Argonaut Holdings, LLC

March 22, 2012

Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6540

SUBJECT: Report Statement
Quarterly Groundwater Monitoring Report #5
Former Oakland Truck Center Site
8099 South Coliseum Way
Oakland, California
CASE # RO0001389
Facility Global ID# T0600101692

To Whom It May Concern:

Argonaut Holdings, LLC (Argonaut), is the owner of the property located at 8099 South Coliseum Way in Oakland, California. Attached please find the fifth quarterly groundwater monitoring report for the property located at 8099 South Coliseum Way in Oakland, California.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

If you have any questions please contact Marilyn Dedyne at 313-506-9461, or our authorized agent, Chuck Dittmar of ARCADIS at (810)-225-1966.

Sincerely,

Mark R. Sloan
President, Argonaut Holdings, LLC

ARCADIS
Infrastructure · Water · Environment · Buildings

Imagine the result

Leaking Underground Storage Tank Site Quarterly Monitoring Report #5

Former Oakland Truck Center
8099 South Coliseum Way
Oakland, California 94621
Case ID RO-0001389

Field Work Dates: December 12 and 13, 2011

Prepared on Behalf of Argonaut Holdings, LLC

Prepared for the Alameda County Health Care Services Agency

ARCADIS

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Leaking Underground Storage Tank Site Quarterly Monitoring Report #5

Former Oakland Truck Center
Oakland, CA

Field Work Dates: December 12 and 13, 2011

Prepared on Behalf of:
Argonaut Holdings, LLC

Prepared for:
Alameda County Health Care Services Agency

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Our Ref.:
B0064601.0000.00008

Date:
March 13, 2012

ARCADIS

Table of Contents

Appendices

1. Introduction

On behalf of Argonaut Holdings, Inc., ARCADIS U.S., Inc. (ARCADIS) has prepared this *Leaking Underground Storage Tank Site Quarterly Monitoring Report #5* to present the results of groundwater monitoring activities performed at the Former Oakland Truck Center (hereafter referred to as the "Site"; Figure 1) on December 12 and 13, 2011. One 500-gallon used oil underground storage tank (UST), one 1,000-gallon used oil UST, one 2,000-gallon unleaded gasoline UST, and one 2,000-gallon diesel fuel UST were installed in 1980 in two separate excavations west of the Main Site Building. According to previous reports (Clayton, 1993a and 1993b), the four USTs were removed on August 5, 1993. Based on analytical results from soil samples collected during UST removal activities, a UST Unauthorized Release/Contamination Site Report was filed with the Alameda County Health Care Services Agency (ACHCSA) on August 10, 1993. In June 2007, ACHCSA approved a monitored natural attenuation approach and requested quarterly sampling and monitoring of the existing groundwater monitoring wells. The purpose of the investigation was to evaluate groundwater quality at the Site in support of the efforts to pursue closure of the open Leaking Underground Storage Tank (LUST) Case ID RO-0001389 as requested by ACHCSA in June 2007. In October 2010, quarterly monitoring of the site monitoring wells was initiated in order to pursue closure of the LUST case. The results summarized in this report represent the data collected during the fifth quarterly monitoring event.

2. Background

Site description, assessment history, geologic and hydrogeologic settings, and previous remedial activities performed at the Site are discussed in the following subsections. Please refer to Figure 2 for the locations of the monitoring wells.

2.1 Site and Surrounding Area Description

The Site is an active new and used truck dealership and service facility located at 8099 South Coliseum Way in Oakland, California. It currently consists of two buildings: the Main Site Building and the Used Truck Center Trailer, situated on approximately 6.38 acres of land. Based on historical information, one former building existed on the eastern portion of the Site. The former building was owned and occupied by the California Department of Transportation (Caltrans) and was utilized as a maintenance facility.

The Site is zoned C-36/S-4, regional commercial. It is anticipated that future use of the Site will consist of commercial facilities. The Site is bounded by South Coliseum Way to the north and by Caltrans property to the east, south, and west. Surrounding properties are comprised of commercial uses. Based on a search of local and regional water agency records performed by Environmental Data Resources (EDR), there are no public supply wells within one mile of the Site. The nearest potential receptor is the San Leandro Bay, which is located approximately 3,500 feet west of the Site.

2.2 Site Assessment History

As mentioned earlier, four USTs were installed in 1980 in two separate excavations west of the Main Site Building and were removed in 1993. Based on analytical results from soil samples collected during UST removal activities, a UST Unauthorized Release/Contamination Site Report was filed with ACHCSA on August 10, 1993. This report identified corroded, leaky pipes and overfilling of the USTs as the main sources of site-related constituents of concern (COCs). Impacted soils surrounding the USTs were excavated and disposed of off-site.

Several subsurface investigations, hydrogeologic evaluations, a risk assessment, and a remediation feasibility study were conducted by Fluor Daniel GTI (FD-GTI) in 1993, 1995, 1996, and 1997[1] prior to a Phase II Environmental Site Assessment (ESA)

[1]Please refer to the References Section for a listing of historical investigations reports.

completed by ARCADIS (operating as Encore Environmental Consortium, LLC [EEC]) in April 2008. Residual impacts to the soil in the vicinity of the former USTs were noted to be primarily of higher molecular weight total petroleum hydrocarbons (TPHs) and polynuclear aromatic hydrocarbons (PAHs). During the 1995 FD-GTI site investigation, several soil borings were advanced throughout the Site. Free phase hydrocarbon product was reportedly observed in soil boring SB-3, located near the oil/water separator east of the Main Site Building; therefore, a groundwater sample was not collected from this boring. However, a product sample was collected and analyzed for a hydrocarbon screen. TPH as mineral spirits was detected at 590,000 milligrams per kilogram (mg/kg) in the product sample collected from SB-3.

In addition, the investigations indicated the presence of a potential off-site source located to the east-southeast. Soil borings SB-7, SB-8, and SB-9 (installed by EEC in 2008) and SB-7A, SB-8A, SB-8A1, and SB-9A (installed by EEC in October 2010), all advanced in the southeastern portion of the Site, demonstrated that there does not appear to be an on-site source at this portion of the Site and that the impact observed in this area of the Site appears to have originated from the Caltrans property located immediately adjacent to the eastern and southeastern site boundary. According to previous EEC reports, the Caltrans property is reported on the LUST and Contaminated Sites (CS) databases. Based on the general north-northwest groundwater flow direction at the Site (Figure 3), contaminant releases from this adjacent property would likely impact the Site.

2.3 Geology and Hydrology

2.3.1 Regional Geology

According to the United States Department of Agriculture's (USDA) Soil Conservation Service (SCS), regional data indicate that the surface soil texture in the area of the Site is variable. The soil component name is URBAN LAND. The soil hydrologic group and soil drainage classification are not reported. Soils do not meet the requirements for a hydric soil. The shallow and deeper soil types in the vicinity of the Site were not reported in the EDR report. Underlying the surface, shallow and deeper soils are bedrock deposits classified as Cenozoic Era, Quaternary System, and Quaternary Series.

2.3.2 Site Geology

During previous subsurface investigations, soils at the Site were observed to consist primarily of fill material of sand, gravel, and clay from ground surface to approximately

9 feet below ground surface (bgs) and grayish-blue clay from approximately 9 to 20 feet bgs, with some interbedded sand and gravel layers throughout the top 20 feet.

2.3.3 Hydrology

In December 2011, groundwater elevations in the eleven (11) site monitoring wells ranged from 3.68 to 8.08 feet above mean sea level (amsl; 8.69 and 4.42 feet below the top of casing, respectively). According to the Aquifer Characterization Report prepared by FD-GTI on May 14, 1996, the aquifer material is comprised of a 4-foot thick sand and gravel bed located approximately between 12 and 18 feet bgs. These materials are most likely discontinuous stream channel deposits. Groundwater flow beneath the Site was previously reported to the north under a gradient of approximately 0.01 foot per foot (ft/ft). Based on water level measurements from the December 2011 groundwater monitoring event, the current groundwater flow is to the north-northwest under an approximate gradient of 0.01 ft/ft.

A 24-hour constant-rate pumping test was conducted at monitoring well MW-2 in April 1996 by FD-GTI to determine aquifer hydraulic properties; including hydraulic conductivity, transmissivity, storability, and specific yield. The aquifer properties ranged from 317 gallons per day per square foot (gpd/ft^2) (42 feet per day [ft/d]) to 733 gpd/ft^2 (98 ft/d) for hydraulic conductivity; 1,270 gallons per day per foot (gpd/ft) (170 square feet per day [ft^2/d]) to 2,930 gpd/ft (392 ft^2/d) for transmissivity; 0.006 to 0.00006 for storability; and 4 to 5 gallons per minute (gpm) for specific yield with a 5-foot drawdown in MW-2. The relatively high hydraulic conductivity values measured during the pump test were representative of the sand and gravel layer observed at some of the groundwater monitoring well locations at the Site. FD-GTI concluded that the presence of finer grained layers would significantly affect groundwater flow at the Site.

2.4 Previously Approved Remedial Approach

The risk assessment completed by FD-GTI in January 1997 included a remedial approach for the Site that consisted of intrinsic bioremediation and monitoring (termed "monitored natural attenuation"). FD-GTI also proposed placing a deed restriction against constructing buildings in the vicinity of MW-3, based on the observed benzene concentrations that exceeded the calculated Site Specific Target Level (SSTL). In June 2007, ACHCSA approved the monitored natural attenuation approach and requested quarterly sampling and monitoring of the eight then-existing groundwater monitoring wells (MW-1 through MW-8). Requirements included monitoring bioremediation parameters such as dissolved oxygen (DO), oxidation-reduction potential (ORP), nitrate, sulfate, alkalinity, and ferrous iron, in addition to benzene,

toluene, ethylbenzene, and xylenes (collectively known as BTEX), TPH as diesel (TPH-DRO), TPH as motor oil (TPH-o), and TPH as gasoline (TPH-GRO). ACHCSA also requested sampling the drainage ditch located adjacent to the northwestern (downgradient) site boundary. In July 2009, ARCADIS collected two sediment samples, SW-2 and SW-3 from the ditch located at the northwestern portion of the Site. In addition, a surface water sample was collected from SW-3. TPH-o and TPH were detected in SW-2 at 300 mg/kg and 41 mg/kg, respectively. TPH-o was detected in SW-3 at 420 mg/kg. TPH was not detected in the surface water or sediment samples collected from SW-3. The detected concentrations did not exceed the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) Commercial Soil or Surface Water Environmental Screening Levels (ESLs). Volatile organic compounds (VOCs) were not detected above laboratory reporting limits in sediment samples SW-2 and SW-3 and surface water sample SW-3. Also as part of the July 2009 site activities, three additional groundwater monitoring wells (MW-9, MW-10, and MW-11) were installed northwest of the impacted area to determine if contaminants had migrated downgradient from the former UST basins.

3. Investigation Activities

The following subsections present pre-field activities, groundwater monitoring activities, analytical results, and data evaluation.

3.1 Pre-Field Activities

Pursuant to the Code of Federal Regulations (CFR), Title 29, Section 1910.120 and the California Code of Regulations (CCR) Title 8, Section 5192; ARCADIS prepared a site-specific Health and Safety Plan (HASP) prior to the first monitoring event to address health and safety concerns related to the groundwater monitoring activities conducted at the Site (ARCADIS, 2010b). The HASP was developed to identify and control potential hazards in order to minimize exposure of workers involved in the environmental assessment activities to site-related COCs. Pre-field activities included coordinating field work with the client, analytical laboratory, and Site personnel; notifying ACHCSA of site activities prior to commencement; and reviewing monitoring plan and the HASP prior to mobilizing to the Site.

3.1.1 Groundwater Sampling

ARCADIS mobilized to the Site on December 12 and 13, 2011 to measure depth to groundwater and to collect groundwater samples from the eleven (11) existing groundwater wells. Groundwater was encountered between 4.42 to 8.69 feet below the top of casing (8.08 and 3.68 feet amsl, respectively) in the monitoring wells during this monitoring event. Please refer to Figure 3 for a potentiometric surface map. ARCADIS prepared hydrographs depicting groundwater elevation, TPH, and MTBE (where applicable) concentration trends for each of the groundwater monitoring wells. Groundwater elevation trends generally indicate more pronounced seasonal fluctuations in the monitoring wells located in the southern portion of the Site, as compared to the wells installed at the northern portion of the Site. Groundwater elevation and select COC concentration trends in monitoring wells MW-1 through MW-11 are included in Appendix D.

Low flow sampling techniques, using a peristaltic pump and dedicated polyethylene tubing, were utilized to purge and sample each of the monitoring wells. Groundwater samples were collected in preserved laboratory-supplied containers, stored on ice, and shipped overnight to ESC Lab Sciences in Mt. Juliet, Tennessee for analysis. During well purging, the following groundwater measurements were recorded: depth to water, pH, temperature, ORP, DO, turbidity, and specific conductivity. Field data collected at each groundwater monitoring well are summarized in Table 1.

3.1.2 Analytical Methods

Groundwater analyses were selected based on the potential source(s) of contamination (used oil, unleaded gasoline, and/or diesel fuel). All collected groundwater samples were analyzed for TPH-Low Fraction and TPH-DRO (C10-C22, C22-C32, and C32-C40) by Environmental Protection Agency (EPA) Method 8015 and VOCs by EPA Method 8260B. In addition, groundwater samples from MW-1 through MW-11 were analyzed for alkalinity by Standard Method (SM) 2320B, sulfate and nitrogen by EPA Method 9056, phosphate by EPA Method 365.1, and ferrous iron by SM Fe-3500.

3.1.3 Quality Assurance/ Quality Control

ARCADIS employed quality assurance/quality control (QA/QC) procedures in accordance with the ARCADIS 2010 Field Health and Safety Handbook (ARCADIS, 2010a) and ARCADIS Procedures which detail standard operating procedures (SOPs) for the primary field activities. One duplicate sample, intended to assess the precision of the laboratory analyses, was collected from monitoring well MW-5. This represents a duplicate sampling frequency of approximately 10% relative to the total number of wells sampled. The duplicate sample followed the same analytical protocols as the primary sample. Trip blanks were also collected; however, these samples were put on hold pending the analytical results of the primary samples. Trip blanks were intended to be analyzed for VOCs if the primary sample data were suspected to be erroneous. Related QA/QC guidance and procedures were employed for the following activities:

- Data recording / field books,
- Groundwater sample collection for laboratory analysis,
- Sample handling and shipping,
- Usage and calibration of field instruments, and
- Equipment decontamination.

3.1.4 Decontamination Procedures

Prior to sampling, all non-disposable sampling equipment was decontaminated using a phosphate-free detergent solution, and then rinsed with tap water. Disposable sampling equipment (including Nitrile gloves, plastic bags, and groundwater sample collection polyethylene tubing) was disposed of outside the sampling area in order to prevent cross-contamination of groundwater samples.

3.1.5 Analytical Results

Laboratory analytical results for the collected groundwater samples are summarized in Table 2. Groundwater concentrations of TPH-DRO and VOCs that exceed the selected screening criteria are presented on Figure 4. Groundwater TPH concentrations were compared to the SFRWQCB ESLs. Cleanup criteria for VOCs are based on City of Oakland Risk-Based Screening Level (RSBLs), SFRWQCB ESLs, and California Department of Public Health (DPH) Maximum Contaminant Levels (MCLs) for groundwater. An MCL is defined as the highest concentration of a contaminant that is allowed in drinking water. Groundwater analytical results are discussed below.

3.1.5.1 TPH

TPH-Low Fraction was not detected above the laboratory detection limits in any of the collected groundwater samples.

TPH-DRO C10-C22 was detected at concentrations ranging between an estimated[2] 0.049 milligram per liter (mg/L; MW-11) and 1.8 mg/L (MW-6). TPH-DRO C10-C22 exceeded the 0.21 mg/L SFRWQCB ESL in all of the monitoring wells; with the exception of wells MW-3, MW-10, and MW-11. TPH-DRO C22-C32 concentrations ranged between an estimated 0.063 mg/L (MW-3) and 0.70 mg/L (MW-6). TPH-DRO C22-C32 exceeded the 0.21 mg/L SFRWQCB ESL in monitoring wells MW-1, MW-4, MW-5, MW-6, and MW-7; while the concentration detected at MW-19 was equal to the SFRWQCB ESL. TPH-DRO C32-C40 was detected only in monitoring wells MW-5 and MW-6 at estimated concentrations of 0.047 mg/L (primary sample) and 0.082 mg/L, respectively. All detected TPH-DRO C32-C40 concentrations were below the SFRWQCB ESL.

During the previous groundwater sampling event (September 2011), the concentrations of TPH-DRO constituents in monitoring well MW-4 were higher than those detected during the March and June 2011 groundwater monitoring events but were comparable to the concentrations observed during the first monitoring event

[2]Analyte concentrations are reported as estimated by the laboratory when the sample concentration is higher than the method detection limit but lower than the method reporting limit. Estimated analyte concentrations are flagged with a “J” on the laboratory analytical reports included as Appendix C.

conducted at the Site approximately one year earlier (October 2010). TPH-DRO (both C10-C22 and C22-C32) decreased during the current groundwater monitoring event to concentrations similar to those detected during the March and June 2011 groundwater monitoring events. This short-term variability in COC concentrations can be due to changes in groundwater flow, chemical degradation rates, and other factors that are inherently variable. This behavior would not necessarily be interpreted as evidence of an unstable plume, as it may be caused by the natural variations of a stable plume.

TPH-DRO C10-C22 concentrations in monitoring well MW-10 had historically exceeded the corresponding SFRWQCB ESL, with a historic high detected during the September 2011 groundwater monitoring event (Table 2). However, during the current monitoring event, TPH-DRO C10-C22 was observed at its lowest concentration since groundwater monitoring was initiated at the Site (0.14 mg/L, below the 0.21 mg/L SFRWQCB ESL).

Hydrographs depicting TPH concentrations during the past five monitoring events indicate an overall stable to decreasing trend at the Site, independent of groundwater elevations in the monitoring wells (Appendix D).

3.1.5.2 VOCs

None of the VOCs analyzed for were present at concentrations exceeding the laboratory detection limits in the groundwater samples collected from monitoring wells MW-1 or MW-11, the latter located downgradient of the former USTs. Several VOCs; including acetone, 1,1-dichloroethene (1,1-DCE), cis-1,2-dichlorethene (cis-1,2-DCE), cyclohexane, ethanol, n-hexane, methyl tert-butyl ether (MTBE), tert-butyl-alcohol (TBA), and toluene; were detected in monitoring wells MW-2 through MW-10. However, the observed concentrations of these VOCs were generally below applicable SFRWQCB ESLs, California DPH MCLs, and/ or City of Oakland RBSLs for Ingestion of Groundwater; with the exception of MTBE. Exceedances of MTBE screening criteria were observed in the groundwater samples collected from monitoring wells MW-5 (primary and duplicate samples) and MW-6 (both located in the vicinity of the former gasoline UST). MTBE was detected at concentrations of 14 micrograms per liter (µg/L) in MW-5 and 19 µg/L in MW-6, both exceeding the California DPH MCL and City of Oakland RBSL of 13 µg/L. In addition, MTBE was detected in the groundwater samples collected from monitoring wells MW-2 (4.0 µg/L), MW-7 (1.6 µg/L), and MW-8 (0.94 µg/L, estimated); all below the MTBE screening criteria. Acetone was detected in only one monitoring well (MW-6) at an estimated concentration of 12 µg/L, well below the 1,500 µg/L SFRWQCB ESL. 1,1-DCE was detected in the groundwater samples collected from MW-2 and MW-3 at concentrations of 0.42 µg/L (estimated) and 1.3

µg/L, respectively; both below the 6 µg/L California DPH MCL or City of Oakland RBSL. cis-1,2-DCE was detected in MW-4 at an estimated concentration of 0.75 µg/L, not exceeding the 6 µg/L California DPH MCL or City of Oakland RBSL. Cyclohexane was detected in one well (MW-7) at a concentration of 1.3 µg/L. Ethanol was detected in only monitoring wells MW-3 and MW-10 at estimated concentrations of 88 µg/L and 64 µg/L, respectively. n-Hexane was detected in only one well (MW-6) at an estimated concentration of 5.4 µg/L. No SFRWQCB ESLs, California DPH MCLs, or City of Oakland RBSLs have been established for cyclohexane, ethanol, or n-hexane. Toluene was detected for the first time since groundwater monitoring was initiated at the Site; only in MW-9 at an estimated concentration of 0.30 µg/L, below the 130 µg/L SFRWQCB ESL and the 150 µg/L California DPH MCL and City of Oakland RBSL. TBA was detected only in monitoring wells MW-5 and MW-6 at concentrations of 5.9 µg/L (in the primary sample and 6.9 µg/L in the duplicate sample) and 8.1 µg/L, respectively. No SFRWQCB ESL, California DPH MCL, or City of Oakland RBSL has been established for TBA.

3.1.5.3 Intrinsic Bioremediation/Natural Attenuation

As mentioned in Section 3, all collected groundwater samples were also analyzed for alkalinity, sulfate, nitrogen, phosphate, and ferrous iron to determine if natural attenuation was occurring at the Site. In addition, pH, specific conductivity, ORP, turbidity, and DO were monitored during monitoring well purging. Alkalinity in the monitoring wells ranged from 380 mg/L (MW-8) to 1,600 mg/L (MW-1). Ferrous iron concentrations ranged from 0.20 mg/L (MW-3) to 38 mg/L (MW-6). Sulfate concentrations ranged from non-detect (less than 0.40 mg/L; MW-1, MW-6, MW-7, and MW-8) to 550 mg/L (MW-11). Phosphate concentrations ranged from 0.75 mg/L (MW-8) to 6.8 mg/L (MW-9). Nitrate (as nitrogen) did not exceed the 0.0091 mg/L laboratory detection limit in monitoring wells MW-1 through MW-10. Nitrate was detected in MW-11 at a concentration of 0.12 mg/L. DO concentrations ranged from 0.05 mg/L (MW-2, MW-5, and MW-6) to 1.18 mg/L (MW-11). pH ranged from 6.53 (MW-6) to 7.29 (MW-2). Specific conductivity values ranged from 0.687 Siemens per meter (S/m) in MW-8 to 10.94 S/m in MW-11. Negative ORP values, ranging from -14.9 millivolts (mV, MW-11) to -120 mV (MW-10), were measured in all monitoring wells. Finally, turbidity was observed to range from 0.00 Nephelometric Turbidity Units (NTU, MW-8) to 20.28 NTUs (MW-5).

3.2 Data Evaluation

Analytical data collected during this groundwater monitoring event were compared to historical data to identify concentration trends and to obtain an overall status of the impact to groundwater at the Site.

Historical groundwater analytical results indicated that, based on the majority of the samples which contained total dissolved solids (TDS) concentrations in excess of 3,000 mg/L, the shallow groundwater under the Site was not suitable for drinking water use. Groundwater samples collected during the four recent quarterly monitoring events were not analyzed for TDS.

The bioremediation parameter data indicated that intrinsic bioremediation is occurring at the Site. The ferrous iron data were not taken into consideration as an indication of microbial activity because the analyses were performed close to the analytical method's holding time and, therefore, there is some uncertainty in these data. Nevertheless, the relatively low nitrate, sulfate, and phosphate concentrations throughout the Site are likely due to assimilation and use to support microbial growth in the areas with previously higher impacts. In addition, the lower pH and DO concentrations in areas of higher TPH concentrations at the Site are also indicative of increased microbial activity in these areas. As the microorganisms aerobically biodegrade organic COCs, they utilize DO (therefore lowering DO levels in the groundwater) and generate slightly acidic waste byproducts (therefore lowering the pH).

When compared to the four previous quarterly groundwater monitoring events (performed during the fourth quarter of 2010 [ARCADIS, 2011a], first quarter of 2011 [ARCADIS, 2011b], second quarter of 2011 [ARCADIS, 2011c], and third quarter of 2011 [ARCADIS, 2011d], respectively), TPH concentrations in the groundwater samples collected during the fifth quarterly monitoring event are generally stable or decreasing, independent of groundwater elevation in the monitoring wells (as shown on the hydrographs included in Appendix D). In addition, the elevated concentrations of TPH-DRO recently observed in MW-4 and MW-10 have decreased to the historically observed low levels. The elevated concentrations observed in September 2011 may have been due to short-term variability in groundwater concentrations. MTBE concentrations slightly exceeding the 13 µg/L screening criteria were still detected in monitoring wells MW-5 and MW-6 during the current groundwater monitoring event; however, overall MTBE concentrations have been either stable or decreasing in both wells. No other detected VOCs exceeded the corresponding screening criteria.

4. Conclusions and Recommendations

The main purpose of the quarterly groundwater monitoring activities was to assess current groundwater conditions at the Site to support the efforts to pursue closure of open LUST Case ID RO-0001389.

4.1 Conclusions

The eleven (11) groundwater monitoring wells at the Site were sampled for VOCs, TPH, and intrinsic bioremediation parameters. TPH and VOCs were detected in several of the groundwater monitoring wells at concentrations indicating an overall stable or decreasing trend, with no COCs exceeding the corresponding screening criteria in MW-11 (the monitoring well located at the downgradient edge of the Site). All the VOCs analyzed for, with the exception of MTBE in monitoring wells MW-5 and MW-6, were detected at concentrations below the corresponding screening criteria. The TPH constituents, detected at low concentrations in several of the monitoring wells, are likely weathered residual components of the petroleum products released to the subsurface in the past or due to fill materials used during development of the Site; and, are an indication of intrinsic bioremediation occurring at the Site. Based on the results of this site investigation, ARCADIS concludes that intrinsic bioremediation has been occurring at the Site and that the COC-affected plume is stable or diminishing in size. The Site is capped with asphalt and concrete, and the current and future land use is commercial. No drinking water supply wells are located on-site or within one mile of the Site, and on-site TDS data previously collected in 2009 indicate that the groundwater at the Site is not suitable for potable use. All of the above findings and conclusions support the efforts to close the open LUST case.

4.2 Recommendations

Based on the findings of the five quarterly groundwater monitoring events conducted at the Site, which indicate a stable to decreasing plume, and the anticipated commercial or light industrial future use of the Site; ARCADIS recommends ceasing quarterly groundwater monitoring, applying for a “Low Risk Closure” status for the Site, and requesting “No Further Action” from ACHCSA. The “Low Risk Closure” status may include a deed notice or land use restriction based on the conditions documented from previous assessments and during the quarterly groundwater monitoring performed at the Site.

References

State of California Water Resources Control Board. 1989. UST Program Tank Permit Application Information, GMC Truck Center, 8099 South Coliseum Way, Oakland, California; November 15.

Clayton Environmental Consultants (Clayton). 1993a. Phase I Level II ESA, GMC Truck, 8099 Coliseum Way, California; August 6.

Clayton. 1993b. Phase I ESA, GMC Truck, 8099 Coliseum Way, Oakland, California; August 26.

Groundwater Technology, Inc. (GTI). 1995. Work Plan for Further Assessment, GMC Truck Center, 8099 South Coliseum Way, Oakland, California; January 26.

Fluor Daniel GTI (FD-GTI). 1996a. Report of Sampling and Analysis of Activities, GMC Truck Center, 8099 South Coliseum Way, Oakland, California; April 12.

FD-GTI. 1996b. Aquifer Characterization Report, GMC Truck Center, 8099 South Coliseum Way, Oakland, California; May 14.

FD-GTI. 1997. Risk-Based Corrective Action of Soil and Groundwater, General Motors Corporation White Truck Center, 8099 Coliseum Way, Oakland, California; January 9, 1997, revised March.

ARCADIS U.S., Inc. (ARCADIS). 2008a. Phase I ESA, Oakland Truck Center, 8099 South Coliseum Way, Oakland, California; March 24.

ARCADIS. 2008b. Phase II ESA, Oakland Truck Center, 8099 South Coliseum Way, Oakland, California; June 19.

ARCADIS.2010a. Field Method Guidelines Manual; August.

ARCADIS. 2010b. Health and Safety Plan for Activities at Oakland Truck Center, 8099 South Coliseum Way, Oakland, California; October.

ARCADIS. 2011a. Quarterly Monitoring Report #1, Former Oakland Truck Center, 8099 South Coliseum Way, Oakland, CA 94621, Case ID RO-0001389; June 10.

ARCADIS. 2011b. Quarterly Monitoring Report #2, Former Oakland Truck Center, 8099 South Coliseum Way, Oakland, CA 94621, Case ID RO-0001389; August 3.

ARCADIS. 2011c. Quarterly Monitoring Report #3, Former Oakland Truck Center, 8099 South Coliseum Way, Oakland, CA 94621, Case ID RO-0001389; September 26.

ARCADIS. 2011d. Quarterly Monitoring Report #4, Former Oakland Truck Center, 8099 South Coliseum Way, Oakland, CA 94621, Case ID RO-0001389; February 1.

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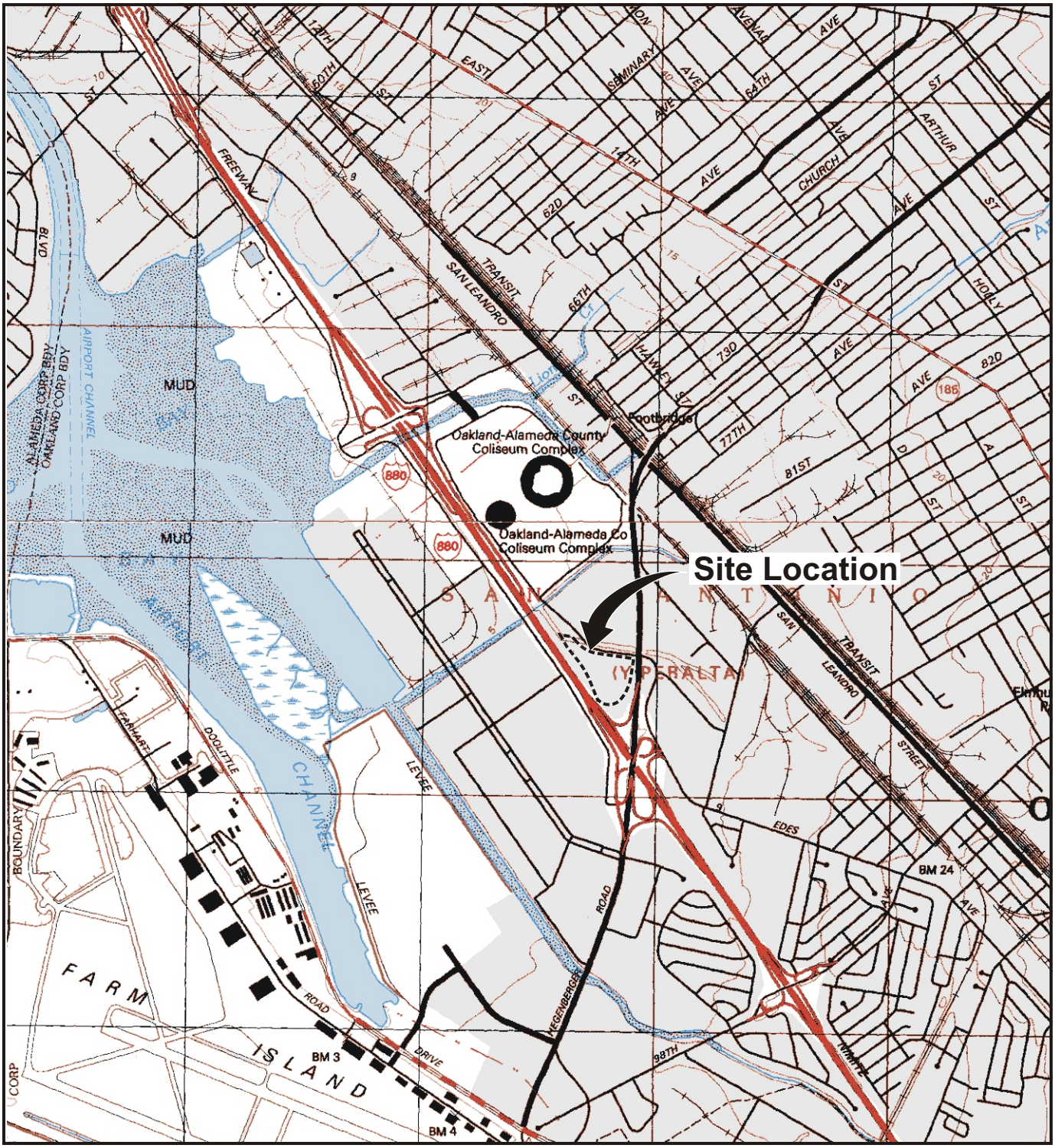
Appendix **A**

Figures



REFERENCE: BASE MAP USGS 7.5 MIN. QUADS. OAKLAND EAST, CA. 1997, AND SAN LEANDRO, CA. 1993.

2000' 0 2000'

Approximate Scale: 1" = 2000'

Area Location

FORMER OAKLAND TRUCK CENTER
8099 SOUTH COLISEUM WAY
OAKLAND, CA 94621

SITE LOCATION MAP

ARCADIS

FIGURE
1

05/17/2011 SYRACUSE-141ENV-DJHOWES
B0064601/0000/00008/CDR/64601N01.CDR

MW-11
USED PARTS
STORAGE

MW-10

South Coliseum Way

MW-9

MW-2
PZ-3
PZ-1
PZ-2

MW-6

FORMER 2,000 GALLON
GASOLINE AND DIESEL USTs

MW-3

MW-5

OIL/WATER
SEPARATOR

MW-1

MAIN SITE
BUILDING

MW-8

FORMER 1,000 GALLON AND
500 GALLON USED OIL USTs

MW-7

MW-4

USED
TRUCK
CENTER

PARTS
STORAGE

CALTRANS
PROPERTY

Hegenberger Road

I 880 North

I 880 South

Oakport
Street

PROJECT NUMBER: B006460
CITY:NOVI DIV/GROUP:ENV DB: PIC: PM: TM: TR:
G:\GIS\Project Files\GeneralMotors\Oakland\Documents\SiteLayout_MWlayout.mxd

LEGEND

- MONITORING WELL (ARCADIS; JULY 2009)
- MONITORING WELL LOCATION (FLUOR; MARCH 1996)
- STORMWATER DRAIN
- DITCH
- FENCE
- PROPERTY BOUNDARY

NOTE:

MONITORING WELL LOCATIONS (MW-1 THROUGH MW-11) WERE SURVEYED ON JULY 28, 2009.

0 80 160

SCALE IN FEET

FORMER OAKLAND TRUCK CENTER
8099 SOUTH COLISEUM WAY
OAKLAND, CALIFORNIA 94621

SITE MAP SHOWING MONITORING WELL LOCATIONS

ARCADIS

FIGURE
2

MW-11
4.05

USED PARTS
STORAGE

MW-10
4.14

South Coliseum Way

MW-9
4.18

4.5

MW-2
3.68*

PZ-3

PZ-1

PZ-2

5.0

MW-6
5.15

5.5

MW-5
5.65

MW-3
5.52

6.0

FORMER 2,000 GALLON
GASOLINE AND DIESEL USTs

OIL/WATER
SEPARATOR

MAIN SITE
BUILDING

MW-1
5.14*

6.5

MW-8
6.10

MW-7
5.73*

7.0

7.5

8.0

MW-4
8.08

FORMER 1,000 GALLON AND
500 GALLON USED OIL USTs

PARTS
STORAGE

USED
TRUCK
CENTER

CALTRANS
PROPERTY

Hegenberger Road

I 880 North

I 880 South

Oakport
Street

PROJECT NUMBER: B006460
CITY:NOVI DIV/GROUP:ENV DB: PIC: PM: TM: TR:
D:\GIS\Project Files\GeneralMotors\Oakland\Documents\201112_potentiometric surface.mxd

LEGEND

- MONITORING WELL (ARCADIS; JULY 2009)
- MONITORING WELL LOCATION (FLUOR; MARCH 1996)
- STORMWATER DRAIN
- DITCH
- FENCE
- PROPERTY BOUNDARY
- 4.5 — POTENTIOMETRIC ELEVATION CONTOUR
- INFERRED POTENTIOMETRIC ELEVATION CONTOUR
- 6.10 — GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL
- GROUNDWATER FLOW DIRECTION
- * — ELEVATION NOT USED IN CONTOURING

NOTES:

1. SOIL BORING LOCATIONS ARE APPROXIMATE.

2. MONITORING WELL LOCATIONS (MW-1 THROUGH MW-11) WERE SURVEYED ON JULY 28, 2009.

0 80 160

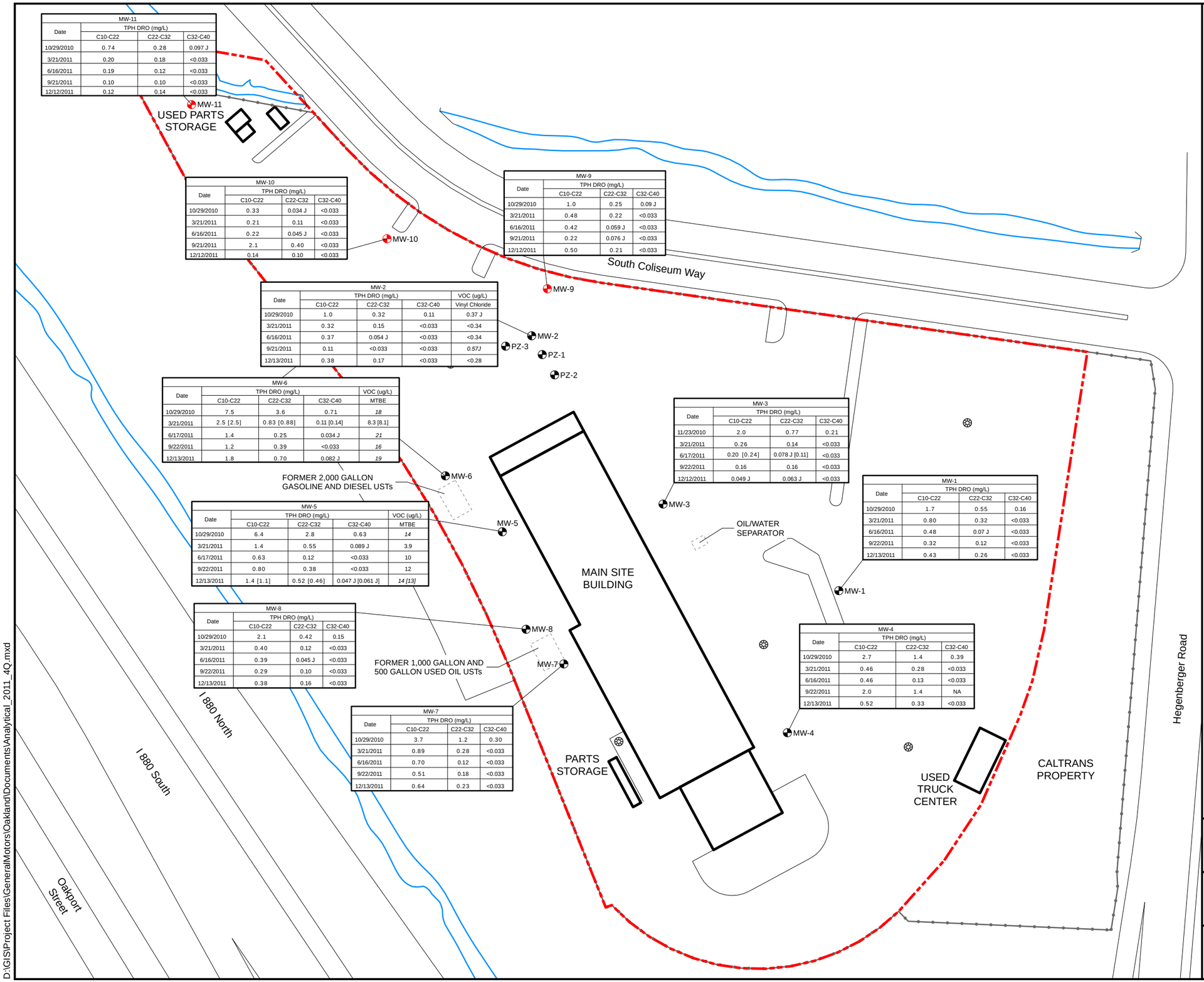
SCALE IN FEET

FORMER OAKLAND TRUCK CENTER
8099 SOUTH COLISEUM WAY
OAKLAND, CALIFORNIA 94621

POTENTIOMETRIC SURFACE MAP - DECEMBER 2011

ARCADIS

FIGURE
3



MW-11			
Date	TPH DRO (mg/L)		
	C10-C22	C22-C32	C32-C40
10/29/2010	0.74	0.28	0.097 J
3/21/2011	0.20	0.18	<0.033
6/16/2011	0.19	0.12	<0.033
9/21/2011	0.10	0.10	<0.033
12/12/2011	0.12	0.14	<0.033

MW-10			
Date	TPH DRO (mg/L)		
	C10-C22	C22-C32	C32-C40
10/29/2010	0.33	0.034 J	<0.033
3/21/2011	0.21	0.11	<0.033
6/16/2011	0.22	0.045 J	<0.033
9/21/2011	2.1	0.40	<0.033
12/12/2011	0.14	0.10	<0.033

MW-9			
Date	TPH DRO (mg/L)		
	C10-C22	C22-C32	C32-C40
10/29/2010	1.0	0.25	0.09 J
3/21/2011	0.48	0.22	<0.033
6/16/2011	0.42	0.059 J	<0.033
9/21/2011	0.22	0.076 J	<0.033
12/12/2011	0.50	0.21	<0.033

MW-2				
Date	TPH DRO (mg/L)			VOC (ug/L)
	C10-C22	C22-C32	C32-C40	Vinyl Chloride
10/29/2010	1.0	0.32	0.11	0.37 J
3/21/2011	0.32	0.15	<0.033	<0.34
6/16/2011	0.37	0.054 J	<0.033	<0.34
9/21/2011	0.11	<0.033	<0.033	*0.57J*
12/13/2011	0.38	0.17	<0.033	<0.28

MW-6				
Date	TPH DRO (mg/L)			VOC (ug/L)
	C10-C22	C22-C32	C32-C40	MTBE
10/29/2010	7.5	3.6	0.71	*18*
3/21/2011	2.5 [2.5]	0.83 [0.88]	0.11 [0.14]	8.3 [8.1]
6/17/2011	1.4	0.25	0.034 J	*21*
9/22/2011	1.2	0.39	<0.033	*16*
12/13/2011	1.8	0.70	0.082 J	*19*

MW-5				
Date	TPH DRO (mg/L)			VOC (ug/L)
	C10-C22	C22-C32	C32-C40	MTBE
10/29/2010	6.4	2.8	0.63	*14*
3/21/2011	1.4	0.55	0.089 J	3.9
6/17/2011	0.63	0.12	<0.033	10
9/22/2011	0.80	0.38	<0.033	12
12/13/2011	1.4 [1.1]	0.52 [0.46]	0.047 J [0.061 J]	*14 [13]*

MW-8			
Date	TPH DRO (mg/L)		
	C10-C22	C22-C32	C32-C40
10/29/2010	2.1	0.42	0.15
3/21/2011	0.40	0.12	<0.033
6/16/2011	0.39	0.045 J	<0.033
9/22/2011	0.29	0.10	<0.033
12/13/2011	0.38	0.16	<0.033

MW-7			
Date	TPH DRO (mg/L)		
	C10-C22	C22-C32	C32-C40
10/29/2010	3.7	1.2	0.30
3/21/2011	0.89	0.28	<0.033
6/16/2011	0.70	0.12	<0.033
9/22/2011	0.51	0.18	<0.033
12/13/2011	0.64	0.23	<0.033

MW-3			
Date	TPH DRO (mg/L)		
	C10-C22	C22-C32	C32-C40
11/23/2010	2.0	0.77	0.21
3/21/2011	0.26	0.14	<0.033
6/17/2011	0.20 [0.24]	0.078 J [0.11]	<0.033
9/22/2011	0.16	0.16	<0.033
12/12/2011	0.049 J	0.063 J	<0.033

MW-1			
Date	TPH DRO (mg/L)		
	C10-C22	C22-C32	C32-C40
10/29/2010	1.7	0.55	0.16
3/21/2011	0.80	0.32	<0.033
6/16/2011	0.48	0.07 J	<0.033
9/22/2011	0.32	0.12	<0.033
12/13/2011	0.43	0.26	<0.033

MW-4			
Date	TPH DRO (mg/L)		
	C10-C22	C22-C32	C32-C40
10/29/2010	2.7	1.4	0.39
3/21/2011	0.46	0.28	<0.033
6/16/2011	0.46	0.13	<0.033
9/22/2011	2.0	1.4	NA
12/13/2011	0.52	0.33	<0.033

LEGEND

- MONITORING WELL (ARCADIS; JULY 2009)
- MONITORING WELL (FLUOR; MARCH 1996)
- STORMWATER DRAIN
- FENCE
- PROPERTY BOUNDARY
- DITCH
- J — ESTIMATED VALUE ABOVE THE METHOD DETECTION LIMIT AND BELOW THE REPORTING LIMIT
- <0.033 — ANALYTE NOT DETECTED AT OR ABOVE THE INDICATED METHOD DETECTION LIMIT
- [ ] — DUPLICATE RESULTS SHOWN IN BRACKETS

NOTES:

1. ONLY VOCS DETECTED ABOVE SCREENING CRITERIA ARE INCLUDED

2. **BOLD** VALUES INDICATE ANALYTE CONCENTRATIONS EQUAL TO OR EXCEEDING SAN FRANCISCO BAY REGIONAL WATER QUALITY CONTROL BOARD ENVIRONMENTAL SCREENING LEVELS FOR GROUNDWATER.

3. *ITALICIZED* VALUES INDICATE ANALYTE CONCENTRATIONS EQUAL TO OR EXCEEDING CALIFORNIA DEPARTMENT OF HEALTH SERVICES DRINKING WATER MAXIMUM CONTAMINANT LEVELS AND OAKLAND TIER 1 RISK-BASED SCREENING LEVELS FOR INJECTION OF GROUNDWATER

	TPH			VOC (ug/L)	
	C10-C22	C22-C32	C32-C40	MTBE	Vinyl Chloride
San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels for Groundwater	0.21	0.21	0.21	1,800	3.8
California Department of Health Services Drinking Water Maximum Contaminant Levels (MCLs)	---	---	---	13	0.50
Oakland Tier I RBSLs for Ingestion of Groundwater (Commerical/ Industrial)	---	---	---	13	0.50

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SCALE IN FEET

FORMER OAKLAND TRUCK CENTER
8099 SOUTH COLISEUM WAY
OAKLAND, CALIFORNIA 94621

GROUNDWATER TPH & VOC CONCENTRATIONS EXCEEDING SCREENING CRITERIA

ARCADIS

FIGURE 4

PROJECT NUMBER: B006460
CITY:NOVI DIV/GROUP:ENV DB: PIC: PM: TM: TR:
D:\GIS\Project Files\GeneralMotors\Oakland\Documents\Analytical_2011_4Q.mxd

ARCADIS

Appendix **B**

Tables

TABLE 1
FIELD DATA

FORMER OAKLAND TRUCK CENTER
8099 S. COLISEUM WAY
OAKLAND, CALIFORNIA 94621

Well ID	Date	TOC (ft amsl)	Depth to Groundwater (ft btoc)	Groundwater Elevation (ft amsl)	Depth to Bottom (ft btoc)	Temperature (°C)	pH	DO (mg/L)	Specific Conductivity (S/m)	Turbidity (NTU)	ORP (mV)
MW-1	10/29/2010	12.46	6.33	6.13	20.35	22.21	7.10	0.25	0.3778	NM	-111
	3/21/2011	12.46	8.60	3.86	20.03	18.42	7.63	0.19	1.010	0.00	-93.7
	6/16/2011	12.46	5.94	6.52	NM	21.72	7.17	0.34	3.600	5.80	-145
	9/22/2011	12.46	5.82	6.64	NM	21.75	6.96	0.19	3.408	2.75	-115
	12/13/2011	12.46	7.32	5.14	NM	20.95	6.75	0.09	3.011	2.31	-95.1
MW-2	10/29/2010	12.37	8.42	3.95	20.07	21.90	7.31	0.23	0.6697	NM	-133
	3/21/2011	12.37	8.60	3.77	20.03	18.42	7.63	0.19	1.010	0.00	-93.7
	6/16/2011	12.37	8.54	3.83	NM	20.91	7.85	0.46	13.60	0.00	-128
	9/21/2011	12.37	8.64	3.73	NM	21.42	7.64	0.30	10.60	1.21	-118
	12/13/2011	12.37	8.69	3.68	NM	21.09	7.29	0.05	9.686	0.05	-61.3
MW-3	10/29/2010	13.06	7.49	5.57	20.30	NM	NM	NM	NM	NM	NM
	11/22/2010	13.06	7.22	5.84	20.25	20.54	7.11	0.25	0.3769	NM	-114
	3/21/2011	13.06	6.78	6.28	20.29	18.28	7.38	0.11	0.8159	0.00	-124
	6/17/2011	13.06	7.24	5.82	NM	19.60	7.69	0.58	8.760	0.40	-124
	9/22/2011	13.06	7.48	5.58	NM	21.13	7.43	0.61	8.176	1.09	-40.0
	12/12/2011	13.06	7.54	5.52	NM	20.15	7.15	0.14	7.445	3.99	-40.5
MW-4	10/29/2010	12.50	4.15	8.35	18.00	23.03	7.00	0.19	0.2160	NM	-130
	3/21/2011	12.50	2.02	10.48	17.95	17.27	6.70	0.11	0.1192	95.82	-69.8
	6/16/2011	12.50	3.70	8.80	NM	22.38	7.24	0.28	2.300	1.60	-124
	9/22/2011	12.50	5.04	7.46	NM	22.51	7.03	0.42	2.768	0.20	-104
	12/13/2011	12.50	4.42	8.08	NM	19.04	6.84	0.15	1.850	10.05	-119
MW-5	10/29/2010	13.38	8.16	5.22	17.10	24.47	7.05	0.15	0.3459	NM	-89.1
	3/21/2011	13.38	4.71	8.67	17.12	19.04	6.75	0.11	0.1768	16.71	-46.3
	6/17/2011	13.38	6.83	6.55	NM	22.36	7.17	0.43	1.780	32.90	-112
	9/22/2011	13.38	8.00	5.38	NM	24.33	7.11	0.14	2.682	31.52	-102
	12/13/2011	13.38	7.73	5.65	NM	22.35	6.87	0.05	2.725	20.28	-74.5
MW-6	10/29/2010	12.33	7.38	4.95	17.95	22.31	6.71	0.15	0.3366	NM	-106
	3/22/2011	12.33	5.45	6.88	17.93	15.50	6.47	0.31	0.2434	0.00	-16.9
	6/17/2011	12.33	6.75	5.58	NM	20.63	7.00	0.37	2.840	0.00	-120
	9/22/2011	12.33	7.26	5.07	NM	23.02	6.70	0.18	3.156	1.73	-106
	12/13/2011	12.33	7.18	5.15	NM	20.15	6.53	0.05	2.656	20.19	-107
MW-7	10/29/2010	13.17	7.82	5.35	18.10	22.87	6.85	0.12	0.2251	NM	-110
	3/21/2011	13.17	6.10	7.07	18.05	18.49	6.62	0.12	0.1175	0.00	-85.7
	6/16/2011	13.17	6.93	6.24	NM	21.57	7.08	0.54	1.700	0.00	-130
	9/22/2011	13.17	7.50	5.67	NM	22.12	6.82	0.22	2.371	2.03	-104
	12/13/2011	13.17	7.44	5.73	NM	22.08	6.67	0.08	1.544	0.02	-89.1
MW-8	10/29/2010	12.64	6.74	5.90	20.22	23.08	6.93	0.18	0.1129	NM	-101
	3/21/2011	12.64	3.26	9.38	20.20	18.69	6.50	0.12	0.0461	0.00	-106
	6/16/2011	12.64	5.96	6.68	NM	21.68	7.15	0.33	0.9190	0.00	-117
	9/22/2011	12.64	6.78	5.86	NM	23.43	7.28	0.21	1.136	1.03	-90.9
	12/13/2011	12.64	6.54	6.10	NM	21.32	6.65	0.08	0.687	0.00	-84.3
MW-9	10/29/2010	12.44	8.58	3.86	20.25	21.17	7.10	0.29	0.6523	NM	-127
	3/21/2011	12.44	8.78	3.66	20.11	18.08	7.08	0.17	0.6669	0.00	-93.2
	6/16/2011	12.44	8.45	3.99	NM	20.36	7.40	0.40	6.970	0.90	-128
	9/21/2011	12.44	8.88	3.56	NM	21.40	7.10	1.01	6.941	5.21	-89.4
	12/12/2011	12.44	8.26	4.18	NM	20.29	6.86	0.14	6.217	0.93	-103
MW-10	10/29/2010	11.49	7.66	3.83	20.25	22.94	7.32	0.25	0.6652	NM	-140
	3/21/2011	11.49	7.98	3.51	19.95	18.29	7.19	0.57	0.7225	2.78	-115
	6/16/2011	11.49	8.25	3.24	NM	21.16	7.47	0.93	7.470	18.60	-182
	9/21/2011	11.49	7.89	3.60	NM	22.84	7.18	0.98	7.159	3.11	-128
	12/12/2011	11.49	7.35	4.14	NM	20.37	7.05	0.23	6.393	9.14	-120
MW-11	10/29/2010	10.93	7.21	3.72	18.30	22.02	6.81	0.25	0.8981	NM	-64.0
	3/21/2011	10.93	7.73	3.20	17.94	17.55	6.84	0.39	0.9718	42.21	-54.9
	6/16/2011	10.93	8.09	2.84	NM	20.14	7.21	0.71	10.50	21.50	-110
	9/21/2011	10.93	7.41	3.52	NM	21.27	6.89	0.43	11.49	10.25	-78.2
	12/12/2011	10.93	6.88	4.05	NM	20.13	6.63	1.18	10.94	9.14	-14.9

Notes:

Monitoring wells MW-1 through MW-11 were surveyed on July 28, 2009.
amsl = above mean sea level
btoc = below top of casing
°C = degrees Celsius
DO = dissolved oxygen
ft = feet
mg/L = milligrams per liter
mV = millivolts
NA = not available
NM = not measured
NTU = Nephelometric turbidity units
ORP = oxidation-reduction potential
S/m = Siemens per meter
TOC = top of casing

TABLE 2
GROUNDWATER ANALYTICAL RESULTS

FORMER OAKLAND TRUCK CENTER
8099 SOUTH COLISEUM WAY
OAKLAND, CALIFORNIA 94621

			TPH DRO (EPA Method 8015B)			VOCs (EPA Method 8260)													Other Parameters				
Well ID	Date Collected	TPH Low Fraction (EPA Method 8015B) mg/L	C10-C22 mg/L	C22-C32 mg/L	C32-C40 mg/L	Acetone mg/L	1,1-Dichloroethane µg/L	1,1-Dichloroethene mg/L	cis-1,2-Dichloroethene mg/L	Cyclohexane mg/L	Methyl tert-butyl ether mg/L	1,2,4-Trimethylbenzene mg/L	Toluene mg/L	n-Hexane mg/L	Vinyl chloride mg/L	Ethanol mg/L	tert-Butyl alcohol mg/L	Other Target VOCs mg/L	Alkalinity (SM 2320B) mg/L	Phosphate (EPA Method 365.1) mg/L	Sulfate (EPA Method 9056) mg/L	Nitrate as Nitrogen (EPA Method 9056) mg/L	Ferrous Iron (SM 3500 Fe-) mg/L
SFRWQCB ESLs for Groundwater		0.21	0.21	0.21	0.21	1,500	47	25	590	NC	1,800	NC	130	NC	3.8	NC	NC	various	NC	NC	NC	NC	NC
California Department of Public Health MCLs		NC	NC	NC	NC	NC	5	6	6	NC	13	NC	150	NC	0.50	NC	NC	various	NC	NC	NC	1	NC
Oakland Tier I RBSLs for Ingestion of Groundwater (Commercial/ Industrial)		NC	NC	NC	NC	10,000	5	6	6	NC	13	NC	150	NC	0.50	NC	NC	various	NC	NC	NC	NC	NC
MW-1	10/29/2010	<0.040	**1.7 Y4**	**0.55 Y4**	0.16 Y4	<16	<0.32	<0.41	<0.34	NS	<0.63	<0.18	<0.32	NS	<0.34	NS	NS	ND	1,800	3.7	<0.46	<0.041	74
MW-1	3/21/2011	<0.040	**0.80 Y1**	**0.32 Y1**	<0.033 Y1	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	1,700	3.6	<0.46	<0.041	19
MW-1	6/16/2011	<0.040	**0.48 Y1**	0.070 J	<0.033	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	1,900	3.0	<0.46	<0.041	24
MW-1	9/22/2011	<0.040	**0.32 Y1**	0.12 Y1	<0.033	<11	<0.29	<0.40	<0.27	<0.36	<0.27	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	1,600	3.7	<0.46	<0.041	24
MW-1	12/13/2011	<0.040	**0.43**	**0.26**	<0.033	<11	<0.29	<0.40	<0.27	<0.36	<0.27	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	1,600	5.2	<0.40	<0.0091	15
MW-2	10/29/2010	<0.040	**1.0 Y4**	**0.32 Y4**	0.11 Y4	<16	<0.32	0.56 J	<0.34	NS	4.1	<0.18	<0.32	NS	0.37 J	NS	NS	ND	1,300	2.2	23	<0.041	1.1
MW-2	3/21/2011	<0.040	**0.32 Y1**	0.15 Y1	<0.033 Y1	<16	<0.32	<0.41	<0.34	<0.36	1.8	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	960	1.6	150	<0.041	1.1
MW-2	6/16/2011	<0.040	**0.37 Y1**	0.054 J	<0.033	<16	<0.32	<0.41	<0.34	<0.36	4.0	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	1,500	2.0	55	0.14	0.22
MW-2	9/21/2011	<0.040	0.11 Y1	<0.033	<0.033	<11	0.31 J	0.76 J	<0.27	<0.36	4.9	<0.20	<0.16	<0.59	**0.57 J**	<12	<1.5	ND	1,200	1.9	22	<0.041	0.19
MW-2	12/13/2011	<0.040	**0.38**	0.17	<0.033	<11	<0.29	0.42 J	<0.27	<0.36	4.0	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	1,200	2.2	210	<0.0091	0.48
MW-3	11/23/2010	<0.040	**2.0 Y4**	**0.77 Y4**	**0.21 Y4**	<16	<0.32	<0.41	<0.34	NS	<0.63	<0.18	<0.32	NS	<0.34	NS	NS	ND	1,200	6.2	14	<0.041	0.91
MW-3	3/21/2011	<0.040	**0.26 Y1**	0.14 Y1	<0.033 Y1	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	1,300	5.5	190	<0.041	0.83
MW-3	6/17/2011	<0.040 [<0.040]	0.20 Y1 **[0.24 Y1]**	0.078 J [0.11 Y4]	<0.033 [<0.033]	<16 [<16]	<0.32 [<0.32]	0.93 J [1.2]	<0.34 [<0.34]	<0.36 [<0.36]	<0.63 [<0.63]	<0.18 [<0.18]	<0.32 [<0.32]	<0.39 [<0.39]	<0.34 [<0.34]	<12 [<12]	<1.5 [<1.5]	ND	1,600 [1,400]	5.2 [4.9]	280 [300]	<0.041 [<0.041]	0.43 [0.51]
MW-3	9/22/2011	<0.040	0.16 Y1	0.16 Y1	<0.033	<11	<0.29	1.2	<0.27	<0.36	<0.27	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	1,300	4.8	240	<0.041	0.28
MW-3	12/12/2011	<0.040	0.049 J	0.063 J	<0.033	<11	<0.29	1.3	<0.27	<0.36	<0.27	<0.20	<0.16	<0.59	<0.28	88 J	<1.5	ND	1,200	5.3	350	<0.0091	0.20
MW-4	10/29/2010	<0.040	**2.7 Y1**	**1.4 Y4**	**0.39 Y4**	<16	<0.32	<0.41	1.0	NS	<0.63	<0.18	<0.32	NS	<0.34	NS	NS	ND	810	2.4	<0.46	<0.041	39
MW-4	3/21/2011	<0.040	**0.46 Y1**	**0.28 Y1**	<0.033 Y1	<16	<0.32	<0.41	<0.34	<0.36	<0.63	0.33 J	<0.32	<0.39	<0.34	<12	<1.5	ND	540	0.94	9.2	0.11	2.9
MW-4	6/16/2011	<0.040	**0.46 Y1**	0.13 Y4	<0.033	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	790	2.0	<0.46	<0.041	30
MW-4	9/22/2011	<0.040	**2.0 Y1****	**1.4 Y4****	--**	<11	<0.29	<0.40	0.69 J	<0.36	<0.27	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	800	2.2	<0.46	<0.041	41
MW-4	12/13/2011	<0.040	**0.52**	**0.33**	<0.033	<11	<0.29	<0.40	0.75 J	<0.36	<0.27	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	970	2.7	21	<0.0091	26
MW-5	10/29/2010	<0.040	**6.4 Y1**	**2.8 Y4**	**0.63 Y4**	<16	<0.32	<0.41	<0.34	NS	**14**	<0.18	<0.32	NS	<0.34	NS	NS	ND	1,700	1.6	<0.46	<0.041	--
MW-5	3/21/2011	<0.040	**1.4 Y1**	**0.55 Y1**	0.089 J Y1	<16	<0.32	<0.41	<0.34	<0.36	3.9	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	870	0.29	<0.46	<0.041	5.6
MW-5	6/17/2011	<0.040	**0.63 Y1**	0.12 Y4	<0.033	<16	<0.32	<0.41	<0.34	<0.36	10	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	980	0.52	0.60 J	0.35	10
MW-5	9/22/2011	<0.040 [<0.040]	**0.80 Y1**	**0.38 Y1**	<0.033	<11 [<11]	<0.29 [<0.29]	<0.40 [<0.40]	<0.27 [<0.27]	<0.36 [<0.36]	12 [12]	<0.20 [<0.20]	<0.16 [<0.16]	<0.59 [<0.59]	<0.28 [<0.28]	<12 [<12]	<1.5 [<1.5]	ND	1,400 [1,400]	0.80 [0.79]	<0.46 [<0.46]	<0.041 [0.041]	13 [14]
MW-5	12/13/2011	<0.040 [<0.040]	**1.4 [1.1]**	**0.52 [0.46]**	0.047 J [0.061 J]	<11 [<11]	<0.29 [<0.29]	<0.40 [<0.40]	<0.27 [<0.27]	<0.36 [<0.36]	**14 [13]**	<0.20 [<0.20]	<0.16 [<0.16]	<0.59 [<0.59]	<0.28 [0.28]	<12 [12]	5.9 [6.9]	ND	1,400 [1,400]	0.83 [0.86]	0.65 J [<0.40]	<0.0091 [<0.0091]	12 [9.5]
MW-6	10/29/2010	<0.040	**7.5 Y1**	**3.6 Y4**	**0.71 Y4**	<16	<0.32	<0.41	<0.34	NS	**18**	<0.18	<0.32	NS	<0.34	NS	NS	ND	1,400	3.0	<0.46	<0.041	45
MW-6	3/22/2011	<0.040 [<0.040]	**2.5 Y1 [2.5 Y1]**	**0.83 Y1 [0.88 Y1]**	0.11 Y1 [0.14 Y1]	<16 [<16]	<0.32 [<0.32]	<0.41 [<0.41]	<0.34 [<0.34]	<0.36 [<0.36]	8.3 [8.1]	<0.18 [<0.18]	<0.32 [<0.32]	<0.39 [<0.39]	<0.34 [<0.34]	<12 [<12]	2.2 J [<1.5]	ND	1,000 [1,000]	2.1 [2.1]	<0.46 [<0.46]	<0.041 [<0.041]	39 [39]
MW-6	6/17/2011	<0.040	**1.4 Y1**	**0.25 Y4**	0.034 J	<16	<0.32	<0.41	<0.34	<0.36	**21**	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	1,300	2.6	<0.46	<0.041	38
MW-6	9/22/2011	<0.040	**1.2 Y1**	**0.39 Y1**	<0.033	<11	<0.29	<0.40	<0.27	<0.36	**16**	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	1,200	2.8	<0.46	<0.041	39
MW-6	12/13/2011	<0.040	**1.8**	**0.70**	0.082 J	12 J	<0.29	<0.40	<0.27	<0.36	**19**	<0.20	<0.16	5.4 J	<0.28	<12	8.1	ND	1,200	3.0	<0.40	<0.0091	38
MW-7	10/29/2010	<0.040	**3.7 Y1**	**1.2 Y4**	**0.30 Y4**	18 J	<0.32	<0.41	<0.34	NS	2.4	<0.18	<0.32	NS	<0.34	NS	NS	ND	1,200	2.2	<0.46	<0.041	32
MW-7	3/21/2011	<0.040	**0.89 Y1**	**0.28 Y1**	<0.033 Y1	<16	<0.32	<0.41	<0.34	0.70 J	0.65	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	580	1.8	<0.46	<0.041	18
MW-7	6/16/2011	<0.040	**0.70 Y1**	0.12 Y4	<0.033	<16	<0.32	<0.41	<0.34	0.87 J	1.5	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	950	2.0	<0.46	<0.041	22
MW-7	9/22/2011	<0.040	**0.51 Y1**	0.18 Y1	<0.033	<11	<0.29	<0.40	<0.27	0.66 J	2.0	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	1,200	1.3	<0.46	<0.041	28
MW-7	12/13/2011	<0.040	**0.64**	**0.23**	<0.033	<11	<0.29	<0.40	<0.27	1.3	1.6	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	850	2.1	<0.40	<0.0091	20
MW-8	10/29/2010	<0.040	**2.1 Y1**	**0.42 Y1**	0.15 Y1	<16	<0.32	<0.41	<0.34	NS	1.7	<0.18	<0.32	NS	<0.34	NS	NS	ND	490	0.87	<0.46	<0.041	16
MW-8	3/21/2011	<0.040	**0.40 Y1**	0.12 Y1	<0.033 Y1	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	200	0.36	13	<0.041	5.3
MW-8	6/16/2011	<0.040	**0.39 Y1**	0.045 J	<0.033	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	430	0.84	<0.46	<0.041	9.7
MW-8	9/22/2011	<0.040	**0.29 Y1**	0.10 Y1	<0.033	<11	<0.29	<0.40	<0.27	<0.36	1.3	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	490	0.96	<0.46	<0.041	17
MW-8	12/13/2011	<0.040	**0.38**	0.16	<0.033	<11	<0.29	<0.40	<0.27	<0.36	0.94 J	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	380	0.75	<0.40	<0.0091	12
MW-9	10/29/2010	<0.040	**1.0 Y1**	**0.25 Y1**	0.09 J Y1	<16	<0.32	<0.41	<0.34	NS	<0.63	<0.18	<0.32	NS	<0.34	NS	NS	ND	970	6.2	120	<0.041	7.9
MW-9	3/21/2011	<0.040	**0.48 Y1**	**0.22 Y1**	<0.033 Y1	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	910	5.9	140	<0.041	7.9
MW-9	6/16/2011	<0.040	**0.42 Y1**	0.059 J	<0.033	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	1,100	6.0	150	<0.041	7.4
MW-9	9/21/2011	<0.040	**0.22 Y1**	0.076 J Y1	<0.033	<11	<0.29	<0.40	<0.27	<0.36	<0.27	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	840	6.8	160	<0.041	7.5
MW-9	12/12/2011	<0.040	**0.50**	**0.21**	<0.033	<11	<0.29	<0.40	<0.27	<0.36	<0.27	<0.20	0.30 J	<0.59	<0.28	<12	<1.5	ND	880	6.8	170	<0.0091	7.8
MW-10	10/29/2010	<0.040	**0.33 Y1**	0.034 J Y1	<0.033	<16	<0.32	<0.41	<0.34	NS	<0.63	<0.18	<0.32	NS	<0.34	NS	NS	ND	920	6.0	120	<0.041	8
MW-10	3/21/2011	<0.040	**0.21 Y1**	0.11 Y1	<0.033 Y1	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	820	5.0	170	<0.041	8.3
MW-10	6/16/2011	<0.040	**0.22 Y1**	0.045 J Y4	<0.033	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	1,000	5.3	180	<0.041	9.5
MW-10	9/21/2011	<0.040	**2.1 Y1**	**0.40 Y1**	<0.033	<11	<0.29	<0.40	<0.27	<0.36	<0.27	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	880	5.1	180	<0.041	8.7
MW-10	12/12/2011	<0.040	0.14	0.10	<0.033	<11	<0.29	<0.40	<0.27	<0.36	<0.27	<0.20	<0.16	<0.59	<0.28	64 J	<1.5	ND	860	5.5	180	<0.0091	9.4
MW-11	10/29/2010	<0.040	**0.74 Y4**	**0.28 Y4**	0.097 J Y4	<16	<0.32	<0.41	<0.34	NS	<0.63	<0.18	<0.32	NS	<0.34	NS	NS	ND	910	5.6	180	<0.041	5.7
MW-11	3/21/2011	<0.040	0.20 Y4	0.18 Y1	<0.033 Y1	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	780	4.5	260	0.20	7.5
MW-11	6/16/2011	<0.040	0.19 Y1	0.12 Y4	<0.033	<16	<0.32	<0.41	<0.34	<0.36	<0.63	<0.18	<0.32	<0.39	<0.34	<12	<1.5	ND	930	4.6	400	<0.041	7.5
MW-11	9/21/2011	<0.040	0.10 Y1	0.10 Y1	<0.033	<11	<0.29	<0.40	<0.27	<0.36	<0.27	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	670	4.3	510	<0.041	8.9
MW-11	12/12/2011	<0.040	0.12	0.14	<0.033	<11	<0.29	<0.40	<0.27	<0.36	<0.27	<0.20	<0.16	<0.59	<0.28	<12	<1.5	ND	650	4.3	550	0.12	11

Notes:
Cleanup Criteria Exceedances are bolded.
[<0.04] = analytical results of duplicate sample
-- = not analyzed
Cal EPA = California Environmental Protection Agency
DRO = diesel range organics
EPA = U.S. Environmental Protection Agency
ESLs = Environmental Screening Levels
J = estimated concentration, reported above the method detection limit but below the laboratory reporting limit
MCLs = Maximum Contaminant Levels
mg/L = milligram(s) per liter
µg/L = microgram(s) per liter
NA = not analyzed
No other VOCs analyzed for were detected in any of the groundwater monitoring wells.
*Groundwater Cleanup Criteria: TPH concentrations were compared to the SFRWQCB ESLs Groundwater Screening Levels for groundwater not used for drinking water. The ESLs are representative of an expansion of the EPA PRGs (and by default, the Cal EPA California Human Health Screening Levels) and the City of Oakland Screening Levels to reflect the broader Interim Final – November 2007 (revised May 2008) scope of environmental concerns put forth in the Basin Plan.
Cleanup criteria for VOCs are based on EPA Region 9 RSLs and California Department of Public Health MCLs (May 2011).
** The DRO sample container for MW-4 was broken at the laboratory and a replacement container was not available. One of the hydrochloric acid-preserved GRO vials was used to perform the DRO analysis for MW-4.

NC = criteria not vailable
NS = not sampled
PRGs = Preliminary Remediation Goals
RBSLs = Risk-Based Screening Levels
RSLs = Regional Screening Levels
SFRWQCB = San Francisco Bay Regional Water Quality Control Board
SM = standard method
TPH = total petroleum hydrocarbon
VOCs = volatile organic compounds
Y1 = sample most closely matches the laboratory standard for diesel
Y4 = sample most closely matches the laboratory standard for motor oil

ARCADIS

Appendix **C**

Analytical Reports

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

Report Summary

Wednesday December 21, 2011

Report Number: L551172
Samples Received: 12/13/11
Client Project: B0064601.0000.00007

Description: Oakland Truck Center

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

John Hawkins , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.
Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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Est. 1970

REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 21, 2011

ESC Sample # : L551172-01

Date Received : December 13, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-10

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/12/11 12:40

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	9.1	100	ug/l		9056	12/13/11	1
Sulfate	180000	2000	25000	ug/l		9056	12/13/11	5
Alkalinity	860000	5000	20000	ug/l		2320B	12/14/11	1
Ferrous Iron	9400	55.	250	ug/l	T8	3500Fe-	12/20/11	5
Phosphorus,Total	5500	32.	200	ug/l		365.1	12/19/11	2
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/14/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	92.4			% Rec.		8015D/G	12/14/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	140	9.7	100	ug/l		8015	12/20/11	1
C22-C32 Hydrocarbons	100	33.	100	ug/l		8015	12/20/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	69.9			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	U	11.	50.	ug/l		8260B	12/13/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/13/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/13/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/13/11	1
Carbon disulfide	U	0.22	1.0	ug/l	J3	8260B	12/13/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/13/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/13/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/13/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/13/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	12/13/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/13/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/13/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/13/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/13/11	1
1,1-Dichloroethene	U	0.40	1.0	ug/l	J3	8260B	12/13/11	1
cis-1,2-Dichloroethene	U	0.27	1.	ug/l		8260B	12/13/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/13/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/13/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/13/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 12/21/11 16:56 Printed: 12/21/11 16:56

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 21, 2011

ESC Sample # : L551172-01

Date Received : December 13, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-10

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/12/11 12:40

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/13/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/13/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/13/11	1
n-Hexane	U	0.59	10.	ug/l		8260B	12/13/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/13/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/13/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/13/11	1
Methyl tert-butyl ether	U	0.27	1.0	ug/l		8260B	12/13/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/13/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/13/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/13/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/13/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/13/11	1
Toluene	U	0.16	5.0	ug/l		8260B	12/13/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/13/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/13/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/13/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/13/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/13/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/13/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/13/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/13/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/13/11	1
Ethanol	64.	12.	100	ug/l	J	8260B	12/13/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/13/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/13/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/13/11	1
tert-Butyl alcohol	U	1.5	5.0	ug/l		8260B	12/13/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/13/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/13/11	1
Surrogate Recovery								
Toluene-d8	99.6			% Rec.		8260B	12/13/11	1
Dibromofluoromethane	112.			% Rec.		8260B	12/13/11	1
4-Bromofluorobenzene	89.9			% Rec.		8260B	12/13/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 21, 2011

ESC Sample # : L551172-02

Date Received : December 13, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-11

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/12/11 11:40

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	120	9.1	100	ug/l		9056	12/13/11	1
Sulfate	550000	4000	50000	ug/l		9056	12/13/11	10
Alkalinity	650000	5000	20000	ug/l		2320B	12/14/11	1
Ferrous Iron	11000	55.	250	ug/l	T8	3500Fe-	12/20/11	5
Phosphorus,Total	4300	16.	100	ug/l		365.1	12/19/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/14/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	92.1			% Rec.		8015D/G	12/14/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	120	9.7	100	ug/l		8015	12/20/11	1
C22-C32 Hydrocarbons	140	33.	100	ug/l		8015	12/20/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	71.0			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	U	11.	50.	ug/l		8260B	12/13/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/13/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/13/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/13/11	1
Carbon disulfide	U	0.22	1.0	ug/l	J3	8260B	12/13/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/13/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/13/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/13/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/13/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	12/13/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/13/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/13/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/13/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/13/11	1
1,1-Dichloroethene	U	0.40	1.0	ug/l	J3	8260B	12/13/11	1
cis-1,2-Dichloroethene	U	0.27	1.	ug/l		8260B	12/13/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/13/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/13/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/13/11	1

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 21, 2011

ESC Sample # : L551172-02

Date Received : December 13, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-11

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/12/11 11:40

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/13/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/13/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/13/11	1
n-Hexane	U	0.59	10.	ug/l		8260B	12/13/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/13/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/13/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/13/11	1
Methyl tert-butyl ether	U	0.27	1.0	ug/l		8260B	12/13/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/13/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/13/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/13/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/13/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/13/11	1
Toluene	U	0.16	5.0	ug/l		8260B	12/13/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/13/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/13/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/13/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/13/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/13/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/13/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/13/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/13/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/13/11	1
Ethanol	U	12.	100	ug/l		8260B	12/13/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/13/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/13/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/13/11	1
tert-Butyl alcohol	U	1.5	5.0	ug/l		8260B	12/13/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/13/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/13/11	1
Surrogate Recovery								
Toluene-d8	99.7			% Rec.		8260B	12/13/11	1
Dibromofluoromethane	113.			% Rec.		8260B	12/13/11	1
4-Bromofluorobenzene	88.9			% Rec.		8260B	12/13/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 21, 2011

ESC Sample # : L551172-03

Date Received : December 13, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-3

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/12/11 14:10

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	9.1	100	ug/l		9056	12/13/11	1
Sulfate	350000	2000	25000	ug/l		9056	12/13/11	5
Alkalinity	1200000	5000	20000	ug/l		2320B	12/14/11	1
Ferrous Iron	200	11.	50.	ug/l	T8	3500Fe-	12/20/11	1
Phosphorus,Total	5300	32.	200	ug/l		365.1	12/19/11	2
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/14/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	92.1			% Rec.		8015D/G	12/14/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	49.	9.7	100	ug/l	J	8015	12/20/11	1
C22-C32 Hydrocarbons	63.	33.	100	ug/l	J	8015	12/20/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	65.9			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	U	11.	50.	ug/l		8260B	12/13/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/13/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/13/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/13/11	1
Carbon disulfide	U	0.22	1.0	ug/l	J3	8260B	12/13/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/13/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/13/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/13/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/13/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	12/13/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/13/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/13/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/13/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/13/11	1
1,1-Dichloroethene	1.3	0.40	1.0	ug/l	J3	8260B	12/13/11	1
cis-1,2-Dichloroethene	U	0.27	1.	ug/l		8260B	12/13/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/13/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/13/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/13/11	1

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 21, 2011

ESC Sample # : L551172-03

Date Received : December 13, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-3

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/12/11 14:10

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/13/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/13/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/13/11	1
n-Hexane	U	0.59	10.	ug/l		8260B	12/13/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/13/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/13/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/13/11	1
Methyl tert-butyl ether	U	0.27	1.0	ug/l		8260B	12/13/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/13/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/13/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/13/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/13/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/13/11	1
Toluene	U	0.16	5.0	ug/l		8260B	12/13/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/13/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/13/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/13/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/13/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/13/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/13/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/13/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/13/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/13/11	1
Ethanol	88.	12.	100	ug/l	J	8260B	12/13/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/13/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/13/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/13/11	1
tert-Butyl alcohol	U	1.5	5.0	ug/l		8260B	12/13/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/13/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/13/11	1
Surrogate Recovery								
Toluene-d8	101.			% Rec.		8260B	12/13/11	1
Dibromofluoromethane	117.			% Rec.		8260B	12/13/11	1
4-Bromofluorobenzene	92.4			% Rec.		8260B	12/13/11	1

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 21, 2011

ESC Sample # : L551172-05

Date Received : December 13, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-9

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/12/11 15:05

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	9.1	100	ug/l		9056	12/13/11	1
Sulfate	170000	810	10000	ug/l		9056	12/13/11	2
Alkalinity	880000	5000	20000	ug/l		2320B	12/14/11	1
Ferrous Iron	7800	280	1300	ug/l	T8	3500Fe-	12/20/11	25
Phosphorus,Total	6800	80.	500	ug/l		365.1	12/19/11	5
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/14/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	92.4			% Rec.		8015D/G	12/14/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	500	9.7	100	ug/l		8015	12/20/11	1
C22-C32 Hydrocarbons	210	33.	100	ug/l		8015	12/20/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	62.2			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	U	11.	50.	ug/l		8260B	12/13/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/13/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/13/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/13/11	1
Carbon disulfide	U	0.22	1.0	ug/l	J3	8260B	12/13/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/13/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/13/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/13/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/13/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	12/13/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/13/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/13/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/13/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/13/11	1
1,1-Dichloroethene	U	0.40	1.0	ug/l	J3	8260B	12/13/11	1
cis-1,2-Dichloroethene	U	0.27	1.	ug/l		8260B	12/13/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/13/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/13/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/13/11	1

U = ND (Not Detected) ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 12/21/11 16:56 Printed: 12/21/11 16:56

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Est. 1970

REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 21, 2011

ESC Sample # : L551172-05

Date Received : December 13, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-9

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/12/11 15:05

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/13/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/13/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/13/11	1
n-Hexane	U	0.59	10.	ug/l		8260B	12/13/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/13/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/13/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/13/11	1
Methyl tert-butyl ether	U	0.27	1.0	ug/l		8260B	12/13/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/13/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/13/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/13/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/13/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/13/11	1
Toluene	0.30	0.16	5.0	ug/l	J	8260B	12/13/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/13/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/13/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/13/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/13/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/13/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/13/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/13/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/13/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/13/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/13/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/13/11	1
Ethanol	U	12.	100	ug/l		8260B	12/13/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/13/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/13/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/13/11	1
tert-Butyl alcohol	U	1.5	5.0	ug/l		8260B	12/13/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/13/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/13/11	1
Surrogate Recovery								
Toluene-d8	99.8			% Rec.		8260B	12/13/11	1
Dibromofluoromethane	118.			% Rec.		8260B	12/13/11	1
4-Bromofluorobenzene	87.4			% Rec.		8260B	12/13/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:
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Reported: 12/21/11 16:56 Printed: 12/21/11 16:56

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L551172-01	WG570855	SAMP	Ferrous Iron	R1973013	T8
	WG569761	SAMP	Carbon disulfide	R1967232	J3
	WG569761	SAMP	1,1-Dichloroethene	R1967232	J3
	WG569761	SAMP	Ethanol	R1967232	J
L551172-02	WG570855	SAMP	Ferrous Iron	R1973013	T8
	WG569761	SAMP	Carbon disulfide	R1967232	J3
	WG569761	SAMP	1,1-Dichloroethene	R1967232	J3
L551172-03	WG569808	SAMP	C10-C22 Hydrocarbons	R1975212	J
	WG569808	SAMP	C22-C32 Hydrocarbons	R1975212	J
	WG570855	SAMP	Ferrous Iron	R1973013	T8
	WG569761	SAMP	Carbon disulfide	R1967232	J3
	WG569761	SAMP	1,1-Dichloroethene	R1967232	J3
	WG569761	SAMP	Ethanol	R1967232	J
L551172-05	WG570855	SAMP	Ferrous Iron	R1973013	T8
	WG569761	SAMP	Carbon disulfide	R1967232	J3
	WG569761	SAMP	1,1-Dichloroethene	R1967232	J3
	WG569761	SAMP	Toluene	R1967232	J

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J3	The associated batch QC was outside the established quality control range for precision.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
12/21/11 at 16:56:59

TSR Signing Reports: 341
R5 - Desired TAT

Sample: L551172-01 Account: ARCABMI Received: 12/13/11 09:00 Due Date: 12/20/11 00:00 RPT Date: 12/21/11 16:56
EDD = Geotracker - removed -04 trip blank per COC (vial still labeled and in VOC cold room)
Sample: L551172-02 Account: ARCABMI Received: 12/13/11 09:00 Due Date: 12/20/11 00:00 RPT Date: 12/21/11 16:56

Sample: L551172-03 Account: ARCABMI Received: 12/13/11 09:00 Due Date: 12/20/11 00:00 RPT Date: 12/21/11 16:56

Sample: L551172-05 Account: ARCABMI Received: 12/13/11 09:00 Due Date: 12/20/11 00:00 RPT Date: 12/21/11 16:56

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ARCADIS US - MI
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551172

December 21, 2011

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Nitrate	< .1	mg/l			WG569735	12/13/11 08:27
Sulfate	< 5	mg/l			WG569735	12/13/11 08:27
TPH (GC/FID) Low Fraction	< .1	mg/l			WG569815	12/13/11 20:43
a,a,a-Trifluorotoluene(FID)		% Rec.	93.79	62-128	WG569815	12/13/11 20:43
Alkalinity	< 20	mg/l			WG569959	12/14/11 22:47
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG569761	12/13/11 17:05
1,1,1-Trichloroethane	< .001	mg/l			WG569761	12/13/11 17:05
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG569761	12/13/11 17:05
1,1,2-Trichloroethane	< .001	mg/l			WG569761	12/13/11 17:05
1,1-Dichloroethane	< .001	mg/l			WG569761	12/13/11 17:05
1,1-Dichloroethene	< .001	mg/l			WG569761	12/13/11 17:05
1,2,3-Trichlorobenzene	< .001	mg/l			WG569761	12/13/11 17:05
1,2,4-Trichlorobenzene	< .001	mg/l			WG569761	12/13/11 17:05
1,2,4-Trimethylbenzene	< .001	mg/l			WG569761	12/13/11 17:05
1,2-Dichlorobenzene	< .001	mg/l			WG569761	12/13/11 17:05
1,2-Dichloroethane	< .001	mg/l			WG569761	12/13/11 17:05
1,2-Dichloropropane	< .001	mg/l			WG569761	12/13/11 17:05
1,3,5-Trimethylbenzene	< .001	mg/l			WG569761	12/13/11 17:05
1,3-Dichlorobenzene	< .001	mg/l			WG569761	12/13/11 17:05
1,3-Dichloropropane	< .001	mg/l			WG569761	12/13/11 17:05
1,4-Dichlorobenzene	< .001	mg/l			WG569761	12/13/11 17:05
2-Butanone (MEK)	< .01	mg/l			WG569761	12/13/11 17:05
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG569761	12/13/11 17:05
Acetone	< .05	mg/l			WG569761	12/13/11 17:05
Benzene	< .001	mg/l			WG569761	12/13/11 17:05
Bromodichloromethane	< .001	mg/l			WG569761	12/13/11 17:05
Bromoform	< .001	mg/l			WG569761	12/13/11 17:05
Bromomethane	< .005	mg/l			WG569761	12/13/11 17:05
Carbon disulfide	< .001	mg/l			WG569761	12/13/11 17:05
Carbon tetrachloride	< .001	mg/l			WG569761	12/13/11 17:05
Chlorobenzene	< .001	mg/l			WG569761	12/13/11 17:05
Chloroethane	< .005	mg/l			WG569761	12/13/11 17:05
Chloroform	< .005	mg/l			WG569761	12/13/11 17:05
cis-1,2-Dichloroethene	< .001	mg/l			WG569761	12/13/11 17:05
cis-1,3-Dichloropropene	< .001	mg/l			WG569761	12/13/11 17:05
Cyclohexane	< .001	mg/l			WG569761	12/13/11 17:05
Di-isopropyl ether	< .001	mg/l			WG569761	12/13/11 17:05
Ethanol	< .1	mg/l			WG569761	12/13/11 17:05
Ethyl tert-butyl ether	< .001	mg/l			WG569761	12/13/11 17:05
Ethylbenzene	< .001	mg/l			WG569761	12/13/11 17:05
Hexachloro-1,3-butadiene	< .001	mg/l			WG569761	12/13/11 17:05
Isopropylbenzene	< .001	mg/l			WG569761	12/13/11 17:05
Methyl tert-butyl ether	< .001	mg/l			WG569761	12/13/11 17:05
Methylene Chloride	< .005	mg/l			WG569761	12/13/11 17:05
n-Hexane	< .01	mg/l			WG569761	12/13/11 17:05
Naphthalene	< .005	mg/l			WG569761	12/13/11 17:05
Styrene	< .001	mg/l			WG569761	12/13/11 17:05
tert-Amyl Methyl Ether	< .001	mg/l			WG569761	12/13/11 17:05
tert-Butyl alcohol	< .005	mg/l			WG569761	12/13/11 17:05
Tetrachloroethene	< .001	mg/l			WG569761	12/13/11 17:05
Toluene	< .005	mg/l			WG569761	12/13/11 17:05
trans-1,2-Dichloroethene	< .001	mg/l			WG569761	12/13/11 17:05
trans-1,3-Dichloropropene	< .001	mg/l			WG569761	12/13/11 17:05

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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ARCADIS US - MI
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551172

December 21, 2011

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Trichloroethene	< .001	mg/l			WG569761	12/13/11 17:05
Vinyl acetate	< .01	mg/l			WG569761	12/13/11 17:05
Vinyl chloride	< .001	mg/l			WG569761	12/13/11 17:05
Xylenes, Total	< .003	mg/l			WG569761	12/13/11 17:05
4-Bromofluorobenzene		% Rec.	98.05	82-120	WG569761	12/13/11 17:05
Dibromofluoromethane		% Rec.	103.1	82-126	WG569761	12/13/11 17:05
Toluene-d8		% Rec.	97.55	92-112	WG569761	12/13/11 17:05
Phosphorus,Total	< .1	mg/l			WG570052	12/19/11 10:27
Ferrous Iron	< .05	mg/l			WG570855	12/20/11 10:41
C10-C22 Hydrocarbons	< .1	mg/l			WG569808	12/20/11 18:59
C22-C32 Hydrocarbons	< .1	mg/l			WG569808	12/20/11 18:59
C32-C40 Hydrocarbons	< .1	mg/l			WG569808	12/20/11 18:59
o-Terphenyl		% Rec.	78.50	50-150	WG569808	12/20/11 18:59

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Nitrate	mg/l	4.60	4.70	1.07	20	L551157-06	WG569735
Nitrate	mg/l	0	0	0	20	L550083-03	WG569735
Alkalinity	mg/l	860.	860.	0	20	L551172-01	WG569959
Alkalinity	mg/l	0	0	0	20	L551307-05	WG569959
Phosphorus,Total	mg/l	0.410	0.340	18.4	20	L551306-04	WG570052
Phosphorus,Total	mg/l	11.0	11.0	3.23	20	L550369-01	WG570052
Ferrous Iron	mg/l	37.0	38.0	3.75	20	L551422-05	WG570855
Ferrous Iron	mg/l	0	0	0	20	L551153-01	WG570855

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Nitrate	mg/l	8	8.32	104.	90-110	WG569735
Sulfate	mg/l	40	40.3	101.	90-110	WG569735
TPH (GC/FID) Low Fraction	mg/l	5.5	5.21	94.7	70-124	WG569815
a,a,a-Trifluorotoluene(FID)				93.61	62-128	WG569815
Alkalinity	mg/l	100	110.	110.	85-115	WG569959
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0266	107.	77-128	WG569761
1,1,1-Trichloroethane	mg/l	.025	0.0243	97.1	71-126	WG569761
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0252	101.	78-130	WG569761
1,1,2-Trichloroethane	mg/l	.025	0.0255	102.	81-121	WG569761
1,1-Dichloroethane	mg/l	.025	0.0239	95.6	73-123	WG569761
1,1-Dichloroethene	mg/l	.025	0.0195	78.2	54-134	WG569761
1,2,3-Trichlorobenzene	mg/l	.025	0.0264	105.	77-130	WG569761

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Brighton, MI 48116

Quality Assurance Report
Level II

L551172

December 21, 2011

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
1,2,4-Trichlorobenzene	mg/l	.025	0.0275	110.	76-127	WG569761
1,2,4-Trimethylbenzene	mg/l	.025	0.0265	106.	77-129	WG569761
1,2-Dichlorobenzene	mg/l	.025	0.0252	101.	82-121	WG569761
1,2-Dichloroethane	mg/l	.025	0.0239	95.4	69-128	WG569761
1,2-Dichloropropane	mg/l	.025	0.0234	93.7	77-121	WG569761
1,3,5-Trimethylbenzene	mg/l	.025	0.0268	107.	78-127	WG569761
1,3-Dichlorobenzene	mg/l	.025	0.0261	105.	77-127	WG569761
1,3-Dichloropropane	mg/l	.025	0.0247	98.9	78-117	WG569761
1,4-Dichlorobenzene	mg/l	.025	0.0245	98.1	79-117	WG569761
2-Butanone (MEK)	mg/l	.125	0.134	107.	58-144	WG569761
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.142	113.	58-147	WG569761
Acetone	mg/l	.125	0.112	89.4	49-153	WG569761
Benzene	mg/l	.025	0.0246	98.6	72-119	WG569761
Bromodichloromethane	mg/l	.025	0.0238	95.3	75-127	WG569761
Bromoform	mg/l	.025	0.0236	94.5	61-136	WG569761
Bromomethane	mg/l	.025	0.0221	88.3	42-172	WG569761
Carbon disulfide	mg/l	.025	0.0201	80.4	19-150	WG569761
Carbon tetrachloride	mg/l	.025	0.0253	101.	63-129	WG569761
Chlorobenzene	mg/l	.025	0.0259	104.	78-123	WG569761
Chloroethane	mg/l	.025	0.0217	86.9	52-164	WG569761
Chloroform	mg/l	.025	0.0243	97.2	76-122	WG569761
cis-1,2-Dichloroethene	mg/l	.025	0.0256	102.	75-121	WG569761
cis-1,3-Dichloropropene	mg/l	.025	0.0264	105.	74-124	WG569761
Di-isopropyl ether	mg/l	.025	0.0221	88.4	66-129	WG569761
Ethylbenzene	mg/l	.025	0.0264	106.	77-124	WG569761
Hexachloro-1,3-butadiene	mg/l	.025	0.0231	92.4	71-134	WG569761
Isopropylbenzene	mg/l	.025	0.0282	113.	74-126	WG569761
Methyl tert-butyl ether	mg/l	.025	0.0265	106.	67-127	WG569761
Methylene Chloride	mg/l	.025	0.0236	94.5	67-122	WG569761
n-Hexane	mg/l	.025	0.0214	85.6	41-143	WG569761
Naphthalene	mg/l	.025	0.0279	112.	70-134	WG569761
Styrene	mg/l	.025	0.0226	90.5	69-145	WG569761
Tetrachloroethene	mg/l	.025	0.0251	100.	69-131	WG569761
Toluene	mg/l	.025	0.0248	99.0	75-114	WG569761
trans-1,2-Dichloroethene	mg/l	.025	0.0251	100.	63-127	WG569761
trans-1,3-Dichloropropene	mg/l	.025	0.0267	107.	69-124	WG569761
Trichloroethene	mg/l	.025	0.0254	102.	69-131	WG569761
Vinyl acetate	mg/l	.125	0.120	95.7	47-161	WG569761
Vinyl chloride	mg/l	.025	0.0211	84.3	55-142	WG569761
Xylenes, Total	mg/l	.075	0.0793	106.	77-123	WG569761
4-Bromofluorobenzene				99.48	82-120	WG569761
Dibromofluoromethane				98.31	82-126	WG569761
Toluene-d8				98.46	92-112	WG569761
Phosphorus,Total	mg/l	1	1.10	110.	85-115	WG570052
Ferrous Iron	mg/l	1	0.981	98.1	85-115	WG570855
C10-C22 Hydrocarbons	mg/l	.75	0.698	93.1	70-130	WG569808
C22-C32 Hydrocarbons	mg/l	.75	0.759	101.	70-130	WG569808
o-Terphenyl				84.96	50-150	WG569808

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Nitrate	mg/l	8.32	8.32	104.	90-110	0	20	WG569735

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Est. 1970

ARCADIS US - MI
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551172

December 21, 2011

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Sulfate	mg/l	40.4	40.3	101.	90-110	0.248	20	WG569735
TPH (GC/FID) Low Fraction	mg/l	5.30	5.21	96.0	70-124	1.66	20	WG569815
a,a,a-Trifluorotoluene(FID)				93.88	62-128			WG569815
Alkalinity	mg/l	96.0	110.	96.0	85-115	13.6	20	WG569959
1,1,1,2-Tetrachloroethane	mg/l	0.0265	0.0266	106.	77-128	0.680	20	WG569761
1,1,1-Trichloroethane	mg/l	0.0235	0.0243	94.0	71-126	3.23	20	WG569761
1,1,2,2-Tetrachloroethane	mg/l	0.0251	0.0252	100.	78-130	0.270	20	WG569761
1,1,2-Trichloroethane	mg/l	0.0254	0.0255	101.	81-121	0.530	20	WG569761
1,1-Dichloroethane	mg/l	0.0230	0.0239	92.0	73-123	3.99	20	WG569761
1,1-Dichloroethene	mg/l	0.0253	0.0195	101.	54-134	25.5*	20	WG569761
1,2,3-Trichlorobenzene	mg/l	0.0253	0.0264	101.	77-130	4.09	20	WG569761
1,2,4-Trichlorobenzene	mg/l	0.0262	0.0275	105.	76-127	5.18	20	WG569761
1,2,4-Trimethylbenzene	mg/l	0.0263	0.0265	105.	77-129	0.540	20	WG569761
1,2-Dichlorobenzene	mg/l	0.0243	0.0252	97.0	82-121	3.58	20	WG569761
1,2-Dichloroethane	mg/l	0.0232	0.0239	93.0	69-128	3.00	20	WG569761
1,2-Dichloropropane	mg/l	0.0228	0.0234	91.0	77-121	2.89	20	WG569761
1,3,5-Trimethylbenzene	mg/l	0.0267	0.0268	107.	78-127	0.430	20	WG569761
1,3-Dichlorobenzene	mg/l	0.0263	0.0261	105.	77-127	0.840	20	WG569761
1,3-Dichloropropane	mg/l	0.0249	0.0247	100.	78-117	0.840	20	WG569761
1,4-Dichlorobenzene	mg/l	0.0236	0.0245	94.0	79-117	3.93	20	WG569761
2-Butanone (MEK)	mg/l	0.131	0.134	105.	58-144	2.14	20	WG569761
4-Methyl-2-pentanone (MIBK)	mg/l	0.138	0.142	111.	58-147	2.37	20	WG569761
Acetone	mg/l	0.105	0.112	84.0	49-153	6.14	21	WG569761
Benzene	mg/l	0.0240	0.0246	96.0	72-119	2.73	20	WG569761
Bromodichloromethane	mg/l	0.0231	0.0238	92.0	75-127	2.98	20	WG569761
Bromoform	mg/l	0.0236	0.0236	94.0	61-136	0.0700	20	WG569761
Bromomethane	mg/l	0.0207	0.0221	83.0	42-172	6.43	20	WG569761
Carbon disulfide	mg/l	0.0281	0.0201	112.	19-150	33.1*	20	WG569761
Carbon tetrachloride	mg/l	0.0245	0.0253	98.0	63-129	3.28	20	WG569761
Chlorobenzene	mg/l	0.0261	0.0259	104.	78-123	0.480	20	WG569761
Chloroethane	mg/l	0.0201	0.0217	80.0	52-164	7.78	20	WG569761
Chloroform	mg/l	0.0236	0.0243	94.0	76-122	2.88	20	WG569761
cis-1,2-Dichloroethene	mg/l	0.0250	0.0256	100.	75-121	2.37	20	WG569761
cis-1,3-Dichloropropene	mg/l	0.0258	0.0264	103.	74-124	2.08	20	WG569761
Di-isopropyl ether	mg/l	0.0214	0.0221	85.0	66-129	3.50	20	WG569761
Ethylbenzene	mg/l	0.0263	0.0264	105.	77-124	0.580	20	WG569761
Hexachloro-1,3-butadiene	mg/l	0.0218	0.0231	87.0	71-134	5.94	20	WG569761
Isopropylbenzene	mg/l	0.0279	0.0282	112.	74-126	1.10	20	WG569761
Methyl tert-butyl ether	mg/l	0.0253	0.0265	101.	67-127	4.37	20	WG569761
Methylene Chloride	mg/l	0.0226	0.0236	90.0	67-122	4.46	20	WG569761
n-Hexane	mg/l	0.0206	0.0214	82.0	41-143	3.83	20	WG569761
Naphthalene	mg/l	0.0271	0.0279	108.	70-134	2.94	20	WG569761
Styrene	mg/l	0.0226	0.0226	90.0	69-145	0.190	20	WG569761
Tetrachloroethene	mg/l	0.0247	0.0251	99.0	69-131	1.43	20	WG569761
Toluene	mg/l	0.0241	0.0248	96.0	75-114	2.73	20	WG569761
trans-1,2-Dichloroethene	mg/l	0.0245	0.0251	98.0	63-127	2.41	20	WG569761
trans-1,3-Dichloropropene	mg/l	0.0262	0.0267	105.	69-124	1.86	20	WG569761
Trichloroethene	mg/l	0.0246	0.0254	98.0	69-131	3.06	20	WG569761
Vinyl acetate	mg/l	0.116	0.120	93.0	47-161	2.91	20	WG569761
Vinyl chloride	mg/l	0.0196	0.0211	78.0	55-142	7.27	20	WG569761
Xylenes, Total	mg/l	0.0790	0.0793	105.	77-123	0.360	20	WG569761
4-Bromofluorobenzene				103.1	82-120			WG569761
Dibromofluoromethane				96.88	82-126			WG569761

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L551172

December 21, 2011

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Toluene-d8				98.74	92-112			
Phosphorus,Total	mg/l	1.11	1.10	111.	85-115	0.905	20	WG570052
Ferrous Iron	mg/l	1.02	0.981	102.	85-115	3.90	20	WG570855
C10-C22 Hydrocarbons	mg/l	0.683	0.698	91.0	70-130	2.27	20	WG569808
C22-C32 Hydrocarbons	mg/l	0.772	0.759	103.	70-130	1.66	20	WG569808
o-Terphenyl				83.92	50-150			WG569808

		Matrix Spike						
Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Nitrate	mg/l	5.05	0	5	101.	80-120	L551157-03	WG569735
TPH (GC/FID) Low Fraction	mg/l	5.47	0	5.5	99.5	55-109	L551207-03	WG569815
a,a,a-Trifluorotoluene(FID)					94.55	62-128		WG569815
Alkalinity	mg/l	95.0	0	100	95.0	80-120	L551307-04	WG569959
1,1,1,2-Tetrachloroethane	mg/l	0.0256	0	.025	102.	71-130	L551111-01	WG569761
1,1,1-Trichloroethane	mg/l	0.0235	0	.025	93.8	58-137	L551111-01	WG569761
1,1,2,2-Tetrachloroethane	mg/l	0.0239	0	.025	95.6	64-149	L551111-01	WG569761
1,1,2-Trichloroethane	mg/l	0.0243	0	.025	97.1	73-128	L551111-01	WG569761
1,1-Dichloroethane	mg/l	0.0227	0	.025	90.7	58-133	L551111-01	WG569761
1,1-Dichloroethene	mg/l	0.0189	0	.025	75.4	32-152	L551111-01	WG569761
1,2,3-Trichlorobenzene	mg/l	0.0253	0	.025	101.	68-135	L551111-01	WG569761
1,2,4-Trichlorobenzene	mg/l	0.0265	0	.025	106.	67-133	L551111-01	WG569761
1,2,4-Trimethylbenzene	mg/l	0.0259	0	.025	104.	62-141	L551111-01	WG569761
1,2-Dichlorobenzene	mg/l	0.0240	0	.025	96.0	75-125	L551111-01	WG569761
1,2-Dichloroethane	mg/l	0.0227	0	.025	90.7	59-135	L551111-01	WG569761
1,2-Dichloropropane	mg/l	0.0220	0	.025	87.8	68-126	L551111-01	WG569761
1,3,5-Trimethylbenzene	mg/l	0.0259	0	.025	103.	67-136	L551111-01	WG569761
1,3-Dichlorobenzene	mg/l	0.0254	0	.025	102.	69-131	L551111-01	WG569761
1,3-Dichloropropane	mg/l	0.0232	0	.025	93.0	70-122	L551111-01	WG569761
1,4-Dichlorobenzene	mg/l	0.0234	0	.025	93.4	70-123	L551111-01	WG569761
2-Butanone (MEK)	mg/l	0.119	0	.125	95.4	51-149	L551111-01	WG569761
4-Methyl-2-pentanone (MIBK)	mg/l	0.128	0	.125	102.	53-154	L551111-01	WG569761
Acetone	mg/l	0.0886	0	.125	70.9	34-146	L551111-01	WG569761
Benzene	mg/l	0.0238	0	.025	95.3	51-134	L551111-01	WG569761
Bromodichloromethane	mg/l	0.0229	0	.025	91.6	67-132	L551111-01	WG569761
Bromoform	mg/l	0.0222	0	.025	88.8	59-137	L551111-01	WG569761
Bromomethane	mg/l	0.0214	0	.025	85.8	23-177	L551111-01	WG569761
Carbon disulfide	mg/l	0.0188	0	.025	75.3	10-165	L551111-01	WG569761
Carbon tetrachloride	mg/l	0.0245	0	.025	97.9	49-140	L551111-01	WG569761
Chlorobenzene	mg/l	0.0249	0	.025	99.4	69-126	L551111-01	WG569761
Chloroethane	mg/l	0.0208	0	.025	83.2	32-177	L551111-01	WG569761
Chloroform	mg/l	0.0233	0	.025	93.1	64-130	L551111-01	WG569761
cis-1,2-Dichloroethene	mg/l	0.0241	0	.025	96.4	54-137	L551111-01	WG569761
cis-1,3-Dichloropropene	mg/l	0.0223	0	.025	89.3	63-127	L551111-01	WG569761
Di-isopropyl ether	mg/l	0.0209	0	.025	83.7	58-133	L551111-01	WG569761
Ethylbenzene	mg/l	0.0256	0	.025	102.	64-135	L551111-01	WG569761
Hexachloro-1,3-butadiene	mg/l	0.0228	0	.025	91.3	64-140	L551111-01	WG569761
Isopropylbenzene	mg/l	0.0273	0	.025	109.	62-134	L551111-01	WG569761
Methyl tert-butyl ether	mg/l	0.0265	0.00140	.025	100.	55-136	L551111-01	WG569761

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December 21, 2011

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Methylene Chloride	mg/l	0.0225	0	.025	90.0	52-130	L551111-01	WG569761
n-Hexane	mg/l	0.0198	0.000515	.025	77.0	16-164	L551111-01	WG569761
Naphthalene	mg/l	0.0266	0	.025	106.	65-140	L551111-01	WG569761
Styrene	mg/l	0.0142	0	.025	56.9*	58-152	L551111-01	WG569761
Tetrachloroethene	mg/l	0.0239	0	.025	95.5	56-139	L551111-01	WG569761
Toluene	mg/l	0.0236	0	.025	94.4	61-126	L551111-01	WG569761
trans-1,2-Dichloroethene	mg/l	0.0239	0	.025	95.5	45-137	L551111-01	WG569761
trans-1,3-Dichloropropene	mg/l	0.0252	0	.025	101.	59-130	L551111-01	WG569761
Trichloroethene	mg/l	0.0242	0	.025	96.9	40-155	L551111-01	WG569761
Vinyl acetate	mg/l	0.0896	0	.125	71.7	36-186	L551111-01	WG569761
Vinyl chloride	mg/l	0.0196	0	.025	78.6	32-159	L551111-01	WG569761
Xylenes, Total	mg/l	0.0770	0	.075	103.	64-133	L551111-01	WG569761
4-Bromofluorobenzene					100.2	82-120		WG569761
Dibromofluoromethane					95.56	82-126		WG569761
Toluene-d8					96.87	92-112		WG569761
Phosphorus,Total	mg/l	2.74	0	2.5	110.	80-120	L551157-09	WG570052
Ferrous Iron	mg/l	1.63	0	1.5	109.	80-120	L551384-03	WG570855

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Nitrate	mg/l	5.21	5.05	104.	80-120	3.12	20	L551157-03	WG569735
TPH (GC/FID) Low Fraction	mg/l	5.01	5.47	91.1	55-109	8.79	20	L551207-03	WG569815
a,a,a-Trifluorotoluene(FID)				93.36	62-128				WG569815
Alkalinity	mg/l	97.0	95.0	97.0	80-120	2.08	20	L551307-04	WG569959
1,1,1,2-Tetrachloroethane	mg/l	0.0271	0.0256	108.	71-130	5.50	20	L551111-01	WG569761
1,1,1-Trichloroethane	mg/l	0.0240	0.0235	95.9	58-137	2.21	20	L551111-01	WG569761
1,1,2,2-Tetrachloroethane	mg/l	0.0255	0.0239	102.	64-149	6.37	20	L551111-01	WG569761
1,1,2-Trichloroethane	mg/l	0.0258	0.0243	103.	73-128	6.02	20	L551111-01	WG569761
1,1-Dichloroethane	mg/l	0.0232	0.0227	93.0	58-133	2.50	20	L551111-01	WG569761
1,1-Dichloroethene	mg/l	0.0259	0.0189	104.	32-152	31.4*	20	L551111-01	WG569761
1,2,3-Trichlorobenzene	mg/l	0.0265	0.0253	106.	68-135	4.82	20	L551111-01	WG569761
1,2,4-Trichlorobenzene	mg/l	0.0271	0.0265	108.	67-133	2.10	20	L551111-01	WG569761
1,2,4-Trimethylbenzene	mg/l	0.0264	0.0259	106.	62-141	1.93	20	L551111-01	WG569761
1,2-Dichlorobenzene	mg/l	0.0248	0.0240	99.1	75-125	3.18	20	L551111-01	WG569761
1,2-Dichloroethane	mg/l	0.0236	0.0227	94.2	59-135	3.81	20	L551111-01	WG569761
1,2-Dichloropropane	mg/l	0.0229	0.0220	91.6	68-126	4.20	20	L551111-01	WG569761
1,3,5-Trimethylbenzene	mg/l	0.0266	0.0259	106.	67-136	2.77	20	L551111-01	WG569761
1,3-Dichlorobenzene	mg/l	0.0262	0.0254	105.	69-131	2.95	20	L551111-01	WG569761
1,3-Dichloropropane	mg/l	0.0245	0.0232	98.1	70-122	5.37	20	L551111-01	WG569761
1,4-Dichlorobenzene	mg/l	0.0236	0.0234	94.5	70-123	1.09	20	L551111-01	WG569761
2-Butanone (MEK)	mg/l	0.126	0.119	101.	51-149	5.90	22	L551111-01	WG569761
4-Methyl-2-pentanone (MIBK)	mg/l	0.137	0.128	110.	53-154	7.05	21	L551111-01	WG569761
Acetone	mg/l	0.0934	0.0886	74.7	34-146	5.25	22	L551111-01	WG569761
Benzene	mg/l	0.0242	0.0238	96.8	51-134	1.61	20	L551111-01	WG569761
Bromodichloromethane	mg/l	0.0238	0.0229	95.2	67-132	3.86	20	L551111-01	WG569761
Bromoform	mg/l	0.0235	0.0222	94.0	59-137	5.71	20	L551111-01	WG569761
Bromomethane	mg/l	0.0221	0.0214	88.3	23-177	2.87	21	L551111-01	WG569761
Carbon disulfide	mg/l	0.0268	0.0188	107.	10-165	35.0*	22	L551111-01	WG569761

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Analyte	Units	Matrix Spike MSD	Ref	Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
Carbon tetrachloride	mg/l	0.0253	0.0245	101.	49-140	3.16	20	L551111-01	WG569761
Chlorobenzene	mg/l	0.0260	0.0249	104.	69-126	4.38	20	L551111-01	WG569761
Chloroethane	mg/l	0.0209	0.0208	83.6	32-177	0.530	21	L551111-01	WG569761
Chloroform	mg/l	0.0239	0.0233	95.6	64-130	2.69	20	L551111-01	WG569761
cis-1,2-Dichloroethene	mg/l	0.0253	0.0241	101.	54-137	4.90	20	L551111-01	WG569761
cis-1,3-Dichloropropene	mg/l	0.0232	0.0223	92.9	63-127	3.96	20	L551111-01	WG569761
Di-isopropyl ether	mg/l	0.0213	0.0209	85.3	58-133	1.93	20	L551111-01	WG569761
Ethylbenzene	mg/l	0.0263	0.0256	105.	64-135	2.80	20	L551111-01	WG569761
Hexachloro-1,3-butadiene	mg/l	0.0230	0.0228	92.0	64-140	0.680	20	L551111-01	WG569761
Isopropylbenzene	mg/l	0.0283	0.0273	113.	62-134	3.79	20	L551111-01	WG569761
Methyl tert-butyl ether	mg/l	0.0277	0.0265	105.	55-136	4.28	20	L551111-01	WG569761
Methylene Chloride	mg/l	0.0233	0.0225	93.0	52-130	3.31	20	L551111-01	WG569761
n-Hexane	mg/l	0.0197	0.0198	76.7	16-164	0.380	20	L551111-01	WG569761
Naphthalene	mg/l	0.0284	0.0266	114.	65-140	6.68	20	L551111-01	WG569761
Styrene	mg/l	0.0168	0.0142	67.3	58-152	16.8	20	L551111-01	WG569761
Tetrachloroethene	mg/l	0.0247	0.0239	98.9	56-139	3.53	20	L551111-01	WG569761
Toluene	mg/l	0.0241	0.0236	96.4	61-126	2.14	20	L551111-01	WG569761
trans-1,2-Dichloroethene	mg/l	0.0243	0.0239	97.2	45-137	1.77	20	L551111-01	WG569761
trans-1,3-Dichloropropene	mg/l	0.0260	0.0252	104.	59-130	3.24	20	L551111-01	WG569761
Trichloroethene	mg/l	0.0250	0.0242	99.9	40-155	2.98	20	L551111-01	WG569761
Vinyl acetate	mg/l	0.0978	0.0896	78.2	36-186	8.68	20	L551111-01	WG569761
Vinyl chloride	mg/l	0.0199	0.0196	79.4	32-159	1.07	21	L551111-01	WG569761
Xylenes, Total	mg/l	0.0791	0.0770	105.	64-133	2.63	20	L551111-01	WG569761
4-Bromofluorobenzene				99.92	82-120				WG569761
Dibromofluoromethane				96.21	82-126				WG569761
Toluene-d8				96.70	92-112				WG569761
Phosphorus,Total	mg/l	2.81	2.74	112.	80-120	2.52	20	L551157-09	WG570052
Ferrous Iron	mg/l	1.61	1.63	107.	80-120	1.23	20	L551384-03	WG570855

Batch number /Run number / Sample number cross reference

WG569735: R1965572: L551172-01 02 03 05
WG569815: R1966232: L551172-01 02 03 05
WG569959: R1966935: L551172-01 02 03 05
WG569761: R1967232: L551172-01 02 03 05
WG570052: R1972016: L551172-01 02 03 05
WG570855: R1973013: L551172-01 02 03 05
WG569808: R1975212: L551172-01 02 03 05

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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ARCADIS US - MI
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551172

December 21, 2011

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

ARCADIS US - MI

10559 Citation Dr. Ste 100
Brighton,MI 48116

Billing information:

Brad Saunders
10559 Citation Dr, Ste 100

Brighton,MI 48116

F066

Chain of Custody 1 of 1

ESC LABORATORIES
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Mt. Juliet, TN 37122
Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

Report to: Holly M. Burger, Debra Hagerty

Email: jhawkins@envsci.com

Project Description: Oakland Truck Center

City/State Collected: Oakland, CA

Phone: (810) 225-1904
FAX: (810) 229-8837

Client Project #: B0064601.0000.00007

Lab Project #: ARCABMI-OAKLANDCAT

Collected by (print): Karl Johnson

Site/Facility ID#: 8099 S. COLISEUM WAY

P.O.#: B0064601 0000

Collected by (signature):

Immediately Packed on Ice N ___ Y ___

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day.....100%
___ Two Day.....50%
___ Three Day.....25%

Date Results Needed: 10 day TAT

Email? __No X Yes
FAX? __No __Yes

Acctnum: ARCABMI (lab use only)
Template/Prelogin: T70272/ P377318
Cooler #: 12-6 (LU)
Shipped Via: FedEX 2nd Dav

Analysis/Container/Preservative

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	ALK 500mlHDPE-NoPres	DROCAER 1L-Amb-Add HCl (2)	FERUSFE 250mlAmb-HCl	GRO 40mlAmb HCl	Nitrate Sulfate 125mlHDPE-NoPres	PT 250mlHDPE-H2SO4 (2)	V8260OXY 40mlAmb-HCl	Remarks/Contaminant	Sample # (lab only)
MW-10		GW		12/12/11	1240	9	X	X	X	X	X	X	X	L551172	-01
MW-11		GW			1140	9	X	X	X	X	X	X	X		-02
MW-3		GW			1410	9	X	X	X	X	X	X	X		-03
TRIP BLANK -ON HOLD		GW			—	#1							X		-04
MW-9		GW			1505	9	X	X	X	X	X	X	X		-05

*Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Remarks:

Flow _____ Other _____

5086 5824 1366

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ _____	Condition: (lab use only)
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp. 3.7°C Bottles Received: 41	COC Seal Intact: ___ Y ___ N ___ NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/13/11 Time: 0900	pH Checked: <2 NCF:

12/12/11 1630

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Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

Report Summary

Thursday December 22, 2011

Report Number: L551422
Samples Received: 12/14/11
Client Project: B0064601.0000.00007

Description: Oakland Truck Center

The analytical results in this report are based upon information supplied by you, the client, and are for your exclusive use. If you have any questions regarding this data package, please do not hesitate to call.

Entire Report Reviewed By:

John Hawkins , ESC Representative

Laboratory Certification Numbers

A2LA - 1461-01, AIHA - 100789, AL - 40660, CA - I-2327, CT - PH-0197, FL - E87487
GA - 923, IN - C-TN-01, KY - 90010, KYUST - 0016, NC - ENV375/DW21704, ND - R-140
NJ - TN002,NJ NELAP - TN002, SC - 84004, TN - 2006, VA - 00109, WV - 233
AZ - 0612, MN - 047-999-395, NY - 11742, WI - 998093910, NV - TN000032008A,
TX - T104704245, OK-9915, PA - 68-02979

Accreditation is only applicable to the test methods specified on each scope of accreditation held by ESC Lab Sciences.
Note: The use of the preparatory EPA Method 3511 is not approved or endorsed by the CA ELAP.

Where applicable, sampling conducted by ESC is performed per guidance provided in laboratory standard operating procedures: 060302, 060303, and 060304.

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-01

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-1

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 10:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	9.1	100	ug/l		9056	12/14/11	1
Sulfate	U	400	5000	ug/l		9056	12/14/11	1
Alkalinity	1600000	5000	20000	ug/l		2320B	12/16/11	1
Ferrous Iron	15000	110	500	ug/l	T8	3500Fe-	12/20/11	10
Phosphorus,Total	5200	32.	200	ug/l		365.1	12/21/11	2
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/15/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	93.1			% Rec.		8015D/G	12/15/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	430	9.7	100	ug/l		8015	12/20/11	1
C22-C32 Hydrocarbons	260	33.	100	ug/l		8015	12/20/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	64.8			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	U	11.	50.	ug/l		8260B	12/15/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/15/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/15/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/15/11	1
Carbon disulfide	U	0.22	1.0	ug/l		8260B	12/15/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/15/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/15/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/15/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	12/15/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/15/11	1
cis-1,2-Dichloroethene	U	0.27	1.	ug/l		8260B	12/15/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/15/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/15/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/15/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 12/22/11 11:15 Printed: 12/22/11 11:16

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-01

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-1

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 10:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/15/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/15/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/15/11	1
n-Hexane	U	0.59	10.	ug/l		8260B	12/15/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/15/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/15/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/15/11	1
Methyl tert-butyl ether	U	0.27	1.0	ug/l		8260B	12/15/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/15/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/15/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/15/11	1
Toluene	U	0.16	5.0	ug/l		8260B	12/15/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/15/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/15/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/15/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/15/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/15/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/15/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/15/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/15/11	1
Ethanol	U	12.	100	ug/l		8260B	12/15/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/15/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/15/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/15/11	1
tert-Butyl alcohol	U	1.5	5.0	ug/l		8260B	12/15/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/15/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/15/11	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	12/15/11	1
Dibromofluoromethane	107.			% Rec.		8260B	12/15/11	1
4-Bromofluorobenzene	100.			% Rec.		8260B	12/15/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:
The reported analytical results relate only to the sample submitted.

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-02

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-2

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 11:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	9.1	100	ug/l		9056	12/14/11	1
Sulfate	210000	2000	25000	ug/l		9056	12/19/11	5
Alkalinity	1200000	5000	20000	ug/l		2320B	12/16/11	1
Ferrous Iron	480	11.	50.	ug/l	T8	3500Fe-	12/20/11	1
Phosphorus,Total	2200	16.	100	ug/l		365.1	12/21/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/15/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	93.6			% Rec.		8015D/G	12/15/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	380	9.7	100	ug/l		8015	12/20/11	1
C22-C32 Hydrocarbons	170	33.	100	ug/l		8015	12/20/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	87.5			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	U	11.	50.	ug/l		8260B	12/15/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/15/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/15/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/15/11	1
Carbon disulfide	U	0.22	1.0	ug/l		8260B	12/15/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/15/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/15/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/15/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	12/15/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethene	0.42	0.40	1.0	ug/l	J	8260B	12/15/11	1
cis-1,2-Dichloroethene	U	0.27	1.	ug/l		8260B	12/15/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/15/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/15/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/15/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 12/22/11 11:15 Printed: 12/22/11 11:16

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-02

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-2

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 11:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/15/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/15/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/15/11	1
n-Hexane	U	0.59	10.	ug/l		8260B	12/15/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/15/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/15/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/15/11	1
Methyl tert-butyl ether	4.0	0.27	1.0	ug/l		8260B	12/15/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/15/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/15/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/15/11	1
Toluene	U	0.16	5.0	ug/l		8260B	12/15/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/15/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/15/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/15/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/15/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/15/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/15/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/15/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/15/11	1
Ethanol	U	12.	100	ug/l		8260B	12/15/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/15/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/15/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/15/11	1
tert-Butyl alcohol	U	1.5	5.0	ug/l		8260B	12/15/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/15/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/15/11	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	12/15/11	1
Dibromofluoromethane	108.			% Rec.		8260B	12/15/11	1
4-Bromofluorobenzene	100.			% Rec.		8260B	12/15/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-03

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-4

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 09:10

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	9.1	100	ug/l		9056	12/14/11	1
Sulfate	21000	400	5000	ug/l		9056	12/20/11	1
Alkalinity	970000	5000	20000	ug/l		2320B	12/20/11	1
Ferrous Iron	26000	110	500	ug/l	T8	3500Fe-	12/20/11	10
Phosphorus,Total	2700	16.	100	ug/l		365.1	12/21/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/15/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	93.1			% Rec.		8015D/G	12/15/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	520	9.7	100	ug/l		8015	12/20/11	1
C22-C32 Hydrocarbons	330	33.	100	ug/l		8015	12/20/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	85.7			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	U	11.	50.	ug/l		8260B	12/15/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/15/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/15/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/15/11	1
Carbon disulfide	U	0.22	1.0	ug/l		8260B	12/15/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/15/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/15/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/15/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	12/15/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/15/11	1
cis-1,2-Dichloroethene	0.75	0.27	1.	ug/l	J	8260B	12/15/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/15/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/15/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/15/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-03

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-4

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 09:10

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/15/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/15/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/15/11	1
n-Hexane	U	0.59	10.	ug/l		8260B	12/15/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/15/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/15/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/15/11	1
Methyl tert-butyl ether	U	0.27	1.0	ug/l		8260B	12/15/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/15/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/15/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/15/11	1
Toluene	U	0.16	5.0	ug/l		8260B	12/15/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/15/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/15/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/15/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/15/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/15/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/15/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/15/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/15/11	1
Ethanol	U	12.	100	ug/l		8260B	12/15/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/15/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/15/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/15/11	1
tert-Butyl alcohol	U	1.5	5.0	ug/l		8260B	12/15/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/15/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/15/11	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	12/15/11	1
Dibromofluoromethane	103.			% Rec.		8260B	12/15/11	1
4-Bromofluorobenzene	101.			% Rec.		8260B	12/15/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-04

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-5

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 13:55

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	9.1	100	ug/l		9056	12/14/11	1
Sulfate	650	400	5000	ug/l	J	9056	12/14/11	1
Alkalinity	1400000	5000	20000	ug/l		2320B	12/20/11	1
Ferrous Iron	12000	110	500	ug/l	T8	3500Fe-	12/20/11	10
Phosphorus,Total	830	16.	100	ug/l		365.1	12/21/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/15/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	92.8			% Rec.		8015D/G	12/15/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	1400	9.7	100	ug/l		8015	12/20/11	1
C22-C32 Hydrocarbons	520	33.	100	ug/l		8015	12/20/11	1
C32-C40 Hydrocarbons	47.	33.	100	ug/l	J	8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	86.0			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	U	11.	50.	ug/l		8260B	12/15/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/15/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/15/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/15/11	1
Carbon disulfide	U	0.22	1.0	ug/l		8260B	12/15/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/15/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/15/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/15/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	12/15/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/15/11	1
cis-1,2-Dichloroethene	U	0.27	1.	ug/l		8260B	12/15/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/15/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/15/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/15/11	1

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-04

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-5

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 13:55

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/15/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/15/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/15/11	1
n-Hexane	U	0.59	10.	ug/l		8260B	12/15/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/15/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/15/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/15/11	1
Methyl tert-butyl ether	14.	0.27	1.0	ug/l		8260B	12/15/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/15/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/15/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/15/11	1
Toluene	U	0.16	5.0	ug/l		8260B	12/15/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/15/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/15/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/15/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/15/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/15/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/15/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/15/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/15/11	1
Ethanol	U	12.	100	ug/l		8260B	12/15/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/15/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/15/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/15/11	1
tert-Butyl alcohol	5.9	1.5	5.0	ug/l		8260B	12/15/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/15/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/15/11	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	12/15/11	1
Dibromofluoromethane	105.			% Rec.		8260B	12/15/11	1
4-Bromofluorobenzene	104.			% Rec.		8260B	12/15/11	1

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RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-05

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-6

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 14:50

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	9.1	100	ug/l		9056	12/14/11	1
Sulfate	U	400	5000	ug/l		9056	12/14/11	1
Alkalinity	1200000	5000	20000	ug/l		2320B	12/20/11	1
Ferrous Iron	38000	550	2500	ug/l	T8	3500Fe-	12/20/11	50
Phosphorus,Total	3000	16.	100	ug/l		365.1	12/21/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/14/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	93.0			% Rec.		8015D/G	12/14/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	1800	9.7	100	ug/l		8015	12/20/11	1
C22-C32 Hydrocarbons	700	33.	100	ug/l		8015	12/20/11	1
C32-C40 Hydrocarbons	82.	33.	100	ug/l	J	8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	105.			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	12.	11.	50.	ug/l	J	8260B	12/16/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/16/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/16/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/16/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/16/11	1
Carbon disulfide	U	0.22	1.0	ug/l		8260B	12/16/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/16/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/16/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/16/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/16/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	12/16/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/16/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/16/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/16/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/16/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/16/11	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/16/11	1
cis-1,2-Dichloroethene	U	0.27	1.	ug/l		8260B	12/16/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/16/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/16/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/16/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/16/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-05

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-6

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 14:50

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/16/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/16/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/16/11	1
n-Hexane	5.4	0.59	10.	ug/l	J	8260B	12/16/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/16/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/16/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/16/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/16/11	1
Methyl tert-butyl ether	19.	0.27	1.0	ug/l		8260B	12/16/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/16/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/16/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/16/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/16/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/16/11	1
Toluene	U	0.16	5.0	ug/l		8260B	12/16/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/16/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/16/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/16/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/16/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/16/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/16/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/16/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/16/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/16/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/16/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/16/11	1
Ethanol	U	12.	100	ug/l		8260B	12/16/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/16/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/16/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/16/11	1
tert-Butyl alcohol	8.1	1.5	5.0	ug/l		8260B	12/16/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/16/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/16/11	1
Surrogate Recovery								
Toluene-d8	95.4			% Rec.		8260B	12/16/11	1
Dibromofluoromethane	126.			% Rec.	J1	8260B	12/16/11	1
4-Bromofluorobenzene	77.9			% Rec.		8260B	12/16/11	1

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-06

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-7

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 11:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	9.1	100	ug/l		9056	12/14/11	1
Sulfate	U	400	5000	ug/l		9056	12/14/11	1
Alkalinity	850000	5000	20000	ug/l		2320B	12/20/11	1
Ferrous Iron	20000	110	500	ug/l	T8	3500Fe-	12/21/11	10
Phosphorus,Total	2100	16.	100	ug/l		365.1	12/21/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/15/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	93.0			% Rec.		8015D/G	12/15/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	640	9.7	100	ug/l		8015	12/20/11	1
C22-C32 Hydrocarbons	230	33.	100	ug/l		8015	12/20/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	87.2			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	U	11.	50.	ug/l		8260B	12/15/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/15/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/15/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/15/11	1
Carbon disulfide	U	0.22	1.0	ug/l		8260B	12/15/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/15/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/15/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/15/11	1
Cyclohexane	1.3	0.36	1.0	ug/l		8260B	12/15/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/15/11	1
cis-1,2-Dichloroethene	U	0.27	1.	ug/l		8260B	12/15/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/15/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/15/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/15/11	1

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-06

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-7

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 11:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/15/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/15/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/15/11	1
n-Hexane	U	0.59	10.	ug/l		8260B	12/15/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/15/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/15/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/15/11	1
Methyl tert-butyl ether	1.6	0.27	1.0	ug/l		8260B	12/15/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/15/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/15/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/15/11	1
Toluene	U	0.16	5.0	ug/l		8260B	12/15/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/15/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/15/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/15/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/15/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/15/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/15/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/15/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/15/11	1
Ethanol	U	12.	100	ug/l		8260B	12/15/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/15/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/15/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/15/11	1
tert-Butyl alcohol	U	1.5	5.0	ug/l		8260B	12/15/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/15/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/15/11	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	12/15/11	1
Dibromofluoromethane	98.4			% Rec.		8260B	12/15/11	1
4-Bromofluorobenzene	103.			% Rec.		8260B	12/15/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-07

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-8

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 12:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	9.1	100	ug/l		9056	12/14/11	1
Sulfate	U	400	5000	ug/l		9056	12/14/11	1
Alkalinity	380000	5000	20000	ug/l		2320B	12/20/11	1
Ferrous Iron	12000	55.	250	ug/l	T8	3500Fe-	12/21/11	5
Phosphorus,Total	750	16.	100	ug/l		365.1	12/21/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/15/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	93.4			% Rec.		8015D/G	12/15/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	380	9.7	100	ug/l		8015	12/20/11	1
C22-C32 Hydrocarbons	160	33.	100	ug/l		8015	12/20/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	102.			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	U	11.	50.	ug/l		8260B	12/16/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/16/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/16/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/16/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/16/11	1
Carbon disulfide	U	0.22	1.0	ug/l		8260B	12/16/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/16/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/16/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/16/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/16/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	12/16/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/16/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/16/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/16/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/16/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/16/11	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/16/11	1
cis-1,2-Dichloroethene	U	0.27	1.	ug/l		8260B	12/16/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/16/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/16/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/16/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/16/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-07

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : MW-8

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 12:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/16/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/16/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/16/11	1
n-Hexane	U	0.59	10.	ug/l		8260B	12/16/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/16/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/16/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/16/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/16/11	1
Methyl tert-butyl ether	0.94	0.27	1.0	ug/l	J	8260B	12/16/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/16/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/16/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/16/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/16/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/16/11	1
Toluene	U	0.16	5.0	ug/l		8260B	12/16/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/16/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/16/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/16/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/16/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/16/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/16/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/16/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/16/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/16/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/16/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/16/11	1
Ethanol	U	12.	100	ug/l		8260B	12/16/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/16/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/16/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/16/11	1
tert-Butyl alcohol	U	1.5	5.0	ug/l		8260B	12/16/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/16/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/16/11	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	12/16/11	1
Dibromofluoromethane	129.			% Rec.	J1	8260B	12/16/11	1
4-Bromofluorobenzene	79.3			% Rec.		8260B	12/16/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
MDL = Minimum Detection Limit = LOD = SQL(TRRP)
Note:
The reported analytical results relate only to the sample submitted.

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Reported: 12/22/11 11:15 Printed: 12/22/11 11:16

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Est. 1970

REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-08

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : DUP

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 00:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	9.1	100	ug/l		9056	12/14/11	1
Sulfate	U	400	5000	ug/l		9056	12/14/11	1
Alkalinity	1400000	5000	20000	ug/l		2320B	12/20/11	1
Ferrous Iron	9500	110	500	ug/l	T8	3500Fe-	12/21/11	10
Phosphorus,Total	860	16.	100	ug/l		365.1	12/21/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	12/15/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	93.1			% Rec.		8015D/G	12/15/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	1100	9.7	100	ug/l		8015	12/20/11	1
C22-C32 Hydrocarbons	460	33.	100	ug/l		8015	12/20/11	1
C32-C40 Hydrocarbons	61.	33.	100	ug/l	J	8015	12/20/11	1
Surrogate Recovery								
o-Terphenyl	76.9			% Rec.		8015	12/20/11	1
Oxygenates								
Acetone	U	11.	50.	ug/l	J3	8260B	12/15/11	1
Benzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Bromodichloromethane	U	0.21	1.0	ug/l		8260B	12/15/11	1
Bromoform	U	0.46	1.0	ug/l		8260B	12/15/11	1
Bromomethane	U	0.57	5.0	ug/l		8260B	12/15/11	1
Carbon disulfide	U	0.22	1.0	ug/l		8260B	12/15/11	1
Carbon tetrachloride	U	0.38	1.0	ug/l		8260B	12/15/11	1
Chlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
Chloroethane	U	1.4	5.0	ug/l		8260B	12/15/11	1
Chloroform	U	0.22	5.0	ug/l		8260B	12/15/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	12/15/11	1
1,2-Dichlorobenzene	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,3-Dichlorobenzene	U	0.25	1.0	ug/l		8260B	12/15/11	1
1,4-Dichlorobenzene	U	0.19	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloroethane	U	0.26	1.0	ug/l		8260B	12/15/11	1
1,1-Dichloroethene	U	0.40	1.0	ug/l		8260B	12/15/11	1
cis-1,2-Dichloroethene	U	0.27	1.	ug/l		8260B	12/15/11	1
trans-1,2-Dichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2-Dichloropropane	U	0.47	1.0	ug/l		8260B	12/15/11	1
1,3-Dichloropropane	U	0.37	1.0	ug/l		8260B	12/15/11	1
cis-1,3-Dichloropropene	U	0.23	1.	ug/l		8260B	12/15/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
RDL = Reported Detection Limit = LOQ = PQL = EQL
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Note:
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS US - MI
10559 Citation Dr, Ste 100
Brighton, MI 48116

December 22, 2011

ESC Sample # : L551422-08

Date Received : December 14, 2011
Description : Oakland Truck Center

Site ID : 8099 S. COLISEUM WAY O

Sample ID : DUP

Project # : B0064601.0000.00007

Collected By : Karl Johnson
Collection Date : 12/13/11 00:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.39	1.0	ug/l		8260B	12/15/11	1
Ethylbenzene	U	0.27	1.0	ug/l		8260B	12/15/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	12/15/11	1
n-Hexane	U	0.59	10.	ug/l		8260B	12/15/11	1
Isopropylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
2-Butanone (MEK)	U	3.0	10.	ug/l		8260B	12/15/11	1
Methylene Chloride	U	0.79	5.0	ug/l		8260B	12/15/11	1
4-Methyl-2-pentanone (MIBK)	U	0.80	10.	ug/l		8260B	12/15/11	1
Methyl tert-butyl ether	13.	0.27	1.0	ug/l		8260B	12/15/11	1
Naphthalene	U	0.69	5.0	ug/l		8260B	12/15/11	1
Styrene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,1,1,2-Tetrachloroethane	U	0.31	1.0	ug/l		8260B	12/15/11	1
1,1,2,2-Tetrachloroethane	U	0.29	1.0	ug/l		8260B	12/15/11	1
Tetrachloroethene	U	0.24	1.0	ug/l		8260B	12/15/11	1
Toluene	U	0.16	5.0	ug/l		8260B	12/15/11	1
1,2,3-Trichlorobenzene	U	0.30	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trichlorobenzene	U	0.21	1.0	ug/l		8260B	12/15/11	1
1,1,1-Trichloroethane	U	0.24	1.0	ug/l		8260B	12/15/11	1
1,1,2-Trichloroethane	U	0.38	1.0	ug/l		8260B	12/15/11	1
Trichloroethene	U	0.29	1.0	ug/l		8260B	12/15/11	1
1,2,4-Trimethylbenzene	U	0.20	1.0	ug/l		8260B	12/15/11	1
1,3,5-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	12/15/11	1
Vinyl acetate	U	1.2	10.	ug/l		8260B	12/15/11	1
Vinyl chloride	U	0.28	1.0	ug/l		8260B	12/15/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	12/15/11	1
Volatile Organics								
Di-isopropyl ether	U	0.24	1.0	ug/l		8260B	12/15/11	1
Ethanol	U	12.	100	ug/l		8260B	12/15/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	12/15/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	12/15/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	12/15/11	1
tert-Butyl alcohol	6.9	1.5	5.0	ug/l		8260B	12/15/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	12/15/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	12/15/11	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	12/15/11	1
Dibromofluoromethane	130.			% Rec.	J1	8260B	12/15/11	1
4-Bromofluorobenzene	81.6			% Rec.		8260B	12/15/11	1

U = ND (Not Detected)ND = Non Detect Above the Method Detection Limit
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Reported: 12/22/11 11:15 Printed: 12/22/11 11:16

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L551422-01	WG570855	SAMP	Ferrous Iron	R1973013	T8
L551422-02	WG570855	SAMP	Ferrous Iron	R1973013	T8
	WG569983	SAMP	1,1-Dichloroethene	R1967434	J
L551422-03	WG570855	SAMP	Ferrous Iron	R1973013	T8
	WG569983	SAMP	cis-1,2-Dichloroethene	R1967434	J
L551422-04	WG569808	SAMP	C32-C40 Hydrocarbons	R1975212	J
	WG570855	SAMP	Ferrous Iron	R1973013	T8
	WG569948	SAMP	Sulfate	R1968252	J
L551422-05	WG569808	SAMP	C32-C40 Hydrocarbons	R1975212	J
	WG570855	SAMP	Ferrous Iron	R1973013	T8
	WG570299	SAMP	Acetone	R1971573	J
	WG570299	SAMP	n-Hexane	R1971573	J
	WG570299	SAMP	Dibromofluoromethane	R1971573	J1
L551422-06	WG570983	SAMP	Ferrous Iron	R1975054	T8
L551422-07	WG570983	SAMP	Ferrous Iron	R1975054	T8
	WG570299	SAMP	Methyl tert-butyl ether	R1971573	J
	WG570299	SAMP	Dibromofluoromethane	R1971573	J1
L551422-08	WG569808	SAMP	C32-C40 Hydrocarbons	R1975212	J
	WG570983	SAMP	Ferrous Iron	R1975054	T8
	WG570077	SAMP	Acetone	R1967175	J3
	WG570077	SAMP	Dibromofluoromethane	R1967175	J1

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J1	Surrogate recovery limits have been exceeded; values are outside upper control limits
J3	The associated batch QC was outside the established quality control range for precision.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.

Qualifier Report Information

ESC utilizes sample and result qualifiers as set forth by the EPA Contract Laboratory Program and as required by most certifying bodies including NELAC. In addition to the EPA qualifiers adopted by ESC, we have implemented ESC qualifiers to provide more information pertaining to our analytical results. Each qualifier is designated in the qualifier explanation as either EPA or ESC. Data qualifiers are intended to provide the ESC client with more detailed information concerning the potential bias of reported data. Because of the wide range of constituents and variety of matrices incorporated by most EPA methods,it is common for some compounds to fall outside of established ranges. These exceptions are evaluated and all reported data is valid and useable "unless qualified as 'R' (Rejected)."

Definitions

Accuracy - The relationship of the observed value of a known sample to the true value of a known sample. Represented by percent recovery and relevant to samples such as: control samples, matrix spike recoveries, surrogate recoveries, etc.

Precision - The agreement between a set of samples or between duplicate samples. Relates to how close together the results are and is represented by Relative Percent Differrence.

Surrogate - Organic compounds that are similar in chemical composition, extraction, and chromotography to analytes of interest. The surrogates are used to determine the probable response of the group of analytes that are chemically related to the surrogate compound. Surrogates are added to the sample and carried through all stages of preparation and analyses.

TIC - Tentatively Identified Compound: Compounds detected in samples that are not target compounds, internal standards, system monitoring compounds, or surrogates.

Summary of Remarks For Samples Printed
12/22/11 at 11:16:53

TSR Signing Reports: 341
R5 - Desired TAT

Sample: L551422-01 Account: ARCABMI Received: 12/14/11 09:00 Due Date: 12/21/11 00:00 RPT Date: 12/22/11 11:15
EDD = Geotracker
Sample: L551422-02 Account: ARCABMI Received: 12/14/11 09:00 Due Date: 12/21/11 00:00 RPT Date: 12/22/11 11:15
EDD = Geotracker
Sample: L551422-03 Account: ARCABMI Received: 12/14/11 09:00 Due Date: 12/21/11 00:00 RPT Date: 12/22/11 11:15
EDD = Geotracker
Sample: L551422-04 Account: ARCABMI Received: 12/14/11 09:00 Due Date: 12/21/11 00:00 RPT Date: 12/22/11 11:15
EDD = Geotracker
Sample: L551422-05 Account: ARCABMI Received: 12/14/11 09:00 Due Date: 12/21/11 00:00 RPT Date: 12/22/11 11:15
EDD = Geotracker
Sample: L551422-06 Account: ARCABMI Received: 12/14/11 09:00 Due Date: 12/21/11 00:00 RPT Date: 12/22/11 11:15
EDD = Geotracker
Sample: L551422-07 Account: ARCABMI Received: 12/14/11 09:00 Due Date: 12/21/11 00:00 RPT Date: 12/22/11 11:15
EDD = Geotracker
Sample: L551422-08 Account: ARCABMI Received: 12/14/11 09:00 Due Date: 12/21/11 00:00 RPT Date: 12/22/11 11:15
EDD = Geotracker

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ARCADIS US - MI
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG570077	12/14/11 23:32
1,1,1-Trichloroethane	< .001	mg/l			WG570077	12/14/11 23:32
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG570077	12/14/11 23:32
1,1,2-Trichloroethane	< .001	mg/l			WG570077	12/14/11 23:32
1,1-Dichloroethane	< .001	mg/l			WG570077	12/14/11 23:32
1,1-Dichloroethene	< .001	mg/l			WG570077	12/14/11 23:32
1,2,3-Trichlorobenzene	< .001	mg/l			WG570077	12/14/11 23:32
1,2,4-Trichlorobenzene	< .001	mg/l			WG570077	12/14/11 23:32
1,2,4-Trimethylbenzene	< .001	mg/l			WG570077	12/14/11 23:32
1,2-Dichlorobenzene	< .001	mg/l			WG570077	12/14/11 23:32
1,2-Dichloroethane	< .001	mg/l			WG570077	12/14/11 23:32
1,2-Dichloropropane	< .001	mg/l			WG570077	12/14/11 23:32
1,3,5-Trimethylbenzene	< .001	mg/l			WG570077	12/14/11 23:32
1,3-Dichlorobenzene	< .001	mg/l			WG570077	12/14/11 23:32
1,3-Dichloropropane	< .001	mg/l			WG570077	12/14/11 23:32
1,4-Dichlorobenzene	< .001	mg/l			WG570077	12/14/11 23:32
2-Butanone (MEK)	< .01	mg/l			WG570077	12/14/11 23:32
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG570077	12/14/11 23:32
Acetone	< .05	mg/l			WG570077	12/14/11 23:32
Benzene	< .001	mg/l			WG570077	12/14/11 23:32
Bromodichloromethane	< .001	mg/l			WG570077	12/14/11 23:32
Bromoform	< .001	mg/l			WG570077	12/14/11 23:32
Bromomethane	< .005	mg/l			WG570077	12/14/11 23:32
Carbon disulfide	< .001	mg/l			WG570077	12/14/11 23:32
Carbon tetrachloride	< .001	mg/l			WG570077	12/14/11 23:32
Chlorobenzene	< .001	mg/l			WG570077	12/14/11 23:32
Chloroethane	< .005	mg/l			WG570077	12/14/11 23:32
Chloroform	< .005	mg/l			WG570077	12/14/11 23:32
cis-1,2-Dichloroethene	< .001	mg/l			WG570077	12/14/11 23:32
cis-1,3-Dichloropropene	< .001	mg/l			WG570077	12/14/11 23:32
Cyclohexane	< .001	mg/l			WG570077	12/14/11 23:32
Di-isopropyl ether	< .001	mg/l			WG570077	12/14/11 23:32
Ethanol	< .1	mg/l			WG570077	12/14/11 23:32
Ethyl tert-butyl ether	< .001	mg/l			WG570077	12/14/11 23:32
Ethylbenzene	< .001	mg/l			WG570077	12/14/11 23:32
Hexachloro-1,3-butadiene	< .001	mg/l			WG570077	12/14/11 23:32
Isopropylbenzene	< .001	mg/l			WG570077	12/14/11 23:32
Methyl tert-butyl ether	< .001	mg/l			WG570077	12/14/11 23:32
Methylene Chloride	< .005	mg/l			WG570077	12/14/11 23:32
n-Hexane	< .01	mg/l			WG570077	12/14/11 23:32
Naphthalene	< .005	mg/l			WG570077	12/14/11 23:32
Styrene	< .001	mg/l			WG570077	12/14/11 23:32
tert-Amyl Methyl Ether	< .001	mg/l			WG570077	12/14/11 23:32
tert-Butyl alcohol	< .005	mg/l			WG570077	12/14/11 23:32
Tetrachloroethene	< .001	mg/l			WG570077	12/14/11 23:32
Toluene	< .005	mg/l			WG570077	12/14/11 23:32
trans-1,2-Dichloroethene	< .001	mg/l			WG570077	12/14/11 23:32
trans-1,3-Dichloropropene	< .001	mg/l			WG570077	12/14/11 23:32
Trichloroethene	< .001	mg/l			WG570077	12/14/11 23:32
Vinyl acetate	< .01	mg/l			WG570077	12/14/11 23:32
Vinyl chloride	< .001	mg/l			WG570077	12/14/11 23:32
Xylenes, Total	< .003	mg/l			WG570077	12/14/11 23:32
4-Bromofluorobenzene		% Rec.	88.04	82-120	WG570077	12/14/11 23:32
Dibromofluoromethane		% Rec.	118.0	82-126	WG570077	12/14/11 23:32
Toluene-d8		% Rec.	99.40	92-112	WG570077	12/14/11 23:32
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG569983	12/15/11 06:00
1,1,1-Trichloroethane	< .001	mg/l			WG569983	12/15/11 06:00

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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ARCADIS US - MI
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG569983	12/15/11 06:00
1,1,2-Trichloroethane	< .001	mg/l			WG569983	12/15/11 06:00
1,1-Dichloroethane	< .001	mg/l			WG569983	12/15/11 06:00
1,1-Dichloroethene	< .001	mg/l			WG569983	12/15/11 06:00
1,2,3-Trichlorobenzene	< .001	mg/l			WG569983	12/15/11 06:00
1,2,4-Trichlorobenzene	< .001	mg/l			WG569983	12/15/11 06:00
1,2,4-Trimethylbenzene	< .001	mg/l			WG569983	12/15/11 06:00
1,2-Dichlorobenzene	< .001	mg/l			WG569983	12/15/11 06:00
1,2-Dichloroethane	< .001	mg/l			WG569983	12/15/11 06:00
1,2-Dichloropropane	< .001	mg/l			WG569983	12/15/11 06:00
1,3,5-Trimethylbenzene	< .001	mg/l			WG569983	12/15/11 06:00
1,3-Dichlorobenzene	< .001	mg/l			WG569983	12/15/11 06:00
1,3-Dichloropropane	< .001	mg/l			WG569983	12/15/11 06:00
1,4-Dichlorobenzene	< .001	mg/l			WG569983	12/15/11 06:00
2-Butanone (MEK)	< .01	mg/l			WG569983	12/15/11 06:00
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG569983	12/15/11 06:00
Acetone	< .05	mg/l			WG569983	12/15/11 06:00
Benzene	< .001	mg/l			WG569983	12/15/11 06:00
Bromodichloromethane	< .001	mg/l			WG569983	12/15/11 06:00
Bromoform	< .001	mg/l			WG569983	12/15/11 06:00
Bromomethane	< .005	mg/l			WG569983	12/15/11 06:00
Carbon disulfide	< .001	mg/l			WG569983	12/15/11 06:00
Carbon tetrachloride	< .001	mg/l			WG569983	12/15/11 06:00
Chlorobenzene	< .001	mg/l			WG569983	12/15/11 06:00
Chloroethane	< .005	mg/l			WG569983	12/15/11 06:00
Chloroform	< .005	mg/l			WG569983	12/15/11 06:00
cis-1,2-Dichloroethene	< .001	mg/l			WG569983	12/15/11 06:00
cis-1,3-Dichloropropene	< .001	mg/l			WG569983	12/15/11 06:00
Cyclohexane	< .001	mg/l			WG569983	12/15/11 06:00
Di-isopropyl ether	< .001	mg/l			WG569983	12/15/11 06:00
Ethanol	< .1	mg/l			WG569983	12/15/11 06:00
Ethyl tert-butyl ether	< .001	mg/l			WG569983	12/15/11 06:00
Ethylbenzene	< .001	mg/l			WG569983	12/15/11 06:00
Hexachloro-1,3-butadiene	< .001	mg/l			WG569983	12/15/11 06:00
Isopropylbenzene	< .001	mg/l			WG569983	12/15/11 06:00
Methyl tert-butyl ether	< .001	mg/l			WG569983	12/15/11 06:00
Methylene Chloride	< .005	mg/l			WG569983	12/15/11 06:00
n-Hexane	< .01	mg/l			WG569983	12/15/11 06:00
Naphthalene	< .005	mg/l			WG569983	12/15/11 06:00
Styrene	< .001	mg/l			WG569983	12/15/11 06:00
tert-Amyl Methyl Ether	< .001	mg/l			WG569983	12/15/11 06:00
tert-Butyl alcohol	< .005	mg/l			WG569983	12/15/11 06:00
Tetrachloroethene	< .001	mg/l			WG569983	12/15/11 06:00
Toluene	< .005	mg/l			WG569983	12/15/11 06:00
trans-1,2-Dichloroethene	< .001	mg/l			WG569983	12/15/11 06:00
trans-1,3-Dichloropropene	< .001	mg/l			WG569983	12/15/11 06:00
Trichloroethene	< .001	mg/l			WG569983	12/15/11 06:00
Vinyl acetate	< .01	mg/l			WG569983	12/15/11 06:00
Vinyl chloride	< .001	mg/l			WG569983	12/15/11 06:00
Xylenes, Total	< .003	mg/l			WG569983	12/15/11 06:00
4-Bromofluorobenzene		% Rec.	99.93	82-120	WG569983	12/15/11 06:00
Dibromofluoromethane		% Rec.	96.39	82-126	WG569983	12/15/11 06:00
Toluene-d8		% Rec.	101.0	92-112	WG569983	12/15/11 06:00
TPH (GC/FID) Low Fraction	< .1	mg/l			WG570064	12/14/11 21:38
a,a,a-Trifluorotoluene(FID)		% Rec.	93.56	62-128	WG570064	12/14/11 21:38

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Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
TPH (GC/FID) Low Fraction	< .1	mg/l			WG570015	12/15/11 14:57
a,a,a-Trifluorotoluene(FID)		% Rec.	93.19	62-128	WG570015	12/15/11 14:57
Nitrate	< .1	mg/l			WG569948	12/14/11 09:51
Sulfate	< 5	mg/l			WG569948	12/14/11 09:51
Alkalinity	< 20	mg/l			WG570417	12/16/11 17:42
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG570299	12/16/11 01:40
1,1,1-Trichloroethane	< .001	mg/l			WG570299	12/16/11 01:40
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG570299	12/16/11 01:40
1,1,2-Trichloroethane	< .001	mg/l			WG570299	12/16/11 01:40
1,1-Dichloroethane	< .001	mg/l			WG570299	12/16/11 01:40
1,1-Dichloroethene	< .001	mg/l			WG570299	12/16/11 01:40
1,2,3-Trichlorobenzene	< .001	mg/l			WG570299	12/16/11 01:40
1,2,4-Trichlorobenzene	< .001	mg/l			WG570299	12/16/11 01:40
1,2,4-Trimethylbenzene	< .001	mg/l			WG570299	12/16/11 01:40
1,2-Dichlorobenzene	< .001	mg/l			WG570299	12/16/11 01:40
1,2-Dichloroethane	< .001	mg/l			WG570299	12/16/11 01:40
1,2-Dichloropropane	< .001	mg/l			WG570299	12/16/11 01:40
1,3,5-Trimethylbenzene	< .001	mg/l			WG570299	12/16/11 01:40
1,3-Dichlorobenzene	< .001	mg/l			WG570299	12/16/11 01:40
1,3-Dichloropropane	< .001	mg/l			WG570299	12/16/11 01:40
1,4-Dichlorobenzene	< .001	mg/l			WG570299	12/16/11 01:40
2-Butanone (MEK)	< .01	mg/l			WG570299	12/16/11 01:40
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG570299	12/16/11 01:40
Acetone	< .05	mg/l			WG570299	12/16/11 01:40
Benzene	< .001	mg/l			WG570299	12/16/11 01:40
Bromodichloromethane	< .001	mg/l			WG570299	12/16/11 01:40
Bromoform	< .001	mg/l			WG570299	12/16/11 01:40
Bromomethane	< .005	mg/l			WG570299	12/16/11 01:40
Carbon disulfide	< .001	mg/l			WG570299	12/16/11 01:40
Carbon tetrachloride	< .001	mg/l			WG570299	12/16/11 01:40
Chlorobenzene	< .001	mg/l			WG570299	12/16/11 01:40
Chloroethane	< .005	mg/l			WG570299	12/16/11 01:40
Chloroform	< .005	mg/l			WG570299	12/16/11 01:40
cis-1,2-Dichloroethene	< .001	mg/l			WG570299	12/16/11 01:40
cis-1,3-Dichloropropene	< .001	mg/l			WG570299	12/16/11 01:40
Cyclohexane	< .001	mg/l			WG570299	12/16/11 01:40
Di-isopropyl ether	< .001	mg/l			WG570299	12/16/11 01:40
Ethanol	< .1	mg/l			WG570299	12/16/11 01:40
Ethyl tert-butyl ether	< .001	mg/l			WG570299	12/16/11 01:40
Ethylbenzene	< .001	mg/l			WG570299	12/16/11 01:40
Hexachloro-1,3-butadiene	< .001	mg/l			WG570299	12/16/11 01:40
Isopropylbenzene	< .001	mg/l			WG570299	12/16/11 01:40
Methyl tert-butyl ether	< .001	mg/l			WG570299	12/16/11 01:40
Methylene Chloride	< .005	mg/l			WG570299	12/16/11 01:40
n-Hexane	< .01	mg/l			WG570299	12/16/11 01:40
Naphthalene	< .005	mg/l			WG570299	12/16/11 01:40
Styrene	< .001	mg/l			WG570299	12/16/11 01:40
tert-Amyl Methyl Ether	< .001	mg/l			WG570299	12/16/11 01:40
tert-Butyl alcohol	< .005	mg/l			WG570299	12/16/11 01:40
Tetrachloroethene	< .001	mg/l			WG570299	12/16/11 01:40
Toluene	< .005	mg/l			WG570299	12/16/11 01:40
trans-1,2-Dichloroethene	< .001	mg/l			WG570299	12/16/11 01:40
trans-1,3-Dichloropropene	< .001	mg/l			WG570299	12/16/11 01:40

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Quality Assurance Report
Level II

L551422

December 22, 2011

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Trichloroethene	< .001	mg/l			WG570299	12/16/11 01:40
Vinyl acetate	< .01	mg/l			WG570299	12/16/11 01:40
Vinyl chloride	< .001	mg/l			WG570299	12/16/11 01:40
Xylenes, Total	< .003	mg/l			WG570299	12/16/11 01:40
4-Bromofluorobenzene		% Rec.	86.74	82-120	WG570299	12/16/11 01:40
Dibromofluoromethane		% Rec.	118.5	82-126	WG570299	12/16/11 01:40
Toluene-d8		% Rec.	99.93	92-112	WG570299	12/16/11 01:40
Sulfate	< 5	mg/l			WG570561	12/18/11 23:17
Ferrous Iron	< .05	mg/l			WG570855	12/20/11 10:41
Sulfate	< 5	mg/l			WG570889	12/20/11 08:18
Alkalinity	< 20	mg/l			WG570800	12/20/11 17:10
Ferrous Iron	< .05	mg/l			WG570983	12/21/11 13:50
C10-C22 Hydrocarbons	< .1	mg/l			WG569808	12/20/11 18:59
C22-C32 Hydrocarbons	< .1	mg/l			WG569808	12/20/11 18:59
C32-C40 Hydrocarbons	< .1	mg/l			WG569808	12/20/11 18:59
o-Terphenyl		% Rec.	78.50	50-150	WG569808	12/20/11 18:59
Phosphorus,Total	< .1	mg/l			WG570807	12/21/11 12:53
Phosphorus,Total	< .1	mg/l			WG570550	12/21/11 05:35

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Nitrate	mg/l	0.580	0.580	0	20	L551382-11	WG569948
Nitrate	mg/l	0	0	0	20	L551422-07	WG569948
Sulfate	mg/l	0	0	0	20	L551422-07	WG569948
Alkalinity	mg/l	67.0	71.0	5.80	20	L551391-01	WG570417
Alkalinity	mg/l	180.	170.	5.71	20	L551601-03	WG570417
Ferrous Iron	mg/l	37.0	38.0	3.75	20	L551422-05	WG570855
Ferrous Iron	mg/l	0	0	0	20	L551153-01	WG570855
Sulfate	mg/l	6.50	6.10	6.66	20	L552466-03	WG570889
Alkalinity	mg/l	0	0	0	20	L551644-03	WG570800
Alkalinity	mg/l	120.	120.	0	20	L551644-04	WG570800
Ferrous Iron	mg/l	0.0950	0.0800	17.1	20	L551760-01	WG570983

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Quality Assurance Report
Level II

L551422

December 22, 2011

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Phosphorus,Total	mg/l	14.0	14.0	1.07	20	L551101-04	WG570807
Phosphorus,Total	mg/l	10.0	12.0	15.2	20	L551101-05	WG570807
Phosphorus,Total	mg/l	11.0	10.0	10.4	20	L551101-06	WG570807
Phosphorus,Total	mg/l	10.0	6.80	39.1*	20	L551101-07	WG570807
Phosphorus,Total	mg/l	10.0	10.0	4.88	20	L551101-08	WG570807
Phosphorus,Total	mg/l	11.0	10.0	10.4	20	L551101-09	WG570807
Phosphorus,Total	mg/l	68.0	68.0	0	20	L551101-03	WG570807
Phosphorus,Total	mg/l	0.330	0.330	1.22	20	L551382-12	WG570550
Phosphorus,Total	mg/l	0	0	0	20	L551382-03	WG570550
Phosphorus,Total	mg/l	0	6.80	NA	20	L551101-07	WG570807

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
			Laboratory Control Sample			
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0244	97.5	77-128	WG570077
1,1,1-Trichloroethane	mg/l	.025	0.0282	113.	71-126	WG570077
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0239	95.8	78-130	WG570077
1,1,2-Trichloroethane	mg/l	.025	0.0236	94.2	81-121	WG570077
1,1-Dichloroethane	mg/l	.025	0.0288	115.	73-123	WG570077
1,1-Dichloroethene	mg/l	.025	0.0291	117.	54-134	WG570077
1,2,3-Trichlorobenzene	mg/l	.025	0.0230	91.9	77-130	WG570077
1,2,4-Trichlorobenzene	mg/l	.025	0.0233	93.0	76-127	WG570077
1,2,4-Trimethylbenzene	mg/l	.025	0.0256	103.	77-129	WG570077
1,2-Dichlorobenzene	mg/l	.025	0.0234	93.4	82-121	WG570077
1,2-Dichloroethane	mg/l	.025	0.0280	112.	69-128	WG570077
1,2-Dichloropropane	mg/l	.025	0.0255	102.	77-121	WG570077
1,3,5-Trimethylbenzene	mg/l	.025	0.0257	103.	78-127	WG570077
1,3-Dichlorobenzene	mg/l	.025	0.0242	97.0	77-127	WG570077
1,3-Dichloropropane	mg/l	.025	0.0233	93.1	78-117	WG570077
1,4-Dichlorobenzene	mg/l	.025	0.0235	93.8	79-117	WG570077
2-Butanone (MEK)	mg/l	.125	0.141	113.	58-144	WG570077
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.155	124.	58-147	WG570077
Acetone	mg/l	.125	0.129	104.	49-153	WG570077
Benzene	mg/l	.025	0.0284	113.	72-119	WG570077
Bromodichloromethane	mg/l	.025	0.0257	103.	75-127	WG570077
Bromoform	mg/l	.025	0.0206	82.5	61-136	WG570077
Bromomethane	mg/l	.025	0.0339	136.	42-172	WG570077
Carbon disulfide	mg/l	.025	0.0334	134.	19-150	WG570077
Carbon tetrachloride	mg/l	.025	0.0280	112.	63-129	WG570077
Chlorobenzene	mg/l	.025	0.0228	91.3	78-123	WG570077
Chloroethane	mg/l	.025	0.0321	128.	52-164	WG570077
Chloroform	mg/l	.025	0.0281	112.	76-122	WG570077
cis-1,2-Dichloroethene	mg/l	.025	0.0271	108.	75-121	WG570077
cis-1,3-Dichloropropene	mg/l	.025	0.0274	109.	74-124	WG570077
Di-isopropyl ether	mg/l	.025	0.0277	111.	66-129	WG570077
Ethylbenzene	mg/l	.025	0.0244	97.5	77-124	WG570077
Hexachloro-1,3-butadiene	mg/l	.025	0.0202	81.0	71-134	WG570077
Isopropylbenzene	mg/l	.025	0.0261	104.	74-126	WG570077
Methyl tert-butyl ether	mg/l	.025	0.0293	117.	67-127	WG570077
Methylene Chloride	mg/l	.025	0.0269	107.	67-122	WG570077
n-Hexane	mg/l	.025	0.0266	107.	41-143	WG570077
Naphthalene	mg/l	.025	0.0237	94.9	70-134	WG570077
Styrene	mg/l	.025	0.0206	82.3	69-145	WG570077
Tetrachloroethene	mg/l	.025	0.0223	89.1	69-131	WG570077
Toluene	mg/l	.025	0.0259	104.	75-114	WG570077

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Level II

L551422

December 22, 2011

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
trans-1,2-Dichloroethene	mg/l	.025	0.0267	107.	63-127	WG570077
trans-1,3-Dichloropropene	mg/l	.025	0.0261	105.	69-124	WG570077
Trichloroethene	mg/l	.025	0.0231	92.4	69-131	WG570077
Vinyl acetate	mg/l	.125	0.158	127.	47-161	WG570077
Vinyl chloride	mg/l	.025	0.0313	125.	55-142	WG570077
Xylenes, Total	mg/l	.075	0.0737	98.2	77-123	WG570077
4-Bromofluorobenzene				94.64	82-120	WG570077
Dibromofluoromethane				113.0	82-126	WG570077
Toluene-d8				102.2	92-112	WG570077
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0216	86.4	77-128	WG569983
1,1,1-Trichloroethane	mg/l	.025	0.0242	96.9	71-126	WG569983
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0241	96.3	78-130	WG569983
1,1,2-Trichloroethane	mg/l	.025	0.0244	97.8	81-121	WG569983
1,1-Dichloroethane	mg/l	.025	0.0270	108.	73-123	WG569983
1,1-Dichloroethene	mg/l	.025	0.0302	121.	54-134	WG569983
1,2,3-Trichlorobenzene	mg/l	.025	0.0265	106.	77-130	WG569983
1,2,4-Trichlorobenzene	mg/l	.025	0.0274	110.	76-127	WG569983
1,2,4-Trimethylbenzene	mg/l	.025	0.0243	97.3	77-129	WG569983
1,2-Dichlorobenzene	mg/l	.025	0.0248	99.1	82-121	WG569983
1,2-Dichloroethane	mg/l	.025	0.0240	96.0	69-128	WG569983
1,2-Dichloropropane	mg/l	.025	0.0260	104.	77-121	WG569983
1,3,5-Trimethylbenzene	mg/l	.025	0.0247	98.6	78-127	WG569983
1,3-Dichlorobenzene	mg/l	.025	0.0245	97.9	77-127	WG569983
1,3-Dichloropropane	mg/l	.025	0.0254	101.	78-117	WG569983
1,4-Dichlorobenzene	mg/l	.025	0.0263	105.	79-117	WG569983
2-Butanone (MEK)	mg/l	.125	0.125	100.	58-144	WG569983
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.134	107.	58-147	WG569983
Acetone	mg/l	.125	0.134	107.	49-153	WG569983
Benzene	mg/l	.025	0.0269	108.	72-119	WG569983
Bromodichloromethane	mg/l	.025	0.0222	88.9	75-127	WG569983
Bromoform	mg/l	.025	0.0248	99.0	61-136	WG569983
Bromomethane	mg/l	.025	0.0286	114.	42-172	WG569983
Carbon disulfide	mg/l	.025	0.0338	135.	19-150	WG569983
Carbon tetrachloride	mg/l	.025	0.0236	94.5	63-129	WG569983
Chlorobenzene	mg/l	.025	0.0256	102.	78-123	WG569983
Chloroethane	mg/l	.025	0.0303	121.	52-164	WG569983
Chloroform	mg/l	.025	0.0252	101.	76-122	WG569983
cis-1,2-Dichloroethene	mg/l	.025	0.0252	101.	75-121	WG569983
cis-1,3-Dichloropropene	mg/l	.025	0.0252	101.	74-124	WG569983
Di-isopropyl ether	mg/l	.025	0.0269	108.	66-129	WG569983
Ethylbenzene	mg/l	.025	0.0254	101.	77-124	WG569983
Hexachloro-1,3-butadiene	mg/l	.025	0.0250	99.9	71-134	WG569983
Isopropylbenzene	mg/l	.025	0.0269	108.	74-126	WG569983
Methyl tert-butyl ether	mg/l	.025	0.0268	107.	67-127	WG569983
Methylene Chloride	mg/l	.025	0.0270	108.	67-122	WG569983
n-Hexane	mg/l	.025	0.0277	111.	41-143	WG569983
Naphthalene	mg/l	.025	0.0252	101.	70-134	WG569983
Styrene	mg/l	.025	0.0252	101.	69-145	WG569983
Tetrachloroethene	mg/l	.025	0.0258	103.	69-131	WG569983
Toluene	mg/l	.025	0.0262	105.	75-114	WG569983
trans-1,2-Dichloroethene	mg/l	.025	0.0270	108.	63-127	WG569983
trans-1,3-Dichloropropene	mg/l	.025	0.0241	96.4	69-124	WG569983
Trichloroethene	mg/l	.025	0.0247	98.6	69-131	WG569983
Vinyl acetate	mg/l	.125	0.136	109.	47-161	WG569983
Vinyl chloride	mg/l	.025	0.0295	118.	55-142	WG569983
Xylenes, Total	mg/l	.075	0.0775	103.	77-123	WG569983
4-Bromofluorobenzene				97.04	82-120	WG569983

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Est. 1970

ARCADIS US - MI
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Dibromofluoromethane				99.65	82-126	
Toluene-d8				105.2	92-112	
TPH (GC/FID) Low Fraction	mg/l	5.5	5.08	92.3	70-124	WG570064
a,a,a-Trifluorotoluene(FID)				93.16	62-128	WG570064
TPH (GC/FID) Low Fraction	mg/l	5.5	5.85	106.	70-124	WG570015
a,a,a-Trifluorotoluene(FID)				98.08	62-128	WG570015
Nitrate	mg/l	8	8.26	103.	90-110	WG569948
Sulfate	mg/l	40	40.7	102.	90-110	WG569948
Alkalinity	mg/l	100	97.0	97.0	85-115	WG570417
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0231	92.4	77-128	WG570299
1,1,1-Trichloroethane	mg/l	.025	0.0253	101.	71-126	WG570299
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0241	96.3	78-130	WG570299
1,1,2-Trichloroethane	mg/l	.025	0.0233	93.2	81-121	WG570299
1,1-Dichloroethane	mg/l	.025	0.0280	112.	73-123	WG570299
1,1-Dichloroethene	mg/l	.025	0.0253	101.	54-134	WG570299
1,2,3-Trichlorobenzene	mg/l	.025	0.0243	97.1	77-130	WG570299
1,2,4-Trichlorobenzene	mg/l	.025	0.0235	93.8	76-127	WG570299
1,2,4-Trimethylbenzene	mg/l	.025	0.0245	98.0	77-129	WG570299
1,2-Dichlorobenzene	mg/l	.025	0.0243	97.3	82-121	WG570299
1,2-Dichloroethane	mg/l	.025	0.0285	114.	69-128	WG570299
1,2-Dichloropropane	mg/l	.025	0.0265	106.	77-121	WG570299
1,3,5-Trimethylbenzene	mg/l	.025	0.0245	98.1	78-127	WG570299
1,3-Dichlorobenzene	mg/l	.025	0.0230	92.1	77-127	WG570299
1,3-Dichloropropane	mg/l	.025	0.0227	91.0	78-117	WG570299
1,4-Dichlorobenzene	mg/l	.025	0.0238	95.1	79-117	WG570299
2-Butanone (MEK)	mg/l	.125	0.150	120.	58-144	WG570299
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.157	126.	58-147	WG570299
Acetone	mg/l	.125	0.146	117.	49-153	WG570299
Benzene	mg/l	.025	0.0276	110.	72-119	WG570299
Bromodichloromethane	mg/l	.025	0.0272	109.	75-127	WG570299
Bromoform	mg/l	.025	0.0199	79.4	61-136	WG570299
Bromomethane	mg/l	.025	0.0316	126.	42-172	WG570299
Carbon disulfide	mg/l	.025	0.0242	97.0	19-150	WG570299
Carbon tetrachloride	mg/l	.025	0.0254	102.	63-129	WG570299
Chlorobenzene	mg/l	.025	0.0222	88.6	78-123	WG570299
Chloroethane	mg/l	.025	0.0317	127.	52-164	WG570299
Chloroform	mg/l	.025	0.0282	113.	76-122	WG570299
cis-1,2-Dichloroethene	mg/l	.025	0.0272	109.	75-121	WG570299
cis-1,3-Dichloropropene	mg/l	.025	0.0280	112.	74-124	WG570299
Di-isopropyl ether	mg/l	.025	0.0281	112.	66-129	WG570299
Ethylbenzene	mg/l	.025	0.0235	93.9	77-124	WG570299
Hexachloro-1,3-butadiene	mg/l	.025	0.0219	87.7	71-134	WG570299
Isopropylbenzene	mg/l	.025	0.0229	91.6	74-126	WG570299
Methyl tert-butyl ether	mg/l	.025	0.0276	110.	67-127	WG570299
Methylene Chloride	mg/l	.025	0.0264	105.	67-122	WG570299
n-Hexane	mg/l	.025	0.0232	92.7	41-143	WG570299
Naphthalene	mg/l	.025	0.0262	105.	70-134	WG570299
Styrene	mg/l	.025	0.0207	82.9	69-145	WG570299
Tetrachloroethene	mg/l	.025	0.0209	83.5	69-131	WG570299
Toluene	mg/l	.025	0.0253	101.	75-114	WG570299
trans-1,2-Dichloroethene	mg/l	.025	0.0255	102.	63-127	WG570299

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10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
trans-1,3-Dichloropropene	mg/l	.025	0.0271	108.	69-124	WG570299
Trichloroethene	mg/l	.025	0.0234	93.6	69-131	WG570299
Vinyl acetate	mg/l	.125	0.143	115.	47-161	WG570299
Vinyl chloride	mg/l	.025	0.0304	122.	55-142	WG570299
Xylenes, Total	mg/l	.075	0.0707	94.3	77-123	WG570299
4-Bromofluorobenzene				89.81	82-120	WG570299
Dibromofluoromethane				112.8	82-126	WG570299
Toluene-d8				101.2	92-112	WG570299
Sulfate	mg/l	40	39.9	99.8	90-110	WG570561
Ferrous Iron	mg/l	1	0.981	98.1	85-115	WG570855
Sulfate	mg/l	40	39.9	99.8	90-110	WG570889
Alkalinity	mg/l	100	98.0	98.0	85-115	WG570800
Ferrous Iron	mg/l	1	1.01	101.	85-115	WG570983
C10-C22 Hydrocarbons	mg/l	.75	0.698	93.1	70-130	WG569808
C22-C32 Hydrocarbons	mg/l	.75	0.759	101.	70-130	WG569808
o-Terphenyl				84.96	50-150	WG569808
Phosphorus,Total	mg/l	1	1.10	110.	85-115	WG570807
Phosphorus,Total	mg/l	1	1.01	101.	85-115	WG570550

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
1,1,1,2-Tetrachloroethane	mg/l	0.0226	0.0244	90.0	77-128	7.36	20	WG570077
1,1,1-Trichloroethane	mg/l	0.0257	0.0282	103.	71-126	9.42	20	WG570077
1,1,2,2-Tetrachloroethane	mg/l	0.0211	0.0239	84.0	78-130	12.5	20	WG570077
1,1,2-Trichloroethane	mg/l	0.0215	0.0236	86.0	81-121	9.21	20	WG570077
1,1-Dichloroethane	mg/l	0.0265	0.0288	106.	73-123	8.50	20	WG570077
1,1-Dichloroethene	mg/l	0.0273	0.0291	109.	54-134	6.61	20	WG570077
1,2,3-Trichlorobenzene	mg/l	0.0222	0.0230	89.0	77-130	3.52	20	WG570077
1,2,4-Trichlorobenzene	mg/l	0.0233	0.0233	93.0	76-127	0.0600	20	WG570077
1,2,4-Trimethylbenzene	mg/l	0.0238	0.0256	95.0	77-129	7.52	20	WG570077
1,2-Dichlorobenzene	mg/l	0.0225	0.0234	90.0	82-121	3.60	20	WG570077
1,2-Dichloroethane	mg/l	0.0253	0.0280	101.	69-128	10.2	20	WG570077
1,2-Dichloropropane	mg/l	0.0237	0.0255	95.0	77-121	7.45	20	WG570077
1,3,5-Trimethylbenzene	mg/l	0.0236	0.0257	94.0	78-127	8.42	20	WG570077
1,3-Dichlorobenzene	mg/l	0.0225	0.0242	90.0	77-127	7.61	20	WG570077
1,3-Dichloropropane	mg/l	0.0212	0.0233	85.0	78-117	9.19	20	WG570077
1,4-Dichlorobenzene	mg/l	0.0226	0.0235	90.0	79-117	3.80	20	WG570077
2-Butanone (MEK)	mg/l	0.122	0.141	97.0	58-144	15.1	20	WG570077
4-Methyl-2-pentanone (MIBK)	mg/l	0.132	0.155	106.	58-147	16.0	20	WG570077
Acetone	mg/l	0.0991	0.129	79.0	49-153	26.6*	21	WG570077
Benzene	mg/l	0.0265	0.0284	106.	72-119	6.83	20	WG570077
Bromodichloromethane	mg/l	0.0238	0.0257	95.0	75-127	7.61	20	WG570077

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Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

		Laboratory Control Sample						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Bromoform	mg/l	0.0186	0.0206	74.0	61-136	10.2	20	WG570077
Bromomethane	mg/l	0.0298	0.0339	119.	42-172	12.8	20	WG570077
Carbon disulfide	mg/l	0.0317	0.0334	127.	19-150	5.15	20	WG570077
Carbon tetrachloride	mg/l	0.0261	0.0280	104.	63-129	7.10	20	WG570077
Chlorobenzene	mg/l	0.0214	0.0228	86.0	78-123	6.31	20	WG570077
Chloroethane	mg/l	0.0291	0.0321	116.	52-164	9.54	20	WG570077
Chloroform	mg/l	0.0259	0.0281	104.	76-122	8.07	20	WG570077
cis-1,2-Dichloroethene	mg/l	0.0257	0.0271	103.	75-121	5.42	20	WG570077
cis-1,3-Dichloropropene	mg/l	0.0256	0.0274	102.	74-124	6.75	20	WG570077
Di-isopropyl ether	mg/l	0.0251	0.0277	100.	66-129	9.74	20	WG570077
Ethylbenzene	mg/l	0.0230	0.0244	92.0	77-124	5.86	20	WG570077
Hexachloro-1,3-butadiene	mg/l	0.0198	0.0202	79.0	71-134	2.41	20	WG570077
Isopropylbenzene	mg/l	0.0244	0.0261	97.0	74-126	7.00	20	WG570077
Methyl tert-butyl ether	mg/l	0.0261	0.0293	104.	67-127	11.4	20	WG570077
Methylene Chloride	mg/l	0.0246	0.0269	98.0	67-122	8.79	20	WG570077
n-Hexane	mg/l	0.0240	0.0266	96.0	41-143	10.3	20	WG570077
Naphthalene	mg/l	0.0227	0.0237	91.0	70-134	4.50	20	WG570077
Styrene	mg/l	0.0196	0.0206	78.0	69-145	4.73	20	WG570077
Tetrachloroethene	mg/l	0.0210	0.0223	84.0	69-131	5.91	20	WG570077
Toluene	mg/l	0.0242	0.0259	97.0	75-114	7.00	20	WG570077
trans-1,2-Dichloroethene	mg/l	0.0252	0.0267	101.	63-127	5.88	20	WG570077
trans-1,3-Dichloropropene	mg/l	0.0247	0.0261	99.0	69-124	5.70	20	WG570077
Trichloroethene	mg/l	0.0222	0.0231	89.0	69-131	3.99	20	WG570077
Vinyl acetate	mg/l	0.138	0.158	111.	47-161	13.5	20	WG570077
Vinyl chloride	mg/l	0.0277	0.0313	111.	55-142	12.0	20	WG570077
Xylenes, Total	mg/l	0.0690	0.0737	92.0	77-123	6.54	20	WG570077
4-Bromofluorobenzene				93.44	82-120			WG570077
Dibromofluoromethane				105.9	82-126			WG570077
Toluene-d8				101.2	92-112			WG570077
1,1,1,2-Tetrachloroethane	mg/l	0.0215	0.0216	86.0	77-128	0.550	20	WG569983
1,1,1-Trichloroethane	mg/l	0.0239	0.0242	96.0	71-126	1.25	20	WG569983
1,1,2,2-Tetrachloroethane	mg/l	0.0236	0.0241	94.0	78-130	2.05	20	WG569983
1,1,2-Trichloroethane	mg/l	0.0248	0.0244	99.0	81-121	1.37	20	WG569983
1,1-Dichloroethane	mg/l	0.0267	0.0270	107.	73-123	0.880	20	WG569983
1,1-Dichloroethene	mg/l	0.0288	0.0302	115.	54-134	4.89	20	WG569983
1,2,3-Trichlorobenzene	mg/l	0.0253	0.0265	101.	77-130	4.65	20	WG569983
1,2,4-Trichlorobenzene	mg/l	0.0259	0.0274	104.	76-127	5.50	20	WG569983
1,2,4-Trimethylbenzene	mg/l	0.0241	0.0243	96.0	77-129	1.14	20	WG569983
1,2-Dichlorobenzene	mg/l	0.0242	0.0248	97.0	82-121	2.37	20	WG569983
1,2-Dichloroethane	mg/l	0.0240	0.0240	96.0	69-128	0.0700	20	WG569983
1,2-Dichloropropane	mg/l	0.0252	0.0260	101.	77-121	3.00	20	WG569983
1,3,5-Trimethylbenzene	mg/l	0.0245	0.0247	98.0	78-127	0.700	20	WG569983
1,3-Dichlorobenzene	mg/l	0.0246	0.0245	98.0	77-127	0.470	20	WG569983
1,3-Dichloropropane	mg/l	0.0260	0.0254	104.	78-117	2.65	20	WG569983
1,4-Dichlorobenzene	mg/l	0.0258	0.0263	103.	79-117	2.04	20	WG569983
2-Butanone (MEK)	mg/l	0.122	0.125	97.0	58-144	2.77	20	WG569983
4-Methyl-2-pentanone (MIBK)	mg/l	0.126	0.134	100.	58-147	6.63	20	WG569983
Acetone	mg/l	0.127	0.134	102.	49-153	5.11	21	WG569983
Benzene	mg/l	0.0266	0.0269	106.	72-119	1.19	20	WG569983
Bromodichloromethane	mg/l	0.0224	0.0222	89.0	75-127	0.620	20	WG569983
Bromoform	mg/l	0.0246	0.0248	98.0	61-136	0.620	20	WG569983
Bromomethane	mg/l	0.0306	0.0286	122.	42-172	6.81	20	WG569983
Carbon disulfide	mg/l	0.0309	0.0338	123.	19-150	9.09	20	WG569983
Carbon tetrachloride	mg/l	0.0227	0.0236	91.0	63-129	3.94	20	WG569983
Chlorobenzene	mg/l	0.0250	0.0256	100.	78-123	2.39	20	WG569983
Chloroethane	mg/l	0.0307	0.0303	123.	52-164	1.21	20	WG569983
Chloroform	mg/l	0.0250	0.0252	100.	76-122	0.750	20	WG569983

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Quality Assurance Report
Level II

L551422

December 22, 2011

		Laboratory Control Sample				Duplicate		
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
cis-1,2-Dichloroethene	mg/l	0.0248	0.0252	99.0	75-121	1.82	20	WG569983
cis-1,3-Dichloropropene	mg/l	0.0245	0.0252	98.0	74-124	2.95	20	WG569983
Di-isopropyl ether	mg/l	0.0270	0.0269	108.	66-129	0.270	20	WG569983
Ethylbenzene	mg/l	0.0253	0.0254	101.	77-124	0.350	20	WG569983
Hexachloro-1,3-butadiene	mg/l	0.0246	0.0250	98.0	71-134	1.41	20	WG569983
Isopropylbenzene	mg/l	0.0267	0.0269	107.	74-126	0.500	20	WG569983
Methyl tert-butyl ether	mg/l	0.0269	0.0268	108.	67-127	0.650	20	WG569983
Methylene Chloride	mg/l	0.0267	0.0270	107.	67-122	1.32	20	WG569983
n-Hexane	mg/l	0.0275	0.0277	110.	41-143	0.630	20	WG569983
Naphthalene	mg/l	0.0240	0.0252	96.0	70-134	4.70	20	WG569983
Styrene	mg/l	0.0247	0.0252	99.0	69-145	2.16	20	WG569983
Tetrachloroethene	mg/l	0.0249	0.0258	100.	69-131	3.55	20	WG569983
Toluene	mg/l	0.0254	0.0262	102.	75-114	3.10	20	WG569983
trans-1,2-Dichloroethene	mg/l	0.0268	0.0270	107.	63-127	0.750	20	WG569983
trans-1,3-Dichloropropene	mg/l	0.0233	0.0241	93.0	69-124	3.46	20	WG569983
Trichloroethene	mg/l	0.0233	0.0247	93.0	69-131	5.45	20	WG569983
Vinyl acetate	mg/l	0.140	0.136	112.	47-161	2.89	20	WG569983
Vinyl chloride	mg/l	0.0294	0.0295	117.	55-142	0.480	20	WG569983
Xylenes, Total	mg/l	0.0759	0.0775	101.	77-123	2.12	20	WG569983
4-Bromofluorobenzene				99.99	82-120			WG569983
Dibromofluoromethane				101.3	82-126			WG569983
Toluene-d8				103.9	92-112			WG569983
TPH (GC/FID) Low Fraction	mg/l	5.28	5.08	96.0	70-124	3.98	20	WG570064
a,a,a-Trifluorotoluene(FID)				94.58	62-128			WG570064
TPH (GC/FID) Low Fraction	mg/l	6.02	5.85	110.	70-124	2.93	20	WG570015
a,a,a-Trifluorotoluene(FID)				98.59	62-128			WG570015
Nitrate	mg/l	8.15	8.26	102.	90-110	1.34	20	WG569948
Sulfate	mg/l	40.7	40.7	102.	90-110	0	20	WG569948
Alkalinity	mg/l	110.	97.0	110.	85-115	12.6	20	WG570417
1,1,1,2-Tetrachloroethane	mg/l	0.0230	0.0231	92.0	77-128	0.290	20	WG570299
1,1,1-Trichloroethane	mg/l	0.0242	0.0253	97.0	71-126	4.27	20	WG570299
1,1,2,2-Tetrachloroethane	mg/l	0.0235	0.0241	94.0	78-130	2.52	20	WG570299
1,1,2-Trichloroethane	mg/l	0.0228	0.0233	91.0	81-121	1.92	20	WG570299
1,1-Dichloroethane	mg/l	0.0266	0.0280	106.	73-123	5.10	20	WG570299
1,1-Dichloroethene	mg/l	0.0245	0.0253	98.0	54-134	3.43	20	WG570299
1,2,3-Trichlorobenzene	mg/l	0.0231	0.0243	92.0	77-130	5.04	20	WG570299
1,2,4-Trichlorobenzene	mg/l	0.0223	0.0235	89.0	76-127	5.17	20	WG570299
1,2,4-Trimethylbenzene	mg/l	0.0245	0.0245	98.0	77-129	0.140	20	WG570299
1,2-Dichlorobenzene	mg/l	0.0234	0.0243	94.0	82-121	3.79	20	WG570299
1,2-Dichloroethane	mg/l	0.0268	0.0285	107.	69-128	6.15	20	WG570299
1,2-Dichloropropane	mg/l	0.0252	0.0265	101.	77-121	4.82	20	WG570299
1,3,5-Trimethylbenzene	mg/l	0.0244	0.0245	98.0	78-127	0.330	20	WG570299
1,3-Dichlorobenzene	mg/l	0.0226	0.0230	90.0	77-127	1.72	20	WG570299
1,3-Dichloropropane	mg/l	0.0224	0.0227	90.0	78-117	1.33	20	WG570299
1,4-Dichlorobenzene	mg/l	0.0230	0.0238	92.0	79-117	3.27	20	WG570299
2-Butanone (MEK)	mg/l	0.138	0.150	110.	58-144	8.63	20	WG570299
4-Methyl-2-pentanone (MIBK)	mg/l	0.145	0.157	116.	58-147	7.97	20	WG570299
Acetone	mg/l	0.131	0.146	105.	49-153	10.3	21	WG570299
Benzene	mg/l	0.0265	0.0276	106.	72-119	3.91	20	WG570299

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Tax I.D. 62-0814289

Est. 1970

ARCADIS US - MI
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

		Laboratory Control Sample Duplicate						
Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Bromodichloromethane	mg/l	0.0257	0.0272	103.	75-127	5.66	20	WG570299
Bromoform	mg/l	0.0198	0.0199	79.0	61-136	0.400	20	WG570299
Bromomethane	mg/l	0.0289	0.0316	115.	42-172	9.12	20	WG570299
Carbon disulfide	mg/l	0.0234	0.0242	93.0	19-150	3.71	20	WG570299
Carbon tetrachloride	mg/l	0.0244	0.0254	97.0	63-129	4.28	20	WG570299
Chlorobenzene	mg/l	0.0225	0.0222	90.0	78-123	1.47	20	WG570299
Chloroethane	mg/l	0.0291	0.0317	116.	52-164	8.48	20	WG570299
Chloroform	mg/l	0.0268	0.0282	107.	76-122	4.97	20	WG570299
cis-1,2-Dichloroethene	mg/l	0.0266	0.0272	106.	75-121	2.46	20	WG570299
cis-1,3-Dichloropropene	mg/l	0.0269	0.0280	108.	74-124	3.97	20	WG570299
Di-isopropyl ether	mg/l	0.0262	0.0281	105.	66-129	6.83	20	WG570299
Ethylbenzene	mg/l	0.0237	0.0235	95.0	77-124	0.880	20	WG570299
Hexachloro-1,3-butadiene	mg/l	0.0215	0.0219	86.0	71-134	1.99	20	WG570299
Isopropylbenzene	mg/l	0.0233	0.0229	93.0	74-126	1.85	20	WG570299
Methyl tert-butyl ether	mg/l	0.0256	0.0276	102.	67-127	7.38	20	WG570299
Methylene Chloride	mg/l	0.0252	0.0264	101.	67-122	4.70	20	WG570299
n-Hexane	mg/l	0.0219	0.0232	87.0	41-143	5.82	20	WG570299
Naphthalene	mg/l	0.0251	0.0262	100.	70-134	4.42	20	WG570299
Styrene	mg/l	0.0208	0.0207	83.0	69-145	0.520	20	WG570299
Tetrachloroethene	mg/l	0.0212	0.0209	85.0	69-131	1.38	20	WG570299
Toluene	mg/l	0.0245	0.0253	98.0	75-114	3.48	20	WG570299
trans-1,2-Dichloroethene	mg/l	0.0247	0.0255	99.0	63-127	3.12	20	WG570299
trans-1,3-Dichloropropene	mg/l	0.0259	0.0271	104.	69-124	4.47	20	WG570299
Trichloroethene	mg/l	0.0234	0.0234	93.0	69-131	0.190	20	WG570299
Vinyl acetate	mg/l	0.132	0.143	105.	47-161	8.36	20	WG570299
Vinyl chloride	mg/l	0.0282	0.0304	113.	55-142	7.33	20	WG570299
Xylenes, Total	mg/l	0.0712	0.0707	95.0	77-123	0.730	20	WG570299
4-Bromofluorobenzene				93.82	82-120			WG570299
Dibromofluoromethane				107.8	82-126			WG570299
Toluene-d8				101.0	92-112			WG570299
Sulfate	mg/l	39.9	39.9	100.	90-110	0	20	WG570561
Ferrous Iron	mg/l	1.02	0.981	102.	85-115	3.90	20	WG570855
Sulfate	mg/l	40.0	39.9	100.	90-110	0.250	20	WG570889
Alkalinity	mg/l	96.0	98.0	96.0	85-115	2.06	20	WG570800
Ferrous Iron	mg/l	0.999	1.01	100.	85-115	1.10	20	WG570983
C10-C22 Hydrocarbons	mg/l	0.683	0.698	91.0	70-130	2.27	20	WG569808
C22-C32 Hydrocarbons	mg/l	0.772	0.759	103.	70-130	1.66	20	WG569808
o-Terphenyl				83.92	50-150			WG569808
Phosphorus,Total	mg/l	1.11	1.10	111.	85-115	0.905	20	WG570807
Phosphorus,Total	mg/l	0.996	1.01	100.	85-115	1.40	20	WG570550

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10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,1,1,2-Tetrachloroethane	mg/l	0.0226	0	.025	90.4	71-130	L551588-02	WG570077
1,1,1-Trichloroethane	mg/l	0.0253	0	.025	101.	58-137	L551588-02	WG570077
1,1,2,2-Tetrachloroethane	mg/l	0.0221	0	.025	88.5	64-149	L551588-02	WG570077
1,1,2-Trichloroethane	mg/l	0.0218	0	.025	87.1	73-128	L551588-02	WG570077
1,1-Dichloroethane	mg/l	0.0254	0	.025	101.	58-133	L551588-02	WG570077
1,1-Dichloroethene	mg/l	0.0272	0	.025	109.	32-152	L551588-02	WG570077
1,2,3-Trichlorobenzene	mg/l	0.0226	0	.025	90.4	68-135	L551588-02	WG570077
1,2,4-Trichlorobenzene	mg/l	0.0240	0	.025	96.0	67-133	L551588-02	WG570077
1,2,4-Trimethylbenzene	mg/l	0.0241	0	.025	96.4	62-141	L551588-02	WG570077
1,2-Dichlorobenzene	mg/l	0.0221	0	.025	88.4	75-125	L551588-02	WG570077
1,2-Dichloroethane	mg/l	0.0242	0	.025	96.7	59-135	L551588-02	WG570077
1,2-Dichloropropane	mg/l	0.0229	0	.025	91.7	68-126	L551588-02	WG570077
1,3,5-Trimethylbenzene	mg/l	0.0244	0	.025	97.7	67-136	L551588-02	WG570077
1,3-Dichlorobenzene	mg/l	0.0230	0	.025	92.0	69-131	L551588-02	WG570077
1,3-Dichloropropane	mg/l	0.0215	0	.025	86.0	70-122	L551588-02	WG570077
1,4-Dichlorobenzene	mg/l	0.0226	0	.025	90.5	70-123	L551588-02	WG570077
2-Butanone (MEK)	mg/l	0.129	0	.125	103.	51-149	L551588-02	WG570077
4-Methyl-2-pentanone (MIBK)	mg/l	0.138	0	.125	110.	53-154	L551588-02	WG570077
Acetone	mg/l	0.105	0	.125	83.7	34-146	L551588-02	WG570077
Benzene	mg/l	0.0254	0	.025	102.	51-134	L551588-02	WG570077
Bromodichloromethane	mg/l	0.0229	0	.025	91.6	67-132	L551588-02	WG570077
Bromoform	mg/l	0.0193	0	.025	77.3	59-137	L551588-02	WG570077
Bromomethane	mg/l	0.0278	0	.025	111.	23-177	L551588-02	WG570077
Carbon disulfide	mg/l	0.0311	0	.025	124.	10-165	L551588-02	WG570077
Carbon tetrachloride	mg/l	0.0261	0	.025	104.	49-140	L551588-02	WG570077
Chlorobenzene	mg/l	0.0218	0	.025	87.1	69-126	L551588-02	WG570077
Chloroethane	mg/l	0.0270	0	.025	108.	32-177	L551588-02	WG570077
Chloroform	mg/l	0.0247	0	.025	98.6	64-130	L551588-02	WG570077
cis-1,2-Dichloroethene	mg/l	0.0272	0.00220	.025	100.	54-137	L551588-02	WG570077
cis-1,3-Dichloropropene	mg/l	0.0244	0	.025	97.7	63-127	L551588-02	WG570077
Di-isopropyl ether	mg/l	0.0241	0	.025	96.4	58-133	L551588-02	WG570077
Ethylbenzene	mg/l	0.0236	0	.025	94.4	64-135	L551588-02	WG570077
Hexachloro-1,3-butadiene	mg/l	0.0209	0	.025	83.6	64-140	L551588-02	WG570077
Isopropylbenzene	mg/l	0.0253	0	.025	101.	62-134	L551588-02	WG570077
Methyl tert-butyl ether	mg/l	0.0256	0	.025	102.	55-136	L551588-02	WG570077
Methylene Chloride	mg/l	0.0236	0	.025	94.4	52-130	L551588-02	WG570077
n-Hexane	mg/l	0.0243	0	.025	97.1	16-164	L551588-02	WG570077
Naphthalene	mg/l	0.0233	0	.025	93.0	65-140	L551588-02	WG570077
Styrene	mg/l	0.0198	0	.025	79.1	58-152	L551588-02	WG570077
Tetrachloroethene	mg/l	0.0223	0	.025	89.2	56-139	L551588-02	WG570077
Toluene	mg/l	0.0253	0	.025	101.	61-126	L551588-02	WG570077
trans-1,2-Dichloroethene	mg/l	0.0248	0	.025	99.2	45-137	L551588-02	WG570077
trans-1,3-Dichloropropene	mg/l	0.0239	0	.025	95.4	59-130	L551588-02	WG570077
Trichloroethene	mg/l	0.0222	0	.025	88.6	40-155	L551588-02	WG570077
Vinyl acetate	mg/l	0.137	0	.125	109.	36-186	L551588-02	WG570077
Vinyl chloride	mg/l	0.0277	0	.025	111.	32-159	L551588-02	WG570077
Xylenes, Total	mg/l	0.0708	0	.075	94.4	64-133	L551588-02	WG570077
4-Bromofluorobenzene					96.61	82-120		WG570077
Dibromofluoromethane					105.3	82-126		WG570077
Toluene-d8					101.0	92-112		WG570077
1,1,1,2-Tetrachloroethane	mg/l	0.0218	0	.025	87.2	71-130	L551064-20	WG569983
1,1,1-Trichloroethane	mg/l	0.0260	0	.025	104.	58-137	L551064-20	WG569983
1,1,2,2-Tetrachloroethane	mg/l	0.0176	0	.025	70.5	64-149	L551064-20	WG569983
1,1,2-Trichloroethane	mg/l	0.0248	0	.025	99.4	73-128	L551064-20	WG569983
1,1-Dichloroethane	mg/l	0.0281	0	.025	112.	58-133	L551064-20	WG569983
1,1-Dichloroethene	mg/l	0.0327	0	.025	131.	32-152	L551064-20	WG569983
1,2,3-Trichlorobenzene	mg/l	0.0263	0	.025	105.	68-135	L551064-20	WG569983
1,2,4-Trichlorobenzene	mg/l	0.0275	0	.025	110.	67-133	L551064-20	WG569983

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Level II

L551422

December 22, 2011

		Matrix Spike						
Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,2,4-Trimethylbenzene	mg/l	0.0348	0.00991	.025	99.6	62-141	L551064-20	WG569983
1,2-Dichlorobenzene	mg/l	0.0255	0	.025	102.	75-125	L551064-20	WG569983
1,2-Dichloroethane	mg/l	0.0249	0	.025	99.7	59-135	L551064-20	WG569983
1,2-Dichloropropane	mg/l	0.0272	0.00209	.025	100.	68-126	L551064-20	WG569983
1,3,5-Trimethylbenzene	mg/l	0.0278	0.00222	.025	102.	67-136	L551064-20	WG569983
1,3-Dichlorobenzene	mg/l	0.0248	0	.025	99.2	69-131	L551064-20	WG569983
1,3-Dichloropropane	mg/l	0.0259	0	.025	104.	70-122	L551064-20	WG569983
1,4-Dichlorobenzene	mg/l	0.0271	0	.025	108.	70-123	L551064-20	WG569983
2-Butanone (MEK)	mg/l	0.136	0	.125	109.	51-149	L551064-20	WG569983
4-Methyl-2-pentanone (MIBK)	mg/l	0.136	0	.125	109.	53-154	L551064-20	WG569983
Acetone	mg/l	0.147	0.00512	.125	113.	34-146	L551064-20	WG569983
Benzene	mg/l	0.140	0.110	.025	118.	51-134	L551064-20	WG569983
Bromodichloromethane	mg/l	0.0233	0	.025	93.1	67-132	L551064-20	WG569983
Bromoform	mg/l	0.0256	0	.025	102.	59-137	L551064-20	WG569983
Bromomethane	mg/l	0.0279	0	.025	112.	23-177	L551064-20	WG569983
Carbon disulfide	mg/l	0.0347	0	.025	139.	10-165	L551064-20	WG569983
Carbon tetrachloride	mg/l	0.0252	0	.025	101.	49-140	L551064-20	WG569983
Chlorobenzene	mg/l	0.0252	0	.025	101.	69-126	L551064-20	WG569983
Chloroethane	mg/l	0.0304	0	.025	122.	32-177	L551064-20	WG569983
Chloroform	mg/l	0.0265	0.000605	.025	104.	64-130	L551064-20	WG569983
cis-1,2-Dichloroethene	mg/l	0.0260	0	.025	104.	54-137	L551064-20	WG569983
cis-1,3-Dichloropropene	mg/l	0.0251	0	.025	100.	63-127	L551064-20	WG569983
Di-isopropyl ether	mg/l	0.0279	0	.025	112.	58-133	L551064-20	WG569983
Ethylbenzene	mg/l	0.0364	0.0100	.025	105.	64-135	L551064-20	WG569983
Hexachloro-1,3-butadiene	mg/l	0.0258	0	.025	103.	64-140	L551064-20	WG569983
Isopropylbenzene	mg/l	0.0290	0.000951	.025	112.	62-134	L551064-20	WG569983
Methyl tert-butyl ether	mg/l	0.0278	0	.025	111.	55-136	L551064-20	WG569983
Methylene Chloride	mg/l	0.0274	0	.025	110.	52-130	L551064-20	WG569983
n-Hexane	mg/l	0.0330	0.00376	.025	117.	16-164	L551064-20	WG569983
Naphthalene	mg/l	0.0274	0	.025	109.	65-140	L551064-20	WG569983
Styrene	mg/l	0.0255	0.000308	.025	101.	58-152	L551064-20	WG569983
Tetrachloroethene	mg/l	0.0268	0	.025	107.	56-139	L551064-20	WG569983
Toluene	mg/l	0.0639	0.0370	.025	108.	61-126	L551064-20	WG569983
trans-1,2-Dichloroethene	mg/l	0.0279	0	.025	112.	45-137	L551064-20	WG569983
trans-1,3-Dichloropropene	mg/l	0.0240	0.000583	.025	93.6	59-130	L551064-20	WG569983
Trichloroethene	mg/l	0.0326	0	.025	130.	40-155	L551064-20	WG569983
Vinyl acetate	mg/l	0.0251	0	.125	20.1*	36-186	L551064-20	WG569983
Vinyl chloride	mg/l	0.0316	0	.025	126.	32-159	L551064-20	WG569983
Xylenes, Total	mg/l	0.128	0.0500	.075	103.	64-133	L551064-20	WG569983
4-Bromofluorobenzene					97.99	82-120		WG569983
Dibromofluoromethane					99.32	82-126		WG569983
Toluene-d8					104.7	92-112		WG569983
TPH (GC/FID) Low Fraction	mg/l	5.20	0	5.5	94.6	55-109	L551422-05	WG570064
a,a,a-Trifluorotoluene(FID)					95.14	62-128		WG570064
TPH (GC/FID) Low Fraction	mg/l	6.18	0	5.5	112.	58-122	L551485-01	WG570015
a,a,a-Trifluorotoluene(FID)					98.55	62-128		WG570015
Nitrate	mg/l	5.11	0.190	5	98.4	80-120	L551382-12	WG569948
Sulfate	mg/l	72.0	23.4	50	97.2	80-120	L551382-12	WG569948
Alkalinity	mg/l	200.	130.	100	70.0*	80-120	L551601-01	WG570417

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Quality Assurance Report
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L551422

December 22, 2011

		Matrix Spike						
Analyte	Units	MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
1,1,1,2-Tetrachloroethane	mg/l	0.0221	0	.025	88.6	71-130	L551841-01	WG570299
1,1,1-Trichloroethane	mg/l	0.0242	0	.025	96.7	58-137	L551841-01	WG570299
1,1,2,2-Tetrachloroethane	mg/l	0.0228	0	.025	91.1	64-149	L551841-01	WG570299
1,1,2-Trichloroethane	mg/l	0.0226	0	.025	90.2	73-128	L551841-01	WG570299
1,1-Dichloroethane	mg/l	0.0264	0	.025	105.	58-133	L551841-01	WG570299
1,1-Dichloroethene	mg/l	0.0249	0	.025	99.8	32-152	L551841-01	WG570299
1,2,3-Trichlorobenzene	mg/l	0.0237	0	.025	94.7	68-135	L551841-01	WG570299
1,2,4-Trichlorobenzene	mg/l	0.0260	0	.025	104.	67-133	L551841-01	WG570299
1,2,4-Trimethylbenzene	mg/l	0.0393	0.0118	.025	110.	62-141	L551841-01	WG570299
1,2-Dichlorobenzene	mg/l	0.0233	0	.025	93.1	75-125	L551841-01	WG570299
1,2-Dichloroethane	mg/l	0.0248	0	.025	99.2	59-135	L551841-01	WG570299
1,2-Dichloropropane	mg/l	0.0248	0	.025	99.2	68-126	L551841-01	WG570299
1,3,5-Trimethylbenzene	mg/l	0.0301	0.00424	.025	103.	67-136	L551841-01	WG570299
1,3-Dichlorobenzene	mg/l	0.0228	0	.025	91.2	69-131	L551841-01	WG570299
1,3-Dichloropropane	mg/l	0.0219	0	.025	87.8	70-122	L551841-01	WG570299
1,4-Dichlorobenzene	mg/l	0.0235	0	.025	94.0	70-123	L551841-01	WG570299
2-Butanone (MEK)	mg/l	0.142	0	.125	113.	51-149	L551841-01	WG570299
4-Methyl-2-pentanone (MIBK)	mg/l	0.155	0	.125	124.	53-154	L551841-01	WG570299
Acetone	mg/l	0.122	0	.125	97.3	34-146	L551841-01	WG570299
Benzene	mg/l	0.0296	0.00402	.025	102.	51-134	L551841-01	WG570299
Bromodichloromethane	mg/l	0.0239	0	.025	95.5	67-132	L551841-01	WG570299
Bromoform	mg/l	0.0194	0	.025	77.5	59-137	L551841-01	WG570299
Bromomethane	mg/l	0.0247	0	.025	98.8	23-177	L551841-01	WG570299
Carbon disulfide	mg/l	0.0207	0	.025	83.0	10-165	L551841-01	WG570299
Carbon tetrachloride	mg/l	0.0242	0	.025	96.7	49-140	L551841-01	WG570299
Chlorobenzene	mg/l	0.0216	0	.025	86.5	69-126	L551841-01	WG570299
Chloroethane	mg/l	0.0256	0	.025	102.	32-177	L551841-01	WG570299
Chloroform	mg/l	0.0264	0	.025	106.	64-130	L551841-01	WG570299
cis-1,2-Dichloroethene	mg/l	0.0249	0	.025	99.7	54-137	L551841-01	WG570299
cis-1,3-Dichloropropene	mg/l	0.0252	0	.025	101.	63-127	L551841-01	WG570299
Di-isopropyl ether	mg/l	0.0271	0	.025	108.	58-133	L551841-01	WG570299
Ethylbenzene	mg/l	0.0295	0.00457	.025	99.7	64-135	L551841-01	WG570299
Hexachloro-1,3-butadiene	mg/l	0.0213	0	.025	85.0	64-140	L551841-01	WG570299
Isopropylbenzene	mg/l	0.0269	0.000707	.025	105.	62-134	L551841-01	WG570299
Methyl tert-butyl ether	mg/l	0.0399	0.0120	.025	111.	55-136	L551841-01	WG570299
Methylene Chloride	mg/l	0.0251	0.00207	.025	92.0	52-130	L551841-01	WG570299
n-Hexane	mg/l	0.0279	0.00960	.025	73.0	16-164	L551841-01	WG570299
Naphthalene	mg/l	0.0287	0.00172	.025	108.	65-140	L551841-01	WG570299
Styrene	mg/l	0.0202	0.000526	.025	78.8	58-152	L551841-01	WG570299
Tetrachloroethene	mg/l	0.0196	0	.025	78.5	56-139	L551841-01	WG570299
Toluene	mg/l	0.0237	0.000894	.025	91.1	61-126	L551841-01	WG570299
trans-1,2-Dichloroethene	mg/l	0.0229	0	.025	91.7	45-137	L551841-01	WG570299
trans-1,3-Dichloropropene	mg/l	0.0248	0	.025	99.4	59-130	L551841-01	WG570299
Trichloroethene	mg/l	0.0218	0	.025	87.3	40-155	L551841-01	WG570299
Vinyl acetate	mg/l	0.150	0	.125	120.	36-186	L551841-01	WG570299
Vinyl chloride	mg/l	0.0223	0	.025	89.0	32-159	L551841-01	WG570299
Xylenes, Total	mg/l	0.0881	0.0155	.075	96.8	64-133	L551841-01	WG570299
4-Bromofluorobenzene					94.56	82-120		WG570299
Dibromofluoromethane					106.1	82-126		WG570299
Toluene-d8					101.0	92-112		WG570299
Ferrous Iron	mg/l	1.63	0	1.5	109.	80-120	L551384-03	WG570855
Sulfate	mg/l	56.7	6.20	50	101.	80-120	L552466-04	WG570889
Alkalinity	mg/l	95.0	0	100	95.0	80-120	L551644-01	WG570800

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Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Ferrous Iron	mg/l	1.59	0.0800	1.5	101.	80-120	L551760-01	WG570983
Phosphorus,Total	mg/l	3.60	0.830	2.5	111.	80-120	L551422-04	WG570807
Phosphorus,Total	mg/l	3.05	0.420	2.5	105.	80-120	L551382-04	WG570550

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
1,1,1,2-Tetrachloroethane	mg/l	0.0234	0.0226	93.7	71-130	3.58	20	L551588-02	WG570077
1,1,1-Trichloroethane	mg/l	0.0257	0.0253	103.	58-137	1.56	20	L551588-02	WG570077
1,1,2,2-Tetrachloroethane	mg/l	0.0234	0.0221	93.6	64-149	5.62	20	L551588-02	WG570077
1,1,2-Trichloroethane	mg/l	0.0232	0.0218	92.9	73-128	6.40	20	L551588-02	WG570077
1,1-Dichloroethane	mg/l	0.0260	0.0254	104.	58-133	2.49	20	L551588-02	WG570077
1,1-Dichloroethene	mg/l	0.0280	0.0272	112.	32-152	2.63	20	L551588-02	WG570077
1,2,3-Trichlorobenzene	mg/l	0.0217	0.0226	86.8	68-135	4.09	20	L551588-02	WG570077
1,2,4-Trichlorobenzene	mg/l	0.0228	0.0240	91.1	67-133	5.31	20	L551588-02	WG570077
1,2,4-Trimethylbenzene	mg/l	0.0251	0.0241	100.	62-141	4.02	20	L551588-02	WG570077
1,2-Dichlorobenzene	mg/l	0.0228	0.0221	91.2	75-125	3.09	20	L551588-02	WG570077
1,2-Dichloroethane	mg/l	0.0248	0.0242	99.4	59-135	2.70	20	L551588-02	WG570077
1,2-Dichloropropane	mg/l	0.0236	0.0229	94.5	68-126	3.02	20	L551588-02	WG570077
1,3,5-Trimethylbenzene	mg/l	0.0253	0.0244	101.	67-136	3.58	20	L551588-02	WG570077
1,3-Dichlorobenzene	mg/l	0.0242	0.0230	96.8	69-131	5.08	20	L551588-02	WG570077
1,3-Dichloropropane	mg/l	0.0228	0.0215	91.2	70-122	5.85	20	L551588-02	WG570077
1,4-Dichlorobenzene	mg/l	0.0236	0.0226	94.4	70-123	4.16	20	L551588-02	WG570077
2-Butanone (MEK)	mg/l	0.138	0.129	110.	51-149	6.54	22	L551588-02	WG570077
4-Methyl-2-pentanone (MIBK)	mg/l	0.148	0.138	118.	53-154	6.68	21	L551588-02	WG570077
Acetone	mg/l	0.108	0.105	86.2	34-146	2.95	22	L551588-02	WG570077
Benzene	mg/l	0.0261	0.0254	104.	51-134	2.59	20	L551588-02	WG570077
Bromodichloromethane	mg/l	0.0236	0.0229	94.5	67-132	3.11	20	L551588-02	WG570077
Bromoform	mg/l	0.0205	0.0193	81.8	59-137	5.67	20	L551588-02	WG570077
Bromomethane	mg/l	0.0265	0.0278	106.	23-177	4.68	21	L551588-02	WG570077
Carbon disulfide	mg/l	0.0315	0.0311	126.	10-165	1.25	22	L551588-02	WG570077
Carbon tetrachloride	mg/l	0.0268	0.0261	107.	49-140	2.87	20	L551588-02	WG570077
Chlorobenzene	mg/l	0.0233	0.0218	93.1	69-126	6.59	20	L551588-02	WG570077
Chloroethane	mg/l	0.0261	0.0270	104.	32-177	3.33	21	L551588-02	WG570077
Chloroform	mg/l	0.0255	0.0247	102.	64-130	3.38	20	L551588-02	WG570077
cis-1,2-Dichloroethene	mg/l	0.0281	0.0272	104.	54-137	3.29	20	L551588-02	WG570077
cis-1,3-Dichloropropene	mg/l	0.0253	0.0244	101.	63-127	3.52	20	L551588-02	WG570077
Di-isopropyl ether	mg/l	0.0247	0.0241	98.6	58-133	2.30	20	L551588-02	WG570077
Ethylbenzene	mg/l	0.0252	0.0236	101.	64-135	6.51	20	L551588-02	WG570077
Hexachloro-1,3-butadiene	mg/l	0.0200	0.0209	80.0	64-140	4.45	20	L551588-02	WG570077
Isopropylbenzene	mg/l	0.0267	0.0253	107.	62-134	5.31	20	L551588-02	WG570077
Methyl tert-butyl ether	mg/l	0.0264	0.0256	105.	55-136	3.16	20	L551588-02	WG570077
Methylene Chloride	mg/l	0.0241	0.0236	96.5	52-130	2.25	20	L551588-02	WG570077
n-Hexane	mg/l	0.0245	0.0243	98.2	16-164	1.08	20	L551588-02	WG570077
Naphthalene	mg/l	0.0233	0.0233	93.4	65-140	0.370	20	L551588-02	WG570077
Styrene	mg/l	0.0199	0.0198	79.6	58-152	0.600	20	L551588-02	WG570077
Tetrachloroethene	mg/l	0.0230	0.0223	92.2	56-139	3.20	20	L551588-02	WG570077
Toluene	mg/l	0.0264	0.0253	106.	61-126	4.18	20	L551588-02	WG570077
trans-1,2-Dichloroethene	mg/l	0.0260	0.0248	104.	45-137	4.77	20	L551588-02	WG570077
trans-1,3-Dichloropropene	mg/l	0.0252	0.0239	101.	59-130	5.30	20	L551588-02	WG570077
Trichloroethene	mg/l	0.0233	0.0222	93.1	40-155	4.94	20	L551588-02	WG570077
Vinyl acetate	mg/l	0.141	0.137	113.	36-186	3.35	20	L551588-02	WG570077
Vinyl chloride	mg/l	0.0267	0.0277	107.	32-159	3.81	21	L551588-02	WG570077
Xylenes, Total	mg/l	0.0753	0.0708	100.	64-133	6.15	20	L551588-02	WG570077
4-Bromofluorobenzene				98.37	82-120				WG570077

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Est. 1970

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10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

Analyte	Units	Matrix Spike MSD	Ref	Duplicate %Rec	Limit	RPD	Limit	Ref Samp	Batch
Dibromofluoromethane				103.1	82-126				
Toluene-d8				100.8	92-112				
1,1,1,2-Tetrachloroethane	mg/l	0.0207	0.0218	83.0	71-130	4.93	20	L551064-20	WG569983
1,1,1-Trichloroethane	mg/l	0.0246	0.0260	98.4	58-137	5.59	20	L551064-20	WG569983
1,1,2,2-Tetrachloroethane	mg/l	0.0155	0.0176	61.9*	64-149	13.0	20	L551064-20	WG569983
1,1,2-Trichloroethane	mg/l	0.0240	0.0248	95.8	73-128	3.63	20	L551064-20	WG569983
1,1-Dichloroethane	mg/l	0.0261	0.0281	104.	58-133	7.39	20	L551064-20	WG569983
1,1-Dichloroethene	mg/l	0.0295	0.0327	118.	32-152	10.2	20	L551064-20	WG569983
1,2,3-Trichlorobenzene	mg/l	0.0254	0.0263	102.	68-135	3.59	20	L551064-20	WG569983
1,2,4-Trichlorobenzene	mg/l	0.0267	0.0275	107.	67-133	2.84	20	L551064-20	WG569983
1,2,4-Trimethylbenzene	mg/l	0.0330	0.0348	92.3	62-141	5.37	20	L551064-20	WG569983
1,2-Dichlorobenzene	mg/l	0.0238	0.0255	95.4	75-125	6.73	20	L551064-20	WG569983
1,2-Dichloroethane	mg/l	0.0240	0.0249	95.8	59-135	3.93	20	L551064-20	WG569983
1,2-Dichloropropane	mg/l	0.0249	0.0272	91.2	68-126	8.80	20	L551064-20	WG569983
1,3,5-Trimethylbenzene	mg/l	0.0263	0.0278	96.5	67-136	5.26	20	L551064-20	WG569983
1,3-Dichlorobenzene	mg/l	0.0235	0.0248	94.1	69-131	5.27	20	L551064-20	WG569983
1,3-Dichloropropane	mg/l	0.0256	0.0259	102.	70-122	1.09	20	L551064-20	WG569983
1,4-Dichlorobenzene	mg/l	0.0252	0.0271	101.	70-123	7.53	20	L551064-20	WG569983
2-Butanone (MEK)	mg/l	0.138	0.136	110.	51-149	1.29	22	L551064-20	WG569983
4-Methyl-2-pentanone (MIBK)	mg/l	0.135	0.136	108.	53-154	0.490	21	L551064-20	WG569983
Acetone	mg/l	0.145	0.147	112.	34-146	1.26	22	L551064-20	WG569983
Benzene	mg/l	0.130	0.140	81.7	51-134	6.83	20	L551064-20	WG569983
Bromodichloromethane	mg/l	0.0219	0.0233	87.5	67-132	6.19	20	L551064-20	WG569983
Bromoform	mg/l	0.0248	0.0256	99.2	59-137	3.13	20	L551064-20	WG569983
Bromomethane	mg/l	0.0267	0.0279	107.	23-177	4.61	21	L551064-20	WG569983
Carbon disulfide	mg/l	0.0311	0.0347	124.	10-165	11.0	22	L551064-20	WG569983
Carbon tetrachloride	mg/l	0.0235	0.0252	93.8	49-140	7.33	20	L551064-20	WG569983
Chlorobenzene	mg/l	0.0244	0.0252	97.4	69-126	3.23	20	L551064-20	WG569983
Chloroethane	mg/l	0.0290	0.0304	116.	32-177	4.64	21	L551064-20	WG569983
Chloroform	mg/l	0.0249	0.0265	97.0	64-130	6.32	20	L551064-20	WG569983
cis-1,2-Dichloroethene	mg/l	0.0242	0.0260	96.7	54-137	7.29	20	L551064-20	WG569983
cis-1,3-Dichloropropene	mg/l	0.0240	0.0251	96.2	63-127	4.39	20	L551064-20	WG569983
Di-isopropyl ether	mg/l	0.0261	0.0279	104.	58-133	6.78	20	L551064-20	WG569983
Ethylbenzene	mg/l	0.0339	0.0364	95.5	64-135	7.05	20	L551064-20	WG569983
Hexachloro-1,3-butadiene	mg/l	0.0245	0.0258	98.0	64-140	5.27	20	L551064-20	WG569983
Isopropylbenzene	mg/l	0.0273	0.0290	105.	62-134	5.93	20	L551064-20	WG569983
Methyl tert-butyl ether	mg/l	0.0265	0.0278	106.	55-136	4.60	20	L551064-20	WG569983
Methylene Chloride	mg/l	0.0253	0.0274	101.	52-130	7.97	20	L551064-20	WG569983
n-Hexane	mg/l	0.0311	0.0330	110.	16-164	5.88	20	L551064-20	WG569983
Naphthalene	mg/l	0.0269	0.0274	108.	65-140	1.70	20	L551064-20	WG569983
Styrene	mg/l	0.0241	0.0255	95.3	58-152	5.42	20	L551064-20	WG569983
Tetrachloroethene	mg/l	0.0256	0.0268	102.	56-139	4.33	20	L551064-20	WG569983
Toluene	mg/l	0.0599	0.0639	91.6	61-126	6.44	20	L551064-20	WG569983
trans-1,2-Dichloroethene	mg/l	0.0263	0.0279	105.	45-137	5.95	20	L551064-20	WG569983
trans-1,3-Dichloropropene	mg/l	0.0234	0.0240	91.3	59-130	2.47	20	L551064-20	WG569983
Trichloroethene	mg/l	0.0319	0.0326	128.	40-155	2.03	20	L551064-20	WG569983
Vinyl acetate	mg/l	0.0129	0.0251	10.4*	36-186	63.9*	20	L551064-20	WG569983
Vinyl chloride	mg/l	0.0291	0.0316	116.	32-159	8.14	21	L551064-20	WG569983
Xylenes, Total	mg/l	0.121	0.128	94.8	64-133	5.21	20	L551064-20	WG569983
4-Bromofluorobenzene				98.51	82-120				WG569983
Dibromofluoromethane				97.66	82-126				WG569983
Toluene-d8				103.4	92-112				WG569983
TPH (GC/FID) Low Fraction	mg/l	4.87	5.20	88.5	55-109	6.57	20	L551422-05	WG570064
a,a,a-Trifluorotoluene(FID)				93.47	62-128				WG570064
TPH (GC/FID) Low Fraction	mg/l	6.11	6.18	111.	58-122	1.25	20	L551485-01	WG570015

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Quality Assurance Report
Level II

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December 22, 2011

Analyte	Units	Matrix Spike MSD	Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
a,a,a-Trifluorotoluene(FID)				98.42	62-128				
Nitrate	mg/l	5.15	5.11	99.2	80-120	0.780	20	L551382-12	WG569948
Sulfate	mg/l	71.2	72.0	95.6	80-120	1.12	20	L551382-12	WG569948
Alkalinity	mg/l	200.	200.	70.0*	80-120	0	20	L551601-01	WG570417
1,1,1,2-Tetrachloroethane	mg/l	0.0223	0.0221	89.3	71-130	0.840	20	L551841-01	WG570299
1,1,1-Trichloroethane	mg/l	0.0240	0.0242	96.0	58-137	0.690	20	L551841-01	WG570299
1,1,2,2-Tetrachloroethane	mg/l	0.0233	0.0228	93.0	64-149	2.08	20	L551841-01	WG570299
1,1,2-Trichloroethane	mg/l	0.0229	0.0226	91.7	73-128	1.62	20	L551841-01	WG570299
1,1-Dichloroethane	mg/l	0.0258	0.0264	103.	58-133	2.35	20	L551841-01	WG570299
1,1-Dichloroethene	mg/l	0.0243	0.0249	97.1	32-152	2.69	20	L551841-01	WG570299
1,2,3-Trichlorobenzene	mg/l	0.0243	0.0237	97.1	68-135	2.48	20	L551841-01	WG570299
1,2,4-Trichlorobenzene	mg/l	0.0262	0.0260	105.	67-133	0.990	20	L551841-01	WG570299
1,2,4-Trimethylbenzene	mg/l	0.0386	0.0393	108.	62-141	1.59	20	L551841-01	WG570299
1,2-Dichlorobenzene	mg/l	0.0235	0.0233	94.2	75-125	1.18	20	L551841-01	WG570299
1,2-Dichloroethane	mg/l	0.0247	0.0248	98.8	59-135	0.360	20	L551841-01	WG570299
1,2-Dichloropropane	mg/l	0.0242	0.0248	96.7	68-126	2.52	20	L551841-01	WG570299
1,3,5-Trimethylbenzene	mg/l	0.0293	0.0301	100.	67-136	2.77	20	L551841-01	WG570299
1,3-Dichlorobenzene	mg/l	0.0227	0.0228	90.6	69-131	0.580	20	L551841-01	WG570299
1,3-Dichloropropane	mg/l	0.0220	0.0219	88.0	70-122	0.250	20	L551841-01	WG570299
1,4-Dichlorobenzene	mg/l	0.0233	0.0235	93.1	70-123	0.900	20	L551841-01	WG570299
2-Butanone (MEK)	mg/l	0.141	0.142	113.	51-149	0.290	22	L551841-01	WG570299
4-Methyl-2-pentanone (MIBK)	mg/l	0.151	0.155	120.	53-154	2.97	21	L551841-01	WG570299
Acetone	mg/l	0.118	0.122	94.1	34-146	3.34	22	L551841-01	WG570299
Benzene	mg/l	0.0290	0.0296	99.9	51-134	2.09	20	L551841-01	WG570299
Bromodichloromethane	mg/l	0.0240	0.0239	96.2	67-132	0.730	20	L551841-01	WG570299
Bromoform	mg/l	0.0194	0.0194	77.7	59-137	0.200	20	L551841-01	WG570299
Bromomethane	mg/l	0.0237	0.0247	94.8	23-177	4.03	21	L551841-01	WG570299
Carbon disulfide	mg/l	0.0201	0.0207	80.4	10-165	3.20	22	L551841-01	WG570299
Carbon tetrachloride	mg/l	0.0236	0.0242	94.4	49-140	2.43	20	L551841-01	WG570299
Chlorobenzene	mg/l	0.0216	0.0216	86.4	69-126	0.130	20	L551841-01	WG570299
Chloroethane	mg/l	0.0244	0.0256	97.4	32-177	4.90	21	L551841-01	WG570299
Chloroform	mg/l	0.0260	0.0264	104.	64-130	1.60	20	L551841-01	WG570299
cis-1,2-Dichloroethene	mg/l	0.0252	0.0249	101.	54-137	1.09	20	L551841-01	WG570299
cis-1,3-Dichloropropene	mg/l	0.0248	0.0252	99.2	63-127	1.72	20	L551841-01	WG570299
Di-isopropyl ether	mg/l	0.0262	0.0271	105.	58-133	3.32	20	L551841-01	WG570299
Ethylbenzene	mg/l	0.0290	0.0295	97.6	64-135	1.79	20	L551841-01	WG570299
Hexachloro-1,3-butadiene	mg/l	0.0216	0.0213	86.4	64-140	1.61	20	L551841-01	WG570299
Isopropylbenzene	mg/l	0.0260	0.0269	101.	62-134	3.41	20	L551841-01	WG570299
Methyl tert-butyl ether	mg/l	0.0401	0.0399	113.	55-136	0.730	20	L551841-01	WG570299
Methylene Chloride	mg/l	0.0252	0.0251	92.5	52-130	0.400	20	L551841-01	WG570299
n-Hexane	mg/l	0.0264	0.0279	67.2	16-164	5.32	20	L551841-01	WG570299
Naphthalene	mg/l	0.0296	0.0287	112.	65-140	3.20	20	L551841-01	WG570299
Styrene	mg/l	0.0200	0.0202	77.7	58-152	1.31	20	L551841-01	WG570299
Tetrachloroethene	mg/l	0.0193	0.0196	77.1	56-139	1.86	20	L551841-01	WG570299
Toluene	mg/l	0.0233	0.0237	89.8	61-126	1.37	20	L551841-01	WG570299
trans-1,2-Dichloroethene	mg/l	0.0224	0.0229	89.8	45-137	2.14	20	L551841-01	WG570299
trans-1,3-Dichloropropene	mg/l	0.0244	0.0248	97.6	59-130	1.82	20	L551841-01	WG570299
Trichloroethene	mg/l	0.0216	0.0218	86.4	40-155	1.03	20	L551841-01	WG570299
Vinyl acetate	mg/l	0.147	0.150	117.	36-186	2.07	20	L551841-01	WG570299
Vinyl chloride	mg/l	0.0211	0.0223	84.3	32-159	5.51	21	L551841-01	WG570299
Xylenes, Total	mg/l	0.0869	0.0881	95.3	64-133	1.33	20	L551841-01	WG570299
4-Bromofluorobenzene				94.23	82-120				WG570299
Dibromofluoromethane				106.5	82-126				WG570299
Toluene-d8				99.73	92-112				WG570299

* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

12065 Lebanon Rd.
Mt. Juliet, TN 37122
(615) 758-5858
1-800-767-5859
Fax (615) 758-5859

Tax I.D. 62-0814289

Est. 1970

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ARCADIS US - MI
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

		Matrix Spike Duplicate							
Analyte	Units	MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Ferrous Iron	mg/l	1.61	1.63	107.	80-120	1.23	20	L551384-03	WG570855
Sulfate	mg/l	56.7	56.7	101.	80-120	0	20	L552466-04	WG570889
Alkalinity	mg/l	96.0	95.0	96.0	80-120	1.05	20	L551644-01	WG570800
Ferrous Iron	mg/l	1.60	1.59	101.	80-120	0.627	20	L551760-01	WG570983
Phosphorus,Total	mg/l	3.42	3.60	104.	80-120	5.13	20	L551422-04	WG570807
Phosphorus,Total	mg/l	3.13	3.05	108.	80-120	2.59	20	L551382-04	WG570550

Batch number /Run number / Sample number cross reference

WG570077: R1967175: L551422-08
WG569983: R1967434: L551422-01 02 03 04 06
WG570064: R1967552: L551422-03 04 05 06 07 08
WG570015: R1968093: L551422-01 02
WG569948: R1968252: L551422-01 02 03 04 05 06 07 08
WG570417: R1970934: L551422-01 02
WG570299: R1971573: L551422-05 07
WG570561: R1972954: L551422-02
WG570855: R1973013: L551422-01 02 03 04 05
WG570889: R1974312: L551422-03
WG570800: R1974752: L551422-03 04 05 06 07 08
WG570983: R1975054: L551422-06 07 08
WG569808: R1975212: L551422-01 02 03 04 05 06 07 08
WG570807: R1975653: L551422-04 05 06 07 08
WG570550: R1975752: L551422-01 02 03

* * Calculations are performed prior to rounding of reported values.
* Performance of this Analyte is outside of established criteria.
For additional information, please see Attachment A 'List of Analytes with QC Qualifiers.'

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ARCADIS US - MI
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L551422

December 22, 2011

The data package includes a summary of the analytic results of the quality control samples required by the SW-846 or CWA methods. The quality control samples include a method blank, a laboratory control sample, and the matrix spike/matrix spike duplicate analysis. If a target parameter is outside the method limits, every sample that is effected is flagged with the appropriate qualifier in Appendix B of the analytic report.

Method Blank - an aliquot of reagent water carried through the entire analytic process. The method blank results indicate if any possible contamination exposure during the sample handling, digestion or extraction process, and analysis. Concentrations of target analytes above the reporting limit in the method blank are qualified with the "B" qualifier.

Laboratory Control Sample - is a sample of known concentration that is carried through the digestion/extraction and analysis process. The percent recovery, expressed as a percentage of the theoretical concentration, has statistical control limits indicating that the analytic process is "in control". If a target analyte is outside the control limits for the laboratory control sample or any other control sample, the parameter is flagged with a "J4" qualifier for all effected samples.

Matrix Spike and Matrix Spike Duplicate - is two aliquots of an environmental sample that is spiked with known concentrations of target analytes. The percent recovery of the target analytes also has statistical control limits. If any recoveries that are outside the method control limits, the sample that was selected for matrix spike/matrix spike duplicate analysis is flagged with either a "J5" or a "J6". The relative percent difference (%RPD) between the matrix spike and the matrix spike duplicate recoveries is all calculated. If the RPD is above the method limit, the effected samples are flagged with a "J3" qualifier.

ARCADIS US - MI

10559 Citation Dr. Ste 100
Brighton,MI 48116

Billing information:

Brad Saunders
10559 Citation Dr, Ste 100

Brighton,MI 48116

Report to: **Holly M. Burger, Debra Hagerty**

Email: **jhawkins@envsci.com**

Project Description: **Oakland Truck Center**

City/State Collected: Oakland, CA

Phone: **(810) 225-1904**
FAX: **(810) 229-8837**

Client Project #: **B0064601.0000.00007**

Lab Project #: **ARCABMI-OAKLANDCAT**

Collected by (print): Karl Johnson

Site/Facility ID#: **8099 S. COLISEUM WAY**

P.O.#: B0064601.0000

Collected by (signature):

Immediately Packed on Ice N ___ Y X

Rush? (Lab MUST Be Notified)
___ Same Day 200%
___ Next Day.....100%
___ Two Day.....50%
___ Three Day.....25%

Date Results Needed: 10 day TAT

Email? ___No X Yes
FAX? ___No ___Yes

Analysis/Container/Preservative

F091

Chain of Custody
Page 1 of 1

ESC LABORATORY SCIENCES
12065 Lebanon Road
Mt. Juliet, TN 37122
Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

Acctnum: **ARCABMI** (lab use only)
Template/Prelogin: **T70272/ P377318**
Cooler #: 12-6 KW
Shipped Via: **FedEx 2nd Day**

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	ALK 500mlHDPE-NoPres	DROCAER 1L-Amb-Add HCl	FERUSFE 250mlAmb-HCl	GRO 40mlAmb HCl	Nitrate Sulfate 125mlHDPE-NoPres	PT 250mlHDPE-H2SO4	V8260OXY 40mlAmb-HCl	Remarks/Contaminant	Sample # (lab only)
MW-1		GW		12/13/11	1000	9	X	X	X	X	X	X	X		LS5142201
MW-2		GW			1100	9	X	X	X	X	X	X	X		02
~~MW-3~~		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		
MW-4		GW			0910	9	X	X	X	X	X	X	X		03
MW-5		GW			1355	9	X	X	X	X	X	X	X		04
MW-6		GW			1450	9	X	X	X	X	X	X	X		05
MW-7		GW			1145	9	X	X	X	X	X	X	X		06
MW-8		GW			1245	9	X	X	X	X	X	X	X		07
~~MW-9~~		~~GW~~				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		

*Matrix: **SS** - Soil **GW** - Groundwater **WW** - WasteWater **DW** - Drinking Water **OT** - Other_____

pH _____ Temp _____

Flow _____ Other _____

Remarks: Also included: Trip Blank (3 containers) - ON HOLD
-08 DUP (9 containers) - same analyses as MW-1 thru MW-8 - NOT ON HOLD

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Samples returned via:	Condition: (lab use only)
	12/13/11	1630	FedEx 5036 5824 1355	☑ FedEx ☐ Courier ☐ ____	OK
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Temp: 3.3	Bottles Received: 75
			5036 5824 1333		COC Seal Intact: ___Y ___N ___NA
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 12/14/11	Time: 0900
				pH Checked: KR	NCF:

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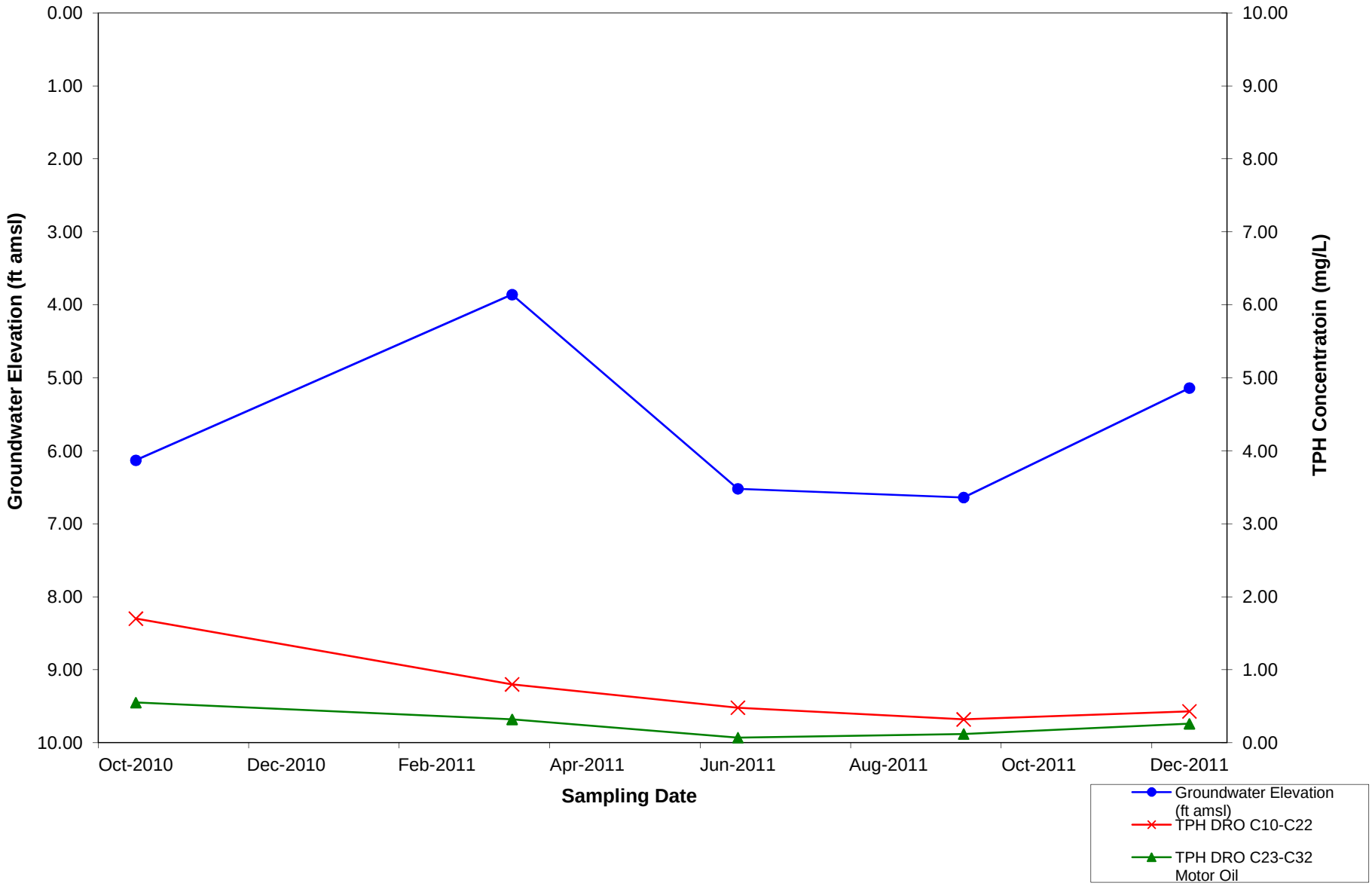
Appendix **D**

Hydrographs

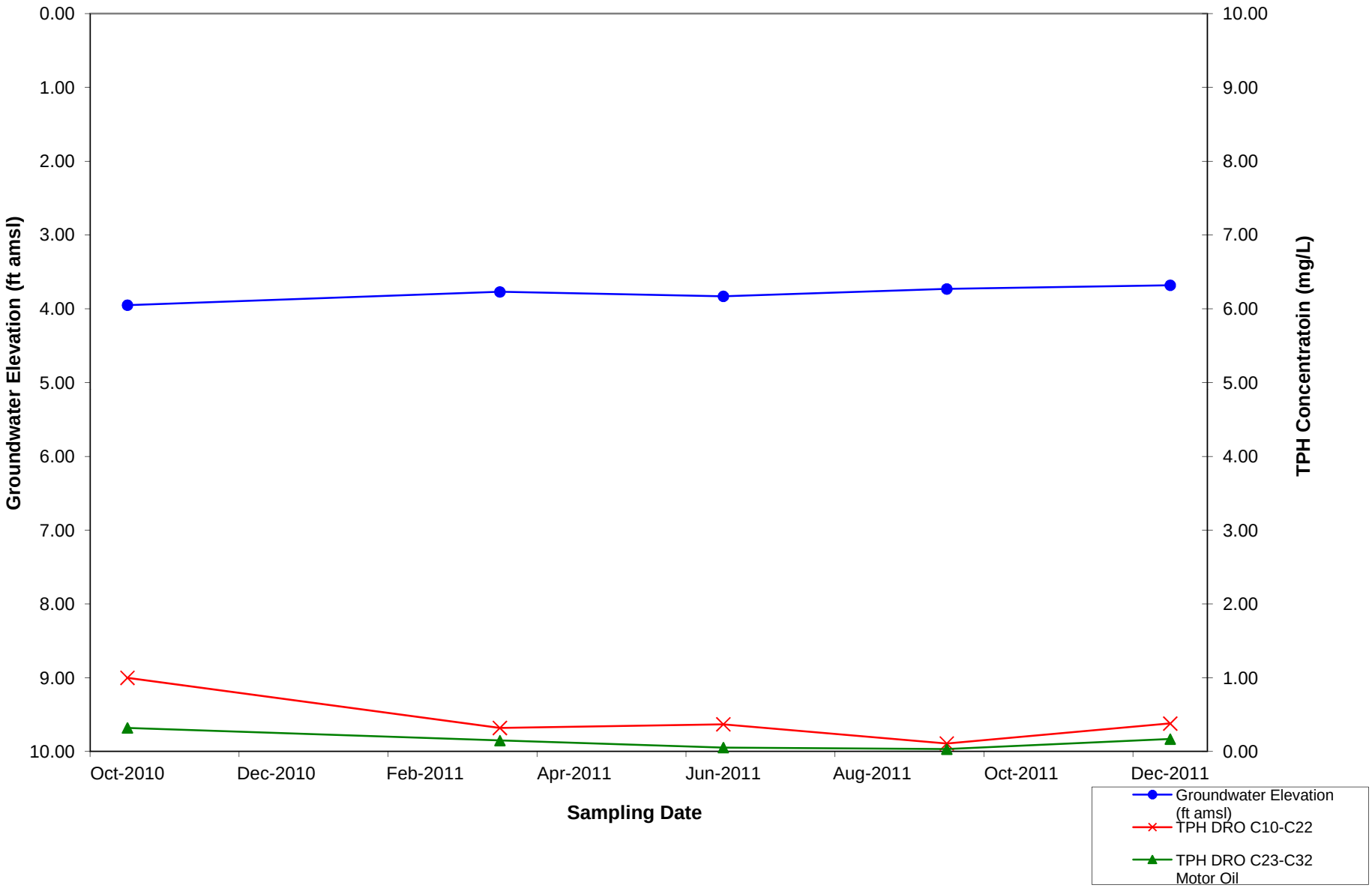
TPH-DRO and Groundwater Elevation Trends in Monitoring Well MW-1

ARCADIS



TPH-DRO and Groundwater Elevation Trends in Monitoring Well MW-2

ARCADIS



TPH-DRO and Groundwater Elevation Trends in Monitoring Well MW-3

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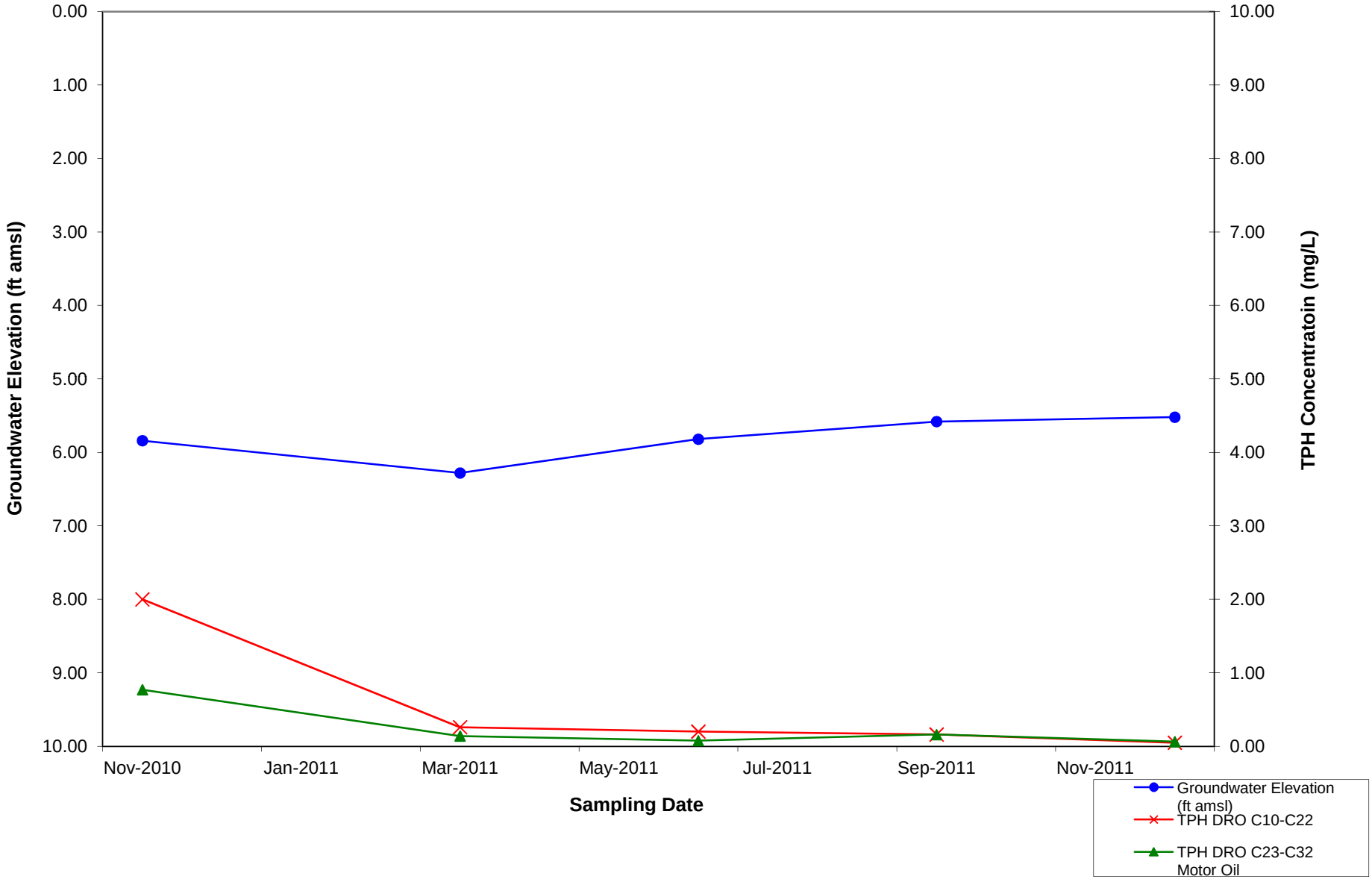

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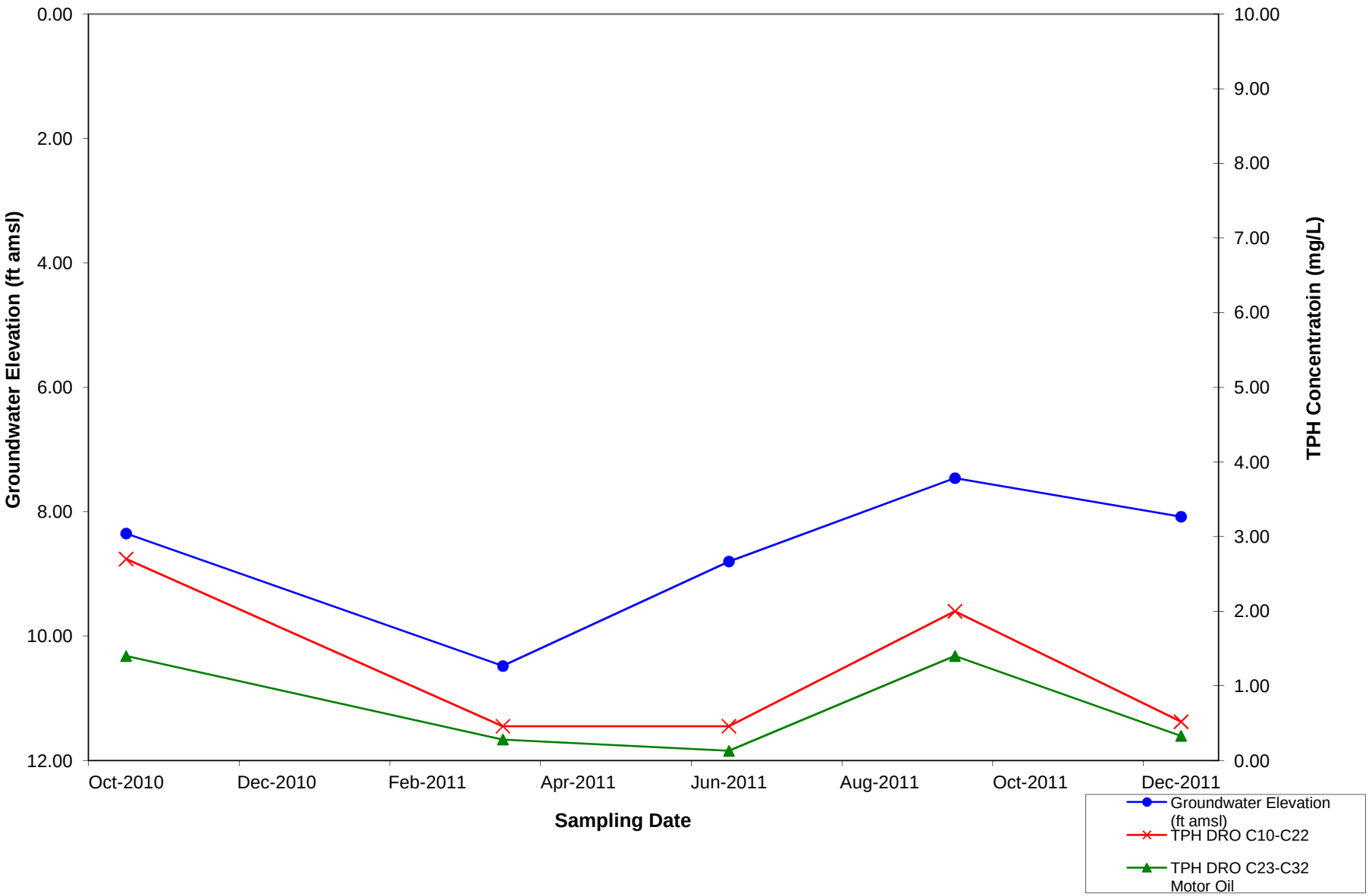
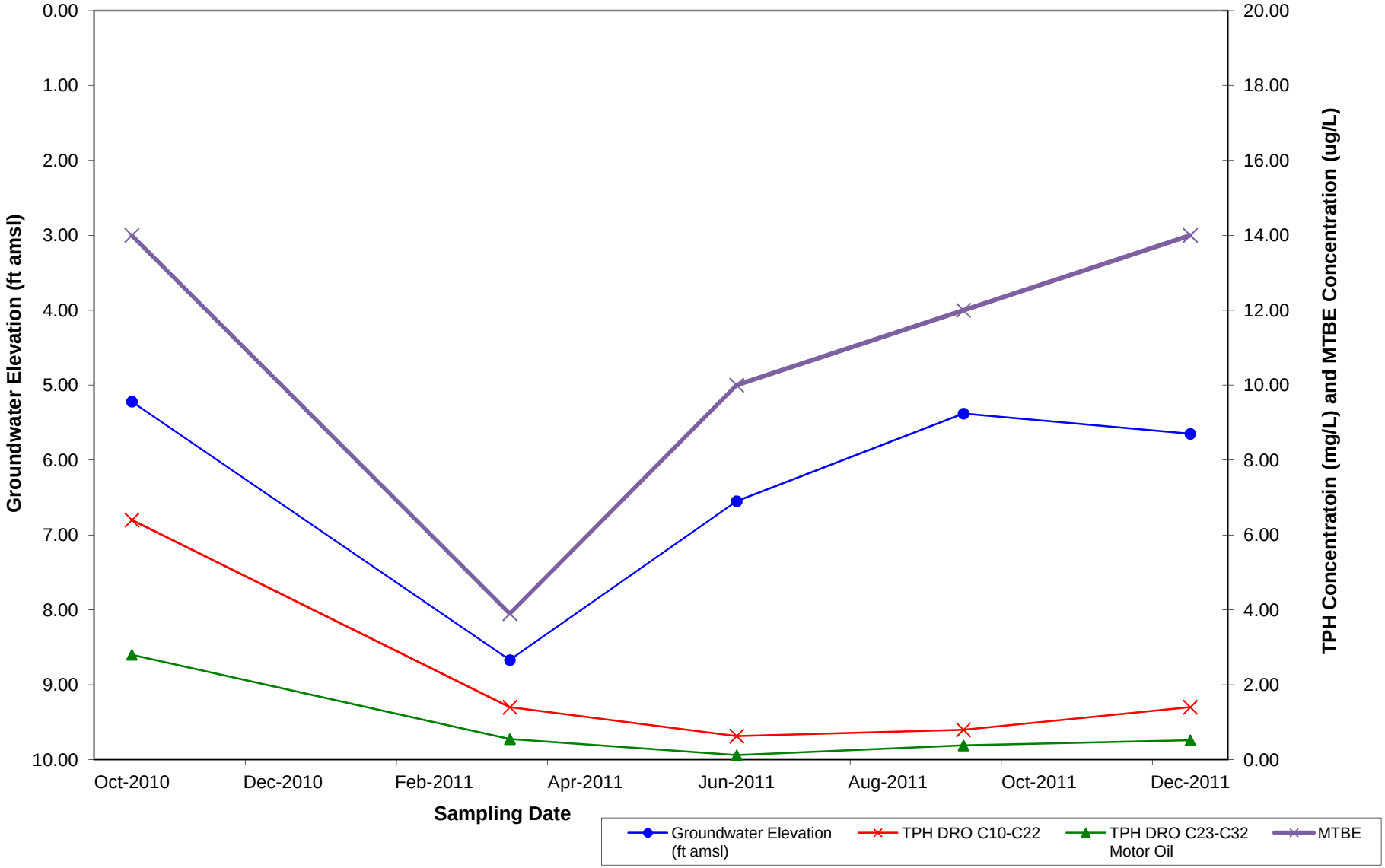
TPH-DRO and Groundwater Elevation Trends in Monitoring Well MW-4



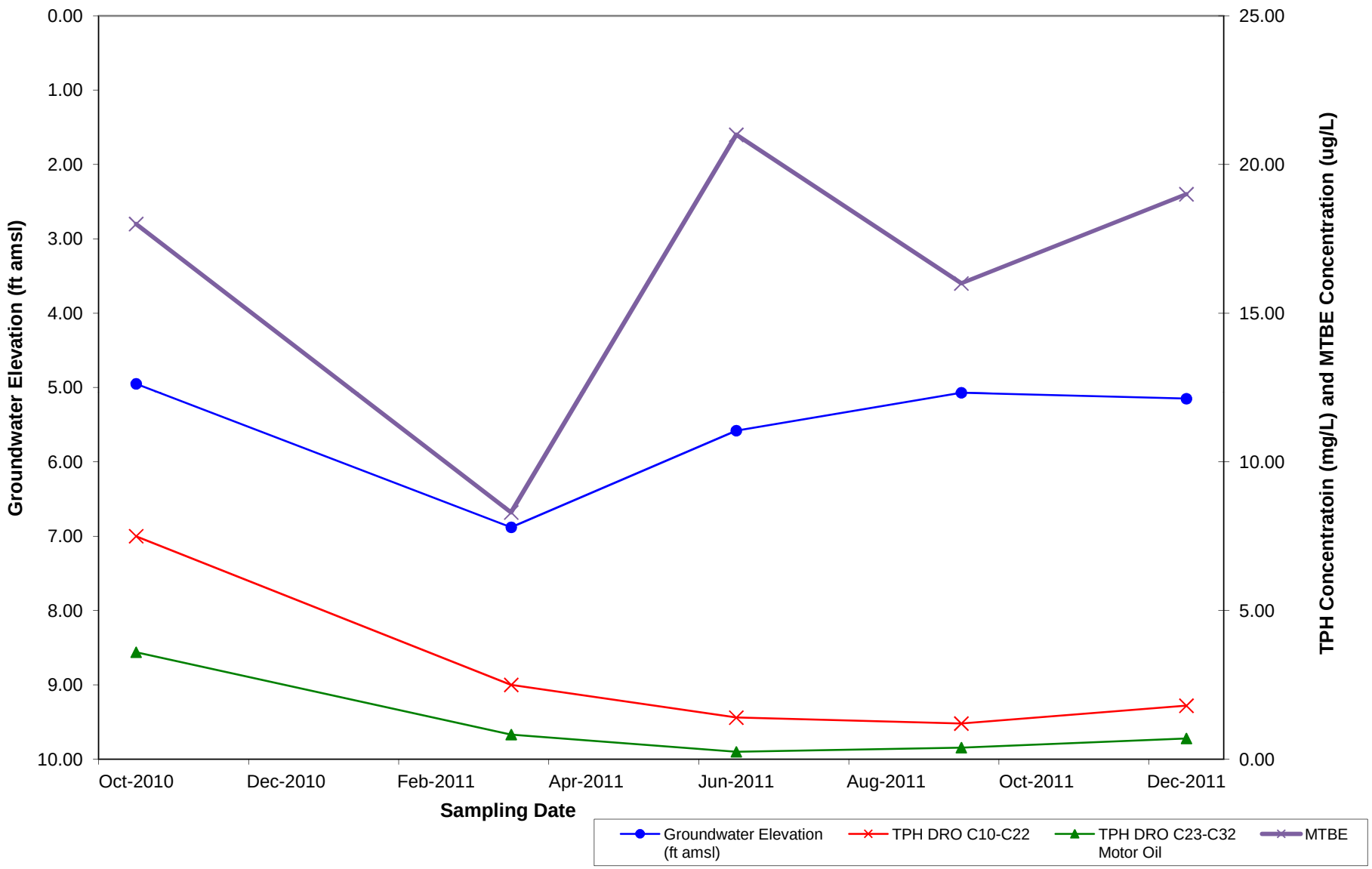
TPH-DRO, MTBE, and Groundwater Elevation Trends in Monitoring Well MW-5

ARCADIS



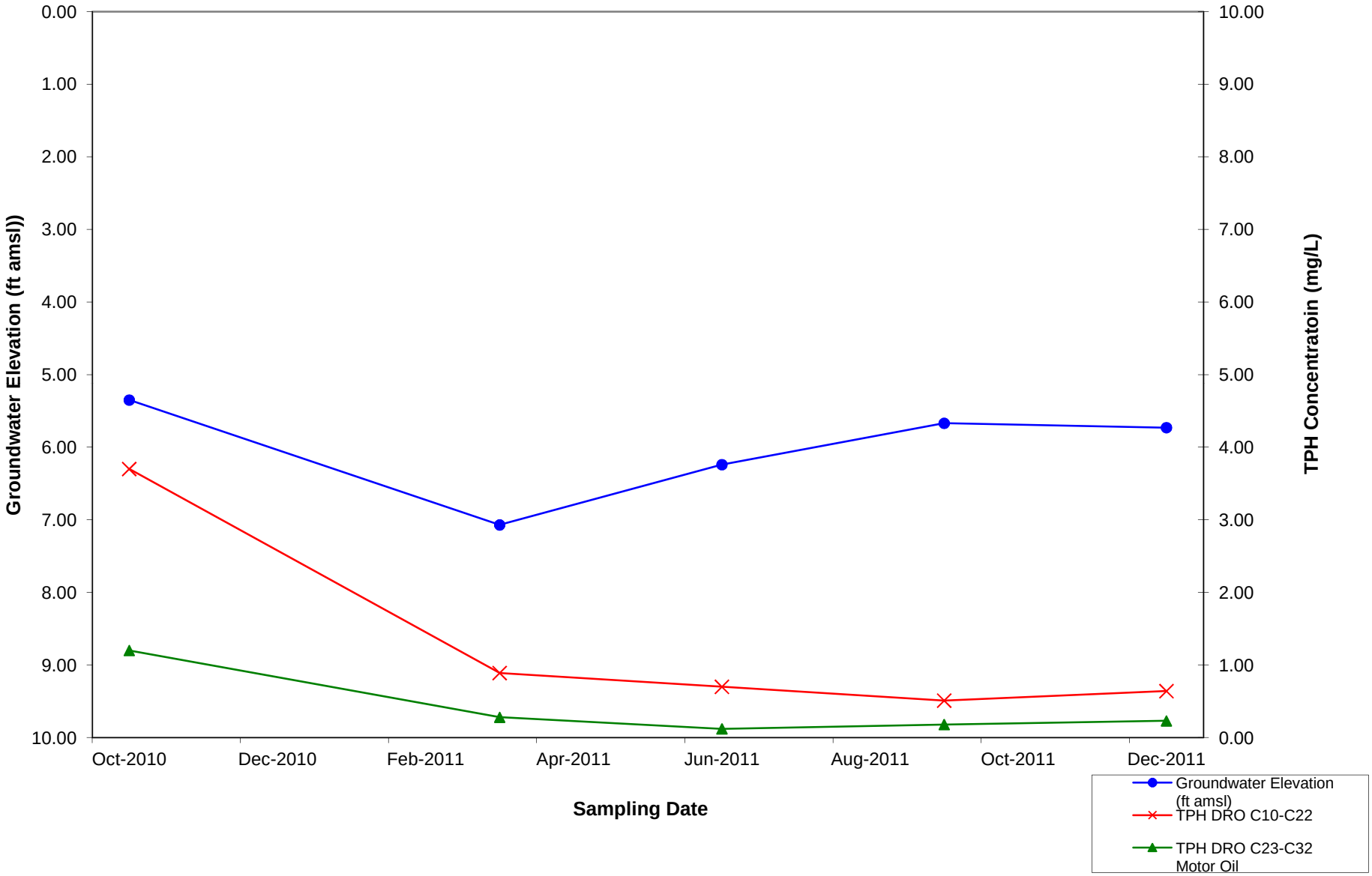
TPH-DRO, MTBE, and Groundwater Elevation Trends in Monitoring Well MW-6

ARCADIS



TPH-DRO and Groundwater Elevation Trends in Monitoring Well MW-7

ARCADIS



TPH-DRO and Groundwater Elevation Trends in Monitoring Well MW-8

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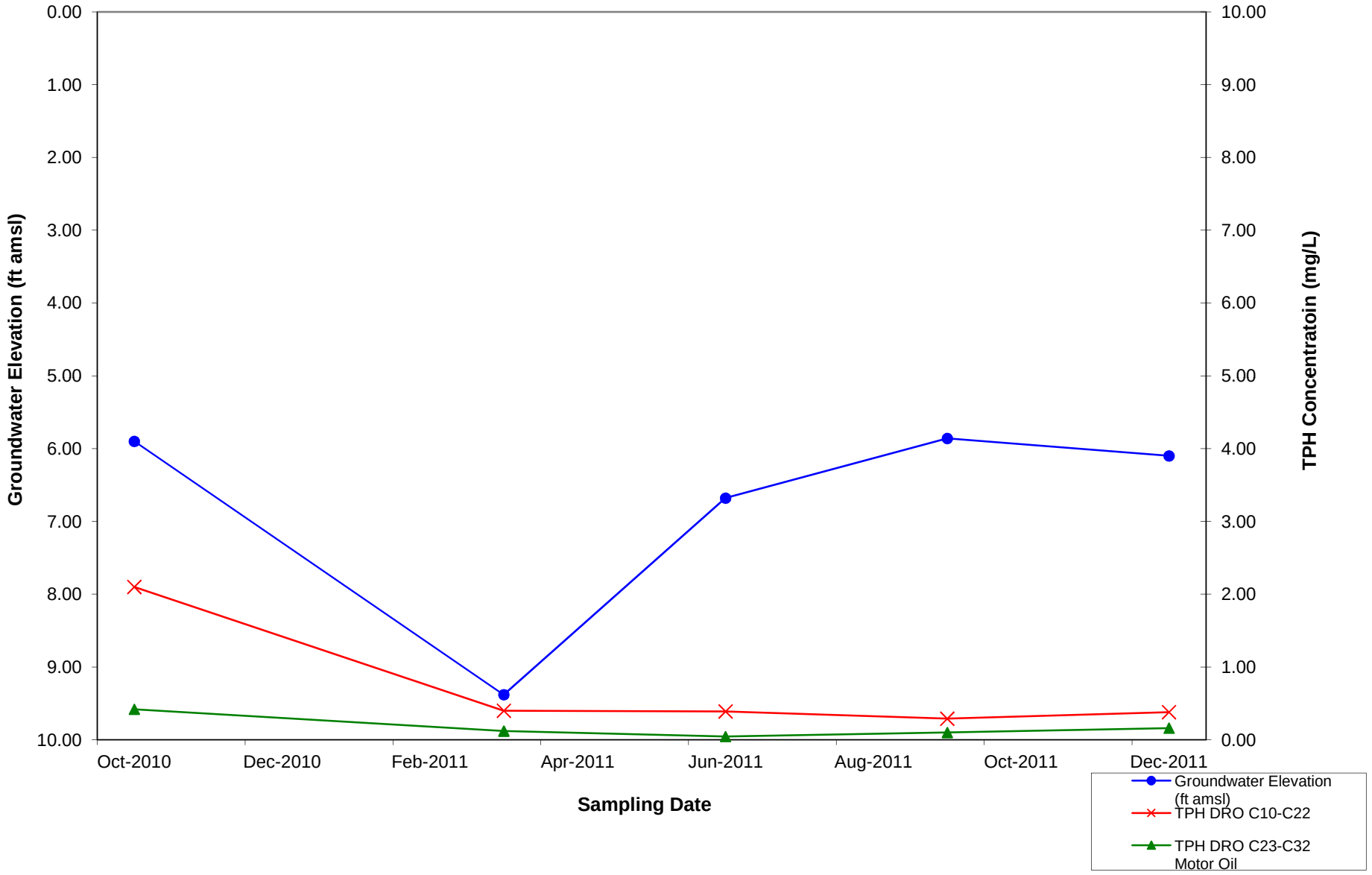

TPH-DRO and Groundwater Elevation Trends in Monitoring Well MW-9

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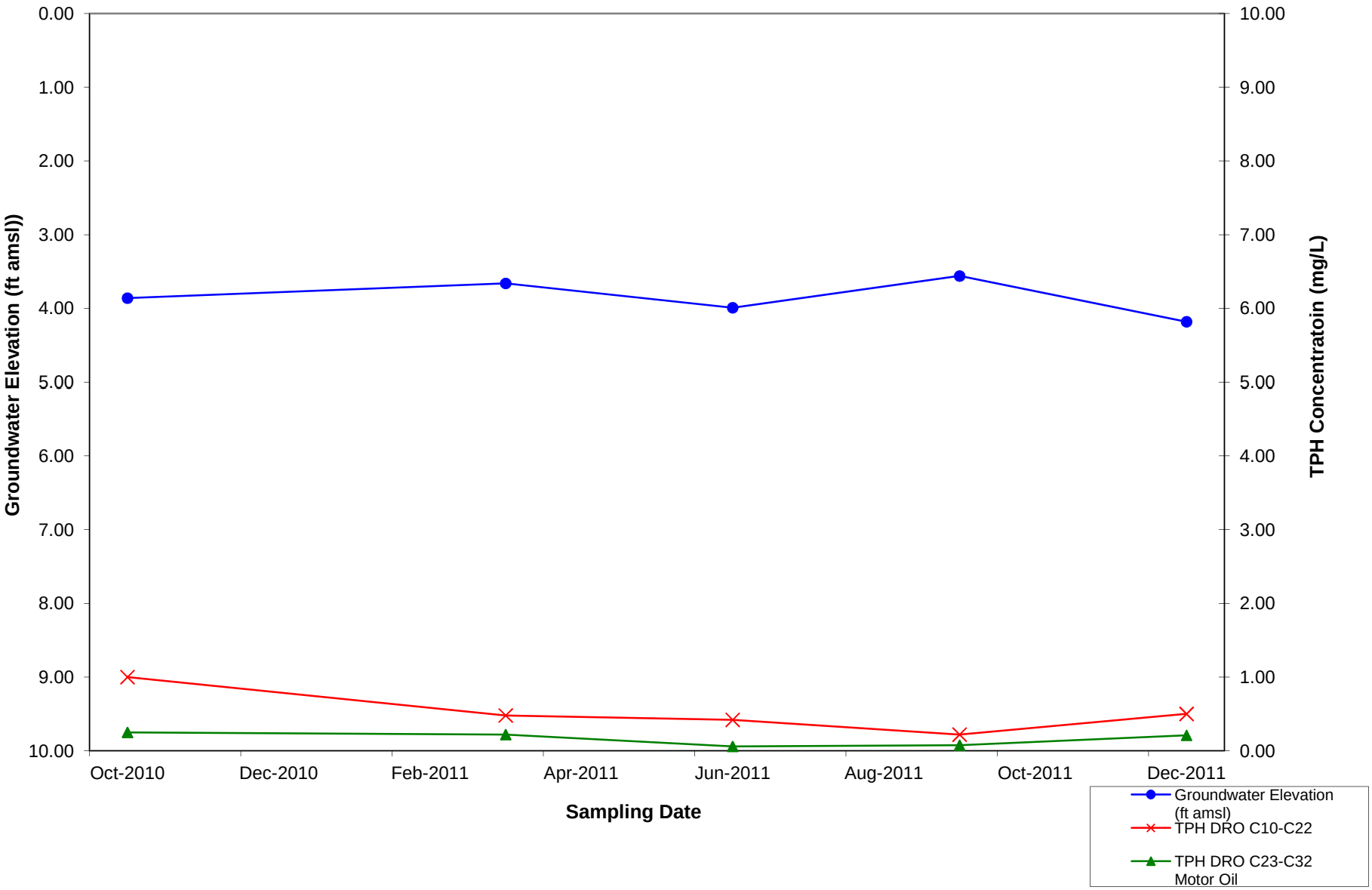

TPH-DRO and Groundwater Elevation Trends in Monitoring Well MW-10

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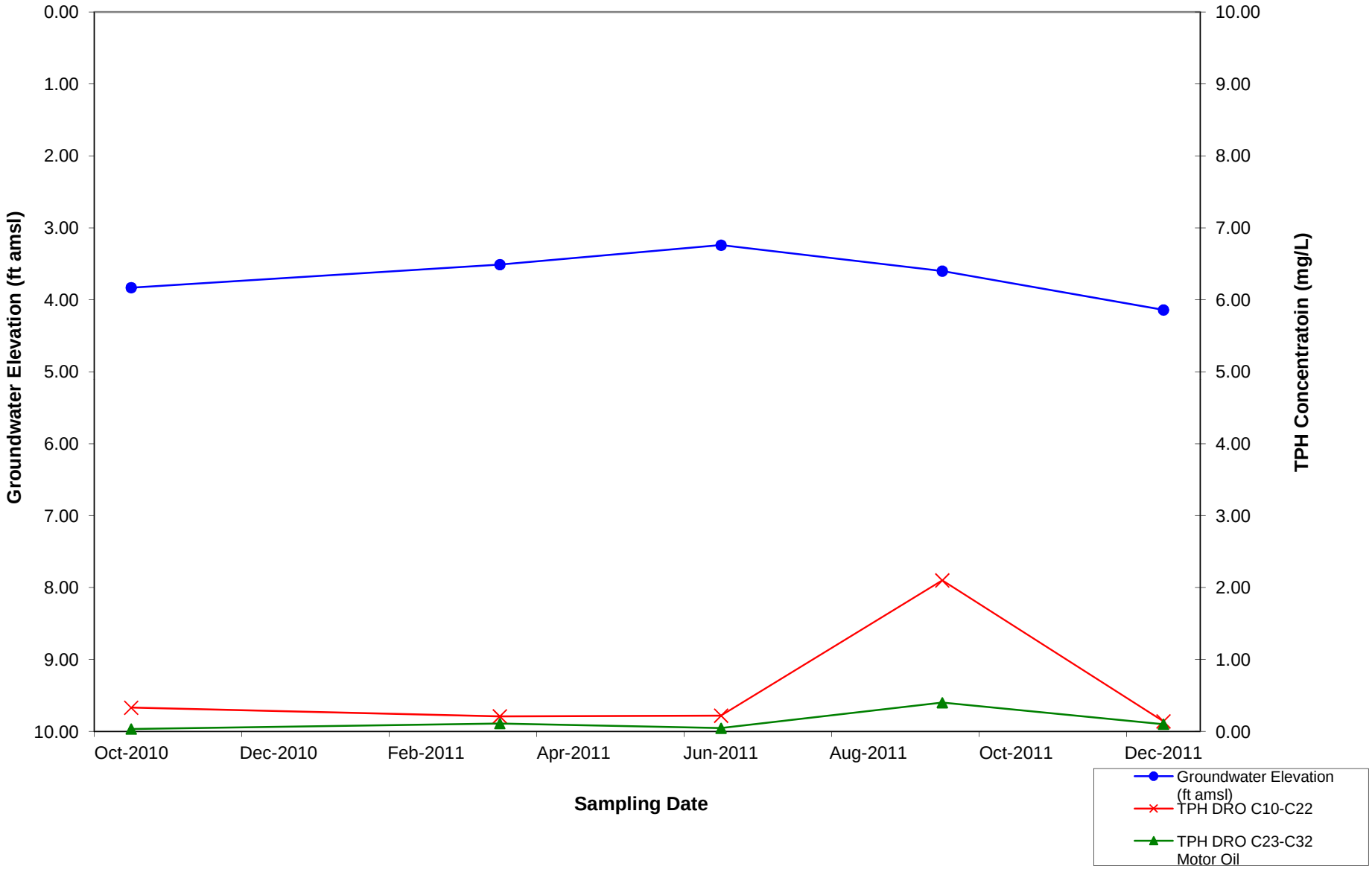

TPH-DRO and Groundwater Elevation Trends in Monitoring Well MW-11

ARCADIS