____

Cooler Temps (Initial/Adjusted): #1: (0.8/0.8); #2: (1.1/1.1); #3: (1.4/1.4); #4: (2.4/2.4);

Cooler Security	<u>Y or N</u>	<u>Y or N</u>
1. Custody Seals Present:	<input checked="" type="checkbox"/> <input type="checkbox"/>	3. COC Present: <input checked="" type="checkbox"/> <input type="checkbox"/>
2. Custody Seals Intact:	<input checked="" type="checkbox"/> <input type="checkbox"/>	4. Smpl Dates/Time OK <input checked="" type="checkbox"/> <input type="checkbox"/>

Cooler Temperature	<u>Y or N</u>
1. Temp criteria achieved:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Thermometer ID:	<u>IRGUN1;</u>
3. Cooler media:	<u>Ice (Bag)</u>
4. No. Coolers:	<u>4</u>

Quality Control Preservation	<u>Y or N</u>	<u>N/A</u>
1. Trip Blank present / cooler:	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	
2. Trip Blank listed on COC:	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	
3. Samples preserved properly:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
4. VOCs headspace free:	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

Sample Integrity - Documentation	<u>Y or N</u>
1. Sample labels present on bottles:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. Container labeling complete:	<input checked="" type="checkbox"/> <input type="checkbox"/>
3. Sample container label / COC agree:	<input checked="" type="checkbox"/> <input type="checkbox"/>

Sample Integrity - Condition	<u>Y or N</u>
1. Sample recvd within HT:	<input checked="" type="checkbox"/> <input type="checkbox"/>
2. All containers accounted for:	<input checked="" type="checkbox"/> <input type="checkbox"/>
3. Condition of sample:	<u>Intact</u>

Sample Integrity - Instructions	<u>Y or N</u>	<u>N/A</u>
1. Analysis requested is clear:	<input checked="" type="checkbox"/> <input type="checkbox"/>	
2. Bottles received for unspecified tests:	<input type="checkbox"/> <input checked="" type="checkbox"/>	
3. Sufficient volume recvd for analysis:	<input checked="" type="checkbox"/> <input type="checkbox"/>	
4. Compositing instructions clear:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Filtering instructions clear:	<input type="checkbox"/> <input type="checkbox"/>	<input checked="" type="checkbox"/>

Comments

Accutest Laboratories
V.(508) 481-6200

495 Technology Center West, Bldg One
F: (508) 481-7753

Marlborough, MA 01752
www.accutest.com

5.1

Appendix C

Well Development Forms

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

Facility/Project Name <i>Tyco - One Stanton St. Parking Lot</i>	County Name <i>Marinette</i>	Well Name <i>MW-1</i>
Facility License, Permit or Monitoring Number <i>BRRTS # 0238559214</i>	County Code <i>38</i>	Wis. Unique Well Number -----
		DNR Well ID Number -----

1. Can this well be purged dry? Yes No

2. 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

3. Time spent developing well 15 min.

4. Depth of well (from top of well casing) 12.0 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 2.0 gal.

7. Volume of water removed from well 8.0 gal.

8. Volume of water added (if any) ----- gal.

9. Source of water added None

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

17. Additional comments on development:

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. <u>3.90</u> ft.	<u>7.15</u> ft.
Date	b. <u>11/05/2012</u> m m d d y y y y	<u>11/05/2012</u> m m d d y y y y
Time	c. <u>1:05</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>1:20</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	<u>2.0</u> inches	<u>0.2</u> inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) _____	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 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: _____ Last Name: _____

Firm: Geiss Drilling

Name and Address of Facility Contact /Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St

City/State/Zip: Marinette, WI 54143

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

Signature: [Signature]

Print Name: Eric Frauen, P.C.

Firm: O&M, Inc.

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

Facility/Project Name: Tyco - One Stanton St. Parking Lot County Name: Marinette Well Name: MW-2
Facility License, Permit or Monitoring Number: BRRTS # 0238559214 County Code: 38 Wis. Unique Well Number: _____ DNR Well ID Number: _____

1. Can this well be purged dry? Yes No

2. 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 _____

3. Time spent developing well 20 min.

4. Depth of well (from top of well casing) 12.5 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 2.0 gal.

7. Volume of water removed from well 20.0 gal.

8. Volume of water added (if any) _____ gal.

9. Source of water added None

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

17. Additional comments on development:

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. <u>3.80</u> ft.	<u>6.05</u> ft.
Date	b. <u>11/06/2012</u> m m d d y y y y	<u>11/06/2012</u> m m d d y y y y
Time	c. <u>11:10</u> <input type="checkbox"/> a.m. <input type="checkbox"/> p.m.	<u>11:30</u> <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.
12. Sediment in well bottom	<u>3.5</u> inches	<u>0.4</u> inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe)	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 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: _____ Last Name: _____

Firm: Geiss Drilling

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette, WI 54143

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

Signature: _____

Print Name: _____

Firm: _____

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

Facility/Project Name <u>Tyco - One Stanton St. Parking Lot</u>	County Name <u>Marinette</u>	Well Name <u>MW-3</u>
Facility License, Permit or Monitoring Number <u>BRRTS# 0238559214</u>	County Code <u>38</u>	Wis. Unique Well Number _____
		DNR Well ID Number _____

1. Can this well be purged dry? Yes No
2. 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 _____
3. Time spent developing well 25 min.
4. Depth of well (from top of well casing) 12.5 ft.
5. Inside diameter of well 2.0 in.
6. Volume of water in filter pack and well casing 20 gal.
7. Volume of water removed from well 20.0 gal.
8. Volume of water added (if any) _____ gal.
9. Source of water added _____
10. Analysis performed on water added? Yes No
(If yes, attach results)

	<u>Before Development</u>	<u>After Development</u>
11. Depth to Water (from top of well casing)	a. <u>4.71</u> ft.	<u>6.24</u> ft.
Date	b. <u>11/05/2012</u>	<u>11/05/2012</u>
Time	c. <u>4:05</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>4:30</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	<u>2.0</u> inches	<u>0.0</u> inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) _____	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 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:	Last Name:	
Firm:	<u>Geiss Drilling</u>	

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette, WI 54143

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

Signature: [Signature]

Print Name: Eric Frauen, P.C.

Firm: O+M, Inc.

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

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

Facility/Project Name <u>Tyco - One Stanton St. Parking Lot</u>	County Name <u>Marinette</u>	Well Name <u>MW-4</u>
Facility License, Permit or Monitoring Number <u>BRRTS # 0238559214</u>	County Code <u>38</u>	Wis. Unique Well Number _____
		DNR Well ID Number _____

1. Can this well be purged dry? Yes No

2. 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 _____

3. Time spent developing well 25 min.

4. Depth of well (from top of well casing) 12.5 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 20 gal.

7. Volume of water removed from well 200 gal.

8. Volume of water added (if any) _____ gal.

9. Source of water added _____

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

17. Additional comments on development:

11. Depth to Water (from top of well casing)

	Before Development	After Development
a. _____	<u>4.40</u> ft.	<u>5.73</u> ft.

Date

	Before Development	After Development
b. _____	<u>11/06/2012</u>	<u>11/06/2012</u>
	m m d d y y y y	m m d d y y y y

Time

	Before Development	After Development
c. _____	<u>11:45</u> <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.	<u>12:10</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.

12. Sediment in well bottom 3.0 inches 0.0 inches

13. Water clarity

	Before Development	After Development
Clear <input type="checkbox"/> 10	<input type="checkbox"/> 10	Clear <input checked="" type="checkbox"/> 20
Turbid <input checked="" type="checkbox"/> 15	Turbid <input type="checkbox"/> 25	
(Describe)	(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: _____ Last Name: _____

Firm: Geiss Drilling

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette, WI 54143

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

Signature: [Signature]

Print Name: Eric Frauen, P.C.

Firm: C&M, Inc.

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

Facility/Project Name <u>Tyco - One Stanton St. Parking Lot</u>	County Name <u>Marinette</u>	Well Name <u>MW-5</u>
Facility License, Permit or Monitoring Number <u>BRRTS # 0238559214</u>	County Code <u>38</u>	Wis. Unique Well Number _____
		DNR Well ID Number _____

1. Can this well be purged dry? Yes No

2. 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 _____ _____

3. Time spent developing well 25 min.

4. Depth of well (from top of well casing) 12.5 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 20 gal.

7. Volume of water removed from well 20.0 gal.

8. Volume of water added (if any) _____ gal.

9. Source of water added _____

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

17. Additional comments on development:

	Before Development	After Development
11. Depth to Water: (from top of well casing)	a. <u>4.14</u> ft.	<u>5.46</u> ft.
Date	b. <u>11/06/2012</u> m m d d y y y y	<u>11/06/2012</u> m m d d y y y y
Time	c. <u>10:55</u> <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.	<u>11:20</u> <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.
12. Sediment in well bottom	<u>4.0</u> inches	<u>0.0</u> inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) _____	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 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:	Last Name:	
Firm:	<u>Geiss Drilling</u>	

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette, WI 54143

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

Signature: [Signature]

Print Name: Eric Frauen, P.E.

Firm: C+M, Inc.

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

Facility/Project Name <u>Tyco - One Stanton St. Parking Lot</u>	County Name <u>Marinette</u>	Well Name <u>MW-6</u>	
Facility License, Permit or Monitoring Number <u>BRRTS# 0238539214</u>	County Code <u>38</u>	Wis. Unique Well Number _____	DNR Well ID Number _____

1. Can this well be purged dry? Yes No
2. 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 _____ _____
3. Time spent developing well 25 min.
4. Depth of well (from top of well casing) 12.5 ft.
5. Inside diameter of well 2.0 in.
6. Volume of water in filter pack and well casing 20 gal.
7. Volume of water removed from well 20.0 gal.
8. Volume of water added (if any) _____ gal.
9. Source of water added _____
10. 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. <u>2.00</u> ft.	<u>3.18</u> ft.
Date	b. <u>02/13/2013</u>	<u>02/13/2013</u>
Time	c. <u>12:05</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>12:30</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	<u>2.0</u> inches	<u>0.0</u> inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) _____	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 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: Keith Last Name: _____

Firm: Geiss Drilling

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette, WI 54143

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

Signature: [Signature]

Print Name: Eric Frauen, P.C.

Firm: O+M, Inc.

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

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

Tyco - One Stanton St. Parking Lot
 Facility/Project Name: Tyco - One Stanton St. Parking Lot
 County Name: Marinette
 Well Name: MW-7
 Facility License, Permit or Monitoring Number: BRTS # 0238559214
 County Code: 38
 Wis. Unique Well Number: _____
 DNR Well ID Number: _____

1. Can this well be purged dry? Yes No
2. 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 _____
3. Time spent developing well: 20 min.
4. Depth of well (from top of well casing): 12.0 ft.
5. Inside diameter of well: 2.0 in.
6. Volume of water in filter pack and well casing: 2.0 gal.
7. Volume of water removed from well: 20.0 gal.
8. Volume of water added (if any): _____ gal.
9. Source of water added: None
10. 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. <u>3.16</u> ft.	<u>4.58</u> ft.
Date	b. <u>07, 29, 2014</u> m m d d y y y y	<u>07, 29, 2014</u> m m d d y y y y
Time	c. <u>11:50</u> <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.	<u>12:10</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	<u>2.0</u> inches	<u>0.0</u> inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) _____	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 25 (Describe) _____

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

14. Total suspended solids: _____ mg/l

15. COD: _____ mg/l

16. Well developed by: Name (first, last) and Firm
 First Name: Adam Last Name: Sweet
 Firm: Horizon Construction

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette, WI 54143

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

Signature: [Signature]

Print Name: Eric Frauen, P.E.

Firm: D+M, Inc.

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

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

Tyco - One Stanton St. Parking Lot
 Facility/Project Name: Tyco - One Stanton St. Parking Lot County Name: Marinette Well Name: MW-8
 Facility License, Permit or Monitoring Number: BRRTS# 0238559214 County Code: 38 Wis. Unique Well Number: _____ DNR Well ID Number: _____

1. Can this well be purged dry? Yes No
2. 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 _____

3. Time spent developing well 20 min.

4. Depth of well (from top of well casing) 12.0 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 2.0 gal.

7. Volume of water removed from well 20.0 gal.

8. Volume of water added (if any) _____ gal.

9. Source of water added None

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

17. Additional comments on development:

11. Depth to Water (from top of well casing)

	Before Development	After Development
a.	<u>2.04</u> ft.	<u>4.88</u> ft.
Date	<u>07/29/2014</u> m m d d y y y y	<u>07/29/2014</u> m m d d y y y y
Time	<u>1:20</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>1:40</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.

12. Sediment in well bottom 3.5 inches 0.5 inches

13. Water clarity

	Before Development	After Development
Clear	<input type="checkbox"/> 10	Clear <input checked="" type="checkbox"/> 20
Turbid (Describe)	<input checked="" type="checkbox"/> 15	Turbid <input type="checkbox"/> 25

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: Adam Last Name: Sweet
 Firm: Horizon Construction

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette, WI 54143

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

Signature: [Signature]

Print Name: Eric Frauen, P.C.

Firm: Og-M, Inc.

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

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

Facility/Project Name: Tyco - One Stanton St. Parking Lot County Name: Marinette Well Name: MW-9
Facility License, Permit or Monitoring Number: BRTS # 0238559214 County Code: 38 Wis. Unique Well Number: _____ DNR Well ID Number: _____

1. Can this well be purged dry? Yes No
2. 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 _____
3. Time spent developing well 20 min.
4. Depth of well (from top of well casing) 12.0 ft.
5. Inside diameter of well 2.0 in.
6. Volume of water in filter pack and well casing 2.0 gal.
7. Volume of water removed from well 20.0 gal.
8. Volume of water added (if any) _____ gal.
9. Source of water added None
10. 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. <u>3.15</u> ft.	<u>4.63</u> ft.
Date	b. ___/___/___	___/___/___
Time	c. <u>3:15</u> <input checked="" type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>3:35</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	<u>3.0</u> inches	<u>1.0</u> inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) _____	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 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:	<u>Adam</u>	Last Name: <u>Sweet</u>
Firm:	<u>Horizon Construction</u>	

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette WI 54143

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

Signature: [Signature]

Print Name: Eric Frauen, P.E.

Firm: OxM, Inc.

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

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

Facility/Project Name <u>Tyco - One Stanton St. Parking Lot</u>	County Name <u>Marinette</u>	Well Name <u>MW-10</u>
Facility License, Permit or Monitoring Number <u>BRRTS# 0238559214</u>	County Code <u>38</u>	Wis. Unique Well Number _____
		DNR Well ID Number _____

1. Can this well be purged dry? Yes No

2. 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 _____

3. Time spent developing well 20 min.

4. Depth of well (from top of well casing) 12.0 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 2.0 gal.

7. Volume of water removed from well 20.0 gal.

8. Volume of water added (if any) _____ gal.

9. Source of water added None

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

17. Additional comments on development:

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. <u>2.20</u> ft.	<u>4.24</u> ft.
Date	b. <u>04/29/2015</u> m m d d y y y y	<u>04/29/2015</u> m m d d y y y y
Time	c. <u>2:00</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>2:20</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.

12. Sediment in well bottom _____ inches

13. Water clarity

Clear <input type="checkbox"/> 10	Clear <input checked="" type="checkbox"/> 20
Turbid <input checked="" type="checkbox"/> 15	Turbid <input type="checkbox"/> 25
(Describe)	(Describe)

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

14. Total suspended solids _____ mg/l

15. COD _____ mg/l

16. Well developed by: Name (first, last) and Firm

First Name: Adam Last Name: Sweet
Firm: Horizon Construction

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette WI 54143

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

Signature: [Signature]

Print Name: Eric Frauen, P.E.

Firm: OxM, Inc.

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

Tyco - One Stanton St. Parking Lot
 Facility/Project Name: Tyco - One Stanton St. Parking Lot County Name: Marinette Well Name: MW-11
 Facility License, Permit or Monitoring Number: BRTS # 0238559214 County Code: 38 Wis. Unique Well Number: _____ DNR Well ID Number: _____

1. Can this well be purged dry? Yes No
2. 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 _____
3. Time spent developing well 20 min.
4. Depth of well (from top of well casing) 12.0 ft.
5. Inside diameter of well 2.0 in.
6. Volume of water in filter pack and well casing 2.0 gal.
7. Volume of water removed from well 20.0 gal.
8. Volume of water added (if any) _____ gal.
9. Source of water added None
10. 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. <u>5.22</u> ft.	<u>7.98</u> ft.
Date	b. <u>04/29/2015</u> m m d d y y y y	<u>04/29/2015</u> m m d d y y y y
Time	c. <u>3:00</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>3:20</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	<u>4.0</u> inches	<u>0.0</u> inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe)	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 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: Adam Last Name: Sweet

Firm: Horizon Construction

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette WI 54143

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

Signature: [Signature]

Print Name: Eric Frauen, P.E.

Firm: OxM, Inc.

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

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

Tyco - One Stanton St. Parking Lot
BRTS # 0238559214

Facility/Project Name	County Name	Well Name
One Stanton St. Parking Lot	Marinette	MW-12
Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number
BRTS # 0238559214	38	
		DNR Well ID Number

1. Can this well be purged dry? Yes No

2. 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

3. Time spent developing well 20 min.

4. Depth of well (from top of well casing) 12.0 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 2.0 gal.

7. Volume of water removed from well 20.0 gal.

8. Volume of water added (if any) _____ gal.

9. Source of water added None

10. 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. <u>5.00</u> ft.	<u>8.32</u> ft.
Date	b. <u>04/29/2015</u> m m d d y y y y	<u>04/29/2015</u> m m d d y y y y
Time	c. <u>4:05</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>4:25</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	_____ inches	_____ inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe)	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 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: Adam Last Name: Sweet
Firm: Horizon Construction

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party

First Name: Scott Last Name: stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette WI 54143

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

Signature: [Signature]

Print Name: Eric Frauen, P.C.

Firm: OxM, Inc.

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

Tyco - One Stanton St. Parking Lot
 Facility/Project Name: Tyco - One Stanton St. Parking Lot County Name: Marinette Well Name: MW-13
 Facility License, Permit or Monitoring Number: BRTS# 0238559214 County Code: 38 Wis. Unique Well Number: _____ DNR Well ID Number: _____

1. Can this well be purged dry? Yes No

2. 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 _____

3. Time spent developing well 20 min.

4. Depth of well (from top of well casing) 12.0 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 20 gal.

7. Volume of water removed from well 200 gal.

8. Volume of water added (if any) _____ gal.

9. Source of water added None

10. 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. <u>4.54</u> ft.	<u>7.88</u> ft.
Date	b. <u>04/29/2015</u> m m d d y y y y	<u>04/29/2015</u> m m d d y y y y
Time	c. <u>1:20</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.	<u>1:40</u> <input type="checkbox"/> a.m. <input checked="" type="checkbox"/> p.m.
12. Sediment in well bottom	_____ inches	_____ inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) _____	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 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: Adam Last Name: Sweet
 Firm: Horizon Construction

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
 First Name: Scott Last Name: Stacy
 Facility/Firm: Tyco
 Street: One Stanton St.
 City/State/Zip: Marinette WI 54143

I hereby certify that the above information is true and correct to the best of my knowledge.
 Signature: [Signature]
 Print Name: Eric Frauen, P.E.
 Firm: O&M, Inc.

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

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

Facility/Project Name <u>Tyco - One Stanton St. Parking Lot</u>	County Name <u>Marinette</u>	Well Name <u>PZ-1</u>
Facility License, Permit or Monitoring Number <u>BRRTS# 0238559214</u>	County Code <u>38</u>	Wis. Unique Well Number _____
		DNR Well ID Number _____

1. Can this well be purged dry? Yes No
2. 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 _____

3. Time spent developing well 45 min.

4. Depth of well (from top of well casing) 22.0 ft.

5. Inside diameter of well 2.0 in.

6. Volume of water in filter pack and well casing 6.0 gal.

7. Volume of water removed from well 30.0 gal.

8. Volume of water added (if any) _____ gal.

9. Source of water added None

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

17. Additional comments on development:

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. <u>4.02</u> ft.	<u>8.94</u> ft.
Date	b. <u>11/05/2012</u> m m d d y y y y	<u>11/05/2012</u> m m d d y y y y
Time	c. <u>11:00</u> <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.	<u>11:45</u> <input checked="" type="checkbox"/> a.m. <input type="checkbox"/> p.m.
12. Sediment in well bottom	<u>4.0</u> inches	<u>0.5</u> inches
13. Water clarity	Clear <input type="checkbox"/> 10 Turbid <input checked="" type="checkbox"/> 15 (Describe) _____	Clear <input checked="" type="checkbox"/> 20 Turbid <input type="checkbox"/> 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: _____ Last Name: _____

Firm: Geiss Drilling

Name and Address of Facility Contact /Owner/Responsible Party

First Name: Scott Last Name: Stacy

Facility/Firm: Tyco

Street: One Stanton St.

City/State/Zip: Marinette, WI 54143

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

Signature: [Signature]

Print Name: Eric Frazer, P.C.

Firm: O+M, Inc.

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