NR 716 Investigation Report - Addendum

West Waterfront Redevelopment Project
92 and 100 East Maple Street
Sturgeon Bay, Wisconsin

Prepared for:

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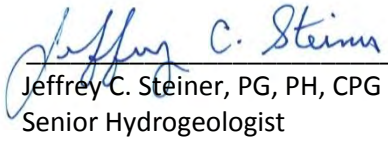

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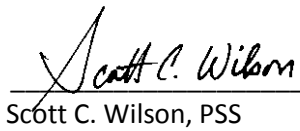

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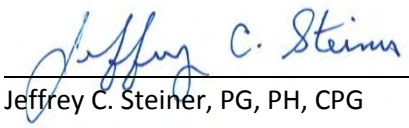
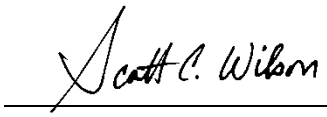
NR 712.09 SUBMITTAL CERTIFICATION

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



Jeffrey C. Steiner, PG, PH, CPG — June 30, 2015 Date

"I, Scott C. Wilson, hereby certify that I am a scientist as that term is defined in s. NR 712.03(3), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to NR 726, Wis. Adm. Code."



Scott C. Wilson, PSS, Vice President – WI Environmental Services — June 30, 2015 Date

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Executive Summary

A Community Development Block Grant and Wisconsin Economic Development Corporation Site Assessment Grant were awarded to the City in December 2012 and February 2013, respectively. The City of Sturgeon Bay retained Ayres Associates to perform environmental assessment activities and assist the City in implementing the requirements of the grants. A Phase II Site Assessment was conducted at the former Door County Cooperative property and the adjacent City-owned property in May 2013. Based on results of the Phase II Assessment, an NR 716 Site Investigation was completed at the Door County Cooperative property in July 2014. Additional NR 716 site investigation was performed, primarily at the 100 E. Maple site, in May 2015. The primary objectives of the assessment were to characterize the hydrogeologic and environmental conditions at the site, characterize the nature of potential environmental impacts, and evaluate the need to implement remedial action at the site.

Unconsolidated sediments at the site consist of general fill material overlying lacustrine (lake) deposits, to the depth of exploration at 35 feet. The lacustrine, or lake deposits, consists of discontinuous layers of poorly graded sand and gravel, silty sand and gravel, silt, and high plasticity clay of variable thickness. The lacustrine deposits are covered by up to 13 feet of fill material which is differentiated from the underlying till by the presence of bricks, cinders, concrete, and wood debris.

Water level data collected in August 2013 and July 2014 indicate that depth to water ranged from 1.39 feet to 5.07 feet below ground surface. Groundwater flow is generally northeast toward the Sturgeon Bay Canal at an average horizontal hydraulic gradient of 0.001 ft/ft. The average horizontal groundwater flow velocity in the water table aquifer is estimated to be 0.05 feet/day or 18 feet/year.

Laboratory results for soil samples collected at the site indicate that trace concentrations of PVOCs, PAHs, and metals were detected in soil samples collected from the site.

Laboratory results show trace concentrations of VOC and PAH constituents in groundwater samples collected from monitoring wells at the site. Benzene, vinyl chloride, benzo(a,h)anthracene, benzo(a,h)anthracene, and chrysene were the only parameters detected above NR 140 enforcement standards.

Methane concentrations were detected in the subsurface soil but did not appear to be accumulating in the on-site buildings prior to building demolition in July 2014.

Based on the nature of the fill material at the site, and limited degree of impacts to soil and groundwater, Ayres Associates believes that no additional investigation is warranted at this site. Limited soil impacts, which appear to primarily be related to the fill material at the site and methane accumulation in the unsaturated zone, should be addressed during site redevelopment.

Acknowledgement

On behalf of the City of Sturgeon Bay, Ayres Associates would like to extend its sincere appreciation to the Wisconsin Department of Administration (WDOA) and the Wisconsin Economic Development Corporation (WEDC) for their funding support and technical assistance. The WDOA and WDEC not only graciously awarded the City of Sturgeon Bay grant funds to assist in funding the environmental activities outlined in this report, but have continued to support the City's efforts as they move toward redevelopment. Without this funding support, this Brownfield site may have laid idle indefinitely. We are indebted to these agencies for making financial assistance available for this important redevelopment project.

Introduction

The City of Sturgeon Bay has been actively pursuing revitalization in the waterfront area for years. The Sturgeon Bay Downtown Waterfront Subarea Development Plan, completed in 2003, established a vision for Downtown that was developed through significant public involvement before adoption by the Sturgeon Bay Waterfront Redevelopment Authority. The vision includes promoting a diversity of uses; opening up the waterfront to the public, extending a waterfront walkway, and promoting waterfront activities, amenities, and commerce; maintaining and enhancing view corridors; and promoting rehab and reuse of existing structures and new construction. This West Waterfront Area Redevelopment Plan develops an actionable land use plan and strategies to further facilitate the proposed development and redevelopment.

The West Waterfront area today is a working waterfront with views of the Bay Shipbuilding Company Shipyard, USCG operations, working tugboats, Harbor Club Marina, boat tours and rentals, transient docking, a public boat launch, the Door County Maritime Museum, restored boats on display, and other related nearby businesses and amenities. These uses are an extension of the historic uses of the area, which included USCG operations and industry including a granary and lumberyards.

The character envisioned for the West Waterfront is to remain a working waterfront closely tied to water uses connected to the activity and employment of nearby Bay Shipbuilding, and providing a mix of services and activities that serve local residents. In fulfilling these roles, the area will naturally function as an appealing attraction for visitors and passersby, as well as present a positive image of the community. The heart of Downtown with many civic uses; attractions, businesses, tourist lodging, and other amenities will remain on the eastern side of the Bay. The West Waterfront Area will complement the Downtown, offering additional services and amenities. Existing uses remain key elements of the future vision for the area, including the USCG (relocated immediately south within the West Waterfront Area), Door County Maritime Museum, Harbor Club Marina, boat tours, rentals, docking, and launching.

The City of Sturgeon Bay received a Community Development Block Grant (CDBG) and a Wisconsin Economic Development Corporation Site Assessment Grant (SAG) in December 2012 and February 2013, respectively. The purpose of the grants is to perform assessment activities at specific sites in the project corridor where environmental assessment is incomplete, or has not been performed. The grants were also used to demolish existing structures on the former Door County Cooperative site.

The City of Sturgeon Bay retained Ayres Associates to perform environmental assessment activities and assist the City in implementing the requirements of the grants. A Phase II Site Assessment was conducted at the site in May 2013. Based on results of the Phase II Assessment, an NR 716 Site Investigation was completed in July 2014. Additional NR 716 site investigation was performed, primarily at the 100 E. Maple site, in May 2015. The primary objectives of the Phase II Assessment and NR 716 Investigation were to:

- Characterize the hydrogeologic and environmental conditions at the site
- Characterize the nature of potential impacts to soil and groundwater at the site
- Evaluate the threat, if any, to human health and the environment
- Evaluate the need to implement remedial action at the site in regards to site development

Environmental assessment and remediation planning activities related to site development are the subjects of this report.

Background

Site Location and Description

The project site is located in the northeast ¼ of the northeast ¼ of Section 7, Township 27 North, Range 26 East (NE ¼, NE ¼, Section 7, T27N, R26E), Door County, Wisconsin, (Figure 1). The site (herein referred to as site or property) includes two parcels (Door County Parcel Numbers 2811210080101 and 2812415090101) located at 92 and 100 East Maple Street on the West side of Sturgeon Bay (Figure 1). A parcel map obtained from the Door County Land Information Office is presented as Figure 2.

The combined properties consist of approximately 3.5 acres and are developed as industrial/municipal property. Prior to 2014, the 100 East Maple Street property was used by the United States Coast Guard as a parking area and storage area (two small structures adjacent to the southern property boundary); the remaining buildings on the 92 East Maple Street were utilized for storage (former coop facility). Improvements to the Subject Property in July 2014 include demolition of six single story (partial basement is located within the former coop structure) concrete and sheet metal structures.

The project site is located adjacent to the west shore of the Sturgeon Bay Ship Canal. The adjacent Sturgeon Bay Canal is approximately 10 feet lower than the north portion of the subject property and can be accessed from East Maple Street located along the south side of the property. Ground cover consists primarily of asphalt and gravel parking and driveway areas, as shown on Figure 3.

The site is zoned Central Business District (C-2); the area surrounding the site is primarily mixed residential, retail, and commercial properties.

Site History and Background

The history of the site was obtained from a *Phase I Environmental Assessment Report* (January 2013), prepared by AECOM under contract to the City of Sturgeon Bay.

Historically, the Subject Property was developed as industrial/municipal property since at least 1885 and has remained developed in that manner to the present day. Initially, Subject Property development was identified on the western side of the Subject Property. Filling activities later expanded the Subject Property to the east into Sturgeon Bay. During the late 1800's, several small storage structures and a railroad spur were identified on the Subject Property. During the early 1900's, industrial and municipal development dominated the land use of the Subject Property as several businesses related to agriculture (seed storage and grain elevator), construction (concrete storage), paint storage, and lumber as well as a "fire engine house", and fire department structure were identified on the Subject Property.

At the time of the site reconnaissance, the Subject Property was developed with a one-story industrial structure with offices situated on a concrete slab on-grade foundation, a partial concrete basement foundation, and wooden timbers and footings; a wood and metal constructed warehouse structure situated on a slab on-grade foundation; a metal constructed warehouse situated on a concrete slab on-grade foundation and partially earthen foundation; a single-story cinder block constructed building situated on a concrete slab-on grade foundation; a metal constructed storage shed situated on a concrete slab-on- grade foundation; and a greenhouse type structure situated on the paved surface of the Subject Property. The former coop property has been vacant since before 2007 when the property was sold to a developer. In 2009, Freedom Bank foreclosed on the property.

The remaining areas of the Subject Property not occupied by a structure are either paved drive or parking areas or decoratively landscaped. The Subject Property is developed as an industrial/municipal property and is currently occupied by six structures (one is vacant) that are primarily utilized as storage facilities by the United States Coast Guard (southernmost structure and greenhouse structure), a salvage company (storing supplies in the easternmost structure), and a small engine equipment company (storing motorcycles, scooters, snow blower equipment, and lawn tractors throughout the former coop building), and private individuals (boats, snowmobiles, and various personal items in the southern storage building).

The building on the property is primarily of cinder block construction. The southern portion of the building used for automotive repair is approximately 6,500 square feet. The storage room attached to the north side of the building is approximately 4,000 square feet. The building consists of three car repair bays, a reception and office area, and two storage rooms with two bathrooms on the main floor. Beneath and behind the building is a large basement and storage areas. The cinder block storage room on the north side of the main building appears to be of newer vintage than the main building. The building is heated with liquid propane gas by a furnace located a utility room in the basement of the structure. Electricity is provided to the Subject Property by Alliant Energy.

The City of Sturgeon Bay supplies drinking water to the Subject Property from the municipal distribution system. Sanitary discharges on the subject site are discharged into the municipal sanitary sewer system. The subject site area is serviced by the City of Sturgeon Bay.

In July 2014, subsequent to the completion of the Phase I Environmental Site Assessment, the City of Sturgeon Bay demolished all of the buildings at 92 and 100 East Maple Street with the exception of a grain elevator. The grain elevator was saved for possible redevelopment to highlight the areas industrial past.

Recognized Environmental Concerns

Environmental concerns regarding the subject parcels are primarily related to the historical operation of an agricultural cooperative at the site and the former presence of aboveground and underground storage tanks. Results from the previous Phase I and Phase II assessments indicate the presence or potential presence of polycyclic aromatic hydrocarbons (PAH), volatile organic compounds (VOCs), and heavy metals in soil and groundwater. Additional concerns include the presence of general fill material across the site in an area that was historically occupied by water (Sturgeon Bay), and the presence of methane in the soil.

Regional Geology and Hydrogeology

Geology

This preliminary evaluation of the site geology is based on existing published regional information[1], and site-specific data collected from borings advanced in the project area by others. Subsurface information

[1] Skinner, E., L. and R. G. Borman. 1973. "Water Resources of Wisconsin – Lake Michigan Basin, Hydrologic Atlas HA-42." United States Department of the Interior Geological Survey, University Extension – The University of Wisconsin Geological and Natural History Survey.

collected by others indicates that the unconsolidated sediments consist primarily of loose to medium dense, fine-grained silty sand and poorly graded gravel and firm, low plasticity silt and clay. Some non-native fill materials, consisting of brick, cinders, and wood were encountered in some of the borings advanced at the site.

Regional information indicates that surficial unconsolidated deposits around Sturgeon Bay consist primarily of lake deposits (organic materials and stratified clay, silt, and sand) and ground moraine deposits (glacial till). Based on available well logs and regional maps, the unconsolidated deposits in the Sturgeon Bay area are less than 50 feet thick.

Underlying the glacial deposits are dolomites of Silurian age. The Silurian age dolomites are underlain by shale, dolomite, and sandstone of Ordovician age. Depth to bedrock is estimated to be approximately 50 to 100 feet.

Hydrogeology

Groundwater is the source for domestic, municipal, and industrial water supplies in the Sturgeon Bay area. The City of Sturgeon Bay relies entirely on groundwater pumped from municipal wells finished in the dolomite (Niagaran) aquifer. Since the turn of the century, the city has installed 12 municipal wells within the city limits. Currently (2013), the city operates 5 wells ranging in depth from 305 feet to 477 feet deep.

Depth to groundwater below the site reportedly ranges from approximately 3 to 6 feet below ground surface. Shallow groundwater flow is generally northeast toward the Sturgeon Bay River, based on water elevation data obtained from previous assessments performed at the project site.

Site Geology and Hydrogeology

Site Stratigraphy

Subsurface conditions were evaluated based on information collected from 10 soil probes and borings, and 10 vapor probes advanced at the site during the Phase II assessment performed in 2013. Additional information was obtained from 21 soil probes and borings and 3 vapor probes advanced at the site in July 2014 and May 2015 for the NR 716 Site Investigation. Soil borings were advanced to a maximum depth of 35 feet below ground surface (bgs).

Sixteen of the soil borings advanced during the Phase II assessment and NR 716 investigation were used for installation of monitoring wells (WMW-1 through WMW-16). Locations of the borings, monitoring wells, and vapor probes are shown on Figure 3. Geologic cross sections A-A' through E-E' are shown on Figure 4 through Figure 6. Geologic boring and well construction logs are presented in Appendix A.

Subsurface information collected during the Phase II Assessment and NR 716 Investigations indicates that the unconsolidated sediments at the site consist of general fill material overlying lacustrine (lake) deposits, to the depth of exploration at 35 feet. The lacustrine, or lake deposits, consist of discontinuous layers of poorly graded sand and gravel, silty sand and gravel, silt, and high plasticity clay of variable thickness. The lacustrine deposits are covered by up to 13 feet of fill material which is generally differentiated from the underlying till by the presence of bricks, cinders, concrete, and wood debris. However, it should be noted that in some instances natural soil materials may have been used as fill. The cross sections indicate that the fill thickness generally increases to the north and west across the site. Historical documents indicate that portions of the site area were formerly part of Sturgeon Bay and covered by water prior to filling. The historical ordinary high water mark (OHWM), delineating the former shoreline, is shown on Figure 3.

Bedrock was not encountered in any of the soil borings advanced at the site during the Phase II assessment or NR 716 investigation. Geologic logs for borings advanced by others for the Maple Street bridge approach, located approximately 100 feet south of the site, indicate "auger refusal" was encountered in two borings at a depth of 38 feet and 53.5 feet below ground surface, respectively; however, the geologic logs do not indicate that bedrock was encountered.

Groundwater Flow Conditions

Groundwater Levels

Groundwater level and elevation data were obtained from the monitoring wells on May 23 and August 6, 2013. Water level data collected in May 2013 indicate that depth to water ranged from 3.85 feet to 4.99 feet below the top of well casing; readings in August 2013 ranged from 4.22 to 5.07 feet below the top of well casing. Water levels collected during the July 2014 and May 2015 site investigations were slightly higher, ranging from 1.39 to 4.80 feet below the top of well casing. Groundwater elevation data are presented on Table 1.

Groundwater Flow

Water level data obtained from the water table observation wells on August 6, 2013, were used to construct a water table contour map. Groundwater flow is generally northeast toward the Sturgeon Bay Canal at a very low average horizontal hydraulic gradient of 0.001, as illustrated in Figure 7. However,

water elevations in well WMW-5, located near the canal, were slightly higher than those at the center of the site during both monitoring events. This may be due to the wells proximity to the bulkhead, which slightly restricts discharge to the canal, or water level fluctuations near the canal due to seiche effect (the effect of the wind on the water surface in the channel) combined with the relatively porous nature of the fill material at the site that allows for rapid water exchange between the lake and the fill.

Water level data collected from the wells during the July 2014 and May 2015 site assessments were more variable, with no discernable groundwater flow direction evident. Again a function of this area being a filled extension of the bay with relatively porous, low density fill material.

Vertical Gradients

Differences in hydraulic head can occur between different geologic units. The difference in hydraulic head is caused by steep hydraulic gradients induced by heavy groundwater pumping, large topographic relief, or by differences in hydraulic conductivity. Vertical gradients can induce or prevent contaminant migration in and between aquifers depending on the magnitude and direction of the gradient. An upward vertical gradient of 0.03 was calculated for well nest WMW-10/WPZ-10 based on water levels collected on May 19, 2015. Upward vertical gradients indicate groundwater discharge conditions at this well nest location.

Hydraulic Conductivity Testing

Hydraulic conductivity (slug) tests were performed on 7 of the 16 monitoring wells installed at the site, including water table wells WMW-1, WMW-3, WMW-5, WMW-7, WMW-8, WMW-10, and WMW11. The slug tests were performed by rapidly lowering a solid cylinder (slug) into the well to cause an instantaneous rise in water level (falling head test), then measuring the return of the water level to its static condition. A second test was performed by removing the slug (rising head test), and again measuring the response of the water level in the well. Water level data were recorded with an automated pressure transducer and data logger system. Slug test data were evaluated using Waterloo Hydrologic Aquifer Test v. 3 graphical analysis and reporting software. The slug tests were analyzed using the methods of Bouwer and Rice (1976)[2] for unconfined aquifers. Results of the slug tests are summarized in Table 2. Slug test data and test parameters are presented in Appendix B.

Hydraulic conductivity values (recovery test only) calculated for water table observation wells ranged from 2.5 x 10^{-2} cm/sec in well WMW-10, screened primarily in wood fill, silty sand, and low plasticity clay deposits to 6.4 x 10^{-4} cm/sec in well WMW-7, screened in silty sand and gravel and high plasticity clay deposits.

[2] Bouwer, H. and R.C. Rice, A Slug Test for Determining Hydraulic Conductivity of Unconfined Aquifers with Completely or Partially Penetrating Wells, *Water Resources Research*, Vol.12, No.3, 1976, pp.423-428

Groundwater Flow Velocity

Groundwater flow velocity was calculated for the water table aquifer at this site using the formula:

$V = ki/n_e$

Where:

V = horizontal groundwater flow velocity

k = hydraulic conductivity

i = hydraulic gradient

n_e = effective porosity

An average (geometric mean) hydraulic conductivity value of 5.7×10^{-3} cm/sec was used in calculating groundwater flow velocity in the water table aquifer. This value was obtained by calculating the geometric mean of hydraulic conductivity results for tests performed on water table wells at the site.

The hydraulic gradient (i) used to calculate horizontal groundwater flow velocity is based on water levels measured on August 6, 2013. An average horizontal gradient of 0.001 was used to calculate groundwater flow in the upper unconsolidated aquifer.

The velocity of groundwater is also influenced by the porosity of the aquifer material. The effective porosity (n_e) is a measure of the amount of interconnecting pore space that is available in a given volume of material through which water can move. The average effective porosity of the unconsolidated material is assumed to be 30 percent.

Based on the values stated above, the average horizontal groundwater flow velocity in the unconsolidated water table aquifer across the subject site is approximately 0.05 feet/day or 18 feet/year.

Soil Quality Assessment

Soil samples collected from the probes and borings advanced during the Phase II Assessment and NR 716 Investigation were submitted to Pace Laboratories in Green Bay, Wisconsin, for analysis. For the Phase II Investigation, selected samples were analyzed for volatile organic compounds (VOC), polycyclic aromatic hydrocarbons (PAH), RCRA metals, and nitrogen. Based on results from the Phase II Investigation, soil samples collected during the NR 716 Investigation were analyzed for VOC, PAH, and metals. The samples selected for analysis, and type of analysis performed, was based on field screening results, visual and olfactory observations during drilling, and the type of activity formerly performed in the area where the probe or boring was advanced.

Field Observations and Screening Results

Headspace analysis was performed on each of the soil samples obtained from the probes and borings. Headspace analysis is a screening tool used to qualitatively assess the degree of potential impacts to soil from volatile organic compounds. The headspace analysis was performed using an organic vapor meter (OVM) equipped with an 11.7 eV lamp in accordance with Ayres Associates standard operating procedure #210. Headspace analysis results are shown on the boring logs in Appendix A.

Results of the headspace analysis indicated the potential presence of elevated levels of volatile organic constituents in soil samples collected from two of the soil borings advanced at the site. Slightly elevated PID readings were recorded for soil samples collected from boring WMW-1, located near the former USTs, at depths ranging between 3.5 and 10 feet below ground surface and near boring WMW-15 at a depth of 6 to 10 feet below ground surface. The headspace analysis indicates that detectable levels of VOC constituents may be found at or near the water table in these areas of the site.

Results of Soil Sample Laboratory Analysis

Twenty nine (29) soil samples collected from the soil borings advanced during the Phase II Assessment and NR 716 investigation performed in July 2013 and July 2014, were submitted for analysis. Eight (8) additional soil samples collected during the additional NR 716 investigation performed in May 2015 were submitted for analysis. Samples collected were analyzed for one or more of the following parameters: VOCs, PAHs, and RCRA metals. VOCs and PAHs were analyzed using EPA SW-846 Method 8260B and Method 8270C/8270SIMs, respectively. Metals were analyzed using Methods 6010, 7060A, and 7471. A summary of analyte detections in soil is presented in Table 3. Laboratory data reports for soil samples are presented in Appendix C. A summary of analyte exceedences in soil is presented in Figure 8.

Volatile Organic Compound Analysis (VOCs)

Thirty (30) of the 37 soil samples collected during these assessments were analyzed for VOCs. Laboratory results for soil samples collected at the site indicate that trace concentrations of VOCs were detected in 5 of the 30 samples that were analyzed for these compounds, including trimethylbenzene and naphthalene. Only naphthalene, detected in a sample from boring WMW-13 0’-2.5’ at a concentration of 9.23 mg/Kg, exceeded NR 720 Wisconsin Administrative Code direct contact residual contaminant levels (RCLs).

Polycyclic Aromatic Hydrocarbon Analysis (PAH)

Trace concentrations of polycyclic aromatic hydrocarbon compounds (PAH) were detected in each of the 30 soil samples submitted for PAH analysis. PAH concentrations exceeded NR 720 Wisconsin Administrative Code residual contaminant levels (RCLs) for direct contact or protection of groundwater in 27 of the 30 soil samples in which they were detected. The distribution of PAH constituents in soil across the site indicate the impacts are related to fill materials used at the site or general site operations rather than a concentrated source area.

Inorganic Analysis

Metals

Low levels of arsenic were detected in each of the 18 samples submitted for analysis at concentrations exceeding NR 720 Wisconsin Administrative Code direct contact residual contaminant levels. Arsenic concentrations in these samples ranged from 2.2 mg/Kg to 4.9 mg/Kg, well within the range for naturally occurring background concentrations in soil throughout Wisconsin. All arsenic concentrations were below the threshold background value of 8 mg/Kg for Wisconsin soils.

Naturally occurring lead concentrations were detected in each of the 18 samples submitted for analysis; ranging from 6.9 mg/Kg to 178 mg/kg. Lead concentrations exceeded the NR 720 Wisconsin Administrative Code protection of groundwater RCL of 13.5 mg/Kg in 7 of the 18 soil samples analyzed.

Nitrogen

Many different chemical and physical forms of nitrogen fertilizer exist. Ammonia (NH_3) analysis was selected to assess the presence and concentration of nitrogen in soil from fertilizer handling at the former co-op. Bacteria in the upper soil layers convert ammonia to ammonium; ammonium is oxidized to nitrite, which is subsequently oxidized to nitrate. Nitrate is very soluble and easy leaches to groundwater.

Five of the soil samples collected were analyzed for ammonia nitrogen. Concentrations of ammonia nitrogen ranged from 15.9 mg/Kg to 54.7 mg/Kg. These concentrations are well below the Department of Agriculture, Trade, and Consumer Protection (DATCP) Suggested RCL for combined Ammonia Nitrogen and Nitrate-Nitrite Nitrogen of 100 mg/Kg.

Groundwater Quality Assessment

Groundwater samples were collected from NR 141 Wisconsin Administrative Code monitoring wells installed at the project site during the Phase II Assessment and NR 716 Investigation. The purpose of this sampling is to characterize the nature and extent of potential contamination at the site by determining the type, distribution, and concentration of chemical constituents present in the groundwater. The analytical data were used in conjunction with site-specific geologic and hydrogeologic data and information on other environmental conditions to determine the potential for contaminant migration.

Ayres Associates collected one round of groundwater samples from five water table observation wells (WMW-1, WMW-2, WMW-3, WMW-4, and WMW-5) during the Phase II Assessment. One additional round of samples was collected from the five existing wells and seven new wells (WMW-6, WMW-7, WMW-8, WMW-9, WMW-10, WPZ-10, and WMW-11) during the NR 716 Investigation performed in July 2014. An additional round of sampling was performed in May 2015 from four existing wells (WMW-2, WMW-8, WMW-10, WPZ-10) and five new wells (WMW-12 through WMW-16).

Samples were submitted to Pace Laboratories in Green Bay, Wisconsin, for analysis. Groundwater samples were analyzed for VOCs, PAHs, dissolved RCRA metals, and nitrogen during the Phase II Assessment and VOCs, PAHs, and dissolved arsenic, cadmium and lead during the NR 716 Investigation. VOCs and PAHs were analyzed using EPA SW-846 Method 8260B and Method 8310, respectively. Dissolved metals were analyzed using Methods 6010B, 7060A, and 7470A. A summary of analyte detections in groundwater samples is presented in Table 4. Low-flow sampling stabilization data is presented in Appendix D, and laboratory data sheets for the May 18, 2015, sampling event are presented in Appendix E. The distribution of analyte exceedences in groundwater is presented in Figure 9.

Volatile Organic Compound Analysis (VOCs)

Laboratory results indicate that detectable concentrations of VOC constituents above NR 140 Wisconsin Administrative Code groundwater standards were found in samples collected from 2 of the 12 monitoring wells sampled (WMW-1 and WMW-3). Only one of the parameters detected (benzene) in the sample collected from well WMW-1 exceeded NR 140 Wisconsin Administrative Code groundwater enforcement standards (ES). Naphthalene and trimethylenzene exceeded the preventive action limit (PAL) in the sample collected from well WMW-1 during the first sampling round only. The elevated petroleum hydrocarbons detected in groundwater appear to be related to release from leaking underground storage tanks formerly located below the south side of the property.

Vinyl chloride was the only parameter found above detection limits in the sample collected from well WMW-3 during the first sampling event. Vinyl chloride was detected at a concentration of 0.53J µg/L, slightly above the NR 140 ES of 0.2 µg/L. Vinyl chloride was not found above detection limits in the sample collected from this well during the second sampling event.

Polycyclic Aromatic Hydrocarbon Analysis (PAH)

Detectable concentrations of PAH constituents were found in 16 of the 17 groundwater samples analyzed. However, only 3 of the PAH constituents (benzo(a)pyrene, benzo(b)fluoranthene, and chrysene) were detected at concentrations exceeding NR 140 Wisconsin Administrative Code PALs. PAH concentrations slightly exceeded NR 140 enforcement standards in samples collected from well WMW-8 located in an area reported to formerly have petroleum storage tanks, and near well WMW-15.

Inorganic Analysis

Concentrations of naturally occurring dissolved metals were detected in 8 of the 17 groundwater samples analyzed. Dissolved arsenic slightly exceeded the NR 140 Wisconsin Administrative Code enforcement standards in a sample from well WMW-5 during the July 2014 sampling event. Dissolved lead exceeded the NR 140 Wisconsin Administrative Code enforcement standard in a sample from well WMW-13 collected during the May 2015 sampling event.

Samples collected from each of the five monitoring wells installed during the Phase II assessment were analyzed for ammonia nitrogen. Concentrations of ammonia nitrogen ranged from 1.9 mg/L to 5.6 mg/L; exceeding the PAL of 0.97 mg/L. None of the ammonia concentrations in groundwater samples exceeded the ES of 9.7 mg/L.

Vapor Assessment

Elevated levels of methane were detected in the soil during a previous assessment performed at the former Door County Cooperative site (92 E. Maple Street) by others; however, no methane readings were obtained inside the existing buildings. Therefore, a limited methane gas assessment was performed at the site to verify the presence of methane in the subsurface and to evaluate potential methane migration and accumulation in the buildings. The primary objectives of the gas survey were to determine the level of methane production and migration within the subsurface and buildings, and to evaluate appropriate engineering controls required, if any, during demolition activities.

Ayres Associates installed four sub-slab Vapor Pins™ beneath the concrete floors in the existing buildings during the Phase II Assessment. Five additional shallow vapor implants were installed in the subsurface to a depth of 2 to 3 feet across the remainder of the project site. Each sample probe was screened for methane (% methane and % LEL) using a Landtec 2000 gas meter.

Methane is a colorless, odorless, non-toxic gas which is lighter than air and, at certain concentrations, is flammable. It is a natural by-product of the decomposition of organic material by bacteria in the absence of oxygen. As a result, methane production may occur wherever there is decaying organic matter. Because methane is lighter than air, it typically migrates upward and disperses into the atmosphere. However, in enclosed spaces with little or no air exchange, methane may accumulate. When the concentration of methane reaches approximately 50,000 parts per million (ppm) in air (or 5% methane by volume), it forms a potentially explosive mixture. This concentration of 50,000 ppm (5% methane) is referred to as the lower explosive limit (LEL). Because methane is non-toxic, the primary risk associated with it is explosion, should it accumulate to concentrations above the LEL. Therefore, measured concentrations of methane are commonly reported as a percentage of the lower explosive limit (% LEL). A summary of the soil vapor monitoring results for methane is included in Table 5; the location and concentration of methane detections is shown on Figure 10.

Methane concentrations in the nine vapor implants installed in the shallow, unsaturated zone, during the Phase II Assessment ranged from 0.4 percent methane (8% LEL) in vapor implant WVP-9 to 15.3 percent methane (>100% LEL) in vapor implant WVP-8. Methane concentrations exceeded the LEL in two of the nine vapor sampling points (WVP-7 and WVP-8), and concentrations of methane were measured at 98 percent of the LEL at sample point WVP-6. None of the readings obtained from the Vapor Pins™ installed beneath the concrete floors of the buildings registered on the meter for the presence of methane. In addition, the presence of methane was not detected in the ambient air inside the buildings. Ayres Associates' Phase II Assessment report indicated that methane is being generated in the subsurface through the decomposition of organic matter; however, methane did not appear to be accumulating in the buildings, and would not present a significant risk during building demolition which was performed prior to the NR 716 investigation.

Three additional vapor implants were installed at the site during the May 2015 NR 716 Investigation (WVP-11, WVP-12, and WVP-13). Methane readings were collected from the three new implants and five existing implants (WVP-6 through WVP-10) on May 19, 2015. Methane concentrations ranged from 0.1 percent methane (2% LEL) in vapor implant WVP-13 to 12.4 percent methane (>100% LEL) in vapor implant WVP-6.

Utility Assessment

Vapor intrusion is the migration of volatile constituents from contaminated subsurface soil or groundwater into indoor air spaces of overlying buildings or underground routes such as buried utility lines and trenches. Most vapor intrusion occurs when contaminants in the underlying soil, or contaminants at the water table, enter the unsaturated zone above the water table and migrate to the atmosphere, or into the air space of overlying structures or utility trenches. Less frequently, vapors can enter buildings with groundwater seepage into sumps or flooded basements where contaminants partition directly from the groundwater into indoor air.

An assessment of the utilities or utility corridors at the site was performed to evaluate the potential for volatile constituents to migrate into utilities or along utility trenches across or away from the site. While contaminants in soil and groundwater are not of sufficient concentration to be a concern from vapor migration, elevated levels of methane gas are being generated through the decomposition of organic matter, as previously discussed. Because methane is the primary volatile (gas) of concern from a vapor migration standpoint, entry into the sewer or migration along the utility corridor if more permeable than the surrounding soil, is the primary migration route of concern.

The site plan (Figure 2) indicates the presence of a 6-foot diameter sanitary sewer running northwest-southeast across the southern portion of the site. The site plan also indicates other utilities running through or alongside the property including gas, telephone, electric, and fiber optic cables. These utility conduits are significantly smaller in diameter and installed at shallower depths through trenching or directional boring, and are less likely to be a route for vapor migration.

A site plan prepared by Baudhuin Engineering of Sturgeon Bay (4/5/2013) lists the invert elevation of the sewer where it exits the western boundary of the site as 577.68, or slightly below the elevation of the groundwater. Therefore, the majority of the trench in which the sewer is installed is located in the saturated zone.

City of Sturgeon Bay engineering and utility staff were contacted for information regarding the construction techniques and materials for this sewer. City staff could not recall when the clay sewer main was constructed and indicated that no as-built or preliminary engineering drawings or specifications were available for review. City field staff indicated that soil excavated near or around the existing sewer produced the same fill and organic soil as the rest of the site and not engineered fill materials. Field staff also indicated that the City does not routinely measure manholes for the presence of methane or other volatile constituents.

While the nature of the backfill material in the trench is unknown, it is likely not significantly more permeable than the low density, sand, silty sand, silty gravel, and general fill (wood) material present across the site. Therefore, methane gas measured in the soil is as likely to vent directly to the atmosphere in unpaved areas of the site as it is to migrate along utility trenches. Furthermore, the general fill material used to fill the former bay extends well beyond the boundaries of the subject site; the potential presence of methane in adjacent, off-site locations is more likely due to the decomposition of the organic fill material rather than vapor migration through utility corridors.

While a moderate risk from methane production and migration has been identified at this site due to decomposition of organic matter, redevelopment often incorporates mitigation solutions into the development as a precautionary measure in lieu of extensive investigation. Mitigation or remediation of

potential vapor intrusion risk is implemented to eliminate exposure pathways and will consist of one or more of the following:

- Removal of the source (contaminated soil or groundwater)
- In-situ remediation of the source
- Institutional controls such as deed restrictions
- Engineering controls or physical modifications to a site or facility

Vapor Mitigation Approach

The presumptive vapor intrusion mitigation approach for this site will include engineering controls to prevent the entry of vapors into buildings by eliminating routes of entry. Specific engineering controls incorporated into the construction will depend on the foundation type, building construction details, as well as construction methods that have not been determined at this time. However, mitigation measures will likely consist of one or more of the following methods including, 1) sealing of expansion joints and cracks in the foundation and walls, and utility penetrations, 2) passive sub-slab venting system, 3) vapor barrier sheet geomembranes applied to the foundation walls, and 4) fluid-applied membranes that are sprayed on the foundation and cured in place.

Summary of Findings

Geology and Hydrogeology

- Unconsolidated sediments at the site consist of general fill material overlying lacustrine (lake) deposits, to the depth of exploration at 35 feet. The lacustrine, or lake deposits, consist of discontinuous layers of poorly graded sand and gravel, silty sand and gravel, silt, and high plasticity clay of variable thickness. The lacustrine deposits are covered by up to 13 feet of fill material which is generally differentiated from the underlying till by the presence of bricks, cinders, concrete, and wood debris.

- Bedrock was not encountered in any of the soil borings advanced at the site during the Phase II assessment or NR 716 investigation. Geologic logs for borings advanced for the Maple Street bridge approach, located approximately 100 feet south of the site, indicate "auger refusal" was encountered in two borings at a depth of 38 feet and 53.5 feet below ground surface, respectively; however, the geologic logs do not indicate that bedrock was encountered.

- Water level data collected in August 2013, July 2014, and May 2015 indicate that depth to water ranged from 1.39 feet to 5.07 feet below ground surface. Groundwater flow is generally northeast toward the Sturgeon Bay Canal at an average horizontal hydraulic gradient of 0.001 ft/ft. The average horizontal groundwater flow velocity in the water table aquifer is estimated to be 0.05 feet/day, or 18 feet/year.

Soil Assessment

Volatile Organic Compound Analysis (VOCs)

- Thirty (30) of the 37 soil samples collected during these assessments were analyzed for VOCs. Laboratory results for soil samples collected at the site indicate that trace concentrations of VOCs were detected in 5 of the 30 samples that were analyzed for these compounds, including trimethylbenzene and naphthalene. Only naphthalene, detected in a sample from boring WMW-13 0'-2.5' at a concentration of 9.23 mg/Kg, exceeded NR 720 Wisconsin Administrative Code direct contact residual contaminant levels (RCLs).

Polycyclic Aromatic Hydrocarbon Analysis (PAH)

- Trace concentrations of polycyclic aromatic hydrocarbon compounds (PAH) were detected in each of the 30 soil samples submitted for PAH analysis. PAH concentrations exceeded NR 720 Wisconsin Administrative Code residual contaminant levels (RCLs) for direct contact or protection of groundwater in 27 of the 30 soil samples in which they were detected. The distribution of PAH constituents in soil across the site indicate the impacts are related to fill materials used at the site or general site operations rather than a concentrated source area.

Inorganic Analysis

- Low levels of arsenic were detected in each of the 18 samples submitted for analysis at concentrations exceeding NR 720 Wisconsin Administrative Code direct contact residual contaminant levels. Arsenic concentrations in these samples ranged from 2.2 mg/Kg to 4.9 mg/Kg, well within the range for naturally occurring background concentrations in soil throughout

Wisconsin. All arsenic concentrations were below the threshold background value of 8 mg/Kg for Wisconsin soils.

- Naturally occurring lead concentrations were detected in each of the 18 samples submitted for analysis; ranging from 6.9 mg/Kg to 178 mg/kg. Lead concentrations exceeded the NR 720 Wisconsin Administrative Code protection of groundwater RCL of 13.5 mg/Kg in 7 of the 18 soil samples analyzed.

- Five of the soil samples collected were analyzed for ammonia nitrogen. Concentrations of ammonia nitrogen ranged from 15.9 mg/Kg to 54.7 mg/Kg. These concentrations are well below the Department of Agriculture, Trade, and Consumer Protection (DATCP) suggested RCL for combined ammonia nitrogen and nitrate-nitrite nitrogen of 100 mg/Kg.

Groundwater Assessment

Volatile Organic Compound Analysis (VOCs)

- Laboratory results indicate that detectable concentrations of VOC constituents above NR 140 Wisconsin Administrative Code groundwater standards were found in samples collected from 2 of the 12 monitoring wells sampled (WMW-1 and WMW-3). Only one of the parameters detected (benzene) in the sample collected from well WMW-1 exceeded NR 140 Wisconsin Administrative Code groundwater enforcement standards (ES). Naphthalene and trimethylenzene exceeded the preventive action limit (PAL) in the sample collected from well WMW-1 during the first sampling round only. The elevated petroleum hydrocarbons detected in groundwater appear to be related to release from leaking underground storage tanks formerly located below the south side of the property.

- Vinyl chloride was the only parameter found above detection limits in the sample collected from well WMW-3 during the first sampling event. Vinyl chloride was detected at a concentration of 0.53J µg/L, slightly above the NR 140 ES of 0.2 µg/L. Vinyl chloride was not found above detection limits in the sample collected from this well during the second sampling event.

Polycyclic Aromatic Hydrocarbon Analysis (PAH)

- Detectable concentrations of PAH constituents were found in 16 of the 17 groundwater samples analyzed. However, only 3 of the PAH constituents (benzo(a)pyrene, benzo(b)fluoranthene, and chrysene) were detected at concentrations exceeding NR 140 Wisconsin Administrative Code PALs. PAH concentrations slightly exceeded NR 140 enforcement standards in samples collected from well WMW-8 located in an area reported to formerly have petroleum storage tanks, and near well WMW-15.

Inorganic Analysis

- Concentrations of naturally occurring dissolved metals were detected in 8 of the 17 groundwater samples analyzed. Dissolved arsenic slightly exceeded the NR 140 Wisconsin Administrative Code enforcement standards in a sample from well WMW-5 during the July 2014 sampling event. Dissolved lead exceeded the NR 140 Wisconsin Administrative Code enforcement standards in a sample from well WMW-13 in the sample collected during the May 2015 sampling event.

- Samples collected from each of the 5 monitoring wells installed during the Phase II assessment were analyzed for ammonia nitrogen. Concentrations of ammonia nitrogen ranged from 1.9 mg/L to 5.6 mg/L; exceeding the PAL of 0.97 mg/L. None of the ammonia concentrations in groundwater samples exceeded the ES of 9.7 mg/L.

Vapor Assessment

- Methane concentrations in the nine original vapor implants installed in the shallow, unsaturated zone, ranged from 0.1 percent methane (8% LEL) in vapor implant WVP-9 to 15.3 percent methane (>100% LEL) in vapor implant WVP-8. Methane concentrations exceeded the LEL in two of the nine vapor sampling points (WVP-7 and WVP-8), and concentrations of methane were measured at 98 percent of the LEL at sample point WVP-6. None of the readings obtained from the Vapor Pins™ installed beneath the concrete floors of the buildings registered on the meter for the presence of methane. In addition, the presence of methane was not detected in the ambient air inside the buildings. These data indicate that methane is being generated in the subsurface through the decomposition of organic matter; however, methane does not appear to be accumulating in the buildings, and should not present a significant risk during building demolition.

- Three additional vapor implants were installed at the site during the May 2015 NR 716 investigation (WVP-11, WVP-12, and WVP-13). Methane readings were collected from the three new implants and five existing implants (WVP-6 through WVP-10) on May 19, 2015. Methane concentrations ranged from 0.1 percent methane (2% LEL) in vapor implant WVP-13 to 12.4 percent methane (>100% LEL) in vapor implant WVP-6.

Conclusions and Recommendations

The following conclusions and recommendations are provided based on information collected during the site assessment:

- Submit this NR 716 Investigation Report to the Wisconsin Department of Natural Resources.

- Based on the nature of the fill material at the site, and limited degree of impacts to soil and groundwater, Ayres Associates believes that no additional investigation is warranted at this site. Limited soil impacts, which appear to primarily be related to the fill material at the site, should be addressed during site redevelopment.

- Prepare a remedial Action Options Report and a remediation implementation or materials management plan to address soil and groundwater impacts and methane concentrations in the subsurface that are consistent with site redevelopment plans. The remediation options selected will be contingent on the plans for redevelopment.

- Proceed with case closure through the Voluntary Party Liability Exemption Program (VPLE) on a parallel track with site development.

Figures

PROJECT LOCATION

NOTE: THIS DRAWING WAS PREPARED IN COLOR. REPRODUCTION BY MEANS OTHER THAN EQUIVALENT COLOR COPYING MAY CAUSE SOME DATA TO BE LOST OR MISREPRESENTED.

DR.BY T. SHUPERT CHK.BY J. STEINER DATE JULY 2013	WEST WATERFROND REDEVELOPMENT PROJECT CITY OF STURGEON BAY STURGEON BAY, WISCONSIN	AYRES ASSOCIATES	PROJECT LOCATION	FIGURE NO. 1

7/16/2013
PEN
V:\ENV\CAD\Sturgeon Bay\DGN\Figure 1 - Sturgeon Bay Location Map.dgn

Parcel Map 92 and 100 E. Maple Street

Printed 08/07/2013 courtesy of Door County Land Information Office

... from the Web Map of ...
(//www.co.door.wi.gov)

Door County, Wisconsin
... for all seasons!

NORTH

60 0 60 120FT

SCALE IN FEET

GROUND SURFACE COVER

- GRASS
- SAND & GRAVEL
- ASPHALT/CONCRETE

STURGEON BAY SHIP CANAL

PIERHEAD LINE AS PER ORD. #802

BULKHEAD LINE AS PER ORD. #460

92 EAST MAPLE STREET

100 EAST MAPLE STREET

LOCUST CT.

MAPLE ST.

NEENAH AVE.

LOT 1

WMW-16, WVP-11, WGP-5, VP-4, WMW-9, B-2, FORMER BUILDING, WVP-10, WGP-12, WVP-4, B-1, WMW-5 SEWER PUMP, WMW-8, B-3, BUILDING, ASPHALT, GUARD RAIL, ELECTRICAL PEDESTAL, B-4, WGP-10, ROOF ONLY, VP-5, WGP-11, WGP-4, FOUND 5/8" REBAR, VP-3, WVP-2, VP-2, WVP-7, WVP-9, LIGHT POLE, HYDRANT & GATE VALVE, WMW-15, UTILITY SUB-STATION, WGP-15, PROPANE TANK, MANHOLE, WMW-2, LOADING DOCK, B-5, METAL GATE, WOOD FENCE, WPZ-10, WMW-10, WGP-2, CATCH BASIN, FORMER BUILDING, WGP-9, WMW-4, WVP-12, LIGHT POLE, STORM MANHOLE, ELECTRICAL PEDESTAL, METAL BUILDING, WGP-8, METAL GATE, WVP-8, ELECTRICAL PEDESTALS, WGP-14, WMW-14, FIBER OPTIC BOX, WVP-1, VP-1, WVP-5, B-6, WGP-7, WGP-6, SANITARY SEWER, CONCRETE, GRAVEL, WMW-3, ASPHALT, MANHOLE, B-7, WMW-11, B-8, WMW-13, WMW-1, WGP-1, ASPHALT, WVP-6, C.B. MANHOLE, WGP-3, WVP-13, CHAIN LINK FENCE, WGP-13, FORMER GARAGE, WMW-12, MANHOLES, ELECTRICAL PEDESTAL, FOUND MAG NAIL, FOUND RAILROAD SPIKE, WMW-7, WMW-6, CONC. WALK, CONC. CURB, 33', 27', 16' UTILITY EASEMENT VOL. 385 PG. 311, WEST 92.01', EAST 7.97', 2.00' SOUTH, N 47°16'59" W 200.38', N 53°52'22" E 263.80', N 13°34'45" E 49.11', S 89°59'38" E 256.57', S 06°01'06" E 178.01', N 06°01'06" W 222.00', S 40°01'00" W 23.71', S 32°53'44" W 35.17', N 89°59'38" W 256.57

LEGEND

- SAN — SAN — SANITARY SEWER LINE
- W — W — W — WATER MAIN
- UE — UE — UNDERGROUND ELECTRIC LINE
- FO — FO — UNDERGROUND FIBER OPTIC LINE
- UG — UG — UNDERGROUND GAS LINE
- TEL — TEL — UNDERGROUND TELEPHONE LINE
- FO — FO — UNDERGROUND ELECTRIC & FIBER OPTIC
- ORDINARY HIGH WATER MARK

WMW-5 – MONITORING WELL

WGP-4 – GEOPROBE

WVP-9 – VAPOR PROBE

WPZ-10 – PIEZOMETER

B-5 – MONITORING WELL (BY STS CONSULTANTS 2004)

B-4 – GEOPROBE (BY STS CONSULTANTS 2004)

VP-1 – VAPOR PROBE (BY STS CONSULTANTS 2004)

NOTES:

- ALL UNDERGROUND UTILITIES WERE LOCATED AS PER DIGGER'S HOTLINE MARKINGS AND ARE NOT GUARANTEED TO BE COMPLETE OR CORRECT.
- PRIOR TO ANY SUBSURFACE WORK ON THIS PROPERTY, DIGGER'S HOTLINE MUST BE CONTACTED FOR A RE-LOCATE.
- LOCATION OF ORDINARY HIGH WATER MARK OF STURGEON BAY PER WISCONSIN DEPARTMENT OF NATURAL RESOURCES. BASED ON PLAT OF SURVEY DATED OCTOBER 2, 2014

V:\ENV\CAD\STURGEON BAY\DGN\FIGURE3-STURGEN BAY SITE MAP.DGN

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$FILE$

DES BY	BOOK NO
J. STEINER	
DR BY	JOB NO
T. SHUPERT	19-0422.20
CHK BY	DATE
J. STEINER	JUNE 2015

NO	DATE	REVISION
1	02-11-2015	ADDED ORDINARY HIGH WATER MARK FOR STURGEON BAY
2	06-11-2015	ADDED WGP-13 - 15, WMW-12 - 16, MVP-11 - 13
3	06-26-2015	ADDED GROUND SURFACE COVER INFORMATION

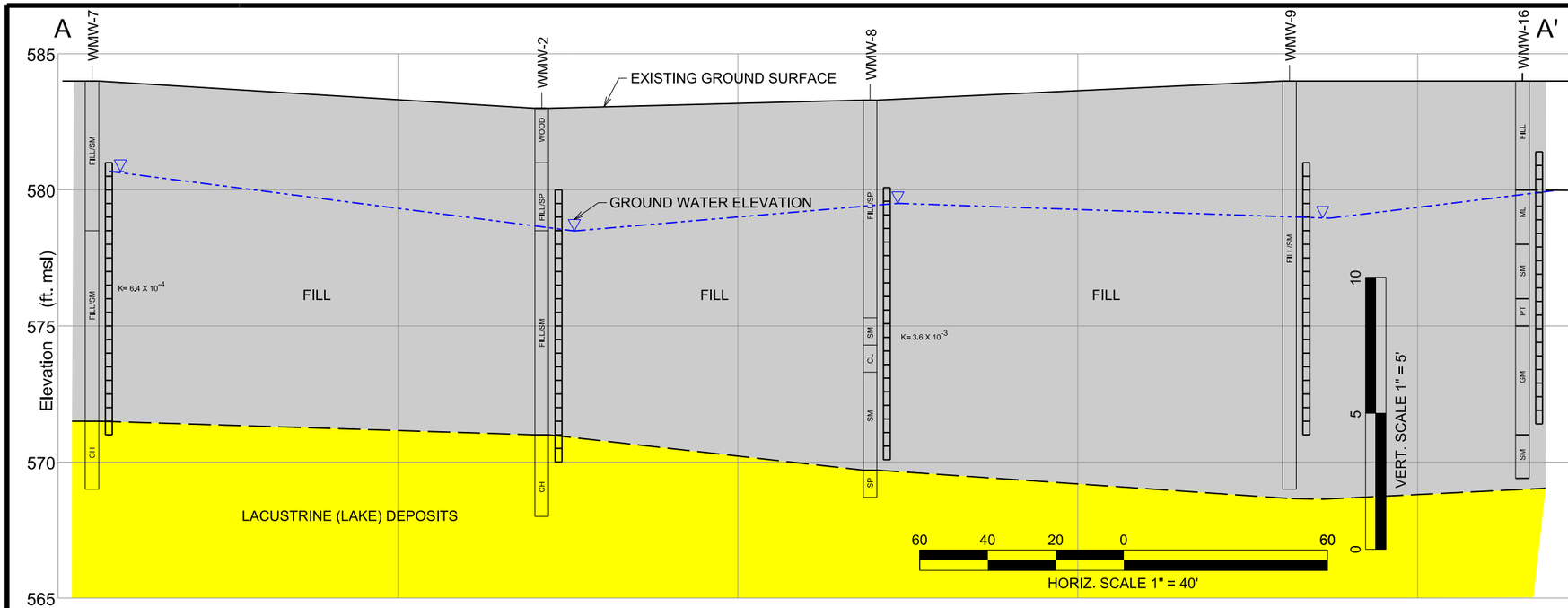
NO	DATE	REVISION

WEST WATERFRONT REDEVELOPMENT PROJECT
CITY OF STURGEON BAY
STURGEON BAY, WISCONSIN

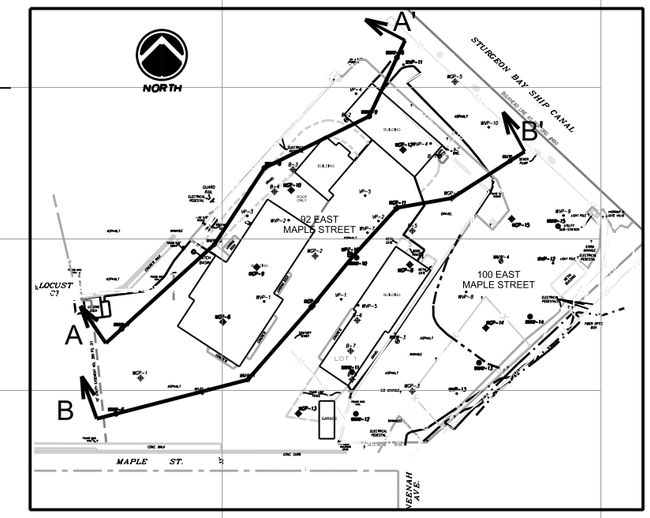
AYRES ASSOCIATES
WAUKESHA, WISCONSIN

SITE MAP

DRAWING NO
3

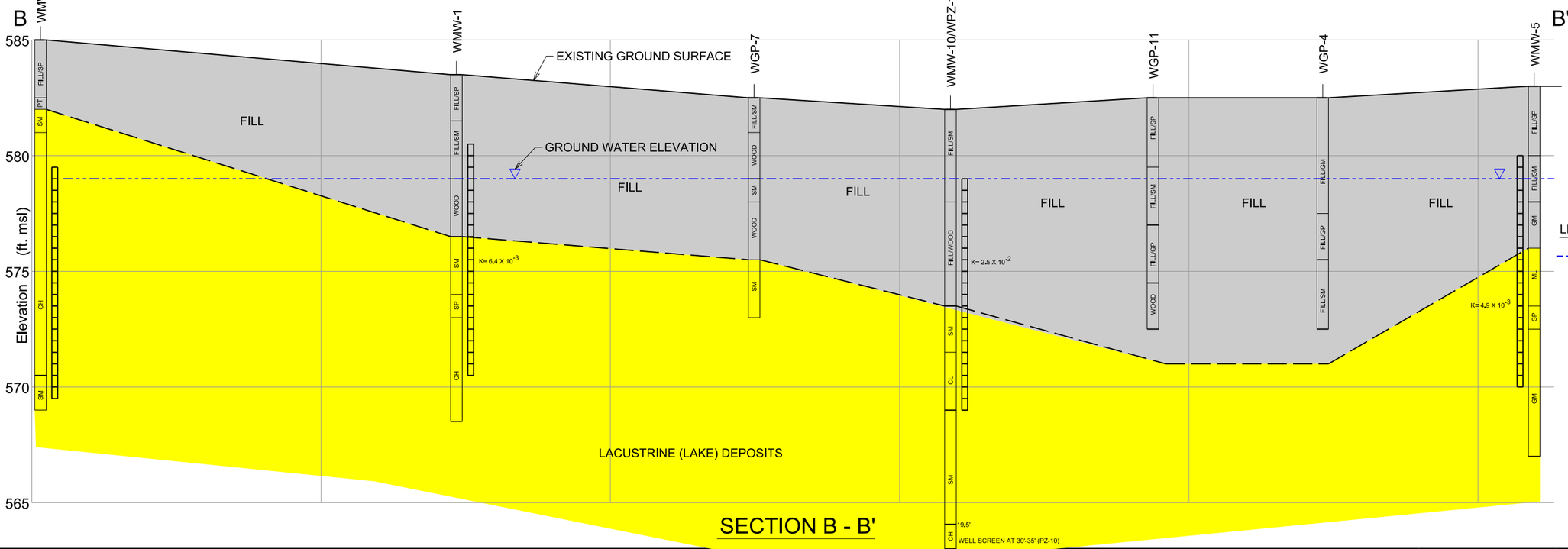


SECTION A - A'



SECTION LOCATION MAP

NTS



SECTION B - B'

LEGEND

- WATER LEVEL MEASURED IN WATER TABLE OBSERVATION WELL
- MONITORING WELL SCREEN INTERVAL
- CL — INORGANIC CLAYS OF LOW PLASTICITY
- CH — INORGANIC CLAYS OF HIGH PLASTICITY
- ML — INORGANIC SILTS AND VERY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
- SC — CLAYEY SANDS, SAND - CLAY MIXTURES
- SM — SILTY SANDS, SAND - SILT MIXTURES
- SP — POORLY - GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
- GM — SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
- GP — POORLY GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
- $K= 4.9 \times 10^{-3}$ — HYDRAULIC CONDUCTIVITY (cm/sec)

DES BY	J. STEINER	BOOK NO					
DR BY	T. SHUPERT	JOB NO	19-0422.00				
CHK BY	J. STEINER	DATE	JUNE 2015	NO	DATE	REVISION	

WEST WATERFRONT REDEVELOPMENT PROJECT
CITY OF STURGEON BAY
STURGEON BAY, WISCONSIN

AYRES ASSOCIATES
WAUKESHA, WISCONSIN

GEOLOGICAL CROSS SECTIONS A - A' AND B - B'

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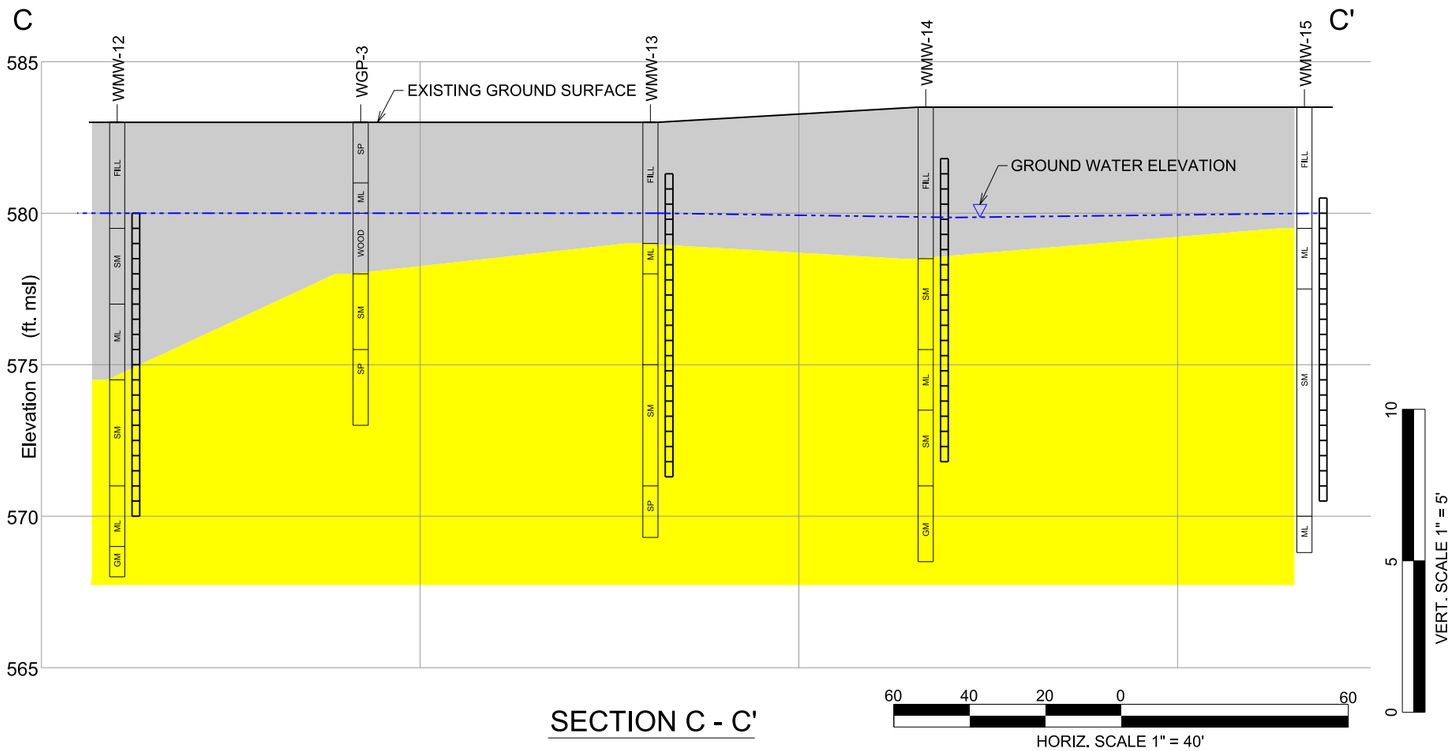

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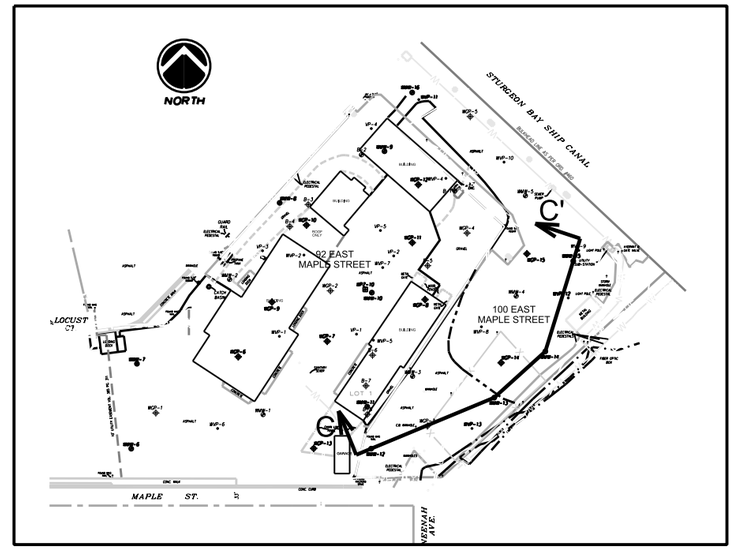

SECTION LOCATION MAP

NTS

LEGEND

	WATER LEVEL MEASURED IN WATER TABLE OBSERVATION WELL
	MONITORING WELL SCREEN INTERVAL
CL	INORGANIC CLAYS OF LOW PLASTICITY
CH	INORGANIC CLAYS OF HIGH PLASTICITY
ML	INORGANIC SILTS AND VERY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
SC	CLAYEY SANDS, SAND - CLAY MIXTURES
SM	SILTY SANDS, SAND - SILT MIXTURES
SP	POORLY - GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
GM	SILTY GRAVELS, GRAVEL - SAND - SILT MIXTURES
GP	POORLY GRADED GRAVELS, GRAVEL - SAND MIXTURES, LITTLE OR NO FINES
K= 4.9 X 10^{-3}	HYDRAULIC CONDUCTIVITY (cm/sec)

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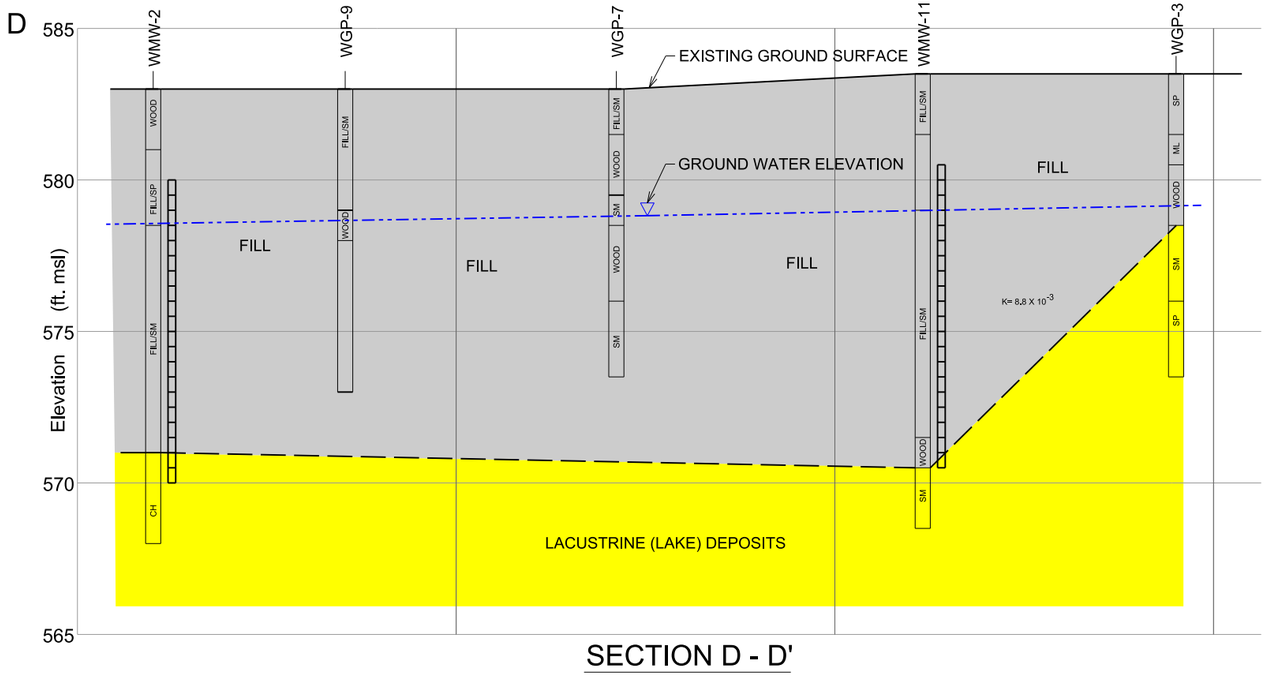
DES BY J. STEINER	BOOK NO	NO	DATE	REVISION	NO	DATE	REVISION	WEST WATERFRONT REDEVELOPMENT PROJECT CITY OF STURGEON BAY STURGEON BAY, WISCONSIN	AYRES ASSOCIATES WAUKESHA, WISCONSIN	GEOLOGICAL CROSS SECTIONS C - C'	DRAWING NO 5
DR BY T. SHUPERT	JOB NO 19-0422.00										
CHK BY J. STEINER	DATE JUNE 2015										



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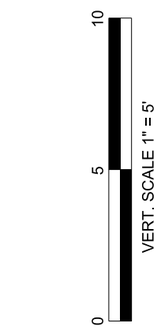

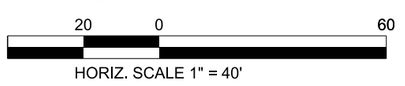

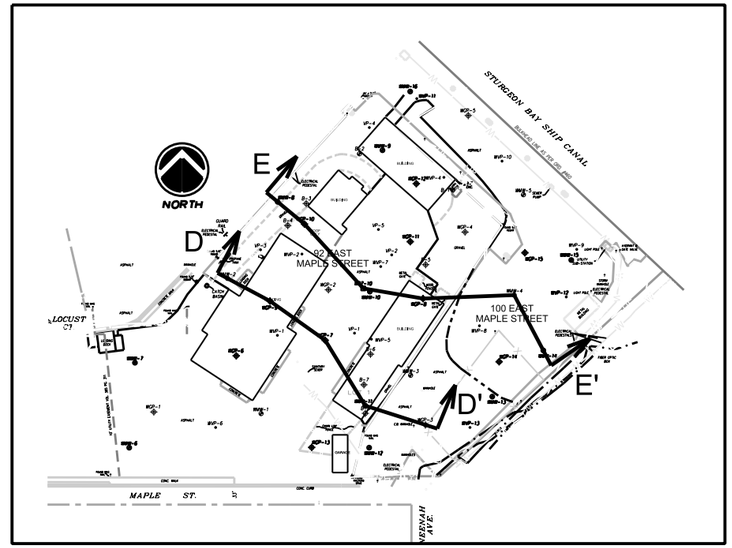

SECTION LOCATION MAP
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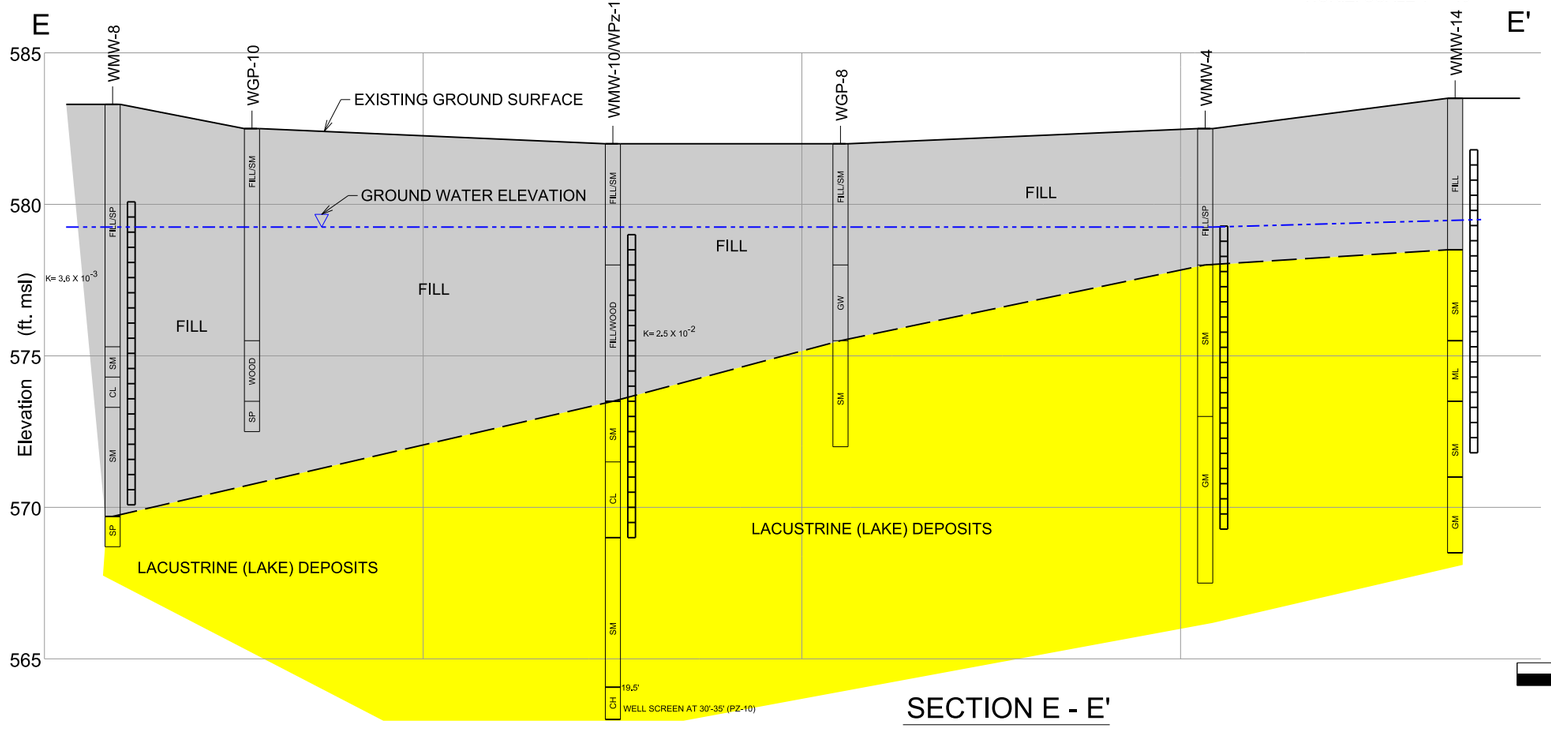

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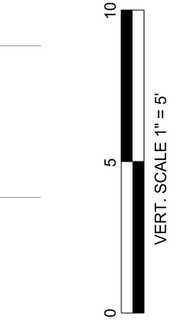

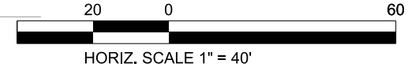

LEGEND

- WATER LEVEL MEASURED IN WATER TABLE OBSERVATION WELL
- MONITORING WELL SCREEN INTERVAL
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- K= 4,9 X 10-3 — HYDRAULIC CONDUCTIVITY (cm/sec)

DES BY	J. STEINER	BOOK NO					
DR BY	T. SHUPERT	JOB NO	19-0422.00				
CHK BY	J. STEINER	DATE	JUNE 2015	NO	DATE	REVISION	

NO	DATE	REVISION	

WEST WATERFRONT REDEVELOPMENT PROJECT
CITY OF STURGEON BAY
STURGEON BAY, WISCONSIN

AYRES ASSOCIATES
WAUKESHA, WISCONSIN

GEOLOGICAL CROSS SECTION D - D' AND E - E'

DRAWING NO 6

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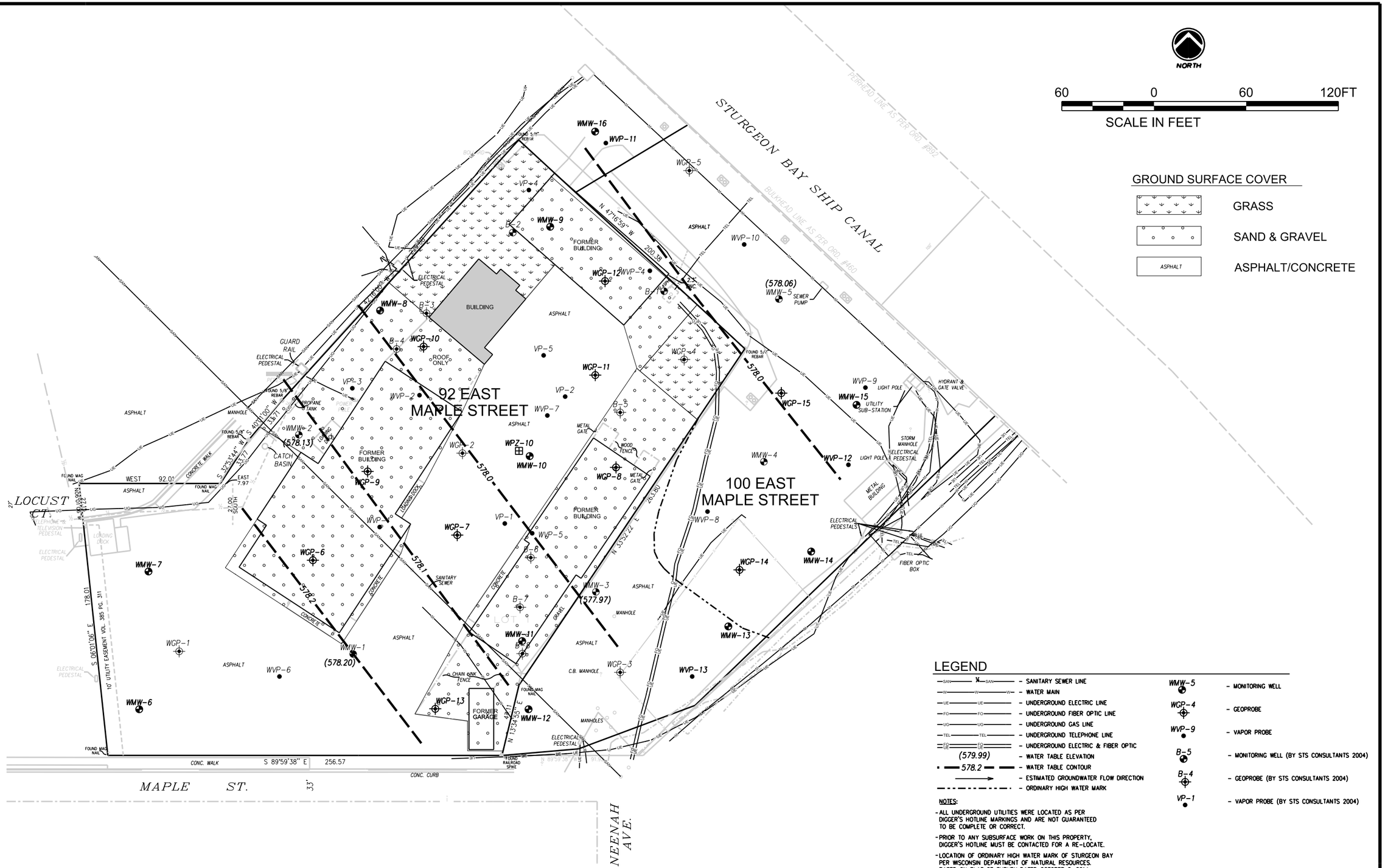

LEGEND

- SAN — SAN — SANITARY SEWER LINE
- W — W — WATER MAIN
- UE — UE — UNDERGROUND ELECTRIC LINE
- FO — FO — UNDERGROUND FIBER OPTIC LINE
- UG — UG — UNDERGROUND GAS LINE
- TEL — TEL — UNDERGROUND TELEPHONE LINE
- FO/UE — UNDERGROUND ELECTRIC & FIBER OPTIC
- (579.99) — WATER TABLE ELEVATION
- 578.2 — WATER TABLE CONTOUR
- ESTIMATED GROUNDWATER FLOW DIRECTION
- ORDINARY HIGH WATER MARK

- WMW-5 — MONITORING WELL
- WGP-4 — GEOPROBE
- WVP-9 — VAPOR PROBE
- B-5 — MONITORING WELL (BY STS CONSULTANTS 2004)
- B-4 — GEOPROBE (BY STS CONSULTANTS 2004)
- VP-1 — VAPOR PROBE (BY STS CONSULTANTS 2004)

NOTES:

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V:\ENV\CAD\STURGEON BAY\DGN\FIGURE3-STURGEN BAY SITE MAP.DGN

$PLTDRVS$
$PENTBLS$
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$FILE$

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WEST WATERFRONT REDEVELOPMENT PROJECT
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WAUKESHA, WISCONSIN

WATER TABLE CONTOUR MAP
08-06-2013

DRAWING NO
7

NOTES:

BOLD	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for *industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for non-*industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Protection of Groundw ater Residual Contaminant Level (RCL).
mg/Kg	Concentration reported as milligrams per kilogram, equivalent to parts per million (ppm).
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

NORTH

60 0 60 120FT

SCALE IN FEET

GROUND SURFACE COVER

- GRASS
- SAND & GRAVEL
- ASPHALT/CONCRETE

WMW-16 2.5-5	5/18/2015
Arsenic	4.9
Lead	39.9
Benzo(a)anthracene	1.55
Benzo(a)pyrene	1.4
Benzo(b)fluoranthene	1.39
Chrysene	1.83
Dibenz(a,h)anthracene	0.288J
Indeno(1,2,3-cd)pyrene	0.76

WGP-5 2.5-5	7/5/2013
Arsenic	4.1
Lead	44.3
Benzo(a)anthracene	0.196
Benzo(a)pyrene	0.247
Benzo(b)fluoranthene	0.255
Chrysene	0.228
Dibenz(a,h)anthracene	0.0593

WGP-4 2.5-5	7/5/2013
Arsenic	3.1J
Benzo(a)anthracene	0.169
Benzo(a)pyrene	0.572
Benzo(b)fluoranthene	0.442
Chrysene	0.340
Dibenz(a,h)anthracene	0.0859
Indeno(1,2,3-cd)pyrene	0.192

WMW-8 2.5'-5'	7/16/2014
Benzo(a)anthracene	0.970
Benzo(a)pyrene	1.050
Benzo(b)fluoranthene	0.970
Chrysene	0.971
Dibenz(a,h)anthracene	0.267
Indeno(1,2,3-cd)pyrene	0.607

WGP-11 2.5'-5'	7/16/2014
Benzo(a)anthracene	0.469
Benzo(a)pyrene	0.627
Benzo(b)fluoranthene	0.585
Chrysene	0.642
Dibenz(a,h)anthracene	0.138
Indeno(1,2,3-cd)pyrene	0.373

WGP-10 2.5'-5'	7/16/2014
Benzo(a)pyrene	0.0165J

WMW-5 2.5-5	7/5/2013
Arsenic	4.1
Benzo(a)pyrene	0.23
Benzo(b)fluoranthene	0.163
Chrysene	0.185
Dibenz(a,h)anthracene	0.0572

WGP-2 2.5-5	7/5/2013
Arsenic	3.8J
Benzo(a)anthracene	5.64
Benzo(a)pyrene	5.59
Benzo(b)fluoranthene	5.42
Benzo(k)fluoroanthene	4.39
Benzo(b)fluoranthene	5.90
Chrysene	0.724
Dibenz(a,h)anthracene	1.61
Naphthalene	0.342J

WGP-15 0-2.5	5/18/2015
Arsenic	2.7
Benzo(a)pyrene	0.0386

WMW-15 0-2.5	5/18/2015
Arsenic	3.2J
Benzo(a)pyrene	0.0812
Dibenz(a,h)anthracene	0.0185

WMW-2 2.5-5	7/5/2013
Arsenic	3.8
Lead	51.3

WMW-4 2.5-5	7/5/2013
Arsenic	2.5
Benzo(a)anthracene	0.406
Benzo(a)pyrene	0.651
Benzo(b)fluoranthene	0.416
Chrysene	0.563
Dibenz(a,h)anthracene	0.14
Indeno(1,2,3-cd)pyrene	0.285

WGP-9 0'-2.5'	7/16/2014
Benzo(a)pyrene	0.0487
Dibenz(a,h)anthracene	0.0120J

WMW-14 2.5-5	5/18/2015
Arsenic	2.3
Benzo(a)pyrene	0.216
Dibenz(a,h)anthracene	0.0518

WGP-8 0'-2.5'	7/16/2014
Benzo(a)pyrene	0.225
Benzo(b)fluoranthene	0.214
Dibenz(a,h)anthracene	0.0621
Indeno(1,2,3-cd)pyrene	0.151

WGP-14 0-2.5	5/18/2015
Arsenic	4.7
Benzo(a)anthracene	0.521
Benzo(a)pyrene	0.673
Benzo(b)fluoranthene	0.527
Chrysene	0.61
Dibenz(a,h)anthracene	0.15
Indeno(1,2,3-cd)pyrene	0.424

WMW-7 0'-2.5'	7/16/2014
Benzo(a)anthracene	0.163
Benzo(a)pyrene	0.0845
Chrysene	0.195
Dibenz(a,h)anthracene	0.0189J

WGP-1 2.5-5	7/5/2013
Arsenic	4.7
Barium	184
Lead	178
Mercury	0.27
Benzo(a)anthracene	5.72
Benzo(a)pyrene	6.28
Benzo(b)fluoranthene	5.22
Benzo(k)fluoroanthene	5.26
Benzo(b)fluoranthene	6.30
Chrysene	0.835
Dibenz(a,h)anthracene	1.83
Naphthalene	0.374J

WMW-1 2.5-5	7/5/2013
Arsenic	2.7
Lead	16.6
Benzo(a)pyrene	0.0806
Dibenz(a,h)anthracene	0.0231

WGP-7 0'-2.5'	7/16/2014
Benzo(a)pyrene	0.0793
Chrysene	0.154
Dibenz(a,h)anthracene	0.0221J

WMW-3 2.5-5	7/5/2013
Arsenic	2.2
Benzo(a)pyrene	0.0314

WMW-13 0-2.5	5/18/2015
Arsenic	2.7
Lead	177
Naphthalene	9.23
Benzo(a)anthracene	9.85
Benzo(a)pyrene	7.17
Benzo(b)fluoranthene	6.75
Benzo(k)fluoranthene	6.94
Chrysene	10.5
Dibenz(a,h)anthracene	1.18
Indeno(1,2,3-cd)pyrene	2.84
Naphthalene	3.85

WMW-6 2.5'-5'	7/16/2014
Benzo(a)anthracene	0.191
Benzo(a)pyrene	0.197
Benzo(b)fluoranthene	0.179
Chrysene	0.214
Dibenz(a,h)anthracene	0.0405

WGP-6 0'-2.5'	7/16/2014
Benzo(a)anthracene	0.832
Benzo(a)pyrene	0.970
Benzo(b)fluoranthene	0.778
Dibenz(a,h)anthracene	0.160
Indeno(1,2,3-cd)pyrene	0.467

WGP-13 0-2.5	5/18/2015
Arsenic	4.4
Barium	193
Lead	69.8
Benzo(a)anthracene	1.01
Benzo(a)pyrene	0.948
Benzo(b)fluoranthene	0.797
Chrysene	1.18
Dibenz(a,h)anthracene	0.196J
Indeno(1,2,3-cd)pyrene	0.505

WMW-11 0'-2.5'	7/16/2014
Benzo(a)anthracene	1.590
Benzo(a)pyrene	1.900
Benzo(b)fluoranthene	1.550
Chrysene	1.460
Dibenz(a,h)anthracene	0.349
Indeno(1,2,3-cd)pyrene	0.912

WMW-12 0-2.5	5/18/2015
Arsenic	4.3
Cadmium	2.6
Lead	70.6
Benzo(a)anthracene	6.7
Benzo(a)pyrene	8.6
Benzo(b)fluoranthene	8.15
Benzo(k)fluoranthene	7.41
Chrysene	8.1
Dibenz(a,h)anthracene	1.99
Indeno(1,2,3-cd)pyrene	5.26

WGP-3 2.5-5	7/5/2013
Arsenic	2.4
Benzo(a)pyrene	0.0558

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V:\ENV\CAD\STURGEON BAY\DGN\FIGURE8 SUM OF EXCED IN SOIL.DGN

$PLTDRVS$
$PENTBLS$
$DATE$
$FILE$

DES BY	J. STEINER
BOOK NO	
DR BY	T. SHUPERT
JOB NO	19-0422.20
CHK BY	J. STEINER
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NO	DATE	REVISION

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WEST WATERFRONT REDEVELOPMENT PROJECT
CITY OF STURGEON BAY
STURGEON BAY, WISCONSIN

AYRES ASSOCIATES
WAUKESHA, WISCONSIN

SUMMARY OF ANALYTE EXCEEDENCES IN SOIL

DRAWING NO 8

NOTES:

BOLD	Exceeds NR 140 Wisconsin Administrative Code Ground Water Enforcement Standard (ES)
BOLD	Exceeds NR 140 Wisconsin Administrative Code Ground Water Preventive Action Limit (PAL)
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. MDL - Adjusted Method Detection Limit.
ug/L	micrograms per liter, equivalent to parts per billion (ppb).
mg/L	milligrams per liter, equivalent to parts per million

NORTH

60 0 60 120FT

SCALE IN FEET

GROUND SURFACE COVER

- GRASS
- SAND & GRAVEL
- ASPHALT/CONCRETE

	WMW-16
	5/18/2015
	ug/L
Chrysene	**0.026J**

	WPZ-10	
	7/16/2014	5/18/2015
	ug/L	
Benzo(a)pyrene	**0.022J**	<0.0043
Benzo(b)fluoranthene	**0.021J**	<0.0052
Chrysene	**0.027J**	0.0078J

	WMW-8	
	7/15/2014	5/18/2015
	mg/L	
Dissolved Lead	**6.9J**	<3.0
	ug/L	
Benzo(a)pyrene	**0.16**	<0.0042
Benzo(b)fluoranthene	**0.17**	<0.0051
Chrysene	**0.26**	0.0075J

	WMW-5	
	5/23/2013	7/15/2014
	mg/L	
Dissolved Arsenic	<4.4	**10.9J**

	WMW-2		
	5/23/2013	7/14/2014	5/18/2015
	mg/L		
Benzo(a)pyrene	<0.012	**0.037J**	**0.026J**
Benzo(b)fluoranthene	<0.016	**0.076**	**0.18**
Chrysene	<0.015	**0.085**	**0.21**

	WMW-15
	5/18/2015
	mg/L
Dissolved Lead	**5.7J**
	ug/L
Benzo(a)pyrene	**0.28**
Benzo(b)fluoranthene	**0.24**
Chrysene	**0.52**

	WMW-4	
	5/23/2013	7/15/2014
	mg/L	
Dissolved Lead	**2.4J**	<3.0
	ug/L	
Benzo(a)pyrene	**0.023J**	<0.0038
Benzo(b)fluoranthene	**0.022J**	<0.0065
Chrysene	**0.027J**	<0.0083

	WMW-13
	5/18/2015
	mg/L
Dissolved Lead	**17.4**
	ug/L
Benzo(a)pyrene	**0.046**
Benzo(b)fluoranthene	**0.086**
Chrysene	**0.13**

	WMW-10	
	7/15/2014	5/18/2015
	mg/L	
Dissolved Lead	**3.0J**	<3.0
	ug/L	
Benzo(b)fluoranthene	<0.0065	**0.062**
Chrysene	<0.0082	**0.086**

	WMW-3	
	5/23/2013	7/14/2014
Dissolved Arsenic	**7.2J**	<7.2
Dissolved Cadmium	**0.71J**	<0.60
Vinyl Chloride	**0.53J**	<0.18
Benzo(a)pyrene	**0.025J**	0.0086J
Benzo(b)fluoranthene	**0.026J**	0.016J
Chrysene	**0.039J**	0.010J

	WMW-1	
Date	5/23/2013	7/14/2014
	ug/L	
Benzene	**11.4**	**13.7**
Naphthalene	**12.6**	6.4
Trimethylbenzene (Total)	**131.3**	18

LEGEND

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V:\ENV\CAD\STURGEON BAY\DGN\FIGURE3-STURGEN BAY SITE MAP.DGN

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SUMMARY OF ANALYTE EXCEEDENCES IN GROUNDWATER

DRAWING NO 9

NOTES:

[1]	WVP-3 not installed
[2]	Vapor probes WVP-1 thru WVP-4 installed beneath concrete floors in buildings
Bold	Exceeds Lower Explosive Limit (LEL) of 5% for methane
Sat	Water in vapor probe, could not measure

Vapor Probe Location	WVP-11
Sample Date	5/19/2015
Vapor Probe Depth (feet bgs)	2.5
Methane (% CH_4 by Vol.)	0
Methane (% LEL)	0
Oxygen (% O_2 by Vol.)	20.3
Carbon Dioxide (% CO_2 by vol.)	0.3

Vapor Probe Location	WVP-4
Sample Date	7/15/2014
Vapor Probe Depth (feet bgs)	1
Methane (% CH_4 by Vol.)	0
Methane (% LEL)	0
Oxygen (% O_2 by Vol.)	20.8
Carbon Dioxide (% CO_2 by vol.)	0.1

Vapor Probe Location	WVP-7	
Sample Date	7/15/2014	5/19/2015
Vapor Probe Depth (feet bgs)	3	3
Methane (% CH_4 by Vol.)	5.2	Sat
Methane (% LEL)	104	Sat
Oxygen (% O_2 by Vol.)	0.3	Sat
Carbon Dioxide (% CO_2 by vol.)	12.9	Sat

Vapor Probe Location	WVP-10	
Sample Date	7/15/2014	5/19/2015
Vapor Probe Depth (feet bgs)	3	3
Methane (% CH_4 by Vol.)	2.5	Sat
Methane (% LEL)	50	Sat
Oxygen (% O_2 by Vol.)	0.3	Sat
Carbon Dioxide (% CO_2 by vol.)	5.6	Sat

Vapor Probe Location	WVP-2
Sample Date	7/15/2014
Vapor Probe Depth (feet bgs)	1
Methane (% CH_4 by Vol.)	0
Methane (% LEL)	0
Oxygen (% O_2 by Vol.)	20.8
Carbon Dioxide (% CO_2 by vol.)	0

Vapor Probe Location	WVP-9	
Sample Date	7/15/2014	5/19/2015
Vapor Probe Depth (feet bgs)	3	3
Methane (% CH_4 by Vol.)	0.4	0.8
Methane (% LEL)	8	16
Oxygen (% O_2 by Vol.)	0	0.3
Carbon Dioxide (% CO_2 by vol.)	7	6.7

Vapor Probe Location	WVP-1
Sample Date	7/15/2014
Vapor Probe Depth (feet bgs)	1
Methane (% CH_4 by Vol.)	0
Methane (% LEL)	0
Oxygen (% O_2 by Vol.)	19.2
Carbon Dioxide (% CO_2 by vol.)	2.1

Vapor Probe Location	WVP-12
Sample Date	5/19/2015
Vapor Probe Depth (feet bgs)	2.5
Methane (% CH_4 by Vol.)	0
Methane (% LEL)	0
Oxygen (% O_2 by Vol.)	9.5
Carbon Dioxide (% CO_2 by vol.)	6

Vapor Probe Location	WVP-8	
Sample Date	7/15/2014	5/19/2015
Vapor Probe Depth (feet bgs)	3	3
Methane (% CH_4 by Vol.)	**15.3**	Sat
Methane (% LEL)	306	Sat
Oxygen (% O_2 by Vol.)	0	Sat
Carbon Dioxide (% CO_2 by vol.)	5.5	Sat

Vapor Probe Location	WVP-5
Sample Date	7/15/2014
Vapor Probe Depth (feet bgs)	3
Methane (% CH_4 by Vol.)	0
Methane (% LEL)	0
Oxygen (% O_2 by Vol.)	186
Carbon Dioxide (% CO_2 by vol.)	2.3

Vapor Probe Location	WVP-6	
Sample Date	7/15/2014	5/19/2015
Vapor Probe Depth (feet bgs)	3	3
Methane (% CH_4 by Vol.)	4.8	**12.4**
Methane (% LEL)	96	248
Oxygen (% O_2 by Vol.)	16.2	5.5
Carbon Dioxide (% CO_2 by vol.)	0.4	4.8

Vapor Probe Location	WVP-13
Sample Date	5/19/2015
Vapor Probe Depth (feet bgs)	2.5
Methane (% CH_4 by Vol.)	0.1
Methane (% LEL)	0
Oxygen (% O_2 by Vol.)	18.7
Carbon Dioxide (% CO_2 by vol.)	1.3

NORTH

60 0 60 120FT

SCALE IN FEET

GROUND SURFACE COVER

- GRASS
- SAND & GRAVEL
- ASPHALT/CONCRETE

LEGEND

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STURGEON BAY, WISCONSIN

AYRES ASSOCIATES
WAUKESHA, WISCONSIN

SUMMARY OF METHANE DETECTIONS

DRAWING NO 10

Tables

Table 1
Groundwater Elevation Data
West Waterfront Redevelopment Project
Sturgeon Bay, Wiscosnin

WELL ID	TOP OF CASING ELEVATION	1/18/2013		8/6/2013		7/16/2014	
		DEPTH TO WATER	GW ELEVATION	DEPTH TO WATER	GW ELEVATION	DEPTH TO WATER	GW ELEVATION
WMW-1	583.27	4.99	578.28	5.07	578.20	4.14	579.13
WMW-2	582.35	3.85	578.50	4.22	578.13	3.76	578.59
WMW-3	582.49	4.62	577.87	4.52	577.97	3.32	579.17
WMW-4	582.25	4.38	577.87	4.26	577.99	2.96	579.29
WMW-5	582.73	4.66	578.07	4.67	578.06	3.44	579.29
WMW-6	584.75					12.3*	---*
WMW-7	583.72					3.14	580.58
WMW-8	583.13					3.81	579.32
WMW-9	583.70					4.80	578.90
WMW-10	581.71					2.40	579.31
WPZ-10	581.85					31.38*	---*
WMW-11	583.05					3.81	579.24

Note:
1. All wells surveyed to USGS datum on 07/16/2014. Wells surveyed to top of PVC casing.
2. Benchmark is top of rail spike at SE corner of 92 and 100 E. Maple Street lot line (583.25 ft. msl).
* Water level not equilibrated.

Table 2
Summary of Hydraulic Conductivity Test Results
92 and 100 East Maple Street
Sturgeon Bay, Wisconsin

Well/Test Number[1]	Hydraulic Conductivity[2] (ft/sec)	Hydraulic Conductivity[3] (cm/sec)	Material Surrounding[4] Screen (USCS)
WMW-1 Slug Out	2.1×10^{-4}	6.4×10^{-3}	CH, SM, SP
WMW-3 Slug Out	3.9×10^{-4}	1.2×10^{-2}	ML, SC, SM, GM
WMW-5 Slug Out	1.6×10^{-4}	4.9×10^{-3}	ML, SM, SM, GM
WMW-7 Slug Out	2.1×10^{-5}	6.4×10^{-4}	CH, SM, GM
WMW-8 Slug Out	1.2×10^{-4}	3.6×10^{-3}	CL, SM, SP
WMW-10 Slug Out	4.8×10^{-4}	2.5×10^{-2}	CL, SM
WMW-11 Slug Out	2.9×10^{-4}	8.8×10^{-3}	SM

Notes:
[1]Slug out test = rising head test
[2]ft/sec = hydraulic conductivity in units of feet per second
[3]cm/sec = hydraulic conductivity in units of centimeters per second
[4]See Figure 3 for Unified Soil Classification System (USCS) soil descriptions

Table 3
Summary of Soil Sample Laboratory Analytical Results
West Waterfront Redevelopment Project, Sturgeon Bay, Wisconsin
July 5, 2013 and July 16, 2014

Boring Number/Depth	Analytical Result (mg/Kg)						Soil Standards (1/2015)		
	WMW-1 2.5-5	WMW-2 0-2.5	WMW-2 2.5-5	WMW-3 0-2.5	WMW-3 2.5-5	WMW-4 0-2.5			
Sampling Date	7/5/2013	7/5/2013	7/5/2013	7/5/2013	7/5/2013	7/5/2013			
							NR 720 DC RCL[1]		**NR720**
Nitrogen	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
Nitrogen, Ammonia	--	--	--	--	--	--	ns	ns	ns
							NR 720 DC RCL[1]		**NR720**
Metals	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
Arsenic	**2.7**	--	**3.8**	--	**2.2**	--	0.613(8)	2.39 (8)	0.584
Barium	27.1	--	12.7	--	37.3	--	15,300	100,000.0	164.8
Cadmium	0.22J	--	0.21J	--	0.24J	--	70	799	0.752
Chromium	10.1	--	6.4	--	11.5	--	ns	ns	360,000, No Cr-VI
Lead	**16.6**	--	**51.3**	--	6.9	--	400	800	27
Selenium	<0.57	--	<0.63	--	<0.6	--	391	5,110	0.52
Silver	<0.21	--	<0.23	--	<0.22	--	391	5,110	0.85
Mercury	0.022	--	0.011	--	0.019	--	3.13	3.13	0.208
							NR 720 DC RCL[1]		**NR720**
VOC[3]	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
1,2,4-Trimethylbenzene	<0.025	<0.025	--	<0.025	--	<0.025	89.8	219	ns
1,3,5-Trimethylbenzene	<0.025	<0.025	--	<0.025	--	<0.025	182	182	ns
m & p-Xylene	<0.05	<0.05	--	<0.05	--	<0.05	388	388	3.94
Naphthalene	<0.025	0.0522J	--	<0.025	--	<0.025	5.15	26	0.6582
							NR 720 DC RCL[2]		**NR720**
PAH	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
1-Methylnaphthalene	0.0304	--	0.0122J	--	0.0035J	--	15.6	53.1	ns
2-Methylnaphthalene	0.0207	--	0.013J	--	<0.095	--	229	2,200	ns
Acenaphthene	<0.0092	--	<0.095	--	<0.095	--	3,440	33,000	ns
Acenaphthylene	0.0288	--	<0.095	--	<0.095	--	ns	ns	ns
Anthracene	0.023	--	<0.095	--	0.015J	--	17,200	100,000	197.7273
Benzo(a)anthracene	0.0597	--	<0.095	--	0.0258	--	0.148	2.11	ns
Benzo(a)pyrene	**0.0806**	--	0.0035J	--	**0.0314**	--	0.015	0.211	0.47
Benzo(b)fluoranthene	0.0676	--	<0.095	--	0.024	--	0.148	2.11	0.4793
Benzo(g,h,i)perylene	0.0773	--	<0.095	--	0.0422	--	ns	ns	ns
Benzo(k)fluoranthene	0.0756	--	0.0034J	--	0.0234	--	1.48	21.1	ns
Chrysene	0.0798	--	<0.095	--	0.0319	--	14.8	211	0.1446
Dibenz(a,h)anthracene	**0.0231**	--	<0.095	--	0.0104J	--	0.015	0.211	ns
Fluoranthene	0.0881	--	<0.095	--	0.0478	--	2,290	22,000	88.8778
Fluorene	<0.0092	--	<0.095	--	<0.095	--	2,290	22,000	14.8027
Indeno(1,2,3-cd)pyrene	0.0544	--	<0.095	--	0.0176J	--	0.148	2.11	ns
Naphthalene	0.0151J	--	0.0128J	--	<0.095	--	5.15	26	0.6582
Phenanthrene	0.033	--	<0.095	--	0.0257	--	ns	ns	ns
Pyrene	0.0874	--	<0.095	--	0.0429	--	1,720	16,500	54.1322

BOLD	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for *industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for non-*industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Protection of Groundwater Residual Contaminant Level (RCL).
( )	Background threshold values are trace element maximum levels in Wisconsin surface soils from the USGS Report at: *http://pubs.usgs.gov/sir/2011/5202* .
ns	No NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) established.
--	Not Analyzed
<	Concentration less than laboratory method detection limit.
mg/Kg	Concentration reported as milligrams per kilogram, equivalent to parts per million (ppm).
	[1]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL)
	[2]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for protection of groundwater.
	[3]Table includes summary of VOC analysis, see lab data sheets for complete list of analytes.
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

Table 3
Summary of Soil Sample Laboratory Analytical Results
West Waterfront Redevelopment Project, Sturgeon Bay, Wisconsin
July 5, 2013 and July 16, 2014

Boring Number/Depth	Analytical Result (mg/Kg)						Soil Standards (1/2015)		
	WMW-4 2.5-5	WMW-5 0-2.5	WMW-5 2.5-5	WGP-1 2.5-5	WGP-2 2.5-5	WGP-3 2.5-5			
Sampling Date	7/5/2013	7/5/2013	7/5/2013	7/5/2013	7/5/2013	7/5/2013			
							NR 720 DC RCL[1]		**NR720**
Nitrogen	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
Nitrogen, Ammonia	54.7	--	51.3	--	52.4	--	ns	ns	ns
							NR 720 DC RCL[1]		**NR720**
Metals	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
Arsenic	**2.5**	--	**4.1**	**4.7**	**3.8J**	**2.4**	0.613(8)	2.39 (8)	0.584
Barium	21.9	--	28.2	**184**	14.9	27.2	15,300	100,000.0	164.8
Cadmium	0.21J	--	0.29J	0.64J	0.21J	0.23J	70	799	0.752
Chromium	8.1	--	10.6	20.7	8.4	9.1	ns	ns	360,000, No Cr-VI
Lead	14.9	--	26.8	**178**	12.3	10.9	400	800	27
Selenium	<0.59	--	<0.57	<0.81	<0.63	<0.58	391	5,110	0.52
Silver	<0.21	--	<0.21	<0.29	<0.23	<0.21	391	5,110	0.85
Mercury	0.031	--	0.047	**0.27**	0.052	0.016	3.13	3.13	0.208
							NR 720 DC RCL[1]		**NR720**
VOC[3]	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
1,2,4-Trimethylbenzene	--	<0.025	--	<0.025	<0.025	<0.025	89.8	219	ns
1,3,5-Trimethylbenzene	--	<0.025	--	<0.025	<0.025	<0.025	182	182	ns
m & p-Xylene	--	<0.05	--	<0.05	<0.05	<0.05	388	388	3.94
Naphthalene	--	0.0692	--	<0.025	0.038J	<0.025	5.15	26	0.6582
							NR 720 DC RCL[2]		**NR720**
PAH	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
1-Methylnaphthalene	0.0396J	--	0.0126J	0.456J	0.417J	0.0299	15.6	53.1	ns
2-Methylnaphthalene	<0.036	--	0.0159J	<0.235	<0.244	0.0241	229	2,200	ns
Acenaphthene	<0.036	--	<0.093	1.18	1.14	<0.093	3,440	33,000	ns
Acenaphthylene	0.231	--	0.0718	3.02	2.89	0.0244	ns	ns	ns
Anthracene	0.203	--	0.0552	4.56	3.88	0.0237	17,200	100,000	197.7273
Benzo(a)anthracene	**0.406**	--	0.142	**5.72**	**5.64**	0.0387	0.148	2.11	ns
Benzo(a)pyrene	**0.651**	--	**0.23**	**6.28**	**5.59**	**0.0558**	0.015	0.211	0.47
Benzo(b)fluoranthene	**0.416**	--	**0.163**	**5.22**	**5.42**	0.0733	0.148	2.11	0.4793
Benzo(g,h,i)perylene	0.438	--	0.185	2.08	1.81	0.0251	ns	ns	ns
Benzo(k)fluoranthene	0.445	--	0.178	**5.26**	**4.39**	0.0426	1.48	21.1	ns
Chrysene	**0.563**	--	**0.185**	**6.30**	**5.90**	0.0697	14.8	211	0.1446
Dibenz(a,h)anthracene	**0.14**	--	**0.0572**	**0.835**	**0.724**	0.0094	0.015	0.211	ns
Fluoranthene	0.618	--	0.208	11.40	10.90	0.0751	2,290	22,000	88.8778
Fluorene	0.0537J	--	0.0179J	2.29	2.36	<0.093	2,290	22,000	14.8027
Indeno(1,2,3-cd)pyrene	**0.285**	--	0.123	**1.83**	**1.61**	0.0217	0.148	2.11	ns
Naphthalene	<0.036	--	0.0165J	**0.374J**	**0.342J**	0.0151J	5.15	26	0.6582
Phenanthrene	0.323	--	0.0876	9.90	9.15	0.064	ns	ns	ns
Pyrene	1.28	--	0.293	13.20	12.70	0.0711	1,720	16,500	54.1322

BOLD	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for *industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for non-*industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Protection of Groundwater Residual Contaminant Level (RCL).
( )	Background threshold values are trace element maximum levels in Wisconsin surface soils from the USGS Report at: *http://pubs.usgs.gov/sir/2011/5202* .
ns	No NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) established.
--	Not Analyzed
<	Concentration less than laboratory method detection limit.
mg/Kg	Concentration reported as milligrams per kilogram, equivalent to parts per million (ppm).
	[1]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL)
	[2]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for protection of groundwater.
	[3]Table includes summary of VOC analysis, see lab data sheets for complete list of analytes.
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

Table 3
Summary of Soil Sample Laboratory Analytical Results
West Waterfront Redevelopment Project, Sturgeon Bay, Wisconsin
July 5, 2013 and July 16, 2014

Boring Number/Depth	Analytical Result (mg/Kg)					Soil Standards (1/2015)		
	WGP-4 0-2.5	WGP-4 2.5-5	WGP-4 5-7.5	WGP-5 0-2.5	WGP-5 2.5-5			
Sampling Date	7/5/2013	7/5/2013	7/5/2013	7/5/2013	7/5/2013			
						NR 720 DC RCL[1]		**NR720**
Nitrogen	**Analytical Result (mg/Kg)**					**Non-Industrial**	**Industrial**	**GW RCL[2]**
Nitrogen, Ammonia	15.9	--	--	--	38.0	ns	ns	ns
						NR 720 DC RCL[1]		**NR720**
Metals	**Analytical Result (mg/Kg)**					**Non-Industrial**	**Industrial**	**GW RCL[2]**
Arsenic	--	**3.1J**	--	--	**4.1**	0.613(8)	2.39 (8)	0.584
Barium	--	16.2	--	--	35.9	15,300	100,000.0	164.8
Cadmium	--	0.15J	--	--	0.32J	70	799	0.752
Chromium	--	6.6	--	--	9.8	ns	ns	360,000, No Cr-VI
Lead	--	9.3	--	--	**44.3**	400	800	27
Selenium	--	<0.62	--	--	<0.61	391	5,110	0.52
Silver	--	<0.22	--	--	<0.22	391	5,110	0.85
Mercury	--	0.051	--	--	0.040	3.13	3.13	0.208
						NR 720 DC RCL[1]		**NR720**
VOC[3]	**Analytical Result (mg/Kg)**					**Non-Industrial**	**Industrial**	**GW RCL[2]**
1,2,4-Trimethylbenzene	--	--	82.3	<0.025	--	89.8	219	ns
1,3,5-Trimethylbenzene	--	--	31.7J	<0.025	--	182	182	ns
m & p-Xylene	--	--	<0.05	<0.05	--	388	388	3.94
Naphthalene	--	--	<0.025	<0.025	--	5.15	26	0.6582
						NR 720 DC RCL[2]		**NR720**
PAH	**Analytical Result (mg/Kg)**					**Non-Industrial**	**Industrial**	**GW RCL[2]**
1-Methylnaphthalene	--	0.0114J	--	--	0.0151J	15.6	53.1	ns
2-Methylnaphthalene	--	<0.0178	--	--	0.0184	229	2,200	ns
Acenaphthene	--	0.0678	--	--	0.0374	3,440	33,000	ns
Acenaphthylene	--	0.0376	--	--	0.0509	ns	ns	ns
Anthracene	--	0.107	--	--	0.119	17,200	100,000	197.7273
Benzo(a)anthracene	--	**0.169**	--	--	**0.196**	0.148	2.11	ns
Benzo(a)pyrene	--	**0.572**	--	--	**0.247**	0.015	0.211	0.47
Benzo(b)fluoranthene	--	**0.442**	--	--	**0.255**	0.148	2.11	0.4793
Benzo(g,h,i)perylene	--	0.205	--	--	0.152	ns	ns	ns
Benzo(k)fluoranthene	--	0.564	--	--	0.177	1.48	21.1	ns
Chrysene	--	**0.340**	--	--	**0.228**	14.8	211	0.1446
Dibenz(a,h)anthracene	--	**0.0859**	--	--	**0.0593**	0.015	0.211	ns
Fluoranthene	--	0.403	--	--	0.405	2,290	22,000	88.8778
Fluorene	--	0.0304J	--	--	0.0438	2,290	22,000	14.8027
Indeno(1,2,3-cd)pyrene	--	**0.192**	--	--	0.130	0.148	2.11	ns
Naphthalene	--	<0.0178	--	--	0.0167J	5.15	26	0.6582
Phenanthrene	--	0.0587	--	--	0.298	ns	ns	ns
Pyrene	--	0.865	--	--	0.35	1,720	16,500	54.1322

BOLD	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for *industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for non-*industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Protection of Groundwater Residual Contaminant Level (RCL).
( )	Background threshold values are trace element maximum levels in Wisconsin surface soils from the USGS Report at: *http://pubs.usgs.gov/sir/2011/520*
ns	No NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) established.
--	Not Analyzed
<	Concentration less than laboratory method detection limit.
mg/Kg	Concentration reported as milligrams per kilogram, equivalent to parts per million (ppm).
	[1]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL)
	[2]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for protection of groundwater.
	[3]Table includes summary of VOC analysis, see lab data sheets for complete list of analytes.
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

Table 3
Summary of Soil Sample Laboratory Analytical Results
West Waterfront Redevelopment Project, Sturgeon Bay, Wisconsin
July 5, 2013 and July 16, 2014

Boring Number/Depth	Analytical Result (mg/Kg)						Soil Standards (1/2015)		
	WMW-6 2.5'-5'	WMW-7 0'-2.5'	WMW-8 2.5'-5'	WMW-9 2.5'-5'	WMW-11 0'-2.5'	WGP-6 0'-2.5'			
Sampling Date	7/16/2014	7/16/2014	7/16/2014	7/16/2014	7/16/2014	7/16/2014			
							NR 720 DC RCL[1]		**NR720**
Nitrogen	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
Nitrogen, Ammonia	--	--	--	--	--	--	ns	ns	ns
							NR 720 DC RCL[1]		**NR720**
Metals	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
Arsenic	--	--	--	--	--	--	0.613(8)	2.39 (8)	0.584
Barium	--	--	--	--	--	--	15,300	100,000.0	164.8
Cadmium	--	--	--	--	--	--	70	799	0.752
Chromium	--	--	--	--	--	--	ns	ns	360,000, No Cr-VI
Lead	--	--	--	--	--	--	400	800	27
Selenium	--	--	--	--	--	--	391	5,110	0.52
Silver	--	--	--	--	--	--	391	5,110	0.85
Mercury	--	--	--	--	--	--	3.13	3.13	0.208
							NR 720 DC RCL[1]		**NR720**
VOC[3]	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
1,2,4-Trimethylbenzene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	89.8	219	ns
1,3,5-Trimethylbenzene	<0.025	<0.025	<0.025	<0.025	<0.025	<0.025	182	182	ns
m & p-Xylene	<0.0500	0.0688J	<0.0500	<0.0500	<0.0500	<0.0500	388	388	3.94
Naphthalene	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	5.15	26	0.6582
							NR 720 DC RCL[2]		**NR720**
PAH	**Analytical Result (mg/Kg)**						**Non-Industrial**	**Industrial**	**GW RCL[2]**
1-Methylnaphthalene	0.0124J	0.0677	0.299	<0.0088	0.103J	<0.0431	15.6	53.1	ns
2-Methylnaphthalene	0.0208	0.0824	0.404	<0.0088	0.184	0.0726J	229	2,200	ns
Acenaphthene	<0.0091	0.0589	<0.0440	<0.0088	<0.0875	<0.0431	3,440	33,000	ns
Acenaphthylene	0.078	<0.0172	0.454	<0.0079	0.669	0.424	ns	ns	ns
Anthracene	0.0718	0.119	0.368	<0.0091	0.734	0.4	17,200	100,000	197.7273
Benzo(a)anthracene	**0.191**	**0.163**	**0.970**	<0.0061	**1.590**	**0.832**	0.148	2.11	ns
Benzo(a)pyrene	**0.197**	**0.0845**	**1.050**	<0.0063	**1.900**	**0.970**	0.015	0.211	0.47
Benzo(b)fluoranthene	**0.179**	0.110	**0.970**	<0.0088	**1.550**	**0.778**	0.148	2.11	0.4793
Benzo(g,h,i)perylene	0.126	0.0458	0.821	0.0073J	1.020	0.571	ns	ns	ns
Benzo(k)fluoranthene	0.193	0.0763	0.671	<0.0097	1.370	0.615	1.48	21.1	ns
Chrysene	**0.214**	**0.195**	**0.971**	<0.0081	**1.460**	0.788	14.8	211	0.1446
Dibenz(a,h)anthracene	**0.0405**	**0.0189J**	**0.267**	<0.0065	**0.349**	**0.160**	0.015	0.211	ns
Fluoranthene	0.399	0.780	1.430	<0.0088	2.420	1.520	2,290	22,000	88.8778
Fluorene	0.0267	0.0500	0.0671J	<0.0088	0.306	0.150	2,290	22,000	14.8027
Indeno(1,2,3-cd)pyrene	0.110	0.0339J	**0.607**	<0.0067	**0.912**	**0.467**	0.148	2.11	ns
Naphthalene	0.0167J	0.0290J	0.337	<0.0088	<0.0875	<0.0431	5.15	26	0.6582
Phenanthrene	0.314	0.702	0.944	<0.0088	1.510	1.020	ns	ns	ns
Pyrene	0.374	0.544	1.350	<0.0088	2.580	1.610	1,720	16,500	54.1322

BOLD	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for *industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for non-*industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Protection of Groundwater Residual Contaminant Level (RCL).
( )	Background threshold values are trace element maximum levels in Wisconsin surface soils from the USGS Report at: *http://pubs.usgs.gov/sir/2011/5202* .
ns	No NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) established.
--	Not Analyzed
<	Concentration less than laboratory method detection limit.
mg/Kg	Concentration reported as milligrams per kilogram, equivalent to parts per million (ppm).
	[1]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL)
	[2]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for protection of groundwater.
	[3]Table includes summary of VOC analysis, see lab data sheets for complete list of analytes.
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

Table 3
Summary of Soil Sample Laboratory Analytical Results
West Waterfront Redevelopment Project, Sturgeon Bay, Wisconsin
July 5, 2013 and July 16, 2014

Boring Number/Depth	Analytical Result (mg/Kg)							Soil Standards		
	WGP-7 0'-2.5'	WGP-8 0'-2.5'	WGP-9 0'-2.5'	WGP-10 2.5'-5'	WGP-11 2.5'-5'	WGP-12 2.5'-5'	MeOH Blank			
Sampling Date	7/16/2014	7/16/2014	7/16/2014	7/16/2014	7/16/2014	7/16/2014	7/16/2014			
								NR 720 DC RCL[1]		**NR720**
Nitrogen	**Analytical Result (mg/Kg)**							**Non-Industrial**	**Industrial**	**GW RCL[2]**
Nitrogen, Ammonia	--	--	--	--	--	--	--	ns	ns	ns
								NR 720 DC RCL[1]		**NR720**
Metals	**Analytical Result (mg/Kg)**							**Non-Industrial**	**Industrial**	**GW RCL[2]**
Arsenic	--	--	--	--	--	--	--	0.613(8)	2.39 (8)	0.584
Barium	--	--	--	--	--	--	--	15,300	100,000.0	164.8
Cadmium	--	--	--	--	--	--	--	70	799	0.752
Chromium	--	--	--	--	--	--	--	ns	ns	360,000, No Cr-VI
Lead	--	--	--	--	--	--	--	400	800	27
Selenium	--	--	--	--	--	--	--	391	5,110	0.52
Silver	--	--	--	--	--	--	--	391	5,110	0.85
Mercury	--	--	--	--	--	--	--	3.13	3.13	0.208
								NR 720 DC RCL[1]		**NR720**
VOC[3]	**Analytical Result (mg/Kg)**							**Non-Industrial**	**Industrial**	**GW RCL[2]**
1,2,4-Trimethylbenzene	<0.025	<0.025	<0.025	<0.025	<0.0253	<0.025	<0.025	89.8	219	ns
1,3,5-Trimethylbenzene	<0.025	<0.025	<0.025	<0.025	<0.0253	<0.025	<0.025	182	182	ns
m & p-Xylene	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	388	388	3.94
Naphthalene	0.0585J	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	<0.0400	5.15	26	0.6582
								NR 720 DC RCL[2]		**NR720**
PAH	**Analytical Result (mg/Kg)**							**Non-Industrial**	**Industrial**	**GW RCL[2]**
1-Methylnaphthalene	0.0258J	<0.0178	<0.0087	<0.0090	0.0729	<0.0092	--	15.6	53.1	ns
2-Methylnaphthalene	0.0490	0.0268J	0.0191	0.0096J	0.173	0.0118J	--	229	2,200	ns
Acenaphthene	0.0452	<0.0178	<0.0087	<0.0090	0.116	<0.0092	--	3,440	33,000	ns
Acenaphthylene	<0.0153	0.0349J	0.0191	<0.0081	0.214	<0.0082	--	ns	ns	ns
Anthracene	0.0759	0.0679	0.0175	<0.0094	0.225	<0.0095	--	17,200	100,000	197.7273
Benzo(a)anthracene	0.0847	0.0399	0.0372	0.0126J	**0.469**	0.0112J	--	0.148	2.11	ns
Benzo(a)pyrene	**0.0793**	**0.225**	**0.0487**	**0.0165J**	**0.627**	0.0123J	--	0.015	0.211	0.47
Benzo(b)fluoranthene	0.116	**0.214**	0.0498	0.0212	**0.585**	0.0140J	--	0.148	2.11	0.4793
Benzo(g,h,i)perylene	0.0434	0.2430	0.0414	0.0167J	0.456	0.0090J	--	ns	ns	ns
Benzo(k)fluoranthene	0.0638	0.0883	0.0362	<0.010	0.499	<0.0102	--	1.48	21.1	ns
Chrysene	**0.154**	0.0813	0.0469	0.0165J	**0.642**	0.0125J	--	14.8	211	0.1446
Dibenz(a,h)anthracene	**0.0221J**	**0.0621**	**0.0120J**	<0.0066	**0.138**	<0.0067	--	0.015	0.211	ns
Fluoranthene	0.323	0.0341J	0.0669	0.0339	0.974	0.0216	--	2,290	22,000	88.8778
Fluorene	0.0348	<0.0178	<0.0087	<0.0090	0.183	<0.0092	--	2,290	22,000	14.8027
Indeno(1,2,3-cd)pyrene	0.0299J	**0.151**	0.0310	0.0105J	**0.373**	<0.0070	--	0.148	2.11	ns
Naphthalene	0.0502	<0.0178	0.0091J	<0.0090	0.394	<0.0092	--	5.15	26	0.6582
Phenanthrene	0.474	<0.0178	0.0374	0.0248	0.507	0.0167J	--	ns	ns	ns
Pyrene	0.245	0.133	0.0672	0.0289	0.904	0.021	--	1,720	16,500	54.1322

BOLD	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for *industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for non-*industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Protection of Groundwater Residual Contaminant Level (RCL).
( )	Background threshold values are trace element maximum levels in Wisconsin surface soils from the USGS Report at: *http://pubs.usgs.gov/sir/2011/5202* .
ns	No NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) established.
--	Not Analyzed
<	Concentration less than laboratory method detection limit.
mg/Kg	Concentration reported as milligrams per kilogram, equivalent to parts per million (ppm).
	[1]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL)
	[2]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for protection of groundwater.
	[3]Table includes summary of VOC analysis, see lab data sheets for complete list of analytes.
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

Table 3
Summary of Soil Sample Laboratory Analytical Results
West Waterfront Redevelopment Project, Sturgeon Bay, Wisconsin
May 18, 2015

Boring Number/Depth	WMW-12 0-2.5	WMW-13 0-2.5	WMW-14 2.5-5	WMW-15 0-2.5	WMW-16 2.5-5	WGP-14 0-2.5	WGP-15 0-2.5	WGP-13 0-2.5	MeOH Blank	Soil Standards (1/2015)	
Sampling Date	5/18/2015	5/18/2015	5/18/2015	5/18/2015	5/18/2015	5/18/2015	5/18/2015	5/18/2015			
										NR 720 DC RCL[1]	**NR720 GW RCL[2]**
Nitrogen	**Analytical Result (mg/Kg)**									**Non-Industrial** / **Industrial**	
Nitrogen, Ammonia	--	--	--	--	--	--	--	--	--	ns / ns	ns
										NR 720 DC RCL[1]	**NR720 GW RCL[2]**
Metals	**Analytical Result (mg/Kg)**									**Non-Industrial** / **Industrial**	
Arsenic	**4.3**	**2.7**	**2.3**	**3.2J**	**4.9**	**4.7**	**2.7**	**4.4**	--	0.613(8) / 2.39 (8)	0.584
Barium	68.5	26.1	26.5	25.9	33	48.8	26.1	**193**	--	15,300 / 100,000.0	164.8
Cadmium	**2.6**	0.16J	<0.072	0.086J	0.13J	0.079J	0.1J	0.32J	--	70 / 799	0.752
Chromium	13.7	8.7	10.8	9.7	10	21.1	8.5	10.6	--	ns / ns	360,000, No Cr-VI
Lead	**70.6**	**177**	22.5	14.9	**39.9**	26.6	20.1	**69.8**	--	400 / 800	27
Selenium	<0.94	<0.75	<0.84	<0.76	<0.74	<0.84	<0.78	<0.8	--	391 / 5,110	0.52
Silver	<0.34	<0.27	<0.3	<0.27	<0.27	<0.3	<0.28	<0.29	--	391 / 5,110	0.85
Mercury	0.043	0.028	0.084	0.029	0.031	0.042	0.034	0.032	--	3.13 / 3.13	0.208
										NR 720 DC RCL[1]	**NR720 GW RCL[2]**
VOC[3]	**Analytical Result (mg/Kg)**									**Non-Industrial** / **Industrial**	
1,2,4-Trimethylbenzene	<0.025	<0.1	<0.025	<0.0258	<0.025	<0.0272	<0.025	<0.025	<0.025	89.8 / 219	ns
1,3,5-Trimethylbenzene	<0.025	<0.1	<0.025	<0.0258	<0.025	<0.0272	<0.025	<0.025	<0.025	182 / 182	ns
m & p-Xylene	<0.05	<0.2	<0.05	<0.0515	<0.05	<0.0543	<0.05	<0.05	<0.05	388 / 388	3.94
Naphthalene	<0.04	**9.23**	<0.04	<0.0413	<0.04	<0.0435	<0.04	<0.04	<0.04	5.15 / 26	0.6582
										NR 720 DC RCL[2]	**NR720 GW RCL[2]**
PAH	**Analytical Result (mg/Kg)**									**Non-Industrial** / **Industrial**	
1-Methylnaphthalene	<0.202	<0.356	0.0223J	<0.0091	<0.184	<0.0383	<0.0091	<0.182	--	15.6 / 53.1	ns
2-Methylnaphthalene	0.232J	<0.356	0.0333J	<0.0091	<0.184	<0.0383	0.0114J	0.198J	--	229 / 2,200	ns
Acenaphthene	<0.202	1.49	<18.4	<0.0091	0.469	<0.0383	<0.0091	<0.182	--	3,440 / 33,000	ns
Acenaphthylene	4.92	<0.319	0.0971	0.0136J	<0.165	0.282	<0.0082	0.634	--	ns / ns	ns
Anthracene	3.53	5.4	0.0756	0.0174J	1.22	0.214	0.0181J	0.671	--	17,200 / 100,000	197.7273
Benzo(a)anthracene	**6.7**	**9.85**	0.14	0.0588	**1.55**	**0.521**	0.0382	**1.01**	--	0.148 / 2.11	ns
Benzo(a)pyrene	**8.6**	**7.17**	**0.216**	**0.0812**	**1.4**	**0.673**	**0.0386**	**0.948**	--	0.015 / 0.211	0.47
Benzo(b)fluoranthene	**8.15**	**6.75**	0.148	0.0424	**1.39**	**0.527**	0.0326	**0.797**	--	0.148 / 2.11	0.4793
Benzo(g,h,i)perylene	5.68	2.6	0.244	0.102	0.763	0.533	0.0315	0.555	--	ns / ns	ns
Benzo(k)fluoranthene	**7.41**	**6.94**	0.138	0.0373	1.2	0.578	0.034	0.859	--	1.48 / 21.1	ns
Chrysene	**8.1**	**10.5**	0.184	0.0914	**1.83**	**0.61**	0.0434	**1.18**	--	14.8 / 211	0.1446
Dibenz(a,h)anthracene	**1.99**	**1.18**	**0.0518**	**0.0185**	**0.288J**	**0.15**	0.0095J	**0.196J**	--	0.015 / 0.211	ns
Fluoranthene	10.6	22.6	0.16	0.0677	4.73	0.788	0.0848	2.11	--	2,290 / 22,000	88.8778
Fluorene	0.337J	1.91	<18.4	<0.0091	0.508	<0.0383	<0.0091	0.236J	--	2,290 / 22,000	14.8027
Indeno(1,2,3-cd)pyrene	**5.26**	**2.84**	0.137	0.0363	**0.76**	**0.424**	0.0238	**0.505**	--	0.148 / 2.11	ns
Naphthalene	0.3J	**3.85**	.0263J	<0.0091	<0.184	<0.0383	<0.0091	<0.182	--	5.15 / 26	0.6582
Phenanthrene	3.640	15.2	0.0559	0.0159	4.12	0.231	0.062	1.86	--	ns / ns	ns
Pyrene	9.030	16.7	0.321	0.242	3.54	0.769	0.0707	1.83	--	1,720 / 16,500	54.1322

BOLD	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for *industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for non-*industrial* direct contact.
Bold	Concentration exceeds NR 720 Wisconsin Administrative Code Protection of Groundwater Residual Contaminant Level (RCL).
( )	Background threshold values are trace element maximum levels in Wisconsin surface soils from the USGS Report at: *http://pubs.usgs.gov/sir/2011/5202* .
ns	No NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) established.
--	Not Analyzed
<	Concentration less than laboratory method detection limit.
mg/Kg	Concentration reported as milligrams per kilogram, equivalent to parts per million (ppm).
	[1]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL)
	[2]NR 720 Wisconsin Administrative Code Residual Contaminant Level (RCL) for protection of groundwater.
	[3]Table includes summary of VOC analysis, see lab data sheets for complete list of analytes.
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

Table 4
Groundwater Laboratory Analytical Data
West Waterfront Redevelopment Project, Sturgeon Bay, Wisconsin
May 23, 2013, July 16, 2014, and May 19, 2015

Well Number	WMW-1		WMW-2			WMW-3		WMW-4		WMW-5		WMW-6	WMW-7	WMW-8		WMW-8D	NR 140 Groundwater Standards	
Date	5/23/2013	7/14/2014	5/23/2013	7/14/2014	5/18/2015	5/23/2013	7/14/2014	5/23/2013	7/15/2014	5/23/2013	7/15/2014	7/16/2014	7/15/2014	7/15/2014	5/18/2015	7/15/2014	**ES**	**PAL**
Nitrogen	**Analytical Result (mg/L)**																	
Nitrogen, Ammonium	3.6	---	2.0	---	---	5.9	---	5.9	---	4.4	---	---	---	---	---	---	ns	ns
Nitrogen, Ammonia	**3.4**	---	**1.9**	---	---	**5.6**	---	**5.6**	---	**4.1**	---	---	---	---	---	---	9.7	0.97
RCRA Metals (dissolved)	**Analytical Result (µg/L)**																	
Dissolved Arsenic	<4.4	<7.2	<4.4	<7.2	<7.2	**7.2J**	<7.2	<4.4	<7.2	<4.4	**10.9J**	<7.2	<7.2	<6.8	<7.2	<7.2	10	1
Dissolved Barium	172	---	167	---	---	281	---	342	---	86.4	---	---	---	---	---	---	2,000	400
Dissolved Cadmium	<0.38	<0.60	<0.38	<0.60	<0.60	**0.71J**	<0.60	0.48J	<0.60	<0.38	<0.60	<0.60	<0.60	<0.60	<0.60	<0.60	5	0.5
Dissolved Chromium	<1.2	---	<1.2	---	---	<1.2	---	<1.2	---	<1.2	---	---	---	---	---	---	100	10
Dissolved Lead	<1.2	<3.0	<1.4J	<3.0	<3.0	<1.2	<3.0	**2.4J**	<3.0	1.2J	<3.0	<3.0	<3.0	**6.9J**	<3.0	<3.0	15	1.5
Dissolved Selenium	<6.6	---	<6.6	---	---	<6,6	---	<6.6	---	<6.6	---	---	---	---	---	---	2	0.2
Dissolved Silver	<1.4	---	<1.4	---	---	<1.4	---	<1.4	---	<1,4	---	---	---	---	---	---	50	10
Dissolved Mercury	<0.10	---	<0.10	---	---	<0.10	---	<0.10	---	<0.10	---	---	---	---	---	---	2	0.2
Volatile Organic Compounds	**Analytical Result (µg/L)**																	
Benzene	**11.4**	**13.7**	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	5	0.5
n-Butylbenzene	10.4	<0.50	<0.40	<0.50	<0.50	<0.40	<0.50	<0.40	<0.50	<0.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ns	ns
sec-Butylbenzene	2.8J	3.0J	<0.60	<2.2	<2.2	<0.60	<2.2	<0.60	<2.2	<0.60	<2.2	<2.2	<2.2	<2.2	<2.2	<2.2	ns	ns
Ethylbenzene	69.7	33.1	<050	<0.50	<0.50	<050	<0.50	<050	<0.50	<050	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	700	140
Isopropylbenzene	10.9	10.3	<0.34	<0.14	<0.14	<0.34	<0.14	<0.34	<0.14	<0.34	<0.14	<0.14	<0.14	<0.14	<0.14	<0.14	ns	ns
Methyl-tert-butyl ether	<0.49	<0.17	0.87J	1.3	1.4	<0.49	<0.17	0.83J	0.43J	<0.49	<0.17	0.27J	1.5	<0.17	<0.17	<0.17	60	12
p-Isopropyltoluene	2.0	<0.50	0.41J	<0.50	<0.50	<0.40	<0.50	<0.40	<0.50	<0.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ns	ns
Naphthalene	**12.6**	6.4	0.070J	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	100	10
n-Propylbenzene	35.9	16.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	ns	ns
Toluene	3.7	3.2	<0.44	<0.50	<0.50	<0.44	<0.50	<0.44	<0.50	<0.44	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	800	160
Trimethylbenzene (Total)	**131.3**	18	<0.47	<0.50	<0.50	<0.47	<0.50	<0.47	<0.50	<0.47	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	480	96
Xylene (total)	42.5	11.3	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	2,000	400
1,1-Dichloroethane	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	<0.24	850	85
cis-1,2-Dichloroethene	<0.42	<0.26	<0.42	<0.26	<0.26	0.52J	<0.26	<0.42	<0.26	<0.42	<0.26	<0.26	<0.26	<0.26	<0.26	<0.26	70	7
Vinyl Chloride	<0.18	<0.18	<0.18	<0.18	<0.18	**0.53J**	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	<0.18	0.2	0.02
Polycyclic Aromatic Hydrocarbons	**Analytical Result (µg/L)**																	
1-Methylnaphthalene	1.8	0.40	0.048J	0.0067J	<0.0029	0.0071J	<0.0054	0.037J	0.022J	0.020J	<0.0053	<0.054	0.077	0.10	<0.0030	0.18	ns	ns
2-Methylnaphthalene	2.6	0.26	0.015J	0.0071J	<0.0026	0.011J	<0.0064	0.037J	0.027J	0.030J	<0.0063	<0.064	0.066	0.097J	<0.0026	0.17	ns	ns
Acenaphthene	<0.080	<0.028	0.63	<0.0056	0.0076J	0.013J	<0.0057	0.0097J	<0.0055	0.025J	0.061	<0.057	0.028J	0.20	<0.0048	0.23	ns	ns
Acenaphthylene	<0.072	<0.026	<0.0085	<0.0050	<0.0047	0.013J	<0.0051	0.012J	<0.0049	<0.0037	<0.0050	<0.051	0.0052J	0.048J	<0.0048	0.056J	ns	ns
Anthracene	<0.10	<0.029	<0.012	0.015J	<0.0038	0.014J	<0.0058	0.020J	0.022J	0.0082J	0.0092J	<0.058	0.0072J	0.14	<0.0039	0.14	3,000	600
Benzo(a)anthracene	<0.098	<0.027	<0.012	0.022J	<0.0049	0.025J	<0.0054	0.019J	<0.0052	<0.0050	<0.0053	<0.054	<0.0054	0.19	<0.0049	0.20	ns	ns
Benzo(a)pyrene	<0.10	<0.020	<0.012	**0.037J**	**0.026J**	**0.025J**	0.0086J	**0.023J**	<0.0038	<0.0052	<0.0039	<0.040	<0.0040	**0.16**	<0.0042	**0.21**	0.2	0.02
Benzo(b)fluoranthene	<0.14	<0.034	<0.016	**0.076**	**0.18**	**0.026J**	0.016J	**0.022J**	<0.0065	<0.0071	<0.0067	<0.068	<0.0068	**0.17**	<0.0051	**0.18**	0.2	0.02
Benzo(g,h,i)perylene	<0.17	<0.067	<0.020	0.032J	0.11	0.017J	<0.013	0.023J	<0.013	<0.0085	<0.013	<0.13	<0.013	0.077J	<0.0034	0.090J	ns	ns
Benzo(k)fluoranthene	<0.21	<0.024	<0.025	0.064	0.13	0.023J	0.014JJ	0.011J	<0.0046	<0.011	0.0047J	<0.048	<0.0048	0.17	<0.0054	0.19	ns	ns
Chrysene	<0.13	<0.043	<0.015	**0.085**	**0.21**	**0.039J**	0.010J	**0.027J**	<0.0083	0.0072J	0.0087J	<0.086	<0.0086	**0.26**	0.0075J	**0.26**	0.2	0.02
Dibenzo(a,h)anthracene	<0.11	<0.074	<0.013	<0.014	0.0077J	<0.0064	<0.015	0.0073J	<0.014	<0.0058	<0.014	<0.15	<0.015	<0.029	<0.0053	0.046J	ns	ns
Fluoranthene	<0.11	<0.019	<0.013	0.24	0.44	0.099	0.012J	0.05	0.0090J	0.023J	0.050	<0.019	0.0077J	0.58	0.011J	0.62	400	80
Fluorene	<0.080	<0.029	0.019	<0.0057	0.0042J	0.020J	<0.0058	0.018J	0.0096J	0.012J	0.016J	<0.058	0.017J	0.16	<0.0039	0.17	400	80
Indeno(1,2,3-cd)pyrene	<0.12	<0.068	,0.014	0.029J	0.056	0.013	<0.014	0.014J	<0.013	<0.0061	<0.013	<0.14	<0.014	0.068J	<0.0034	0.081J	ns	ns
Naphthalene	6.0	6.4	0.070J	0.010J	0.0056J	0.027J	<0.010	0.029J	<0.010	0.024J	<0.010	<0.10	0.070	0.22	0.0045J	0.31	100	10
Phenanthrene	<0.080	<0.026	0.017J	0.099	0.15	0.095	0.012J	0.061	0.024J	0.024J	0.015J	<0.052	0.034J	0.71	<0.0074	0.73	ns	ns
Pyrene	<0.11	<0.021	<0.013	0.16	0.28	0.091	0.011J	0.081	0.020J	0.022J	0.044J	<0.042	0.0060J	0.46	0.0099J	0.48	250	50

BOLD	Exceeds NR 140 Wisconsin Administrative Code Ground Water Enforcement Standard (ES)
BOLD	Exceeds NR 140 Wisconsin Administrative Code Ground Water Preventive Action Limit (PAL)
ns	No NR 140 Wisconsin Administrative Code Ground Water Enforcement Standard (ES) established
---	Not Analyzed
ug/L	Concentration reported as micrograms per liter, equivalent to parts per billion (ppb).
	Table includes summary of VOC analysis, see lab data sheets for complete list of analytes.
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit. MDL - Adjusted Method Detection Limit.
	Detection Limit.

Table 5 Summary of Soil Vapor (Methane) Monitoring Results[1,2]

Vapor Probe Location	WVP-1	WVP-2	WVP-4	WVP-5	WVP-6		WVP-7		Methane Explosive Limits	
Sample Date	7/15/14	7/15/14	7/15/14	7/15/14	7/15/14	5/19/15	7/15/14	5/19/15		
Vapor Probe Depth (feet bgs)	1	1	1	3	3	3	3	3	LEL (% by Volume)	UEL (% by Volume)
Methane (% CH_4 by Vol.)	0	0	0	0	4.8	**12.4**	**5.2**	Sat	5	15
Methane (% LEL)	0	0	0	0	96	248	104	Sat		
Oxygen (% O_2 by Vol.)	19.2	20.8	20.8	18.6	16.2	5.5	0.3	Sat		
Carbon Dioxide (% CO_2 by vol.)	2.1	0	0.1	2.3	0.4	4.8	12.9	Sat		

Vapor Probe Location	WVP-8		WVP-9		WVP-10		WVP-11	WVP-12	WVP-13	Methane Explosive Limits	
Sample Date	7/15/14	5/19/15	7/15/14	5/19/15	7/15/14	5/19/15	5/19/15	5/19/15	5/19/15		
Vapor Probe Depth (feet bgs)	3	3	3	3	3	3	2.5	2.5	2.5	LEL (% by Volume)	UEL (% by Volume)
Methane (% CH_4 by Vol.)	**15.3**	Sat	0.4	0.8	2.5	Sat	0.0	0.0	0.1	5	15
Methane (% LEL)	306	Sat	8	16	50	Sat	0.0	0.0	2		
Oxygen (% O_2 by Vol.)	0	Sat	0	0.3	0.3	Sat	20.3	9.5	18.7		
Carbon Dioxide (% CO_2 by vol.)	5.5	Sat	7	6.7	5.6	Sat	0.3	6.0	1.3		

Notes:
[1]WVP-3 not installed
[2]Vapor probes WVP-1 thru WVP-4 installed beneath concrete floors in buildings
Bold Exceeds Lower Explosive Limit (LEL) of 5% for methane
Sat Water in vapor probe, could not measure

Appendix A

Geologic Logs & Monitoring Well Construction / Well Development Forms

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WGP-13**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Dusty** Last Name:			
Firm: **On_Site Environmental Drilling Inc.**	**5/19/2015** M/D/Y	**5/19/2015** M/D/Y	**Geoprobe**

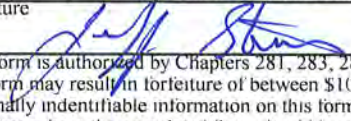
WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
					2-inch

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat. ___ ___ ___ "	Local Grid Location (If applicable)
State Plane _____ N, _____ E		☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long ___ ___ ___ "	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Gravel Lot (4")										
			-1	FILL, SAND, some gravel, silty, dry, no odor, lt gray/white	FILL			0.2		M				
			-2											
			-3	wet at 3 feet										
			-4					0.2		W				
			-5	3-inch wood layer at approximately 4 feet bgs										
			-6											
			-7					0.3		W				
			-8	Sand, silty, trace clay, some shells, wet, medium grained, no odor, gray										
			-9					0.6		W				
			-10											
			-11	EOB @ 10 feet bgs										
			-11	Abandoned with bentonite chips										
			-12											
			-13											
			-14											
			-15											
			-16											
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature  Firm AYRES ASSOCIATES

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe		Boring Number
West Waterfront Redevelopment Project			**WGP-14**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Dusty** Last Name: Firm: **On_Site Environmental Drilling Inc.**	Date Drilling Started **5/19/2015** M/D/Y	Date Drilling Completed **5/19/2015** M/D/Y	Drilling Method **Geoprobe**
WI Unique Well No. / DNR Well Id No. / Well Name	Final Static Water Level	Surface Elevation	Borehole Dia. **2-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat. ___ ___ ___ Long ___ ___ ___	Local Grid Location (If applicable) ☐ N ☐ E ____ Feet ☐ S ____ Feet ☐ W	
Facility Id. / County **Door**	County Code **15**	Civil Town/City/or Village **City of Sturgeon Bay**	

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	SOIL PROPERTIES PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Gravel Lot (4") FILL, SAND, some gravel, silty, dry, no odor, light brown	FILL			0.2		M				
			-3	wet at 3 feet										
			-4	SAND, clayey, some silt, trace gravel, trace wood, wet, dark brown, no odor	SC			0.3		W				
			-7					--		W				
			-8	SAND, silty, wet, moderate hydrocarbon odo slight sheen, black	SM									
			-9					0.2		W				
			-11	EOB @ 10 feet bgs Abandoned with bentonite chips										

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

Signature _____ Firm AYRES ASSOCIATES

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State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WGP-15**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Dusty** Last Name:			
Firm: **On_Site Environmental Drilling Inc.**	**5/19/2015** M/D/Y	**5/19/2015** M/D/Y	**Geoprobe**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
					2-inch

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat. ° ' "	Local Grid Location (If applicable)
State Plane _____ N, _____ E		☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long ° ' "	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Gravel Lot (4") FILL, SAND, some gravel, silty, dry, no odor, light brown	FILL			0.5		M				
			-2											
			-3	wet at 3 feet										
			-4	SAND, poorly graded, wet, fine to medium grained, wet, no odor, brown	SP			0.6		W				
			-5											
			-6											
			-7					0.7		W				
			-8											
			-9	SILT, few shells, wet, green	Mf.			0.4		W				
			-10	SAND, silty, trace clay, trace rgavel, wet, no odor, brown	SM									
			-11	EOB @ 10 feet bgs Abandoned with bentonite chips										
			-12											
			-13											
			-14											
			-15											
			-16											
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature

Firm AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WMW-12**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Dusty** Last Name:			
Firm: **On_Site Environmental Drilling Inc.**	**5/15/2015** M/D/Y	**5/15/2015** M/D/Y	**4.25" ID Hollow Stem Auger**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
_ _ _ _ _ _ _ _		**WMW-12**	**3.21**	**583**	**8-inch**

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat. ___ ° ___ ' ___ "	Local Grid Location (If applicable)
State Plane _____ N, _____ E	----------	☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long ___ ° ___ ' ___ "	_____ Feet ☐ S _____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Paved Lot FILL, brick, gravel	FILL			0		M				
			-4	FILL, SAND, silty, trace clay, wet, medium gr no odor, dark brown	SM			1.2		W				
			-6	FILL, SILT, trace wood, some organics, wet, course grained, no odor, black	ML			1.4		W				
			-9	SAND, silty, wet, med-course grained, wet, no odor, black	SM			1.5		W				
			-12	SILT, clayey, trace organics (peat), wet, slight plasticity, no odor, black	ML			1.2		W				
			-14	GRAVEL and sand, silty, wet, med - v. course grained, no odor, brown	GM			1.1		W				
			-16	EOB @ 15 feet bgs Well set @ 13 feet										

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

Signature Evan Gross Firm AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WMW-13**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Dusty** Last Name:			
Firm: **On_Site Environmental Drilling Inc.**	**5/15/2015** M/D/Y	**5/15/2015** M/D/Y	**4.25" ID Hollow Stem Auger**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
		WMW-13	**2.98**	**583**	**8-inch**

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat. ___ ___ ___ "	Local Grid Location (If applicable)
State Plane _____N, _____E	----------	☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long ___ ___ ___ "	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			- -1 - -2 - -3 -	Paved Lot FILL, gravel, silty clay, some sand, moist, no odor, dk brown Wet at 3 feet	FILL			3.5		M				
			-4 -					2.6		W				
			-5 -	SILT, trace clay, some fibrous organics, wet, plastic, black	ML									
			-6 -	NO RECOVERY	No Recovery					W				
			-7 - -8 -	SAND, silty, some gravel, wet, coarse gravel, no odor, black	SM									
			-9 - -10 - -11 -					3.1		W				
			-12 -					2.7		W				
			-13 - -14 - -15 -	SAND, some coarse gravel, trace silt, wet, med-course grained sand, somewhat well graded, no odor, brown	SP			1.7		W				
			-16 - -17 - -18 - -19 - -20 - -21 - -22 - -23 - -24 - -25 -	EOB @ 13.7 feet bgs Well set @ 11.7 feet										

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

Signature Erin Gross Firm AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WMW-14**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Dusty** Last Name:			
Firm: **On_Site Environmental Drilling Inc.**	**5/15/2015** M/D/Y	**5/15/2015** M/D/Y	**4.25" ID Hollow Stem Auger**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
		WMW-14	**3.65**	**583.5**	**8-inch**

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat.___ ___ ___	Local Grid Location (If applicable)
State Plane _____N, _____E	----------	☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long___ ___ ___	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Paved Lot FILL, silty sand, some gravel, dry, hydrocarbon odor, brown	FILL			8.7		D				
			-4					2.2		D				
			-5	SAND, silty, some gravel, wet, slight hydrocarbon odor, brown	SM									
			-7					3.5		W				
			-8	SILT, trace clay, wet, non- plastic, no odor, black	ML									
			-9					3.0		W				
			-10	SAND, silty, wet, fine-med grained, slight hydrocarbon odor, dk brown	SM									
			-12					1.6		W				
			-13	Gravel, some sand, trace-some silt, wet, med-course grained sand, fine-med gravel, somewhat well graded, no odor, brown	GM									
			-14					1.8		W				
			-15											
			-16	EOB @ 15 feet bgs Well set @ 11.7 feet										
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature	Firm
Evan Gross	AYRES ASSOCIATES

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WMW-15**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Dusty** Last Name:			
Firm: **On_Site Environmental Drilling Inc.**	**5/15/2015** M/D/Y	**5/15/2015** M/D/Y	**4.25" ID Hollow Stem Auger**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
		WMW-15	**3.45**	**583.5**	**8-inch**

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat. ° ' "	Local Grid Location (If applicable)
State Plane _____N, _____E		☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long ° ' "	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Paved Lot FILL, silty sand, some gravel, moist, no odor, brown	FILL			2.6		M				
			-4	SILT, trace gravel, trace clay, moist, slight plasticity, no odor, black	ML			1.9		M				
			-6	SAND, silty, trace gravel, wet, med-course grained, oily appearance, moderate hydrocarbon odor, black	SM			17.5		W				
			-9					43		W				
			-10	Finer grained with depth										
			-12					6.4		W				
			-14	SILT, trace clay and sand, wet, slight plasticity, no odor, black	ML			2.1		W				
			-16	EOB @ 14.7 feet bgs Well set @ 12.7 feet										

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

Signature: Evan Gross Firm: AYRES ASSOCIATES

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis.Stats. Completion of this report is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conductu involved. Personally indentifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe	Boring Number
West Waterfront Redevelopment Project		**WMW-16**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Dusty** Last Name:			
Firm: **On_Site Environmental Drilling Inc.**	**5/15/2015** M/D/Y	**5/15/2015** M/D/Y	**4.25" ID Hollow Stem Auger**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
_ _ _ _ _ _		**WMW-16**	**4.24**	**584**	**8-inch**

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat. ___ ___ ___ "	Local Grid Location (If applicable)
State Plane _____ N, _____ E	----------	☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long ___ ___ ___ "	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	SOIL PROPERTIES PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Paved Lot FILL, silty sand, some gravel, moist, no odor, light brown	FILL			0.9		M				
			-4					1.6		M				
			-5	SILT, trace gravel, trace clay, moist, very small gravel, slight plasticity, no odor, black	ML									
			-7	SAND, silty, trace gravel, wet, med-course grained, no odor, dk brown	SM			2.0		W				
			-8	PEAT, wood, moist, no odor, lt brown	PT									
			-9	GRAVEL, some sand, silty, wet, med-lg grave	GM			9.8		W				
			-10	med-course sand, no odor, gray 10-12.5', gray-brown										
			-12					1.6		W				
			-14	SAND, silty, wet, fine grained, no odor, dk brown	SM			2.0		W				
			-16	EOB @ 14.6 feet bgs Well set @ 12.6 feet										
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature	Firm
Sam Gross	AYRES ASSOCIATES

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: WMW-12
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 05/18/2015 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: NE 1/4 of NE 1/4 of Sec. 07, T. 27 N, R. 26 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Dusty / On-Site Environmental
Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation 582.67 ft. MSL

C. Land surface elevation ____ ft. MSL

D. Surface seal, bottom ____ ft. MSL or ____ 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 2 ft.

G. Filter pack, top ____ ft. MSL or 2 ft.

H. Screen joint, top ____ ft. MSL or 3 ft.

I. Well bottom ____ ft. MSL or 13 ft.

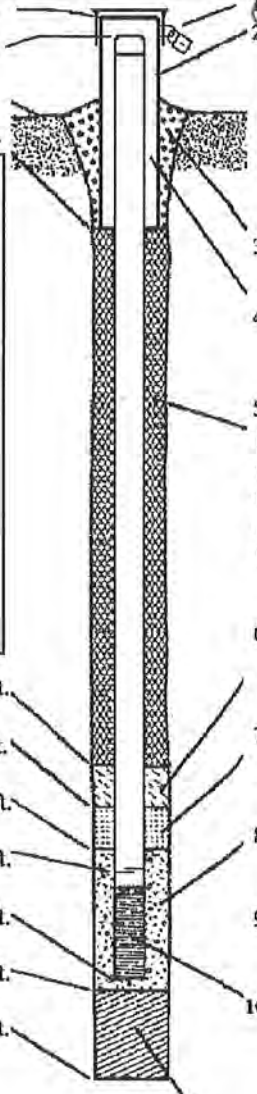
J. Filter pack, bottom ____ ft. MSL or 15 ft.

K. Borehole, bottom ____ ft. MSL or 15 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.40 in.

N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: ____

3. Surface seal: Bentonite ☒ 30 / Concrete ☒ 01 / Other ☐

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

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

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

7. Fine sand material: Manufacturer, product name & mesh size
a. #15 Flint
b. Volume added ____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added ____ ft^3

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

10. Screen material: PVC
a. Screen type: Factory cut ☐ 11 / Continuous slot ☐ 01 / Other ☐
b. Manufacturer Johnson
c. Slot size: 0.006 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	Firm
Erin Gom	Ayres Associates 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.

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: WMW-13
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 05/18/2015 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: NE 1/4 of NE 1/4 of Sec. 07, T. 27 N, R. 26 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Dusty — On-Site Environmental
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known / Gov. Lot Number	

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation 582.57 ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or _____ 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 0.7 ft.

G. Filter pack, top _____ ft. MSL or 0.7 ft.

H. Screen joint, top _____ ft. MSL or 1.7 ft.

I. Well bottom _____ ft. MSL or 11.7 ft.

J. Filter pack, bottom _____ ft. MSL or 13.7 ft.

K. Borehole, bottom _____ ft. MSL or 13.7 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.40 in.

N. I.D. well casing 2.06 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 4 ft.
c. Material: _____ Steel ☒ 04 / Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

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

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

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

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

7. Fine sand material: Manufacturer, product name & mesh size
a. #15 Flint
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added _____ ft^3

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

10. Screen material: PVC
a. Screen type: Factory cut ☐ 11 / Continuous slot ☐ 01 / Other ☐ _____
b. Manufacturer Johnson
c. Slot size: 0.006 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	Firm
Erin Gesn	Ayres Associates 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.

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well ☐ N. ☐ S. _____ ft. ☐ E. ☐ W. _____ ft.	Well Name: WMW-14
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 05/18/2015 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: NE 1/4 of NE 1/4 of Sec. 07 T. 27 N, R. 26 ☒ E ☐ W	Well Installed By: Name (first, last) and Firm: Dusty — On-Site Environmental
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation 583.21 ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or _____ 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 1.2 ft.

G. Filter pack, top _____ ft. MSL or 1.2 ft.

H. Screen joint, top _____ ft. MSL or 2.2 ft.

I. Well bottom _____ ft. MSL or 12.2 ft.

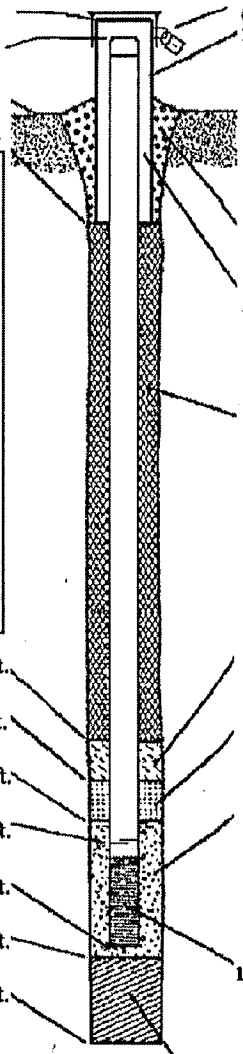
J. Filter pack, bottom _____ ft. MSL or 14.2 ft.

K. Borehole, bottom _____ ft. MSL or 14.2 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.40 in.

N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☒ 30 / Concrete ☒ 01 / Other ☐ _____
4. Material between well casing and protective pipe: Bentonite ☒ 30 / Other ☐ _____
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ _____
7. Fine sand material: Manufacturer, product name & mesh size
a. #15 Flint
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ _____
10. Screen material: PVC
a. Screen type: Factory cut ☐ 11 / Continuous slot ☐ 01 / Other ☐ _____
b. Manufacturer Johnson
c. Slot size: 0.006 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	Firm
Erin Dean	Ayres Associates 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.

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well ☐ N. ☐ S. _____ ft. ☐ E. ☐ W. _____ ft.	Well Name: WMW-15
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E, S/C/N	Date Well Installed: 05/18/2015 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: NE 1/4 of NE 1/4 of Sec. 07, T. 27 N, R. 26 ☒ E ☐ W	Well Installed By: Name (first, last) and Firm: Dusty, On-Site Environmental
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation 583.04 ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or _____ 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

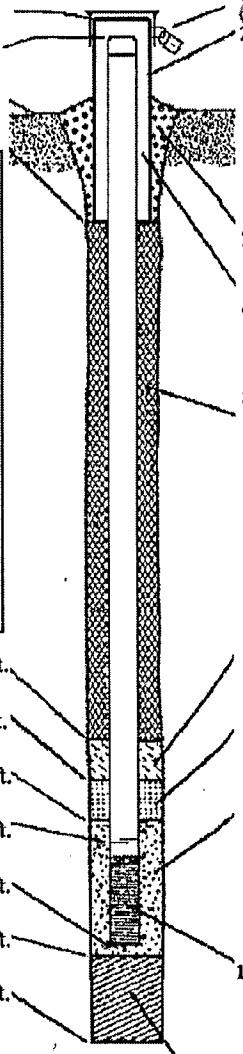
14. Drilling method used: Rotary ☐ 50 / Hollow Stem Auger ☒ 41 / Other ☐ _____

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 1.7 ft.
G. Filter pack, top _____ ft. MSL or 1.7 ft.
H. Screen joint, top _____ ft. MSL or 2.7 ft.
I. Well bottom _____ ft. MSL or 12.7 ft.
J. Filter pack, bottom _____ ft. MSL or 14.7 ft.
K. Borehole, bottom _____ ft. MSL or 14.7 ft.
L. Borehole, diameter 8.25 in.
M. O.D. well casing 2.40 in.
N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 3 ft.
c. Material: Steel ☒ 04 / Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☒ 30 / Concrete ☒ 01 / Other ☐ _____
4. Material between well casing and protective pipe: Bentonite ☒ 30 / Other ☐ _____
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ _____
7. Fine sand material: Manufacturer, product name & mesh size
a. #15 Flint
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ _____
10. Screen material: PVC
a. Screen type: Factory cut ☐ 11 / Continuous slot ☐ 01 / Other ☐ _____
b. Manufacturer Johnson
c. Slot size: 0.006 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	Firm
Erin Gross	Ayres Associates 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.

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION

Form 4400-113A Rev. 7-98

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: WMW-16
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ____ ° ____ ' ____ " Long. ____ ° ____ ' ____ " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 05/18/2015 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: NE 1/4 of NE 1/4 of Sec. 07, T. 27 N, R. 26 ☒E ☐W	Well Installed By: Name (first, last) and Firm: Dusty On-Site Environmental
Distance from Waste/Source ____ ft.	Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known
		Gov. Lot Number

A. Protective pipe, top elevation ____ ft. MSL

B. Well casing, top elevation 583.78 ft. MSL

C. Land surface elevation ____ ft. MSL

D. Surface seal, bottom ____ ft. MSL or ____ 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 1.6 ft.

G. Filter pack, top ____ ft. MSL or 1.6 ft.

H. Screen joint, top ____ ft. MSL or 2.6 ft.

I. Well bottom ____ ft. MSL or 12.6 ft.

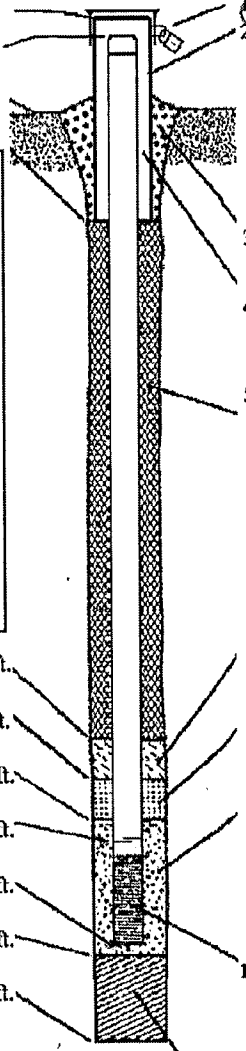
J. Filter pack, bottom ____ ft. MSL or 14.6 ft.

K. Borehole, bottom ____ ft. MSL or 14.6 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.40 in.

N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 3 ft.
c. Material: Steel ☒ 04
Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: ____
3. Surface seal: Bentonite ☒ 30
Concrete ☒ 01
Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30
Other ☐
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. ____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. ____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. ____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. ____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. ____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. #15 Flint
b. Volume added ____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added ____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
Other ☐
10. Screen material: PVC
a. Screen type: Factory cut ☐ 11
Continuous slot ☐ 01
Other ☐
b. Manufacturer Johnson
c. Slot size: 0.006 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	Firm
Erin Gross	Ayres Associates 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.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront	Door	WMW-12

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	15	_____	___

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 peristaltic	☐

3. Time spent developing well 65 min.

4. Depth of well (from top of well casisng) 13.0 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 30.0 gal.

8. Volume of water added (if any) 0.__ gal.

9. Source of water added N/A

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. 3.30 ft.	____.__ ft.
Date	b. 05/18/2015 (m m d d y y y y)	05/18/2015 (m m d d y y y y)
Time	c. 02:15 ☐ a.m. ☒ p.m.	03:20 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	0.__ inches	0.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) dk brown, v. turbid	Clear ☒ 20 Turbid ☐ 25 (Describe) slight brown

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: Erin Last Name: Gross
Firm: Ayres Associates

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Marty Last Name: Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St
City/State/Zip: Sturgeon Bay, WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Erin Gross
Print Name: Erin Gross
Firm: Ayres Associates

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront	Door	WMW-13

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	15	_____	___

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 peristaltic	☐ ___

3. Time spent developing well 75 min.

4. Depth of well (from top of well casisng) 11.7 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 40.0 gal.

8. Volume of water added (if any) 0.__ gal.

9. Source of water added N/A

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. 2.98 ft.	____.__ ft.
Date	b. 05/18/2015 (m m d d y y y y)	05/18/2015 (m m d d y y y y)
Time	c. 02:30 ☐ a.m. ☒ p.m.	03:45 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	__.__ inches	__.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 20 Turbid ☐ 25
(Describe)	brown	lt brown; mod. turb.

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: Erin Last Name: Gross
Firm: Ayres Associates

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Marty Last Name: Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St
City/State/Zip: Sturgeon Bay, WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Erin Gross
Print Name: Erin Gross
Firm: Ayres Associates

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront	Door	WMW-14

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	15	_____	___

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 peristaltic	☐ __

3. Time spent developing well 140 min.

4. Depth of well (from top of casisng) 12.2 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 65.0 gal.

8. Volume of water added (if any) 0.__ gal.

9. Source of water added N/A

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. 3.65 ft.	____.__ ft.
Date	b. 05/18/2015 (m m d d y y y y)	05/18/2015 (m m d d y y y y)
Time	c. 03:25 ☐ a.m. ☒ p.m.	05:05 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	__.__ inches	__.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 20 Turbid ☐ 25
(Describe)	dk brown	H2S odor

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: Erin Last Name: Gross
Firm: Ayres Associates

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Marty Last Name: Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St
City/State/Zip: Sturgeon Bay, WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Erin Gross
Print Name: Erin Gross
Firm: Ayres Associates

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront	Door	WMW-MW 15

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	15	_ _ _ _ _ _	_ _ _

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 peristaltic	☐ ___

3. Time spent developing well 60 min.

4. Depth of well (from top of well casisng) 12.7 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing _ _ _ . _ gal.

7. Volume of water removed from well 400.0 gal.

8. Volume of water added (if any) _ _ 0 . _ gal.

9. Source of water added N/A

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. 3.45 ft.	_ _ _ . _ _ ft.
Date	b. 05/19/2015 (m m d d y y y y)	05/18/2015 (m m d d y y y y)
Time	c. 05:10 ☐ a.m. ☒ p.m.	06:10 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	_ _ . _ inches	_ _ . _ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 20 Turbid ☐ 25
(Describe)	lt brown	yellow, slight h. odor, low turb.
14. Total suspended solids	_ _ _ _ . _ mg/l	_ _ _ _ . _ mg/l
15. COD	_ _ _ _ . _ mg/l	_ _ _ _ . _ mg/l

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

16. Well developed by: Name (first, last) and Firm
First Name: Erin Last Name: Gross
Firm: Ayres Associates

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Marty Last Name: Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St
City/State/Zip: Sturgeon Bay, WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Erin Gross
Print Name: Erin Gross
Firm: Ayres Associates

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

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront	Door	WMW-16

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	15	_____	___

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 peristaltic	☐	

3. Time spent developing well 110 min.

4. Depth of well (from top of well casisng) 126 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 75.0 gal.

8. Volume of water added (if any) 0 gal.

9. Source of water added N/A

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. 4.24 ft.	____.__ ft.
Date	b. 05/19/2015	05/19/2015
Time	c. 07:30 ☒ a.m. ☐ p.m.	09:20 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	___.__ inches	___.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15	Clear ☒ 20 Turbid ☐ 25
(Describe)	lt brown	H_2S odor

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: Erin Last Name: Gross
Firm: Ayres Associates

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Marty Last Name: Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St
City/State/Zip: Sturgeon Bay WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Erin Gross
Print Name: Erin Gross
Firm: Ayres Associates

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

State of Wisconsin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WGP-6**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	**7/15/2014** M/D/Y	**7/15/2014** M/D/Y	**Geoprobe**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
		WGP-6			**2-inch**

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐		Local Grid Location (If applicable)
State Plane _____ N, _____ E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat. ° ' " Long ° ' "	☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Concrete (4") FILL, SAND, some silt, some gravel, moist no odor, lt brown	FILL/ SM			1		M				
			-2											
			-3	**change in color to lt gray @ 2.5 ft										
			-4					0						
			-5	Fill, some woodchips, some gravel, moist, no odor, lt brown	Fill/ Wood					M				
			-6											
			-7					1						
			-8											
			-9					0						
			-10	SAND, some silt, moist, no odor, gray	SM					M				
			-11	EOB @ 10 feet bgs Abandoned with bentonite chips										
			-12											
			-13											
			-14											
			-15											
			-16											
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature	Firm
	AYRES ASSOCIATES

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis.Stats. Completion of this report is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conductu involved. Personally indentifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WGP-7**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	**7/15/2014** M/D/Y	**7/15/2014** M/D/Y	**Geoprobe**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
		WGP-7			**2-inch**

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat. ___ ° ___ ' ___ "	Local Grid Location (If applicable)
State Plane _____ N, _____ E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Long ___ ° ___ ' ___ "	☐ N ☐ E ____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Concrete (4") FILL, SAND, some silt, some gravel, moist no odor, lt brown	FILL/ SM			0		M				
			-2	FILL, woodchips, moist, no odor, black	Fill/ Wood					M				
			-3											
			-4	FILL, SAND, some silt, some gravel, moist, n dk brown/black	SM			0		M				
			-5	FILL, Wood, some gravel, moist, no odor lt brown - dk brown	FILL/ Wood					M				
			-6											
			-7	SAND, some silt, wet, no odor, dk gray	SM			0		W				
			-8											
			-9					0						
			-10											
			-11	EOB @ 10 feet bgs Abandoned with bentonite chips										
			-12											
			-13											
			-14											
			-15											
			-16											
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature	Firm
	AYRES ASSOCIATES

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis.Stats. Completion of this report is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conductu involved. Personally indentifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe		Boring Number
West Waterfront Redevelopment Project			**WGP-8**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	Date Drilling Started **7/15/2014** M/D/Y	Date Drilling Completed **7/15/2014** M/D/Y	Drilling Method **Geoprobe**
WI Unique Well No. / DNR Well Id No. / Well Name **WGP-8**	Final Static Water Level	Surface Elevation	Borehole Dia. **2-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat. ___ ° ___ ' ___ " Long ___ ° ___ ' ___ "	Local Grid Location (If applicable) ___ Feet ☐ N ☐ S ___ Feet ☐ E ☐ W	
Facility Id.	County **Door**	County Code **15**	Civil Town/City/or Village **City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	% 200	RQD/Comments
			-1	Concrete (4") FILL, SAND, some silt, some gravel, moist no odor, lt brown/gray	FILL/ SM			1		M				
			-2											
			-3											
			-4					0						
			-5	GRAVEL, some sand, moist, well graded, no odor black and lt brown	GW					M				
			-6											
			-7	SAND, some silt, some gravel, moist, no odor, dk brown - lt gray	SM			2		M				
			-8											
			-9	**indistinct odor @ 9ft				0						
			-10											
			-11	EOB @ 10 feet bgs Abandoned with bentonite chips										
			-12											
			-13											
			-14											
			-15											
			-16											
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature: Jeff Stern Firm: AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe:		Boring Number
West Waterfront Redevelopment Project			**WGP-9**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	Date Drilling Started **7/15/2014** M/D/Y	Date Drilling Completed **7/15/2014** M/D/Y	Drilling Method **Geoprobe**
WI Unique Well No. / DNR Well Id No. / Well Name **WGP-9**	Final Static Water Level	Surface Elevation	Borehole Dia. **2-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____N, _____E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat.___ ° ___ ' ___ " Long___ ° ___ ' ___ "	Local Grid Location (If applicable) ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W	
Facility Id.	County **Door**	County Code **15**	Civil Town/City/or Village **City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Concrete (4") FILL, SAND, some silt, some gravel, moist no odor, lt gray - lt brown	FILL/ SM			0		M				
			-4					0						
			-5	FILL, Wood, some plastic, moist, no odor dk brown	Wood					M				
			-6	FILL, SAND, some silt, some gravel, moist, no odor, gray	SM					M				
			-7					0						
			-9					0						
			-11	EOB @ 10 feet bgs Abandoned with bentonite chips										

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

Signature: Jeff Stems Firm: AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe		Boring Number
West Waterfront Redevelopment Project			**WGP-10**
Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Tony** Last Name: **Kapugi**			
Firm: **On_Site Environmental Drilling Inc.**	**7/15/2014** M/D/Y	**7/15/2014** M/D/Y	**Geoprobe**
WI Unique Well No. / DNR Well Id No. / Well Name **WGP-10**	Final Static Water Level	Surface Elevation	Borehole Dia. **2-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat. ___° ___' ___"	Local Grid Location (If applicable)	
State Plane _____N, _____E		☐ N ☐ E	
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long ___° ___' ___"	____ Feet ☐ S ____ Feet ☐ W	
Facility Id. / County **Door**	County Code **15**	Civil Town/City/or Village **City of Sturgeon Bay**	

SAMPLE Number and Type	SAMPLE Length Att & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Concrete (4")										
			-1	FILL, SAND, some silt, some gravel, moist no odor, gray/white/tan	FILL/ SM			0		M				
			-2											
			-3											
			-4					0						
			-5											
			-6											
			-7					0						
			-8	FILL, Wood, lenses of clay, moist, no odor dk brown	Wood					M				
			-9					0						
			-10	FILL, SAND, some silt, some wood, moist, no odor, gray	SM					M				
			-11	EOB @ 10 feet bgs										
			-11	Abandoned with bentonite chips										
			-12											
			-13											
			-14											
			-15											
			-16											
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature  Firm AYRES ASSOCIATES

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe		Boring Number
West Waterfront Redevelopment Project			**WGP-11**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	Date Drilling Started **7/15/2014** M/D/Y	Date Drilling Completed **7/15/2014** M/D/Y	Drilling Method **Geoprobe**
WI Unique Well No. / DNR Well Id No. / Well Name **WGP-11**	Final Static Water Level	Surface Elevation	Borehole Dia. **2-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat. __° __ ' __ " Long __° __ ' __ "	Local Grid Location (If applicable) ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W	
Facility Id.	County **Door**	County Code **15**	Civil Town/City/or Village **City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Gravel Lot (4") Fill, SAND, some gravel, moist no odor, lt gray/white	FILL/SP			1		M				
			-4					2						
			-5	GRAVEL, some sand, wet, well graded, no o lt brown	GW					W				
			-6	SAND, some silt, some gravel, wet, some wo no odor, lt brown - black	SM					W				
			-7					0						
			-9					0						
			-11	EOB @ 10 feet bgs Abandoned with bentonite chips										

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

Signature Firm AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe		Boring Number
West Waterfront Redevelopment Project			**WMW-6**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	Date Drilling Started **7/14/2014** M/D/Y	Date Drilling Completed **7/14/2014** M/D/Y	Drilling Method **4.25" ID Hollow Stem Auger**
WI Unique Well No. / DNR Well Id No. / Well Name **WMW-6**	Final Static Water Level **12.3**	Surface Elevation **585**	Borehole Dia. **8-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat. __° __' __" Long __° __' __"	Local Grid Location (If applicable) ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W	
Facility Id. / County **Door**	County Code **15**	Civil Town/City/or Village **City of Sturgeon Bay**	

SAMPLE Number and Type	SAMPLE Length Att & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Concrete (4") FILL, SAND, some gravel, some moisture, no odor, gray-brown	FILL/ SP			0		M				
			-3	PEAT, some moisture, dk brown/black	PT					M				
			-4	SAND, silty, wet, no odor, varying lt and dk gr	SM			0		W				
			-5	CLAY, silty, some gravel, very stiff, wet, high plasticity, no odor, red	CH									
			-7					0						
			-9					0						
			-11					0						
			-13											
			-14					0						
			-15	SAND, silty, f. grained, wet, no odor, brown/g	SM					W				
			-17	EOB @ 16 feet bgs Well set @ 15.7 feet										

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Signature Jeff Stern Firm AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe		Boring Number
West Waterfront Redevelopment Project			**WMW-7**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	Date Drilling Started **7/14/2014** M/D/Y	Date Drilling Completed **7/14/2014** M/D/Y	Drilling Method **4.25" ID Hollow Stem Auger**
WI Unique Well No. / DNR Well Id No. / Well Name: **WMW-7**	Final Static Water Level: **3.14**	Surface Elevation: **584**	Borehole Dia.: **8-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat. ___ ° ___ ' ___ " Long ___ ° ___ ' ___ "	Local Grid Location (If applicable) ___ Feet ☐ N ☐ S ___ Feet ☐ E ☐ W	
Facility Id.	County: **Door**	County Code: **15**	Civil Town/City/or Village: **City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Concrete (4") FILL, SAND, silty, some gravel, low moisture, no odor, brown with some gray	FILL/ SM			1		M				
			-2											
			-3	NO RECOVERY, 2.5 - 5.0 ft										
			-4					0		W				
			-5											
			-6	FILL, SAND, silty, wood, wet, no odor, brown NO RECOVERY, 5.5 - 11.0 ft	SM			0		W				
			-7											
			-8											
			-9					0		W				
			-10											
			-11	FILL, SAND, silty, gravel, wet, no odor, dk gra	SM/GM			0		W				
			-12	CLAY, silty, some gravel, very stiff, wet, high plasticity, no odor, red	CH									
			-13											
			-14					0		W				
			-15											
			-16	EOB @ 15 feet bgs Well set @ 12.9 feet										
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature: Jeff Stern Firm: AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe		Boring Number
West Waterfront Redevelopment Project			**WMW-8**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	Date Drilling Started **7/15/2014** M/D/Y	Date Drilling Completed **7/15/2014** M/D/Y	Drilling Method **4.25" ID Hollow Stem Auger**
WI Unique Well No. / DNR Well Id No. / Well Name **WMW-8**	Final Static Water Level **3.81**	Surface Elevation **583.5**	Borehole Dia. **8-inch**
Local Grid Origin (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat. ___ ___ ___ Long ___ ___ ___	Local Grid Location (If applicable) ___ Feet ☐ N ☐ S ___ Feet ☐ E ☐ W	
Facility Id.	County **Door**	County Code **15**	Civil Town/City/or Village **City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	#200	RQD/Comments
			-1	Concrete (4") FILL, SAND, some gravel, coal ash, low moisture, no odor, grey-white-brown	FILL/ SP			0		M				
			-4					0		W				
			-7					0		W				
			-9	SAND, some silt, white blendable soil-materia wet, no odor, reddish brown	SM			0		W				
			-10	CLAY, silty, some sand, wet, low plasticity, no odor, reddish brown	CL									
			-11	SAND, some silt, some gravel, wet, no odor gray	SM			0		W				
			-14	SAND, some gravel, occ. 1" red clay lenses, wet, no odor, reddish brown	SP			0		W				
			-16	EOB @ 15 feet bgs Well set @ 12.8 feet										

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

Signature _____ Firm AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WMW-9**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Tony** Last Name: **Kapugi**			
Firm: **On_Site Environmental Drilling Inc.**	**7/15/2014** M/D/Y	**7/15/2014** M/D/Y	**4.25" ID Hollow Stem Auger**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
_ _ _ _ _ _ _		**WMW-9**	**4.80**	**584**	**8-inch**

Local Grid Origin (estimated: ☐) or Boring Location ☐	Lat. ___ ___ ___	Local Grid Location (If applicable)
State Plane _____ N, _____ E		☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long ___ ___ ___	___ Feet ☐ S ___ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	SOIL PROPERTIES PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Gravel Lot (4") SAND, some silt, some gravel, moist, no odor, lt brown with some lt gray portions	SM			0		M				
			-4					0		M				
			-5	FILL, SAND, some silt, wet no odor, dk brown/black	FILL/ SM									
			-6					0		W				
			-9					0		W				
			-10	**Encountered some organics (wood) @ 10 ft										
			-12					0		W				
			-14					0		W				
			-15											
			-16	EOB @ 15 feet bgs Well set @ 12.8 feet										
			-25											

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

Signature: Jeff Stein Firm: AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe		Boring Number
West Waterfront Redevelopment Project			**WPZ-10**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	Date Drilling Started **7/14/2014** M/D/Y	Date Drilling Completed **7/14/2014** M/D/Y	Drilling Method **4.25" ID Hollow Stem Auger**
WI Unique Well No. / DNR Well Id No. / Well Name **WPZ-10**	Final Static Water Level **4.88**	Surface Elevation **582**	Borehole Dia. **8-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____ N, _____ E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat. __° __' __" Long __° __' __"	Local Grid Location (If applicable) ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W	
Facility Id.	County **Door**	County Code **15**	Civil Town/City/or Village **City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Concrete (4") FILL, SAND, some silt, some gravel, moist no odor, gray/white	Fill/ SM			0		M				
			-2											
			-3											
			-4					0						
			-5	FILL, woodchips, moist, no odor dk brown	Fill/ Wood					M				
			-6											
			-7					0						
			-8											
			-9	SAND, some silt, wet, no odor, dk brown	SM			0		W				
			-10											
			-11	CLAY, some gravel, wet, low plasticity, no odor, red/brown	CL					W				
			-12					0						
			-13											
			-14	SAND, some silt, some gravel, wet no odor, dk brown	SM			0		W				
			-15											
			-16							W				
			-17											
			-18											
			-19							W				
			-20	CLAY, some gravel, wet, high plasticity no odor, red	CH					W				
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature: Joe Stern Firm: AYRES ASSOCIATES

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SOIL BORING LOG INFORMATION (CONTINUED)
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WPZ-10 cont.

SAMPLE NUMBER	SAMPLE LENGTH RECOV-ERED (IN)	BLOW COUNT	DEPTH IN FEET	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	FIELD OBSERVATIONS USCS	GRAPHIC LOG	WELL DIAGRAM	PID/ FID	SOIL PROPERTIES STANDARD PENETRA-TION	MOISTURE CONTENT	LIQUID LIMIT	PLASTIC LIMIT	P-200	RDQ/ comment
			-26 - -27 - -28 - -29 - -30 - -31 - -32 - -33 - -34	CLAY, some gravel, wet, high plasticity no odor, red	CH					W W W W				
			-35 - -36 - -37 - -38 - -39 - -40 - -41 - -42 - -43 - -44 - -45 - -46 - -47 - -48 - -49 - -50 - -51 - -52 - -53 - -54 - -55 - -56 - -57 - -58 - -59	EOB @ 35 feet bgs Well set @ 34.7 feet										

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

Signature

Firm
AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
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Route to:
Watershed/Wastewater ☐ Waste Management ☐
Remediation/Redevelopment ☐ Other ☐

Facility/Project Name	License/Permit/Monitoring Numbe:		Boring Number
West Waterfront Redevelopment Project			**WMW-11**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	Date Drilling Started **7/15/2014** M/D/Y	Date Drilling Completed **7/15/2014** M/D/Y	Drilling Method **4.25" ID Hollow Stem Auger**
WI Unique Well No. / DNR Well Id No. / Well Name: **WMW-11**	Final Static Water Level: **3.81**	Surface Elevation: **583.5**	Borehole Dia.: **8-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____N, _____E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat. ___ ___ ___ Long ___ ___ ___	Local Grid Location (If applicable) ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W	
Facility Id.	County: **Door**	County Code: **15**	Civil Town/City/or Village: **City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	ROD/Comments
			-1	Gravel Lot (4")										
			-1	FILL, SAND, some silt, some gravel, moist	FILL/ SM									
			-2	no odor, gray/brown/red				0		M				
			-3	NO RECOVERY, 2.5 - 5.0 ft										
			-4					0		W				
			-5	Fill, SAND, some silt, some gravel, wet,										
			-6	no odor, red/brown	SM									
			-7					0		W				
			-8											
			-9					0		W				
			-10	**Some organics and odor @ 9.5 ft										
			-11											
			-12					0		W				
			-13	FILL, some woodchips, moist, no odor dk brown	PT									
			-14	SAND, some silt, some gravel, wet,										
			-14	no odor, gray/brown	SM			0		W				
			-15											
			-16	EOB @ 15 feet bgs										
			-17	Well set @ 12.7 feet										
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature: Firm: AYRES ASSOCIATES

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

MONITORING WELL CONSTRUCTION

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well: ____ ft. ☐ N. ☐ S. ____ ft. ☐ E. ☐ W.	Well Name: WMW - 60
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ____ ° ____ ' ____ " Long. ____ ° ____ ' ____ " or	Unique Well No.	Well ID No.
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 07/14/2014 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: ____ 1/4 of ____ 1/4 of Sec. ____, T. ____ N, R. ____ ☐ E ☐ W	Well Installed By: Name (first, last) and Firm: Tony Kapugi, On-Site Environmental
Distance from Waste/Source ____ ft.	Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation 584.75 ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or _____ 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 2 ft.

G. Filter pack, top _____ ft. MSL or 2 ft.

H. Screen joint, top _____ ft. MSL or 3 ft.

I. Well bottom _____ ft. MSL or 13 ft.

J. Filter pack, bottom _____ ft. MSL or 15 ft.

K. Borehole, bottom _____ ft. MSL or 15 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.40 in.

N. I.D. well casing 2.06 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04
_____ Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☒ 30
Concrete ☒ 01
_____ Other ☐
4. Material between well casing and protective pipe:
Bentonite ☒ 30
_____ Other ☐
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01
Tremie pumped ☐ 02
Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐
7. Fine sand material: Manufacturer, product name & mesh size
a. #20 - #40
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23
Flush threaded PVC schedule 80 ☐ 24
_____ Other ☐
10. Screen material: PVC
a. Screen type: Factory cut ☐ 11
Continuous slot ☐ 01
_____ Other ☐
b. Manufacturer 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: Jeff Stumm | Firm: Ayres Associates Inc.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront Dev.	Door	MW-6

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	15	_____	___

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 ____5____ min.

4. Depth of well (from top of well casisng) __15.7__ ft.

5. Inside diameter of well __2.06__ in.

6. Volume of water in filter pack and well casing ___.___ gal.

7. Volume of water removed from well __0.6__ gal.

8. Volume of water added (if any) __0.__ gal.

9. Source of water added N/A

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. 12.3 ft.	15.7 ft.
Date	b. 07/14/2014 (m m d d y y y y)	07/14/2014 (m m d d y y y y)
Time	c. 7:25 ☒ a.m. ☐ p.m.	7:30 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	0. inches	0. inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Silty, brown	Clear ☐ 20 Turbid ☒ 25 (Describe) Silty, brown

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: Jeff Last Name: Steiner
Firm: Ayres Associates Inc.

17. Additional comments on development:
was not able to develop the well clear because the well was purged dry even with low pump rate

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Marty Last Name: Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St.
City/State/Zip: Sturgeon Bay, WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Jeff Steiner
Print Name: Jeff Steiner
Firm: Ayres Associates 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 ☐

MONITORING WELL CONSTRUCTION

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well: ___ ft. ☐ N. ☐ S. ___ ft. ☐ E. ☐ W.	Well Name: WMW - 7
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ___ ° ___ ' ___ " Long. ___ ° ___ ' ___ " or	Unique Well No. ___ Well ID No. ___
Facility ID	St. Plane ___ ft. N, ___ ft. E. S/C/N	Date Well Installed: 07/14/2014 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: ___ 1/4 of ___ 1/4 of Sec. ___, T. ___ N, R. ___ ☐ E ☐ W	Well Installed By: Name (first, last) and Firm: Tony Kapugi, On-Site Environmental
Distance from Waste/Source ___ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number: ___

A. Protective pipe, top elevation ___ ft. MSL

B. Well casing, top elevation 583.72 ft. MSL

C. Land surface elevation ___ ft. MSL

D. Surface seal, bottom ___ ft. MSL or ___ 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 2 ft.

G. Filter pack, top ___ ft. MSL or 2 ft.

H. Screen joint, top ___ ft. MSL or 3 ft.

I. Well bottom ___ ft. MSL or 13 ft.

J. Filter pack, bottom ___ ft. MSL or 15 ft.

K. Borehole, bottom ___ ft. MSL or 15 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.40 in.

N. I.D. well casing 2.06 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 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 ☐ 30
e. ___ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 Tremie pumped ☐ 02 Gravity ☒ 08

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

7. Fine sand material: Manufacturer, product name & mesh size
a. #20 - #40
b. Volume added ___ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added ___ ft^3

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

10. Screen material: PVC
a. Screen type: Factory cut ☐ 11 Continuous slot ☐ 01 Other ☐ ___
b. Manufacturer Johnson
c. Slot size: 0.020 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: Jeff Stum | Firm: Ayres Associates Inc.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront Dev.	Door	MW-7

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	15	_____	___

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 35 min.

4. Depth of well (from top of well casisng) 12.9 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 5.__ gal.

8. Volume of water added (if any) 0.__ gal.

9. Source of water added N/A

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 3.66 ft.	3.66 ft.
Date	b. 07/14/2014 (m m d d y y y y)	07/14/2014
Time	c. 3:00 ☐ a.m. ☒ p.m.	3:35 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	0.__ inches	0.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Silty Sand	Clear ☒ 20 Turbid ☐ 25 (Describe)

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

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

16. Well developed by: Name (first, last) and Firm
First Name: Jeff Last Name: Steiner
Firm: Ayres Associates Inc.

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Marty Last Name: Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St.
City/State/Zip: Sturgeon Bay, WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: [signature]
Print Name: Jeff Steiner
Firm: Ayres Associates 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 ☐

MONITORING WELL CONSTRUCTION

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: WMW - 8
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ____ ° ____ ' ____ " Long. ____ ° ____ ' ____ " or	Unique Well No. / Well ID No.
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 07/15/2014 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: 1/4 of ____ 1/4 of Sec. ____ T. ____ N, R. ____ ☐E ☐W	Well Installed By: Name (first, last) and Firm: Tony Kapugi, On-Site Environmental
Distance from Waste/Source ____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation 583.13 ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or _____ 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 2 ft.

G. Filter pack, top _____ ft. MSL or 2 ft.

H. Screen joint, top _____ ft. MSL or 3 ft.

I. Well bottom _____ ft. MSL or 13 ft.

J. Filter pack, bottom _____ ft. MSL or 15 ft.

K. Borehole, bottom _____ ft. MSL or 15 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.40 in.

N. I.D. well casing 2.06 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

3. Surface seal: Bentonite ☒ 30 / Concrete ☒ 01 / Other ☐

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

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

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

7. Fine sand material: Manufacturer, product name & mesh size
a. #20 - #40
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added _____ ft^3

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

10. Screen material: PVC
a. Screen type: Factory cut ☐ 11 / Continuous slot ☐ 01 / Other ☐
b. Manufacturer 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: Jeff Stern | Firm: Ayres Associates Inc.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront Dev.	Door	WMW-8
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	15	_____ / ___

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 30 min.

4. Depth of well (from top of well casisng) 12.8 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 2.__ gal.

8. Volume of water added (if any) 0.__ gal.

9. Source of water added N/A

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 3.81 ft.	3.81 ft.
Date	b. 07/15/2014 (m m d d y y y y)	07/15/2014
Time	c. 5:00 ☐ a.m. ☒ p.m.	5:30 ☐ a.m. ☒ p.m.
12. Sediment in well bottom	0.__ inches	0.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) v. muddy fine sand	Clear ☐ 20 Turbid ☒ 25 (Describe) slight turbidity
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

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

16. Well developed by: Name (first, last) and Firm
First Name: Jeff Last Name: Steiner
Firm: Ayres Associates Inc.

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Marty Last Name: Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St.
City/State/Zip: Sturgeon Bay, WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Jeff Steiner
Print Name: Jeff Steiner
Firm: Ayres Associates 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 ☐ _____

MONITORING WELL CONSTRUCTION

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well: _____ ft. ☐N. ☐S. _____ ft. ☐E. ☐W.	Well Name: WMW - 9
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Unique Well No. / Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 07/15/2014 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: 1/4 of ___ 1/4 of Sec. ___, T. ___ N, R. ___ ☐E ☐W	Well Installed By: Name (first, last) and Firm: Tony Kapugi, On-Site Environmental
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation 583.70 ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or _____ 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 2 ft.

G. Filter pack, top _____ ft. MSL or 2 ft.

H. Screen joint, top _____ ft. MSL or 3 ft.

I. Well bottom _____ ft. MSL or 13 ft.

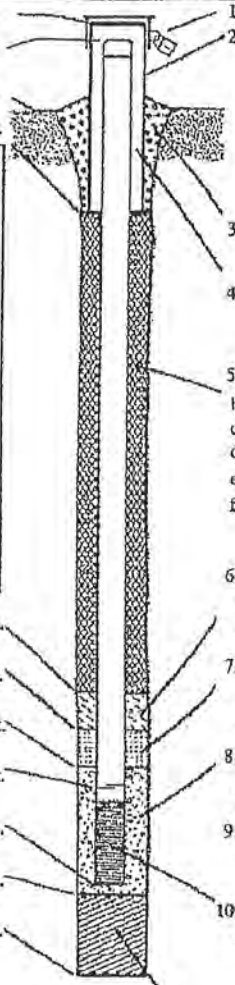
J. Filter pack, bottom _____ ft. MSL or 15 ft.

K. Borehole, bottom _____ ft. MSL or 15 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.40 in.

N. I.D. well casing 2.06 in.



1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04; Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☒ 30; Concrete ☒ 01; Other ☐ _____
4. Material between well casing and protective pipe: Bentonite ☒ 30; Other ☐ _____
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01; Tremie pumped ☐ 02; Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐1/4 in. ☒3/8 in. ☐1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ _____
7. Fine sand material: Manufacturer, product name & mesh size
a. #20 - #40
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23; Flush threaded PVC schedule 80 ☐ 24; Other ☐ _____
10. Screen material: PVC
a. Screen type: Factory cut ☐ 11; Continuous slot ☐ 01; Other ☐ _____
b. Manufacturer Johnson
c. Slot size: 0.006 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	Firm
Jeff Stearns	Ayres Associates Inc.

Table 1
Groundwater Elevation Data
West Waterfront Redevelopment Project
Sturgeon Bay, Wiscosnin

WELL ID	TOP OF CASING ELEVATION	1/18/2013		8/6/2013		7/16/2014	
		DEPTH TO WATER	GW ELEVATION	DEPTH TO WATER	GW ELEVATION	DEPTH TO WATER	GW ELEVATION
WMW-1	583.27	4.99	578.28	5.07	578.20	4.14	579.13
WMW-2	582.35	3.85	578.50	4.22	578.13	3.76	578.59
WMW-3	582.49	4.62	577.87	4.52	577.97	3.32	579.17
WMW-4	582.25	4.38	577.87	4.26	577.99	2.96	579.29
WMW-5	582.73	4.66	578.07	4.67	578.06	3.44	579.29
WMW-6	584.75					12.3*	---*
WMW-7	583.72					3.14	580.58
WMW-8	583.13					3.81	579.32
WMW-9	583.70					4.80	578.90
WMW-10	581.71					2.40	579.31
WPZ-10	581.85					31.38*	---*
WMW-11	583.05					3.81	579.24

Note:
1. All wells surveyed to USGS datum on 07/16/2014. Wells surveyed to top of PVC casing.
2. Benchmark is top of rail spike at SE corner of 92 and 100 E. Maple Street lot line (583.25 ft. msl).
* Water level not equilibrated.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront Dev.	Door	WMW-9

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	15	_____	___

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 30 min.

4. Depth of well (from top of well casisng) 12.8 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 1.5 gal.

8. Volume of water added (if any) 0.__ gal.

9. Source of water added N/A

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

	Before Development	After Development
11. Depth to Water (from top of well casing) a.	4.80 ft.	12.80 ft.
Date b. (m m d d y y y y)	07/15/2014	07/15/2014
Time c.	8:20 ☒ a.m. ☐ p.m.	8:50 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	__.__ inches	__.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) silty, brown	Clear ☐ 20 Turbid ☒ 25 (Describe) silty, brown
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

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

16. Well developed by: Name (first, last) and Firm
First Name: Jeff Last Name: Steiner
Firm: Ayres Associates Inc.

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Marty Last Name: Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St.
City/State/Zip: Sturgeon Bay, WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Jeff Steiner
Print Name: Jeff Steiner
Firm: Ayres Associates 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 ☐ _____

MONITORING WELL CONSTRUCTION

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well: _____ ft. ☐ N. ☐ S. _____ ft. ☐ E. ☐ W.	Well Name: WMW - 10
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. _____ ° ' " Long. _____ ° ' " or St. Plane _____ ft. N. _____ ft. E. S/C/N	Unique Well No. _____ Well ID No. _____
Facility ID _____	Section Location of Waste/Source: _____ 1/4 of _____ 1/4 of Sec. _____, T. _____ N, R. _____ ☐ E ☐ W	Date Well Installed: 07/14/2014 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Well Installed By: Name (first, last) and Firm: Tony Kapugi, On-Site Environmental
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Gov. Lot Number: _____	

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation 581.71 ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or _____ 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 2 ft.

G. Filter pack, top _____ ft. MSL or 2 ft.

H. Screen joint, top _____ ft. MSL or 3 ft.

I. Well bottom _____ ft. MSL or 13 ft.

J. Filter pack, bottom _____ ft. MSL or 15 ft.

K. Borehole, bottom _____ ft. MSL or 15 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.40 in.

N. I.D. well casing 2.06 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

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

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

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

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

7. Fine sand material: Manufacturer, product name & mesh size
a. #20 - #40
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added _____ ft^3

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

10. Screen material: PVC
a. Screen type: Factory cut ☐ 11 Continuous slot ☐ 01 Other ☐ _____
b. Manufacturer Johnson
c. Slot size: 0.006 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: Ayres Associates Inc.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront Dev.	Door	WMW-10
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number**	**DNR Well ID Number**
	15	_____	___

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 65 min.

4. Depth of well (from top of well casisng) 12.7 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 15.__ gal.

8. Volume of water added (if any) 0.__ gal.

9. Source of water added N/A

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. 2.42 ft.	2.42 ft.
Date	b. 07/15/2014 (m m d d y y y y)	07/15/2014
Time	c. 7:40 ☒ a.m. ☐ p.m.	8:45 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	0.__ inches	0.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) silty sand & red clay	Clear ☒ 20 Turbid ☐ 25 (Describe) slight turbidity

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: Jeff Last Name: Steiner
Firm: Ayres Associates Inc.

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: [redacted] Marty Last Name: [redacted] Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St.
City/State/Zip: Sturgeon Bay, WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Jeff Steiner
Print Name: Jeff Steiner
Firm: Ayres Associates Inc.

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

State of Wisconsin
Department of Natural Resources

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

MONITORING WELL CONSTRUCTION
Form 4400-113A Rev. 7-98

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well ☐ N. ☐ S. _____ ft. ☐ E. ☐ W. _____ ft.	Well Name: WPZ-10
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ° ' " Long. ° ' " or	Wis. Unique Well No. / DNR Well ID No.
Facility ID	St. Plane _____ ft. N, _____ ft. E. S/C/N	Date Well Installed: 07/14/2014 (m m d d y y y y)
Type of Well: Well Code 12 / PZ	Section Location of Waste/Source: _____ 1/4 of _____ 1/4 of Sec. _____, T. _____ N, R. _____ ☐ E ☐ W	Well Installed By: Name (first, last) and Firm: Tony Kapugi, On-Site Environmental
Distance from Waste/Source _____ ft. / Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL
B. Well casing, top elevation 581.85 ft. MSL
C. Land surface elevation _____ ft. MSL
D. Surface seal, bottom _____ ft. MSL or _____ 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 29 ft.
G. Filter pack, top _____ ft. MSL or 29 ft.
H. Screen joint, top _____ ft. MSL or 30 ft.
I. Well bottom _____ ft. MSL or 35 ft.
J. Filter pack, bottom _____ ft. MSL or 35 ft.
K. Borehole, bottom _____ ft. MSL or 35 ft.
L. Borehole, diameter 8.25 in.
M. O.D. well casing 2.40 in.
N. I.D. well casing 2.06 in.

1. Cap and lock? ☒ Yes ☐ No
2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 / Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____
3. Surface seal: Bentonite ☒ 30 / Concrete ☒ 01 / Other ☐ _____
4. Material between well casing and protective pipe: Bentonite ☒ 30 / Other ☐ _____
5. Annular space seal: a. Granular/Chipped Bentonite ☒ 33
b. _____ Lbs/gal mud weight . . . Bentonite-sand slurry ☐ 35
c. _____ Lbs/gal mud weight . . . . . Bentonite slurry ☐ 31
d. _____ % Bentonite . . . . . Bentonite-cement grout ☐ 50
e. _____ Ft^3 volume added for any of the above
f. How installed: Tremie ☐ 01 / Tremie pumped ☐ 02 / Gravity ☒ 08
6. Bentonite seal: a. Bentonite granules ☐ 33
b. ☐ 1/4 in. ☒ 3/8 in. ☐ 1/2 in. Bentonite chips ☒ 32
c. _____ Other ☐ _____
7. Fine sand material: Manufacturer, product name & mesh size
a. #20 - #40
b. Volume added _____ ft^3
8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added _____ ft^3
9. Well casing: Flush threaded PVC schedule 40 ☒ 23 / Flush threaded PVC schedule 80 ☐ 24 / Other ☐ _____
10. Screen material: PVC
a. Screen type: Factory cut ☐ 11 / Continuous slot ☐ 01 / Other ☐ _____
b. Manufacturer Johnson
c. Slot size: 0.006 in.
d. Slotted length: 5 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: Jeff Stern | Firm: Ayres Associates 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.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront Dev.	Door	WPZ-10
Facility License, Permit or Monitoring Number	**County Code**	**Wis. Unique Well Number** / **DNR Well ID Number**
	15	_____ / ___

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 65 min.

4. Depth of well (from top of well casisng) 34.7 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing ____.__ gal.

7. Volume of water removed from well 5.__ gal.

8. Volume of water added (if any) 0.__ gal.

9. Source of water added N/A

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. 4.88 ft.	34.7 ft.
Date	b. 07/15/2014 (m m d d y y y y)	07/15/2014 (m m d d y y y y)
Time	c. 7:40 ☒ a.m. ☐ p.m.	8:45 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	0.__ inches	0.__ inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) red clay	Clear ☐ 20 Turbid ☒ 25 (Describe) red clay

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: Jeff Last Name: Steiner
Firm: Ayres Associates Inc.

17. Additional comments on development:

Name and Address of Facility Contact /Owner/Responsible Party
First Name: Marty Last Name: Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St.
City/State/Zip: Sturgeon Bay, WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Jeff Steiner
Print Name: Jeff Steiner
Firm: Ayres Associates 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 ☐

MONITORING WELL CONSTRUCTION

Facility/Project Name: West Waterfront Dev.	Local Grid Location of Well: ____ ft. ☐N. ☐S. ____ ft. ☐E. ☐W.	Well Name: WMW - 11
Facility License, Permit or Monitoring No.	Local Grid Origin ☐ (estimated: ☐) or Well Location ☐ Lat. ____ ° ____ ' ____ " Long. ____ ° ____ ' ____ " or	Unique Well No.	Well ID No.
Facility ID	St. Plane ____ ft. N, ____ ft. E. S/C/N	Date Well Installed: 07/15/2014 (m m d d y y y y)
Type of Well: Well Code 11 / MW	Section Location of Waste/Source: ____ 1/4 of ____ 1/4 of Sec. ____, T. ____ N, R. ____ ☐E ☐W	Well Installed By: Name (first, last) and Firm: Tony Kapugi, On-Site Environmental
Distance from Waste/Source ____ ft.	Enf. Stds. Apply ☐	Location of Well Relative to Waste/Source: u ☐ Upgradient s ☐ Sidegradient d ☐ Downgradient n ☐ Not Known	Gov. Lot Number

A. Protective pipe, top elevation _____ ft. MSL

B. Well casing, top elevation 583.05 ft. MSL

C. Land surface elevation _____ ft. MSL

D. Surface seal, bottom _____ ft. MSL or _____ 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 2 ft.

G. Filter pack, top _____ ft. MSL or 2 ft.

H. Screen joint, top _____ ft. MSL or 3 ft.

I. Well bottom _____ ft. MSL or 13 ft.

J. Filter pack, bottom _____ ft. MSL or 15 ft.

K. Borehole, bottom _____ ft. MSL or 15 ft.

L. Borehole, diameter 8.25 in.

M. O.D. well casing 2.40 in.

N. I.D. well casing 2.06 in.

1. Cap and lock? ☒ Yes ☐ No

2. Protective cover pipe:
a. Inside diameter: 8 in.
b. Length: 1 ft.
c. Material: Steel ☒ 04 Other ☐ _____
d. Additional protection? ☐ Yes ☐ No
If yes, describe: _____

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

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

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

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

7. Fine sand material: Manufacturer, product name & mesh size
a. #20 - #40
b. Volume added _____ ft^3

8. Filter pack material: Manufacturer, product name & mesh size
a. #40 Flint
b. Volume added _____ ft^3

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

10. Screen material: PVC
a. Screen type: Factory cut ☐ 11 Continuous slot ☐ 01 Other ☐ _____
b. Manufacturer Johnson
c. Slot size: 0.006 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	Firm
Jeff Steins	Ayres Associates Inc.

State of Wisconsin
Department of Natural Resources

MONITORING WELL DEVELOPMENT

Form 4400-113B Rev. 7-98

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

Facility/Project Name	County Name	Well Name
West Waterfront Dev.	Door	WMW-11

Facility License, Permit or Monitoring Number	County Code	Wis. Unique Well Number	DNR Well ID Number
	15	_____	___

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 30 min.

4. Depth of well (from top of well casisng) 12.7 ft.

5. Inside diameter of well 2.06 in.

6. Volume of water in filter pack and well casing ___.__ gal.

7. Volume of water removed from well 7.5 gal.

8. Volume of water added (if any) 0.__ gal.

9. Source of water added N/A

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

	Before Development	After Development
11. Depth to Water (from top of well casing)	a. 3.85 ft.	3.85 ft.
Date	b. 07/15/2014 (m m d d y y y y)	07/15/2014
Time	c. 9:45 ☒ a.m. ☐ p.m.	10:15 ☒ a.m. ☐ p.m.
12. Sediment in well bottom	0. inches	0. inches
13. Water clarity	Clear ☐ 10 Turbid ☒ 15 (Describe) Silty Sand	Clear ☒ 20 Turbid ☐ 25 (Describe)
14. Total suspended solids	____.__ mg/l	____.__ mg/l
15. COD	____.__ mg/l	____.__ mg/l

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

16. Well developed by: Name (first, last) and Firm
First Name: Jeff Last Name: Steirer
Firm: Ayres Associates Inc.

17. Additional comments on development:

Name and Address of Facility Contact/Owner/Responsible Party
First Name: Marty Last Name: Olejniczak
Facility/Firm: City of Sturgeon Bay
Street: 421 Michigan St.
City/State/Zip: Sturgeon Bay, WI 54235

I hereby certify that the above information is true and correct to the best of my knowledge.
Signature: Jeff Steirer
Print Name: Jeff Steirer
Firm: Ayres Associates Inc.

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

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WGP-1**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	**5/24/2013** M/D/Y	**5/24/2013** M/D/Y	**Geoprobe**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
					2-inch

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat. ° ' "	Local Grid Location (If applicable)
State Plane _____N, _____E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Long ° ' "	☐ N ☐ E ____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Asphalt (3") FILL, SAND, some gravel, trace silt, moist, medium grained, no odor, brown	FILL/ SP			0.3		M				
			-2	wood and cobbles at 2.5 feet										
			-3	FILL. SILT, some wood and organics (roots), some fine sand, moist, low plasticity, no odor, black	ML			0		M				
			-4											
			-5	silty gravel seam at 5 feet										
			-6	CLAY, some silt, wet, high plasticity, no odor, red	CH			0		W				
			-7											
			-8											
			-9					0		W				
			-10											
			-11	EOB @ 10 feet bgs Abandoned with bentonite chips										
			-12											
			-13											
			-14											
			-15											
			-16											
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature	Firm
Jeff Steiner	AYRES ASSOCIATES

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WGP-2**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Tony** Last Name: **Kapugi**			
Firm: **On_Site Environmental Drilling Inc.**	**5/24/2013** M/D/Y	**5/24/2013** M/D/Y	**Geoprobe**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
_ _ _ _ _ _ _ _					**2-inch**

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat.___ ° ___ ' ___ "	Local Grid Location (If applicable)
State Plane _____N, _____E	---	☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long___ ° ___ ' ___ "	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Asphalt (3")										
			-1	FILL, SAND, some gravel, trace silt, moist, medium grained, no odor, brown	FILL/ SP			0.4		M				
			-2	wood and concrete at 2.5 feet										
			-3											
			-4	FILL, CLAY, some silt and concrete, wet, high plasticity, no odor, gray	FILL/ CH			0.6		M				
			-5											
			-6	wood at 5 feet, blue										
			-7					0		W				
			-8	SAND, silty, some organics (roots), wet, fine grained, no odor, brown	SM									
			-9					0		W				
			-10											
			-11	EOB @ 10 feet bgs										
			-12	Abandoned with bentonite chips										
			-13											
			-14											
			-15											
			-16											
			-17											
			-18											
			-19											
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			-23											
			-24											
			-25											

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

Signature	Firm
	AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WGP-3**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Tony** Last Name: **Kapugi**			
Firm: **On_Site Environmental Drilling Inc.**	**5/23/2013** M/D/Y	**5/23/2013** M/D/Y	**Geoprobe**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
					2-inch

Local Grid Origin (estimated: ☐) or Boring Location ☐	Lat.___ ° ___ ' ___ "	Local Grid Location (If applicable)
State Plane _____N, _____E	---	☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long___ ° ___ ' ___ "	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-	Asphalt (4")										
			-1	FILL, SAND, some gravel, trace silt, dry,	FILL/									
			-	medium grained, no odor, brown	SP			0		D				
			-2											
			-	FILL, SILT, some fine sand, moist, no odor,	FILL/									
			-3	black to brown	ML									
			-											
			-4	Fill, Concrete	FILL			0		M				
			-											
			-5											
			-											
			-6	SAND, silty, wet, medium grained, no odor,	SM									
			-	brown				0.2		W				
			-7											
			-	some organics at 7 feet, no odor, black										
			-8											
			-	SAND, trace silt, wet, very fine grained,	SP									
			-9	no odor, gray				0		W				
			-											
			-10											
			-											
			-11	EOB @ 10 feet bgs										
			-	Abandoned with bentonite chips										
			-12											
			-											
			-13											
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			-14											
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I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature	Firm
	AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WGP-4**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Tony** Last Name: **Kapugi**			
Firm: **On_Site Environmental Drilling Inc.**	**5/23/2013** M/D/Y	**5/23/2013** M/D/Y	**Geoprobe**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
					2-inch

Local Grid Origin [(estimated: ☐) or Boring Location ☐	Lat. ° ' "	Local Grid Location (If applicable)
State Plane _____ N, _____ E	----------	☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long ° ' "	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	FILL, GRAVEL, silty, some sand, dry, medium grained, no odor, brown	FILL/ GM			0		D				
			-2											
			-3											
			-4					0.2		M				
			-5	black silty sand at 5 feet, hydrocarbon odor										
			-6	FILL, GRAVEL, sme sand, wet, medium grain slight hydrocarbon odor, brown	GP			4		W				
			-7											
			-8	FILL, SAND, silty, some gravel, wet, very fine grained, no odor, gray	SM									
			-9					0		W				
			-10	concrete at 9 feet										
			-11	EOB @ 10 feet bgs Abandoned with bentonite chips										
			-12											
			-13											
			-14											
			-15											
			-16											
			-17											
			-18											
			-19											
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			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature	Firm
Jeff Stumo	AYRES ASSOCIATES

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WGP-5**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Tony** Last Name: **Kapugi**			
Firm: **On_Site Environmental Drilling Inc.**	**5/23/2013** M/D/Y	**5/23/2013** M/D/Y	**Geoprobe**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
_ _ _ _ _ _					**2-inch**

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat.___ ° ___ ' ___ "	Local Grid Location (If applicable)
State Plane _____N, _____E	----------	☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long___ ° ___ ' ___ "	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Asphalt (4")										
			-1	FILL, SAND, silty, some gravel and concrete, dry, no odor, brown	FILL/ SM			0.8		D				
			-2											
			-3											
			-4					0.4		M				
			-5	change to black, some organics, wet										
			-6											
			-7					0.4		W				
			-8											
			-9					0.3		W				
			-10	greenish-gray color at 10 feet										
			-11	EOB @ 10 feet bgs										
			-11	Abandoned with bentonite chips										
			-12											
			-13											
			-14											
			-15											
			-16											
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature [signature] Firm AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WMW-1**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Tony** Last Name: **Kapugi**			
Firm: **On_Site Environmental Drilling Inc.**	**5/23/2013** M/D/Y	**5/23/2013** M/D/Y	**4.25" ID Hollow Stem Auger**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
_ _ _ _ _ _ _		**WMW-1**	4.99		**8-inch**

Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐	Lat. ___ ___ ___	Local Grid Location (If applicable)
State Plane _____N, _____E	---	☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long ___ ___ ___	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	SOIL PROPERTIES PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Concrete (4")										
			-1	FILL, SAND, some gravel, trace silt, moist, medium grained, no odor, brown	FILL/ SP			0.8		M				
			-2											
			-3	FILL, SAND, silty, some gravel, dry, fine gain	FILL/ SM									
			-4	no odor, brown				0.6		D				
			-5											
			-6	FILL, WOOD, wet, hydrocarbon odor	FILL/ Wood									
			-7					0		W				
			-8	SAND, silty, some gravel, wet, hydrocarbon odor, black	SM									
			-9					0		W				
			-10	gray staining @ 10 ft., silty sand SAND, trace silt, some coares gravel, wet, gray	SP									
			-11											
			-12	CLAY, silty, tace coarse sand, very stiff, wet, high plasticity, no odor, red	CH			1		W				
			-13											
			-14					0.2		W				
			-15											
			-16	EOB @ 15 feet bgs Well set @ 12.9 feet										
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature Jeff Stemen Firm AYRES ASSOCIATES

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Number	Boring Number
West Waterfront Redevelopment Project		**WMW-2**

Boring Drilled By: Name of crew chief (first,last) and Firm	Date Drilling Started	Date Drilling Completed	Drilling Method
First Name: **Tony** Last Name: **Kapugi**			
Firm: **On_Site Environmental Drilling Inc.**	**5/23/2013** M/D/Y	**5/23/2013** M/D/Y	**4.25" ID Hollow Stem Auger**

WI Unique Well No.	DNR Well Id No.	Well Name	Final Static Water Level	Surface Elevation	Borehole Dia.
_ _ _ _ _ _		**WMW-2**	3.85		**8-inch**

Local Grid Origin (estimated: ☐) or Boring Location ☐	Lat. ___ ___ ___	Local Grid Location (If applicable)
State Plane _____ N, _____ E	----------	☐ N ☐ E
NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E	Long ___ ___ ___	____ Feet ☐ S ____ Feet ☐ W

Facility Id.	County	County Code	Civil Town/City/or Village
	Door	**15**	**City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Act. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Topsoil (2") FILL, Wood, moist,	FILL/ Wood			0		M				
			-3	FILL, SAND, silty, some gravel and cobbles, fine, grained, no odor, brown	FILL/ SP			0		D				
			-5	FILL, WOOD, at 5 feet FILL, SAND, silty, some gravel, wet,	FILL/			0		M				
			-6	fine grained, no odor, brown	Wood									
			-7	wood at 6-7 feet black to gray sand				0		W				
			-8		SM									
			-9					0		W				
			-10											
			-11	organics, wood chips, soft, black 11-12 feet, some small shells	SM			0		W				
			-12											
			-13	CLAY, silty, very stiff, wet, high plasticity, no odor, red	CH			0		W				
			-15					0		W				
			-16	EOB @ 15 feet bgs Well set @ 12.8 feet										

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

Signature _____ Firm AYRES ASSOCIATES

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State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION

Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe		Boring Number
West Waterfront Redevelopment Project			**WMW-3**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	Date Drilling Started **5/23/2013** M/D/Y	Date Drilling Completed **5/23/2013** M/D/Y	Drilling Method **4.25" ID Hollow Stem Auger**
WI Unique Well No. _ _ _ _ _ _ _ / DNR Well Id No. / Well Name **WMW-3**	Final Static Water Level 4.62	Surface Elevation	Borehole Dia. **8-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____N, _____E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat.___ ° ___ ' ___ " Long___ ° ___ ' ___ "	Local Grid Location (If applicable) ☐ N ☐ E _____ Feet ☐ S _____ Feet ☐ W	
Facility Id.	County **Door**	County Code **15**	Civil Town/City/or Village **City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			- -1 - -2	Asphalt (4") FILL, SAND, some gravel, trace silt, moist, medium grained, no odor, brown	FILL/ SP			0.8		D				
			- -3 - -4	FILL, SAND, clayey, some silt and gravel, dry fine grained, no odor, brown	FILL/ SC			0.6		D				
			-5 - -6	SAND, silty, some gravel, wet, no odor	SM			0		W				
			-7 - -8 - -9	GRAVEL, silty, some sand, wet, no odor, gray odor, black	GM			0		W				
			-10 - -11 - -12	wood, black @ 10 ft., slight hydrocarbon odor,				1		W				
			-13 - -14	SILT, some clay, trace gravel and sand, wet, non-plastic, no odor, black	ML			0.2		W				
			- -15	GRAVEL, silty, some sand, trace clay, wet	GM									
			-16 - -17 - -18 - -19 - -20 - -21 - -22 - -23 - -24 - -25 -	EOB @ 15 feet bgs Well set @ 12.9 feet										

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

Signature	Firm
Jeff Stemm	AYRES ASSOCIATES

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe		Boring Number
West Waterfront Redevelopment Project			**WMW-4**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Tony** Last Name: **Kapugi** Firm: **On_Site Environmental Drilling Inc.**	Date Drilling Started **5/23/2013** M/D/Y	Date Drilling Completed **5/23/2013** M/D/Y	Drilling Method **4.25" ID Hollow Stem Auger**
WI Unique Well No. / DNR Well Id No. / Well Name **WMW-4**	Final Static Water Level 4.38	Surface Elevation	Borehole Dia. **8-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____N, _____E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat.___ ___ ___ Long___ ___ ___	Local Grid Location (If applicable) ☐ N ☐ E ____ Feet ☐ S ____ Feet ☐ W	
Facility Id.	County **Door**	County Code **15**	Civil Town/City/or Village **City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	SOIL PROPERTIES PID/FID	Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	ROD/Comments
			-1	Asphalt (4") FILL, SAND, some gravel, trace silt, moist, medium grained, no odor, brown	FILL/ SP			0.8		M				
			-4					0.6		M				
			-6	SAND, silty, some gravel, wet, no odor	SM			0		W				
			-9					0		W				
			-11	GRAVEL, silty, some organic material, coarse grained, wet, no odor, black	GM			1		W				
			-14	cobbles at 15 feet				0.2		W				
			-16	EOB @ 15 feet bgs Well set @ 12.8 feet										
			-25											

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

Signature: Jeff Stearns Firm: AYRES ASSOCIATES

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis.Stats. Completion of this report is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conductu involved. Personally indentifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

State of Wiscosnin
Department of Natural Resources

SOIL BORING LOG INFORMATION
Form 4400-122 7-98

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

Facility/Project Name	License/Permit/Monitoring Numbe		Boring Number
West Waterfront Redevelopment Project			**WMW-5**
Boring Drilled By: Name of crew chief (first,last) and Firm First Name: **Tony** Last Name: **Kapugi** Firm: **On-Site Environmental Drilling Inc.**	Date Drilling Started **5/23/2013** M/D/Y	Date Drilling Completed **5/23/2013** M/D/Y	Drilling Method **4.25" ID Hollow Stem Auger**
WI Unique Well No. / DNR Well Id No. / Well Name: **WMW-5**	Final Static Water Level: 4.66	Surface Elevation	Borehole Dia.: **8-inch**
Local Grid Origin ☐ (estimated: ☐) or Boring Location ☐ State Plane _____N, _____E **NE 1/4 of NE 1/4, of Section 7, T 27 N, R 26 E**	Lat. __° __' __" Long __° __' __"	Local Grid Location (If applicable) ____ Feet ☐ N ☐ S ____ Feet ☐ E ☐ W	
Facility Id.	County: **Door**	County Code: **15**	Civil Town/City/or Village: **City of Sturgeon Bay**

SAMPLE Number and Type	SAMPLE Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Below ground surface)	SOIL/ROCK DESCRIPTION AND GEOLOGIC ORIGIN FOR EACH MAJOR UNIT	USCS	Graphic Log	Well Diagram	PID/FID	SOIL PROPERTIES: Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200	RQD/Comments
			-1	Asphalt (4") FILL, SAND, some gravel and concrete, trace moist, medium grained, no odor, black	FILL/ SP			0.6		M				
			-2											
			-3	wood at 2.5 to 3 feet										
			-4	FILL, SAND, silty, moist, fine grained, black	FILL/ SM			0.2		M				
			-5	concrete at 5 feet										
			-6	GRAVEL, silty, some sand and cobble, wet, coarse grained, black	GM			0.2		W				
			-7											
			-8	SILT, some gravel and sand, trace organics, wet, non-plastic, no odor, black	ML									
			-9					0		W				
			-10	GRAVEL, silty, some sand, coarse grained, wet, no odor, black	GP									
			-11					0		W				
			-12											
			-13											
			-14					0.2		W				
			-15	cobbles at 15 feet										
			-16	EOB @ 15 feet bgs Well set @ 12.8 feet										
			-17											
			-18											
			-19											
			-20											
			-21											
			-22											
			-23											
			-24											
			-25											

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

Signature: Jeff Sterns Firm: AYRES ASSOCIATES

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis.Stats. Completion of this report is mandatory. Failure to file this form may result in forfeiture of between $10 and $25,000, or imprisonment for up to one year, depending on the program and conductu involved. Personally indentifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Appendix B

Hydraulic Conductivity Test Results

Summary of Slug Test Parameters
92 East Maple Street
Sturgeon Bay, WI

Well Number	Test Type	Depth of Well (ft)	Depth to Water (ft)	Water Level at t=0 (ft)	Internal Well Radius (r) (ft)	Effective Well Radius (R) (ft)	Sat. Aquifer Thickness (ft)	Screen Length (L) (ft)	Height of Water Column (b) (ft)
W-MW-1	Slug Out	12.9	4.14	2.33	0.0858	0.33	9	8.76	8.76
W-MW-3	Slug Out	12.8	3.32	2.31	0.0858	0.33	10	9.48	9.48
W-MW-5	Slug Out	12.7	3.44	1.58	0.0858	0.33	10	9.26	9.26
W-MW-7	Slug Out	12.9	3.14	1.03	0.0858	0.33	10	9.76	9.76
W-MW-8	Slug Out	12.8	3.81	2.02	0.0858	0.33	9	8.99	8.99
W-MW-10	Slug Out	12.7	2.41	1.18	0.0858	0.33	10	10	10.29
W-MW-11	Slug Out	12.7	3.81	2.44	0.0858	0.33	9	8.89	8.89

Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

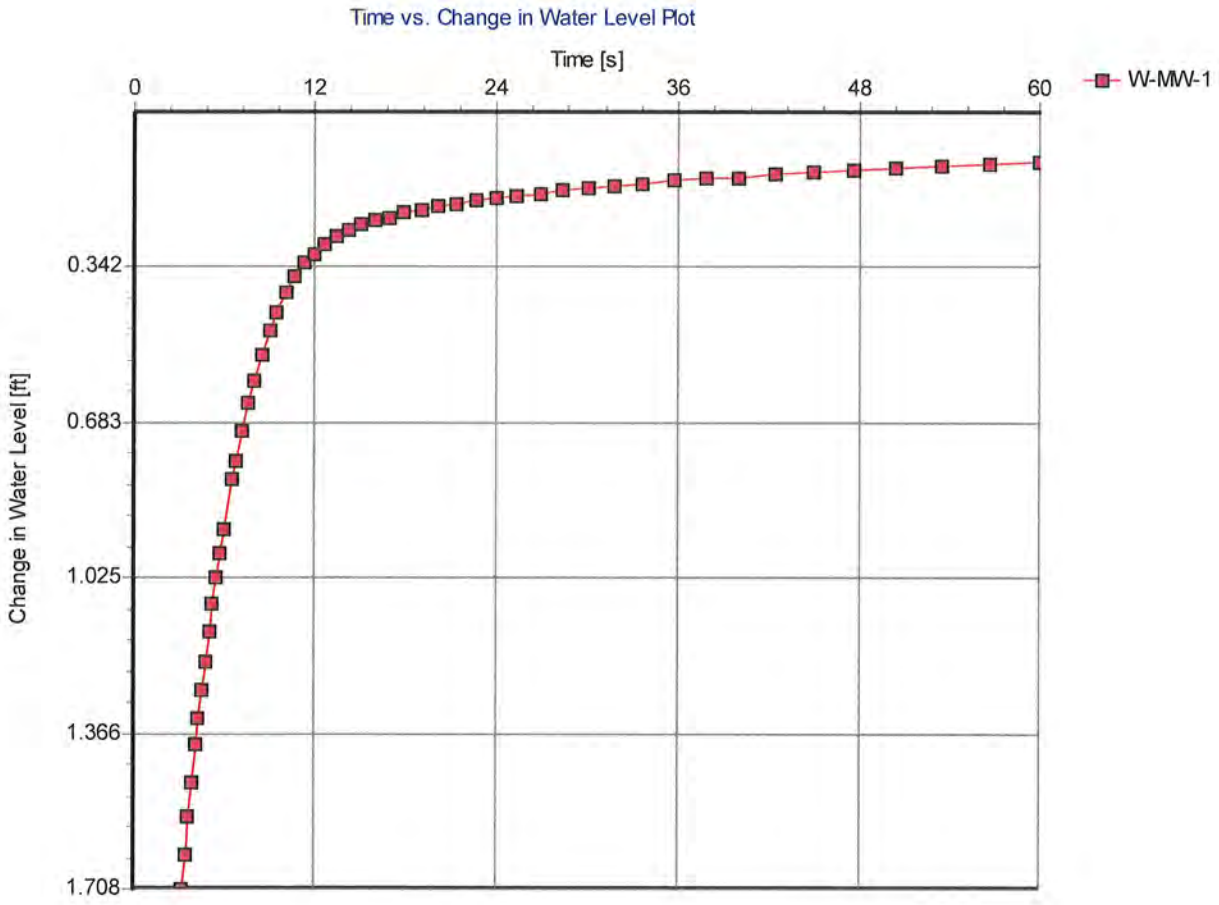
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-1 Slug Out	Test well:	W-MW-1
Test performed by:	Jeff Steiner		Evaluated by:	Jeff Steiner	
Test date:	7/16/2014		Evaluation date:	8/21/2014	
Analysis method:	Time vs. Change in waterlevel plot		Aquifer thickness:	9 [ft]	



Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

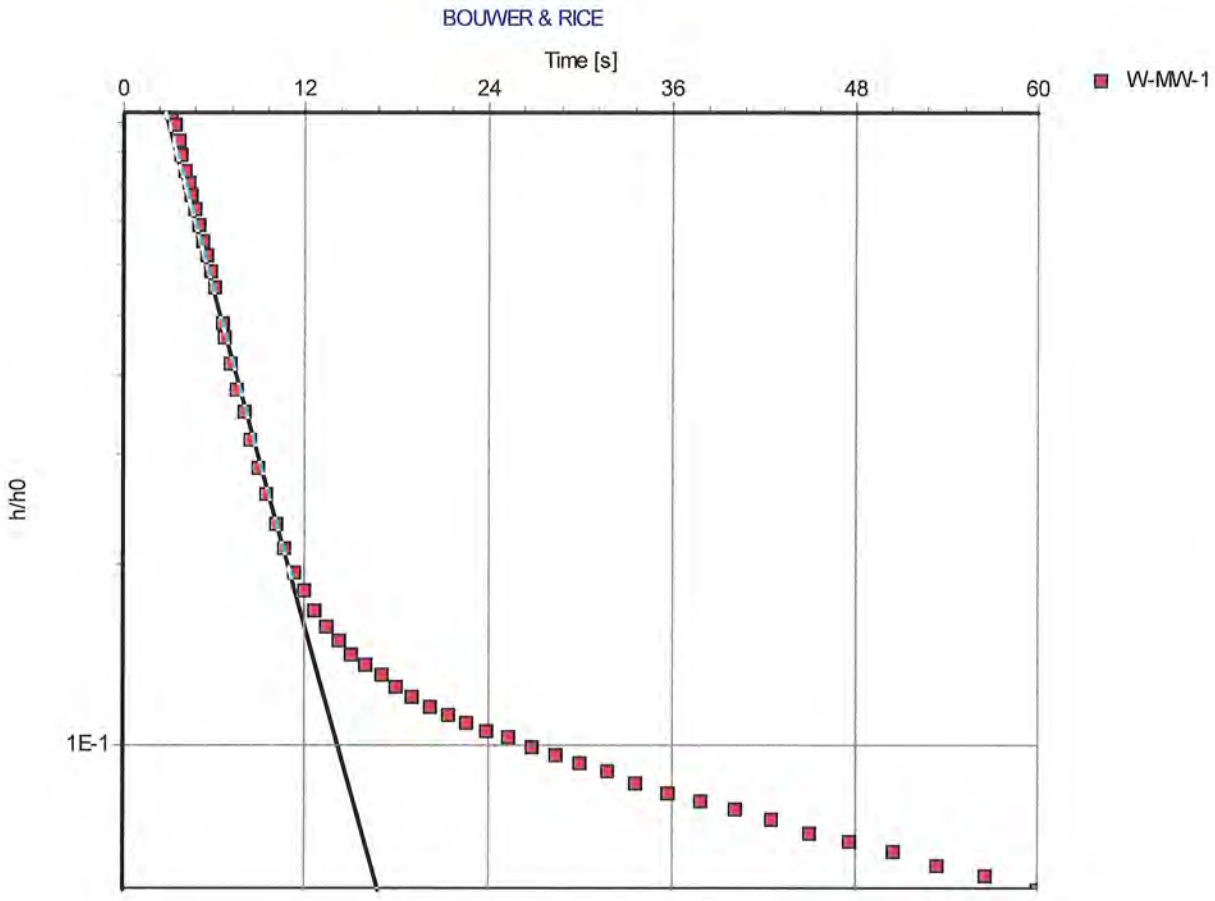
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-1 Slug Out	Test well:	W-MW-1
Test performed by:	Jeff Steiner		Evaluated by:	Jeff Steiner	
Test date:	7/16/2014		Evaluation date:	8/21/2014	
Analysis method:	BOUWER & RICE		Aquifer thickness:	9 [ft]	



Conductivity: 2.07×10^-4 [ft/s]

Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

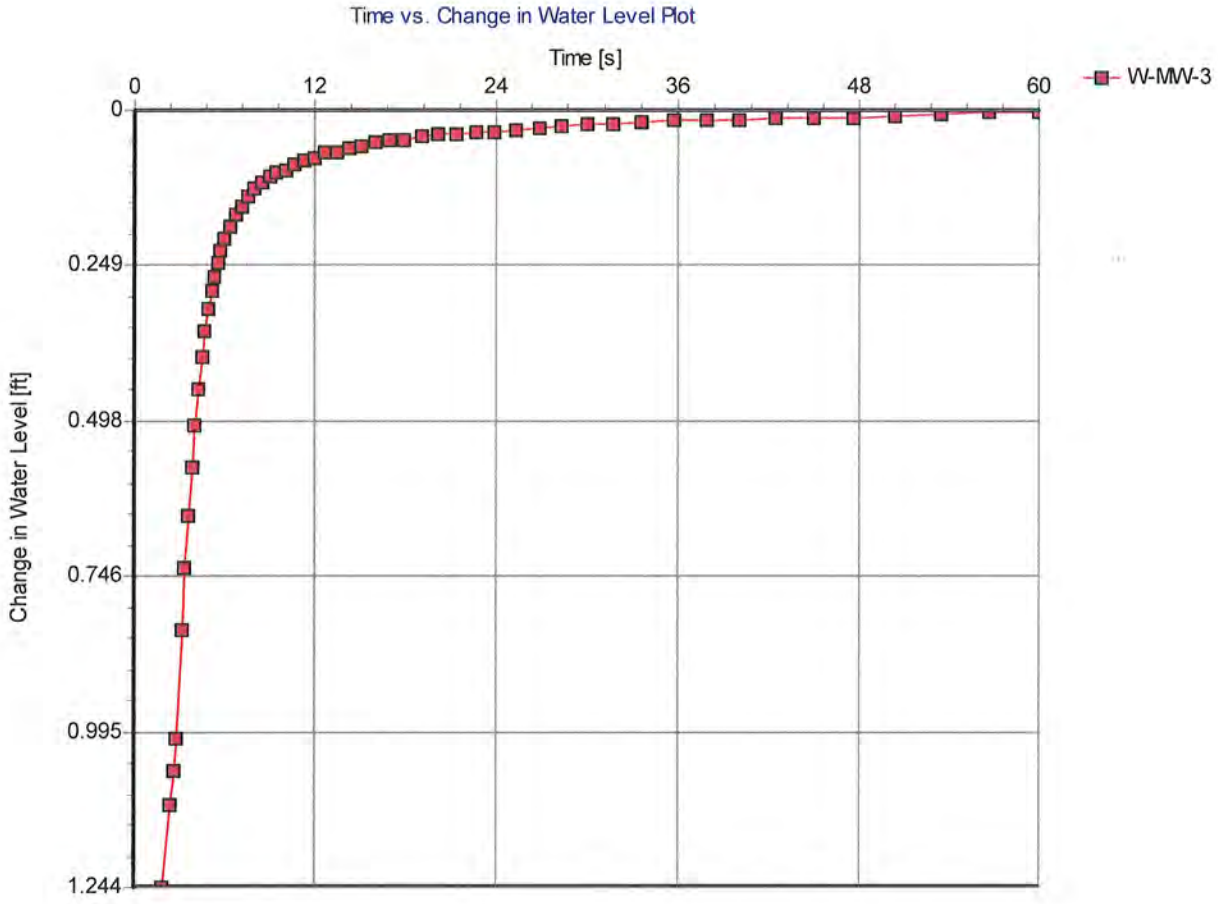
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-3 Slug Out	Test well:	W-MW-3
Test performed by:	Jeff Steiner		Evaluated by:	Jeff Steiner	
Test date:	7/16/2014		Evaluation date:	8/25/2014	
Analysis method:	Time vs. Change in waterlevel plot		Aquifer thickness:	10 [ft]	



Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

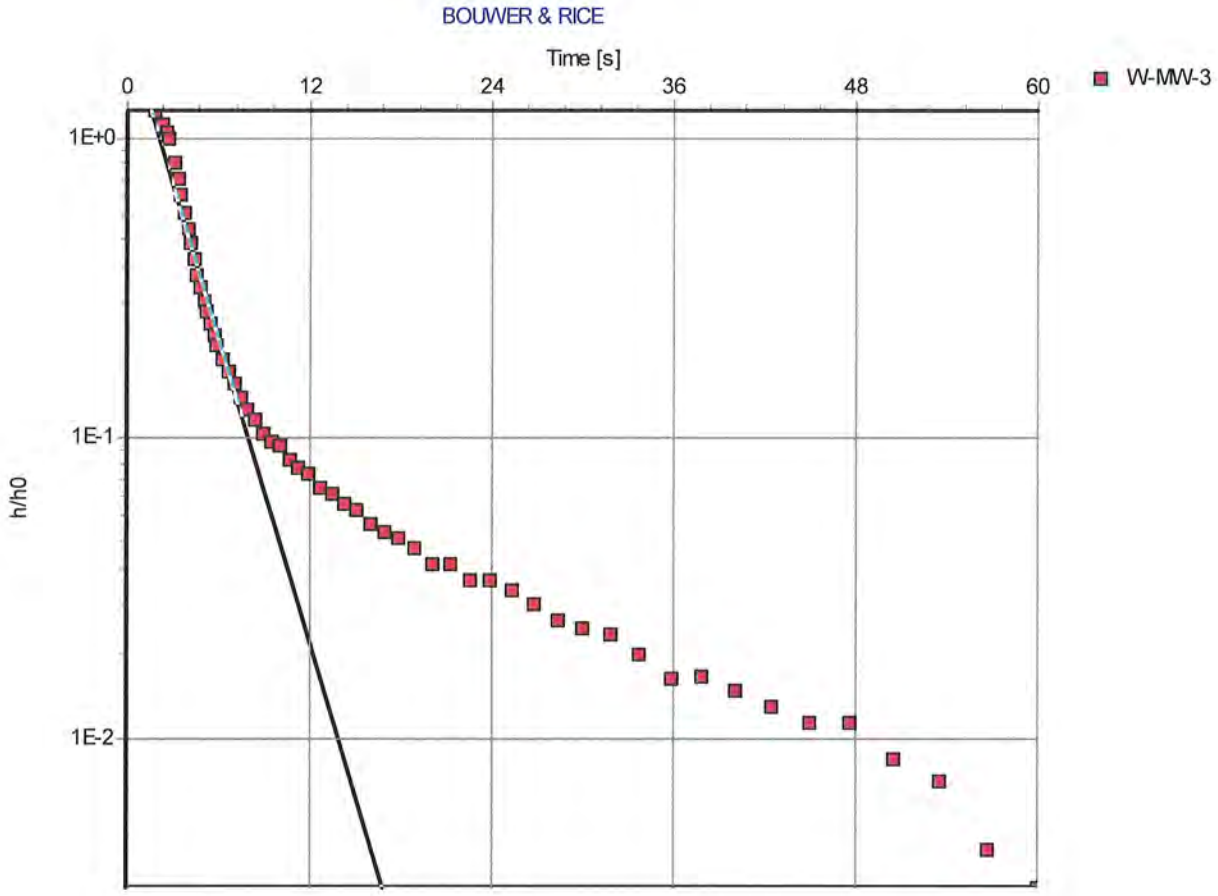
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-3 Slug Out	Test well:	W-MW-3
Test performed by:	Jeff Steiner		Evaluated by:	Jeff Steiner	
Test date:	7/16/2014		Evaluation date:	8/25/2014	
Analysis method:	BOUWER & RICE		Aquifer thickness:	10 [ft]	



Conductivity: 3.89×10^-4 [ft/s]

Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

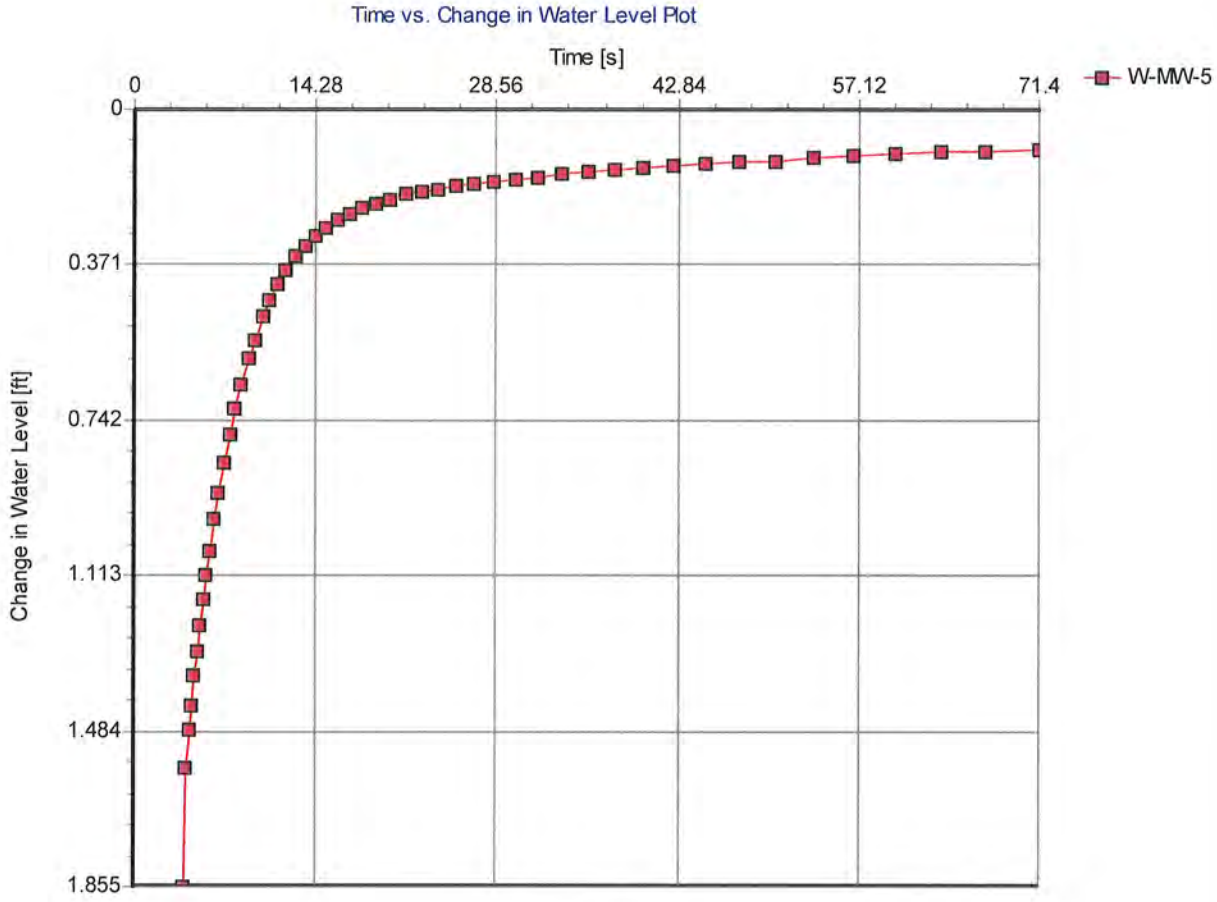
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-5 Slug Out	Test well:	W-MW-5
Test performed by:	Jeff Steiner			Evaluated by:	Jeff Steiner
Test date:	7/16/2014			Evaluation date:	8/25/2014
Analysis method:	Time vs. Change in waterlevel plot			Aquifer thickness:	10 [ft]



Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

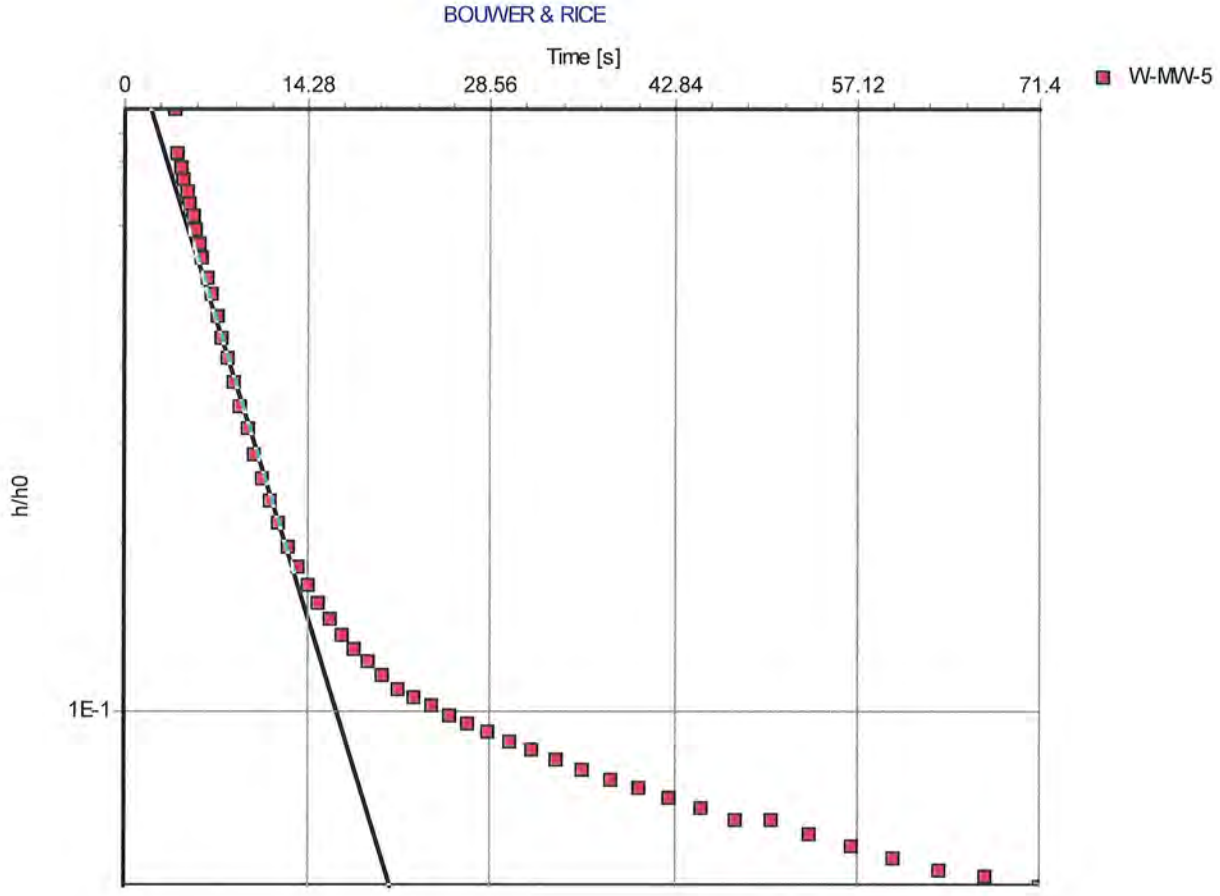
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-5 Slug Out	Test well:	W-MW-5
Test performed by:	Jeff Steiner		Evaluated by:	Jeff Steiner	
Test date:	7/16/2014		Evaluation date:	8/25/2014	
Analysis method:	BOUWER & RICE		Aquifer thickness:	10 [ft]	



Conductivity: 1.62×10^-4 [ft/s]

Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

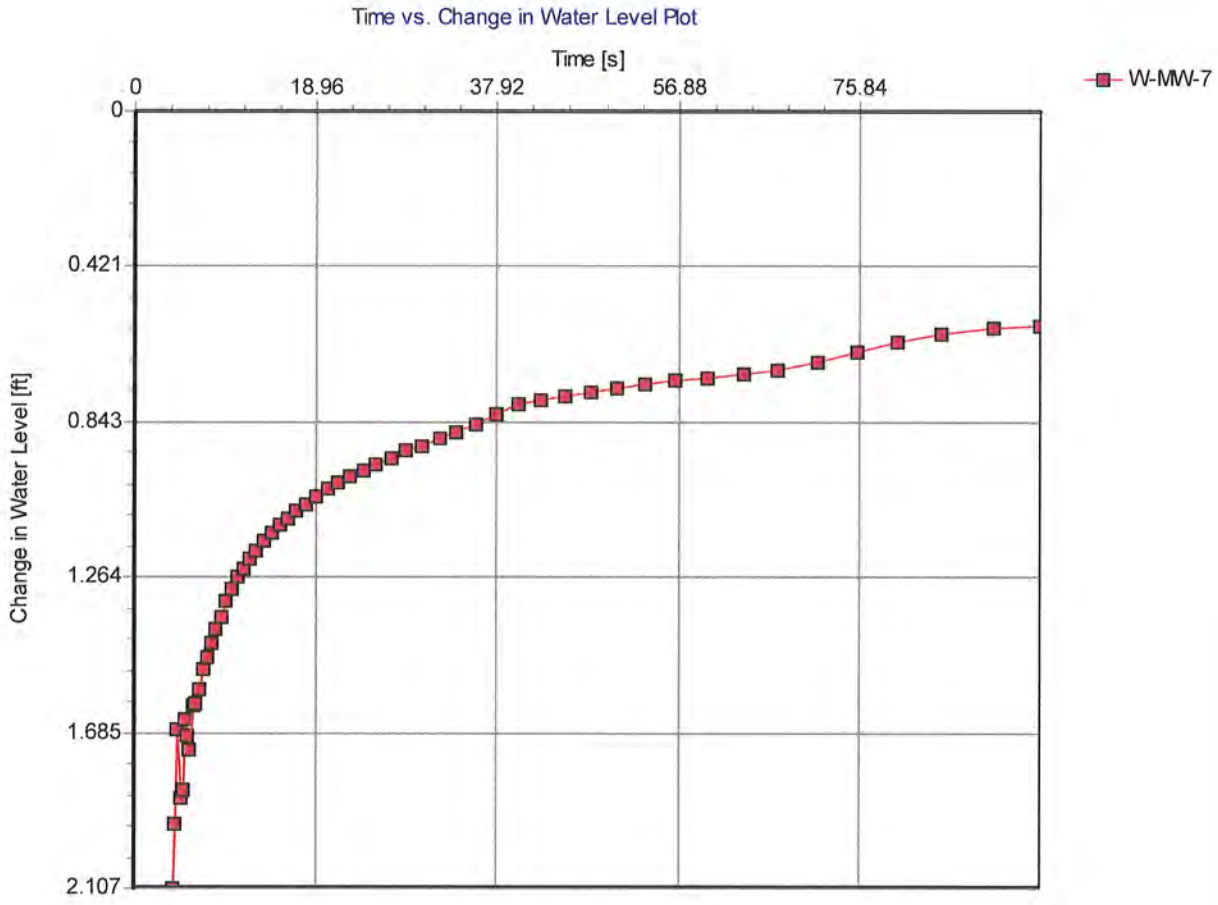
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-7 Slug Out	Test well:	W-MW-7
Test performed by:	Jeff Steiner			Evaluated by:	Jeff Steiner
Test date:	7/16/2014			Evaluation date:	8/25/2014
Analysis method:	Time vs. Change in waterlevel plot			Aquifer thickness:	10 [ft]



Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

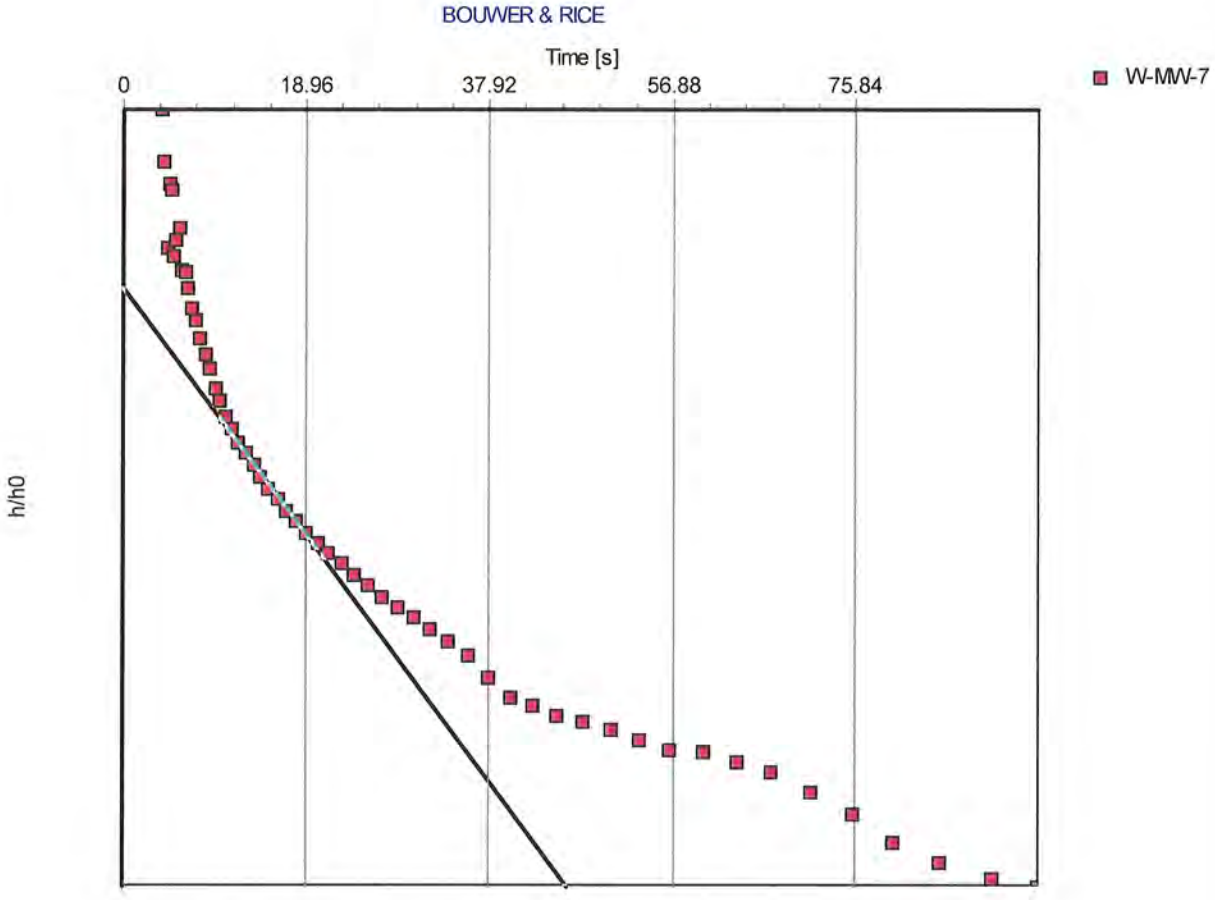
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-7 Slug Out	Test well:	W-MW-7
Test performed by:	Jeff Steiner		Evaluated by:	Jeff Steiner	
Test date:	7/16/2014		Evaluation date:	8/25/2014	
Analysis method:	BOUWER & RICE		Aquifer thickness:	10 [ft]	



Conductivity: 2.11×10^-5 [ft/s]

Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

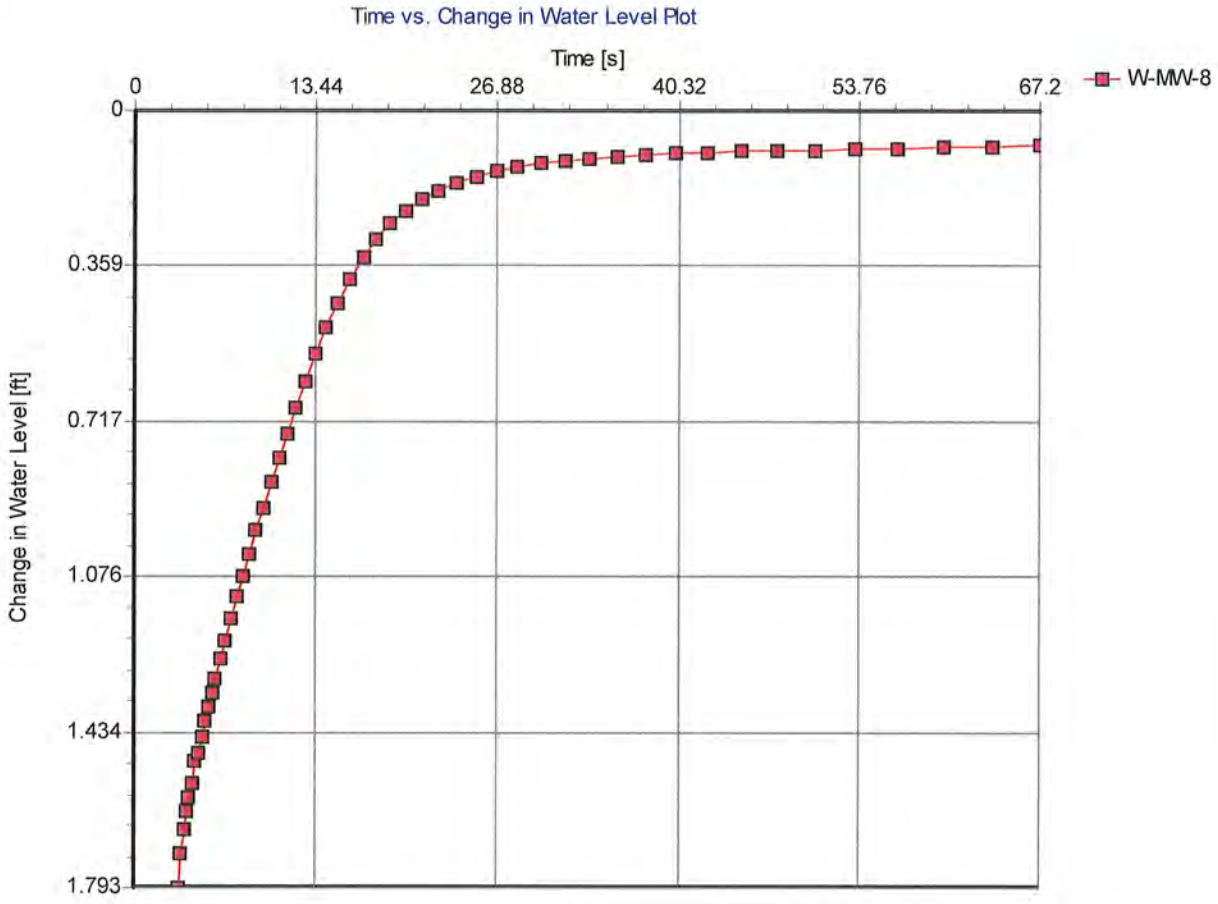
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-8 Slug Out	Test well:	W-MW-8
Test performed by:	Jeff Steiner			Evaluated by:	Jeff Steiner
Test date:	7/16/2014			Evaluation date:	8/25/2014
Analysis method:	Time vs. Change in waterlevel plot			Aquifer thickness:	9 [ft]



Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

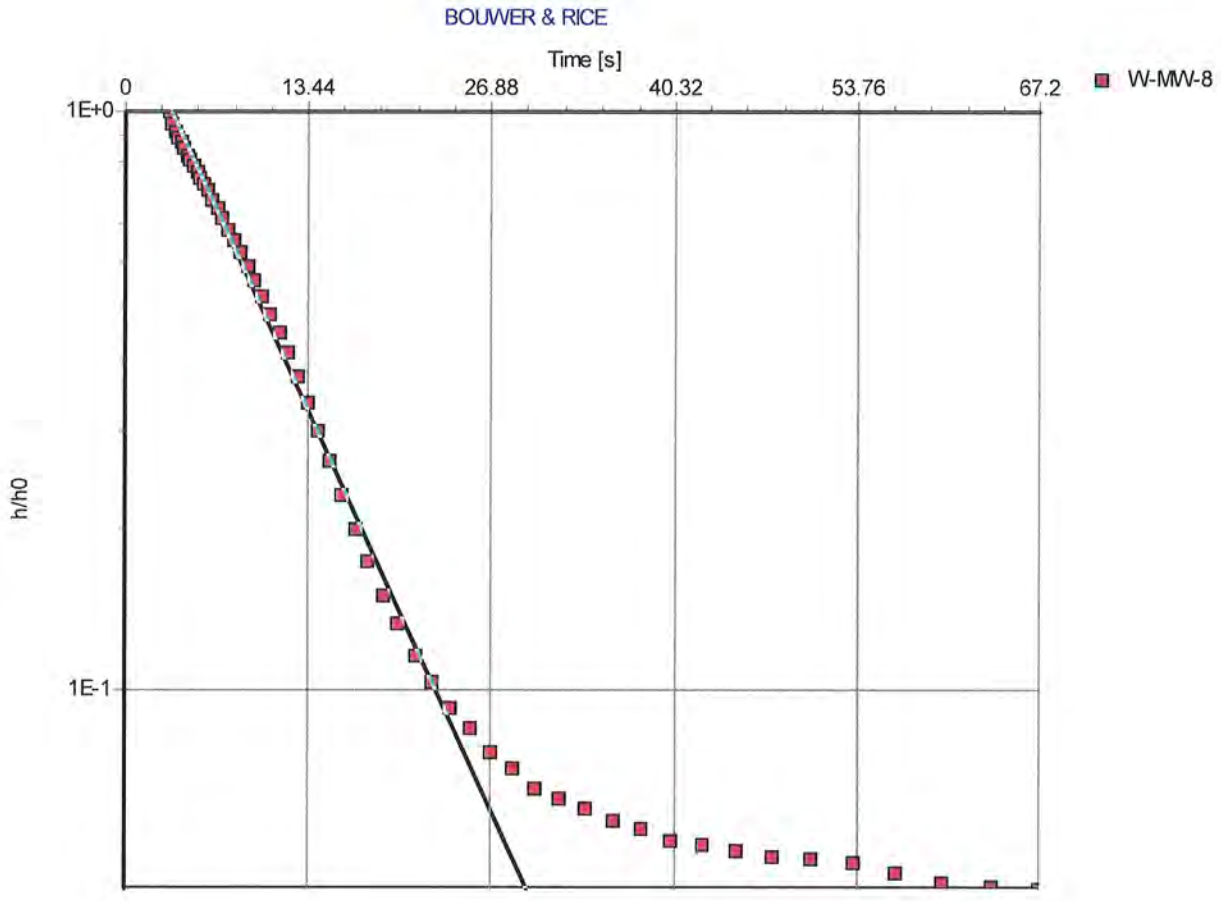
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-8 Slug Out	Test well:	W-MW-8
Test performed by:	Jeff Steiner		Evaluated by:	Jeff Steiner	
Test date:	7/16/2014		Evaluation date:	8/25/2014	
Analysis method:	BOUWER & RICE		Aquifer thickness:	9 [ft]	



Conductivity: 1.23×10^-4 [ft/s]

Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

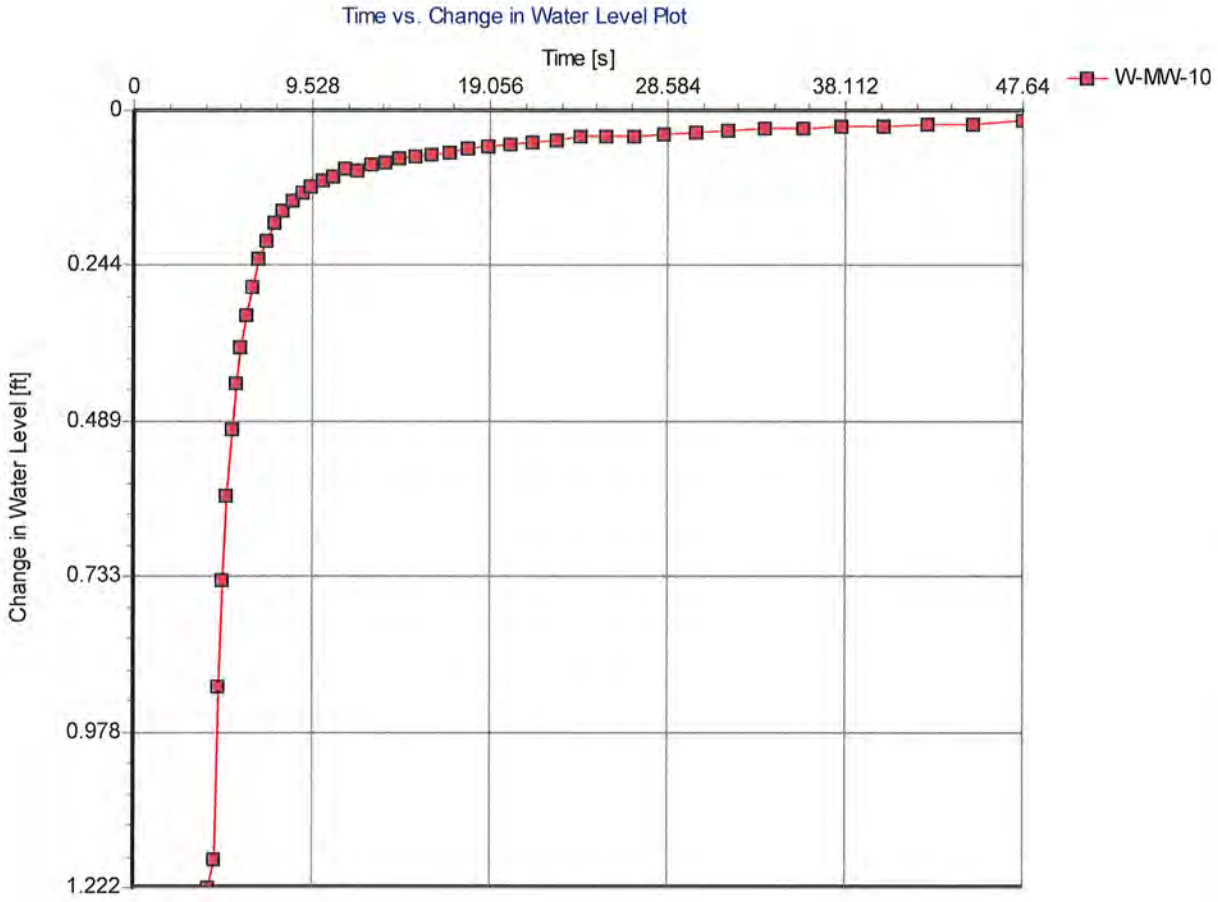
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-10 Slug Out	Test well:	W-MW-10
Test performed by:	Jeff Steiner		Evaluated by:	Jeff Steiner	
Test date:	7/16/2014		Evaluation date:	8/25/2014	
Analysis method:	Time vs. Change in waterlevel plot		Aquifer thickness:	10 [ft]	



Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

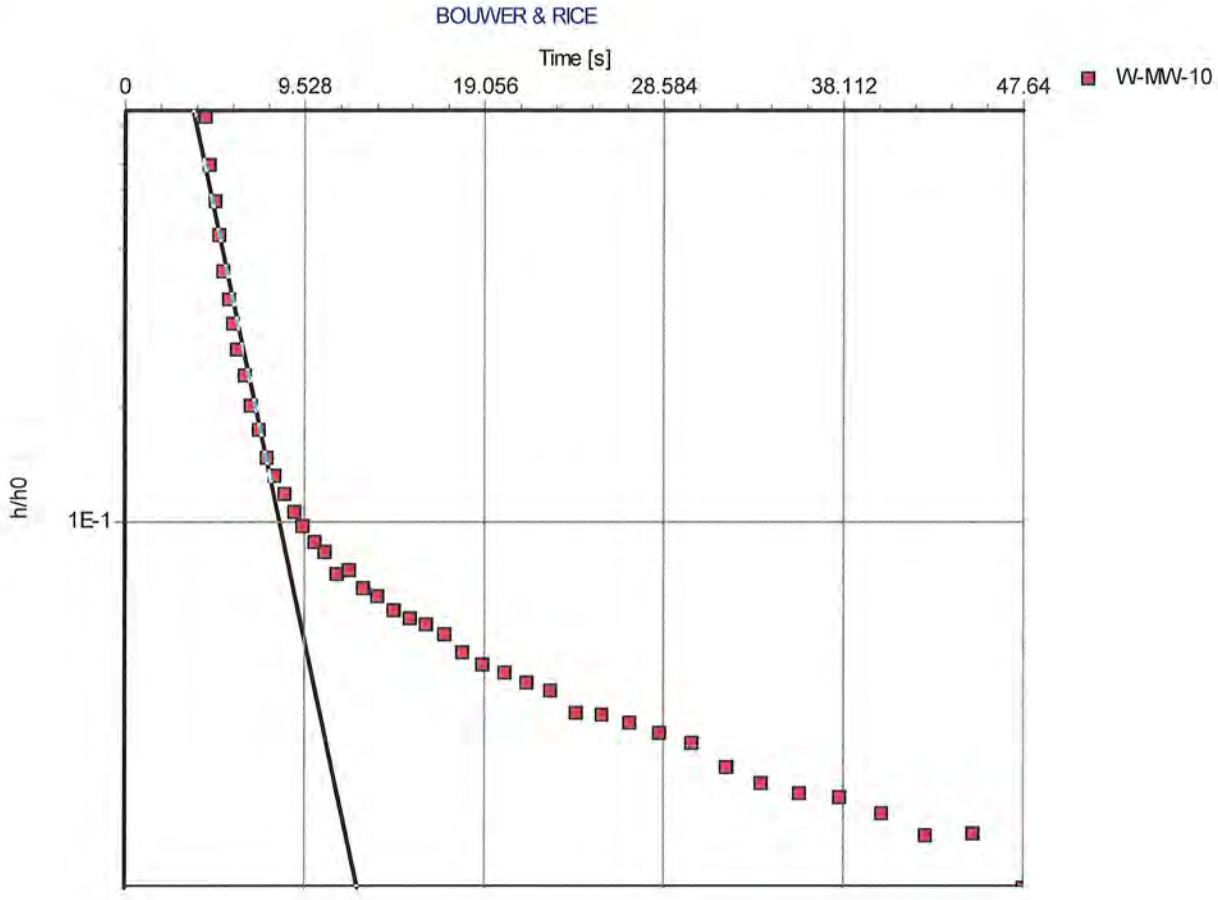
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-10 Slug Out	Test well:	W-MW-10
Test performed by:	Jeff Steiner	Evaluated by:	Jeff Steiner		
Test date:	7/16/2014	Evaluation date:	8/25/2014		
Analysis method:	BOUWER & RICE	Aquifer thickness:	10 [ft]		



Conductivity: 4.79×10^-4 [ft/s]

Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

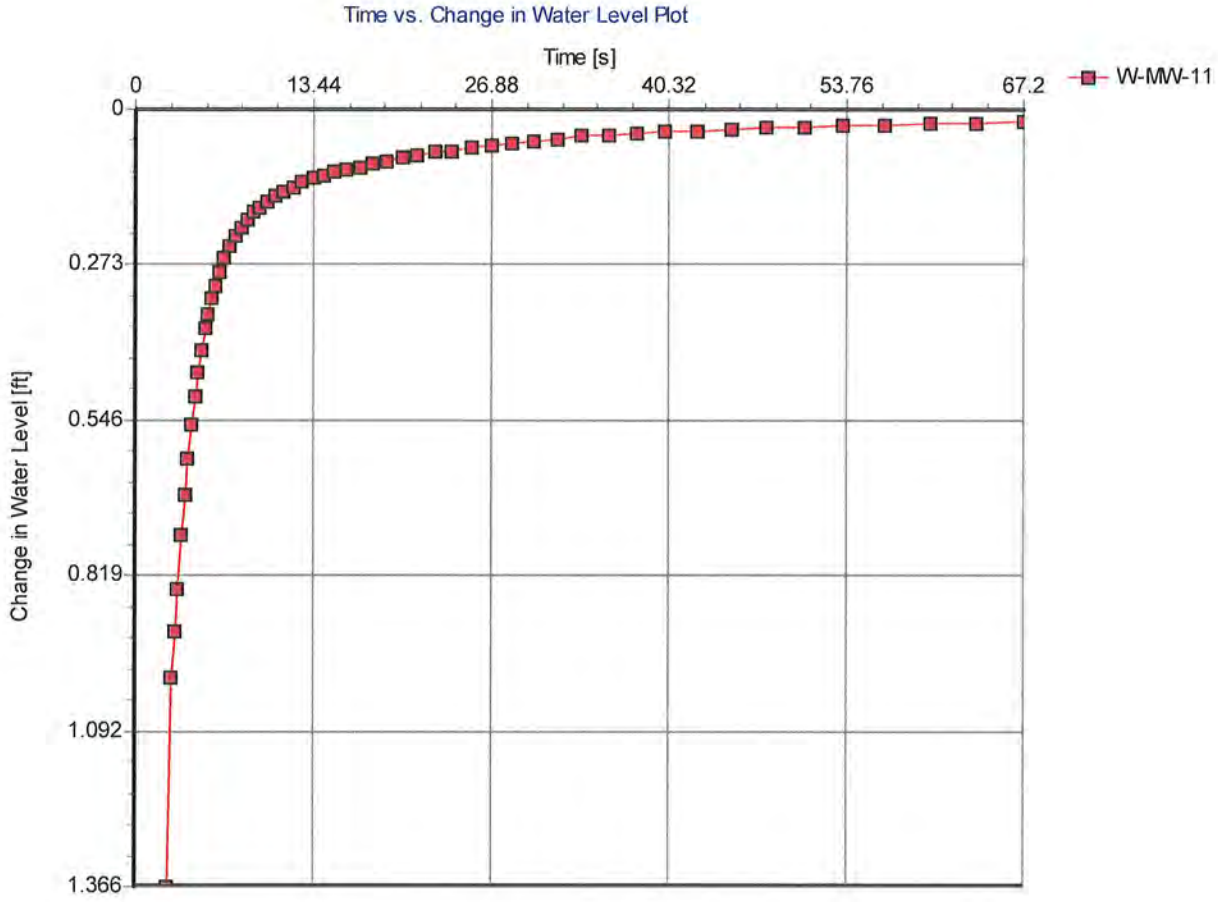
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-11 Slug Out	Test well:	W-MW-11
Test performed by:	Jeff Steiner		Evaluated by:	Jeff Steiner	
Test date:	7/16/2014		Evaluation date:	8/25/2014	
Analysis method:	Time vs. Change in waterlevel plot		Aquifer thickness:	9 [ft]	



Ayres Associates Inc
5201 E. Terrace Drive, Suite 200
Madison, Wisconsin 53718
Phone: 608-443-1200

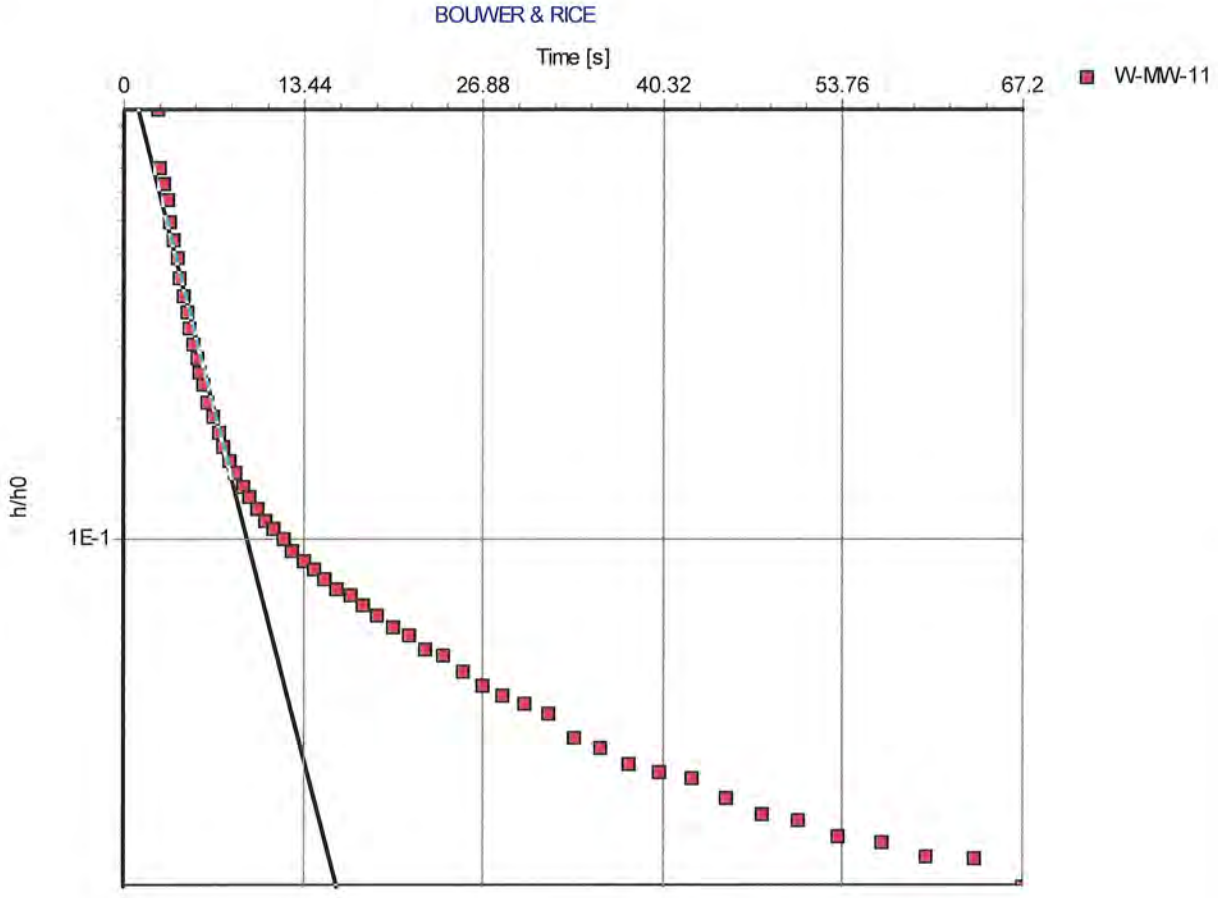
Slug test analysis

No:

Project: West Waterfront Redevelopment

Client:

Location:		Slug test:	W-MW-11 Slug Out	Test well:	W-MW-11
Test performed by:	Jeff Steiner	Evaluated by:	Jeff Steiner		
Test date:	7/16/2014	Evaluation date:	8/25/2014		
Analysis method:	BOUWER & RICE	Aquifer thickness:	9 [ft]		



Conductivity: 2.90×10^-4 [ft/s]

Appendix C

Laboratory Analytical Reports for Soil Samples

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

June 04, 2015

Jeff Steiner
AYRES & ASSOCIATES, INC.
5201 E. Terrace Dr., Suite 200
Madison, WI 53718

RE: Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Dear Jeff Steiner:
Enclosed are the analytical results for sample(s) received by the laboratory on May 20, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40115043001	**WMW-12 0-2.5**	Solid	05/18/15 09:45	05/20/15 09:15
40115043002	**WMW-13 0-2.5**	Solid	05/18/15 11:35	05/20/15 09:15
40115043003	**WMW-14 2.5-5**	Solid	05/18/15 13:05	05/20/15 09:15
40115043004	**WMW-15 0-2.5**	Solid	05/18/15 14:55	05/20/15 09:15
40115043005	**WMW-16 2.5-5**	Solid	05/18/15 16:40	05/20/15 09:15
40115043006	**WGP-14 0-2.5**	Solid	05/19/15 10:30	05/20/15 09:15
40115043007	**WGP-15 0-2.5**	Solid	05/19/15 10:40	05/20/15 09:15
40115043008	**WGP-13 0-2.5**	Solid	05/19/15 11:05	05/20/15 09:15
40115043009	**MEOH BLANK**	Solid	05/19/15 00:00	05/20/15 09:15

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

SAMPLE ANALYTE COUNT

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40115043001	**WMW-12 0-2.5**	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	RJN	20	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40115043002	**WMW-13 0-2.5**	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	RJN	20	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40115043003	**WMW-14 2.5-5**	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	RJN	20	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40115043004	**WMW-15 0-2.5**	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	ARO	20	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40115043005	**WMW-16 2.5-5**	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	RJN	20	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40115043006	**WGP-14 0-2.5**	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	RJN	20	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40115043007	**WGP-15 0-2.5**	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	RJN	20	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40115043008	**WGP-13 0-2.5**	EPA 6010	DLB	7	PASI-G
		EPA 7471	AJT	1	PASI-G

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SAMPLE ANALYTE COUNT

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270 by SIM	RJN	20	PASI-G
		EPA 8260	SMT	64	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40115043009	**MEOH BLANK**	EPA 8260	SMT	64	PASI-G

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SUMMARY OF DETECTION

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40115043001	**WMW-12 0-2.5**					
EPA 6010	Arsenic	4.3	mg/kg	2.4	05/29/15 15:53	
EPA 6010	Barium	68.5	mg/kg	0.61	05/29/15 15:53	M0
EPA 6010	Cadmium	2.6	mg/kg	0.61	05/29/15 15:53	
EPA 6010	Chromium	13.7	mg/kg	0.61	05/29/15 15:53	
EPA 6010	Lead	70.6	mg/kg	1.2	05/29/15 15:53	M0
EPA 7471	Mercury	0.043	mg/kg	0.0076	05/22/15 12:34	
EPA 8270 by SIM	Acenaphthylene	4920	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Anthracene	3530	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Benzo(a)anthracene	6700	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Benzo(a)pyrene	8600	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Benzo(b)fluoranthene	8150	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Benzo(g,h,i)perylene	5680	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Benzo(k)fluoranthene	7410	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Chrysene	8100	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Dibenz(a,h)anthracene	1990	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Fluoranthene	10600	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Fluorene	337J	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	5260	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	2-Methylnaphthalene	232J	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Naphthalene	300J	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Phenanthrene	3640	ug/kg	405	05/27/15 23:45	
EPA 8270 by SIM	Pyrene	9030	ug/kg	405	05/27/15 23:45	
ASTM D2974-87	Percent Moisture	17.6	%	0.10	06/03/15 06:24	
40115043002	**WMW-13 0-2.5**					
EPA 6010	Arsenic	2.7	mg/kg	1.9	05/29/15 16:05	
EPA 6010	Barium	26.1	mg/kg	0.48	05/29/15 16:05	
EPA 6010	Cadmium	0.16J	mg/kg	0.48	05/29/15 16:05	
EPA 6010	Chromium	8.7	mg/kg	0.48	05/29/15 16:05	
EPA 6010	Lead	177	mg/kg	0.97	05/29/15 16:05	
EPA 7471	Mercury	0.028	mg/kg	0.0055	05/22/15 12:37	
EPA 8270 by SIM	Acenaphthene	1490	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Anthracene	5400	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Benzo(a)anthracene	9850	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Benzo(a)pyrene	7170	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Benzo(b)fluoranthene	6750	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Benzo(g,h,i)perylene	2600	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Benzo(k)fluoranthene	6940	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Chrysene	10500	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Dibenz(a,h)anthracene	1180	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Fluoranthene	22600	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Fluorene	1910	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	2840	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Naphthalene	385J	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Phenanthrene	15200	ug/kg	712	05/28/15 10:58	
EPA 8270 by SIM	Pyrene	16700	ug/kg	712	05/28/15 10:58	
EPA 8260	Naphthalene	9230	ug/kg	1070	05/22/15 05:28	
ASTM D2974-87	Percent Moisture	6.4	%	0.10	06/03/15 06:24	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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SUMMARY OF DETECTION

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40115043003	**WMW-14 2.5-5**					
EPA 6010	Arsenic	2.3	mg/kg	2.2	05/29/15 16:07	
EPA 6010	Barium	26.5	mg/kg	0.54	05/29/15 16:07	
EPA 6010	Chromium	10.8	mg/kg	0.54	05/29/15 16:07	
EPA 6010	Lead	22.5	mg/kg	1.1	05/29/15 16:07	
EPA 7471	Mercury	0.084	mg/kg	0.0070	05/22/15 12:39	
EPA 8270 by SIM	Acenaphthylene	97.1	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Anthracene	75.6	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Benzo(a)anthracene	140	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Benzo(a)pyrene	216	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Benzo(b)fluoranthene	148	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Benzo(g,h,i)perylene	244	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Benzo(k)fluoranthene	138	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Chrysene	184	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Dibenz(a,h)anthracene	51.8	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Fluoranthene	160	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	137	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	1-Methylnaphthalene	22.3J	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	2-Methylnaphthalene	33.3J	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Naphthalene	26.3J	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Phenanthrene	55.9	ug/kg	36.7	05/28/15 17:34	
EPA 8270 by SIM	Pyrene	321	ug/kg	36.7	05/28/15 17:34	
ASTM D2974-87	Percent Moisture	9.2	%	0.10	06/03/15 06:24	
40115043004	**WMW-15 0-2.5**					
EPA 6010	Arsenic	3.2J	mg/kg	9.8	06/02/15 11:07	D3
EPA 6010	Barium	25.9	mg/kg	0.49	05/29/15 16:10	
EPA 6010	Cadmium	0.086J	mg/kg	0.49	05/29/15 16:10	
EPA 6010	Chromium	9.7	mg/kg	0.49	05/29/15 16:10	
EPA 6010	Lead	14.9	mg/kg	0.98	05/29/15 16:10	
EPA 7471	Mercury	0.029	mg/kg	0.0062	05/22/15 12:41	
EPA 8270 by SIM	Acenaphthylene	13.6J	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Anthracene	17.4J	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Benzo(a)anthracene	58.8	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Benzo(a)pyrene	81.2	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Benzo(b)fluoranthene	42.4	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Benzo(g,h,i)perylene	102	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Benzo(k)fluoranthene	37.3	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Chrysene	91.4	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Dibenz(a,h)anthracene	18.5	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Fluoranthene	67.7	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	36.3	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Phenanthrene	15.9J	ug/kg	18.1	06/02/15 18:15	
EPA 8270 by SIM	Pyrene	242	ug/kg	18.1	06/02/15 18:15	
ASTM D2974-87	Percent Moisture	8.1	%	0.10	06/03/15 06:24	
40115043005	**WMW-16 2.5-5**					
EPA 6010	Arsenic	4.9	mg/kg	1.9	05/29/15 16:12	
EPA 6010	Barium	33.0	mg/kg	0.48	05/29/15 16:12	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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SUMMARY OF DETECTION

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40115043005	**WMW-16 2.5-5**					
EPA 6010	Cadmium	0.13J	mg/kg	0.48	05/29/15 16:12	
EPA 6010	Chromium	10	mg/kg	0.48	05/29/15 16:12	
EPA 6010	Lead	39.9	mg/kg	0.96	05/29/15 16:12	
EPA 7471	Mercury	0.031	mg/kg	0.0058	05/22/15 12:48	
EPA 8270 by SIM	Acenaphthene	469	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Anthracene	1220	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Benzo(a)anthracene	1550	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Benzo(a)pyrene	1400	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Benzo(b)fluoranthene	1390	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Benzo(g,h,i)perylene	763	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Benzo(k)fluoranthene	1200	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Chrysene	1830	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Dibenz(a,h)anthracene	288J	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Fluoranthene	4730	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Fluorene	508	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	760	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Phenanthrene	4120	ug/kg	368	05/28/15 01:28	
EPA 8270 by SIM	Pyrene	3540	ug/kg	368	05/28/15 01:28	
ASTM D2974-87	Percent Moisture	9.4	%	0.10	06/03/15 06:24	
40115043006	**WGP-14 0-2.5**					
EPA 6010	Arsenic	4.7	mg/kg	2.2	05/29/15 16:14	
EPA 6010	Barium	48.4	mg/kg	0.55	05/29/15 16:14	
EPA 6010	Cadmium	0.079J	mg/kg	0.55	05/29/15 16:14	
EPA 6010	Chromium	21.1	mg/kg	0.55	05/29/15 16:14	
EPA 6010	Lead	26.6	mg/kg	1.1	05/29/15 16:14	
EPA 7471	Mercury	0.042	mg/kg	0.0062	05/22/15 12:51	
EPA 8270 by SIM	Acenaphthylene	282	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Anthracene	214	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Benzo(a)anthracene	521	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Benzo(a)pyrene	673	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Benzo(b)fluoranthene	527	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Benzo(g,h,i)perylene	533	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Benzo(k)fluoranthene	578	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Chrysene	610	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Dibenz(a,h)anthracene	150	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Fluoranthene	788	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	424	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Phenanthrene	231	ug/kg	76.5	05/28/15 17:52	
EPA 8270 by SIM	Pyrene	769	ug/kg	76.5	05/28/15 17:52	
ASTM D2974-87	Percent Moisture	12.9	%	0.10	06/03/15 06:24	
40115043007	**WGP-15 0-2.5**					
EPA 6010	Arsenic	2.7	mg/kg	2.0	05/29/15 16:17	
EPA 6010	Barium	26.1	mg/kg	0.50	05/29/15 16:17	
EPA 6010	Cadmium	0.10J	mg/kg	0.50	05/29/15 16:17	
EPA 6010	Chromium	8.5	mg/kg	0.50	05/29/15 16:17	
EPA 6010	Lead	20.1	mg/kg	1.0	05/29/15 16:17	

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SUMMARY OF DETECTION

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40115043007	**WGP-15 0-2.5**					
EPA 7471	Mercury	0.034	mg/kg	0.0065	05/22/15 12:53	
EPA 8270 by SIM	Anthracene	18.1J	ug/kg	18.2	05/28/15 19:17	
EPA 8270 by SIM	Benzo(a)anthracene	38.2	ug/kg	18.2	05/28/15 19:17	
EPA 8270 by SIM	Benzo(a)pyrene	38.6	ug/kg	18.2	05/28/15 19:17	
EPA 8270 by SIM	Benzo(b)fluoranthene	32.6	ug/kg	18.2	05/28/15 19:17	
EPA 8270 by SIM	Benzo(g,h,i)perylene	31.5	ug/kg	18.2	05/28/15 19:17	
EPA 8270 by SIM	Benzo(k)fluoranthene	34.0	ug/kg	18.2	05/28/15 19:17	
EPA 8270 by SIM	Chrysene	43.4	ug/kg	18.2	05/28/15 19:17	
EPA 8270 by SIM	Dibenz(a,h)anthracene	9.5J	ug/kg	18.2	05/28/15 19:17	
EPA 8270 by SIM	Fluoranthene	84.8	ug/kg	18.2	05/28/15 19:17	R1
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	23.8	ug/kg	18.2	05/28/15 19:17	
EPA 8270 by SIM	2-Methylnaphthalene	11.4J	ug/kg	18.2	05/28/15 19:17	
EPA 8270 by SIM	Phenanthrene	62.0	ug/kg	18.2	05/28/15 19:17	
EPA 8270 by SIM	Pyrene	70.7	ug/kg	18.2	05/28/15 19:17	
ASTM D2974-87	Percent Moisture	8.6	%	0.10	06/03/15 06:24	
40115043008	**WGP-13 0-2.5**					
EPA 6010	Arsenic	4.4	mg/kg	2.1	05/29/15 16:19	
EPA 6010	Barium	193	mg/kg	0.52	05/29/15 16:19	
EPA 6010	Cadmium	0.32J	mg/kg	0.52	05/29/15 16:19	
EPA 6010	Chromium	10.6	mg/kg	0.52	05/29/15 16:19	
EPA 6010	Lead	69.8	mg/kg	1.0	05/29/15 16:19	
EPA 7471	Mercury	0.032	mg/kg	0.0071	05/22/15 12:55	
EPA 8270 by SIM	Acenaphthylene	634	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Anthracene	671	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Benzo(a)anthracene	1010	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Benzo(a)pyrene	948	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Benzo(b)fluoranthene	797	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Benzo(g,h,i)perylene	555	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Benzo(k)fluoranthene	859	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Chrysene	1180	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Dibenz(a,h)anthracene	196J	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Fluoranthene	2110	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Fluorene	236J	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Indeno(1,2,3-cd)pyrene	505	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	2-Methylnaphthalene	198J	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Phenanthrene	1860	ug/kg	364	05/28/15 02:03	
EPA 8270 by SIM	Pyrene	1830	ug/kg	364	05/28/15 02:03	
ASTM D2974-87	Percent Moisture	8.3	%	0.10	06/03/15 06:24	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-12 0-2.5 **Lab ID: 40115043001** Collected: 05/18/15 09:45 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.3**	mg/kg	2.4	0.77	1	05/28/15 16:22	05/29/15 15:53	7440-38-2	
Barium	**68.5**	mg/kg	0.61	0.14	1	05/28/15 16:22	05/29/15 15:53	7440-39-3	M0
Cadmium	**2.6**	mg/kg	0.61	0.080	1	05/28/15 16:22	05/29/15 15:53	7440-43-9	
Chromium	**13.7**	mg/kg	0.61	0.24	1	05/28/15 16:22	05/29/15 15:53	7440-47-3	
Lead	**70.6**	mg/kg	1.2	0.52	1	05/28/15 16:22	05/29/15 15:53	7439-92-1	M0
Selenium	**<0.94**	mg/kg	2.4	0.94	1	05/28/15 16:22	05/29/15 15:53	7782-49-2	
Silver	**<0.34**	mg/kg	1.2	0.34	1	05/28/15 16:22	05/29/15 15:53	7440-22-4	1q
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.043**	mg/kg	0.0076	0.0038	1	05/22/15 10:05	05/22/15 12:34	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<202**	ug/kg	405	202	20	05/26/15 13:30	05/27/15 23:45	83-32-9	
Acenaphthylene	**4920**	ug/kg	405	181	20	05/26/15 13:30	05/27/15 23:45	208-96-8	
Anthracene	**3530**	ug/kg	405	210	20	05/26/15 13:30	05/27/15 23:45	120-12-7	
Benzo(a)anthracene	**6700**	ug/kg	405	140	20	05/26/15 13:30	05/27/15 23:45	56-55-3	
Benzo(a)pyrene	**8600**	ug/kg	405	145	20	05/26/15 13:30	05/27/15 23:45	50-32-8	
Benzo(b)fluoranthene	**8150**	ug/kg	405	202	20	05/26/15 13:30	05/27/15 23:45	205-99-2	
Benzo(g,h,i)perylene	**5680**	ug/kg	405	154	20	05/26/15 13:30	05/27/15 23:45	191-24-2	
Benzo(k)fluoranthene	**7410**	ug/kg	405	224	20	05/26/15 13:30	05/27/15 23:45	207-08-9	
Chrysene	**8100**	ug/kg	405	187	20	05/26/15 13:30	05/27/15 23:45	218-01-9	
Dibenz(a,h)anthracene	**1990**	ug/kg	405	148	20	05/26/15 13:30	05/27/15 23:45	53-70-3	
Fluoranthene	**10600**	ug/kg	405	202	20	05/26/15 13:30	05/27/15 23:45	206-44-0	
Fluorene	**337J**	ug/kg	405	202	20	05/26/15 13:30	05/27/15 23:45	86-73-7	
Indeno(1,2,3-cd)pyrene	**5260**	ug/kg	405	154	20	05/26/15 13:30	05/27/15 23:45	193-39-5	
1-Methylnaphthalene	**<202**	ug/kg	405	202	20	05/26/15 13:30	05/27/15 23:45	90-12-0	
2-Methylnaphthalene	**232J**	ug/kg	405	202	20	05/26/15 13:30	05/27/15 23:45	91-57-6	
Naphthalene	**300J**	ug/kg	405	202	20	05/26/15 13:30	05/27/15 23:45	91-20-3	
Phenanthrene	**3640**	ug/kg	405	202	20	05/26/15 13:30	05/27/15 23:45	85-01-8	
Pyrene	**9030**	ug/kg	405	202	20	05/26/15 13:30	05/27/15 23:45	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	62	%	39-130		20	05/26/15 13:30	05/27/15 23:45	321-60-8	
Terphenyl-d14 (S)	70	%	37-130		20	05/26/15 13:30	05/27/15 23:45	1718-51-0	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	05/21/15 08:00	05/22/15 00:28	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	56-23-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-12 0-2.5 **Lab ID: 40115043001** Collected: 05/18/15 09:45 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	05/21/15 08:00	05/22/15 00:28	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	05/21/15 08:00	05/22/15 00:28	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	05/21/15 08:00	05/22/15 00:28	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	1634-04-4	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	05/21/15 08:00	05/22/15 00:28	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	100-42-5	W
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	05/21/15 08:00	05/22/15 00:28	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	75-69-4	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-12 0-2.5 **Lab ID: 40115043001** Collected: 05/18/15 09:45 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	75-01-4	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	05/21/15 08:00	05/22/15 00:28	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:28	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	102	%	49-157		1	05/21/15 08:00	05/22/15 00:28	1868-53-7	
Toluene-d8 (S)	98	%	61-148		1	05/21/15 08:00	05/22/15 00:28	2037-26-5	
4-Bromofluorobenzene (S)	86	%	53-134		1	05/21/15 08:00	05/22/15 00:28	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.6**	%	0.10	0.10	1		06/03/15 06:24		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-13 0-2.5 **Lab ID: 40115043002** Collected: 05/18/15 11:35 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**2.7**	mg/kg	1.9	0.62	1	05/28/15 16:22	05/29/15 16:05	7440-38-2	
Barium	**26.1**	mg/kg	0.48	0.12	1	05/28/15 16:22	05/29/15 16:05	7440-39-3	
Cadmium	**0.16J**	mg/kg	0.48	0.064	1	05/28/15 16:22	05/29/15 16:05	7440-43-9	
Chromium	**8.7**	mg/kg	0.48	0.19	1	05/28/15 16:22	05/29/15 16:05	7440-47-3	
Lead	**177**	mg/kg	0.97	0.42	1	05/28/15 16:22	05/29/15 16:05	7439-92-1	
Selenium	**<0.75**	mg/kg	1.9	0.75	1	05/28/15 16:22	05/29/15 16:05	7782-49-2	
Silver	**<0.27**	mg/kg	0.97	0.27	1	05/28/15 16:22	05/29/15 16:05	7440-22-4	1q
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.028**	mg/kg	0.0055	0.0028	1	05/22/15 10:05	05/22/15 12:37	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**1490**	ug/kg	712	356	40	05/26/15 13:30	05/28/15 10:58	83-32-9	
Acenaphthylene	**<319**	ug/kg	712	319	40	05/26/15 13:30	05/28/15 10:58	208-96-8	
Anthracene	**5400**	ug/kg	712	369	40	05/26/15 13:30	05/28/15 10:58	120-12-7	
Benzo(a)anthracene	**9850**	ug/kg	712	247	40	05/26/15 13:30	05/28/15 10:58	56-55-3	
Benzo(a)pyrene	**7170**	ug/kg	712	255	40	05/26/15 13:30	05/28/15 10:58	50-32-8	
Benzo(b)fluoranthene	**6750**	ug/kg	712	356	40	05/26/15 13:30	05/28/15 10:58	205-99-2	
Benzo(g,h,i)perylene	**2600**	ug/kg	712	271	40	05/26/15 13:30	05/28/15 10:58	191-24-2	
Benzo(k)fluoranthene	**6940**	ug/kg	712	394	40	05/26/15 13:30	05/28/15 10:58	207-08-9	
Chrysene	**10500**	ug/kg	712	329	40	05/26/15 13:30	05/28/15 10:58	218-01-9	
Dibenz(a,h)anthracene	**1180**	ug/kg	712	261	40	05/26/15 13:30	05/28/15 10:58	53-70-3	
Fluoranthene	**22600**	ug/kg	712	356	40	05/26/15 13:30	05/28/15 10:58	206-44-0	
Fluorene	**1910**	ug/kg	712	356	40	05/26/15 13:30	05/28/15 10:58	86-73-7	
Indeno(1,2,3-cd)pyrene	**2840**	ug/kg	712	271	40	05/26/15 13:30	05/28/15 10:58	193-39-5	
1-Methylnaphthalene	**<356**	ug/kg	712	356	40	05/26/15 13:30	05/28/15 10:58	90-12-0	
2-Methylnaphthalene	**<356**	ug/kg	712	356	40	05/26/15 13:30	05/28/15 10:58	91-57-6	
Naphthalene	**385J**	ug/kg	712	356	40	05/26/15 13:30	05/28/15 10:58	91-20-3	
Phenanthrene	**15200**	ug/kg	712	356	40	05/26/15 13:30	05/28/15 10:58	85-01-8	
Pyrene	**16700**	ug/kg	712	356	40	05/26/15 13:30	05/28/15 10:58	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	38	%	39-130		40	05/26/15 13:30	05/28/15 10:58	321-60-8	S4
Terphenyl-d14 (S)	45	%	37-130		40	05/26/15 13:30	05/28/15 10:58	1718-51-0	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	71-43-2	W
Bromobenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	108-86-1	W
Bromochloromethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	74-97-5	W
Bromodichloromethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	75-27-4	W
Bromoform	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	75-25-2	W
Bromomethane	**<280**	ug/kg	1000	280	4	05/21/15 08:00	05/22/15 05:28	74-83-9	W
n-Butylbenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	104-51-8	W
sec-Butylbenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	135-98-8	W
tert-Butylbenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	98-06-6	W
Carbon tetrachloride	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	56-23-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-13 0-2.5 **Lab ID: 40115043002** Collected: 05/18/15 11:35 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chlorobenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	108-90-7	W
Chloroethane	**<268**	ug/kg	1000	268	4	05/21/15 08:00	05/22/15 05:28	75-00-3	W
Chloroform	**<186**	ug/kg	1000	186	4	05/21/15 08:00	05/22/15 05:28	67-66-3	W
Chloromethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	74-87-3	W
2-Chlorotoluene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	95-49-8	W
4-Chlorotoluene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	106-43-4	W
1,2-Dibromo-3-chloropropane	**<365**	ug/kg	1000	365	4	05/21/15 08:00	05/22/15 05:28	96-12-8	W
Dibromochloromethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	124-48-1	W
1,2-Dibromoethane (EDB)	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	106-93-4	W
Dibromomethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	74-95-3	W
1,2-Dichlorobenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	95-50-1	W
1,3-Dichlorobenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	541-73-1	W
1,4-Dichlorobenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	106-46-7	W
Dichlorodifluoromethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	75-71-8	W
1,1-Dichloroethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	75-34-3	W
1,2-Dichloroethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	107-06-2	W
1,1-Dichloroethene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	75-35-4	W
cis-1,2-Dichloroethene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	156-59-2	W
trans-1,2-Dichloroethene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	156-60-5	W
1,2-Dichloropropane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	78-87-5	W
1,3-Dichloropropane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	142-28-9	W
2,2-Dichloropropane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	594-20-7	W
1,1-Dichloropropene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	563-58-6	W
cis-1,3-Dichloropropene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	10061-01-5	W
trans-1,3-Dichloropropene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	10061-02-6	W
Diisopropyl ether	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	108-20-3	W
Ethylbenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	100-41-4	W
Hexachloro-1,3-butadiene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	87-68-3	W
Isopropylbenzene (Cumene)	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	98-82-8	W
p-Isopropyltoluene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	99-87-6	W
Methylene Chloride	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	75-09-2	W
Methyl-tert-butyl ether	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	1634-04-4	W
Naphthalene	**9230**	ug/kg	1070	171	4	05/21/15 08:00	05/22/15 05:28	91-20-3	
n-Propylbenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	103-65-1	W
Styrene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	100-42-5	W
1,1,1,2-Tetrachloroethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	630-20-6	W
1,1,2,2-Tetrachloroethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	79-34-5	W
Tetrachloroethene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	127-18-4	W
Toluene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	108-88-3	W
1,2,3-Trichlorobenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	87-61-6	W
1,2,4-Trichlorobenzene	**<190**	ug/kg	1000	190	4	05/21/15 08:00	05/22/15 05:28	120-82-1	W
1,1,1-Trichloroethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	71-55-6	W
1,1,2-Trichloroethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	79-00-5	W
Trichloroethene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	79-01-6	W
Trichlorofluoromethane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	75-69-4	W

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-13 0-2.5 **Lab ID: 40115043002** Collected: 05/18/15 11:35 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2,3-Trichloropropane	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	96-18-4	W
1,2,4-Trimethylbenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	95-63-6	W
1,3,5-Trimethylbenzene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	108-67-8	W
Vinyl chloride	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	75-01-4	W
m&p-Xylene	**<200**	ug/kg	480	200	4	05/21/15 08:00	05/22/15 05:28	179601-23-1	W
o-Xylene	**<100**	ug/kg	240	100	4	05/21/15 08:00	05/22/15 05:28	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	98	%	49-157		4	05/21/15 08:00	05/22/15 05:28	1868-53-7	
Toluene-d8 (S)	92	%	61-148		4	05/21/15 08:00	05/22/15 05:28	2037-26-5	
4-Bromofluorobenzene (S)	84	%	53-134		4	05/21/15 08:00	05/22/15 05:28	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**6.4**	%	0.10	0.10	1		06/03/15 06:24		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-14 2.5-5 **Lab ID: 40115043003** Collected: 05/18/15 13:05 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**2.3**	mg/kg	2.2	0.69	1	05/28/15 16:22	05/29/15 16:07	7440-38-2	
Barium	**26.5**	mg/kg	0.54	0.13	1	05/28/15 16:22	05/29/15 16:07	7440-39-3	
Cadmium	**<0.072**	mg/kg	0.54	0.072	1	05/28/15 16:22	05/29/15 16:07	7440-43-9	
Chromium	**10.8**	mg/kg	0.54	0.21	1	05/28/15 16:22	05/29/15 16:07	7440-47-3	
Lead	**22.5**	mg/kg	1.1	0.47	1	05/28/15 16:22	05/29/15 16:07	7439-92-1	
Selenium	**<0.84**	mg/kg	2.2	0.84	1	05/28/15 16:22	05/29/15 16:07	7782-49-2	
Silver	**<0.30**	mg/kg	1.1	0.30	1	05/28/15 16:22	05/29/15 16:07	7440-22-4	1q
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.084**	mg/kg	0.0070	0.0035	1	05/22/15 10:05	05/22/15 12:39	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<18.4**	ug/kg	36.7	18.4	2	05/26/15 13:30	05/28/15 17:34	83-32-9	
Acenaphthylene	**97.1**	ug/kg	36.7	16.4	2	05/26/15 13:30	05/28/15 17:34	208-96-8	
Anthracene	**75.6**	ug/kg	36.7	19.0	2	05/26/15 13:30	05/28/15 17:34	120-12-7	
Benzo(a)anthracene	**140**	ug/kg	36.7	12.7	2	05/26/15 13:30	05/28/15 17:34	56-55-3	
Benzo(a)pyrene	**216**	ug/kg	36.7	13.1	2	05/26/15 13:30	05/28/15 17:34	50-32-8	
Benzo(b)fluoranthene	**148**	ug/kg	36.7	18.4	2	05/26/15 13:30	05/28/15 17:34	205-99-2	
Benzo(g,h,i)perylene	**244**	ug/kg	36.7	14.0	2	05/26/15 13:30	05/28/15 17:34	191-24-2	
Benzo(k)fluoranthene	**138**	ug/kg	36.7	20.3	2	05/26/15 13:30	05/28/15 17:34	207-08-9	
Chrysene	**184**	ug/kg	36.7	17.0	2	05/26/15 13:30	05/28/15 17:34	218-01-9	
Dibenz(a,h)anthracene	**51.8**	ug/kg	36.7	13.5	2	05/26/15 13:30	05/28/15 17:34	53-70-3	
Fluoranthene	**160**	ug/kg	36.7	18.4	2	05/26/15 13:30	05/28/15 17:34	206-44-0	
Fluorene	**<18.4**	ug/kg	36.7	18.4	2	05/26/15 13:30	05/28/15 17:34	86-73-7	
Indeno(1,2,3-cd)pyrene	**137**	ug/kg	36.7	13.9	2	05/26/15 13:30	05/28/15 17:34	193-39-5	
1-Methylnaphthalene	**22.3J**	ug/kg	36.7	18.4	2	05/26/15 13:30	05/28/15 17:34	90-12-0	
2-Methylnaphthalene	**33.3J**	ug/kg	36.7	18.4	2	05/26/15 13:30	05/28/15 17:34	91-57-6	
Naphthalene	**26.3J**	ug/kg	36.7	18.4	2	05/26/15 13:30	05/28/15 17:34	91-20-3	
Phenanthrene	**55.9**	ug/kg	36.7	18.4	2	05/26/15 13:30	05/28/15 17:34	85-01-8	
Pyrene	**321**	ug/kg	36.7	18.4	2	05/26/15 13:30	05/28/15 17:34	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	51	%	39-130		2	05/26/15 13:30	05/28/15 17:34	321-60-8	
Terphenyl-d14 (S)	53	%	37-130		2	05/26/15 13:30	05/28/15 17:34	1718-51-0	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	05/21/15 08:00	05/22/15 00:51	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	56-23-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-14 2.5-5 **Lab ID: 40115043003** Collected: 05/18/15 13:05 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	05/21/15 08:00	05/22/15 00:51	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	05/21/15 08:00	05/22/15 00:51	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	05/21/15 08:00	05/22/15 00:51	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	1634-04-4	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	05/21/15 08:00	05/22/15 00:51	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	100-42-5	W
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	05/21/15 08:00	05/22/15 00:51	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	75-69-4	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-14 2.5-5 **Lab ID: 40115043003** Collected: 05/18/15 13:05 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	75-01-4	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	05/21/15 08:00	05/22/15 00:51	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 00:51	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	106	%	49-157		1	05/21/15 08:00	05/22/15 00:51	1868-53-7	
Toluene-d8 (S)	101	%	61-148		1	05/21/15 08:00	05/22/15 00:51	2037-26-5	
4-Bromofluorobenzene (S)	86	%	53-134		1	05/21/15 08:00	05/22/15 00:51	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**9.2**	%	0.10	0.10	1		06/03/15 06:24		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-15 0-2.5 **Lab ID: 40115043004** Collected: 05/18/15 14:55 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**3.2J**	mg/kg	9.8	3.1	5	05/28/15 16:22	06/02/15 11:07	7440-38-2	D3
Barium	**25.9**	mg/kg	0.49	0.12	1	05/28/15 16:22	05/29/15 16:10	7440-39-3	
Cadmium	**0.086J**	mg/kg	0.49	0.065	1	05/28/15 16:22	05/29/15 16:10	7440-43-9	
Chromium	**9.7**	mg/kg	0.49	0.19	1	05/28/15 16:22	05/29/15 16:10	7440-47-3	
Lead	**14.9**	mg/kg	0.98	0.42	1	05/28/15 16:22	05/29/15 16:10	7439-92-1	
Selenium	**<0.76**	mg/kg	2.0	0.76	1	05/28/15 16:22	05/29/15 16:10	7782-49-2	
Silver	**<0.27**	mg/kg	0.98	0.27	1	05/28/15 16:22	05/29/15 16:10	7440-22-4	1q
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.029**	mg/kg	0.0062	0.0031	1	05/22/15 10:05	05/22/15 12:41	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<9.1**	ug/kg	18.1	9.1	1	06/01/15 09:52	06/02/15 18:15	83-32-9	
Acenaphthylene	**13.6J**	ug/kg	18.1	8.1	1	06/01/15 09:52	06/02/15 18:15	208-96-8	
Anthracene	**17.4J**	ug/kg	18.1	9.4	1	06/01/15 09:52	06/02/15 18:15	120-12-7	
Benzo(a)anthracene	**58.8**	ug/kg	18.1	6.3	1	06/01/15 09:52	06/02/15 18:15	56-55-3	
Benzo(a)pyrene	**81.2**	ug/kg	18.1	6.5	1	06/01/15 09:52	06/02/15 18:15	50-32-8	
Benzo(b)fluoranthene	**42.4**	ug/kg	18.1	9.1	1	06/01/15 09:52	06/02/15 18:15	205-99-2	
Benzo(g,h,i)perylene	**102**	ug/kg	18.1	6.9	1	06/01/15 09:52	06/02/15 18:15	191-24-2	
Benzo(k)fluoranthene	**37.3**	ug/kg	18.1	10.0	1	06/01/15 09:52	06/02/15 18:15	207-08-9	
Chrysene	**91.4**	ug/kg	18.1	8.4	1	06/01/15 09:52	06/02/15 18:15	218-01-9	
Dibenz(a,h)anthracene	**18.5**	ug/kg	18.1	6.7	1	06/01/15 09:52	06/02/15 18:15	53-70-3	
Fluoranthene	**67.7**	ug/kg	18.1	9.1	1	06/01/15 09:52	06/02/15 18:15	206-44-0	
Fluorene	**<9.1**	ug/kg	18.1	9.1	1	06/01/15 09:52	06/02/15 18:15	86-73-7	
Indeno(1,2,3-cd)pyrene	**36.3**	ug/kg	18.1	6.9	1	06/01/15 09:52	06/02/15 18:15	193-39-5	
1-Methylnaphthalene	**<9.1**	ug/kg	18.1	9.1	1	06/01/15 09:52	06/02/15 18:15	90-12-0	
2-Methylnaphthalene	**<9.1**	ug/kg	18.1	9.1	1	06/01/15 09:52	06/02/15 18:15	91-57-6	
Naphthalene	**<9.1**	ug/kg	18.1	9.1	1	06/01/15 09:52	06/02/15 18:15	91-20-3	
Phenanthrene	**15.9J**	ug/kg	18.1	9.1	1	06/01/15 09:52	06/02/15 18:15	85-01-8	
Pyrene	**242**	ug/kg	18.1	9.1	1	06/01/15 09:52	06/02/15 18:15	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	50	%	39-130		1	06/01/15 09:52	06/02/15 18:15	321-60-8	
Terphenyl-d14 (S)	47	%	37-130		1	06/01/15 09:52	06/02/15 18:15	1718-51-0	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	71-43-2	W
Bromobenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	108-86-1	W
Bromochloromethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	74-97-5	W
Bromodichloromethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	75-27-4	W
Bromoform	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	75-25-2	W
Bromomethane	**<72.1**	ug/kg	258	72.1	1	05/21/15 08:00	05/22/15 01:14	74-83-9	W
n-Butylbenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	104-51-8	W
sec-Butylbenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	135-98-8	W
tert-Butylbenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	98-06-6	W
Carbon tetrachloride	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	56-23-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-15 0-2.5 **Lab ID: 40115043004** Collected: 05/18/15 14:55 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chlorobenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	108-90-7	W
Chloroethane	**<69.1**	ug/kg	258	69.1	1	05/21/15 08:00	05/22/15 01:14	75-00-3	W
Chloroform	**<47.9**	ug/kg	258	47.9	1	05/21/15 08:00	05/22/15 01:14	67-66-3	W
Chloromethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	74-87-3	W
2-Chlorotoluene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	95-49-8	W
4-Chlorotoluene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	106-43-4	W
1,2-Dibromo-3-chloropropane	**<94.1**	ug/kg	258	94.1	1	05/21/15 08:00	05/22/15 01:14	96-12-8	W
Dibromochloromethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	106-93-4	W
Dibromomethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	74-95-3	W
1,2-Dichlorobenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	95-50-1	W
1,3-Dichlorobenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	541-73-1	W
1,4-Dichlorobenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	106-46-7	W
Dichlorodifluoromethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	75-71-8	W
1,1-Dichloroethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	75-34-3	W
1,2-Dichloroethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	107-06-2	W
1,1-Dichloroethene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	75-35-4	W
cis-1,2-Dichloroethene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	156-59-2	W
trans-1,2-Dichloroethene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	156-60-5	W
1,2-Dichloropropane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	78-87-5	W
1,3-Dichloropropane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	142-28-9	W
2,2-Dichloropropane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	594-20-7	W
1,1-Dichloropropene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	563-58-6	W
cis-1,3-Dichloropropene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	10061-01-5	W
trans-1,3-Dichloropropene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	10061-02-6	W
Diisopropyl ether	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	108-20-3	W
Ethylbenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	100-41-4	W
Hexachloro-1,3-butadiene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	87-68-3	W
Isopropylbenzene (Cumene)	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	98-82-8	W
p-Isopropyltoluene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	99-87-6	W
Methylene Chloride	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	75-09-2	W
Methyl-tert-butyl ether	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	1634-04-4	W
Naphthalene	**<41.3**	ug/kg	258	41.3	1	05/21/15 08:00	05/22/15 01:14	91-20-3	W
n-Propylbenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	103-65-1	W
Styrene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	100-42-5	W
1,1,1,2-Tetrachloroethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	79-34-5	W
Tetrachloroethene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	127-18-4	W
Toluene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	108-88-3	W
1,2,3-Trichlorobenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	87-61-6	W
1,2,4-Trichlorobenzene	**<49.0**	ug/kg	258	49.0	1	05/21/15 08:00	05/22/15 01:14	120-82-1	W
1,1,1-Trichloroethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	71-55-6	W
1,1,2-Trichloroethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	79-00-5	W
Trichloroethene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	79-01-6	W
Trichlorofluoromethane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	75-69-4	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-15 0-2.5 **Lab ID: 40115043004** Collected: 05/18/15 14:55 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2,3-Trichloropropane	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	96-18-4	W
1,2,4-Trimethylbenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	95-63-6	W
1,3,5-Trimethylbenzene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	108-67-8	W
Vinyl chloride	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	75-01-4	W
m&p-Xylene	**<51.5**	ug/kg	124	51.5	1	05/21/15 08:00	05/22/15 01:14	179601-23-1	W
o-Xylene	**<25.8**	ug/kg	61.9	25.8	1	05/21/15 08:00	05/22/15 01:14	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	105	%	49-157		1	05/21/15 08:00	05/22/15 01:14	1868-53-7	
Toluene-d8 (S)	103	%	61-148		1	05/21/15 08:00	05/22/15 01:14	2037-26-5	
4-Bromofluorobenzene (S)	88	%	53-134		1	05/21/15 08:00	05/22/15 01:14	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**8.1**	%	0.10	0.10	1		06/03/15 06:24		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-16 2.5-5 **Lab ID: 40115043005** Collected: 05/18/15 16:40 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.9**	mg/kg	1.9	0.61	1	05/28/15 16:22	05/29/15 16:12	7440-38-2	
Barium	**33.0**	mg/kg	0.48	0.11	1	05/28/15 16:22	05/29/15 16:12	7440-39-3	
Cadmium	**0.13J**	mg/kg	0.48	0.064	1	05/28/15 16:22	05/29/15 16:12	7440-43-9	
Chromium	**10**	mg/kg	0.48	0.19	1	05/28/15 16:22	05/29/15 16:12	7440-47-3	
Lead	**39.9**	mg/kg	0.96	0.41	1	05/28/15 16:22	05/29/15 16:12	7439-92-1	
Selenium	**<0.74**	mg/kg	1.9	0.74	1	05/28/15 16:22	05/29/15 16:12	7782-49-2	
Silver	**<0.27**	mg/kg	0.96	0.27	1	05/28/15 16:22	05/29/15 16:12	7440-22-4	1q
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.031**	mg/kg	0.0058	0.0029	1	05/22/15 10:05	05/22/15 12:48	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**469**	ug/kg	368	184	20	05/26/15 13:30	05/28/15 01:28	83-32-9	
Acenaphthylene	**<165**	ug/kg	368	165	20	05/26/15 13:30	05/28/15 01:28	208-96-8	
Anthracene	**1220**	ug/kg	368	191	20	05/26/15 13:30	05/28/15 01:28	120-12-7	
Benzo(a)anthracene	**1550**	ug/kg	368	128	20	05/26/15 13:30	05/28/15 01:28	56-55-3	
Benzo(a)pyrene	**1400**	ug/kg	368	132	20	05/26/15 13:30	05/28/15 01:28	50-32-8	
Benzo(b)fluoranthene	**1390**	ug/kg	368	184	20	05/26/15 13:30	05/28/15 01:28	205-99-2	
Benzo(g,h,i)perylene	**763**	ug/kg	368	140	20	05/26/15 13:30	05/28/15 01:28	191-24-2	
Benzo(k)fluoranthene	**1200**	ug/kg	368	204	20	05/26/15 13:30	05/28/15 01:28	207-08-9	
Chrysene	**1830**	ug/kg	368	170	20	05/26/15 13:30	05/28/15 01:28	218-01-9	
Dibenz(a,h)anthracene	**288J**	ug/kg	368	135	20	05/26/15 13:30	05/28/15 01:28	53-70-3	
Fluoranthene	**4730**	ug/kg	368	184	20	05/26/15 13:30	05/28/15 01:28	206-44-0	
Fluorene	**508**	ug/kg	368	184	20	05/26/15 13:30	05/28/15 01:28	86-73-7	
Indeno(1,2,3-cd)pyrene	**760**	ug/kg	368	140	20	05/26/15 13:30	05/28/15 01:28	193-39-5	
1-Methylnaphthalene	**<184**	ug/kg	368	184	20	05/26/15 13:30	05/28/15 01:28	90-12-0	
2-Methylnaphthalene	**<184**	ug/kg	368	184	20	05/26/15 13:30	05/28/15 01:28	91-57-6	
Naphthalene	**<184**	ug/kg	368	184	20	05/26/15 13:30	05/28/15 01:28	91-20-3	
Phenanthrene	**4120**	ug/kg	368	184	20	05/26/15 13:30	05/28/15 01:28	85-01-8	
Pyrene	**3540**	ug/kg	368	184	20	05/26/15 13:30	05/28/15 01:28	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	66	%	39-130		20	05/26/15 13:30	05/28/15 01:28	321-60-8	
Terphenyl-d14 (S)	72	%	37-130		20	05/26/15 13:30	05/28/15 01:28	1718-51-0	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	05/21/15 08:00	05/22/15 01:37	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	56-23-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-16 2.5-5 **Lab ID: 40115043005** Collected: 05/18/15 16:40 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	05/21/15 08:00	05/22/15 01:37	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	05/21/15 08:00	05/22/15 01:37	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	05/21/15 08:00	05/22/15 01:37	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	1634-04-4	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	05/21/15 08:00	05/22/15 01:37	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	100-42-5	W
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	05/21/15 08:00	05/22/15 01:37	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	75-69-4	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WMW-16 2.5-5 **Lab ID: 40115043005** Collected: 05/18/15 16:40 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	75-01-4	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	05/21/15 08:00	05/22/15 01:37	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 01:37	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	107	%	49-157		1	05/21/15 08:00	05/22/15 01:37	1868-53-7	
Toluene-d8 (S)	106	%	61-148		1	05/21/15 08:00	05/22/15 01:37	2037-26-5	
4-Bromofluorobenzene (S)	91	%	53-134		1	05/21/15 08:00	05/22/15 01:37	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**9.4**	%	0.10	0.10	1		06/03/15 06:24		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WGP-14 0-2.5 **Lab ID: 40115043006** Collected: 05/19/15 10:30 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.7**	mg/kg	2.2	0.70	1	05/28/15 16:22	05/29/15 16:14	7440-38-2	
Barium	**48.4**	mg/kg	0.55	0.13	1	05/28/15 16:22	05/29/15 16:14	7440-39-3	
Cadmium	**0.079J**	mg/kg	0.55	0.072	1	05/28/15 16:22	05/29/15 16:14	7440-43-9	
Chromium	**21.1**	mg/kg	0.55	0.21	1	05/28/15 16:22	05/29/15 16:14	7440-47-3	
Lead	**26.6**	mg/kg	1.1	0.47	1	05/28/15 16:22	05/29/15 16:14	7439-92-1	
Selenium	**<0.84**	mg/kg	2.2	0.84	1	05/28/15 16:22	05/29/15 16:14	7782-49-2	
Silver	**<0.30**	mg/kg	1.1	0.30	1	05/28/15 16:22	05/29/15 16:14	7440-22-4	1q
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.042**	mg/kg	0.0062	0.0031	1	05/22/15 10:05	05/22/15 12:51	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<38.3**	ug/kg	76.5	38.3	4	05/26/15 13:30	05/28/15 17:52	83-32-9	
Acenaphthylene	**282**	ug/kg	76.5	34.2	4	05/26/15 13:30	05/28/15 17:52	208-96-8	
Anthracene	**214**	ug/kg	76.5	39.7	4	05/26/15 13:30	05/28/15 17:52	120-12-7	
Benzo(a)anthracene	**521**	ug/kg	76.5	26.5	4	05/26/15 13:30	05/28/15 17:52	56-55-3	
Benzo(a)pyrene	**673**	ug/kg	76.5	27.4	4	05/26/15 13:30	05/28/15 17:52	50-32-8	
Benzo(b)fluoranthene	**527**	ug/kg	76.5	38.3	4	05/26/15 13:30	05/28/15 17:52	205-99-2	
Benzo(g,h,i)perylene	**533**	ug/kg	76.5	29.1	4	05/26/15 13:30	05/28/15 17:52	191-24-2	
Benzo(k)fluoranthene	**578**	ug/kg	76.5	42.3	4	05/26/15 13:30	05/28/15 17:52	207-08-9	
Chrysene	**610**	ug/kg	76.5	35.4	4	05/26/15 13:30	05/28/15 17:52	218-01-9	
Dibenz(a,h)anthracene	**150**	ug/kg	76.5	28.1	4	05/26/15 13:30	05/28/15 17:52	53-70-3	
Fluoranthene	**788**	ug/kg	76.5	38.3	4	05/26/15 13:30	05/28/15 17:52	206-44-0	
Fluorene	**<38.3**	ug/kg	76.5	38.3	4	05/26/15 13:30	05/28/15 17:52	86-73-7	
Indeno(1,2,3-cd)pyrene	**424**	ug/kg	76.5	29.1	4	05/26/15 13:30	05/28/15 17:52	193-39-5	
1-Methylnaphthalene	**<38.3**	ug/kg	76.5	38.3	4	05/26/15 13:30	05/28/15 17:52	90-12-0	
2-Methylnaphthalene	**<38.3**	ug/kg	76.5	38.3	4	05/26/15 13:30	05/28/15 17:52	91-57-6	
Naphthalene	**<38.3**	ug/kg	76.5	38.3	4	05/26/15 13:30	05/28/15 17:52	91-20-3	
Phenanthrene	**231**	ug/kg	76.5	38.3	4	05/26/15 13:30	05/28/15 17:52	85-01-8	
Pyrene	**769**	ug/kg	76.5	38.3	4	05/26/15 13:30	05/28/15 17:52	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	58	%	39-130		4	05/26/15 13:30	05/28/15 17:52	321-60-8	
Terphenyl-d14 (S)	64	%	37-130		4	05/26/15 13:30	05/28/15 17:52	1718-51-0	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	71-43-2	W
Bromobenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	108-86-1	W
Bromochloromethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	74-97-5	W
Bromodichloromethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	75-27-4	W
Bromoform	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	75-25-2	W
Bromomethane	**<76.0**	ug/kg	272	76.0	1	05/21/15 08:00	05/22/15 02:00	74-83-9	W
n-Butylbenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	104-51-8	W
sec-Butylbenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	135-98-8	W
tert-Butylbenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	98-06-6	W
Carbon tetrachloride	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	56-23-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WGP-14 0-2.5 **Lab ID: 40115043006** Collected: 05/19/15 10:30 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chlorobenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	108-90-7	W
Chloroethane	**<72.8**	ug/kg	272	72.8	1	05/21/15 08:00	05/22/15 02:00	75-00-3	W
Chloroform	**<50.5**	ug/kg	272	50.5	1	05/21/15 08:00	05/22/15 02:00	67-66-3	W
Chloromethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	74-87-3	W
2-Chlorotoluene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	95-49-8	W
4-Chlorotoluene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	106-43-4	W
1,2-Dibromo-3-chloropropane	**<99.2**	ug/kg	272	99.2	1	05/21/15 08:00	05/22/15 02:00	96-12-8	W
Dibromochloromethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	124-48-1	W
1,2-Dibromoethane (EDB)	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	106-93-4	W
Dibromomethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	74-95-3	W
1,2-Dichlorobenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	95-50-1	W
1,3-Dichlorobenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	541-73-1	W
1,4-Dichlorobenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	106-46-7	W
Dichlorodifluoromethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	75-71-8	W
1,1-Dichloroethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	75-34-3	W
1,2-Dichloroethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	107-06-2	W
1,1-Dichloroethene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	75-35-4	W
cis-1,2-Dichloroethene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	156-59-2	W
trans-1,2-Dichloroethene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	156-60-5	W
1,2-Dichloropropane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	78-87-5	W
1,3-Dichloropropane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	142-28-9	W
2,2-Dichloropropane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	594-20-7	W
1,1-Dichloropropene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	563-58-6	W
cis-1,3-Dichloropropene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	10061-01-5	W
trans-1,3-Dichloropropene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	10061-02-6	W
Diisopropyl ether	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	108-20-3	W
Ethylbenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	100-41-4	W
Hexachloro-1,3-butadiene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	87-68-3	W
Isopropylbenzene (Cumene)	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	98-82-8	W
p-Isopropyltoluene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	99-87-6	W
Methylene Chloride	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	75-09-2	W
Methyl-tert-butyl ether	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	1634-04-4	W
Naphthalene	**<43.5**	ug/kg	272	43.5	1	05/21/15 08:00	05/22/15 02:00	91-20-3	W
n-Propylbenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	103-65-1	W
Styrene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	100-42-5	W
1,1,1,2-Tetrachloroethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	630-20-6	W
1,1,2,2-Tetrachloroethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	79-34-5	W
Tetrachloroethene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	127-18-4	W
Toluene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	108-88-3	W
1,2,3-Trichlorobenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	87-61-6	W
1,2,4-Trichlorobenzene	**<51.7**	ug/kg	272	51.7	1	05/21/15 08:00	05/22/15 02:00	120-82-1	W
1,1,1-Trichloroethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	71-55-6	W
1,1,2-Trichloroethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	79-00-5	W
Trichloroethene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	79-01-6	W
Trichlorofluoromethane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	75-69-4	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WGP-14 0-2.5 **Lab ID: 40115043006** Collected: 05/19/15 10:30 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2,3-Trichloropropane	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	96-18-4	W
1,2,4-Trimethylbenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	95-63-6	W
1,3,5-Trimethylbenzene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	108-67-8	W
Vinyl chloride	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	75-01-4	W
m&p-Xylene	**<54.3**	ug/kg	130	54.3	1	05/21/15 08:00	05/22/15 02:00	179601-23-1	W
o-Xylene	**<27.2**	ug/kg	65.2	27.2	1	05/21/15 08:00	05/22/15 02:00	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	102	%	49-157		1	05/21/15 08:00	05/22/15 02:00	1868-53-7	
Toluene-d8 (S)	99	%	61-148		1	05/21/15 08:00	05/22/15 02:00	2037-26-5	
4-Bromofluorobenzene (S)	86	%	53-134		1	05/21/15 08:00	05/22/15 02:00	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**12.9**	%	0.10	0.10	1		06/03/15 06:24		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WGP-15 0-2.5 **Lab ID: 40115043007** Collected: 05/19/15 10:40 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**2.7**	mg/kg	2.0	0.64	1	05/28/15 16:22	05/29/15 16:17	7440-38-2	
Barium	**26.1**	mg/kg	0.50	0.12	1	05/28/15 16:22	05/29/15 16:17	7440-39-3	
Cadmium	**0.10J**	mg/kg	0.50	0.067	1	05/28/15 16:22	05/29/15 16:17	7440-43-9	
Chromium	**8.5**	mg/kg	0.50	0.20	1	05/28/15 16:22	05/29/15 16:17	7440-47-3	
Lead	**20.1**	mg/kg	1.0	0.43	1	05/28/15 16:22	05/29/15 16:17	7439-92-1	
Selenium	**<0.78**	mg/kg	2.0	0.78	1	05/28/15 16:22	05/29/15 16:17	7782-49-2	
Silver	**<0.28**	mg/kg	1.0	0.28	1	05/28/15 16:22	05/29/15 16:17	7440-22-4	1q
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.034**	mg/kg	0.0065	0.0032	1	05/22/15 10:05	05/22/15 12:53	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<9.1**	ug/kg	18.2	9.1	1	05/26/15 13:30	05/28/15 19:17	83-32-9	
Acenaphthylene	**<8.2**	ug/kg	18.2	8.2	1	05/26/15 13:30	05/28/15 19:17	208-96-8	
Anthracene	**18.1J**	ug/kg	18.2	9.5	1	05/26/15 13:30	05/28/15 19:17	120-12-7	
Benzo(a)anthracene	**38.2**	ug/kg	18.2	6.3	1	05/26/15 13:30	05/28/15 19:17	56-55-3	
Benzo(a)pyrene	**38.6**	ug/kg	18.2	6.5	1	05/26/15 13:30	05/28/15 19:17	50-32-8	
Benzo(b)fluoranthene	**32.6**	ug/kg	18.2	9.1	1	05/26/15 13:30	05/28/15 19:17	205-99-2	
Benzo(g,h,i)perylene	**31.5**	ug/kg	18.2	6.9	1	05/26/15 13:30	05/28/15 19:17	191-24-2	
Benzo(k)fluoranthene	**34.0**	ug/kg	18.2	10.1	1	05/26/15 13:30	05/28/15 19:17	207-08-9	
Chrysene	**43.4**	ug/kg	18.2	8.4	1	05/26/15 13:30	05/28/15 19:17	218-01-9	
Dibenz(a,h)anthracene	**9.5J**	ug/kg	18.2	6.7	1	05/26/15 13:30	05/28/15 19:17	53-70-3	
Fluoranthene	**84.8**	ug/kg	18.2	9.1	1	05/26/15 13:30	05/28/15 19:17	206-44-0	R1
Fluorene	**<9.1**	ug/kg	18.2	9.1	1	05/26/15 13:30	05/28/15 19:17	86-73-7	
Indeno(1,2,3-cd)pyrene	**23.8**	ug/kg	18.2	6.9	1	05/26/15 13:30	05/28/15 19:17	193-39-5	
1-Methylnaphthalene	**<9.1**	ug/kg	18.2	9.1	1	05/26/15 13:30	05/28/15 19:17	90-12-0	
2-Methylnaphthalene	**11.4J**	ug/kg	18.2	9.1	1	05/26/15 13:30	05/28/15 19:17	91-57-6	
Naphthalene	**<9.1**	ug/kg	18.2	9.1	1	05/26/15 13:30	05/28/15 19:17	91-20-3	
Phenanthrene	**62.0**	ug/kg	18.2	9.1	1	05/26/15 13:30	05/28/15 19:17	85-01-8	
Pyrene	**70.7**	ug/kg	18.2	9.1	1	05/26/15 13:30	05/28/15 19:17	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	55	%	39-130		1	05/26/15 13:30	05/28/15 19:17	321-60-8	
Terphenyl-d14 (S)	62	%	37-130		1	05/26/15 13:30	05/28/15 19:17	1718-51-0	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	05/21/15 08:00	05/22/15 02:23	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	56-23-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WGP-15 0-2.5 **Lab ID: 40115043007** Collected: 05/19/15 10:40 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	05/21/15 08:00	05/22/15 02:23	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	05/21/15 08:00	05/22/15 02:23	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	05/21/15 08:00	05/22/15 02:23	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	1634-04-4	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	05/21/15 08:00	05/22/15 02:23	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	100-42-5	W
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	05/21/15 08:00	05/22/15 02:23	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	75-69-4	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WGP-15 0-2.5 **Lab ID: 40115043007** Collected: 05/19/15 10:40 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	75-01-4	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	05/21/15 08:00	05/22/15 02:23	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:23	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	102	%	49-157		1	05/21/15 08:00	05/22/15 02:23	1868-53-7	
Toluene-d8 (S)	100	%	61-148		1	05/21/15 08:00	05/22/15 02:23	2037-26-5	
4-Bromofluorobenzene (S)	83	%	53-134		1	05/21/15 08:00	05/22/15 02:23	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**8.6**	%	0.10	0.10	1		06/03/15 06:24		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WGP-13 0-2.5 **Lab ID: 40115043008** Collected: 05/19/15 11:05 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.4**	mg/kg	2.1	0.66	1	05/28/15 16:22	05/29/15 16:19	7440-38-2	
Barium	**193**	mg/kg	0.52	0.12	1	05/28/15 16:22	05/29/15 16:19	7440-39-3	
Cadmium	**0.32J**	mg/kg	0.52	0.069	1	05/28/15 16:22	05/29/15 16:19	7440-43-9	
Chromium	**10.6**	mg/kg	0.52	0.20	1	05/28/15 16:22	05/29/15 16:19	7440-47-3	
Lead	**69.8**	mg/kg	1.0	0.45	1	05/28/15 16:22	05/29/15 16:19	7439-92-1	
Selenium	**<0.80**	mg/kg	2.1	0.80	1	05/28/15 16:22	05/29/15 16:19	7782-49-2	
Silver	**<0.29**	mg/kg	1.0	0.29	1	05/28/15 16:22	05/29/15 16:19	7440-22-4	1q
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.032**	mg/kg	0.0071	0.0036	1	05/22/15 10:05	05/22/15 12:55	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
Acenaphthene	**<182**	ug/kg	364	182	20	05/26/15 13:30	05/28/15 02:03	83-32-9	
Acenaphthylene	**634**	ug/kg	364	163	20	05/26/15 13:30	05/28/15 02:03	208-96-8	
Anthracene	**671**	ug/kg	364	189	20	05/26/15 13:30	05/28/15 02:03	120-12-7	
Benzo(a)anthracene	**1010**	ug/kg	364	126	20	05/26/15 13:30	05/28/15 02:03	56-55-3	
Benzo(a)pyrene	**948**	ug/kg	364	130	20	05/26/15 13:30	05/28/15 02:03	50-32-8	
Benzo(b)fluoranthene	**797**	ug/kg	364	182	20	05/26/15 13:30	05/28/15 02:03	205-99-2	
Benzo(g,h,i)perylene	**555**	ug/kg	364	138	20	05/26/15 13:30	05/28/15 02:03	191-24-2	
Benzo(k)fluoranthene	**859**	ug/kg	364	201	20	05/26/15 13:30	05/28/15 02:03	207-08-9	
Chrysene	**1180**	ug/kg	364	168	20	05/26/15 13:30	05/28/15 02:03	218-01-9	
Dibenz(a,h)anthracene	**196J**	ug/kg	364	133	20	05/26/15 13:30	05/28/15 02:03	53-70-3	
Fluoranthene	**2110**	ug/kg	364	182	20	05/26/15 13:30	05/28/15 02:03	206-44-0	
Fluorene	**236J**	ug/kg	364	182	20	05/26/15 13:30	05/28/15 02:03	86-73-7	
Indeno(1,2,3-cd)pyrene	**505**	ug/kg	364	138	20	05/26/15 13:30	05/28/15 02:03	193-39-5	
1-Methylnaphthalene	**<182**	ug/kg	364	182	20	05/26/15 13:30	05/28/15 02:03	90-12-0	
2-Methylnaphthalene	**198J**	ug/kg	364	182	20	05/26/15 13:30	05/28/15 02:03	91-57-6	
Naphthalene	**<182**	ug/kg	364	182	20	05/26/15 13:30	05/28/15 02:03	91-20-3	
Phenanthrene	**1860**	ug/kg	364	182	20	05/26/15 13:30	05/28/15 02:03	85-01-8	
Pyrene	**1830**	ug/kg	364	182	20	05/26/15 13:30	05/28/15 02:03	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	51	%	39-130		20	05/26/15 13:30	05/28/15 02:03	321-60-8	
Terphenyl-d14 (S)	57	%	37-130		20	05/26/15 13:30	05/28/15 02:03	1718-51-0	
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	05/21/15 08:00	05/22/15 02:46	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	56-23-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WGP-13 0-2.5 **Lab ID: 40115043008** Collected: 05/19/15 11:05 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	05/21/15 08:00	05/22/15 02:46	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	05/21/15 08:00	05/22/15 02:46	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	05/21/15 08:00	05/22/15 02:46	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	1634-04-4	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	05/21/15 08:00	05/22/15 02:46	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	100-42-5	W
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	05/21/15 08:00	05/22/15 02:46	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	75-69-4	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: WGP-13 0-2.5 **Lab ID: 40115043008** Collected: 05/19/15 11:05 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	75-01-4	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	05/21/15 08:00	05/22/15 02:46	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 02:46	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	101	%	49-157		1	05/21/15 08:00	05/22/15 02:46	1868-53-7	
Toluene-d8 (S)	97	%	61-148		1	05/21/15 08:00	05/22/15 02:46	2037-26-5	
4-Bromofluorobenzene (S)	84	%	53-134		1	05/21/15 08:00	05/22/15 02:46	460-00-4	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**8.3**	%	0.10	0.10	1		06/03/15 06:24		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: MEOH BLANK **Lab ID: 40115043009** Collected: 05/19/15 00:00 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Benzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	71-43-2	W
Bromobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	108-86-1	W
Bromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	74-97-5	W
Bromodichloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	75-27-4	W
Bromoform	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	75-25-2	W
Bromomethane	**<69.9**	ug/kg	250	69.9	1	05/21/15 08:00	05/22/15 03:10	74-83-9	W
n-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	104-51-8	W
sec-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	135-98-8	W
tert-Butylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	98-06-6	W
Carbon tetrachloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	56-23-5	W
Chlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	108-90-7	W
Chloroethane	**<67.0**	ug/kg	250	67.0	1	05/21/15 08:00	05/22/15 03:10	75-00-3	W
Chloroform	**<46.4**	ug/kg	250	46.4	1	05/21/15 08:00	05/22/15 03:10	67-66-3	W
Chloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	74-87-3	W
2-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	95-49-8	W
4-Chlorotoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	106-43-4	W
1,2-Dibromo-3-chloropropane	**<91.2**	ug/kg	250	91.2	1	05/21/15 08:00	05/22/15 03:10	96-12-8	W
Dibromochloromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	124-48-1	W
1,2-Dibromoethane (EDB)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	106-93-4	W
Dibromomethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	74-95-3	W
1,2-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	95-50-1	W
1,3-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	541-73-1	W
1,4-Dichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	106-46-7	W
Dichlorodifluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	75-71-8	W
1,1-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	75-34-3	W
1,2-Dichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	107-06-2	W
1,1-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	75-35-4	W
cis-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	156-59-2	W
trans-1,2-Dichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	156-60-5	W
1,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	78-87-5	W
1,3-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	142-28-9	W
2,2-Dichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	594-20-7	W
1,1-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	563-58-6	W
cis-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	10061-01-5	W
trans-1,3-Dichloropropene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	10061-02-6	W
Diisopropyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	108-20-3	W
Ethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	100-41-4	W
Hexachloro-1,3-butadiene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	87-68-3	W
Isopropylbenzene (Cumene)	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	98-82-8	W
p-Isopropyltoluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	99-87-6	W
Methylene Chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	75-09-2	W
Methyl-tert-butyl ether	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	1634-04-4	W
Naphthalene	**<40.0**	ug/kg	250	40.0	1	05/21/15 08:00	05/22/15 03:10	91-20-3	W
n-Propylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	103-65-1	W
Styrene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	100-42-5	W

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Sample: MEOH BLANK **Lab ID: 40115043009** Collected: 05/19/15 00:00 Received: 05/20/15 09:15 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Med Level Normal List	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,1,1,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	630-20-6	W
1,1,2,2-Tetrachloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	79-34-5	W
Tetrachloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	127-18-4	W
Toluene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	108-88-3	W
1,2,3-Trichlorobenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	87-61-6	W
1,2,4-Trichlorobenzene	**<47.6**	ug/kg	250	47.6	1	05/21/15 08:00	05/22/15 03:10	120-82-1	W
1,1,1-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	71-55-6	W
1,1,2-Trichloroethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	79-00-5	W
Trichloroethene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	79-01-6	W
Trichlorofluoromethane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	75-69-4	W
1,2,3-Trichloropropane	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	96-18-4	W
1,2,4-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	95-63-6	W
1,3,5-Trimethylbenzene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	108-67-8	W
Vinyl chloride	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	75-01-4	W
m&p-Xylene	**<50.0**	ug/kg	120	50.0	1	05/21/15 08:00	05/22/15 03:10	179601-23-1	W
o-Xylene	**<25.0**	ug/kg	60.0	25.0	1	05/21/15 08:00	05/22/15 03:10	95-47-6	W
Surrogates									
Dibromofluoromethane (S)	103	%	49-157		1	05/21/15 08:00	05/22/15 03:10	1868-53-7	
Toluene-d8 (S)	96	%	61-148		1	05/21/15 08:00	05/22/15 03:10	2037-26-5	
4-Bromofluorobenzene (S)	85	%	53-134		1	05/21/15 08:00	05/22/15 03:10	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

QC Batch: MERP/4945 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 40115043001, 40115043002, 40115043003, 40115043004, 40115043005, 40115043006, 40115043007, 40115043008

METHOD BLANK: 1162569 Matrix: Solid
Associated Lab Samples: 40115043001, 40115043002, 40115043003, 40115043004, 40115043005, 40115043006, 40115043007, 40115043008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.0033	0.0067	05/22/15 12:20	

LABORATORY CONTROL SAMPLE: 1162570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.17	0.17	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1162571 1162572

Parameter	Units	40115095001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.017	.19	.19	0.20	0.19	97	95	85-115	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

QC Batch: MPRP/11968 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40115043001, 40115043002, 40115043003, 40115043004, 40115043005, 40115043006, 40115043007, 40115043008

METHOD BLANK: 1165734 Matrix: Solid
Associated Lab Samples: 40115043001, 40115043002, 40115043003, 40115043004, 40115043005, 40115043006, 40115043007, 40115043008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<0.64	2.0	05/29/15 15:48	
Barium	mg/kg	<0.12	0.50	05/29/15 15:48	
Cadmium	mg/kg	<0.066	0.50	05/29/15 15:48	
Chromium	mg/kg	<0.19	0.50	05/29/15 15:48	
Lead	mg/kg	<0.43	1.0	05/29/15 15:48	
Selenium	mg/kg	<0.77	2.0	05/29/15 15:48	
Silver	mg/kg	<0.28	1.0	05/29/15 15:48	

LABORATORY CONTROL SAMPLE: 1165735

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	49.8	100	80-120	
Barium	mg/kg	50	50.9	102	80-120	
Cadmium	mg/kg	50	51.1	102	80-120	
Chromium	mg/kg	50	51.4	103	80-120	
Lead	mg/kg	50	50.4	101	80-120	
Selenium	mg/kg	50	51.0	102	80-120	
Silver	mg/kg	25	25.5	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1165736 1165737

Parameter	Units	40115043001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	4.3	60.7	60.6	63.9	63.7	98	98	75-125	0	20	
Barium	mg/kg	68.5	60.7	60.6	162	156	154	144	75-125	4	20	M0
Cadmium	mg/kg	2.6	60.7	60.6	60.8	60.3	96	95	75-125	1	20	
Chromium	mg/kg	13.7	60.7	60.6	72.3	73.9	96	99	75-125	2	20	
Lead	mg/kg	70.6	60.7	60.6	190	189	197	196	75-125	0	20	M0
Selenium	mg/kg	<0.94	60.7	60.6	59.0	59.3	97	98	75-125	1	20	
Silver	mg/kg	<0.34	30.4	30.4	30.7	30.8	101	102	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

QC Batch: MSV/28568 Analysis Method: EPA 8260
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List
Associated Lab Samples: 40115043001, 40115043002, 40115043003, 40115043004, 40115043005, 40115043006, 40115043007, 40115043008, 40115043009

METHOD BLANK: 1161762 Matrix: Solid
Associated Lab Samples: 40115043001, 40115043002, 40115043003, 40115043004, 40115043005, 40115043006, 40115043007, 40115043008, 40115043009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<13.7	50.0	05/21/15 11:28	
1,1,1-Trichloroethane	ug/kg	<14.4	50.0	05/21/15 11:28	
1,1,2,2-Tetrachloroethane	ug/kg	<17.5	50.0	05/21/15 11:28	
1,1,2-Trichloroethane	ug/kg	<20.2	50.0	05/21/15 11:28	
1,1-Dichloroethane	ug/kg	<17.6	50.0	05/21/15 11:28	
1,1-Dichloroethene	ug/kg	<17.6	50.0	05/21/15 11:28	
1,1-Dichloropropene	ug/kg	<14.0	50.0	05/21/15 11:28	
1,2,3-Trichlorobenzene	ug/kg	<17.0	50.0	05/21/15 11:28	
1,2,3-Trichloropropane	ug/kg	<22.3	50.0	05/21/15 11:28	
1,2,4-Trichlorobenzene	ug/kg	<47.6	250	05/21/15 11:28	
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	05/21/15 11:28	
1,2-Dibromo-3-chloropropane	ug/kg	<91.2	250	05/21/15 11:28	
1,2-Dibromoethane (EDB)	ug/kg	<14.7	50.0	05/21/15 11:28	
1,2-Dichlorobenzene	ug/kg	<16.2	50.0	05/21/15 11:28	
1,2-Dichloroethane	ug/kg	<15.0	50.0	05/21/15 11:28	
1,2-Dichloropropane	ug/kg	<16.8	50.0	05/21/15 11:28	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	05/21/15 11:28	
1,3-Dichlorobenzene	ug/kg	<13.2	50.0	05/21/15 11:28	
1,3-Dichloropropane	ug/kg	<12.0	50.0	05/21/15 11:28	
1,4-Dichlorobenzene	ug/kg	<15.9	50.0	05/21/15 11:28	
2,2-Dichloropropane	ug/kg	<12.6	50.0	05/21/15 11:28	
2-Chlorotoluene	ug/kg	<15.8	50.0	05/21/15 11:28	
4-Chlorotoluene	ug/kg	<13.0	50.0	05/21/15 11:28	
Benzene	ug/kg	<9.2	20.0	05/21/15 11:28	
Bromobenzene	ug/kg	<20.6	50.0	05/21/15 11:28	
Bromochloromethane	ug/kg	<21.4	50.0	05/21/15 11:28	
Bromodichloromethane	ug/kg	<9.8	50.0	05/21/15 11:28	
Bromoform	ug/kg	<19.8	50.0	05/21/15 11:28	
Bromomethane	ug/kg	<69.9	250	05/21/15 11:28	
Carbon tetrachloride	ug/kg	<12.1	50.0	05/21/15 11:28	
Chlorobenzene	ug/kg	<14.8	50.0	05/21/15 11:28	
Chloroethane	ug/kg	<67.0	250	05/21/15 11:28	
Chloroform	ug/kg	<46.4	250	05/21/15 11:28	
Chloromethane	ug/kg	<20.4	50.0	05/21/15 11:28	
cis-1,2-Dichloroethene	ug/kg	<16.6	50.0	05/21/15 11:28	
cis-1,3-Dichloropropene	ug/kg	<16.6	50.0	05/21/15 11:28	
Dibromochloromethane	ug/kg	<17.9	50.0	05/21/15 11:28	
Dibromomethane	ug/kg	<19.3	50.0	05/21/15 11:28	
Dichlorodifluoromethane	ug/kg	<12.3	50.0	05/21/15 11:28	
Diisopropyl ether	ug/kg	<17.7	50.0	05/21/15 11:28	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

METHOD BLANK: 1161762 Matrix: Solid

Associated Lab Samples: 40115043001, 40115043002, 40115043003, 40115043004, 40115043005, 40115043006, 40115043007, 40115043008, 40115043009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/kg	<12.4	50.0	05/21/15 11:28	
Hexachloro-1,3-butadiene	ug/kg	<24.5	50.0	05/21/15 11:28	
Isopropylbenzene (Cumene)	ug/kg	<12.6	50.0	05/21/15 11:28	
m&p-Xylene	ug/kg	<34.4	100	05/21/15 11:28	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	05/21/15 11:28	
Methylene Chloride	ug/kg	<16.2	50.0	05/21/15 11:28	
n-Butylbenzene	ug/kg	<10.5	50.0	05/21/15 11:28	
n-Propylbenzene	ug/kg	<11.6	50.0	05/21/15 11:28	
Naphthalene	ug/kg	<40.0	250	05/21/15 11:28	
o-Xylene	ug/kg	<14.0	50.0	05/21/15 11:28	
p-Isopropyltoluene	ug/kg	<12.0	50.0	05/21/15 11:28	
sec-Butylbenzene	ug/kg	<11.9	50.0	05/21/15 11:28	
Styrene	ug/kg	<9.0	50.0	05/21/15 11:28	
tert-Butylbenzene	ug/kg	<9.5	50.0	05/21/15 11:28	
Tetrachloroethene	ug/kg	<12.9	50.0	05/21/15 11:28	
Toluene	ug/kg	<11.2	50.0	05/21/15 11:28	
trans-1,2-Dichloroethene	ug/kg	<16.5	50.0	05/21/15 11:28	
trans-1,3-Dichloropropene	ug/kg	<14.4	50.0	05/21/15 11:28	
Trichloroethene	ug/kg	<23.6	50.0	05/21/15 11:28	
Trichlorofluoromethane	ug/kg	<24.7	50.0	05/21/15 11:28	
Vinyl chloride	ug/kg	<21.1	50.0	05/21/15 11:28	
4-Bromofluorobenzene (S)	%	86	53-134	05/21/15 11:28	
Dibromofluoromethane (S)	%	105	49-157	05/21/15 11:28	
Toluene-d8 (S)	%	102	61-148	05/21/15 11:28	

LABORATORY CONTROL SAMPLE & LCSD: 1161763 1161764

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/kg	2500	2560	2520	103	101	70-130	2	20	
1,1,2,2-Tetrachloroethane	ug/kg	2500	2880	2720	115	109	70-130	6	20	
1,1,2-Trichloroethane	ug/kg	2500	2570	2530	103	101	70-130	1	20	
1,1-Dichloroethane	ug/kg	2500	2680	2680	107	107	70-130	0	20	
1,1-Dichloroethene	ug/kg	2500	2710	2720	108	109	70-132	0	20	
1,2,4-Trichlorobenzene	ug/kg	2500	2740	2760	110	110	70-130	1	20	
1,2-Dibromo-3-chloropropane	ug/kg	2500	2300	2390	92	96	45-150	4	20	
1,2-Dibromoethane (EDB)	ug/kg	2500	2780	2580	111	103	70-130	7	20	
1,2-Dichlorobenzene	ug/kg	2500	2630	2570	105	103	70-130	2	20	
1,2-Dichloroethane	ug/kg	2500	2750	2700	110	108	70-134	2	20	
1,2-Dichloropropane	ug/kg	2500	2600	2540	104	102	70-130	2	20	
1,3-Dichlorobenzene	ug/kg	2500	2660	2660	106	106	70-130	0	20	
1,4-Dichlorobenzene	ug/kg	2500	2550	2540	102	102	70-130	0	20	
Benzene	ug/kg	2500	2620	2590	105	103	70-130	1	20	
Bromodichloromethane	ug/kg	2500	2560	2560	103	102	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

LABORATORY CONTROL SAMPLE & LCSD: 1161763 1161764

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Bromoform	ug/kg	2500	2070	2060	83	83	48-130	0	20	
Bromomethane	ug/kg	2500	2500	2600	100	104	70-169	4	20	
Carbon tetrachloride	ug/kg	2500	2550	2630	102	105	67-130	3	20	
Chlorobenzene	ug/kg	2500	2510	2480	100	99	70-130	1	20	
Chloroethane	ug/kg	2500	2570	2540	103	102	70-191	1	20	
Chloroform	ug/kg	2500	2680	2690	107	108	70-130	0	20	
Chloromethane	ug/kg	2500	2390	2210	96	88	52-132	8	20	
cis-1,2-Dichloroethene	ug/kg	2500	2670	2730	107	109	70-130	2	20	
cis-1,3-Dichloropropene	ug/kg	2500	2750	2690	110	108	70-130	2	20	
Dibromochloromethane	ug/kg	2500	2670	2700	107	108	65-130	1	20	
Dichlorodifluoromethane	ug/kg	2500	1740	1640	70	66	12-150	6	20	
Ethylbenzene	ug/kg	2500	2700	2650	108	106	70-130	2	20	
Isopropylbenzene (Cumene)	ug/kg	2500	2750	2680	110	107	70-130	2	20	
m&p-Xylene	ug/kg	5000	5480	5400	110	108	70-130	1	20	
Methyl-tert-butyl ether	ug/kg	2500	2810	2590	112	104	70-130	8	20	
Methylene Chloride	ug/kg	2500	2720	2640	109	106	70-131	3	20	
o-Xylene	ug/kg	2500	2670	2650	107	106	70-130	1	20	
Styrene	ug/kg	2500	2900	2860	116	115	70-130	1	20	
Tetrachloroethene	ug/kg	2500	2520	2450	101	98	70-130	3	20	
Toluene	ug/kg	2500	2570	2570	103	103	70-130	0	20	
trans-1,2-Dichloroethene	ug/kg	2500	2820	2780	113	111	69-130	1	20	
trans-1,3-Dichloropropene	ug/kg	2500	2260	2280	91	91	65-130	1	20	
Trichloroethene	ug/kg	2500	2520	2460	101	98	70-130	2	20	
Trichlorofluoromethane	ug/kg	2500	3010	2770	120	111	50-150	8	20	
Vinyl chloride	ug/kg	2500	2510	2500	100	100	67-134	0	20	
4-Bromofluorobenzene (S)	%				97	95	53-134			
Dibromofluoromethane (S)	%				110	107	49-157			
Toluene-d8 (S)	%				104	102	61-148			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

QC Batch: OEXT/26637 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 40115043001, 40115043002, 40115043003, 40115043005, 40115043006, 40115043007, 40115043008

METHOD BLANK: 1164270 Matrix: Solid
Associated Lab Samples: 40115043001, 40115043002, 40115043003, 40115043005, 40115043006, 40115043007, 40115043008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<8.3	16.7	05/27/15 11:26	
2-Methylnaphthalene	ug/kg	<8.3	16.7	05/27/15 11:26	
Acenaphthene	ug/kg	<8.3	16.7	05/27/15 11:26	
Acenaphthylene	ug/kg	<7.5	16.7	05/27/15 11:26	
Anthracene	ug/kg	<8.6	16.7	05/27/15 11:26	
Benzo(a)anthracene	ug/kg	<5.8	16.7	05/27/15 11:26	
Benzo(a)pyrene	ug/kg	<6.0	16.7	05/27/15 11:26	
Benzo(b)fluoranthene	ug/kg	<8.3	16.7	05/27/15 11:26	
Benzo(g,h,i)perylene	ug/kg	<6.3	16.7	05/27/15 11:26	
Benzo(k)fluoranthene	ug/kg	<9.2	16.7	05/27/15 11:26	
Chrysene	ug/kg	<7.7	16.7	05/27/15 11:26	
Dibenz(a,h)anthracene	ug/kg	<6.1	16.7	05/27/15 11:26	
Fluoranthene	ug/kg	<8.3	16.7	05/27/15 11:26	
Fluorene	ug/kg	<8.3	16.7	05/27/15 11:26	
Indeno(1,2,3-cd)pyrene	ug/kg	<6.3	16.7	05/27/15 11:26	
Naphthalene	ug/kg	<8.3	16.7	05/27/15 11:26	
Phenanthrene	ug/kg	<8.3	16.7	05/27/15 11:26	
Pyrene	ug/kg	<8.3	16.7	05/27/15 11:26	
2-Fluorobiphenyl (S)	%	56	39-130	05/27/15 11:26	
Terphenyl-d14 (S)	%	61	37-130	05/27/15 11:26	

LABORATORY CONTROL SAMPLE: 1164271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	197	59	53-130	
2-Methylnaphthalene	ug/kg	333	202	61	52-130	
Acenaphthene	ug/kg	333	192	58	54-130	
Acenaphthylene	ug/kg	333	197	59	55-130	
Anthracene	ug/kg	333	231	69	64-130	
Benzo(a)anthracene	ug/kg	333	200	60	50-130	
Benzo(a)pyrene	ug/kg	333	202	61	46-130	
Benzo(b)fluoranthene	ug/kg	333	186	56	43-130	
Benzo(g,h,i)perylene	ug/kg	333	209	63	48-130	
Benzo(k)fluoranthene	ug/kg	333	203	61	55-130	
Chrysene	ug/kg	333	212	64	62-130	
Dibenz(a,h)anthracene	ug/kg	333	226	68	49-130	
Fluoranthene	ug/kg	333	211	63	57-130	
Fluorene	ug/kg	333	196	59	57-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	221	66	50-130	
Naphthalene	ug/kg	333	186	56	48-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

LABORATORY CONTROL SAMPLE: 1164271

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	333	204	61	51-130	
Pyrene	ug/kg	333	187	56	55-130	
2-Fluorobiphenyl (S)	%			55	39-130	
Terphenyl-d14 (S)	%			60	37-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1164272 1164273

Parameter	Units	40115043007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<9.1	364	364	243	247	64	66	50-130	2	30	
2-Methylnaphthalene	ug/kg	11.4J	364	364	253	257	66	67	44-130	2	32	
Acenaphthene	ug/kg	<9.1	364	364	224	227	59	60	46-130	1	26	
Acenaphthylene	ug/kg	<8.2	364	364	274	256	73	68	49-130	7	23	
Anthracene	ug/kg	18.1J	364	364	313	285	81	73	52-130	9	28	
Benzo(a)anthracene	ug/kg	38.2	364	364	345	277	84	66	34-130	22	36	
Benzo(a)pyrene	ug/kg	38.6	364	364	346	317	84	76	34-130	9	40	
Benzo(b)fluoranthene	ug/kg	32.6	364	364	348	318	86	78	22-130	9	40	
Benzo(g,h,i)perylene	ug/kg	31.5	364	364	242	213	58	50	24-130	13	35	
Benzo(k)fluoranthene	ug/kg	34.0	364	364	316	295	77	72	41-130	7	37	
Chrysene	ug/kg	43.4	364	364	343	297	82	70	49-130	14	33	
Dibenz(a,h)anthracene	ug/kg	9.5J	364	364	250	233	66	61	27-130	7	31	
Fluoranthene	ug/kg	84.8	364	364	437	289	97	56	34-130	41	37	R1
Fluorene	ug/kg	<9.1	364	364	235	234	63	62	45-130	1	25	
Indeno(1,2,3-cd)pyrene	ug/kg	23.8	364	364	267	241	67	60	30-130	10	34	
Naphthalene	ug/kg	<9.1	364	364	221	225	58	59	38-130	2	30	
Phenanthrene	ug/kg	62.0	364	364	342	259	77	54	38-130	28	34	
Pyrene	ug/kg	70.7	364	364	383	283	86	58	35-130	30	35	
2-Fluorobiphenyl (S)	%						56	56	39-130			
Terphenyl-d14 (S)	%						61	62	37-130			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

QC Batch: OEXT/26685
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 40115043004

METHOD BLANK: 1167343
Matrix: Solid
Associated Lab Samples: 40115043004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<8.3	16.7	06/01/15 12:42	
2-Methylnaphthalene	ug/kg	<8.3	16.7	06/01/15 12:42	
Acenaphthene	ug/kg	<8.3	16.7	06/01/15 12:42	
Acenaphthylene	ug/kg	<7.5	16.7	06/01/15 12:42	
Anthracene	ug/kg	<8.6	16.7	06/01/15 12:42	
Benzo(a)anthracene	ug/kg	<5.8	16.7	06/01/15 12:42	
Benzo(a)pyrene	ug/kg	<6.0	16.7	06/01/15 12:42	
Benzo(b)fluoranthene	ug/kg	<8.3	16.7	06/01/15 12:42	
Benzo(g,h,i)perylene	ug/kg	<6.3	16.7	06/01/15 12:42	
Benzo(k)fluoranthene	ug/kg	<9.2	16.7	06/01/15 12:42	
Chrysene	ug/kg	<7.7	16.7	06/01/15 12:42	
Dibenz(a,h)anthracene	ug/kg	<6.1	16.7	06/01/15 12:42	
Fluoranthene	ug/kg	<8.3	16.7	06/01/15 12:42	
Fluorene	ug/kg	<8.3	16.7	06/01/15 12:42	
Indeno(1,2,3-cd)pyrene	ug/kg	<6.3	16.7	06/01/15 12:42	
Naphthalene	ug/kg	<8.3	16.7	06/01/15 12:42	
Phenanthrene	ug/kg	<8.3	16.7	06/01/15 12:42	
Pyrene	ug/kg	<8.3	16.7	06/01/15 12:42	
2-Fluorobiphenyl (S)	%	73	39-130	06/01/15 12:42	
Terphenyl-d14 (S)	%	85	37-130	06/01/15 12:42	

LABORATORY CONTROL SAMPLE: 1167344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	235	70	53-130	
2-Methylnaphthalene	ug/kg	333	243	73	52-130	
Acenaphthene	ug/kg	333	265	79	54-130	
Acenaphthylene	ug/kg	333	262	79	55-130	
Anthracene	ug/kg	333	308	92	64-130	
Benzo(a)anthracene	ug/kg	333	275	82	50-130	
Benzo(a)pyrene	ug/kg	333	279	84	46-130	
Benzo(b)fluoranthene	ug/kg	333	271	81	43-130	
Benzo(g,h,i)perylene	ug/kg	333	276	83	48-130	
Benzo(k)fluoranthene	ug/kg	333	285	86	55-130	
Chrysene	ug/kg	333	279	84	62-130	
Dibenz(a,h)anthracene	ug/kg	333	290	87	49-130	
Fluoranthene	ug/kg	333	279	84	57-130	
Fluorene	ug/kg	333	262	79	57-130	
Indeno(1,2,3-cd)pyrene	ug/kg	333	290	87	50-130	
Naphthalene	ug/kg	333	227	68	48-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

LABORATORY CONTROL SAMPLE: 1167344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	333	276	83	51-130	
Pyrene	ug/kg	333	263	79	55-130	
2-Fluorobiphenyl (S)	%			76	39-130	
Terphenyl-d14 (S)	%			82	37-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1167345 1167346

Parameter	Units	40115533003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<9.7	387	387	262	300	68	78	50-130	14	30	
2-Methylnaphthalene	ug/kg	<9.7	387	387	261	305	67	79	44-130	16	32	
Acenaphthene	ug/kg	<9.7	387	387	322	331	83	85	46-130	3	26	
Acenaphthylene	ug/kg	<8.7	387	387	352	348	91	90	49-130	1	23	
Anthracene	ug/kg	<10.0	387	387	364	368	94	95	52-130	1	28	
Benzo(a)anthracene	ug/kg	8.3J	387	387	319	346	80	87	34-130	8	36	
Benzo(a)pyrene	ug/kg	11.3J	387	387	331	355	83	89	34-130	7	40	
Benzo(b)fluoranthene	ug/kg	13.0J	387	387	355	347	88	86	22-130	2	40	
Benzo(g,h,i)perylene	ug/kg	8.6J	387	387	309	332	78	84	24-130	7	35	
Benzo(k)fluoranthene	ug/kg	<10.7	387	387	303	337	76	85	41-130	11	37	
Chrysene	ug/kg	13.6J	387	387	343	373	85	93	49-130	8	33	
Dibenz(a,h)anthracene	ug/kg	<7.1	387	387	331	335	85	86	27-130	1	31	
Fluoranthene	ug/kg	12.4J	387	387	360	442	90	111	34-130	20	37	
Fluorene	ug/kg	<9.7	387	387	339	341	88	88	45-130	1	25	
Indeno(1,2,3-cd)pyrene	ug/kg	<7.4	387	387	337	347	85	88	30-130	3	34	
Naphthalene	ug/kg	<9.7	387	387	272	299	70	77	38-130	10	30	
Phenanthrene	ug/kg	<9.7	387	387	339	383	86	97	38-130	12	34	
Pyrene	ug/kg	11.6J	387	387	359	397	90	100	35-130	10	35	
2-Fluorobiphenyl (S)	%						75	76	39-130			
Terphenyl-d14 (S)	%						69	72	37-130			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

QC Batch: PMST/11260 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40115043001, 40115043002, 40115043003, 40115043004, 40115043005, 40115043006, 40115043007, 40115043008

SAMPLE DUPLICATE: 1168620

Parameter	Units	40115755003 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.0	5.9	1	10	

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: MSV/28575

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte was detected in the associated method blank at a concentration of -0.52 mg/kg.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
R1	RPD value was outside control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
W	Non-detect results are reported on a wet weight basis.

Pace Analytical Services, Inc.
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(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115043

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40115043001	**WMW-12 0-2.5**	EPA 3050	MPRP/11968	EPA 6010	ICP/10643
40115043002	**WMW-13 0-2.5**	EPA 3050	MPRP/11968	EPA 6010	ICP/10643
40115043003	**WMW-14 2.5-5**	EPA 3050	MPRP/11968	EPA 6010	ICP/10643
40115043004	**WMW-15 0-2.5**	EPA 3050	MPRP/11968	EPA 6010	ICP/10643
40115043005	**WMW-16 2.5-5**	EPA 3050	MPRP/11968	EPA 6010	ICP/10643
40115043006	**WGP-14 0-2.5**	EPA 3050	MPRP/11968	EPA 6010	ICP/10643
40115043007	**WGP-15 0-2.5**	EPA 3050	MPRP/11968	EPA 6010	ICP/10643
40115043008	**WGP-13 0-2.5**	EPA 3050	MPRP/11968	EPA 6010	ICP/10643
40115043001	**WMW-12 0-2.5**	EPA 7471	MERP/4945	EPA 7471	MERC/6767
40115043002	**WMW-13 0-2.5**	EPA 7471	MERP/4945	EPA 7471	MERC/6767
40115043003	**WMW-14 2.5-5**	EPA 7471	MERP/4945	EPA 7471	MERC/6767
40115043004	**WMW-15 0-2.5**	EPA 7471	MERP/4945	EPA 7471	MERC/6767
40115043005	**WMW-16 2.5-5**	EPA 7471	MERP/4945	EPA 7471	MERC/6767
40115043006	**WGP-14 0-2.5**	EPA 7471	MERP/4945	EPA 7471	MERC/6767
40115043007	**WGP-15 0-2.5**	EPA 7471	MERP/4945	EPA 7471	MERC/6767
40115043008	**WGP-13 0-2.5**	EPA 7471	MERP/4945	EPA 7471	MERC/6767
40115043001	**WMW-12 0-2.5**	EPA 3546	OEXT/26637	EPA 8270 by SIM	MSSV/7918
40115043002	**WMW-13 0-2.5**	EPA 3546	OEXT/26637	EPA 8270 by SIM	MSSV/7918
40115043003	**WMW-14 2.5-5**	EPA 3546	OEXT/26637	EPA 8270 by SIM	MSSV/7918
40115043004	**WMW-15 0-2.5**	EPA 3546	OEXT/26685	EPA 8270 by SIM	MSSV/7935
40115043005	**WMW-16 2.5-5**	EPA 3546	OEXT/26637	EPA 8270 by SIM	MSSV/7918
40115043006	**WGP-14 0-2.5**	EPA 3546	OEXT/26637	EPA 8270 by SIM	MSSV/7918
40115043007	**WGP-15 0-2.5**	EPA 3546	OEXT/26637	EPA 8270 by SIM	MSSV/7918
40115043008	**WGP-13 0-2.5**	EPA 3546	OEXT/26637	EPA 8270 by SIM	MSSV/7918
40115043001	**WMW-12 0-2.5**	EPA 5035/5030B	MSV/28568	EPA 8260	MSV/28575
40115043002	**WMW-13 0-2.5**	EPA 5035/5030B	MSV/28568	EPA 8260	MSV/28575
40115043003	**WMW-14 2.5-5**	EPA 5035/5030B	MSV/28568	EPA 8260	MSV/28575
40115043004	**WMW-15 0-2.5**	EPA 5035/5030B	MSV/28568	EPA 8260	MSV/28575
40115043005	**WMW-16 2.5-5**	EPA 5035/5030B	MSV/28568	EPA 8260	MSV/28575
40115043006	**WGP-14 0-2.5**	EPA 5035/5030B	MSV/28568	EPA 8260	MSV/28575
40115043007	**WGP-15 0-2.5**	EPA 5035/5030B	MSV/28568	EPA 8260	MSV/28575
40115043008	**WGP-13 0-2.5**	EPA 5035/5030B	MSV/28568	EPA 8260	MSV/28575
40115043009	**MEOH BLANK**	EPA 5035/5030B	MSV/28568	EPA 8260	MSV/28575
40115043001	**WMW-12 0-2.5**	ASTM D2974-87	PMST/11260		
40115043002	**WMW-13 0-2.5**	ASTM D2974-87	PMST/11260		
40115043003	**WMW-14 2.5-5**	ASTM D2974-87	PMST/11260		
40115043004	**WMW-15 0-2.5**	ASTM D2974-87	PMST/11260		
40115043005	**WMW-16 2.5-5**	ASTM D2974-87	PMST/11260		
40115043006	**WGP-14 0-2.5**	ASTM D2974-87	PMST/11260		
40115043007	**WGP-15 0-2.5**	ASTM D2974-87	PMST/11260		
40115043008	**WGP-13 0-2.5**	ASTM D2974-87	PMST/11260		

REPORT OF LABORATORY ANALYSIS

CHAIN OF CUSTODY RECORD

VOC

401504

PROJECT NO.	PROJECT NAME/CLIENT
19-0422.20	West Waterfront

SAMPLERS: (*Signature*) Erin Lam

SAMPLE NO.	DATE	TIME	OM	RA	SAMPLE LOCATION/ DESCRIPTION	NO. OF CON-TAINERS	VOC	PAH	RCRA Metals	Field Filtered: N	N	N	REMARKS
001	5/18/15	9:45am			WMW-12 0-2.5	3	X	X	X	1-40ml F	1-40z p A		Send EDD 1-40z ag
002	5/18	11:35am			WMW-13 0-2.5	3	X	X	X				
003	5/18	1:05pm			WMW-14 2.5-5	3	X	X	X				
004	5/18	2:55pm			WMW-15 0-2.5	3	X	X	X				
005	5/18/15	4:40pm			WMW-16 2.5-5	3	X	X	X				
006	5/19/15	10:30am			WGP-14 0-2.5	3	X	X	X				
007	5/19	10:40am			WGP-15 0-2.5	3	X	X	X				
008	5/19	11:05am			WGP-13 0-2.5	3	X	X	X				
009					MeOH blank*								

Ayres Project Contact: Jeff Steiner

Ayres Project Manager: Jeff Steiner

Invoice To: Ayres Associates, Eau Claire, WI

RELINQUISHED BY: (*Signature*)	DATE / TIME	RECEIVED BY: (*Signature*)	RELINQUISHED BY: (*Signature*)	DATE / TIME	RECEIVED BY: (*Signature*)
Erin Lam	5/20/15 9:15	Susan Killyea Tate		5-20-15 0915	

Shipped on ice: X yes ___ no

Received on ice: X yes ___ no

Temp. if **not** received on ice: _____

COMMENTS:

AYRES ASSOCIATES
Ayres Associates Inc
Engineers/Architects/Scientists/Photogrammetrists
5201 E. Terrace Drive, Suite 200
Madison, WI 53718
(608)443-1200 Fax (608)443-1250

*added to COC by lab
KW 5-20-15

Appendix D

Low Flow Sampling Stabilization Logs

In-Situ Inc.

Troll 9000 **Low-Flow System**

7/14/2014 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	JCS	Pump Model/Type	PERISTALTIC
Company Name	AYRES	Tubing Type	HDPE
Project Name	WEST WATERFRONT 2	Tubing Diameter	0.22 [in]
Site Name	CO-OP	Tubing Length	13 [ft]
		Pump placement from TOC	1 [ft]

Well Information:		**Pumping information:**	
Well ID	WMW_1	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	214.18 [mL]
Well total depth	12.8 [ft]	Calculated Sample Rate	129 [sec]
Depth to top of screen	2.8 [ft]	Sample rate	180 [sec]
Screen length	10 [in]	Stabilized drawdown	1 [in]
Depth to Water	4.14 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30	+/-1	+/-0.2	+/-20
			+/-10 %	+/-3 %	+/-10 %	+/-10 %	
Last 5 Readings	15:58:06	57.20	6.70	1173.88	824.81	0.43	-196.88
	16:01:13	57.23	6.69	1165.24	275.15	0.42	-201.16
	16:04:19	57.20	6.70	1168.73	83.86	0.57	-204.37
	16:07:25	57.12	6.70	1169.40	455.51	0.46	-206.47
	16:10:33	57.10	6.70	1162.09	471.81	0.46	-207.71
Variance in last 3 readings	16:04:19	-0.03	0.01	3.49	-191.29	0.14	-3.21
	16:07:25	-0.08	0.00	0.67	371.65	-0.10	-2.10
	16:10:33	-0.02	0.00	-7.31	16.31	0.00	-1.24

Notes:

In-Situ Inc.

Troll 9000 **Low-Flow System**

7/14/2014 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	JCS	Pump Model/Type	PERISTALTIC
Company Name	AYRES	Tubing Type	HDPE
Project Name	WEST WATERFRONT 2	Tubing Diameter	0.22 [in]
Site Name	CO-OP	Tubing Length	13 [ft]
		Pump placement from TOC	1 [ft]

Well Information:		**Pumping information:**	
Well ID	WMW_1	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	214.18 [mL]
Well total depth	12.8 [ft]	Calculated Sample Rate	129 [sec]
Depth to top of screen	2.8 [ft]	Sample rate	180 [sec]
Screen length	10 [in]	Stabilized drawdown	1 [in]
Depth to Water	3.76 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30	+/-1	+/-0.2	+/-20
			+/-10 %	+/-3 %	+/-10 %	+/-10 %	
Last 5 Readings	16:37:20	54.90	6.80	1557.12	0.70	0.54	-86.93
	16:40:27	55.88	6.81	1517.43	1.02	0.47	-88.05
	16:43:34	56.06	6.81	1436.34	0.32	0.47	-87.58
	16:46:40	56.13	6.82	1369.98	0.53	0.49	-87.58
	16:49:47	56.14	6.83	1334.42	0.09	0.50	-88.13
Variance in last 3 readings	16:43:34	0.18	0.01	-81.09	-0.70	0.01	0.47
	16:46:40	0.08	0.01	-66.36	0.21	0.02	0.00
	16:49:47	0.01	0.00	-35.56	-0.44	0.01	-0.56

Notes:

In-Situ Inc.

Troll 9000 **Low-Flow System**

7/14/2014 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	JCS	Pump Model/Type	PERISTALTIC
Company Name	AYRES	Tubing Type	HDPE
Project Name	WEST WATERFRONT 2	Tubing Diameter	0.25 [in]
Site Name	CO-OP	Tubing Length	13 [ft]
		Pump placement from TOC	1 [ft]

Well Information:		**Pumping information:**	
Well ID	WMW_3	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	242.49 [mL]
Well total depth	12.8 [ft]	Calculated Sample Rate	146 [sec]
Depth to top of screen	2.8 [ft]	Sample rate	180 [sec]
Screen length	10 [in]	Stabilized drawdown	1 [in]
Depth to Water	3.32 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30	+/-1	+/-0.2	+/-20
			+/-10 %	+/-3 %	+/-10 %	+/-10 %	
Last 5 Readings	17:12:07	54.49	6.83	1555.13	-0.33	0.88	-105.35
	17:15:13	54.58	6.83	1557.73	-0.71	0.58	-110.32
	17:18:20	54.42	6.82	1545.17	-0.48	0.52	-113.44
	17:21:27	54.32	6.83	1546.08	0.00	0.54	-116.40
	17:24:33	53.98	6.82	1536.26	-0.50	0.57	-119.01
Variance in last 3 readings	17:18:20	-0.16	-0.01	-12.56	0.22	-0.06	-3.13
	17:21:27	-0.10	0.00	0.91	0.49	0.01	-2.96
	17:24:33	-0.34	0.00	-9.82	-0.51	0.03	-2.61

Notes:

In-Situ Inc.

Troll 9000 **Low-Flow System**

7/15/2014 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	JCS	Pump Model/Type	PERISTALTIC
Company Name	AYRES	Tubing Type	HDPE
Project Name	WEST WATERFRONT 2	Tubing Diameter	0.25 [in]
Site Name	CO-OP	Tubing Length	13 [ft]
		Pump placement from TOC	1 [ft]

Well Information:		**Pumping information:**	
Well ID	WMW_4	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	242.49 [mL]
Well total depth	12.7 [ft]	Calculated Sample Rate	146 [sec]
Depth to top of screen	2.7 [ft]	Sample rate	180 [sec]
Screen length	10 [in]	Stabilized drawdown	1 [in]
Depth to Water	2.96 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30	+/-1	+/-0.2	+/-20
			+/-10 %	+/-3 %	+/-10 %	+/-10 %	
Last 5 Readings	11:39:13	55.66	6.90	1035.97	9.10	0.44	-140.41
	11:42:20	55.66	6.90	1029.56	8.02	0.39	-140.80
	11:45:26	55.76	6.91	1018.27	7.29	0.35	-140.20
	11:48:34	55.80	6.91	1011.73	6.64	0.32	-139.86
	11:51:41	55.84	6.91	1004.96	6.69	0.34	-139.56
Variance in last 3 readings	11:45:26	0.10	0.01	-11.29	-0.73	-0.03	0.60
	11:48:34	0.04	0.00	-6.53	-0.65	-0.03	0.34
	11:51:41	0.04	0.00	-6.77	0.06	0.02	0.30

Notes:

In-Situ Inc.

Troll 9000 **Low-Flow System**

7/15/2014 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	JCS	Pump Model/Type	PERISTALTIC
Company Name	AYRES	Tubing Type	HDPE
Project Name	WEST WATERFRONT 2	Tubing Diameter	0.25 [in]
Site Name	CO-OP	Tubing Length	13 [ft]
		Pump placement from TOC	1 [ft]

Well Information:		**Pumping information:**	
Well ID	WMW_t	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	242.49 [mL]
Well total depth	12.7 [ft]	Calculated Sample Rate	146 [sec]
Depth to top of screen	2.7 [ft]	Sample rate	180 [sec]
Screen length	10 [in]	Stabilized drawdown	1 [in]
Depth to Water	3.44 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30	+/-1	+/-0.2	+/-20
			+/-10 %	+/-3 %	+/-10 %	+/-10 %	
Last 5 Readings	12:30:00	60.93	7.19	1502.43	-1.05	0.29	-168.33
	12:33:07	61.05	7.19	1515.77	-1.11	0.28	-168.84
	12:36:13	61.12	7.19	1521.70	-1.07	0.29	-168.88
	12:36:51	61.20	7.18	1522.46	-1.03	0.32	-168.79
	12:39:58	61.20	7.18	1521.21	-0.99	0.29	-169.01
Variance in last 3 readings	12:36:13	0.07	0.00	5.93	0.04	0.01	-0.04
	12:36:51	0.07	0.00	0.76	0.05	0.03	0.09
	12:39:58	0.01	0.00	-1.25	0.04	-0.03	-0.21

Notes:

In-Situ Inc.

Troll 9000 **Low-Flow System**

7/15/2014 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	JCS	Pump Model/Type	PERISTALTIC
Company Name	AYRES	Tubing Type	HDPE
Project Name	WEST WATERFRONT 2	Tubing Diameter	0.25 [in]
Site Name	CO-OP	Tubing Length	13 [ft]
		Pump placement from TOC	1 [ft]

Well Information:		**Pumping information:**	
Well ID	WMW_7	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	242.49 [mL]
Well total depth	12.9 [ft]	Calculated Sample Rate	146 [sec]
Depth to top of screen	2.9 [ft]	Sample rate	180 [sec]
Screen length	10 [in]	Stabilized drawdown	1 [in]
Depth to Water	3.14 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30	+/-1	+/-0.2	+/-20
			+/-10 %	+/-3 %	+/-10 %	+/-10 %	
	0:00:00	0.00	0.00	0.00	0.00	0.00	0.00
	13:06:59	59.73	6.76	1776.82	-0.78	7.94	76.96
Last 5 Readings	13:10:04	60.87	6.70	1930.41	-0.64	6.49	92.75
	13:13:11	61.06	6.68	1983.52	-0.94	6.30	96.95
	13:16:17	60.99	6.66	2016.02	-1.04	6.11	96.27
	13:10:04	1.14	-0.06	153.60	0.14	-1.45	15.79
Variance in last 3 readings	13:13:11	0.20	-0.02	53.11	-0.31	-0.19	4.20
	13:16:17	-0.08	-0.02	32.50	-0.09	-0.19	-0.68

Notes:

In-Situ Inc.

Troll 9000 **Low-Flow System**

7/15/2014 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	JCS	Pump Model/Type	PERISTALTIC
Company Name	AYRES	Tubing Type	HDPE
Project Name	WEST WATERFRONT 2	Tubing Diameter	0.25 [in]
Site Name	CO-OP	Tubing Length	13 [ft]
		Pump placement from TOC	1 [ft]

Well Information:		**Pumping information:**	
Well ID	WMW_8	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	242.49 [mL]
Well total depth	12.8 [ft]	Calculated Sample Rate	146 [sec]
Depth to top of screen	2.8 [ft]	Sample rate	180 [sec]
Screen length	10 [in]	Stabilized drawdown	1 [in]
Depth to Water	3.81 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30	+/-0.2	+/-20
			+/-10 %	+/-3 %	+/-10 %	
	0:00:00	0.00	0.00	0.00	0.00	0.00
	16:33:08	57.66	6.94	1199.54	5.16	-34.24
Last 5 Readings	16:36:15	57.61	6.92	1199.29	4.88	-27.90
	16:39:21	57.65	6.90	1188.61	4.71	-25.59
	16:42:28	57.68	6.89	1181.49	4.59	-21.26
	16:36:15	-0.04	-0.02	-0.25	-0.28	6.34
Variance in last 3 readings	16:39:21	0.04	-0.02	-10.68	-0.16	2.32
	16:42:28	0.03	-0.01	-7.12	-0.12	4.33

Notes:

In-Situ Inc.

Troll 9000 **Low-Flow System**

7/15/2014 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	JCS	Pump Model/Type	PERISTALTIC
Company Name	AYRES	Tubing Type	HDPE
Project Name	WEST WATERFRONT 2	Tubing Diameter	0.25 [in]
Site Name	CO-OP	Tubing Length	13 [ft]
		Pump placement from TOC	1 [ft]

Well Information:		**Pumping information:**	
Well ID	WMW_10	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	242.49 [mL]
Well total depth	12.7 [ft]	Calculated Sample Rate	146 [sec]
Depth to top of screen	2.7 [ft]	Sample rate	180 [sec]
Screen length	10 [in]	Stabilized drawdown	1 [in]
Depth to Water	2.4 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30	+/-1	+/-0.2	+/-20
			+/-10 %	+/-3 %	+/-10 %	+/-10 %	
Last 5 Readings	15:18:22	58.36	6.34	1048.90	-0.90	0.59	-58.34
	15:21:29	58.46	6.33	1033.84	-0.80	0.64	-60.52
	15:24:36	58.76	6.32	1031.50	-0.88	0.68	-61.72
	15:27:42	58.65	6.32	1068.56	-0.86	0.72	-62.92
	15:30:49	58.63	6.32	1068.20	-0.95	0.74	-64.29
Variance in last 3 readings	15:24:36	0.31	-0.01	-2.34	-0.08	0.04	-1.20
	15:27:42	-0.11	0.00	37.06	0.02	0.04	-1.20
	15:30:49	-0.03	0.00	-0.36	-0.09	0.02	-1.37

Notes:

In-Situ Inc.

Troll 9000 **Low-Flow System**

7/15/2014 **ISI Low-Flow Log**

Project Information:		**Pump Information:**	
Operator Name	JCS	Pump Model/Type	PERISTALTIC
Company Name	AYRES	Tubing Type	HDPE
Project Name	WEST WATERFRONT 2	Tubing Diameter	0.25 [in]
Site Name	CO-OP	Tubing Length	13 [ft]
		Pump placement from TOC	1 [ft]

Well Information:		**Pumping information:**	
Well ID	WMW_11	Final pumping rate	100 [mL/min]
Well diameter	2 [in]	Flowcell volume	242.49 [mL]
Well total depth	12.7 [ft]	Calculated Sample Rate	146 [sec]
Depth to top of screen	2.7 [ft]	Sample rate	180 [sec]
Screen length	10 [in]	Stabilized drawdown	1 [in]
Depth to Water	3.81 [ft]		

Low-Flow Sampling Stabilization Summary

	Time	Temp [F]	pH [pH]	Cond [µS/cm]	Turb [NTU]	DO [mg/L]	ORP [mV]
Stabilization Settings			+/-0.2	+/-30	+/-1	+/-0.2	+/-20
			+/-10 %	+/-3 %	+/-10 %	+/-10 %	
Last 5 Readings	14:30:26	59.44	6.72	1739.13	-0.52	0.70	-73.58
	14:33:32	59.79	6.69	1716.93	-0.71	0.53	-79.44
	14:36:39	59.81	6.68	1683.48	-0.71	0.48	-81.19
	14:39:46	59.99	6.67	1666.41	-0.77	0.49	-81.92
	14:42:53	59.96	6.67	1656.95	-0.84	0.50	-83.75
Variance in last 3 readings	14:36:39	0.02	-0.01	-33.45	0.00	-0.04	-1.75
	14:39:46	0.18	-0.01	-17.07	-0.06	0.00	-0.73
	14:42:53	-0.03	0.00	-9.46	-0.06	0.01	-1.84

Notes:

Appendix E

Laboratory Analytical Reports for Groundwater Samples

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

June 04, 2015

Jeff Steiner
AYRES & ASSOCIATES, INC.
5201 E. Terrace Dr., Suite 200
Madison, WI 53718

RE: Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Dear Jeff Steiner:
Enclosed are the analytical results for sample(s) received by the laboratory on May 20, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
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(920)469-2436

CERTIFICATIONS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40115037001	**WMW-2**	Water	05/18/15 10:45	05/20/15 09:15
40115037002	**WMW-8**	Water	05/18/15 11:20	05/20/15 09:15
40115037003	**WMW-10**	Water	05/18/15 12:25	05/20/15 09:15
40115037004	**WPZ-10**	Water	05/18/15 12:25	05/20/15 09:15
40115037005	**WMW-12**	Water	05/19/15 07:55	05/20/15 09:15
40115037006	**WMW-13**	Water	05/19/15 08:35	05/20/15 09:15
40115037007	**WMW-14**	Water	05/19/15 09:10	05/20/15 09:15
40115037008	**WMW-15**	Water	05/19/15 09:40	05/20/15 09:15
40115037009	**WMW-16**	Water	05/19/15 10:10	05/20/15 09:15
40115037010	**TRIP**	Water	05/19/15 00:00	05/20/15 09:15

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SAMPLE ANALYTE COUNT

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40115037001	**WMW-2**	EPA 6010	DLB	3	PASI-G
		EPA 8270 by HVI	TPO	20	PASI-G
		EPA 8260	LAP	64	PASI-G
40115037002	**WMW-8**	EPA 6010	DLB	3	PASI-G
		EPA 8270 by HVI	TPO	20	PASI-G
		EPA 8260	LAP	64	PASI-G
40115037003	**WMW-10**	EPA 6010	DLB	3	PASI-G
		EPA 8270 by HVI	TPO	20	PASI-G
		EPA 8260	LAP	64	PASI-G
40115037004	**WPZ-10**	EPA 6010	DLB	3	PASI-G
		EPA 8270 by HVI	TPO	20	PASI-G
		EPA 8260	LAP	64	PASI-G
40115037005	**WMW-12**	EPA 6010	DLB	3	PASI-G
		EPA 8270 by HVI	TPO	20	PASI-G
		EPA 8260	LAP	64	PASI-G
40115037006	**WMW-13**	EPA 6010	DLB	3	PASI-G
		EPA 8270 by HVI	TPO	20	PASI-G
		EPA 8260	LAP	64	PASI-G
40115037007	**WMW-14**	EPA 6010	DLB	3	PASI-G
		EPA 8270 by HVI	TPO	20	PASI-G
		EPA 8260	LAP	64	PASI-G
40115037008	**WMW-15**	EPA 6010	DLB	3	PASI-G
		EPA 8270 by HVI	TPO	20	PASI-G
		EPA 8260	LAP	64	PASI-G
40115037009	**WMW-16**	EPA 6010	DLB	3	PASI-G
		EPA 8270 by HVI	TPO	20	PASI-G
		EPA 8260	LAP	64	PASI-G
40115037010	**TRIP**	EPA 8260	LAP	64	PASI-G

Pace Analytical Services, Inc.
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SUMMARY OF DETECTION

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40115037001	**WMW-2**					
EPA 8270 by HVI	Acenaphthene	0.0076J	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Benzo(a)pyrene	0.026J	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.18	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.11	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.13	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Chrysene	0.21	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Dibenz(a,h)anthracene	0.0077J	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Fluoranthene	0.44	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Fluorene	0.0042J	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Indeno(1,2,3-cd)pyrene	0.056	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Naphthalene	0.0056J	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Phenanthrene	0.15	ug/L	0.048	05/22/15 16:45	
EPA 8270 by HVI	Pyrene	0.28	ug/L	0.048	05/22/15 16:45	
EPA 8260	Methyl-tert-butyl ether	1.4	ug/L	1.0	05/21/15 13:51	
40115037002	**WMW-8**					
EPA 8270 by HVI	Chrysene	0.0075J	ug/L	0.048	05/22/15 17:02	
EPA 8270 by HVI	Fluoranthene	0.011J	ug/L	0.048	05/22/15 17:02	
EPA 8270 by HVI	Naphthalene	0.0045J	ug/L	0.048	05/22/15 17:02	
EPA 8270 by HVI	Pyrene	0.0099J	ug/L	0.048	05/22/15 17:02	
40115037003	**WMW-10**					
EPA 8270 by HVI	Acenaphthene	0.018J	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Acenaphthylene	0.015J	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Benzo(a)pyrene	0.017J	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.062	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.037J	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.030J	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Chrysene	0.086	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Fluoranthene	0.15	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Fluorene	0.0042J	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Indeno(1,2,3-cd)pyrene	0.025J	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	1-Methylnaphthalene	0.0040J	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	2-Methylnaphthalene	0.0033J	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Naphthalene	0.0052J	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Phenanthrene	0.054	ug/L	0.046	05/22/15 17:18	
EPA 8270 by HVI	Pyrene	0.14	ug/L	0.046	05/22/15 17:18	
40115037004	**WPZ-10**					
EPA 8270 by HVI	Chrysene	0.0078J	ug/L	0.049	05/22/15 17:35	
EPA 8270 by HVI	1-Methylnaphthalene	0.0054J	ug/L	0.049	05/22/15 17:35	
EPA 8270 by HVI	2-Methylnaphthalene	0.0038J	ug/L	0.049	05/22/15 17:35	
EPA 8270 by HVI	Naphthalene	0.0066J	ug/L	0.049	05/22/15 17:35	
EPA 8270 by HVI	Phenanthrene	0.0095J	ug/L	0.049	05/22/15 17:35	
40115037005	**WMW-12**					
EPA 8270 by HVI	Chrysene	0.016J	ug/L	0.051	05/22/15 17:52	
EPA 8270 by HVI	Fluoranthene	0.032J	ug/L	0.051	05/22/15 17:52	
EPA 8270 by HVI	1-Methylnaphthalene	0.0034J	ug/L	0.051	05/22/15 17:52	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40115037005	**WMW-12**					
EPA 8270 by HVI	2-Methylnaphthalene	0.0029J	ug/L	0.051	05/22/15 17:52	
EPA 8270 by HVI	Phenanthrene	0.022J	ug/L	0.051	05/22/15 17:52	
EPA 8270 by HVI	Pyrene	0.025J	ug/L	0.051	05/22/15 17:52	
EPA 8260	1,1-Dichloroethane	0.53J	ug/L	1.0	05/21/15 14:59	
EPA 8260	cis-1,2-Dichloroethene	0.75J	ug/L	1.0	05/21/15 14:59	
40115037006	**WMW-13**					
EPA 6010	Lead, Dissolved	17.4	ug/L	7.5	05/26/15 18:08	
EPA 8270 by HVI	Acenaphthene	0.63	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Acenaphthylene	0.062	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Anthracene	0.19	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Benzo(a)anthracene	0.074	ug/L	0.045	05/22/15 18:08	L2
EPA 8270 by HVI	Benzo(a)pyrene	0.046	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.086	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.047	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.059	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Chrysene	0.13	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Fluoranthene	0.56	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Fluorene	0.47	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Indeno(1,2,3-cd)pyrene	0.029J	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	1-Methylnaphthalene	0.26	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	2-Methylnaphthalene	0.25	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Naphthalene	1.6	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Phenanthrene	1.1	ug/L	0.045	05/22/15 18:08	
EPA 8270 by HVI	Pyrene	0.45	ug/L	0.045	05/22/15 18:08	
40115037007	**WMW-14**					
EPA 8270 by HVI	Acenaphthene	0.011J	ug/L	0.046	05/22/15 15:05	
EPA 8270 by HVI	Chrysene	0.011J	ug/L	0.046	05/22/15 15:05	
EPA 8270 by HVI	Fluoranthene	0.021J	ug/L	0.046	05/22/15 15:05	
EPA 8270 by HVI	Fluorene	0.0089J	ug/L	0.046	05/22/15 15:05	
EPA 8270 by HVI	1-Methylnaphthalene	0.011J	ug/L	0.046	05/22/15 15:05	
EPA 8270 by HVI	2-Methylnaphthalene	0.0072J	ug/L	0.046	05/22/15 15:05	
EPA 8270 by HVI	Naphthalene	0.029J	ug/L	0.046	05/22/15 15:05	
EPA 8270 by HVI	Phenanthrene	0.027J	ug/L	0.046	05/22/15 15:05	
EPA 8270 by HVI	Pyrene	0.024J	ug/L	0.046	05/22/15 15:05	
40115037008	**WMW-15**					
EPA 6010	Lead, Dissolved	5.7J	ug/L	7.5	05/26/15 18:17	
EPA 8270 by HVI	Acenaphthene	0.36	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Acenaphthylene	0.13	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Anthracene	0.47	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Benzo(a)anthracene	0.38	ug/L	0.048	05/22/15 18:41	L2
EPA 8270 by HVI	Benzo(a)pyrene	0.28	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.24	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Benzo(g,h,i)perylene	0.49	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.055	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Chrysene	0.52	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Dibenz(a,h)anthracene	0.013J	ug/L	0.048	05/22/15 18:41	

REPORT OF LABORATORY ANALYSIS

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

SUMMARY OF DETECTION

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40115037008	**WMW-15**					
EPA 8270 by HVI	Fluoranthene	0.42	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Fluorene	0.71	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Indeno(1,2,3-cd)pyrene	0.10	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	1-Methylnaphthalene	2.4	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	2-Methylnaphthalene	1.1	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Naphthalene	0.44	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Phenanthrene	2.0	ug/L	0.048	05/22/15 18:41	
EPA 8270 by HVI	Pyrene	3.3	ug/L	0.048	05/22/15 18:41	
EPA 8260	1,2,4-Trimethylbenzene	0.73J	ug/L	1.0	05/21/15 16:06	
40115037009	**WMW-16**					
EPA 8270 by HVI	Acenaphthene	0.10	ug/L	0.047	05/22/15 15:22	
EPA 8270 by HVI	Acenaphthylene	0.024J	ug/L	0.047	05/22/15 15:22	
EPA 8270 by HVI	Benzo(b)fluoranthene	0.0097J	ug/L	0.047	05/22/15 15:22	
EPA 8270 by HVI	Benzo(k)fluoranthene	0.0063J	ug/L	0.047	05/22/15 15:22	
EPA 8270 by HVI	Chrysene	0.026J	ug/L	0.047	05/22/15 15:22	
EPA 8270 by HVI	Fluoranthene	0.071	ug/L	0.047	05/22/15 15:22	
EPA 8270 by HVI	Fluorene	0.085	ug/L	0.047	05/22/15 15:22	
EPA 8270 by HVI	1-Methylnaphthalene	0.078	ug/L	0.047	05/22/15 15:22	
EPA 8270 by HVI	2-Methylnaphthalene	0.054	ug/L	0.047	05/22/15 15:22	
EPA 8270 by HVI	Naphthalene	0.047	ug/L	0.047	05/22/15 15:22	
EPA 8270 by HVI	Phenanthrene	0.18	ug/L	0.047	05/22/15 15:22	
EPA 8270 by HVI	Pyrene	0.090	ug/L	0.047	05/22/15 15:22	
EPA 8260	p-Isopropyltoluene	2.6	ug/L	1.0	05/21/15 16:29	
EPA 8260	Toluene	3.8	ug/L	1.0	05/21/15 16:29	

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-2 **Lab ID: 40115037001** Collected: 05/18/15 10:45 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<7.2**	ug/L	20.0	7.2	1		05/26/15 17:42	7440-38-2	
Cadmium, Dissolved	**<0.60**	ug/L	5.0	0.60	1		05/26/15 17:42	7440-43-9	
Lead, Dissolved	**<3.0**	ug/L	7.5	3.0	1		05/26/15 17:42	7439-92-1	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**0.0076J**	ug/L	0.048	0.0047	1	05/21/15 08:41	05/22/15 16:45	83-32-9	
Acenaphthylene	**<0.0047**	ug/L	0.048	0.0047	1	05/21/15 08:41	05/22/15 16:45	208-96-8	
Anthracene	**<0.0038**	ug/L	0.048	0.0038	1	05/21/15 08:41	05/22/15 16:45	120-12-7	
Benzo(a)anthracene	**<0.0049**	ug/L	0.048	0.0049	1	05/21/15 08:41	05/22/15 16:45	56-55-3	L2
Benzo(a)pyrene	**0.026J**	ug/L	0.048	0.0042	1	05/21/15 08:41	05/22/15 16:45	50-32-8	
Benzo(b)fluoranthene	**0.18**	ug/L	0.048	0.0051	1	05/21/15 08:41	05/22/15 16:45	205-99-2	
Benzo(g,h,i)perylene	**0.11**	ug/L	0.048	0.0033	1	05/21/15 08:41	05/22/15 16:45	191-24-2	
Benzo(k)fluoranthene	**0.13**	ug/L	0.048	0.0054	1	05/21/15 08:41	05/22/15 16:45	207-08-9	
Chrysene	**0.21**	ug/L	0.048	0.0040	1	05/21/15 08:41	05/22/15 16:45	218-01-9	
Dibenz(a,h)anthracene	**0.0077J**	ug/L	0.048	0.0053	1	05/21/15 08:41	05/22/15 16:45	53-70-3	
Fluoranthene	**0.44**	ug/L	0.048	0.0090	1	05/21/15 08:41	05/22/15 16:45	206-44-0	
Fluorene	**0.0042J**	ug/L	0.048	0.0038	1	05/21/15 08:41	05/22/15 16:45	86-73-7	
Indeno(1,2,3-cd)pyrene	**0.056**	ug/L	0.048	0.0034	1	05/21/15 08:41	05/22/15 16:45	193-39-5	
1-Methylnaphthalene	**<0.0029**	ug/L	0.048	0.0029	1	05/21/15 08:41	05/22/15 16:45	90-12-0	
2-Methylnaphthalene	**<0.0026**	ug/L	0.048	0.0026	1	05/21/15 08:41	05/22/15 16:45	91-57-6	
Naphthalene	**0.0056J**	ug/L	0.048	0.0043	1	05/21/15 08:41	05/22/15 16:45	91-20-3	
Phenanthrene	**0.15**	ug/L	0.048	0.0073	1	05/21/15 08:41	05/22/15 16:45	85-01-8	
Pyrene	**0.28**	ug/L	0.048	0.0073	1	05/21/15 08:41	05/22/15 16:45	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	64	%	40-130		1	05/21/15 08:41	05/22/15 16:45	321-60-8	
Terphenyl-d14 (S)	83	%	26-135		1	05/21/15 08:41	05/22/15 16:45	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 13:51	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		05/21/15 13:51	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		05/21/15 13:51	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 13:51	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		05/21/15 13:51	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		05/21/15 13:51	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		05/21/15 13:51	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		05/21/15 13:51	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		05/21/15 13:51	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	124-48-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-2 **Lab ID: 40115037001** Collected: 05/18/15 10:45 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		05/21/15 13:51	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		05/21/15 13:51	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		05/21/15 13:51	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		05/21/15 13:51	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		05/21/15 13:51	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		05/21/15 13:51	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 13:51	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 13:51	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		05/21/15 13:51	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		05/21/15 13:51	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		05/21/15 13:51	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 13:51	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 13:51	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		05/21/15 13:51	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		05/21/15 13:51	75-09-2	
Methyl-tert-butyl ether	**1.4**	ug/L	1.0	0.17	1		05/21/15 13:51	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		05/21/15 13:51	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 13:51	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		05/21/15 13:51	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 13:51	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 13:51	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		05/21/15 13:51	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		05/21/15 13:51	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 13:51	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/21/15 13:51	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		05/21/15 13:51	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:51	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		05/21/15 13:51	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		05/21/15 13:51	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-2 **Lab ID: 40115037001** Collected: 05/18/15 10:45 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/21/15 13:51	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-8 **Lab ID: 40115037002** Collected: 05/18/15 11:20 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<7.2**	ug/L	20.0	7.2	1		05/26/15 17:49	7440-38-2	
Cadmium, Dissolved	**<0.60**	ug/L	5.0	0.60	1		05/26/15 17:49	7440-43-9	
Lead, Dissolved	**<3.0**	ug/L	7.5	3.0	1		05/26/15 17:49	7439-92-1	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0048**	ug/L	0.048	0.0048	1	05/21/15 08:41	05/22/15 17:02	83-32-9	
Acenaphthylene	**<0.0048**	ug/L	0.048	0.0048	1	05/21/15 08:41	05/22/15 17:02	208-96-8	
Anthracene	**<0.0039**	ug/L	0.048	0.0039	1	05/21/15 08:41	05/22/15 17:02	120-12-7	
Benzo(a)anthracene	**<0.0049**	ug/L	0.048	0.0049	1	05/21/15 08:41	05/22/15 17:02	56-55-3	L2
Benzo(a)pyrene	**<0.0042**	ug/L	0.048	0.0042	1	05/21/15 08:41	05/22/15 17:02	50-32-8	
Benzo(b)fluoranthene	**<0.0051**	ug/L	0.048	0.0051	1	05/21/15 08:41	05/22/15 17:02	205-99-2	
Benzo(g,h,i)perylene	**<0.0034**	ug/L	0.048	0.0034	1	05/21/15 08:41	05/22/15 17:02	191-24-2	
Benzo(k)fluoranthene	**<0.0054**	ug/L	0.048	0.0054	1	05/21/15 08:41	05/22/15 17:02	207-08-9	
Chrysene	**0.0075J**	ug/L	0.048	0.0041	1	05/21/15 08:41	05/22/15 17:02	218-01-9	
Dibenz(a,h)anthracene	**<0.0053**	ug/L	0.048	0.0053	1	05/21/15 08:41	05/22/15 17:02	53-70-3	
Fluoranthene	**0.011J**	ug/L	0.048	0.0090	1	05/21/15 08:41	05/22/15 17:02	206-44-0	
Fluorene	**<0.0039**	ug/L	0.048	0.0039	1	05/21/15 08:41	05/22/15 17:02	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.0034**	ug/L	0.048	0.0034	1	05/21/15 08:41	05/22/15 17:02	193-39-5	
1-Methylnaphthalene	**<0.0030**	ug/L	0.048	0.0030	1	05/21/15 08:41	05/22/15 17:02	90-12-0	
2-Methylnaphthalene	**<0.0026**	ug/L	0.048	0.0026	1	05/21/15 08:41	05/22/15 17:02	91-57-6	
Naphthalene	**0.0045J**	ug/L	0.048	0.0044	1	05/21/15 08:41	05/22/15 17:02	91-20-3	
Phenanthrene	**<0.0074**	ug/L	0.048	0.0074	1	05/21/15 08:41	05/22/15 17:02	85-01-8	
Pyrene	**0.0099J**	ug/L	0.048	0.0074	1	05/21/15 08:41	05/22/15 17:02	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	62	%	40-130		1	05/21/15 08:41	05/22/15 17:02	321-60-8	
Terphenyl-d14 (S)	92	%	26-135		1	05/21/15 08:41	05/22/15 17:02	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:14	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		05/21/15 14:14	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		05/21/15 14:14	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 14:14	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:14	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		05/21/15 14:14	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		05/21/15 14:14	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		05/21/15 14:14	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		05/21/15 14:14	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	124-48-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-8 **Lab ID: 40115037002** Collected: 05/18/15 11:20 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:14	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		05/21/15 14:14	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		05/21/15 14:14	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		05/21/15 14:14	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		05/21/15 14:14	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		05/21/15 14:14	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 14:14	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 14:14	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:14	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		05/21/15 14:14	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		05/21/15 14:14	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:14	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 14:14	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		05/21/15 14:14	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:14	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		05/21/15 14:14	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		05/21/15 14:14	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:14	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		05/21/15 14:14	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 14:14	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 14:14	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		05/21/15 14:14	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		05/21/15 14:14	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:14	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:14	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		05/21/15 14:14	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:14	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		05/21/15 14:14	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		05/21/15 14:14	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-8 **Lab ID: 40115037002** Collected: 05/18/15 11:20 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
Toluene-d8 (S)	100	%	70-130		1		05/21/15 14:14	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-10 **Lab ID: 40115037003** Collected: 05/18/15 12:25 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<7.2**	ug/L	20.0	7.2	1		05/26/15 17:52	7440-38-2	
Cadmium, Dissolved	**<0.60**	ug/L	5.0	0.60	1		05/26/15 17:52	7440-43-9	
Lead, Dissolved	**<3.0**	ug/L	7.5	3.0	1		05/26/15 17:52	7439-92-1	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**0.018J**	ug/L	0.046	0.0046	1	05/21/15 08:41	05/22/15 17:18	83-32-9	
Acenaphthylene	**0.015J**	ug/L	0.046	0.0045	1	05/21/15 08:41	05/22/15 17:18	208-96-8	
Anthracene	**<0.0037**	ug/L	0.046	0.0037	1	05/21/15 08:41	05/22/15 17:18	120-12-7	
Benzo(a)anthracene	**<0.0047**	ug/L	0.046	0.0047	1	05/21/15 08:41	05/22/15 17:18	56-55-3	L2
Benzo(a)pyrene	**0.017J**	ug/L	0.046	0.0041	1	05/21/15 08:41	05/22/15 17:18	50-32-8	
Benzo(b)fluoranthene	**0.062**	ug/L	0.046	0.0049	1	05/21/15 08:41	05/22/15 17:18	205-99-2	
Benzo(g,h,i)perylene	**0.037J**	ug/L	0.046	0.0032	1	05/21/15 08:41	05/22/15 17:18	191-24-2	
Benzo(k)fluoranthene	**0.030J**	ug/L	0.046	0.0052	1	05/21/15 08:41	05/22/15 17:18	207-08-9	
Chrysene	**0.086**	ug/L	0.046	0.0039	1	05/21/15 08:41	05/22/15 17:18	218-01-9	
Dibenz(a,h)anthracene	**<0.0051**	ug/L	0.046	0.0051	1	05/21/15 08:41	05/22/15 17:18	53-70-3	
Fluoranthene	**0.15**	ug/L	0.046	0.0086	1	05/21/15 08:41	05/22/15 17:18	206-44-0	
Fluorene	**0.0042J**	ug/L	0.046	0.0037	1	05/21/15 08:41	05/22/15 17:18	86-73-7	
Indeno(1,2,3-cd)pyrene	**0.025J**	ug/L	0.046	0.0033	1	05/21/15 08:41	05/22/15 17:18	193-39-5	
1-Methylnaphthalene	**0.0040J**	ug/L	0.046	0.0028	1	05/21/15 08:41	05/22/15 17:18	90-12-0	
2-Methylnaphthalene	**0.0033J**	ug/L	0.046	0.0025	1	05/21/15 08:41	05/22/15 17:18	91-57-6	
Naphthalene	**0.0052J**	ug/L	0.046	0.0042	1	05/21/15 08:41	05/22/15 17:18	91-20-3	
Phenanthrene	**0.054**	ug/L	0.046	0.0070	1	05/21/15 08:41	05/22/15 17:18	85-01-8	
Pyrene	**0.14**	ug/L	0.046	0.0071	1	05/21/15 08:41	05/22/15 17:18	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	57	%	40-130		1	05/21/15 08:41	05/22/15 17:18	321-60-8	
Terphenyl-d14 (S)	57	%	26-135		1	05/21/15 08:41	05/22/15 17:18	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:36	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		05/21/15 14:36	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		05/21/15 14:36	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 14:36	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:36	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		05/21/15 14:36	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		05/21/15 14:36	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		05/21/15 14:36	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		05/21/15 14:36	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	124-48-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-10 **Lab ID: 40115037003** Collected: 05/18/15 12:25 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:36	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		05/21/15 14:36	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		05/21/15 14:36	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		05/21/15 14:36	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		05/21/15 14:36	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		05/21/15 14:36	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 14:36	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 14:36	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:36	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		05/21/15 14:36	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		05/21/15 14:36	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:36	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 14:36	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		05/21/15 14:36	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:36	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		05/21/15 14:36	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		05/21/15 14:36	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:36	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		05/21/15 14:36	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 14:36	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 14:36	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		05/21/15 14:36	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		05/21/15 14:36	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:36	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:36	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		05/21/15 14:36	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:36	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		05/21/15 14:36	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		05/21/15 14:36	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-10 **Lab ID: 40115037003** Collected: 05/18/15 12:25 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/21/15 14:36	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WPZ-10 **Lab ID: 40115037004** Collected: 05/18/15 12:25 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<7.2**	ug/L	20.0	7.2	1		05/26/15 17:59	7440-38-2	
Cadmium, Dissolved	**<0.60**	ug/L	5.0	0.60	1		05/26/15 17:59	7440-43-9	
Lead, Dissolved	**<3.0**	ug/L	7.5	3.0	1		05/26/15 17:59	7439-92-1	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0049**	ug/L	0.049	0.0049	1	05/21/15 08:41	05/22/15 17:35	83-32-9	
Acenaphthylene	**<0.0048**	ug/L	0.049	0.0048	1	05/21/15 08:41	05/22/15 17:35	208-96-8	
Anthracene	**<0.0040**	ug/L	0.049	0.0040	1	05/21/15 08:41	05/22/15 17:35	120-12-7	
Benzo(a)anthracene	**<0.0050**	ug/L	0.049	0.0050	1	05/21/15 08:41	05/22/15 17:35	56-55-3	L2
Benzo(a)pyrene	**<0.0043**	ug/L	0.049	0.0043	1	05/21/15 08:41	05/22/15 17:35	50-32-8	
Benzo(b)fluoranthene	**<0.0052**	ug/L	0.049	0.0052	1	05/21/15 08:41	05/22/15 17:35	205-99-2	
Benzo(g,h,i)perylene	**<0.0034**	ug/L	0.049	0.0034	1	05/21/15 08:41	05/22/15 17:35	191-24-2	
Benzo(k)fluoranthene	**<0.0055**	ug/L	0.049	0.0055	1	05/21/15 08:41	05/22/15 17:35	207-08-9	
Chrysene	**0.0078J**	ug/L	0.049	0.0042	1	05/21/15 08:41	05/22/15 17:35	218-01-9	
Dibenz(a,h)anthracene	**<0.0055**	ug/L	0.049	0.0055	1	05/21/15 08:41	05/22/15 17:35	53-70-3	
Fluoranthene	**<0.0092**	ug/L	0.049	0.0092	1	05/21/15 08:41	05/22/15 17:35	206-44-0	
Fluorene	**<0.0040**	ug/L	0.049	0.0040	1	05/21/15 08:41	05/22/15 17:35	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.0035**	ug/L	0.049	0.0035	1	05/21/15 08:41	05/22/15 17:35	193-39-5	
1-Methylnaphthalene	**0.0054J**	ug/L	0.049	0.0030	1	05/21/15 08:41	05/22/15 17:35	90-12-0	
2-Methylnaphthalene	**0.0038J**	ug/L	0.049	0.0027	1	05/21/15 08:41	05/22/15 17:35	91-57-6	
Naphthalene	**0.0066J**	ug/L	0.049	0.0044	1	05/21/15 08:41	05/22/15 17:35	91-20-3	
Phenanthrene	**0.0095J**	ug/L	0.049	0.0075	1	05/21/15 08:41	05/22/15 17:35	85-01-8	
Pyrene	**<0.0075**	ug/L	0.049	0.0075	1	05/21/15 08:41	05/22/15 17:35	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	69	%	40-130		1	05/21/15 08:41	05/22/15 17:35	321-60-8	
Terphenyl-d14 (S)	95	%	26-135		1	05/21/15 08:41	05/22/15 17:35	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 13:29	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		05/21/15 13:29	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		05/21/15 13:29	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 13:29	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		05/21/15 13:29	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		05/21/15 13:29	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		05/21/15 13:29	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		05/21/15 13:29	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		05/21/15 13:29	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	124-48-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WPZ-10 **Lab ID: 40115037004** Collected: 05/18/15 12:25 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		05/21/15 13:29	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		05/21/15 13:29	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		05/21/15 13:29	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		05/21/15 13:29	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		05/21/15 13:29	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		05/21/15 13:29	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 13:29	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 13:29	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		05/21/15 13:29	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		05/21/15 13:29	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		05/21/15 13:29	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 13:29	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 13:29	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		05/21/15 13:29	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		05/21/15 13:29	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		05/21/15 13:29	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		05/21/15 13:29	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 13:29	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		05/21/15 13:29	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 13:29	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 13:29	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		05/21/15 13:29	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		05/21/15 13:29	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 13:29	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/21/15 13:29	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		05/21/15 13:29	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 13:29	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	96	%	70-130		1		05/21/15 13:29	460-00-4	
Dibromofluoromethane (S)	103	%	70-130		1		05/21/15 13:29	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WPZ-10 **Lab ID: 40115037004** Collected: 05/18/15 12:25 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/21/15 13:29	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-12 **Lab ID: 40115037005** Collected: 05/19/15 07:55 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<7.2**	ug/L	20.0	7.2	1		05/26/15 18:05	7440-38-2	
Cadmium, Dissolved	**<0.60**	ug/L	5.0	0.60	1		05/26/15 18:05	7440-43-9	
Lead, Dissolved	**<3.0**	ug/L	7.5	3.0	1		05/26/15 18:05	7439-92-1	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**<0.0050**	ug/L	0.051	0.0050	1	05/21/15 08:41	05/22/15 17:52	83-32-9	
Acenaphthylene	**<0.0050**	ug/L	0.051	0.0050	1	05/21/15 08:41	05/22/15 17:52	208-96-8	
Anthracene	**<0.0041**	ug/L	0.051	0.0041	1	05/21/15 08:41	05/22/15 17:52	120-12-7	
Benzo(a)anthracene	**<0.0052**	ug/L	0.051	0.0052	1	05/21/15 08:41	05/22/15 17:52	56-55-3	L2
Benzo(a)pyrene	**<0.0045**	ug/L	0.051	0.0045	1	05/21/15 08:41	05/22/15 17:52	50-32-8	
Benzo(b)fluoranthene	**<0.0054**	ug/L	0.051	0.0054	1	05/21/15 08:41	05/22/15 17:52	205-99-2	
Benzo(g,h,i)perylene	**<0.0035**	ug/L	0.051	0.0035	1	05/21/15 08:41	05/22/15 17:52	191-24-2	
Benzo(k)fluoranthene	**<0.0057**	ug/L	0.051	0.0057	1	05/21/15 08:41	05/22/15 17:52	207-08-9	
Chrysene	**0.016J**	ug/L	0.051	0.0043	1	05/21/15 08:41	05/22/15 17:52	218-01-9	
Dibenz(a,h)anthracene	**<0.0056**	ug/L	0.051	0.0056	1	05/21/15 08:41	05/22/15 17:52	53-70-3	
Fluoranthene	**0.032J**	ug/L	0.051	0.0095	1	05/21/15 08:41	05/22/15 17:52	206-44-0	
Fluorene	**<0.0041**	ug/L	0.051	0.0041	1	05/21/15 08:41	05/22/15 17:52	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.0036**	ug/L	0.051	0.0036	1	05/21/15 08:41	05/22/15 17:52	193-39-5	
1-Methylnaphthalene	**0.0034J**	ug/L	0.051	0.0031	1	05/21/15 08:41	05/22/15 17:52	90-12-0	
2-Methylnaphthalene	**0.0029J**	ug/L	0.051	0.0028	1	05/21/15 08:41	05/22/15 17:52	91-57-6	
Naphthalene	**<0.0046**	ug/L	0.051	0.0046	1	05/21/15 08:41	05/22/15 17:52	91-20-3	
Phenanthrene	**0.022J**	ug/L	0.051	0.0077	1	05/21/15 08:41	05/22/15 17:52	85-01-8	
Pyrene	**0.025J**	ug/L	0.051	0.0078	1	05/21/15 08:41	05/22/15 17:52	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	56	%	40-130		1	05/21/15 08:41	05/22/15 17:52	321-60-8	
Terphenyl-d14 (S)	92	%	26-135		1	05/21/15 08:41	05/22/15 17:52	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:59	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		05/21/15 14:59	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		05/21/15 14:59	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 14:59	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:59	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		05/21/15 14:59	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		05/21/15 14:59	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		05/21/15 14:59	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		05/21/15 14:59	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-12 **Lab ID: 40115037005** Collected: 05/19/15 07:55 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:59	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		05/21/15 14:59	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		05/21/15 14:59	75-71-8	
1,1-Dichloroethane	**0.53J**	ug/L	1.0	0.24	1		05/21/15 14:59	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		05/21/15 14:59	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		05/21/15 14:59	75-35-4	
cis-1,2-Dichloroethene	**0.75J**	ug/L	1.0	0.26	1		05/21/15 14:59	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 14:59	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:59	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		05/21/15 14:59	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		05/21/15 14:59	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:59	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 14:59	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		05/21/15 14:59	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		05/21/15 14:59	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		05/21/15 14:59	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		05/21/15 14:59	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:59	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		05/21/15 14:59	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 14:59	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 14:59	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		05/21/15 14:59	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		05/21/15 14:59	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:59	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/21/15 14:59	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		05/21/15 14:59	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 14:59	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		05/21/15 14:59	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		05/21/15 14:59	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-12 **Lab ID: 40115037005** Collected: 05/19/15 07:55 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
Toluene-d8 (S)	103	%	70-130		1		05/21/15 14:59	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-13 **Lab ID: 40115037006** Collected: 05/19/15 08:35 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<7.2**	ug/L	20.0	7.2	1		05/26/15 18:08	7440-38-2	
Cadmium, Dissolved	**<0.60**	ug/L	5.0	0.60	1		05/26/15 18:08	7440-43-9	
Lead, Dissolved	**17.4**	ug/L	7.5	3.0	1		05/26/15 18:08	7439-92-1	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**0.63**	ug/L	0.045	0.0045	1	05/21/15 08:41	05/22/15 18:08	83-32-9	
Acenaphthylene	**0.062**	ug/L	0.045	0.0045	1	05/21/15 08:41	05/22/15 18:08	208-96-8	
Anthracene	**0.19**	ug/L	0.045	0.0037	1	05/21/15 08:41	05/22/15 18:08	120-12-7	
Benzo(a)anthracene	**0.074**	ug/L	0.045	0.0047	1	05/21/15 08:41	05/22/15 18:08	56-55-3	L2
Benzo(a)pyrene	**0.046**	ug/L	0.045	0.0040	1	05/21/15 08:41	05/22/15 18:08	50-32-8	
Benzo(b)fluoranthene	**0.086**	ug/L	0.045	0.0048	1	05/21/15 08:41	05/22/15 18:08	205-99-2	
Benzo(g,h,i)perylene	**0.047**	ug/L	0.045	0.0032	1	05/21/15 08:41	05/22/15 18:08	191-24-2	
Benzo(k)fluoranthene	**0.059**	ug/L	0.045	0.0051	1	05/21/15 08:41	05/22/15 18:08	207-08-9	
Chrysene	**0.13**	ug/L	0.045	0.0039	1	05/21/15 08:41	05/22/15 18:08	218-01-9	
Dibenz(a,h)anthracene	**<0.0051**	ug/L	0.045	0.0051	1	05/21/15 08:41	05/22/15 18:08	53-70-3	
Fluoranthene	**0.56**	ug/L	0.045	0.0085	1	05/21/15 08:41	05/22/15 18:08	206-44-0	
Fluorene	**0.47**	ug/L	0.045	0.0037	1	05/21/15 08:41	05/22/15 18:08	86-73-7	
Indeno(1,2,3-cd)pyrene	**0.029J**	ug/L	0.045	0.0033	1	05/21/15 08:41	05/22/15 18:08	193-39-5	
1-Methylnaphthalene	**0.26**	ug/L	0.045	0.0028	1	05/21/15 08:41	05/22/15 18:08	90-12-0	
2-Methylnaphthalene	**0.25**	ug/L	0.045	0.0025	1	05/21/15 08:41	05/22/15 18:08	91-57-6	
Naphthalene	**1.6**	ug/L	0.045	0.0041	1	05/21/15 08:41	05/22/15 18:08	91-20-3	
Phenanthrene	**1.1**	ug/L	0.045	0.0070	1	05/21/15 08:41	05/22/15 18:08	85-01-8	
Pyrene	**0.45**	ug/L	0.045	0.0070	1	05/21/15 08:41	05/22/15 18:08	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	59	%	40-130		1	05/21/15 08:41	05/22/15 18:08	321-60-8	
Terphenyl-d14 (S)	70	%	26-135		1	05/21/15 08:41	05/22/15 18:08	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 15:21	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		05/21/15 15:21	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		05/21/15 15:21	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 15:21	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		05/21/15 15:21	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		05/21/15 15:21	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		05/21/15 15:21	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		05/21/15 15:21	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		05/21/15 15:21	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	124-48-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-13 **Lab ID: 40115037006** Collected: 05/19/15 08:35 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		05/21/15 15:21	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		05/21/15 15:21	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		05/21/15 15:21	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		05/21/15 15:21	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		05/21/15 15:21	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		05/21/15 15:21	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 15:21	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 15:21	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		05/21/15 15:21	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		05/21/15 15:21	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		05/21/15 15:21	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 15:21	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 15:21	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		05/21/15 15:21	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		05/21/15 15:21	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		05/21/15 15:21	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		05/21/15 15:21	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 15:21	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		05/21/15 15:21	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 15:21	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 15:21	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		05/21/15 15:21	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		05/21/15 15:21	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 15:21	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/21/15 15:21	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		05/21/15 15:21	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:21	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		05/21/15 15:21	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		05/21/15 15:21	1868-53-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-13 **Lab ID: 40115037006** Collected: 05/19/15 08:35 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/21/15 15:21	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-14 **Lab ID: 40115037007** Collected: 05/19/15 09:10 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<7.2**	ug/L	20.0	7.2	1		05/26/15 18:10	7440-38-2	
Cadmium, Dissolved	**<0.60**	ug/L	5.0	0.60	1		05/26/15 18:10	7440-43-9	
Lead, Dissolved	**<3.0**	ug/L	7.5	3.0	1		05/26/15 18:10	7439-92-1	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**0.011J**	ug/L	0.046	0.0046	1	05/21/15 08:41	05/22/15 15:05	83-32-9	
Acenaphthylene	**<0.0046**	ug/L	0.046	0.0046	1	05/21/15 08:41	05/22/15 15:05	208-96-8	
Anthracene	**<0.0037**	ug/L	0.046	0.0037	1	05/21/15 08:41	05/22/15 15:05	120-12-7	
Benzo(a)anthracene	**<0.0048**	ug/L	0.046	0.0048	1	05/21/15 08:41	05/22/15 15:05	56-55-3	L2
Benzo(a)pyrene	**<0.0041**	ug/L	0.046	0.0041	1	05/21/15 08:41	05/22/15 15:05	50-32-8	
Benzo(b)fluoranthene	**<0.0049**	ug/L	0.046	0.0049	1	05/21/15 08:41	05/22/15 15:05	205-99-2	
Benzo(g,h,i)perylene	**<0.0032**	ug/L	0.046	0.0032	1	05/21/15 08:41	05/22/15 15:05	191-24-2	
Benzo(k)fluoranthene	**<0.0052**	ug/L	0.046	0.0052	1	05/21/15 08:41	05/22/15 15:05	207-08-9	
Chrysene	**0.011J**	ug/L	0.046	0.0039	1	05/21/15 08:41	05/22/15 15:05	218-01-9	
Dibenz(a,h)anthracene	**<0.0051**	ug/L	0.046	0.0051	1	05/21/15 08:41	05/22/15 15:05	53-70-3	
Fluoranthene	**0.021J**	ug/L	0.046	0.0087	1	05/21/15 08:41	05/22/15 15:05	206-44-0	
Fluorene	**0.0089J**	ug/L	0.046	0.0037	1	05/21/15 08:41	05/22/15 15:05	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.0033**	ug/L	0.046	0.0033	1	05/21/15 08:41	05/22/15 15:05	193-39-5	
1-Methylnaphthalene	**0.011J**	ug/L	0.046	0.0029	1	05/21/15 08:41	05/22/15 15:05	90-12-0	
2-Methylnaphthalene	**0.0072J**	ug/L	0.046	0.0025	1	05/21/15 08:41	05/22/15 15:05	91-57-6	
Naphthalene	**0.029J**	ug/L	0.046	0.0042	1	05/21/15 08:41	05/22/15 15:05	91-20-3	
Phenanthrene	**0.027J**	ug/L	0.046	0.0071	1	05/21/15 08:41	05/22/15 15:05	85-01-8	
Pyrene	**0.024J**	ug/L	0.046	0.0071	1	05/21/15 08:41	05/22/15 15:05	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	40-130		1	05/21/15 08:41	05/22/15 15:05	321-60-8	
Terphenyl-d14 (S)	93	%	26-135		1	05/21/15 08:41	05/22/15 15:05	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 15:44	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		05/21/15 15:44	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		05/21/15 15:44	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 15:44	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		05/21/15 15:44	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		05/21/15 15:44	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		05/21/15 15:44	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		05/21/15 15:44	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		05/21/15 15:44	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	124-48-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-14 **Lab ID: 40115037007** Collected: 05/19/15 09:10 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		05/21/15 15:44	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		05/21/15 15:44	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		05/21/15 15:44	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		05/21/15 15:44	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		05/21/15 15:44	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		05/21/15 15:44	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 15:44	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 15:44	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		05/21/15 15:44	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		05/21/15 15:44	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		05/21/15 15:44	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 15:44	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 15:44	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		05/21/15 15:44	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		05/21/15 15:44	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		05/21/15 15:44	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		05/21/15 15:44	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 15:44	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		05/21/15 15:44	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 15:44	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 15:44	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		05/21/15 15:44	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		05/21/15 15:44	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 15:44	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/21/15 15:44	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		05/21/15 15:44	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 15:44	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		05/21/15 15:44	460-00-4	
Dibromofluoromethane (S)	111	%	70-130		1		05/21/15 15:44	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-14 **Lab ID: 40115037007** Collected: 05/19/15 09:10 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
Toluene-d8 (S)	100	%	70-130		1		05/21/15 15:44	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-15 **Lab ID: 40115037008** Collected: 05/19/15 09:40 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<7.2**	ug/L	20.0	7.2	1		05/26/15 18:17	7440-38-2	
Cadmium, Dissolved	**<0.60**	ug/L	5.0	0.60	1		05/26/15 18:17	7440-43-9	
Lead, Dissolved	**5.7J**	ug/L	7.5	3.0	1		05/26/15 18:17	7439-92-1	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**0.36**	ug/L	0.048	0.0048	1	05/21/15 08:41	05/22/15 18:41	83-32-9	
Acenaphthylene	**0.13**	ug/L	0.048	0.0048	1	05/21/15 08:41	05/22/15 18:41	208-96-8	
Anthracene	**0.47**	ug/L	0.048	0.0039	1	05/21/15 08:41	05/22/15 18:41	120-12-7	
Benzo(a)anthracene	**0.38**	ug/L	0.048	0.0049	1	05/21/15 08:41	05/22/15 18:41	56-55-3	L2
Benzo(a)pyrene	**0.28**	ug/L	0.048	0.0042	1	05/21/15 08:41	05/22/15 18:41	50-32-8	
Benzo(b)fluoranthene	**0.24**	ug/L	0.048	0.0051	1	05/21/15 08:41	05/22/15 18:41	205-99-2	
Benzo(g,h,i)perylene	**0.49**	ug/L	0.048	0.0034	1	05/21/15 08:41	05/22/15 18:41	191-24-2	
Benzo(k)fluoranthene	**0.055**	ug/L	0.048	0.0054	1	05/21/15 08:41	05/22/15 18:41	207-08-9	
Chrysene	**0.52**	ug/L	0.048	0.0041	1	05/21/15 08:41	05/22/15 18:41	218-01-9	
Dibenz(a,h)anthracene	**0.013J**	ug/L	0.048	0.0053	1	05/21/15 08:41	05/22/15 18:41	53-70-3	
Fluoranthene	**0.42**	ug/L	0.048	0.0090	1	05/21/15 08:41	05/22/15 18:41	206-44-0	
Fluorene	**0.71**	ug/L	0.048	0.0039	1	05/21/15 08:41	05/22/15 18:41	86-73-7	
Indeno(1,2,3-cd)pyrene	**0.10**	ug/L	0.048	0.0034	1	05/21/15 08:41	05/22/15 18:41	193-39-5	
1-Methylnaphthalene	**2.4**	ug/L	0.048	0.0030	1	05/21/15 08:41	05/22/15 18:41	90-12-0	
2-Methylnaphthalene	**1.1**	ug/L	0.048	0.0026	1	05/21/15 08:41	05/22/15 18:41	91-57-6	
Naphthalene	**0.44**	ug/L	0.048	0.0044	1	05/21/15 08:41	05/22/15 18:41	91-20-3	
Phenanthrene	**2.0**	ug/L	0.048	0.0074	1	05/21/15 08:41	05/22/15 18:41	85-01-8	
Pyrene	**3.3**	ug/L	0.048	0.0074	1	05/21/15 08:41	05/22/15 18:41	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	52	%	40-130		1	05/21/15 08:41	05/22/15 18:41	321-60-8	
Terphenyl-d14 (S)	64	%	26-135		1	05/21/15 08:41	05/22/15 18:41	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 16:06	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		05/21/15 16:06	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		05/21/15 16:06	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 16:06	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		05/21/15 16:06	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		05/21/15 16:06	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		05/21/15 16:06	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		05/21/15 16:06	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		05/21/15 16:06	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	124-48-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-15 **Lab ID: 40115037008** Collected: 05/19/15 09:40 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		05/21/15 16:06	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		05/21/15 16:06	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		05/21/15 16:06	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		05/21/15 16:06	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		05/21/15 16:06	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		05/21/15 16:06	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 16:06	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 16:06	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		05/21/15 16:06	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		05/21/15 16:06	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		05/21/15 16:06	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 16:06	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 16:06	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		05/21/15 16:06	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		05/21/15 16:06	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		05/21/15 16:06	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		05/21/15 16:06	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 16:06	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		05/21/15 16:06	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 16:06	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 16:06	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		05/21/15 16:06	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		05/21/15 16:06	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 16:06	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	96-18-4	
1,2,4-Trimethylbenzene	**0.73J**	ug/L	1.0	0.50	1		05/21/15 16:06	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/21/15 16:06	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		05/21/15 16:06	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:06	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		05/21/15 16:06	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		05/21/15 16:06	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-15 **Lab ID: 40115037008** Collected: 05/19/15 09:40 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
Toluene-d8 (S)	98	%	70-130		1		05/21/15 16:06	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-16 **Lab ID: 40115037009** Collected: 05/19/15 10:10 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<7.2**	ug/L	20.0	7.2	1		05/26/15 18:20	7440-38-2	
Cadmium, Dissolved	**<0.60**	ug/L	5.0	0.60	1		05/26/15 18:20	7440-43-9	
Lead, Dissolved	**<3.0**	ug/L	7.5	3.0	1		05/26/15 18:20	7439-92-1	
8270 MSSV PAH by HVI	Analytical Method: EPA 8270 by HVI Preparation Method: EPA 3510								
Acenaphthene	**0.10**	ug/L	0.047	0.0046	1	05/21/15 08:41	05/22/15 15:22	83-32-9	
Acenaphthylene	**0.024J**	ug/L	0.047	0.0046	1	05/21/15 08:41	05/22/15 15:22	208-96-8	
Anthracene	**<0.0038**	ug/L	0.047	0.0038	1	05/21/15 08:41	05/22/15 15:22	120-12-7	
Benzo(a)anthracene	**<0.0048**	ug/L	0.047	0.0048	1	05/21/15 08:41	05/22/15 15:22	56-55-3	L2
Benzo(a)pyrene	**<0.0041**	ug/L	0.047	0.0041	1	05/21/15 08:41	05/22/15 15:22	50-32-8	
Benzo(b)fluoranthene	**0.0097J**	ug/L	0.047	0.0050	1	05/21/15 08:41	05/22/15 15:22	205-99-2	
Benzo(g,h,i)perylene	**<0.0033**	ug/L	0.047	0.0033	1	05/21/15 08:41	05/22/15 15:22	191-24-2	
Benzo(k)fluoranthene	**0.0063J**	ug/L	0.047	0.0053	1	05/21/15 08:41	05/22/15 15:22	207-08-9	
Chrysene	**0.026J**	ug/L	0.047	0.0040	1	05/21/15 08:41	05/22/15 15:22	218-01-9	
Dibenz(a,h)anthracene	**<0.0052**	ug/L	0.047	0.0052	1	05/21/15 08:41	05/22/15 15:22	53-70-3	
Fluoranthene	**0.071**	ug/L	0.047	0.0088	1	05/21/15 08:41	05/22/15 15:22	206-44-0	
Fluorene	**0.085**	ug/L	0.047	0.0038	1	05/21/15 08:41	05/22/15 15:22	86-73-7	
Indeno(1,2,3-cd)pyrene	**<0.0033**	ug/L	0.047	0.0033	1	05/21/15 08:41	05/22/15 15:22	193-39-5	
1-Methylnaphthalene	**0.078**	ug/L	0.047	0.0029	1	05/21/15 08:41	05/22/15 15:22	90-12-0	
2-Methylnaphthalene	**0.054**	ug/L	0.047	0.0026	1	05/21/15 08:41	05/22/15 15:22	91-57-6	
Naphthalene	**0.047**	ug/L	0.047	0.0042	1	05/21/15 08:41	05/22/15 15:22	91-20-3	
Phenanthrene	**0.18**	ug/L	0.047	0.0072	1	05/21/15 08:41	05/22/15 15:22	85-01-8	
Pyrene	**0.090**	ug/L	0.047	0.0072	1	05/21/15 08:41	05/22/15 15:22	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	62	%	40-130		1	05/21/15 08:41	05/22/15 15:22	321-60-8	
Terphenyl-d14 (S)	86	%	26-135		1	05/21/15 08:41	05/22/15 15:22	1718-51-0	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 16:29	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		05/21/15 16:29	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		05/21/15 16:29	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 16:29	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		05/21/15 16:29	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		05/21/15 16:29	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		05/21/15 16:29	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		05/21/15 16:29	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		05/21/15 16:29	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	124-48-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-16 **Lab ID: 40115037009** Collected: 05/19/15 10:10 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		05/21/15 16:29	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		05/21/15 16:29	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		05/21/15 16:29	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		05/21/15 16:29	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		05/21/15 16:29	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		05/21/15 16:29	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 16:29	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 16:29	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		05/21/15 16:29	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		05/21/15 16:29	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		05/21/15 16:29	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 16:29	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 16:29	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		05/21/15 16:29	98-82-8	
p-Isopropyltoluene	**2.6**	ug/L	1.0	0.50	1		05/21/15 16:29	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		05/21/15 16:29	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		05/21/15 16:29	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		05/21/15 16:29	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 16:29	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		05/21/15 16:29	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	127-18-4	
Toluene	**3.8**	ug/L	1.0	0.50	1		05/21/15 16:29	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 16:29	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 16:29	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		05/21/15 16:29	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		05/21/15 16:29	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 16:29	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/21/15 16:29	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		05/21/15 16:29	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 16:29	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	92	%	70-130		1		05/21/15 16:29	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		05/21/15 16:29	1868-53-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: WMW-16 **Lab ID: 40115037009** Collected: 05/19/15 10:10 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Surrogates									
Toluene-d8 (S)	101	%	70-130		1		05/21/15 16:29	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: TRIP **Lab ID: 40115037010** Collected: 05/19/15 00:00 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	71-43-2	
Bromobenzene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 10:34	108-86-1	
Bromochloromethane	**<0.34**	ug/L	1.0	0.34	1		05/21/15 10:34	74-97-5	
Bromodichloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	75-27-4	
Bromoform	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	75-25-2	
Bromomethane	**<2.4**	ug/L	5.0	2.4	1		05/21/15 10:34	74-83-9	
n-Butylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	104-51-8	
sec-Butylbenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 10:34	135-98-8	
tert-Butylbenzene	**<0.18**	ug/L	1.0	0.18	1		05/21/15 10:34	98-06-6	
Carbon tetrachloride	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	56-23-5	
Chlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	108-90-7	
Chloroethane	**<0.37**	ug/L	1.0	0.37	1		05/21/15 10:34	75-00-3	
Chloroform	**<2.5**	ug/L	5.0	2.5	1		05/21/15 10:34	67-66-3	
Chloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	74-87-3	
2-Chlorotoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	95-49-8	
4-Chlorotoluene	**<0.21**	ug/L	1.0	0.21	1		05/21/15 10:34	106-43-4	
1,2-Dibromo-3-chloropropane	**<2.2**	ug/L	5.0	2.2	1		05/21/15 10:34	96-12-8	
Dibromochloromethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	124-48-1	
1,2-Dibromoethane (EDB)	**<0.18**	ug/L	1.0	0.18	1		05/21/15 10:34	106-93-4	
Dibromomethane	**<0.43**	ug/L	1.0	0.43	1		05/21/15 10:34	74-95-3	
1,2-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	95-50-1	
1,3-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	541-73-1	
1,4-Dichlorobenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	106-46-7	
Dichlorodifluoromethane	**<0.22**	ug/L	1.0	0.22	1		05/21/15 10:34	75-71-8	
1,1-Dichloroethane	**<0.24**	ug/L	1.0	0.24	1		05/21/15 10:34	75-34-3	
1,2-Dichloroethane	**<0.17**	ug/L	1.0	0.17	1		05/21/15 10:34	107-06-2	
1,1-Dichloroethene	**<0.41**	ug/L	1.0	0.41	1		05/21/15 10:34	75-35-4	
cis-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 10:34	156-59-2	
trans-1,2-Dichloroethene	**<0.26**	ug/L	1.0	0.26	1		05/21/15 10:34	156-60-5	
1,2-Dichloropropane	**<0.23**	ug/L	1.0	0.23	1		05/21/15 10:34	78-87-5	
1,3-Dichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	142-28-9	
2,2-Dichloropropane	**<0.48**	ug/L	1.0	0.48	1		05/21/15 10:34	594-20-7	
1,1-Dichloropropene	**<0.44**	ug/L	1.0	0.44	1		05/21/15 10:34	563-58-6	
cis-1,3-Dichloropropene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	10061-01-5	
trans-1,3-Dichloropropene	**<0.23**	ug/L	1.0	0.23	1		05/21/15 10:34	10061-02-6	
Diisopropyl ether	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	108-20-3	
Ethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	100-41-4	
Hexachloro-1,3-butadiene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 10:34	87-68-3	
Isopropylbenzene (Cumene)	**<0.14**	ug/L	1.0	0.14	1		05/21/15 10:34	98-82-8	
p-Isopropyltoluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	99-87-6	
Methylene Chloride	**<0.23**	ug/L	1.0	0.23	1		05/21/15 10:34	75-09-2	
Methyl-tert-butyl ether	**<0.17**	ug/L	1.0	0.17	1		05/21/15 10:34	1634-04-4	
Naphthalene	**<2.5**	ug/L	5.0	2.5	1		05/21/15 10:34	91-20-3	
n-Propylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	103-65-1	
Styrene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 10:34	630-20-6	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Sample: TRIP **Lab ID: 40115037010** Collected: 05/19/15 00:00 Received: 05/20/15 09:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,2,2-Tetrachloroethane	**<0.25**	ug/L	1.0	0.25	1		05/21/15 10:34	79-34-5	
Tetrachloroethene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	127-18-4	
Toluene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	108-88-3	
1,2,3-Trichlorobenzene	**<2.1**	ug/L	5.0	2.1	1		05/21/15 10:34	87-61-6	
1,2,4-Trichlorobenzene	**<2.2**	ug/L	5.0	2.2	1		05/21/15 10:34	120-82-1	
1,1,1-Trichloroethane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	71-55-6	
1,1,2-Trichloroethane	**<0.20**	ug/L	1.0	0.20	1		05/21/15 10:34	79-00-5	
Trichloroethene	**<0.33**	ug/L	1.0	0.33	1		05/21/15 10:34	79-01-6	
Trichlorofluoromethane	**<0.18**	ug/L	1.0	0.18	1		05/21/15 10:34	75-69-4	
1,2,3-Trichloropropane	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	96-18-4	
1,2,4-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	95-63-6	
1,3,5-Trimethylbenzene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	108-67-8	
Vinyl chloride	**<0.18**	ug/L	1.0	0.18	1		05/21/15 10:34	75-01-4	
m&p-Xylene	**<1.0**	ug/L	2.0	1.0	1		05/21/15 10:34	179601-23-1	
o-Xylene	**<0.50**	ug/L	1.0	0.50	1		05/21/15 10:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		05/21/15 10:34	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		05/21/15 10:34	1868-53-7	
Toluene-d8 (S)	104	%	70-130		1		05/21/15 10:34	2037-26-5	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

QC Batch: ICP/10609 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40115037001, 40115037002, 40115037003

METHOD BLANK: 1163202 Matrix: Water
Associated Lab Samples: 40115037001, 40115037002, 40115037003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<7.2	20.0	05/26/15 16:44	
Cadmium, Dissolved	ug/L	<0.60	5.0	05/26/15 16:44	
Lead, Dissolved	ug/L	<3.0	7.5	05/26/15 16:44	

LABORATORY CONTROL SAMPLE: 1163203

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	475	95	80-120	
Cadmium, Dissolved	ug/L	500	471	94	80-120	
Lead, Dissolved	ug/L	500	482	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1163204 1163205

Parameter	Units	40115007022 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	ug/L	<7.2	500	500	479	478	96	96	75-125	0	20	
Cadmium, Dissolved	ug/L	<0.60	500	500	478	478	96	96	75-125	0	20	
Lead, Dissolved	ug/L	<3.0	500	500	494	496	98	99	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

QC Batch: ICP/10612 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40115037004, 40115037005, 40115037006, 40115037007, 40115037008, 40115037009

METHOD BLANK: 1163308 Matrix: Water
Associated Lab Samples: 40115037004, 40115037005, 40115037006, 40115037007, 40115037008, 40115037009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<7.2	20.0	05/26/15 17:54	
Cadmium, Dissolved	ug/L	<0.60	5.0	05/26/15 17:54	
Lead, Dissolved	ug/L	<3.0	7.5	05/26/15 17:54	

LABORATORY CONTROL SAMPLE: 1163309

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	462	92	80-120	
Cadmium, Dissolved	ug/L	500	470	94	80-120	
Lead, Dissolved	ug/L	500	495	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1163310 1163311

Parameter	Units	40115037004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	ug/L	<7.2	500	500	478	471	96	94	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.60	500	500	480	480	96	96	75-125	0	20	
Lead, Dissolved	ug/L	<3.0	500	500	502	503	100	100	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

QC Batch: MSV/28542 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40115037001, 40115037002, 40115037003, 40115037004, 40115037005, 40115037006, 40115037007, 40115037008, 40115037009, 40115037010

METHOD BLANK: 1161068 Matrix: Water
Associated Lab Samples: 40115037001, 40115037002, 40115037003, 40115037004, 40115037005, 40115037006, 40115037007, 40115037008, 40115037009, 40115037010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.18	1.0	05/21/15 06:26	
1,1,1-Trichloroethane	ug/L	<0.50	1.0	05/21/15 06:26	
1,1,2,2-Tetrachloroethane	ug/L	<0.25	1.0	05/21/15 06:26	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	05/21/15 06:26	
1,1-Dichloroethane	ug/L	<0.24	1.0	05/21/15 06:26	
1,1-Dichloroethene	ug/L	<0.41	1.0	05/21/15 06:26	
1,1-Dichloropropene	ug/L	<0.44	1.0	05/21/15 06:26	
1,2,3-Trichlorobenzene	ug/L	<2.1	5.0	05/21/15 06:26	
1,2,3-Trichloropropane	ug/L	<0.50	1.0	05/21/15 06:26	
1,2,4-Trichlorobenzene	ug/L	<2.2	5.0	05/21/15 06:26	
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	05/21/15 06:26	
1,2-Dibromo-3-chloropropane	ug/L	<2.2	5.0	05/21/15 06:26	
1,2-Dibromoethane (EDB)	ug/L	<0.18	1.0	05/21/15 06:26	
1,2-Dichlorobenzene	ug/L	<0.50	1.0	05/21/15 06:26	
1,2-Dichloroethane	ug/L	<0.17	1.0	05/21/15 06:26	
1,2-Dichloropropane	ug/L	<0.23	1.0	05/21/15 06:26	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	05/21/15 06:26	
1,3-Dichlorobenzene	ug/L	<0.50	1.0	05/21/15 06:26	
1,3-Dichloropropane	ug/L	<0.50	1.0	05/21/15 06:26	
1,4-Dichlorobenzene	ug/L	<0.50	1.0	05/21/15 06:26	
2,2-Dichloropropane	ug/L	<0.48	1.0	05/21/15 06:26	
2-Chlorotoluene	ug/L	<0.50	1.0	05/21/15 06:26	
4-Chlorotoluene	ug/L	<0.21	1.0	05/21/15 06:26	
Benzene	ug/L	<0.50	1.0	05/21/15 06:26	
Bromobenzene	ug/L	<0.23	1.0	05/21/15 06:26	
Bromochloromethane	ug/L	<0.34	1.0	05/21/15 06:26	
Bromodichloromethane	ug/L	<0.50	1.0	05/21/15 06:26	
Bromoform	ug/L	<0.50	1.0	05/21/15 06:26	
Bromomethane	ug/L	<2.4	5.0	05/21/15 06:26	
Carbon tetrachloride	ug/L	<0.50	1.0	05/21/15 06:26	
Chlorobenzene	ug/L	<0.50	1.0	05/21/15 06:26	
Chloroethane	ug/L	<0.37	1.0	05/21/15 06:26	
Chloroform	ug/L	<2.5	5.0	05/21/15 06:26	
Chloromethane	ug/L	<0.50	1.0	05/21/15 06:26	
cis-1,2-Dichloroethene	ug/L	<0.26	1.0	05/21/15 06:26	
cis-1,3-Dichloropropene	ug/L	<0.50	1.0	05/21/15 06:26	
Dibromochloromethane	ug/L	<0.50	1.0	05/21/15 06:26	
Dibromomethane	ug/L	<0.43	1.0	05/21/15 06:26	
Dichlorodifluoromethane	ug/L	<0.22	1.0	05/21/15 06:26	
Diisopropyl ether	ug/L	<0.50	1.0	05/21/15 06:26	

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

METHOD BLANK: 1161068 Matrix: Water

Associated Lab Samples: 40115037001, 40115037002, 40115037003, 40115037004, 40115037005, 40115037006, 40115037007, 40115037008, 40115037009, 40115037010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.50	1.0	05/21/15 06:26	
Hexachloro-1,3-butadiene	ug/L	<2.1	5.0	05/21/15 06:26	
Isopropylbenzene (Cumene)	ug/L	<0.14	1.0	05/21/15 06:26	
m&p-Xylene	ug/L	<1.0	2.0	05/21/15 06:26	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	05/21/15 06:26	
Methylene Chloride	ug/L	<0.23	1.0	05/21/15 06:26	
n-Butylbenzene	ug/L	<0.50	1.0	05/21/15 06:26	
n-Propylbenzene	ug/L	<0.50	1.0	05/21/15 06:26	
Naphthalene	ug/L	<2.5	5.0	05/21/15 06:26	
o-Xylene	ug/L	<0.50	1.0	05/21/15 06:26	
p-Isopropyltoluene	ug/L	<0.50	1.0	05/21/15 06:26	
sec-Butylbenzene	ug/L	<2.2	5.0	05/21/15 06:26	
Styrene	ug/L	<0.50	1.0	05/21/15 06:26	
tert-Butylbenzene	ug/L	<0.18	1.0	05/21/15 06:26	
Tetrachloroethene	ug/L	<0.50	1.0	05/21/15 06:26	
Toluene	ug/L	<0.50	1.0	05/21/15 06:26	
trans-1,2-Dichloroethene	ug/L	<0.26	1.0	05/21/15 06:26	
trans-1,3-Dichloropropene	ug/L	<0.23	1.0	05/21/15 06:26	
Trichloroethene	ug/L	<0.33	1.0	05/21/15 06:26	
Trichlorofluoromethane	ug/L	<0.18	1.0	05/21/15 06:26	
Vinyl chloride	ug/L	<0.18	1.0	05/21/15 06:26	
4-Bromofluorobenzene (S)	%	97	70-130	05/21/15 06:26	
Dibromofluoromethane (S)	%	105	70-130	05/21/15 06:26	
Toluene-d8 (S)	%	100	70-130	05/21/15 06:26	

LABORATORY CONTROL SAMPLE & LCSD: 1161069 1161070

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	50	56.8	57.3	114	115	70-130	1	20	
1,1,2,2-Tetrachloroethane	ug/L	50	47.5	48.3	95	97	70-130	2	20	
1,1,2-Trichloroethane	ug/L	50	50.0	53.7	100	107	70-130	7	20	
1,1-Dichloroethane	ug/L	50	54.3	54.2	109	108	70-130	0	20	
1,1-Dichloroethene	ug/L	50	56.1	56.9	112	114	70-130	1	20	
1,2,4-Trichlorobenzene	ug/L	50	48.5	51.5	97	103	70-130	6	20	
1,2-Dibromo-3-chloropropane	ug/L	50	42.6	48.5	85	97	50-150	13	20	
1,2-Dibromoethane (EDB)	ug/L	50	53.2	53.8	106	108	70-130	1	20	
1,2-Dichlorobenzene	ug/L	50	51.1	53.0	102	106	70-130	4	20	
1,2-Dichloroethane	ug/L	50	54.1	54.9	108	110	70-131	2	20	
1,2-Dichloropropane	ug/L	50	51.7	53.4	103	107	70-130	3	20	
1,3-Dichlorobenzene	ug/L	50	52.3	53.9	105	108	70-130	3	20	
1,4-Dichlorobenzene	ug/L	50	50.0	52.4	100	105	70-130	5	20	
Benzene	ug/L	50	53.2	52.2	106	104	70-130	2	20	
Bromodichloromethane	ug/L	50	53.4	54.6	107	109	70-130	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

LABORATORY CONTROL SAMPLE & LCSD: 1161069 1161070

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Bromoform	ug/L	50	47.7	50.6	95	101	68-130	6	20	
Bromomethane	ug/L	50	40.6	44.1	81	88	38-137	8	20	
Carbon tetrachloride	ug/L	50	56.1	56.8	112	114	70-130	1	20	
Chlorobenzene	ug/L	50	52.3	53.8	105	108	70-130	3	20	
Chloroethane	ug/L	50	55.1	55.4	110	111	70-136	0	20	
Chloroform	ug/L	50	54.5	54.7	109	109	70-130	0	20	
Chloromethane	ug/L	50	49.9	51.2	100	102	48-144	2	20	
cis-1,2-Dichloroethene	ug/L	50	56.5	54.9	113	110	70-130	3	20	
cis-1,3-Dichloropropene	ug/L	50	50.2	50.8	100	102	70-130	1	20	
Dibromochloromethane	ug/L	50	52.7	55.5	105	111	70-130	5	20	
Dichlorodifluoromethane	ug/L	50	59.5	60.5	119	121	33-157	2	20	
Ethylbenzene	ug/L	50	53.5	55.6	107	111	70-132	4	20	
Isopropylbenzene (Cumene)	ug/L	50	54.7	58.1	109	116	70-130	6	20	
m&p-Xylene	ug/L	100	107	112	107	112	70-131	5	20	
Methyl-tert-butyl ether	ug/L	50	48.1	48.9	96	98	48-141	2	20	
Methylene Chloride	ug/L	50	52.3	51.7	105	103	70-130	1	20	
o-Xylene	ug/L	50	52.7	54.4	105	109	70-131	3	20	
Styrene	ug/L	50	49.4	53.8	99	108	70-130	9	20	
Tetrachloroethene	ug/L	50	48.5	50.2	97	100	70-130	3	20	
Toluene	ug/L	50	52.1	54.8	104	110	70-130	5	20	
trans-1,2-Dichloroethene	ug/L	50	54.7	54.0	109	108	70-130	1	20	
trans-1,3-Dichloropropene	ug/L	50	45.5	47.7	91	95	70-130	5	20	
Trichloroethene	ug/L	50	54.6	55.1	109	110	70-130	1	20	
Trichlorofluoromethane	ug/L	50	57.0	57.1	114	114	50-150	0	20	
Vinyl chloride	ug/L	50	57.2	56.5	114	113	65-142	1	20	
4-Bromofluorobenzene (S)	%				102	102	70-130			
Dibromofluoromethane (S)	%				110	108	70-130			
Toluene-d8 (S)	%				99	101	70-130			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1162032 1162033

Parameter	Units	40115018001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.50	50	50	55.8	40.5	112	81	70-130	32	20	R1
1,1,2,2-Tetrachloroethane	ug/L	<0.25	50	50	49.9	48.0	100	96	70-130	4	20	
1,1,2-Trichloroethane	ug/L	<0.20	50	50	52.4	50.1	105	100	70-130	4	20	
1,1-Dichloroethane	ug/L	<0.24	50	50	54.6	46.1	109	92	70-134	17	20	
1,1-Dichloroethene	ug/L	<0.41	50	50	57.0	39.7	114	79	70-139	36	20	R1
1,2,4-Trichlorobenzene	ug/L	<2.2	50	50	48.8	37.6	98	75	70-130	26	20	R1
1,2-Dibromo-3-chloropropane	ug/L	<2.2	50	50	44.7	47.0	89	94	50-150	5	20	
1,2-Dibromoethane (EDB)	ug/L	<0.18	50	50	54.7	52.4	109	105	70-130	4	20	
1,2-Dichlorobenzene	ug/L	<0.50	50	50	52.1	40.8	104	82	70-130	24	20	R1
1,2-Dichloroethane	ug/L	<0.17	50	50	55.7	51.3	111	103	70-132	8	20	
1,2-Dichloropropane	ug/L	<0.23	50	50	54.1	46.8	108	94	70-130	15	20	

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QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1162032 1162033

Parameter	Units	40115018001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,3-Dichlorobenzene	ug/L	<0.50	50	50	52.6	38.8	105	78	70-130	30	20	R1
1,4-Dichlorobenzene	ug/L	<0.50	50	50	50.8	37.1	102	74	70-130	31	20	R1
Benzene	ug/L	<0.50	50	50	53.0	44.3	106	89	70-130	18	20	
Bromodichloromethane	ug/L	<0.50	50	50	54.1	47.7	108	95	70-132	12	20	
Bromoform	ug/L	<0.50	50	50	49.7	46.8	99	94	68-130	6	20	
Bromomethane	ug/L	<2.4	50	50	34.3	33.2	69	66	38-141	3	20	
Carbon tetrachloride	ug/L	<0.50	50	50	55.0	36.4	110	73	70-130	41	20	R1
Chlorobenzene	ug/L	<0.50	50	50	53.2	41.5	106	83	70-130	25	20	R1
Chloroethane	ug/L	<0.37	50	50	54.4	45.0	109	90	66-152	19	20	
Chloroform	ug/L	<2.5	50	50	54.5	47.7	109	95	70-130	13	20	
Chloromethane	ug/L	<0.50	50	50	48.6	40.2	97	80	44-151	19	20	
cis-1,2-Dichloroethene	ug/L	9.1	50	50	64.5	56.8	111	96	70-130	13	20	
cis-1,3-Dichloropropene	ug/L	<0.50	50	50	51.0	42.3	102	85	70-130	19	20	
Dibromochloromethane	ug/L	<0.50	50	50	53.2	48.9	106	98	70-130	8	20	
Dichlorodifluoromethane	ug/L	<0.22	50	50	50.0	27.2	100	54	29-160	59	20	R1
Ethylbenzene	ug/L	<0.50	50	50	55.2	38.9	110	78	70-132	35	20	R1
Isopropylbenzene (Cumene)	ug/L	<0.14	50	50	55.3	36.6	111	73	70-130	41	20	R1
m&p-Xylene	ug/L	<1.0	100	100	109	77.1	109	77	70-131	35	20	R1
Methyl-tert-butyl ether	ug/L	<0.17	50	50	49.7	49.6	99	99	48-143	0	20	
Methylene Chloride	ug/L	<0.23	50	50	51.5	48.5	103	97	70-130	6	20	
o-Xylene	ug/L	<0.50	50	50	53.7	40.7	107	81	70-131	28	20	R1
Styrene	ug/L	<0.50	50	50	52.5	36.8	105	74	70-130	35	20	R1
Tetrachloroethene	ug/L	<0.50	50	50	48.9	32.0	98	64	70-130	42	20	M1,R1
Toluene	ug/L	<0.50	50	50	52.6	40.8	105	82	70-130	25	20	R1
trans-1,2-Dichloroethene	ug/L	<0.26	50	50	54.4	42.7	109	85	70-132	24	20	R1
trans-1,3-Dichloropropene	ug/L	<0.23	50	50	46.1	40.5	92	81	70-130	13	20	
Trichloroethene	ug/L	<0.33	50	50	54.4	41.0	109	82	70-130	28	20	R1
Trichlorofluoromethane	ug/L	<0.18	50	50	56.9	33.9	114	68	50-153	51	20	R1
Vinyl chloride	ug/L	1.4	50	50	56.9	40.4	111	78	60-155	34	20	R1
4-Bromofluorobenzene (S)	%						100	102	70-130			HS
Dibromofluoromethane (S)	%						109	107	70-130			
Toluene-d8 (S)	%						100	101	70-130			

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QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

QC Batch: OEXT/26595 Analysis Method: EPA 8270 by HVI
QC Batch Method: EPA 3510 Analysis Description: 8270 Water PAH by HVI
Associated Lab Samples: 40115037001, 40115037002, 40115037003, 40115037004, 40115037005, 40115037006, 40115037007, 40115037008, 40115037009

METHOD BLANK: 1161534 Matrix: Water
Associated Lab Samples: 40115037001, 40115037002, 40115037003, 40115037004, 40115037005, 40115037006, 40115037007, 40115037008, 40115037009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.0031	0.050	05/22/15 13:58	
2-Methylnaphthalene	ug/L	<0.0028	0.050	05/22/15 13:58	
Acenaphthene	ug/L	<0.0050	0.050	05/22/15 13:58	
Acenaphthylene	ug/L	<0.0049	0.050	05/22/15 13:58	
Anthracene	ug/L	<0.0040	0.050	05/22/15 13:58	
Benzo(a)anthracene	ug/L	<0.0051	0.050	05/22/15 13:58	
Benzo(a)pyrene	ug/L	<0.0044	0.050	05/22/15 13:58	
Benzo(b)fluoranthene	ug/L	<0.0053	0.050	05/22/15 13:58	
Benzo(g,h,i)perylene	ug/L	<0.0035	0.050	05/22/15 13:58	
Benzo(k)fluoranthene	ug/L	<0.0056	0.050	05/22/15 13:58	
Chrysene	ug/L	<0.0042	0.050	05/22/15 13:58	
Dibenz(a,h)anthracene	ug/L	<0.0056	0.050	05/22/15 13:58	
Fluoranthene	ug/L	<0.0094	0.050	05/22/15 13:58	
Fluorene	ug/L	<0.0040	0.050	05/22/15 13:58	
Indeno(1,2,3-cd)pyrene	ug/L	<0.0036	0.050	05/22/15 13:58	
Naphthalene	ug/L	<0.0045	0.050	05/22/15 13:58	
Phenanthrene	ug/L	<0.0077	0.050	05/22/15 13:58	
Pyrene	ug/L	<0.0077	0.050	05/22/15 13:58	
2-Fluorobiphenyl (S)	%	66	40-130	05/22/15 13:58	
Terphenyl-d14 (S)	%	101	26-135	05/22/15 13:58	

LABORATORY CONTROL SAMPLE: 1161535

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/L	2	1.2	59	46-130	
2-Methylnaphthalene	ug/L	2	1.2	60	47-130	
Acenaphthene	ug/L	2	1.4	68	49-130	
Acenaphthylene	ug/L	2	1.1	57	44-130	
Anthracene	ug/L	2	1.5	76	53-130	
Benzo(a)anthracene	ug/L	2	0.96	48	49-130	L0
Benzo(a)pyrene	ug/L	2	1.3	64	47-130	
Benzo(b)fluoranthene	ug/L	2	1.5	75	54-133	
Benzo(g,h,i)perylene	ug/L	2	1.3	67	33-132	
Benzo(k)fluoranthene	ug/L	2	1.9	96	59-143	
Chrysene	ug/L	2	2.5	127	70-157	
Dibenz(a,h)anthracene	ug/L	2	1.2	59	24-130	
Fluoranthene	ug/L	2	1.8	91	59-130	
Fluorene	ug/L	2	1.2	59	49-130	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

LABORATORY CONTROL SAMPLE: 1161535

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Indeno(1,2,3-cd)pyrene	ug/L	2	1.6	79	52-130	
Naphthalene	ug/L	2	1.2	58	45-130	
Phenanthrene	ug/L	2	1.2	61	60-130	
Pyrene	ug/L	2	1.7	86	64-147	
2-Fluorobiphenyl (S)	%			65	40-130	
Terphenyl-d14 (S)	%			93	26-135	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1161536 1161537

Parameter	Units	40114859004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/L	0.0032J	2	1.9	1.2	1.2	62	59	27-130	5	42	
2-Methylnaphthalene	ug/L	0.0044J	2	1.9	1.2	1.2	62	59	33-130	5	37	
Acenaphthene	ug/L	<0.0049	2	1.9	1.4	1.3	70	66	32-130	6	35	
Acenaphthylene	ug/L	<0.0048	2	1.9	1.2	1.1	59	57	34-130	6	29	
Anthracene	ug/L	<0.0040	2	1.9	1.6	1.6	80	83	31-130	3	29	
Benzo(a)anthracene	ug/L	<0.0050	2	1.9	0.86	0.80	44	41	35-135	8	20	
Benzo(a)pyrene	ug/L	<0.0043	2	1.9	1.2	1.1	61	58	21-139	7	22	
Benzo(b)fluoranthene	ug/L	<0.0052	2	1.9	1.3	1.2	67	64	26-144	7	20	
Benzo(g,h,i)perylene	ug/L	<0.0034	2	1.9	1.2	1.1	60	56	10-142	8	20	
Benzo(k)fluoranthene	ug/L	<0.0055	2	1.9	2.0	1.6	100	85	21-155	17	20	
Chrysene	ug/L	0.0043J	2	1.9	2.6	2.4	130	125	46-157	5	20	
Dibenz(a,h)anthracene	ug/L	<0.0055	2	1.9	1.1	1.0	54	52	10-143	5	20	
Fluoranthene	ug/L	<0.0092	2	1.9	1.8	1.7	90	90	35-138	1	20	
Fluorene	ug/L	<0.0040	2	1.9	1.2	1.1	60	57	28-130	6	27	
Indeno(1,2,3-cd)pyrene	ug/L	<0.0035	2	1.9	1.3	1.3	67	65	16-139	4	20	
Naphthalene	ug/L	<0.0044	2	1.9	1.2	1.1	61	59	35-130	5	39	
Phenanthrene	ug/L	<0.0075	2	1.9	1.1	1.1	57	59	41-131	2	22	
Pyrene	ug/L	<0.0075	2	1.9	1.7	1.6	86	81	50-151	7	20	
2-Fluorobiphenyl (S)	%						66	65	40-130			
Terphenyl-d14 (S)	%						92	92	26-135			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

ANALYTE QUALIFIERS

HS	Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1	RPD value was outside control limits.

Pace Analytical Services, Inc.
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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 19-0422.20 WEST WATERFRONT
Pace Project No.: 40115037

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40115037001	**WMW-2**	EPA 6010	ICP/10609		
40115037002	**WMW-8**	EPA 6010	ICP/10609		
40115037003	**WMW-10**	EPA 6010	ICP/10609		
40115037004	**WPZ-10**	EPA 6010	ICP/10612		
40115037005	**WMW-12**	EPA 6010	ICP/10612		
40115037006	**WMW-13**	EPA 6010	ICP/10612		
40115037007	**WMW-14**	EPA 6010	ICP/10612		
40115037008	**WMW-15**	EPA 6010	ICP/10612		
40115037009	**WMW-16**	EPA 6010	ICP/10612		
40115037001	**WMW-2**	EPA 3510	OEXT/26595	EPA 8270 by HVI	MSSV/7906
40115037002	**WMW-8**	EPA 3510	OEXT/26595	EPA 8270 by HVI	MSSV/7906
40115037003	**WMW-10**	EPA 3510	OEXT/26595	EPA 8270 by HVI	MSSV/7906
40115037004	**WPZ-10**	EPA 3510	OEXT/26595	EPA 8270 by HVI	MSSV/7906
40115037005	**WMW-12**	EPA 3510	OEXT/26595	EPA 8270 by HVI	MSSV/7906
40115037006	**WMW-13**	EPA 3510	OEXT/26595	EPA 8270 by HVI	MSSV/7906
40115037007	**WMW-14**	EPA 3510	OEXT/26595	EPA 8270 by HVI	MSSV/7906
40115037008	**WMW-15**	EPA 3510	OEXT/26595	EPA 8270 by HVI	MSSV/7906
40115037009	**WMW-16**	EPA 3510	OEXT/26595	EPA 8270 by HVI	MSSV/7906
40115037001	**WMW-2**	EPA 8260	MSV/28542		
40115037002	**WMW-8**	EPA 8260	MSV/28542		
40115037003	**WMW-10**	EPA 8260	MSV/28542		
40115037004	**WPZ-10**	EPA 8260	MSV/28542		
40115037005	**WMW-12**	EPA 8260	MSV/28542		
40115037006	**WMW-13**	EPA 8260	MSV/28542		
40115037007	**WMW-14**	EPA 8260	MSV/28542		
40115037008	**WMW-15**	EPA 8260	MSV/28542		
40115037009	**WMW-16**	EPA 8260	MSV/28542		
40115037010	**TRIP**	EPA 8260	MSV/28542		

CHAIN OF CUSTODY RECORD

401150337

PROJECT NO.	PROJECT NAME/CLIENT
19-0422.20	West Waterfront

SAMPLERS: (*Signature*) Evan Gam

SAMPLE NO.	DATE	TIME	OM	RA	SAMPLE LOCATION/ DESCRIPTION	NO. OF CON-TAINERS	VOC	PAH	dis. metals (Pb, Cd, As)						REMARKS
							Field Filtered:		N	N	Y				
001	5/18/15	10:45am			WMW-2	6	X	X	X		3-40ml G	1-250ml pD	Send EDD	2-100ml ag	A
002	5/18	11:20am			WMW-8	6	X	X	X						
003	5/18	12:25pm			WMW-10	6	X	X	X						
004	5/18	12:25pm			[redacted] WPZ-10	6	X	X	X						
005	5/19/15	7:55am			WMW-12	6	X	X	X						
006	5/19	8:35am			WMW-13	6	X	X	X						
007	5/19	9:10am			WMW-14	6	X	X	X						
009	5/19	9:40am			WMW-15	6	X	X	X						
009	5/19	10:10am			WMW-16	6	X	X	X						
010					Trip	1	X					2 X-40ml G			
												KW 5-20-15			

Ayres Project Contact: Jeff Steiner

Ayres Project Manager: Jeff Steiner

Invoice To: Ayres Associates, Eau Claire, WI

RELINQUISHED BY: (*Signature*)	DATE / TIME	RECEIVED BY: (*Signature*)	RELINQUISHED BY: (*Signature*)	DATE / TIME	RECEIVED BY: (*Signature*)
Evan Gam	5/20/15 9:15	[signature]	[signature]	5/20/15 0915	

AYRES ASSOCIATES

Ayres Associates Inc
Engineers/Architects/Scientists/Photogrammetrists
5201 E. Terrace Drive, Suite 200
Madison, WI 53718
(608)443-1200 Fax (608)443-1250

Shipped on ice: X yes ___ no

Received on ice: X yes ___ no

Temp. if **not** received on ice: _____

COMMENTS: