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 #3
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 third 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 #3

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

Field Work Dates: June 16 and 17, 2011

Prepared on Behalf of Argonaut Holdings, Inc.

Prepared for the Alameda County Health Care Services Agency

ARCADIS

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Our Ref.:
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Date:
September 26, 2011

Table of Contents

Appendices

ARCADIS

1. Introduction

On behalf of Argonaut Holdings, Inc., ARCADIS U.S., Inc. (ARCADIS) is submitting this *Leaking Underground Storage Tank Site Quarterly Monitoring Report #3* for the Former Oakland Truck Center (hereafter referred to as the "Site") located in Oakland, California (Figure 1). 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, the 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 to support the efforts to pursue closure of the open Leaking Underground Storage Tank (LUST) Case ID RO-0001389 as requested by the 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 presented in this report represent the data collected during the third 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. According to previous reports (Clayton, 1993a), 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 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 (please refer to the references section for a list of previous reports for historical investigations) prior to Phase II Environmental Site Assessment (ESA) activities completed by ARCADIS (operating as Encore Environmental

Consortium, LLC, or 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; consequently, 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) for 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, the soils encountered at the Site consisted 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 June 2011, groundwater levels in the eleven (11) site monitoring wells ranged from 3.70 to 8.09 feet below the top of casing (8.80 and 2.84 feet above mean sea level [amsl], 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 feet per foot. Based on water level measurements from the June 2011 groundwater monitoring event, the current groundwater flow is to the north-northwest.

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, the 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-

d), TPH as motor oil (TPH-o), and TPH as gasoline (TPH-g). ACHCSA also requested sampling at the drainage ditch located adjacent to the 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 initial monitoring event to address health and safety concerns related to the groundwater monitoring activities conducted at the Site. The HASP was developed to identify and control potential hazards in order to minimize exposures 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 the 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 June 16 and 17, 2011 to measure depth to groundwater and to collect groundwater samples from the eleven (11) existing groundwater wells. Groundwater was encountered between 3.70 to 8.09 feet below the top of casing (8.80 and 2.84 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 collect groundwater samples from 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, depth to bottom of the well, pH, temperature, ORP, DO,

turbidity, and specific conductivity. Field data of 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 diesel fuel). All collected groundwater samples were analyzed for TPH-Low Fraction and TPH Diesel Range Organics (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 Field Health and Safety Handbook (August 2010) 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-3. This represents a duplicate frequency of approximately 10% relative to the total number of wells sampled. The duplicate 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 blank were only 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.

3.2.6.1 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 0.19 milligrams per liter (mg/L) (MW-11) and 1.4 mg/L (MW-6), exceeding the 0.21 mg/L SFRWQCB ESL in all of the monitored wells, with the exception of MW-3 primary sample and MW-11. TPH-DRO C22-C32 was detected at concentrations ranging between an estimated[1] 0.045 mg/L (MW-8 and MW-10) and 0.25 mg/L (MW-6); exceeding the 0.21 mg/L SFRWQCB ESL only in well MW-6. TPH-DRO C32-C40 was detected only in one of the monitored well (MW-6 at an estimated 0.034 mg/L), not exceeding the 0.21 mg/L SFRWQCB ESL for TPH-DRO C32-C40. However, hydrographs depicting TPH concentrations during the past three monitoring events indicate an overall decreasing trend of TPH at the Site independent of the water level trends in the monitoring wells (Appendix D).

[1] 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.

3.2.6.2 VOCs

None of the VOCs analyzed for were detected above the laboratory detection limits in the groundwater samples collected from monitoring wells MW-1, MW-4, MW-8, MW-9, MW-10, and MW-11. Several VOCs; including cyclohexane, methyl tert-butyl ether (MTBE), and 1,1-dichloroethrene (1,1-DCE); were detected in monitoring wells MW-2, MW-3, MW-5, and MW-7. However, all measured concentrations were below applicable SFRWQCB ESLs, California DPH MCLs, and City of Oakland RBSLs for Ingestion of Groundwater. MTBE was detected in the groundwater sample collected from MW-6 at a concentration of 21 micrograms per liter (µg/L), which exceeds the California DPH MCLs and City of Oakland RBSLs of 13 µg/L. MTBE was also detected in the groundwater samples collected from MW-2 (4.0 µg/L), MW-5 (10 µg/L), and MW-7 (1.5 µg/L). Cyclohexane was detected in one well (MW-7) at an estimated concentration of 0.87 µg/L. 1,1-DCE was detected in the groundwater sample collected from MW-3 at an estimated concentration of 0.93 µg/L. Monitoring wells MW-5 and MW-6 are both located in the vicinity of the former gasoline and diesel USTs.

3.2.6.3 Intrinsic Bioremediation/Natural Attenuation

As mentioned earlier, 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 groundwater monitoring well purging. Alkalinity in the monitoring wells ranged from 430 mg/L (MW-8) to 1,900 mg/L (MW-1). Ferrous iron concentrations ranged from 0.22 mg/L (MW-2) to 38 mg/L (MW-6). Sulfate concentrations ranged from non-detect (MW-1, MW-4, MW-6, MW-7, and MW-8) to 400 mg/L (MW-11). Phosphate concentrations ranged from 0.52 mg/L (MW-5) to 6.0 mg/L (MW-9). Nitrate (as nitrogen) was detected in only two monitoring wells at concentrations of 0.14 mg/L (MW-2) and 0.35 mg/L (MW-5). DO concentrations ranged from 0.28 mg/L (MW-4) to 0.93 mg/L (MW-10). pH ranged from 7.00 (MW-6) to 7.85 (MW-2). Specific conductivity values ranged from 0.9190 Siemens per meter (S/m) (MW-8) to 13.60 S/m (MW-2). Negative ORP values, ranging from -182 millivolts (mV) (MW-10) to -110.0 mV (MW-11), were measured in all monitoring wells. Finally, turbidity was observed to range from stable (0.00 Nephelometric Turbidity Units [NTU]) in the groundwater sampled collected from monitoring wells MW-2, MW-6, MW-7, and MW-8 to 32.9 NTU in MW-5.

3.2 Data Evaluation

Analytical data collected during the groundwater investigation activities were compared to historical data to identify any concentration trends in groundwater 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. The groundwater samples collected for these 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 was not taken into consideration as an indication of microbial activity because the analyses were performed close to the analytical methods' holding times and therefore, there is some uncertainty in this data. However, 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 (lowering DO levels in the groundwater) and generate slightly acidic waste byproducts (lowering the pH).

When compared to the first and second quarterly groundwater monitoring events (performed during the fourth quarter of 2010 [ARCADIS, 2011a] and first quarter of 2011 [ARCADIS, 2011b], respectively), TPH concentrations in the groundwater samples collected during the third quarterly monitoring event are generally lower, indicating a decreasing trend independent of groundwater elevation in the monitoring wells. On the other hand, MTBE concentrations in monitoring wells MW-5 and MW-6 appear to be fluctuating, possibly due to seasonal fluctuations in groundwater levels. The concentrations of MTBE in both wells have increased slightly during the June 2011 monitoring event, but only exceeding the 13 μg/L screening criterion in MW-6.

4. Conclusions and Recommendations

The purpose of this groundwater investigation was to assess the 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 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 which indicate an overall decreasing trend, with no COCs exceeding the 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 MW-6, were detected at concentrations below the corresponding screening criteria in the monitoring wells. The TPH constituents, detected at low concentrations in several of the groundwater samples, are likely weathered residual components of the petroleum products released to the subsurface in the past 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. 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.

4.2 Recommendations

Based on the results of this site investigation and the anticipated future use of the Site for commercial or light industrial purposes, ARCADIS recommends continuing quarterly groundwater monitoring for one additional quarter to continue to evaluate trends in TPH and VOC concentrations, along with the bioremediation parameters monitored during this sampling event. Should the trends in TPH and VOC concentrations remain stable or decrease over the proposed quarterly monitoring period, ARCADIS will recommend applying for a “Low Risk Closure” status for the Site, and will request a “No Further Action” letter from the ACHCSA for the Site. 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 at the Site.

References

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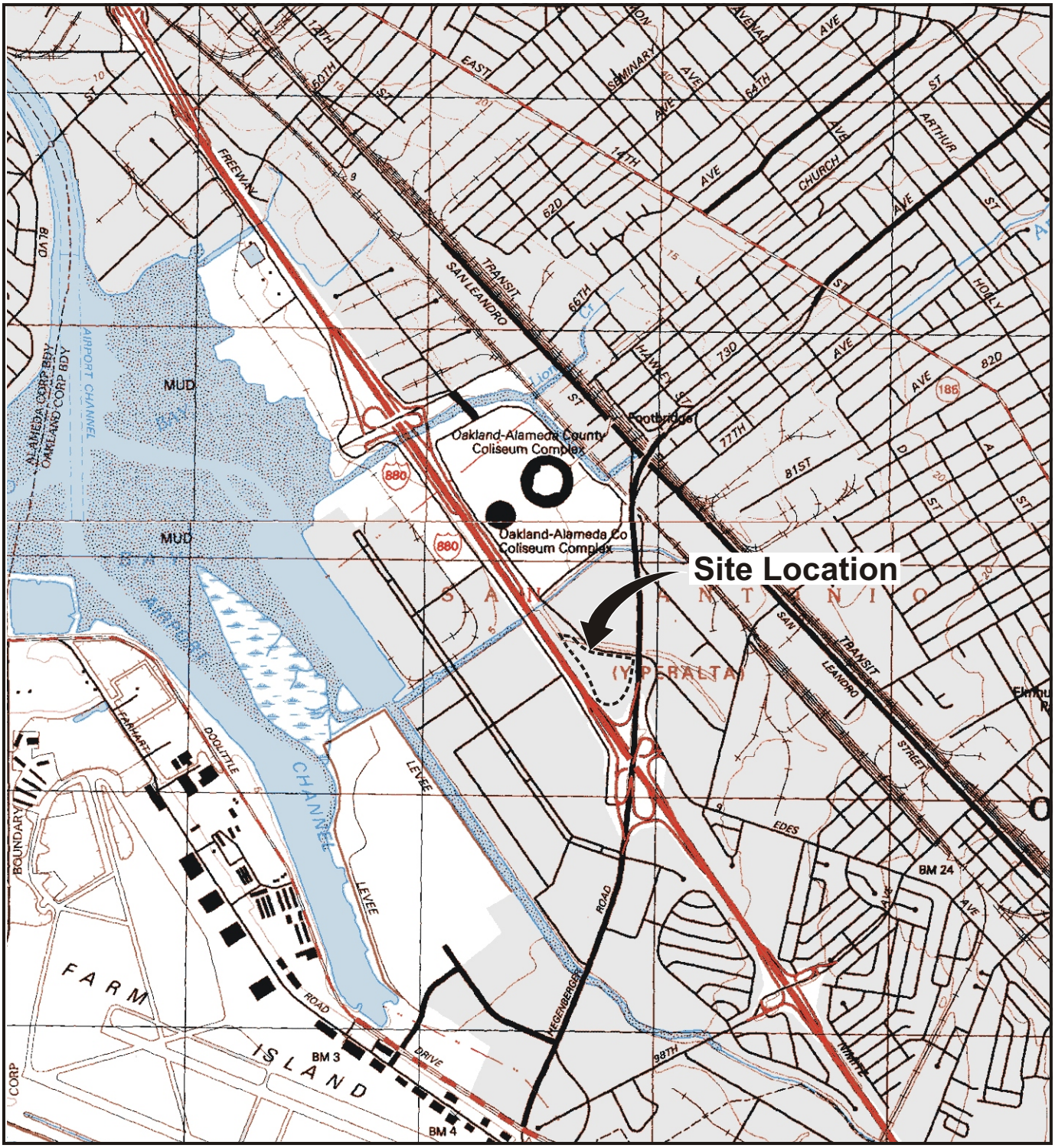
ARCADIS

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
2.84

USED PARTS
STORAGE

3.0

MW-10
3.24

3.5

South Coliseum Way

MW-9
3.99

MW-2
3.83

PZ-3

PZ-1

PZ-2

4.0

4.5

5.0

5.5

MW-6
5.58

FORMER 2,000 GALLON
GASOLINE AND DIESEL USTs

MW-3
5.82

6.0

MW-5
6.55

OIL/WATER
SEPARATOR

MAIN SITE
BUILDING

6.5

MW-1
6.52

MW-8
6.68

7.0

FORMER 1,000 GALLON AND
500 GALLON USED OIL USTs

MW-7
6.24*

MW-4
8.80

PARTS
STORAGE

USED
TRUCK
CENTER

CALTRANS
PROPERTY

Hegenberger Road

I 880 North

I 880 South

Oakport
Street

LEGEND

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

NOTE:

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 - JUNE 2011

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FIGURE
3

PROJECT NUMBER: B006460
CITY:NOVI DIV/GROUP:ENV DB: PIC: PM: TM: TR:
G:\GIS\Project Files\GeneralMotors\Oakland\Documents\201106_potentiometric surface.mxd

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

MW-11

USED PARTS STORAGE

MW-10

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

MW-2			
Date	TPH DRO (mg/L)		
	C10-C22	C22-C32	C32-C40
10/29/2010	**1.0**	**0.32**	0.11
3/21/2011	**0.32**	0.15	<0.033
6/16/2011	**0.37**	0.054 J	<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

South Coliseum Way

MW-9

MW-2

PZ-3

PZ-1

PZ-2

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*

FORMER 2,000 GALLON GASOLINE AND DIESEL USTs

MW-6

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

MW-5

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**	0.045J	<0.033

MW-8

FORMER 1,000 GALLON AND 500 GALLON USED OIL USTs

MW-7

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

MAIN SITE BUILDING

PARTS STORAGE

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 [<0.033]

MW-3

OIL/WATER SEPARATOR

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

MW-1

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

MW-4

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:
C:\Users\tyarbrough\Desktop\GIS\GeneralMotors\Oakland\Documents\Analytical_2011_2Q.mxd

LEGEND

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

NOTES:

ONLY VOCS DETECTED ABOVE SCREENING CRITERIA ARE INCLUDED

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

ITALICIZED VALUES INDICATE ANALYTE CONCENTRATIONS EXCEEDING CALIFORNIA DEPARTMENT OF HEALTH SERVICES DRINKING WATER MAXIMUM CONTAMINANT LEVELS AND OAKLAND TIER 1 RISK-BASED SCREENING LEVELS FOR INJECTION OF GROUNDWATER (COMMERCIAL/INDUSTRIAL).

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

0 80 160

SCALE IN FEET

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

TPH & VOC GROUNDWATER CONCENTRATIONS EXCEEDING SCREENING CRITERIA

ARCADIS

FIGURE
4

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	-94
	6/16/2011	12.46	5.94	6.52	NM	21.72	7.17	0.34	3.600	5.80	-145
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	-94
	6/16/2011	12.37	8.54	3.83	NM	20.91	7.85	0.46	13.60	0.00	-128
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	19.6	7.69	0.58	8.760	0.40	-124
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	95.8	-70
	6/16/2011	12.50	3.70	8.80	NM	22.38	7.24	0.28	2.300	1.60	-124
MW-5	10/29/2010	13.38	8.16	5.22	17.10	24.47	7.05	0.15	0.3459	NM	-89
	3/21/2011	13.38	4.71	8.67	17.12	19.04	6.75	0.11	0.1768	16.7	-46
	6/17/2011	13.38	6.83	6.55	NM	22.36	7.17	0.43	1.780	32.9	-112
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	-17
	6/17/2011	12.33	6.75	5.58	NM	20.63	7.00	0.37	2.840	0.00	-120
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	-86
	6/16/2011	13.17	6.93	6.24	NM	21.57	7.08	0.54	1.700	0.00	-130
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
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
	6/16/2011	12.44	8.45	3.99	NM	20.36	7.40	0.40	6.970	0.90	-128
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	18.6	-182
MW-11	10/29/2010	10.93	7.21	3.72	18.30	22.02	6.81	0.25	0.8981	NM	-64
	3/21/2011	10.93	7.73	3.20	17.94	17.55	6.84	0.39	0.9718	42.2	-55
	6/16/2011	10.93	8.09	2.84	NM	20.14	7.21	0.71	10.50	21.5	-110

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 µg/L	1,1-Dichloroethene µg/L	cis-1,2-Dichloroethene µg/L	Cyclohexane µg/L	Methyl tert-butyl ether µg/L	1,2,4-Trimethylbenzene µg/L	Vinyl chloride µg/L	tert-Butyl alcohol µg/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	25	590	NC	1,800	NC	3.8	NC	NC	NC	NC	NC	NC
California Department of Public Health MCLs		NC	NC	NC	NC	NC	NC	NC	NC	13	NC	0.5	NC	NC	NC	NC	1	NC
Oakland Tier I RBSLs for Ingestion of Groundwater (Commercial/ Industrial)		NC	NC	NC	NC	10,000	6	6	NC	13	NC	0.5	NC	NC	NC	NC	NC	NC
MW-1	10/29/2010	<0.04	**1.7 Y4**	**0.55 Y4**	0.16 Y4	<16	<0.41	<0.34	NS	<0.63	<0.18	<0.34	NS	1,800	3.7	<0.46	<0.041	74
MW-1	3/21/2011	<0.04	**0.80 Y1**	**0.32 Y1**	<0.033 Y1	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	1,700	3.6	<0.46	<0.041	19
MW-1	6/16/2011	<0.04	**0.48 Y1**	0.070 J	<0.033	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	1,900	3.0	<0.46	<0.041	24
MW-2	10/29/2010	<0.04	**1.0 Y4**	**0.32 Y4**	0.11 Y4	<16	0.56 J	<0.34	NS	4.1	<0.18	0.37 J	NS	1,300	2.2	23	<0.041	1.1
MW-2	3/21/2011	<0.04	**0.32 Y1**	0.15 Y1	<0.033 Y1	<16	<0.41	<0.34	<0.36	1.8	<0.18	<0.34	<1.5	960	1.6	150	<0.041	1.1
MW-2	6/16/2011	<0.04	**0.37 Y1**	0.054 J	<0.033	<16	<0.41	<0.34	<0.36	4.0	<0.18	<0.34	<1.5	1,500	2.0	55	0.14	0.22
MW-3	11/23/2010	<0.04	**2.0 Y4**	**0.77 Y4**	**0.21 Y4**	<16	<0.41	<0.34	NS	<0.63	<0.18	<0.34	NS	1,200	6.2	14	<0.041	0.91
MW-3	3/21/2011	<0.04	**0.26 Y1**	0.14 Y1	<0.033 Y1	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	1,300	5.5	190	<0.041	0.83
MW-3	6/17/2011	<0.04 [<0.04]	0.20 Y1 **[0.24 Y1]**	0.078 J [0.11 Y4]	<0.033 [<0.033]	<16 [<16]	0.93 J [1.2]	<0.34 [<0.34]	<0.36 [<0.36]	<0.63 [<0.63]	<0.18 [<0.18]	<0.34 [<0.34]	<1.5 [<1.5]	1,600 [1,400]	5.2 [4.9]	280 [300]	<0.041 [<0.041]	0.43 [0.51]
MW-4	10/29/2010	<0.04	**2.7 Y1**	**1.4 Y4**	**0.39 Y4**	<16	<0.41	1.0	NS	<0.63	<0.18	<0.34	NS	810	2.4	<0.46	<0.041	39
MW-4	3/21/2011	<0.04	**0.46 Y1**	**0.28 Y1**	<0.033 Y1	<16	<0.41	<0.34	<0.36	<0.63	0.33 J	<0.34	<1.5	540	0.94	9.2	0.11	2.9
MW-4	6/16/2011	<0.04	**0.46 Y1**	0.13 Y4	<0.033	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	790	2.0	<0.46	<0.041	30
MW-5	10/29/2010	<0.04	**6.4 Y1**	**2.8 Y4**	**0.63 Y4**	<16	<0.41	<0.34	NS	**14**	<0.18	<0.34	NS	1,700	1.6	<0.46	<0.041	--
MW-5	3/21/2011	<0.04	**1.4 Y1**	**0.55 Y1**	0.089 J Y1	<16	<0.41	<0.34	<0.36	3.9	<0.18	<0.34	<1.5	870	0.29	<0.46	<0.041	5.6
MW-5	6/17/2011	<0.04	**0.63 Y1**	0.12 Y4	<0.033	<16	<0.41	<0.34	<0.36	10	<0.18	<0.34	<1.5	980	0.52	0.60 J	0.35	10
MW-6	10/29/2010	<0.04	**7.5 Y1**	**3.6 Y4**	**0.71 Y4**	<16	<0.41	<0.34	NS	**18**	<0.18	<0.34	NS	1,400	3.0	<0.46	<0.041	45
MW-6	3/22/2011	<0.04 [<0.04]	**2.5 Y1 [2.5 Y1]**	**0.83 Y1 [0.88 Y1]**	0.11 Y1 [0.14 Y1]	<16 [<16]	<0.41 [<0.41]	<0.34 [<0.34]	<0.36 [<0.36]	8.3 [8.1]	<0.18 [<0.18]	<0.34 [<0.34]	2.2 J [<1.5]	1,000 [1,000]	2.1 [2.1]	<0.46 [<0.46	<0.041 [<0.041	39 [39]
MW-6	6/17/2011	<0.04	**1.4 Y1**	**0.25 Y4**	0.034 J	<16	<0.41	<0.34	<0.36	**21**	<0.18	<0.34	<1.5	1,300	2.6	<0.46	<0.041	38
MW-7	10/29/2010	<0.04	**3.7 Y1**	**1.2 Y4**	**0.30 Y4**	18 J	<0.41	<0.34	NS	2.4	<0.18	<0.34	NS	1,200	2.2	<0.46	<0.041	32
MW-7	3/21/2011	<0.04	**0.89 Y1**	**0.28 Y1**	<0.033 Y1	<16	<0.41	<0.34	0.70 J	0.65	<0.18	<0.34	<1.5	580	1.8	<0.46	<0.041	18
MW-7	6/16/2011	<0.04	**0.70 Y1**	0.12 Y4	<0.033	<16	<0.41	<0.34	0.87 J	1.5	<0.18	<0.34	<1.5	950	2.0	<0.46	<0.041	22
MW-8	10/29/2010	<0.04	**2.1 Y1**	**0.42 Y1**	0.15 Y1	<16	<0.41	<0.34	NS	1.7	<0.18	<0.34	NS	490	0.87	<0.46	<0.041	16
MW-8	3/21/2011	<0.04	**0.40 Y1**	0.12 Y1	<0.033 Y1	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	200	0.36	13	<0.041	5.3
MW-8	6/16/2011	<0.04	**0.39 Y1**	0.045 J	<0.033	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	430	0.84	<0.46	<0.041	9.7
MW-9	10/29/2010	<0.04	**1.0 Y1**	**0.25 Y1**	0.09 J Y1	<16	<0.41	<0.34	NS	<0.63	<0.18	<0.34	NS	970	6.2	120	<0.041	7.9
MW-9	3/21/2011	<0.04	**0.48 Y1**	**0.22 Y1**	<0.033 Y1	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	910	5.9	140	<0.041	7.9
MW-9	6/16/2011	<0.04	**0.42 Y1**	0.059 J	<0.033	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	1,100	6.0	150	<0.041	7.4
MW-10	10/29/2010	<0.04	**0.33 Y1**	0.034 J Y1	<0.033	<16	<0.41	<0.34	NS	<0.63	<0.18	<0.34	NS	920	6.0	120	<0.041	8
MW-10	3/21/2011	<0.04	**0.21 Y1**	0.11 Y1	<0.033 Y1	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	820	5.0	170	<0.041	8.3
MW-10	6/16/2011	<0.04	**0.22 Y1**	0.045 J Y4	<0.033	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	1,000	5.3	180	<0.041	9.5
MW-11	10/29/2010	<0.04	**0.74 Y4**	**0.28 Y4**	0.097 J Y4	<16	<0.41	<0.34	NS	<0.63	<0.18	<0.34	NS	910	5.6	180	<0.041	5.7
MW-11	3/21/2011	<0.04	0.20 Y4	0.18 Y1	<0.033 Y1	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	780	4.5	260	0.20	7.5
MW-11	6/16/2011	<0.04	0.19 Y1	0.12 Y4	<0.033	<16	<0.41	<0.34	<0.36	<0.63	<0.18	<0.34	<1.5	930	4.6	400	<0.041	7.5

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).

NC = not criteria available
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

Report Summary

Monday June 27, 2011

Report Number: L521488
Samples Received: 06/17/11
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

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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-01

Date Received : June 17, 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 : 06/16/11 14:55

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	41.	100	ug/l		9056	06/17/11	1
Sulfate	U	460	5000	ug/l		9056	06/17/11	1
Alkalinity	790000	15000	100000	ug/l		2320B	06/23/11	5
Ferrous Iron	30000	550	2500	ug/l	T8	3500Fe-	06/24/11	50
Phosphorus,Total	2000	26.	100	ug/l		365.1	06/23/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/18/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.0			% Rec.		8015D/G	06/18/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	460	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	130	33.	100	ug/l	Y4	8015	06/27/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	124.			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/18/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/18/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/18/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/18/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/18/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/18/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/18/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/18/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	06/18/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethene	U	0.41	1.0	ug/l		8260B	06/18/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/18/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/18/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/18/11	1
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/18/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-01

Date Received : June 17, 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 : 06/16/11 14:55

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/18/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/18/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/18/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/18/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/18/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/18/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/18/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/18/11	1
Methyl tert-butyl ether	U	0.63	1.0	ug/l		8260B	06/18/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/18/11	1
Styrene	U	0.24	1.0	ug/l	J4J3	8260B	06/18/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/18/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/18/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/18/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/18/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/18/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/18/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/18/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/18/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/18/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/18/11	1
Ethanol	U	12.	100	ug/l		8260B	06/18/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/18/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/18/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/18/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/18/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/18/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/18/11	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	06/18/11	1
Dibromofluoromethane	103.			% Rec.		8260B	06/18/11	1
4-Bromofluorobenzene	93.1			% Rec.		8260B	06/18/11	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-02

Date Received : June 17, 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 : 06/16/11 14:05

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	41.	100	ug/l		9056	06/17/11	1
Sulfate	150000	2300	25000	ug/l		9056	06/22/11	5
Alkalinity	1100000	15000	100000	ug/l		2320B	06/23/11	5
Ferrous Iron	7400	55.	250	ug/l	T8	3500Fe-	06/24/11	5
Phosphorus,Total	6000	52.	200	ug/l		365.1	06/23/11	2
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/18/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	97.5			% Rec.		8015D/G	06/18/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	420	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	59.	33.	100	ug/l	J	8015	06/27/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	119.			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/18/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/18/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/18/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/18/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/18/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/18/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/18/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/18/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	06/18/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethene	U	0.41	1.0	ug/l		8260B	06/18/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/18/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/18/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/18/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-02

Date Received : June 17, 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 : 06/16/11 14:05

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/18/11	1
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/18/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/18/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/18/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/18/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/18/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/18/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/18/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/18/11	1
Methyl tert-butyl ether	U	0.63	1.0	ug/l		8260B	06/18/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/18/11	1
Styrene	U	0.24	1.0	ug/l	J4J3	8260B	06/18/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/18/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/18/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/18/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/18/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/18/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/18/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/18/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/18/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/18/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/18/11	1
Ethanol	U	12.	100	ug/l		8260B	06/18/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/18/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/18/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/18/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/18/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/18/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/18/11	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	06/18/11	1
Dibromofluoromethane	107.			% Rec.		8260B	06/18/11	1
4-Bromofluorobenzene	87.7			% Rec.		8260B	06/18/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-03

Date Received : June 17, 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 : 06/16/11 13:25

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	140	41.	100	ug/l		9056	06/17/11	1
Sulfate	55000	460	5000	ug/l		9056	06/17/11	1
Alkalinity	1500000	15000	100000	ug/l		2320B	06/23/11	5
Ferrous Iron	220	11.	50.	ug/l	T8	3500Fe-	06/24/11	1
Phosphorus,Total	2000	26.	100	ug/l		365.1	06/23/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/18/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.0			% Rec.		8015D/G	06/18/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	370	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	54.	33.	100	ug/l	J	8015	06/27/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	123.			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/18/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/18/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/18/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/18/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/18/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/18/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/18/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/18/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	06/18/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethene	U	0.41	1.0	ug/l		8260B	06/18/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/18/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/18/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/18/11	1
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/18/11	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
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ARCADIS U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-03

Date Received : June 17, 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 : 06/16/11 13:25

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/18/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/18/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/18/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/18/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/18/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/18/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/18/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/18/11	1
Methyl tert-butyl ether	4.0	0.63	1.0	ug/l		8260B	06/18/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/18/11	1
Styrene	U	0.24	1.0	ug/l	J4J3	8260B	06/18/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/18/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/18/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/18/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/18/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/18/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/18/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/18/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/18/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/18/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/18/11	1
Ethanol	U	12.	100	ug/l		8260B	06/18/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/18/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/18/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/18/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/18/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/18/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/18/11	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	06/18/11	1
Dibromofluoromethane	107.			% Rec.		8260B	06/18/11	1
4-Bromofluorobenzene	87.8			% Rec.		8260B	06/18/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-04

Date Received : June 17, 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 : 06/16/11 11:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	41.	100	ug/l		9056	06/17/11	1
Sulfate	U	460	5000	ug/l		9056	06/17/11	1
Alkalinity	950000	15000	100000	ug/l		2320B	06/23/11	5
Ferrous Iron	22000	110	500	ug/l	T8	3500Fe-	06/24/11	10
Phosphorus,Total	2000	26.	100	ug/l		365.1	06/23/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/18/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.2			% Rec.		8015D/G	06/18/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	700	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	120	33.	100	ug/l	Y4	8015	06/27/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	128.			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/18/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/18/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/18/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/18/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/18/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/18/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/18/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/18/11	1
Cyclohexane	0.87	0.36	1.0	ug/l	J	8260B	06/18/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethene	U	0.41	1.0	ug/l		8260B	06/18/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/18/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/18/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/18/11	1
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/18/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-04

Date Received : June 17, 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 : 06/16/11 11:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/18/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/18/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/18/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/18/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/18/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/18/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/18/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/18/11	1
Methyl tert-butyl ether	1.5	0.63	1.0	ug/l		8260B	06/18/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/18/11	1
Styrene	U	0.24	1.0	ug/l	J4J3	8260B	06/18/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/18/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/18/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/18/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/18/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/18/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/18/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/18/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/18/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/18/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/18/11	1
Ethanol	U	12.	100	ug/l		8260B	06/18/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/18/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/18/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/18/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/18/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/18/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/18/11	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	06/18/11	1
Dibromofluoromethane	105.			% Rec.		8260B	06/18/11	1
4-Bromofluorobenzene	90.3			% Rec.		8260B	06/18/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-05

Date Received : June 17, 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 : 06/16/11 09:35

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	41.	100	ug/l		9056	06/17/11	1
Sulfate	400000	4600	50000	ug/l		9056	06/23/11	10
Alkalinity	930000	15000	100000	ug/l		2320B	06/23/11	5
Ferrous Iron	7500	55.	250	ug/l	T8	3500Fe-	06/24/11	5
Phosphorus,Total	4600	26.	100	ug/l		365.1	06/23/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/18/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	97.6			% Rec.		8015D/G	06/18/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	190	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	120	33.	100	ug/l	Y4	8015	06/27/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	120.			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/18/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/18/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/18/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/18/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/18/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/18/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/18/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/18/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	06/18/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethene	U	0.41	1.0	ug/l		8260B	06/18/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/18/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/18/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/18/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-05

Date Received : June 17, 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 : 06/16/11 09:35

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/18/11	1
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/18/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/18/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/18/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/18/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/18/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/18/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/18/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/18/11	1
Methyl tert-butyl ether	U	0.63	1.0	ug/l		8260B	06/18/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/18/11	1
Styrene	U	0.24	1.0	ug/l	J4J3	8260B	06/18/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/18/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/18/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/18/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/18/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/18/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/18/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/18/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/18/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/18/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/18/11	1
Ethanol	U	12.	100	ug/l		8260B	06/18/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/18/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/18/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/18/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/18/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/18/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/18/11	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	06/18/11	1
Dibromofluoromethane	108.			% Rec.		8260B	06/18/11	1
4-Bromofluorobenzene	88.0			% Rec.		8260B	06/18/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-06

Date Received : June 17, 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 : 06/16/11 08:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	41.	100	ug/l		9056	06/17/11	1
Sulfate	180000	930	10000	ug/l		9056	06/21/11	2
Alkalinity	1000000	15000	100000	ug/l		2320B	06/23/11	5
Ferrous Iron	9500	55.	250	ug/l	T8	3500Fe-	06/24/11	5
Phosphorus,Total	5300	52.	200	ug/l		365.1	06/23/11	2
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/18/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.1			% Rec.		8015D/G	06/18/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	220	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	45.	33.	100	ug/l	JY4	8015	06/27/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	117.			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/18/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/18/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/18/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/18/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/18/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/18/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/18/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/18/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	06/18/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethene	U	0.41	1.0	ug/l		8260B	06/18/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/18/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/18/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/18/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-06

Date Received : June 17, 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 : 06/16/11 08:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/18/11	1
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/18/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/18/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/18/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/18/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/18/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/18/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/18/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/18/11	1
Methyl tert-butyl ether	U	0.63	1.0	ug/l		8260B	06/18/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/18/11	1
Styrene	U	0.24	1.0	ug/l	J4J3	8260B	06/18/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/18/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/18/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/18/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/18/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/18/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/18/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/18/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/18/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/18/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/18/11	1
Ethanol	U	12.	100	ug/l		8260B	06/18/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/18/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/18/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/18/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/18/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/18/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/18/11	1
Surrogate Recovery								
Toluene-d8	104.			% Rec.		8260B	06/18/11	1
Dibromofluoromethane	107.			% Rec.		8260B	06/18/11	1
4-Bromofluorobenzene	90.7			% Rec.		8260B	06/18/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-07

Date Received : June 17, 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 : 06/16/11 10:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	41.	100	ug/l		9056	06/17/11	1
Sulfate	U	460	5000	ug/l		9056	06/17/11	1
Alkalinity	1900000	15000	100000	ug/l		2320B	06/23/11	5
Ferrous Iron	24000	110	500	ug/l	T8	3500Fe-	06/24/11	10
Phosphorus,Total	3000	26.	100	ug/l		365.1	06/23/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/18/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.1			% Rec.		8015D/G	06/18/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	480	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	70.	33.	100	ug/l	J	8015	06/27/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	104.			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/18/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/18/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/18/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/18/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/18/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/18/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/18/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/18/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	06/18/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethene	U	0.41	1.0	ug/l		8260B	06/18/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/18/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/18/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/18/11	1
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/18/11	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-07

Date Received : June 17, 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 : 06/16/11 10:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/18/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/18/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/18/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/18/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/18/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/18/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/18/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/18/11	1
Methyl tert-butyl ether	U	0.63	1.0	ug/l		8260B	06/18/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/18/11	1
Styrene	U	0.24	1.0	ug/l	J4J3	8260B	06/18/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/18/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/18/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/18/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/18/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/18/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/18/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/18/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/18/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/18/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/18/11	1
Ethanol	U	12.	100	ug/l		8260B	06/18/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/18/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/18/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/18/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/18/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/18/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/18/11	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	06/18/11	1
Dibromofluoromethane	105.			% Rec.		8260B	06/18/11	1
4-Bromofluorobenzene	91.4			% Rec.		8260B	06/18/11	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-08

Date Received : June 17, 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 : 06/16/11 12:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	41.	100	ug/l		9056	06/17/11	1
Sulfate	U	460	5000	ug/l		9056	06/17/11	1
Alkalinity	430000	3000	20000	ug/l		2320B	06/23/11	1
Ferrous Iron	9700	55.	250	ug/l	T8	3500Fe-	06/24/11	5
Phosphorus,Total	840	26.	100	ug/l		365.1	06/23/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/18/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	92.8			% Rec.		8015D/G	06/18/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	390	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	45.	33.	100	ug/l	J	8015	06/27/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	118.			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/18/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/18/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/18/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/18/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/18/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/18/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/18/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/18/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/18/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	06/18/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/18/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
1,1-Dichloroethene	U	0.41	1.0	ug/l		8260B	06/18/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/18/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/18/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/18/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/18/11	1
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/18/11	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521488-08

Date Received : June 17, 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 : 06/16/11 12:15

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/18/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/18/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/18/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/18/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/18/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/18/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/18/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/18/11	1
Methyl tert-butyl ether	U	0.63	1.0	ug/l		8260B	06/18/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/18/11	1
Styrene	U	0.24	1.0	ug/l	J4J3	8260B	06/18/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/18/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/18/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/18/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/18/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/18/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/18/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/18/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/18/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/18/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/18/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/18/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/18/11	1
Ethanol	U	12.	100	ug/l		8260B	06/18/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/18/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/18/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/18/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/18/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/18/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/18/11	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	06/18/11	1
Dibromofluoromethane	105.			% Rec.		8260B	06/18/11	1
4-Bromofluorobenzene	89.0			% Rec.		8260B	06/18/11	1

U = ND (Not Detected)
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: 06/27/11 09:58 Printed: 06/27/11 09:59

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L521488-01	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	Y4
	WG541201	SAMP	Styrene	R1730570	J4J3
	WG542352	SAMP	Ferrous Iron	R1738330	T8
L521488-02	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	J
	WG541201	SAMP	Styrene	R1730570	J4J3
	WG542352	SAMP	Ferrous Iron	R1738330	T8
L521488-03	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	J
	WG541201	SAMP	Styrene	R1730570	J4J3
	WG542352	SAMP	Ferrous Iron	R1738330	T8
L521488-04	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	Y4
	WG541201	SAMP	Cyclohexane	R1730570	J
	WG541201	SAMP	Styrene	R1730570	J4J3
	WG542352	SAMP	Ferrous Iron	R1738330	T8
L521488-05	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	Y4
	WG541201	SAMP	Styrene	R1730570	J4J3
	WG542352	SAMP	Ferrous Iron	R1738330	T8
L521488-06	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	JY4
	WG541201	SAMP	Styrene	R1730570	J4J3
	WG542352	SAMP	Ferrous Iron	R1738330	T8
L521488-07	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	J
	WG541201	SAMP	Styrene	R1730570	J4J3
	WG542352	SAMP	Ferrous Iron	R1738330	T8
L521488-08	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	J
	WG541201	SAMP	Styrene	R1730570	J4J3
	WG542352	SAMP	Ferrous Iron	R1738330	T8

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.
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.
Y1	This sample most closely matches the laboratory standard for Diesel
Y4	This sample most closely matches the laboratory standard for Motor Oil

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
06/27/11 at 09:59:30

TSR Signing Reports: 341
R5 - Desired TAT

Sample: L521488-01 Account: ARCABMI Received: 06/17/11 09:00 Due Date: 06/24/11 00:00 RPT Date: 06/27/11 09:58

Sample: L521488-02 Account: ARCABMI Received: 06/17/11 09:00 Due Date: 06/24/11 00:00 RPT Date: 06/27/11 09:58

Sample: L521488-03 Account: ARCABMI Received: 06/17/11 09:00 Due Date: 06/24/11 00:00 RPT Date: 06/27/11 09:58

Sample: L521488-04 Account: ARCABMI Received: 06/17/11 09:00 Due Date: 06/24/11 00:00 RPT Date: 06/27/11 09:58

Sample: L521488-05 Account: ARCABMI Received: 06/17/11 09:00 Due Date: 06/24/11 00:00 RPT Date: 06/27/11 09:58

Sample: L521488-06 Account: ARCABMI Received: 06/17/11 09:00 Due Date: 06/24/11 00:00 RPT Date: 06/27/11 09:58

Sample: L521488-07 Account: ARCABMI Received: 06/17/11 09:00 Due Date: 06/24/11 00:00 RPT Date: 06/27/11 09:58

Sample: L521488-08 Account: ARCABMI Received: 06/17/11 09:00 Due Date: 06/24/11 00:00 RPT Date: 06/27/11 09:58

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Est. 1970

ARCADIS U.S. GMC
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L521488

June 27, 2011

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Nitrate	< .1	mg/l			WG541084	06/17/11 07:24
Sulfate	< 5	mg/l			WG541084	06/17/11 07:24
TPH (GC/FID) Low Fraction	< .1	mg/l			WG541253	06/18/11 09:49
a,a,a-Trifluorotoluene(FID)		% Rec.	97.93	62-128	WG541253	06/18/11 09:49
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG541201	06/18/11 05:28
1,1,1-Trichloroethane	< .001	mg/l			WG541201	06/18/11 05:28
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG541201	06/18/11 05:28
1,1,2-Trichloroethane	< .001	mg/l			WG541201	06/18/11 05:28
1,1-Dichloroethane	< .001	mg/l			WG541201	06/18/11 05:28
1,1-Dichloroethene	< .001	mg/l			WG541201	06/18/11 05:28
1,2,3-Trichlorobenzene	< .001	mg/l			WG541201	06/18/11 05:28
1,2,4-Trichlorobenzene	< .001	mg/l			WG541201	06/18/11 05:28
1,2,4-Trimethylbenzene	< .001	mg/l			WG541201	06/18/11 05:28
1,2-Dichlorobenzene	< .001	mg/l			WG541201	06/18/11 05:28
1,2-Dichloroethane	< .001	mg/l			WG541201	06/18/11 05:28
1,2-Dichloropropane	< .001	mg/l			WG541201	06/18/11 05:28
1,3,5-Trimethylbenzene	< .001	mg/l			WG541201	06/18/11 05:28
1,3-Dichlorobenzene	< .001	mg/l			WG541201	06/18/11 05:28
1,3-Dichloropropane	< .001	mg/l			WG541201	06/18/11 05:28
1,4-Dichlorobenzene	< .001	mg/l			WG541201	06/18/11 05:28
2-Butanone (MEK)	< .01	mg/l			WG541201	06/18/11 05:28
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG541201	06/18/11 05:28
Acetone	< .05	mg/l			WG541201	06/18/11 05:28
Benzene	< .001	mg/l			WG541201	06/18/11 05:28
Bromodichloromethane	< .001	mg/l			WG541201	06/18/11 05:28
Bromoform	< .001	mg/l			WG541201	06/18/11 05:28
Bromomethane	< .005	mg/l			WG541201	06/18/11 05:28
Carbon disulfide	< .001	mg/l			WG541201	06/18/11 05:28
Carbon tetrachloride	< .001	mg/l			WG541201	06/18/11 05:28
Chlorobenzene	< .001	mg/l			WG541201	06/18/11 05:28
Chloroethane	< .005	mg/l			WG541201	06/18/11 05:28
Chloroform	< .005	mg/l			WG541201	06/18/11 05:28
cis-1,2-Dichloroethene	< .001	mg/l			WG541201	06/18/11 05:28
cis-1,3-Dichloropropene	< .001	mg/l			WG541201	06/18/11 05:28
Cyclohexane	< .001	mg/l			WG541201	06/18/11 05:28
Di-isopropyl ether	< .001	mg/l			WG541201	06/18/11 05:28
Ethanol	< .1	mg/l			WG541201	06/18/11 05:28
Ethyl tert-butyl ether	< .001	mg/l			WG541201	06/18/11 05:28
Ethylbenzene	< .001	mg/l			WG541201	06/18/11 05:28
Hexachloro-1,3-butadiene	< .001	mg/l			WG541201	06/18/11 05:28
Isopropylbenzene	< .001	mg/l			WG541201	06/18/11 05:28
Methyl tert-butyl ether	< .001	mg/l			WG541201	06/18/11 05:28
Methylene Chloride	< .005	mg/l			WG541201	06/18/11 05:28
n-Hexane	< .01	mg/l			WG541201	06/18/11 05:28
Naphthalene	< .005	mg/l			WG541201	06/18/11 05:28
Styrene	< .001	mg/l			WG541201	06/18/11 05:28
tert-Amyl Methyl Ether	< .001	mg/l			WG541201	06/18/11 05:28
tert-Butyl alcohol	< .05	mg/l			WG541201	06/18/11 05:28
Tetrachloroethene	< .001	mg/l			WG541201	06/18/11 05:28
Toluene	< .005	mg/l			WG541201	06/18/11 05:28
trans-1,2-Dichloroethene	< .001	mg/l			WG541201	06/18/11 05:28
trans-1,3-Dichloropropene	< .001	mg/l			WG541201	06/18/11 05:28
Trichloroethene	< .001	mg/l			WG541201	06/18/11 05:28
Vinyl acetate	< .01	mg/l			WG541201	06/18/11 05:28
Vinyl chloride	< .001	mg/l			WG541201	06/18/11 05:28

* 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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Est. 1970

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Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L521488

June 27, 2011

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Xylenes, Total	< .003	mg/l			WG541201	06/18/11 05:28
4-Bromofluorobenzene		% Rec.	90.97	75-128	WG541201	06/18/11 05:28
Dibromofluoromethane		% Rec.	101.5	79-125	WG541201	06/18/11 05:28
Toluene-d8		% Rec.	101.8	87-114	WG541201	06/18/11 05:28
TPH (GC/FID) Low Fraction	< .1	mg/l			WG541254	06/18/11 16:03
a,a,a-Trifluorotoluene(FID)		% Rec.	93.24	62-128	WG541254	06/18/11 16:03
Sulfate	< 5	mg/l			WG541688	06/21/11 19:37
Sulfate	< 5	mg/l			WG541689	06/21/11 20:38
Sulfate	< 5	mg/l			WG541873	06/22/11 19:52
Phosphorus,Total	< .1	mg/l			WG541597	06/23/11 11:55
Phosphorus,Total	< .1	mg/l			WG541833	06/23/11 17:44
Alkalinity	< 20	mg/l			WG541866	06/23/11 20:31
Ferrous Iron	< .05	mg/l			WG542352	06/24/11 16:00
C10-C22 Hydrocarbons	< .1	mg/l			WG541643	06/26/11 23:58
C22-C32 Hydrocarbons	< .1	mg/l			WG541643	06/26/11 23:58
C32-C40 Hydrocarbons	< .1	mg/l			WG541643	06/26/11 23:58
o-Terphenyl		% Rec.	113.5	50-150	WG541643	06/26/11 23:58

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Nitrate	mg/l	0	0	0	20	L521457-01	WG541084
Sulfate	mg/l	0	0	0	20	L521457-01	WG541084
Nitrate	mg/l	0	0	0	20	L521488-06	WG541084
Sulfate	mg/l	170.	174.	0.576	20	L521488-06	WG541084
Sulfate	mg/l	60.0	60.0	0.837	20	L521117-28	WG541688
Sulfate	mg/l	1800	1800	0.554	20	L521534-02	WG541689
Sulfate	mg/l	0	0	0	20	L521578-13	WG541689
Sulfate	mg/l	2100	2100	0.957	20	L521534-22	WG541873
Phosphorus,Total	mg/l	6.00	6.00	0.334	20	L521488-02	WG541597
Phosphorus,Total	mg/l	0	0.0660	NA	20	L521447-01	WG541597

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Brighton, MI 48116

Quality Assurance Report
Level II

L521488

June 27, 2011

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
			Duplicate				
Phosphorus,Total	mg/l	0.130	0.120	8.76	20	L521534-22	WG541833
Phosphorus,Total	mg/l	2.00	2.00	1.98	20	L521488-03	WG541833
Alkalinity	mg/l	1300	1400	6.64	20	L521787-04	WG541866
Alkalinity	mg/l	290.	290.	0.692	20	L520902-04	WG541866
Ferrous Iron	mg/l	0.230	0.220	5.74	20	L521488-03	WG542352

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
			Laboratory Control Sample			
Nitrate	mg/l	8	8.09	101.	90-110	WG541084
Sulfate	mg/l	40	39.9	99.8	90-110	WG541084
TPH (GC/FID) Low Fraction	mg/l	5.5	5.40	98.2	70-124	WG541253
a,a,a-Trifluorotoluene(FID)				106.5	62-128	WG541253
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0306	122.	75-134	WG541201
1,1,1-Trichloroethane	mg/l	.025	0.0275	110.	67-137	WG541201
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0239	95.4	72-128	WG541201
1,1,2-Trichloroethane	mg/l	.025	0.0248	99.2	79-123	WG541201
1,1-Dichloroethane	mg/l	.025	0.0255	102.	67-133	WG541201
1,1-Dichloroethene	mg/l	.025	0.0278	111.	60-130	WG541201
1,2,3-Trichlorobenzene	mg/l	.025	0.0263	105.	63-138	WG541201
1,2,4-Trichlorobenzene	mg/l	.025	0.0260	104.	65-137	WG541201
1,2,4-Trimethylbenzene	mg/l	.025	0.0258	103.	72-135	WG541201
1,2-Dichlorobenzene	mg/l	.025	0.0259	104.	75-122	WG541201
1,2-Dichloroethane	mg/l	.025	0.0233	93.1	63-137	WG541201
1,2-Dichloropropane	mg/l	.025	0.0239	95.8	74-122	WG541201
1,3,5-Trimethylbenzene	mg/l	.025	0.0258	103.	73-134	WG541201
1,3-Dichlorobenzene	mg/l	.025	0.0257	103.	73-131	WG541201
1,3-Dichloropropane	mg/l	.025	0.0231	92.4	77-119	WG541201
1,4-Dichlorobenzene	mg/l	.025	0.0251	101.	70-121	WG541201
2-Butanone (MEK)	mg/l	.125	0.0936	74.9	53-132	WG541201
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.111	89.2	60-142	WG541201
Acetone	mg/l	.125	0.101	80.7	48-134	WG541201
Benzene	mg/l	.025	0.0251	100.	67-126	WG541201
Bromodichloromethane	mg/l	.025	0.0259	104.	68-133	WG541201
Bromoform	mg/l	.025	0.0240	96.1	60-139	WG541201
Bromomethane	mg/l	.025	0.0297	119.	45-175	WG541201
Carbon disulfide	mg/l	.025	0.0293	117.	41-148	WG541201
Carbon tetrachloride	mg/l	.025	0.0318	127.	64-141	WG541201
Chlorobenzene	mg/l	.025	0.0257	103.	77-125	WG541201
Chloroethane	mg/l	.025	0.0291	117.	49-155	WG541201
Chloroform	mg/l	.025	0.0253	101.	66-126	WG541201
cis-1,2-Dichloroethene	mg/l	.025	0.0266	107.	72-128	WG541201
cis-1,3-Dichloropropene	mg/l	.025	0.0252	101.	73-131	WG541201
Di-isopropyl ether	mg/l	.025	0.0234	93.8	63-139	WG541201
Ethylbenzene	mg/l	.025	0.0243	97.1	76-129	WG541201
Hexachloro-1,3-butadiene	mg/l	.025	0.0267	107.	67-135	WG541201
Isopropylbenzene	mg/l	.025	0.0266	106.	73-132	WG541201
Methyl tert-butyl ether	mg/l	.025	0.0239	95.6	51-142	WG541201
Methylene Chloride	mg/l	.025	0.0234	93.7	64-125	WG541201
n-Hexane	mg/l	.025	0.0252	101.	33-167	WG541201
Naphthalene	mg/l	.025	0.0241	96.5	56-145	WG541201

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10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L521488

June 27, 2011

Analyte	Units	Laboratory Control Sample Known Val	Result	% Rec	Limit	Batch
Styrene	mg/l	.025	0.0255	102.	78-130	WG541201
Tetrachloroethene	mg/l	.025	0.0272	109.	67-135	WG541201
Toluene	mg/l	.025	0.0231	92.3	72-122	WG541201
trans-1,2-Dichloroethene	mg/l	.025	0.0260	104.	67-129	WG541201
trans-1,3-Dichloropropene	mg/l	.025	0.0226	90.3	66-137	WG541201
Trichloroethene	mg/l	.025	0.0268	107.	74-126	WG541201
Vinyl acetate	mg/l	.125	0.123	98.0	34-178	WG541201
Vinyl chloride	mg/l	.025	0.0268	107.	55-153	WG541201
Xylenes, Total	mg/l	.075	0.0709	94.5	75-128	WG541201
4-Bromofluorobenzene				93.13	75-128	WG541201
Dibromofluoromethane				102.3	79-125	WG541201
Toluene-d8				99.23	87-114	WG541201
TPH (GC/FID) Low Fraction	mg/l	5.5	5.23	95.1	70-124	WG541254
a,a,a-Trifluorotoluene(FID)				96.66	62-128	WG541254
Sulfate	mg/l	40	39.3	98.3	90-110	WG541688
Sulfate	mg/l	40	40.0	100.	90-110	WG541689
Sulfate	mg/l	40	39.4	98.5	90-110	WG541873
Phosphorus,Total	mg/l	1	0.983	98.3	85-115	WG541597
Phosphorus,Total	mg/l	1	1.03	103.	85-115	WG541833
Alkalinity	mg/l	40	40.5	101.	85-115	WG541866
Ferrous Iron	mg/l	1	0.940	94.0	85-115	WG542352
C10-C22 Hydrocarbons	mg/l	.75	1.00	133.	50-150	WG541643
C22-C32 Hydrocarbons	mg/l	.75	0.545	72.7	70-130	WG541643
o-Terphenyl				106.3	50-150	WG541643

Analyte	Units	Laboratory Control Sample Duplicate Result	Ref	%Rec	Limit	RPD	Limit	Batch
Nitrate	mg/l	8.10	8.09	101.	90-110	0.124	20	WG541084
Sulfate	mg/l	39.8	39.9	100.	90-110	0.251	20	WG541084
TPH (GC/FID) Low Fraction	mg/l	5.60	5.40	102.	70-124	3.65	20	WG541253
a,a,a-Trifluorotoluene(FID)				106.6	62-128			WG541253
1,1,1,2-Tetrachloroethane	mg/l	0.0300	0.0306	120.	75-134	1.77	20	WG541201
1,1,1-Trichloroethane	mg/l	0.0283	0.0275	113.	67-137	3.08	20	WG541201
1,1,2,2-Tetrachloroethane	mg/l	0.0225	0.0239	90.0	72-128	5.99	20	WG541201
1,1,2-Trichloroethane	mg/l	0.0238	0.0248	95.0	79-123	3.94	20	WG541201
1,1-Dichloroethane	mg/l	0.0260	0.0255	104.	67-133	1.87	20	WG541201

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Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	Duplicate RPD	Limit	Batch
1,1-Dichloroethene	mg/l	0.0290	0.0278	116.	60-130	4.21	20	WG541201
1,2,3-Trichlorobenzene	mg/l	0.0250	0.0263	100.	63-138	5.24	20	WG541201
1,2,4-Trichlorobenzene	mg/l	0.0277	0.0260	111.	65-137	6.33	20	WG541201
1,2,4-Trimethylbenzene	mg/l	0.0245	0.0258	98.0	72-135	5.16	20	WG541201
1,2-Dichlorobenzene	mg/l	0.0254	0.0259	102.	75-122	2.11	20	WG541201
1,2-Dichloroethane	mg/l	0.0213	0.0233	85.0	63-137	8.82	20	WG541201
1,2-Dichloropropane	mg/l	0.0224	0.0239	89.0	74-122	6.76	20	WG541201
1,3,5-Trimethylbenzene	mg/l	0.0253	0.0258	101.	73-134	1.75	20	WG541201
1,3-Dichlorobenzene	mg/l	0.0254	0.0257	102.	73-131	1.31	20	WG541201
1,3-Dichloropropane	mg/l	0.0223	0.0231	89.0	77-119	3.52	20	WG541201
1,4-Dichlorobenzene	mg/l	0.0257	0.0251	103.	70-121	2.15	20	WG541201
2-Butanone (MEK)	mg/l	0.0829	0.0936	66.0	53-132	12.2	20	WG541201
4-Methyl-2-pentanone (MIBK)	mg/l	0.103	0.111	82.0	60-142	7.88	20	WG541201
Acetone	mg/l	0.0938	0.101	75.0	48-134	7.21	20	WG541201
Benzene	mg/l	0.0237	0.0251	95.0	67-126	5.66	20	WG541201
Bromodichloromethane	mg/l	0.0235	0.0259	94.0	68-133	9.71	20	WG541201
Bromoform	mg/l	0.0229	0.0240	91.0	60-139	5.02	20	WG541201
Bromomethane	mg/l	0.0247	0.0297	99.0	45-175	18.5	20	WG541201
Carbon disulfide	mg/l	0.0267	0.0293	107.	41-148	9.37	20	WG541201
Carbon tetrachloride	mg/l	0.0312	0.0318	125.	64-141	2.01	20	WG541201
Chlorobenzene	mg/l	0.0251	0.0257	100.	77-125	2.66	20	WG541201
Chloroethane	mg/l	0.0249	0.0291	100.	49-155	15.7	20	WG541201
Chloroform	mg/l	0.0251	0.0253	100.	66-126	0.630	20	WG541201
cis-1,2-Dichloroethene	mg/l	0.0258	0.0266	103.	72-128	3.09	20	WG541201
cis-1,3-Dichloropropene	mg/l	0.0237	0.0252	95.0	73-131	6.27	20	WG541201
Di-isopropyl ether	mg/l	0.0243	0.0234	97.0	63-139	3.63	20	WG541201
Ethylbenzene	mg/l	0.0242	0.0243	97.0	76-129	0.400	20	WG541201
Hexachloro-1,3-butadiene	mg/l	0.0264	0.0267	106.	67-135	1.07	20	WG541201
Isopropylbenzene	mg/l	0.0280	0.0266	112.	73-132	5.26	20	WG541201
Methyl tert-butyl ether	mg/l	0.0241	0.0239	96.0	51-142	0.680	20	WG541201
Methylene Chloride	mg/l	0.0219	0.0234	88.0	64-125	6.47	20	WG541201
n-Hexane	mg/l	0.0206	0.0252	82.0	33-167	19.9	20	WG541201
Naphthalene	mg/l	0.0220	0.0241	88.0	56-145	9.12	20	WG541201
Styrene	mg/l	0.0186	0.0255	74*	78-130	31.4*	20	WG541201
Tetrachloroethene	mg/l	0.0272	0.0272	109.	67-135	0.140	20	WG541201
Toluene	mg/l	0.0220	0.0231	88.0	72-122	4.95	20	WG541201
trans-1,2-Dichloroethene	mg/l	0.0250	0.0260	100.	67-129	4.24	20	WG541201
trans-1,3-Dichloropropene	mg/l	0.0200	0.0226	80.0	66-137	12.2	20	WG541201
Trichloroethene	mg/l	0.0255	0.0268	102.	74-126	4.81	20	WG541201
Vinyl acetate	mg/l	0.113	0.123	90.0	34-178	8.42	26	WG541201
Vinyl chloride	mg/l	0.0222	0.0268	89.0	55-153	18.6	20	WG541201
Xylenes, Total	mg/l	0.0702	0.0709	94.0	75-128	1.03	20	WG541201
4-Bromofluorobenzene				93.40	75-128			WG541201
Dibromofluoromethane				98.75	79-125			WG541201
Toluene-d8				97.24	87-114			WG541201
TPH (GC/FID) Low Fraction	mg/l	5.29	5.23	96.0	70-124	1.10	20	WG541254
a,a,a-Trifluorotoluene(FID)				97.65	62-128			WG541254
Sulfate	mg/l	39.4	39.3	98.0	90-110	0.254	20	WG541688
Sulfate	mg/l	40.0	40.0	100.	90-110	0	20	WG541689
Sulfate	mg/l	39.4	39.4	98.0	90-110	0	20	WG541873

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Quality Assurance Report
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Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	RPD	Limit	Batch
Phosphorus,Total	mg/l	1.00	0.983	100.	85-115	1.71	20	WG541597
Phosphorus,Total	mg/l	1.05	1.03	105.	85-115	1.92	20	WG541833
Alkalinity	mg/l	39.6	40.5	99.0	85-115	2.25	20	WG541866
Ferrous Iron	mg/l	0.968	0.940	97.0	85-115	2.94	20	WG542352
C10-C22 Hydrocarbons	mg/l	1.00	1.00	134.	50-150	0.158	20	WG541643
C22-C32 Hydrocarbons	mg/l	0.554	0.545	74.0	70-130	1.50	20	WG541643
o-Terphenyl				108.5	50-150			WG541643

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Nitrate	mg/l	4.85	0	5	97.0	80-120	L521457-02	WG541084
Sulfate	mg/l	49.5	0	50	99.0	80-120	L521457-02	WG541084
TPH (GC/FID) Low Fraction	mg/l	5.50	0	5.5	100.	55-109	L521539-01	WG541253
a,a,a-Trifluorotoluene(FID)					106.1	62-128		WG541253
1,1,1,2-Tetrachloroethane	mg/l	0.0259	0	.025	103.	45-152	L521578-01	WG541201
1,1,1-Trichloroethane	mg/l	0.0248	0	.025	99.1	31-161	L521578-01	WG541201
1,1,2,2-Tetrachloroethane	mg/l	0.0209	0	.025	83.7	49-149	L521578-01	WG541201
1,1,2-Trichloroethane	mg/l	0.0214	0	.025	85.8	46-145	L521578-01	WG541201
1,1-Dichloroethane	mg/l	0.0219	0	.025	87.4	30-159	L521578-01	WG541201
1,1-Dichloroethene	mg/l	0.0242	0	.025	96.8	10-162	L521578-01	WG541201
1,2,3-Trichlorobenzene	mg/l	0.0220	0	.025	88.0	32-143	L521578-01	WG541201
1,2,4-Trichlorobenzene	mg/l	0.0228	0	.025	91.2	27-142	L521578-01	WG541201
1,2,4-Trimethylbenzene	mg/l	0.0208	0	.025	83.2	29-153	L521578-01	WG541201
1,2-Dichlorobenzene	mg/l	0.0213	0	.025	85.2	40-139	L521578-01	WG541201
1,2-Dichloroethane	mg/l	0.0189	0	.025	75.4	29-167	L521578-01	WG541201
1,2-Dichloropropane	mg/l	0.0195	0	.025	78.2	39-148	L521578-01	WG541201
1,3,5-Trimethylbenzene	mg/l	0.0219	0	.025	87.6	33-149	L521578-01	WG541201
1,3-Dichlorobenzene	mg/l	0.0219	0	.025	87.6	32-148	L521578-01	WG541201
1,3-Dichloropropane	mg/l	0.0203	0	.025	81.2	44-142	L521578-01	WG541201
1,4-Dichlorobenzene	mg/l	0.0210	0	.025	84.1	32-136	L521578-01	WG541201
2-Butanone (MEK)	mg/l	0.0788	0	.125	63.1	32-151	L521578-01	WG541201
4-Methyl-2-pentanone (MIBK)	mg/l	0.103	0	.125	82.1	40-160	L521578-01	WG541201
Acetone	mg/l	0.0777	0	.125	62.2	25-157	L521578-01	WG541201
Benzene	mg/l	0.0201	0	.025	80.4	16-158	L521578-01	WG541201
Bromodichloromethane	mg/l	0.0204	0	.025	81.8	45-147	L521578-01	WG541201
Bromoform	mg/l	0.0207	0	.025	83.0	38-152	L521578-01	WG541201
Bromomethane	mg/l	0.0196	0	.025	78.2	0-191	L521578-01	WG541201
Carbon disulfide	mg/l	0.0230	0	.025	91.9	10-166	L521578-01	WG541201
Carbon tetrachloride	mg/l	0.0267	0	.025	107.	22-168	L521578-01	WG541201
Chlorobenzene	mg/l	0.0212	0	.025	84.9	33-148	L521578-01	WG541201
Chloroethane	mg/l	0.0215	0	.025	86.1	4-176	L521578-01	WG541201
Chloroform	mg/l	0.0216	0	.025	86.4	37-147	L521578-01	WG541201
cis-1,2-Dichloroethene	mg/l	0.0214	0	.025	85.4	29-156	L521578-01	WG541201
cis-1,3-Dichloropropene	mg/l	0.0202	0	.025	81.0	35-148	L521578-01	WG541201
Di-isopropyl ether	mg/l	0.0206	0	.025	82.6	39-160	L521578-01	WG541201

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Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Ethylbenzene	mg/l	0.0204	0	.025	81.6	29-150	L521578-01	WG541201
Hexachloro-1,3-butadiene	mg/l	0.0215	0	.025	86.0	28-144	L521578-01	WG541201
Isopropylbenzene	mg/l	0.0241	0	.025	96.4	35-147	L521578-01	WG541201
Methyl tert-butyl ether	mg/l	0.0226	0	.025	90.6	24-167	L521578-01	WG541201
Methylene Chloride	mg/l	0.0192	0	.025	76.8	23-151	L521578-01	WG541201
n-Hexane	mg/l	0.0177	0	.025	70.8	10-176	L521578-01	WG541201
Naphthalene	mg/l	0.0200	0	.025	79.9	24-160	L521578-01	WG541201
Styrene	mg/l	0.0156	0	.025	62.3	38-149	L521578-01	WG541201
Tetrachloroethene	mg/l	0.0222	0	.025	88.9	13-157	L521578-01	WG541201
Toluene	mg/l	0.0185	0	.025	74.0	22-152	L521578-01	WG541201
trans-1,2-Dichloroethene	mg/l	0.0204	0	.025	81.6	11-160	L521578-01	WG541201
trans-1,3-Dichloropropene	mg/l	0.0181	0	.025	72.4	33-153	L521578-01	WG541201
Trichloroethene	mg/l	0.0219	0	.025	87.7	18-163	L521578-01	WG541201
Vinyl acetate	mg/l	0.107	0	.125	85.3	0-196	L521578-01	WG541201
Vinyl chloride	mg/l	0.0174	0	.025	69.7	0-179	L521578-01	WG541201
Xylenes, Total	mg/l	0.0597	0	.075	79.6	27-151	L521578-01	WG541201
4-Bromofluorobenzene					95.27	75-128		WG541201
Dibromofluoromethane					101.9	79-125		WG541201
Toluene-d8					97.72	87-114		WG541201
TPH (GC/FID) Low Fraction	mg/l	4.83	0	5.5	87.9	55-109	L521656-04	WG541254
a,a,a-Trifluorotoluene(FID)					95.08	62-128		WG541254
Sulfate	mg/l	83.9	36.0	50	95.8	80-120	L521578-12	WG541689
Sulfate	mg/l	58.7	6.10	50	105.	80-120	L521818-01	WG541873
Phosphorus,Total	mg/l	2.54	0.0900	2.5	98.0	80-120	L521447-02	WG541597
Phosphorus,Total	mg/l	4.52	2.00	2.5	101.	80-120	L521488-04	WG541833
Alkalinity	mg/l	437.	290.	200	73.5*	80-120	L520902-03	WG541866
Ferrous Iron	mg/l	1.66	0.220	1.5	96.0	80-120	L521488-03	WG542352

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Nitrate	mg/l	4.96	4.85	99.2	80-120	2.24	20	L521457-02	WG541084
Sulfate	mg/l	50.7	49.5	101.	80-120	2.40	20	L521457-02	WG541084
TPH (GC/FID) Low Fraction	mg/l	5.55	5.50	101.	55-109	0.970	20	L521539-01	WG541253
a,a,a-Trifluorotoluene(FID)				105.8	62-128				WG541253
1,1,1,2-Tetrachloroethane	mg/l	0.0273	0.0259	109.	45-152	5.37	21	L521578-01	WG541201
1,1,1-Trichloroethane	mg/l	0.0258	0.0248	103.	31-161	3.91	23	L521578-01	WG541201
1,1,2,2-Tetrachloroethane	mg/l	0.0223	0.0209	89.4	49-149	6.55	22	L521578-01	WG541201
1,1,2-Trichloroethane	mg/l	0.0233	0.0214	93.4	46-145	8.44	20	L521578-01	WG541201
1,1-Dichloroethane	mg/l	0.0232	0.0219	92.9	30-159	6.10	21	L521578-01	WG541201
1,1-Dichloroethene	mg/l	0.0238	0.0242	95.3	10-162	1.61	23	L521578-01	WG541201

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Analyte	Units	Matrix Spike MSD	Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
1,2,3-Trichlorobenzene	mg/l	0.0239	0.0220	95.7	32-143	8.38	33	L521578-01	WG541201
1,2,4-Trichlorobenzene	mg/l	0.0254	0.0228	102.	27-142	10.9	30	L521578-01	WG541201
1,2,4-Trimethylbenzene	mg/l	0.0223	0.0208	89.0	29-153	6.71	27	L521578-01	WG541201
1,2-Dichlorobenzene	mg/l	0.0232	0.0213	92.7	40-139	8.35	23	L521578-01	WG541201
1,2-Dichloroethane	mg/l	0.0198	0.0189	79.1	29-167	4.77	21	L521578-01	WG541201
1,2-Dichloropropane	mg/l	0.0213	0.0195	85.1	39-148	8.46	20	L521578-01	WG541201
1,3,5-Trimethylbenzene	mg/l	0.0232	0.0219	92.6	33-149	5.57	26	L521578-01	WG541201
1,3-Dichlorobenzene	mg/l	0.0235	0.0219	94.1	32-148	7.26	24	L521578-01	WG541201
1,3-Dichloropropane	mg/l	0.0220	0.0203	88.1	44-142	8.09	20	L521578-01	WG541201
1,4-Dichlorobenzene	mg/l	0.0231	0.0210	92.6	32-136	9.54	23	L521578-01	WG541201
2-Butanone (MEK)	mg/l	0.0840	0.0788	67.2	32-151	6.34	26	L521578-01	WG541201
4-Methyl-2-pentanone (MIBK)	mg/l	0.108	0.103	86.4	40-160	5.07	28	L521578-01	WG541201
Acetone	mg/l	0.0810	0.0777	64.8	25-157	4.08	26	L521578-01	WG541201
Benzene	mg/l	0.0214	0.0201	85.8	16-158	6.49	21	L521578-01	WG541201
Bromodichloromethane	mg/l	0.0224	0.0204	89.8	45-147	9.29	20	L521578-01	WG541201
Bromoform	mg/l	0.0230	0.0207	92.1	38-152	10.4	20	L521578-01	WG541201
Bromomethane	mg/l	0.0193	0.0196	77.3	0-191	1.17	35	L521578-01	WG541201
Carbon disulfide	mg/l	0.0227	0.0230	90.7	10-166	1.29	25	L521578-01	WG541201
Carbon tetrachloride	mg/l	0.0270	0.0267	108.	22-168	1.04	24	L521578-01	WG541201
Chlorobenzene	mg/l	0.0226	0.0212	90.4	33-148	6.31	22	L521578-01	WG541201
Chloroethane	mg/l	0.0214	0.0215	85.7	4-176	0.500	27	L521578-01	WG541201
Chloroform	mg/l	0.0226	0.0216	90.3	37-147	4.38	21	L521578-01	WG541201
cis-1,2-Dichloroethene	mg/l	0.0226	0.0214	90.5	29-156	5.73	22	L521578-01	WG541201
cis-1,3-Dichloropropene	mg/l	0.0225	0.0202	90.2	35-148	10.7	21	L521578-01	WG541201
Di-isopropyl ether	mg/l	0.0219	0.0206	87.6	39-160	5.98	21	L521578-01	WG541201
Ethylbenzene	mg/l	0.0217	0.0204	86.6	29-150	6.00	24	L521578-01	WG541201
Hexachloro-1,3-butadiene	mg/l	0.0231	0.0215	92.5	28-144	7.31	33	L521578-01	WG541201
Isopropylbenzene	mg/l	0.0258	0.0241	103.	35-147	6.92	25	L521578-01	WG541201
Methyl tert-butyl ether	mg/l	0.0237	0.0226	94.8	24-167	4.54	22	L521578-01	WG541201
Methylene Chloride	mg/l	0.0197	0.0192	78.6	23-151	2.40	21	L521578-01	WG541201
n-Hexane	mg/l	0.0183	0.0177	73.3	10-176	3.60	23	L521578-01	WG541201
Naphthalene	mg/l	0.0218	0.0200	87.2	24-160	8.80	37	L521578-01	WG541201
Styrene	mg/l	0.0167	0.0156	66.9	38-149	7.19	23	L521578-01	WG541201
Tetrachloroethene	mg/l	0.0235	0.0222	94.1	13-157	5.69	24	L521578-01	WG541201
Toluene	mg/l	0.0207	0.0185	82.7	22-152	11.1	22	L521578-01	WG541201
trans-1,2-Dichloroethene	mg/l	0.0212	0.0204	84.8	11-160	3.91	23	L521578-01	WG541201
trans-1,3-Dichloropropene	mg/l	0.0202	0.0181	80.7	33-153	10.9	22	L521578-01	WG541201
Trichloroethene	mg/l	0.0227	0.0219	90.9	18-163	3.55	21	L521578-01	WG541201
Vinyl acetate	mg/l	0.115	0.107	91.7	0-196	7.20	26	L521578-01	WG541201
Vinyl chloride	mg/l	0.0169	0.0174	67.4	0-179	3.28	26	L521578-01	WG541201
Xylenes, Total	mg/l	0.0635	0.0597	84.7	27-151	6.14	23	L521578-01	WG541201
4-Bromofluorobenzene				93.80	75-128				WG541201
Dibromofluoromethane				97.01	79-125				WG541201
Toluene-d8				99.58	87-114				WG541201
TPH (GC/FID) Low Fraction	mg/l	5.03	4.83	91.5	55-109	4.04	20	L521656-04	WG541254
a,a,a-Trifluorotoluene(FID)				96.29	62-128				WG541254
Sulfate	mg/l	84.4	83.9	96.8	80-120	0.594	20	L521578-12	WG541689
Sulfate	mg/l	55.8	58.7	99.4	80-120	5.07	20	L521818-01	WG541873
Phosphorus,Total	mg/l	2.57	2.54	99.2	80-120	1.17	20	L521447-02	WG541597

* 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 U.S. GMC
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L521488

June 27, 2011

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Phosphorus,Total	mg/l	4.56	4.52	102.	80-120	0.881	20	L521488-04	WG541833
Alkalinity	mg/l	437.	437.	73.5*	80-120	0	20	L520902-03	WG541866
Ferrous Iron	mg/l	1.68	1.66	97.3	80-120	1.20	20	L521488-03	WG542352

Batch number /Run number / Sample number cross reference

WG541084: R1728489: L521488-01 02 03 04 05 06 07 08
WG541253: R1730050: L521488-01 02 03 04 05 06 07
WG541201: R1730570: L521488-01 02 03 04 05 06 07 08
WG541254: R1732190: L521488-08
WG541688: R1732749: L521488-02
WG541689: R1732810: L521488-06
WG541873: R1734549: L521488-05
WG541597: R1736169: L521488-01 02
WG541833: R1736269: L521488-03 04 05 06 07 08
WG541866: R1736469: L521488-01 02 03 04 05 06 07 08
WG542352: R1738330: L521488-01 02 03 04 05 06 07 08
WG541643: R1740169: L521488-01 02 03 04 05 06 07 08

* * 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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10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L521488

June 27, 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 U.S. GMC

10559 Citation Dr. Ste 100
Brighton,MI 48116

Billing information:

Brad Saunders
10559 Citation Dr, Ste 100

Brighton,MI 48116

Analysis/Container/Preservative

E056

Chain of Custody 1 of 1

ESC LABS
12065 Lebanon Road
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Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

Report to: Holly M. Burger, Debra Hagerty

Email: debra.hagerty@arcadis-us.co

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 WA

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

Acctnum: ARCABMI (lab use only)
Template/Prelogin: T70272/ P358745
Cooler #: ~~6-7-11-6~~
Shipped Via: FedEX 2nd Day

Sample ID	Comp/Grab	Matrix*	Depth	Date	Time	No. of Cntrs	ALK 500mlHDPE-NoPres	DROCAER 1L-Amb-Add HCl <2	FERUSFE 250mlAmb-HCl <2	GRO 40mlAmb HCl	Nitrate Sulfate 125mlHDPE-NoPres	PT 250mlHDPE-H2SO4 <2	V8260OXY 40mlAmb-HCl	Remarks/Contaminant	Sample # (lab only)
MW-4		GW		6/16/11	1455	9	X	X	X	X	X	X	X		L521468-01
MW-9		GW			1405	9	X	X	X	X	X	X	X		-02
MW-2		GW			1325	9	X	X	X	X	X	X	X		-03
MW-7		GW			1130	9	X	X	X	X	X	X	X		-04
MW-11		GW			0935	9	X	X	X	X	X	X	X		-05
MW-10		GW			0845	9	X	X	X	X	X	X	X		-06
MW-1		GW			1030	9	X	X	X	X	X	X	X		-07
MW-8		GW			1215	9	X	X	X	X	X	X	X		-08
		GW				~~9~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~	~~X~~		

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

Remarks:

pH _____ Temp _____

Flow _____ Other _____

4875 5512 7469 / 4875 5512 7470

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	6/16/11	1600	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)
			Greg Warrenon

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐ ____
Temp: 3.6 Bottles Received: 72+2TB
Date: 6-17-11 Time: 0900

Condition: (ok) (lab use only)
COC Seal Intact: ___ Y ___ N ___ NA
pH Checked: <2 NCF:

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Holly M. Burger, Debra Hagerty
ARCADIS U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

Report Summary

Monday June 27, 2011

Report Number: L521787
Samples Received: 06/18/11
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

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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521787-01

Date Received : June 18, 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 : 06/17/11 07:40

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	41.	100	ug/l		9056	06/18/11	1
Sulfate	280000	2300	25000	ug/l		9056	06/22/11	5
Alkalinity	1600000	15000	100000	ug/l		2320B	06/23/11	5
Ferrous Iron	430	11.	50.	ug/l	T8	3500Fe-	06/23/11	1
Phosphorus,Total	5200	52.	200	ug/l		365.1	06/23/11	2
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/21/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.5			% Rec.		8015D/G	06/21/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	200	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	78.	33.	100	ug/l	J	8015	06/27/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	106.			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/20/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/20/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/20/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/20/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/20/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/20/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/20/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/20/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/20/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/20/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	06/20/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/20/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/20/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/20/11	1
1,1-Dichloroethene	0.93	0.41	1.0	ug/l	J	8260B	06/20/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/20/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/20/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/20/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/20/11	1
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/20/11	1

U = ND (Not Detected)
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.

.
Reported: 06/27/11 10:00 Printed: 06/27/11 10:00

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521787-01

Date Received : June 18, 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 : 06/17/11 07:40

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/20/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/20/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/20/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/20/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/20/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/20/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/20/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/20/11	1
Methyl tert-butyl ether	U	0.63	1.0	ug/l		8260B	06/20/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/20/11	1
Styrene	U	0.24	1.0	ug/l	J4	8260B	06/20/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/20/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/20/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/20/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/20/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/20/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/20/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/20/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/20/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/20/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/20/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/20/11	1
Ethanol	U	12.	100	ug/l		8260B	06/20/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/20/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/20/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/20/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/20/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/20/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/20/11	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	06/20/11	1
Dibromofluoromethane	105.			% Rec.		8260B	06/20/11	1
4-Bromofluorobenzene	99.7			% Rec.		8260B	06/20/11	1

U = ND (Not Detected)
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: 06/27/11 10:00 Printed: 06/27/11 10:00

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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521787-02

Date Received : June 18, 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 : 06/17/11 10:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	350	41.	100	ug/l		9056	06/18/11	1
Sulfate	600	460	5000	ug/l	J	9056	06/18/11	1
Alkalinity	980000	15000	100000	ug/l		2320B	06/23/11	5
Ferrous Iron	10000	110	500	ug/l	T8	3500Fe-	06/23/11	10
Phosphorus,Total	520	26.	100	ug/l		365.1	06/23/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/21/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.2			% Rec.		8015D/G	06/21/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	630	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	120	33.	100	ug/l	Y4	8015	06/27/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	93.8			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/20/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/20/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/20/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/20/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/20/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/20/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/20/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/20/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/20/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/20/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	06/20/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/20/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/20/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/20/11	1
1,1-Dichloroethene	U	0.41	1.0	ug/l		8260B	06/20/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/20/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/20/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/20/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/20/11	1
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/20/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521787-02

Date Received : June 18, 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 : 06/17/11 10:45

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/20/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/20/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/20/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/20/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/20/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/20/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/20/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/20/11	1
Methyl tert-butyl ether	10.	0.63	1.0	ug/l		8260B	06/20/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/20/11	1
Styrene	U	0.24	1.0	ug/l	J4	8260B	06/20/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/20/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/20/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/20/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/20/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/20/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/20/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/20/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/20/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/20/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/20/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/20/11	1
Ethanol	U	12.	100	ug/l		8260B	06/20/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/20/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/20/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/20/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/20/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/20/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/20/11	1
Surrogate Recovery								
Toluene-d8	103.			% Rec.		8260B	06/20/11	1
Dibromofluoromethane	109.			% Rec.		8260B	06/20/11	1
4-Bromofluorobenzene	98.0			% Rec.		8260B	06/20/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521787-03

Date Received : June 18, 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 : 06/17/11 11:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	41.	100	ug/l		9056	06/18/11	1
Sulfate	U	460	5000	ug/l		9056	06/18/11	1
Alkalinity	1300000	15000	100000	ug/l		2320B	06/23/11	5
Ferrous Iron	38000	280	1300	ug/l	T8	3500Fe-	06/23/11	25
Phosphorus,Total	2600	26.	100	ug/l		365.1	06/23/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/21/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	98.9			% Rec.		8015D/G	06/21/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	1400	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	250	33.	100	ug/l	Y4	8015	06/27/11	1
C32-C40 Hydrocarbons	34.	33.	100	ug/l	J	8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	113.			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/20/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/20/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/20/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/20/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/20/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/20/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/20/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/20/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/20/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/20/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	06/20/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/20/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/20/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/20/11	1
1,1-Dichloroethene	U	0.41	1.0	ug/l		8260B	06/20/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/20/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/20/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/20/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/20/11	1
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/20/11	1

U = ND (Not Detected)
RDL = Reported Detection Limit = LOQ = PQL = EQL
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REPORT OF ANALYSIS

Holly M. Burger, Debra Hagerty
ARCADIS U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521787-03

Date Received : June 18, 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 : 06/17/11 11:30

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/20/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/20/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/20/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/20/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/20/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/20/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/20/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/20/11	1
Methyl tert-butyl ether	21.	0.63	1.0	ug/l		8260B	06/20/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/20/11	1
Styrene	U	0.24	1.0	ug/l	J4	8260B	06/20/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/20/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/20/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/20/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/20/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/20/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/20/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/20/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/20/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/20/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/20/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/20/11	1
Ethanol	U	12.	100	ug/l		8260B	06/20/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/20/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/20/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/20/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/20/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/20/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/20/11	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	06/20/11	1
Dibromofluoromethane	109.			% Rec.		8260B	06/20/11	1
4-Bromofluorobenzene	99.4			% Rec.		8260B	06/20/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521787-04

Date Received : June 18, 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 : 06/17/11 00:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
Nitrate	U	41.	100	ug/l		9056	06/18/11	1
Sulfate	300000	2300	25000	ug/l		9056	06/22/11	5
Alkalinity	1400000	15000	100000	ug/l		2320B	06/23/11	5
Ferrous Iron	510	11.	50.	ug/l	T8	3500Fe-	06/23/11	1
Phosphorus,Total	4900	26.	100	ug/l		365.1	06/23/11	1
TPH (GC/FID) Low Fraction	U	40.	100	ug/l		8015D/G	06/21/11	1
Surrogate Recovery-%								
a,a,a-Trifluorotoluene(FID)	97.7			% Rec.		8015D/G	06/21/11	1
Diesel Range Organics California								
C10-C22 Hydrocarbons	240	9.7	100	ug/l	Y1	8015	06/27/11	1
C22-C32 Hydrocarbons	110	33.	100	ug/l	Y4	8015	06/27/11	1
C32-C40 Hydrocarbons	U	33.	100	ug/l		8015	06/27/11	1
Surrogate Recovery								
o-Terphenyl	109.			% Rec.		8015	06/27/11	1
Oxygenates								
Acetone	U	16.	50.	ug/l		8260B	06/20/11	1
Benzene	U	0.23	1.0	ug/l		8260B	06/20/11	1
Bromodichloromethane	U	0.23	1.0	ug/l		8260B	06/20/11	1
Bromoform	U	0.37	1.0	ug/l		8260B	06/20/11	1
Bromomethane	U	1.6	5.0	ug/l		8260B	06/20/11	1
Carbon disulfide	U	0.28	1.0	ug/l		8260B	06/20/11	1
Carbon tetrachloride	U	0.20	1.0	ug/l		8260B	06/20/11	1
Chlorobenzene	U	0.30	1.0	ug/l		8260B	06/20/11	1
Chloroethane	U	0.87	5.0	ug/l		8260B	06/20/11	1
Chloroform	U	0.27	5.0	ug/l		8260B	06/20/11	1
Cyclohexane	U	0.36	1.0	ug/l		8260B	06/20/11	1
1,2-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/20/11	1
1,3-Dichlorobenzene	U	0.29	1.0	ug/l		8260B	06/20/11	1
1,4-Dichlorobenzene	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,1-Dichloroethane	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,2-Dichloroethane	U	0.25	1.0	ug/l		8260B	06/20/11	1
1,1-Dichloroethene	1.2	0.41	1.0	ug/l		8260B	06/20/11	1
cis-1,2-Dichloroethene	U	0.34	1.	ug/l		8260B	06/20/11	1
trans-1,2-Dichloroethene	U	0.26	1.0	ug/l		8260B	06/20/11	1
1,2-Dichloropropane	U	0.39	1.0	ug/l		8260B	06/20/11	1
1,3-Dichloropropane	U	0.28	1.0	ug/l		8260B	06/20/11	1
cis-1,3-Dichloropropene	U	0.25	1.	ug/l		8260B	06/20/11	1

U = ND (Not Detected)
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 U.S. GMC
10559 Citation Dr, Ste 100
Brighton, MI 48116

June 27, 2011

ESC Sample # : L521787-04

Date Received : June 18, 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 : 06/17/11 00:00

Parameter	Result	MDL	RDL	Units	Qualifier	Method	Date	Dil.
trans-1,3-Dichloropropene	U	0.24	1.0	ug/l		8260B	06/20/11	1
Ethylbenzene	U	0.22	1.0	ug/l		8260B	06/20/11	1
Hexachloro-1,3-butadiene	U	0.38	1.0	ug/l		8260B	06/20/11	1
n-Hexane	U	0.39	10.	ug/l		8260B	06/20/11	1
Isopropylbenzene	U	0.20	1.0	ug/l		8260B	06/20/11	1
2-Butanone (MEK)	U	3.4	10.	ug/l		8260B	06/20/11	1
Methylene Chloride	U	0.91	5.0	ug/l		8260B	06/20/11	1
4-Methyl-2-pentanone (MIBK)	U	1.7	10.	ug/l		8260B	06/20/11	1
Methyl tert-butyl ether	U	0.63	1.0	ug/l		8260B	06/20/11	1
Naphthalene	U	0.98	5.0	ug/l		8260B	06/20/11	1
Styrene	U	0.24	1.0	ug/l	J4	8260B	06/20/11	1
1,1,1,2-Tetrachloroethane	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,1,2,2-Tetrachloroethane	U	0.25	1.0	ug/l		8260B	06/20/11	1
Tetrachloroethene	U	0.32	1.0	ug/l		8260B	06/20/11	1
Toluene	U	0.32	5.0	ug/l		8260B	06/20/11	1
1,2,3-Trichlorobenzene	U	0.32	1.0	ug/l		8260B	06/20/11	1
1,2,4-Trichlorobenzene	U	0.35	1.0	ug/l		8260B	06/20/11	1
1,1,1-Trichloroethane	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,1,2-Trichloroethane	U	0.29	1.0	ug/l		8260B	06/20/11	1
Trichloroethene	U	0.31	1.0	ug/l		8260B	06/20/11	1
1,2,4-Trimethylbenzene	U	0.18	1.0	ug/l		8260B	06/20/11	1
1,3,5-Trimethylbenzene	U	0.33	1.0	ug/l		8260B	06/20/11	1
Vinyl acetate	U	4.0	1.0	ug/l		8260B	06/20/11	1
Vinyl chloride	U	0.34	1.0	ug/l		8260B	06/20/11	1
Xylenes, Total	U	0.86	3.0	ug/l		8260B	06/20/11	1
Volatile Organics								
Di-isopropyl ether	U	0.26	1.0	ug/l		8260B	06/20/11	1
Ethanol	U	12.	100	ug/l		8260B	06/20/11	1
3,3-Dimethyl-1-butanol	U	4.6	100	ug/l		8260B	06/20/11	1
Ethyl tert-butyl ether	U	0.099	1.0	ug/l		8260B	06/20/11	1
t-Amyl Alcohol	U	1.4	5.0	ug/l		8260B	06/20/11	1
tert-Butyl alcohol	U	1.5	50.	ug/l		8260B	06/20/11	1
tert-Butyl Formate	U	2.7	20.	ug/l		8260B	06/20/11	1
tert-Amyl Methyl Ether	U	0.085	1.0	ug/l		8260B	06/20/11	1
Surrogate Recovery								
Toluene-d8	102.			% Rec.		8260B	06/20/11	1
Dibromofluoromethane	109.			% Rec.		8260B	06/20/11	1
4-Bromofluorobenzene	99.6			% Rec.		8260B	06/20/11	1

U = ND (Not Detected)
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: 06/27/11 10:00 Printed: 06/27/11 10:00

Attachment A
List of Analytes with QC Qualifiers

Sample Number	Work Group	Sample Type	Analyte	Run ID	Qualifier
L521787-01	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	J
	WG541379	SAMP	1,1-Dichloroethene	R1730770	J
	WG541379	SAMP	Styrene	R1730770	J4
	WG541701	SAMP	Ferrous Iron	R1735251	T8
L521787-02	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	Y4
	WG541379	SAMP	Styrene	R1730770	J4
	WG541701	SAMP	Ferrous Iron	R1735251	T8
	WG541299	SAMP	Sulfate	R1729754	J
L521787-03	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	Y4
	WG541643	SAMP	C32-C40 Hydrocarbons	R1740169	J
	WG541379	SAMP	Styrene	R1730770	J4
	WG541701	SAMP	Ferrous Iron	R1735251	T8
L521787-04	WG541643	SAMP	C10-C22 Hydrocarbons	R1740169	Y1
	WG541643	SAMP	C22-C32 Hydrocarbons	R1740169	Y4
	WG541379	SAMP	Styrene	R1730770	J4
	WG541701	SAMP	Ferrous Iron	R1735251	T8

Attachment B
Explanation of QC Qualifier Codes

Qualifier	Meaning
J	(EPA) - Estimated value below the lowest calibration point. Confidence correlates with concentration.
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	(ESC) - Additional method/sample information: Sample(s) received past/too close to holding time expiration.
Y1	This sample most closely matches the laboratory standard for Diesel
Y4	This sample most closely matches the laboratory standard for Motor Oil

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
06/27/11 at 10:00:41

TSR Signing Reports: 341
R5 - Desired TAT

Sample: L521787-01 Account: ARCABMI Received: 06/18/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/27/11 10:00

Sample: L521787-02 Account: ARCABMI Received: 06/18/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/27/11 10:00

Sample: L521787-03 Account: ARCABMI Received: 06/18/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/27/11 10:00

Sample: L521787-04 Account: ARCABMI Received: 06/18/11 09:00 Due Date: 06/22/11 00:00 RPT Date: 06/27/11 10:00

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Est. 1970

ARCADIS U.S. GMC
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L521787

June 27, 2011

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
Nitrate	< .1	mg/l			WG541299	06/18/11 12:20
Sulfate	< 5	mg/l			WG541299	06/18/11 12:20
1,1,1,2-Tetrachloroethane	< .001	mg/l			WG541379	06/20/11 04:33
1,1,1-Trichloroethane	< .001	mg/l			WG541379	06/20/11 04:33
1,1,2,2-Tetrachloroethane	< .001	mg/l			WG541379	06/20/11 04:33
1,1,2-Trichloroethane	< .001	mg/l			WG541379	06/20/11 04:33
1,1-Dichloroethane	< .001	mg/l			WG541379	06/20/11 04:33
1,1-Dichloroethene	< .001	mg/l			WG541379	06/20/11 04:33
1,2,3-Trichlorobenzene	< .001	mg/l			WG541379	06/20/11 04:33
1,2,4-Trichlorobenzene	< .001	mg/l			WG541379	06/20/11 04:33
1,2,4-Trimethylbenzene	< .001	mg/l			WG541379	06/20/11 04:33
1,2-Dichlorobenzene	< .001	mg/l			WG541379	06/20/11 04:33
1,2-Dichloroethane	< .001	mg/l			WG541379	06/20/11 04:33
1,2-Dichloropropane	< .001	mg/l			WG541379	06/20/11 04:33
1,3,5-Trimethylbenzene	< .001	mg/l			WG541379	06/20/11 04:33
1,3-Dichlorobenzene	< .001	mg/l			WG541379	06/20/11 04:33
1,3-Dichloropropane	< .001	mg/l			WG541379	06/20/11 04:33
1,4-Dichlorobenzene	< .001	mg/l			WG541379	06/20/11 04:33
2-Butanone (MEK)	< .01	mg/l			WG541379	06/20/11 04:33
4-Methyl-2-pentanone (MIBK)	< .01	mg/l			WG541379	06/20/11 04:33
Acetone	< .05	mg/l			WG541379	06/20/11 04:33
Benzene	< .001	mg/l			WG541379	06/20/11 04:33
Bromodichloromethane	< .001	mg/l			WG541379	06/20/11 04:33
Bromoform	< .001	mg/l			WG541379	06/20/11 04:33
Bromomethane	< .005	mg/l			WG541379	06/20/11 04:33
Carbon disulfide	< .001	mg/l			WG541379	06/20/11 04:33
Carbon tetrachloride	< .001	mg/l			WG541379	06/20/11 04:33
Chlorobenzene	< .001	mg/l			WG541379	06/20/11 04:33
Chloroethane	< .005	mg/l			WG541379	06/20/11 04:33
Chloroform	< .005	mg/l			WG541379	06/20/11 04:33
cis-1,2-Dichloroethene	< .001	mg/l			WG541379	06/20/11 04:33
cis-1,3-Dichloropropene	< .001	mg/l			WG541379	06/20/11 04:33
Cyclohexane	< .001	mg/l			WG541379	06/20/11 04:33
Di-isopropyl ether	< .001	mg/l			WG541379	06/20/11 04:33
Ethanol	< .1	mg/l			WG541379	06/20/11 04:33
Ethyl tert-butyl ether	< .001	mg/l			WG541379	06/20/11 04:33
Ethylbenzene	< .001	mg/l			WG541379	06/20/11 04:33
Hexachloro-1,3-butadiene	< .001	mg/l			WG541379	06/20/11 04:33
Isopropylbenzene	< .001	mg/l			WG541379	06/20/11 04:33
Methyl tert-butyl ether	< .001	mg/l			WG541379	06/20/11 04:33
Methylene Chloride	< .005	mg/l			WG541379	06/20/11 04:33
n-Hexane	< .01	mg/l			WG541379	06/20/11 04:33
Naphthalene	< .005	mg/l			WG541379	06/20/11 04:33
Styrene	< .001	mg/l			WG541379	06/20/11 04:33
tert-Amyl Methyl Ether	< .001	mg/l			WG541379	06/20/11 04:33
tert-Butyl alcohol	< .05	mg/l			WG541379	06/20/11 04:33
Tetrachloroethene	< .001	mg/l			WG541379	06/20/11 04:33
Toluene	< .005	mg/l			WG541379	06/20/11 04:33
trans-1,2-Dichloroethene	< .001	mg/l			WG541379	06/20/11 04:33
trans-1,3-Dichloropropene	< .001	mg/l			WG541379	06/20/11 04:33
Trichloroethene	< .001	mg/l			WG541379	06/20/11 04:33
Vinyl acetate	< .01	mg/l			WG541379	06/20/11 04:33
Vinyl chloride	< .001	mg/l			WG541379	06/20/11 04:33
Xylenes, Total	< .003	mg/l			WG541379	06/20/11 04:33
4-Bromofluorobenzene		% Rec.	104.1	75-128	WG541379	06/20/11 04:33
Dibromofluoromethane		% Rec.	101.8	79-125	WG541379	06/20/11 04:33
Toluene-d8		% Rec.	99.77	87-114	WG541379	06/20/11 04:33

* 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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Est. 1970

ARCADIS U.S. GMC
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L521787

June 27, 2011

Laboratory Blank

Analyte	Result	Units	% Rec	Limit	Batch	Date Analyzed
TPH (GC/FID) Low Fraction	< .1	mg/l			WG541705	06/21/11 14:19
a,a,a-Trifluorotoluene(FID)		% Rec.	99.38	62-128	WG541705	06/21/11 14:19
Sulfate	< 5	mg/l			WG541688	06/21/11 19:37
Ferrous Iron	< .05	mg/l			WG541701	06/23/11 09:10
Phosphorus,Total	< .1	mg/l			WG541597	06/23/11 11:55
Alkalinity	< 20	mg/l			WG541866	06/23/11 20:31
C10-C22 Hydrocarbons	< .1	mg/l			WG541643	06/26/11 23:58
C22-C32 Hydrocarbons	< .1	mg/l			WG541643	06/26/11 23:58
C32-C40 Hydrocarbons	< .1	mg/l			WG541643	06/26/11 23:58
o-Terphenyl		% Rec.	113.5	50-150	WG541643	06/26/11 23:58

Duplicate

Analyte	Units	Result	Duplicate	RPD	Limit	Ref Samp	Batch
Nitrate	mg/l	0	0	0	20	L521764-01	WG541299
Sulfate	mg/l	0	0	0	20	L521764-01	WG541299
Nitrate	mg/l	0	0	0	20	L521787-04	WG541299
Sulfate	mg/l	60.0	60.0	0.837	20	L521117-28	WG541688
Ferrous Iron	mg/l	0.210	0.210	0	20	L521486-04	WG541701
Ferrous Iron	mg/l	0.490	0.510	4.00	20	L521787-04	WG541701
Phosphorus,Total	mg/l	6.00	6.00	0.334	20	L521488-02	WG541597
Phosphorus,Total	mg/l	0	0.0660	NA	20	L521447-01	WG541597
Alkalinity	mg/l	1300	1400	6.64	20	L521787-04	WG541866
Alkalinity	mg/l	290.	290.	0.692	20	L520902-04	WG541866

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
Nitrate	mg/l	8	8.13	102.	90-110	WG541299
Sulfate	mg/l	40	39.9	99.8	90-110	WG541299
1,1,1,2-Tetrachloroethane	mg/l	.025	0.0250	99.8	75-134	WG541379
1,1,1-Trichloroethane	mg/l	.025	0.0240	96.0	67-137	WG541379
1,1,2,2-Tetrachloroethane	mg/l	.025	0.0269	107.	72-128	WG541379
1,1,2-Trichloroethane	mg/l	.025	0.0262	105.	79-123	WG541379
1,1-Dichloroethane	mg/l	.025	0.0245	98.0	67-133	WG541379
1,1-Dichloroethene	mg/l	.025	0.0264	106.	60-130	WG541379
1,2,3-Trichlorobenzene	mg/l	.025	0.0246	98.4	63-138	WG541379
1,2,4-Trichlorobenzene	mg/l	.025	0.0253	101.	65-137	WG541379
1,2,4-Trimethylbenzene	mg/l	.025	0.0236	94.3	72-135	WG541379

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Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L521787

June 27, 2011

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
1,2-Dichlorobenzene	mg/l	.025	0.0244	97.5	75-122	WG541379
1,2-Dichloroethane	mg/l	.025	0.0245	97.9	63-137	WG541379
1,2-Dichloropropane	mg/l	.025	0.0237	94.7	74-122	WG541379
1,3,5-Trimethylbenzene	mg/l	.025	0.0238	95.1	73-134	WG541379
1,3-Dichlorobenzene	mg/l	.025	0.0256	102.	73-131	WG541379
1,3-Dichloropropane	mg/l	.025	0.0246	98.2	77-119	WG541379
1,4-Dichlorobenzene	mg/l	.025	0.0244	97.7	70-121	WG541379
2-Butanone (MEK)	mg/l	.125	0.142	114.	53-132	WG541379
4-Methyl-2-pentanone (MIBK)	mg/l	.125	0.138	110.	60-142	WG541379
Acetone	mg/l	.125	0.129	103.	48-134	WG541379
Benzene	mg/l	.025	0.0238	95.2	67-126	WG541379
Bromodichloromethane	mg/l	.025	0.0242	96.8	68-133	WG541379
Bromoform	mg/l	.025	0.0266	106.	60-139	WG541379
Bromomethane	mg/l	.025	0.0225	90.1	45-175	WG541379
Carbon disulfide	mg/l	.025	0.0239	95.7	41-148	WG541379
Carbon tetrachloride	mg/l	.025	0.0243	97.1	64-141	WG541379
Chlorobenzene	mg/l	.025	0.0239	95.7	77-125	WG541379
Chloroethane	mg/l	.025	0.0201	80.4	49-155	WG541379
Chloroform	mg/l	.025	0.0250	100.	66-126	WG541379
cis-1,2-Dichloroethene	mg/l	.025	0.0245	98.1	72-128	WG541379
cis-1,3-Dichloropropene	mg/l	.025	0.0241	96.5	73-131	WG541379
Di-isopropyl ether	mg/l	.025	0.0229	91.5	63-139	WG541379
Ethylbenzene	mg/l	.025	0.0245	97.9	76-129	WG541379
Hexachloro-1,3-butadiene	mg/l	.025	0.0225	90.1	67-135	WG541379
Isopropylbenzene	mg/l	.025	0.0260	104.	73-132	WG541379
Methyl tert-butyl ether	mg/l	.025	0.0271	108.	51-142	WG541379
Methylene Chloride	mg/l	.025	0.0250	100.	64-125	WG541379
n-Hexane	mg/l	.025	0.0187	74.9	33-167	WG541379
Naphthalene	mg/l	.025	0.0248	99.3	56-145	WG541379
Styrene	mg/l	.025	0.0178	71.4*	78-130	WG541379
Tetrachloroethene	mg/l	.025	0.0241	96.5	67-135	WG541379
Toluene	mg/l	.025	0.0236	94.5	72-122	WG541379
trans-1,2-Dichloroethene	mg/l	.025	0.0232	92.8	67-129	WG541379
trans-1,3-Dichloropropene	mg/l	.025	0.0246	98.2	66-137	WG541379
Trichloroethene	mg/l	.025	0.0240	95.9	74-126	WG541379
Vinyl acetate	mg/l	.125	0.121	96.9	34-178	WG541379
Vinyl chloride	mg/l	.025	0.0189	75.5	55-153	WG541379
Xylenes, Total	mg/l	.075	0.0719	95.9	75-128	WG541379
4-Bromofluorobenzene				97.56	75-128	WG541379
Dibromofluoromethane				103.8	79-125	WG541379
Toluene-d8				100.7	87-114	WG541379
TPH (GC/FID) Low Fraction	mg/l	5.5	5.46	99.3	70-124	WG541705
a,a,a-Trifluorotoluene(FID)				105.6	62-128	WG541705
Sulfate	mg/l	40	39.3	98.3	90-110	WG541688
Ferrous Iron	mg/l	1	1.00	100.	85-115	WG541701
Phosphorus,Total	mg/l	1	0.983	98.3	85-115	WG541597
Alkalinity	mg/l	40	40.5	101.	85-115	WG541866

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10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

L521787

June 27, 2011

Laboratory Control Sample

Analyte	Units	Known Val	Result	% Rec	Limit	Batch
C10-C22 Hydrocarbons	mg/l	.75	1.00	133.	50-150	WG541643
C22-C32 Hydrocarbons	mg/l	.75	0.545	72.7	70-130	WG541643
o-Terphenyl				106.3	50-150	WG541643

Laboratory Control Sample Duplicate

Analyte	Units	Result	Ref	%Rec	Limit	RPD	Limit	Batch
Nitrate	mg/l	8.13	8.13	102.	90-110	0	20	WG541299
Sulfate	mg/l	39.8	39.9	100.	90-110	0.251	20	WG541299
1,1,1,2-Tetrachloroethane	mg/l	0.0253	0.0250	101.	75-134	1.38	20	WG541379
1,1,1-Trichloroethane	mg/l	0.0235	0.0240	94.0	67-137	2.26	20	WG541379
1,1,2,2-Tetrachloroethane	mg/l	0.0271	0.0269	108.	72-128	0.870	20	WG541379
1,1,2-Trichloroethane	mg/l	0.0260	0.0262	104.	79-123	0.710	20	WG541379
1,1-Dichloroethane	mg/l	0.0233	0.0245	93.0	67-133	4.88	20	WG541379
1,1-Dichloroethene	mg/l	0.0250	0.0264	100.	60-130	5.62	20	WG541379
1,2,3-Trichlorobenzene	mg/l	0.0236	0.0246	94.0	63-138	4.18	20	WG541379
1,2,4-Trichlorobenzene	mg/l	0.0238	0.0253	95.0	65-137	5.84	20	WG541379
1,2,4-Trimethylbenzene	mg/l	0.0234	0.0236	94.0	72-135	0.770	20	WG541379
1,2-Dichlorobenzene	mg/l	0.0240	0.0244	96.0	75-122	1.53	20	WG541379
1,2-Dichloroethane	mg/l	0.0246	0.0245	98.0	63-137	0.290	20	WG541379
1,2-Dichloropropane	mg/l	0.0229	0.0237	91.0	74-122	3.42	20	WG541379
1,3,5-Trimethylbenzene	mg/l	0.0233	0.0238	93.0	73-134	1.89	20	WG541379
1,3-Dichlorobenzene	mg/l	0.0250	0.0256	100.	73-131	2.43	20	WG541379
1,3-Dichloropropane	mg/l	0.0247	0.0246	99.0	77-119	0.600	20	WG541379
1,4-Dichlorobenzene	mg/l	0.0235	0.0244	94.0	70-121	3.86	20	WG541379
2-Butanone (MEK)	mg/l	0.137	0.142	110.	53-132	3.64	20	WG541379
4-Methyl-2-pentanone (MIBK)	mg/l	0.137	0.138	109.	60-142	0.850	20	WG541379
Acetone	mg/l	0.126	0.129	101.	48-134	2.20	20	WG541379
Benzene	mg/l	0.0237	0.0238	95.0	67-126	0.500	20	WG541379
Bromodichloromethane	mg/l	0.0232	0.0242	93.0	68-133	4.18	20	WG541379
Bromoform	mg/l	0.0274	0.0266	110.	60-139	3.24	20	WG541379
Bromomethane	mg/l	0.0220	0.0225	88.0	45-175	2.32	20	WG541379
Carbon disulfide	mg/l	0.0228	0.0239	91.0	41-148	4.74	20	WG541379
Carbon tetrachloride	mg/l	0.0232	0.0243	93.0	64-141	4.29	20	WG541379
Chlorobenzene	mg/l	0.0244	0.0239	97.0	77-125	1.78	20	WG541379
Chloroethane	mg/l	0.0193	0.0201	77.0	49-155	3.78	20	WG541379
Chloroform	mg/l	0.0243	0.0250	97.0	66-126	2.99	20	WG541379
cis-1,2-Dichloroethene	mg/l	0.0236	0.0245	94.0	72-128	3.67	20	WG541379
cis-1,3-Dichloropropene	mg/l	0.0240	0.0241	96.0	73-131	0.580	20	WG541379
Di-isopropyl ether	mg/l	0.0225	0.0229	90.0	63-139	1.52	20	WG541379
Ethylbenzene	mg/l	0.0247	0.0245	99.0	76-129	0.810	20	WG541379
Hexachloro-1,3-butadiene	mg/l	0.0214	0.0225	85.0	67-135	5.32	20	WG541379
Isopropylbenzene	mg/l	0.0256	0.0260	102.	73-132	1.58	20	WG541379
Methyl tert-butyl ether	mg/l	0.0263	0.0271	105.	51-142	2.95	20	WG541379
Methylene Chloride	mg/l	0.0242	0.0250	97.0	64-125	3.32	20	WG541379
n-Hexane	mg/l	0.0167	0.0187	67.0	33-167	11.7	20	WG541379
Naphthalene	mg/l	0.0240	0.0248	96.0	56-145	3.55	20	WG541379
Styrene	mg/l	0.0183	0.0178	73*	78-130	2.70	20	WG541379
Tetrachloroethene	mg/l	0.0235	0.0241	94.0	67-135	2.50	20	WG541379
Toluene	mg/l	0.0232	0.0236	93.0	72-122	1.95	20	WG541379
trans-1,2-Dichloroethene	mg/l	0.0219	0.0232	88.0	67-129	5.68	20	WG541379
trans-1,3-Dichloropropene	mg/l	0.0237	0.0246	95.0	66-137	3.46	20	WG541379
Trichloroethene	mg/l	0.0228	0.0240	91.0	74-126	4.90	20	WG541379
Vinyl acetate	mg/l	0.120	0.121	96.0	34-178	1.14	26	WG541379
Vinyl chloride	mg/l	0.0182	0.0189	73.0	55-153	3.64	20	WG541379
Xylenes, Total	mg/l	0.0730	0.0719	97.0	75-128	1.48	20	WG541379
4-Bromofluorobenzene				102.3	75-128			WG541379

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ARCADIS U.S. GMC
Holly M. Burger, Debra Hagerty
10559 Citation Dr, Ste 100

Brighton, MI 48116

Quality Assurance Report
Level II

June 27, 2011

L521787

Analyte	Units	Laboratory Control Sample Result	Ref	%Rec	Limit	RPD	Limit	Batch
Dibromofluoromethane				103.3	79-125			
Toluene-d8				101.8	87-114			
TPH (GC/FID) Low Fraction	mg/l	5.51	5.46	100.	70-124	0.840	20	WG541705
a,a,a-Trifluorotoluene(FID)				106.2	62-128			WG541705
Sulfate	mg/l	39.4	39.3	98.0	90-110	0.254	20	WG541688
Ferrous Iron	mg/l	1.00	1.00	100.	85-115	0	20	WG541701
Phosphorus,Total	mg/l	1.00	0.983	100.	85-115	1.71	20	WG541597
Alkalinity	mg/l	39.6	40.5	99.0	85-115	2.25	20	WG541866
C10-C22 Hydrocarbons	mg/l	1.00	1.00	134.	50-150	0.158	20	WG541643
C22-C32 Hydrocarbons	mg/l	0.554	0.545	74.0	70-130	1.50	20	WG541643
o-Terphenyl				108.5	50-150			WG541643

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Nitrate	mg/l	5.43	0.510	5	98.4	80-120	L521764-04	WG541299
1,1,1,2-Tetrachloroethane	mg/l	0.0265	0	.025	106.	45-152	L521687-01	WG541379
1,1,1-Trichloroethane	mg/l	0.0275	0	.025	110.	31-161	L521687-01	WG541379
1,1,2,2-Tetrachloroethane	mg/l	0.0257	0	.025	103.	49-149	L521687-01	WG541379
1,1,2-Trichloroethane	mg/l	0.0263	0	.025	105.	46-145	L521687-01	WG541379
1,1-Dichloroethane	mg/l	0.0275	0	.025	110.	30-159	L521687-01	WG541379
1,1-Dichloroethene	mg/l	0.0328	0	.025	131.	10-162	L521687-01	WG541379
1,2,3-Trichlorobenzene	mg/l	0.0252	0	.025	101.	32-143	L521687-01	WG541379
1,2,4-Trichlorobenzene	mg/l	0.0257	0	.025	103.	27-142	L521687-01	WG541379
1,2,4-Trimethylbenzene	mg/l	0.0248	0	.025	99.1	29-153	L521687-01	WG541379
1,2-Dichlorobenzene	mg/l	0.0242	0	.025	96.8	40-139	L521687-01	WG541379
1,2-Dichloroethane	mg/l	0.0266	0	.025	106.	29-167	L521687-01	WG541379
1,2-Dichloropropane	mg/l	0.0244	0	.025	97.6	39-148	L521687-01	WG541379
1,3,5-Trimethylbenzene	mg/l	0.0252	0	.025	101.	33-149	L521687-01	WG541379
1,3-Dichlorobenzene	mg/l	0.0258	0	.025	103.	32-148	L521687-01	WG541379
1,3-Dichloropropane	mg/l	0.0252	0	.025	101.	44-142	L521687-01	WG541379
1,4-Dichlorobenzene	mg/l	0.0247	0	.025	98.9	32-136	L521687-01	WG541379
2-Butanone (MEK)	mg/l	0.135	0	.125	108.	32-151	L521687-01	WG541379
4-Methyl-2-pentanone (MIBK)	mg/l	0.130	0	.125	104.	40-160	L521687-01	WG541379
Acetone	mg/l	0.107	0	.125	85.5	25-157	L521687-01	WG541379
Benzene	mg/l	0.0273	0	.025	109.	16-158	L521687-01	WG541379
Bromodichloromethane	mg/l	0.0244	0	.025	97.7	45-147	L521687-01	WG541379
Bromoform	mg/l	0.0275	0	.025	110.	38-152	L521687-01	WG541379
Bromomethane	mg/l	0.0280	0	.025	112.	0-191	L521687-01	WG541379
Carbon disulfide	mg/l	0.0390	0	.025	156.	10-166	L521687-01	WG541379
Carbon tetrachloride	mg/l	0.0283	0	.025	113.	22-168	L521687-01	WG541379
Chlorobenzene	mg/l	0.0253	0	.025	101.	33-148	L521687-01	WG541379
Chloroethane	mg/l	0.0249	0	.025	99.6	4-176	L521687-01	WG541379
Chloroform	mg/l	0.0268	0	.025	107.	37-147	L521687-01	WG541379
cis-1,2-Dichloroethene	mg/l	0.0269	0	.025	108.	29-156	L521687-01	WG541379
cis-1,3-Dichloropropene	mg/l	0.0242	0	.025	96.7	35-148	L521687-01	WG541379
Di-isopropyl ether	mg/l	0.0238	0	.025	95.2	39-160	L521687-01	WG541379

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Quality Assurance Report
Level II

June 27, 2011

L521787

Analyte	Units	Matrix Spike MS Res	Ref Res	TV	% Rec	Limit	Ref Samp	Batch
Ethylbenzene	mg/l	0.0261	0	.025	104.	29-150	L521687-01	WG541379
Hexachloro-1,3-butadiene	mg/l	0.0230	0	.025	91.9	28-144	L521687-01	WG541379
Isopropylbenzene	mg/l	0.0280	0	.025	112.	35-147	L521687-01	WG541379
Methyl tert-butyl ether	mg/l	0.0277	0	.025	111.	24-167	L521687-01	WG541379
Methylene Chloride	mg/l	0.0287	0.000715	.025	112.	23-151	L521687-01	WG541379
n-Hexane	mg/l	0.0262	0	.025	105.	10-176	L521687-01	WG541379
Naphthalene	mg/l	0.0244	0	.025	97.4	24-160	L521687-01	WG541379
Styrene	mg/l	0.0178	0	.025	71.3	38-149	L521687-01	WG541379
Tetrachloroethene	mg/l	0.0278	0	.025	111.	13-157	L521687-01	WG541379
Toluene	mg/l	0.0255	0	.025	102.	22-152	L521687-01	WG541379
trans-1,2-Dichloroethene	mg/l	0.0292	0	.025	117.	11-160	L521687-01	WG541379
trans-1,3-Dichloropropene	mg/l	0.0239	0	.025	95.6	33-153	L521687-01	WG541379
Trichloroethene	mg/l	0.0267	0	.025	107.	18-163	L521687-01	WG541379
Vinyl acetate	mg/l	0.131	0	.125	105.	0-196	L521687-01	WG541379
Vinyl chloride	mg/l	0.0252	0	.025	101.	0-179	L521687-01	WG541379
Xylenes, Total	mg/l	0.0758	0	.075	101.	27-151	L521687-01	WG541379
4-Bromofluorobenzene					95.10	75-128		WG541379
Dibromofluoromethane					105.2	79-125		WG541379
Toluene-d8					99.05	87-114		WG541379
TPH (GC/FID) Low Fraction	mg/l	5.65	0	5.5	103.	55-109	L521656-05	WG541705
a,a,a-Trifluorotoluene(FID)					106.0	62-128		WG541705
Ferrous Iron	mg/l	1.70	0.0900	1.5	107.	80-120	L521486-05	WG541701
Phosphorus,Total	mg/l	2.54	0.0900	2.5	98.0	80-120	L521447-02	WG541597
Alkalinity	mg/l	437.	290.	200	73.5*	80-120	L520902-03	WG541866

Analyte	Units	Matrix Spike Duplicate MSD	Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Nitrate	mg/l	5.53	5.43	100.	80-120	1.82	20	L521764-04	WG541299
1,1,1,2-Tetrachloroethane	mg/l	0.0263	0.0265	105.	45-152	0.610	21	L521687-01	WG541379
1,1,1-Trichloroethane	mg/l	0.0272	0.0275	109.	31-161	1.05	23	L521687-01	WG541379
1,1,2,2-Tetrachloroethane	mg/l	0.0286	0.0257	114.	49-149	10.6	22	L521687-01	WG541379
1,1,2-Trichloroethane	mg/l	0.0271	0.0263	108.	46-145	3.07	20	L521687-01	WG541379
1,1-Dichloroethane	mg/l	0.0266	0.0275	106.	30-159	3.60	21	L521687-01	WG541379
1,1-Dichloroethene	mg/l	0.0312	0.0328	125.	10-162	4.82	23	L521687-01	WG541379
1,2,3-Trichlorobenzene	mg/l	0.0246	0.0252	98.3	32-143	2.53	33	L521687-01	WG541379
1,2,4-Trichlorobenzene	mg/l	0.0252	0.0257	101.	27-142	1.82	30	L521687-01	WG541379
1,2,4-Trimethylbenzene	mg/l	0.0244	0.0248	97.6	29-153	1.45	27	L521687-01	WG541379
1,2-Dichlorobenzene	mg/l	0.0248	0.0242	99.2	40-139	2.45	23	L521687-01	WG541379
1,2-Dichloroethane	mg/l	0.0273	0.0266	109.	29-167	2.45	21	L521687-01	WG541379
1,2-Dichloropropane	mg/l	0.0255	0.0244	102.	39-148	4.46	20	L521687-01	WG541379
1,3,5-Trimethylbenzene	mg/l	0.0249	0.0252	99.6	33-149	1.35	26	L521687-01	WG541379
1,3-Dichlorobenzene	mg/l	0.0266	0.0258	106.	32-148	3.20	24	L521687-01	WG541379
1,3-Dichloropropane	mg/l	0.0268	0.0252	107.	44-142	6.15	20	L521687-01	WG541379
1,4-Dichlorobenzene	mg/l	0.0242	0.0247	96.6	32-136	2.33	23	L521687-01	WG541379
2-Butanone (MEK)	mg/l	0.147	0.135	118.	32-151	8.57	26	L521687-01	WG541379
4-Methyl-2-pentanone (MIBK)	mg/l	0.151	0.130	120.	40-160	14.6	28	L521687-01	WG541379
Acetone	mg/l	0.116	0.107	92.9	25-157	8.29	26	L521687-01	WG541379
Benzene	mg/l	0.0270	0.0273	108.	16-158	1.18	21	L521687-01	WG541379

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Quality Assurance Report
Level II

L521787

June 27, 2011

Analyte	Units	Matrix Spike MSD	Duplicate Ref	%Rec	Limit	RPD	Limit	Ref Samp	Batch
Bromodichloromethane	mg/l	0.0252	0.0244	101.	45-147	3.29	20	L521687-01	WG541379
Bromoform	mg/l	0.0297	0.0275	119.	38-152	7.55	20	L521687-01	WG541379
Bromomethane	mg/l	0.0270	0.0280	108.	0-191	3.56	35	L521687-01	WG541379
Carbon disulfide	mg/l	0.0373	0.0390	149.	10-166	4.42	25	L521687-01	WG541379
Carbon tetrachloride	mg/l	0.0282	0.0283	113.	22-168	0.550	24	L521687-01	WG541379
Chlorobenzene	mg/l	0.0258	0.0253	103.	33-148	1.92	22	L521687-01	WG541379
Chloroethane	mg/l	0.0246	0.0249	98.4	4-176	1.30	27	L521687-01	WG541379
Chloroform	mg/l	0.0261	0.0268	104.	37-147	2.65	21	L521687-01	WG541379
cis-1,2-Dichloroethene	mg/l	0.0266	0.0269	106.	29-156	1.06	22	L521687-01	WG541379
cis-1,3-Dichloropropene	mg/l	0.0254	0.0242	102.	35-148	4.99	21	L521687-01	WG541379
Di-isopropyl ether	mg/l	0.0243	0.0238	97.1	39-160	1.96	21	L521687-01	WG541379
Ethylbenzene	mg/l	0.0262	0.0261	105.	29-150	0.410	24	L521687-01	WG541379
Hexachloro-1,3-butadiene	mg/l	0.0228	0.0230	91.1	28-144	0.900	33	L521687-01	WG541379
Isopropylbenzene	mg/l	0.0276	0.0280	110.	35-147	1.51	25	L521687-01	WG541379
Methyl tert-butyl ether	mg/l	0.0293	0.0277	117.	24-167	5.49	22	L521687-01	WG541379
Methylene Chloride	mg/l	0.0287	0.0287	112.	23-151	0.290	21	L521687-01	WG541379
n-Hexane	mg/l	0.0262	0.0262	105.	10-176	0.0600	23	L521687-01	WG541379
Naphthalene	mg/l	0.0257	0.0244	103.	24-160	5.37	37	L521687-01	WG541379
Styrene	mg/l	0.0188	0.0178	75.3	38-149	5.52	23	L521687-01	WG541379
Tetrachloroethene	mg/l	0.0277	0.0278	111.	13-157	0.440	24	L521687-01	WG541379
Toluene	mg/l	0.0265	0.0255	106.	22-152	3.80	22	L521687-01	WG541379
trans-1,2-Dichloroethene	mg/l	0.0283	0.0292	113.	11-160	3.05	23	L521687-01	WG541379
trans-1,3-Dichloropropene	mg/l	0.0264	0.0239	105.	33-153	9.74	22	L521687-01	WG541379
Trichloroethene	mg/l	0.0270	0.0267	108.	18-163	1.17	21	L521687-01	WG541379
Vinyl acetate	mg/l	0.139	0.131	111.	0-196	5.91	26	L521687-01	WG541379
Vinyl chloride	mg/l	0.0237	0.0252	94.9	0-179	6.17	26	L521687-01	WG541379
Xylenes, Total	mg/l	0.0772	0.0758	103.	27-151	1.82	23	L521687-01	WG541379
4-Bromofluorobenzene				99.63	75-128				WG541379
Dibromofluoromethane				103.8	79-125				WG541379
Toluene-d8				101.8	87-114				WG541379
TPH (GC/FID) Low Fraction	mg/l	5.70	5.65	104.	55-109	0.910	20	L521656-05	WG541705
a,a,a-Trifluorotoluene(FID)				105.5	62-128				WG541705
Ferrous Iron	mg/l	1.70	1.70	107.	80-120	0	20	L521486-05	WG541701
Phosphorus,Total	mg/l	2.57	2.54	99.2	80-120	1.17	20	L521447-02	WG541597
Alkalinity	mg/l	437.	437.	73.5*	80-120	0	20	L520902-03	WG541866

Batch number /Run number / Sample number cross reference

WG541299: R1729754: L521787-01 02 03 04
WG541379: R1730770: L521787-01 02 03 04
WG541705: R1732170: L521787-01 02 03 04
WG541688: R1732749: L521787-01 04
WG541701: R1735251: L521787-01 02 03 04
WG541597: R1736169: L521787-01 02 03 04
WG541866: R1736469: L521787-01 02 03 04
WG541643: R1740169: L521787-01 02 03 04

* * Calculations are performed prior to rounding of reported values.
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L521787

June 27, 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 U.S. GMC

10559 Citation Dr. Ste 100
Brighton,MI 48116

Billing information:

Brad Saunders
10559 Citation Dr, Ste 100

Brighton,MI 48116

Analysis/Container/Preservative — E076

Chain of Custody
Page 1 of 1

ESC LABORATORIES
12065 Lebanon Road
Mt. Juliet, TN 37122

Phone: (800) 767-5859
Phone: (615) 758-5858
Fax: (615) 758-5859

Report to: Holly M. Burger, Debra Hagerty

Email: debra.hagerty@arcadis-us.co

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

(lab use only)
Acctnum: ARCABMI
Template/Prelogin: T70272/ P358745
Cooler #: 6-7-11 G
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-3		GW		6/17/11	0800 1345	9	X	X	X	X	X	X	X		52178721
MW-5		GW		↓	1045	9	X	X	X	X	X	X	X		02
MW-6		GW		↓	1130	9	X	X	X	X	X	X	X		03
DUP		GW		—	—	9	X	X	X	X	X	X	X		04
Trip Blank - ON HOLD		GW		—	—	1									

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

pH _____ Temp _____

Remarks: Please also place Trip Blanks from coolers shipped on 6/16/11 on hold.

Flow _____ Other _____

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
	6/17/11	1300	
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)

Samples returned via: ☐ UPS ☒ FedEx ☐ Courier ☐

Temp: 3.1 oC Bottles Received: 30

Date: 6/18/11 Time: 0900

Condition: (lab use only)

COC Seal Intact: ___ Y ___ N ___ NA

pH Checked: NCF: X

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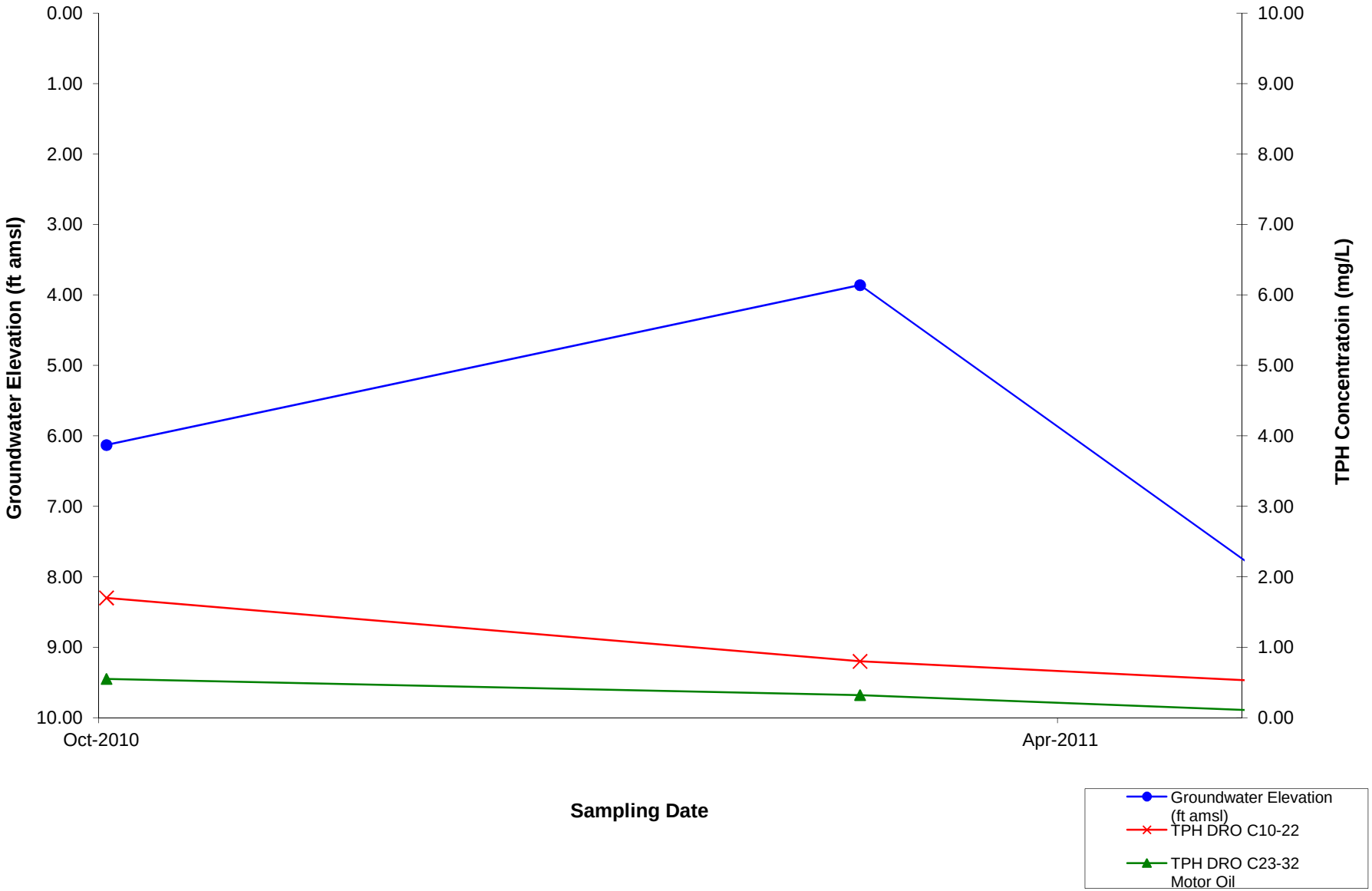
Appendix **D**

Hydrographs

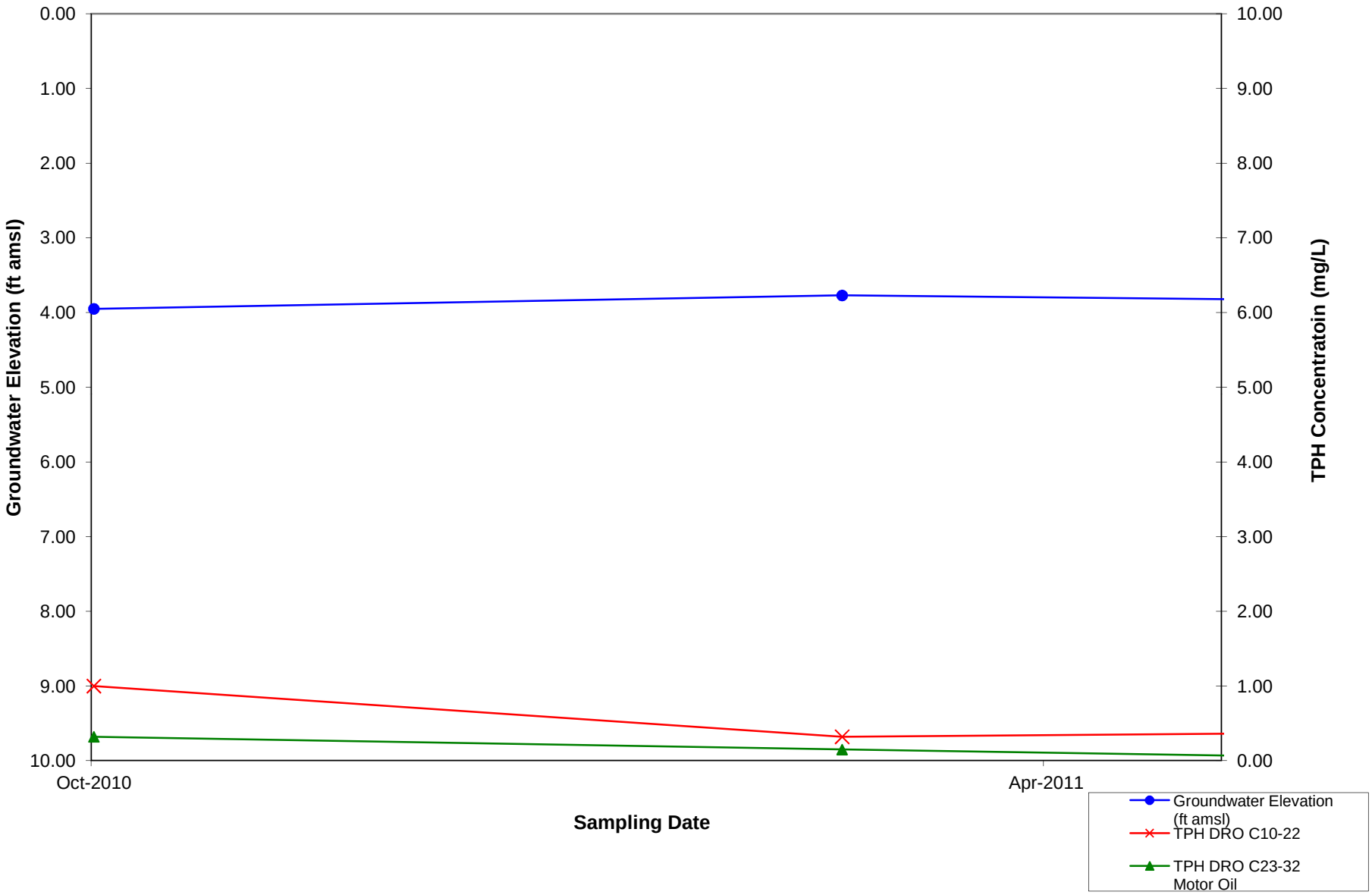
TPH DRO and Groundwater Elevation Trend in MW-1

ARCADIS



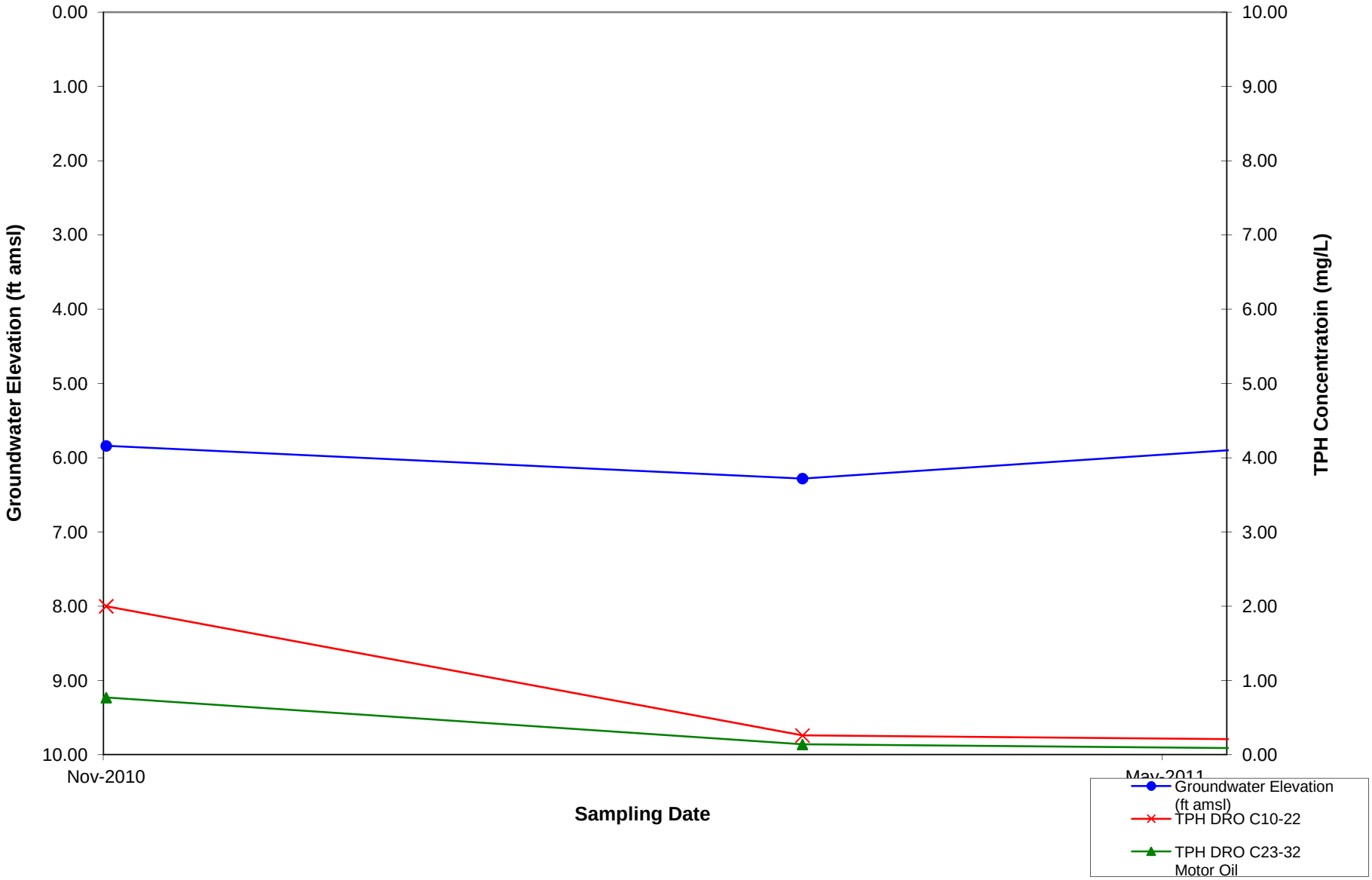
TPH DRO and Groundwater Elevation Trend in MW-2

ARCADIS



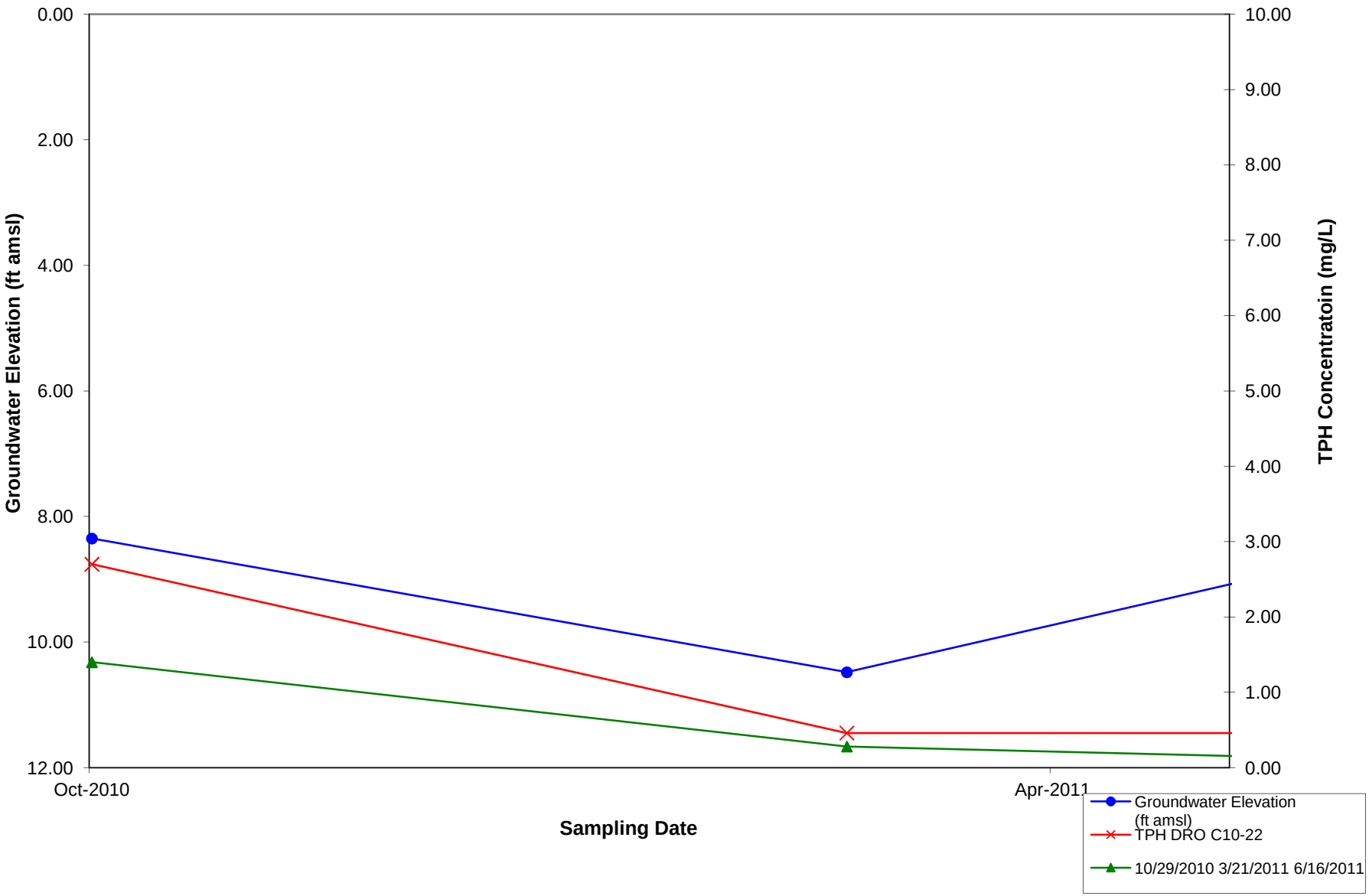
TPH DRO and Groundwater Elevation Trend in MW-3

ARCADIS



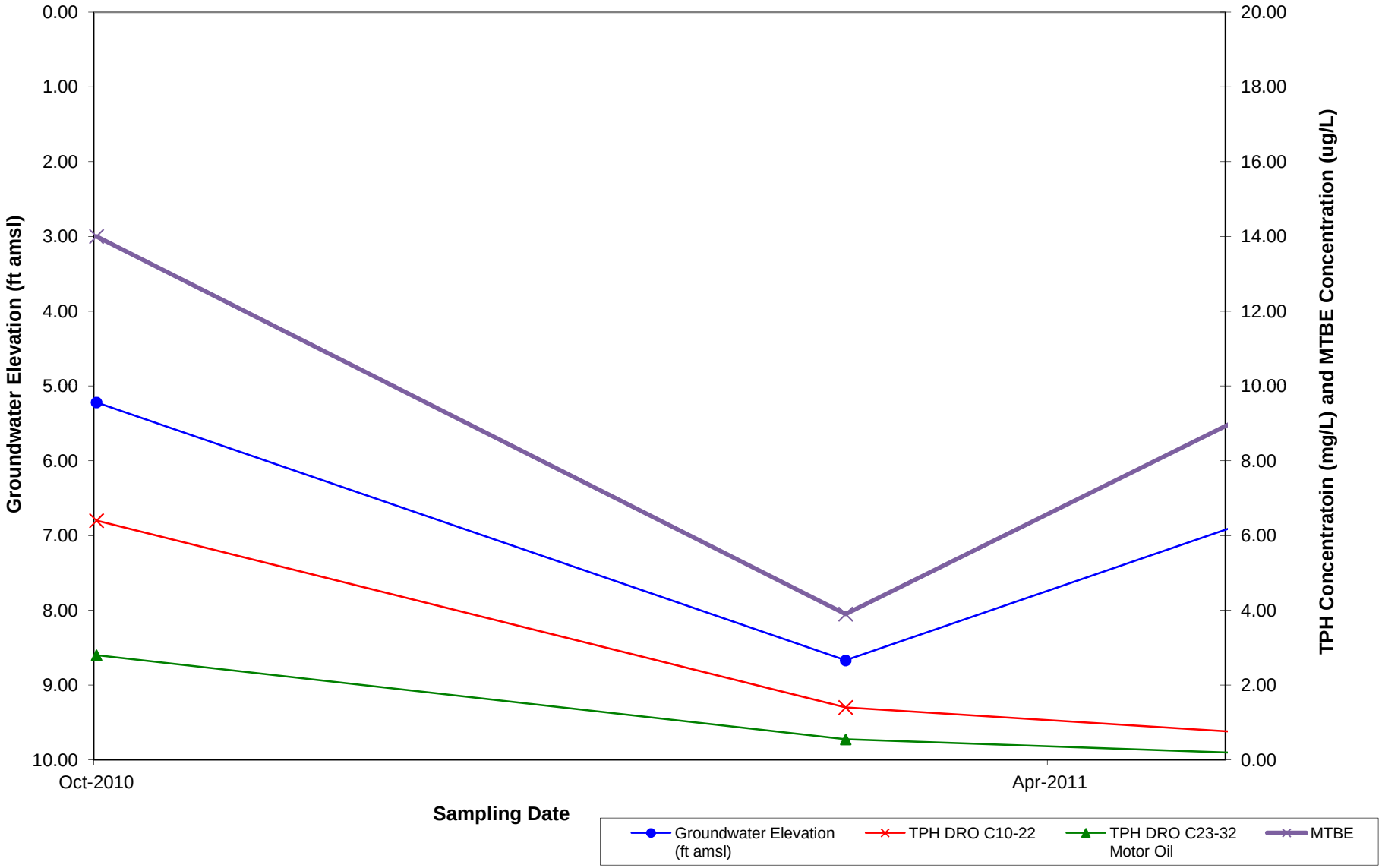
ARCADIS

TPH DRO and Groundwater Elevation Trend in MW-4



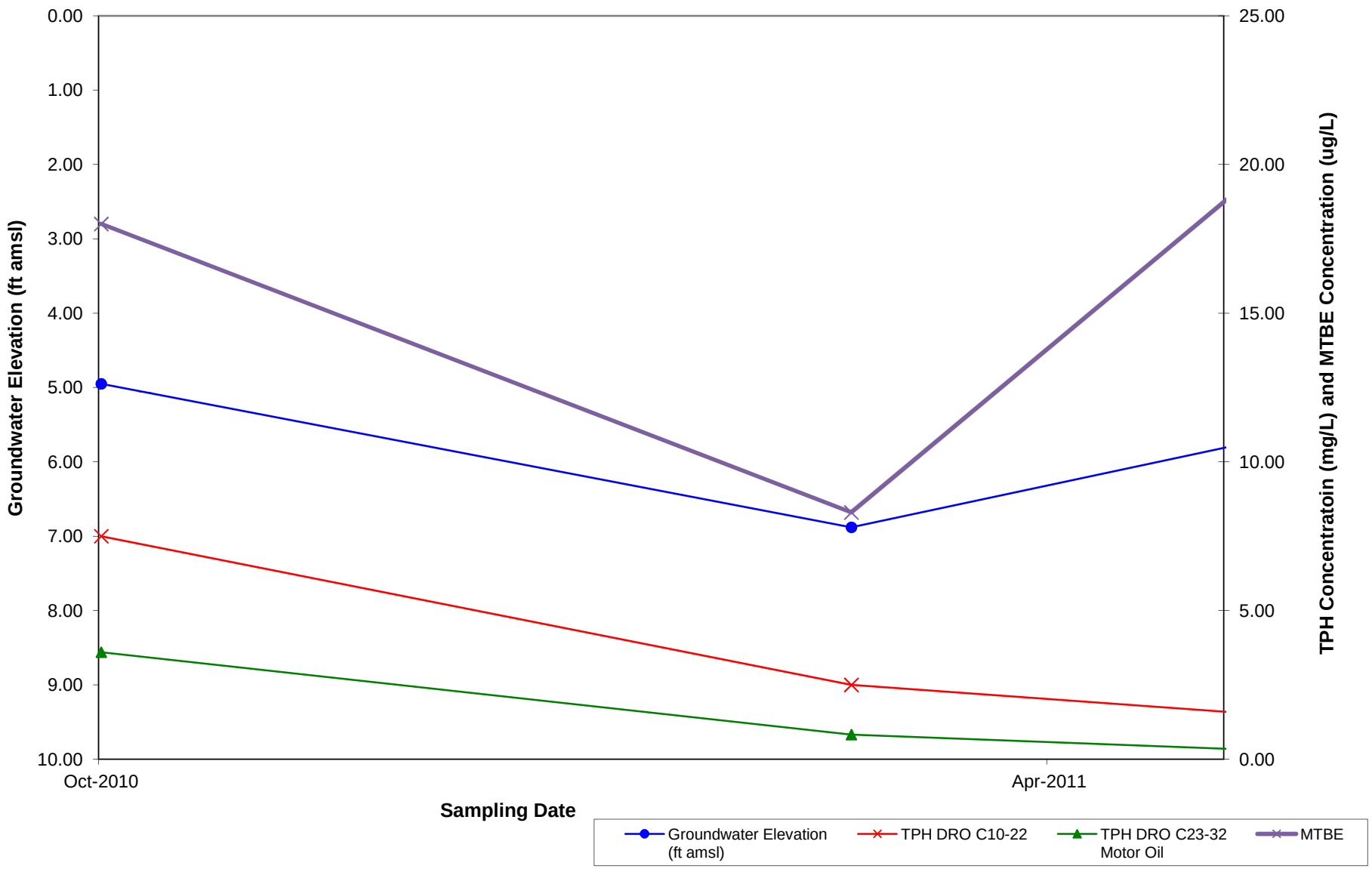
TPH DRO, MTBE, and Groundwater Elevation Trend in MW-5

ARCADIS



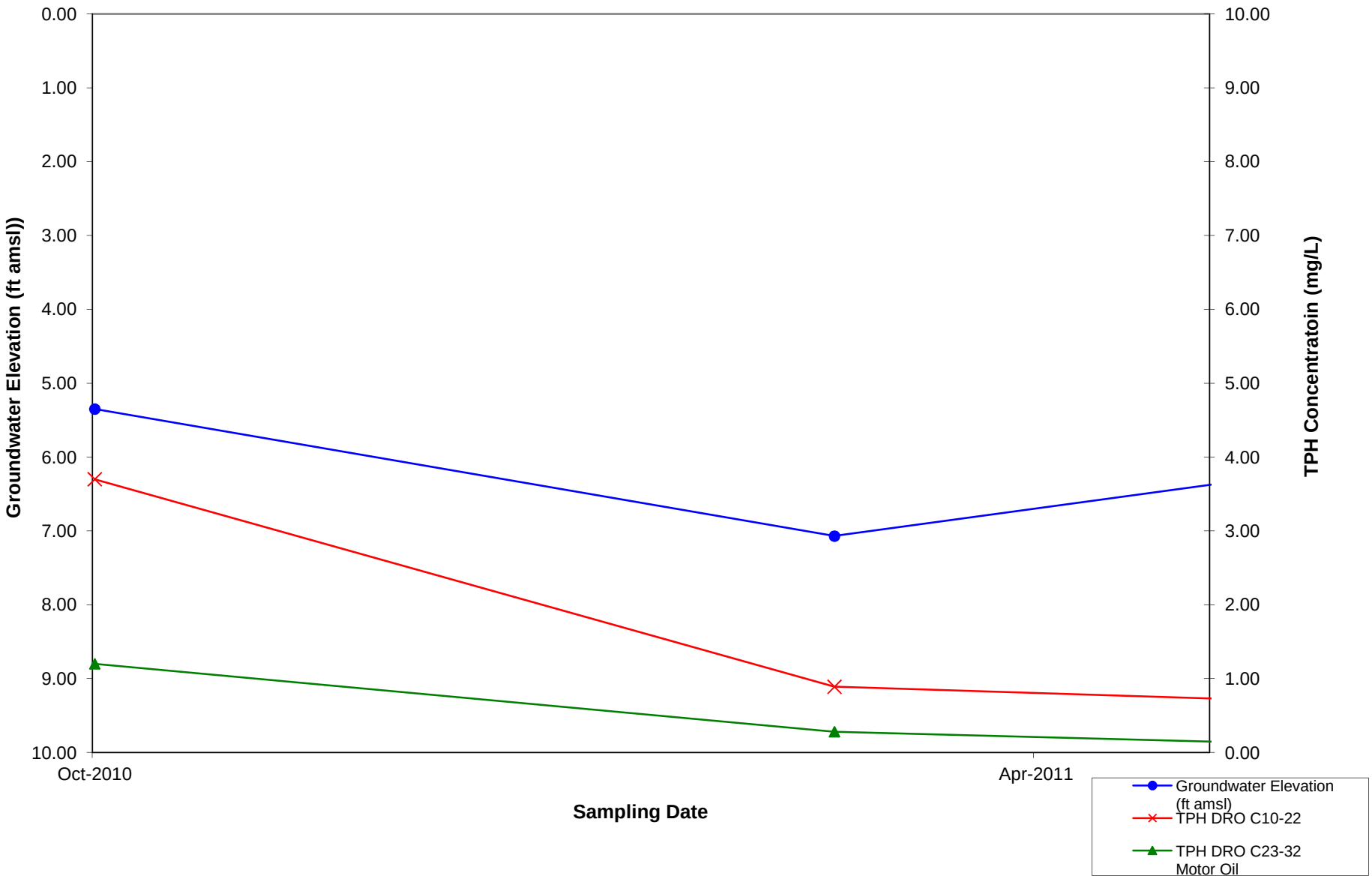
TPH DRO, MTBE, and Groundwater Elevation Trend in MW-6

ARCADIS



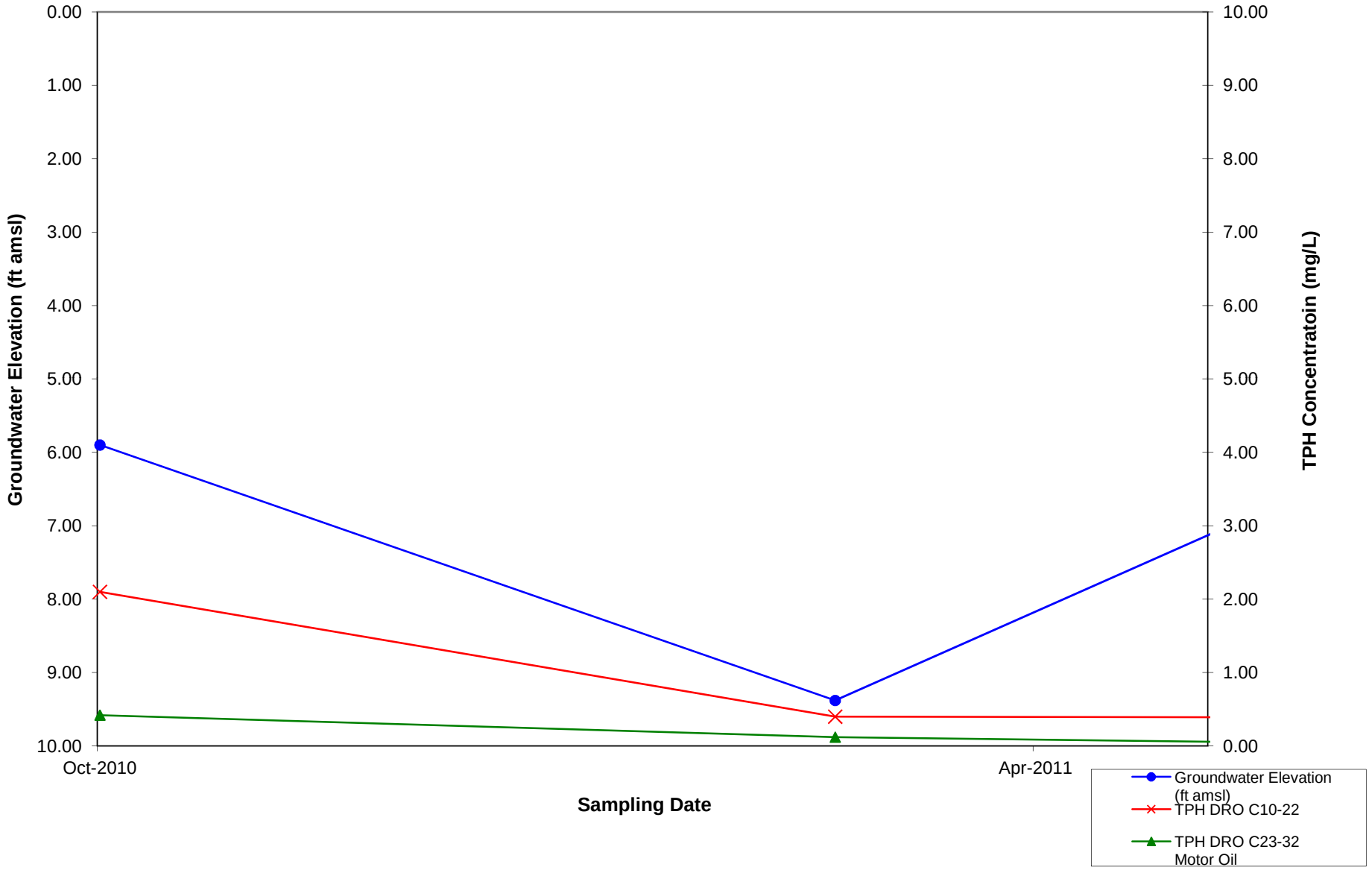
TPH DRO and Groundwater Elevation Trend in MW-7

ARCADIS



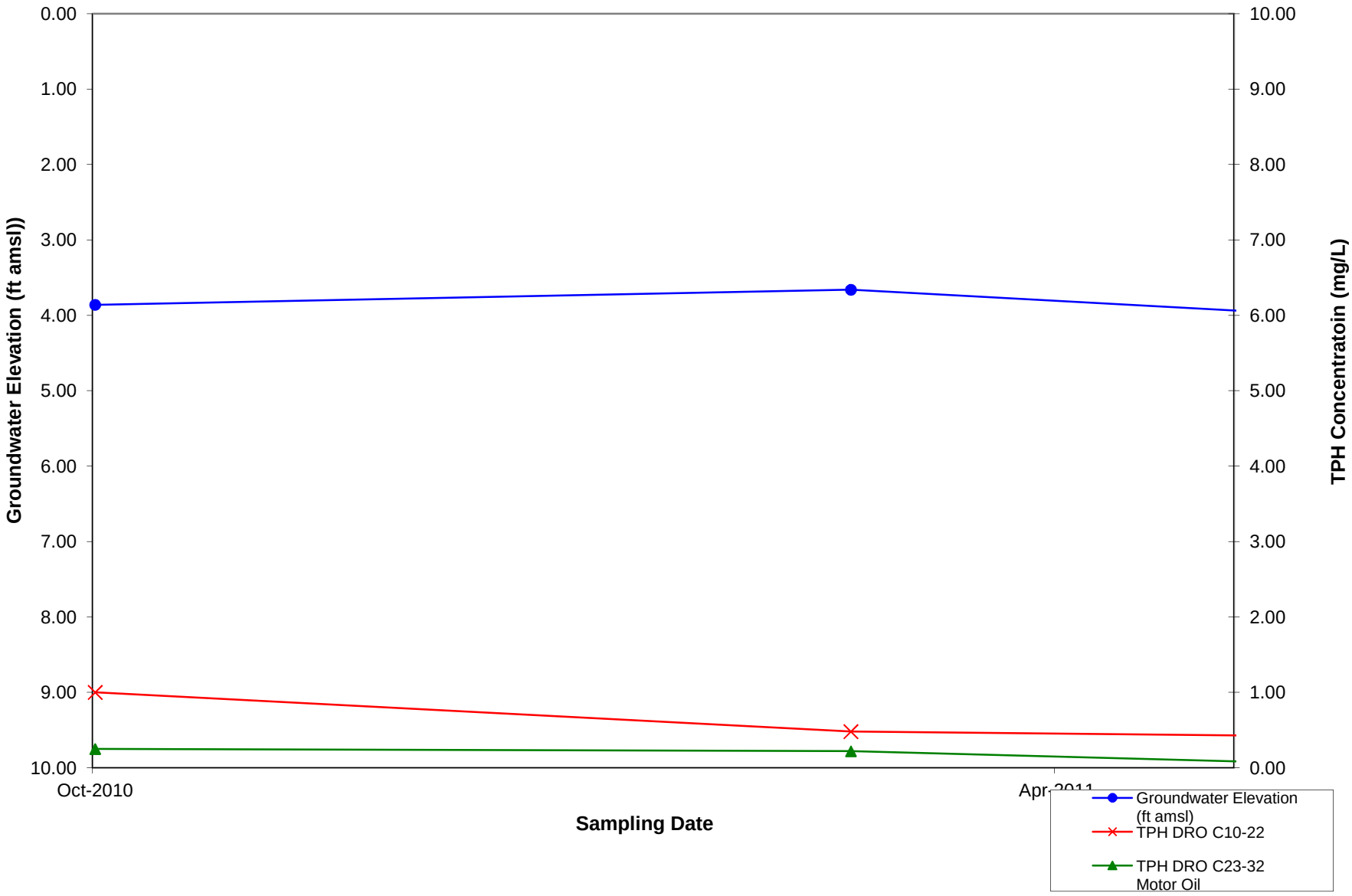
TPH DRO and Groundwater Elevation Trend in MW-8

ARCADIS



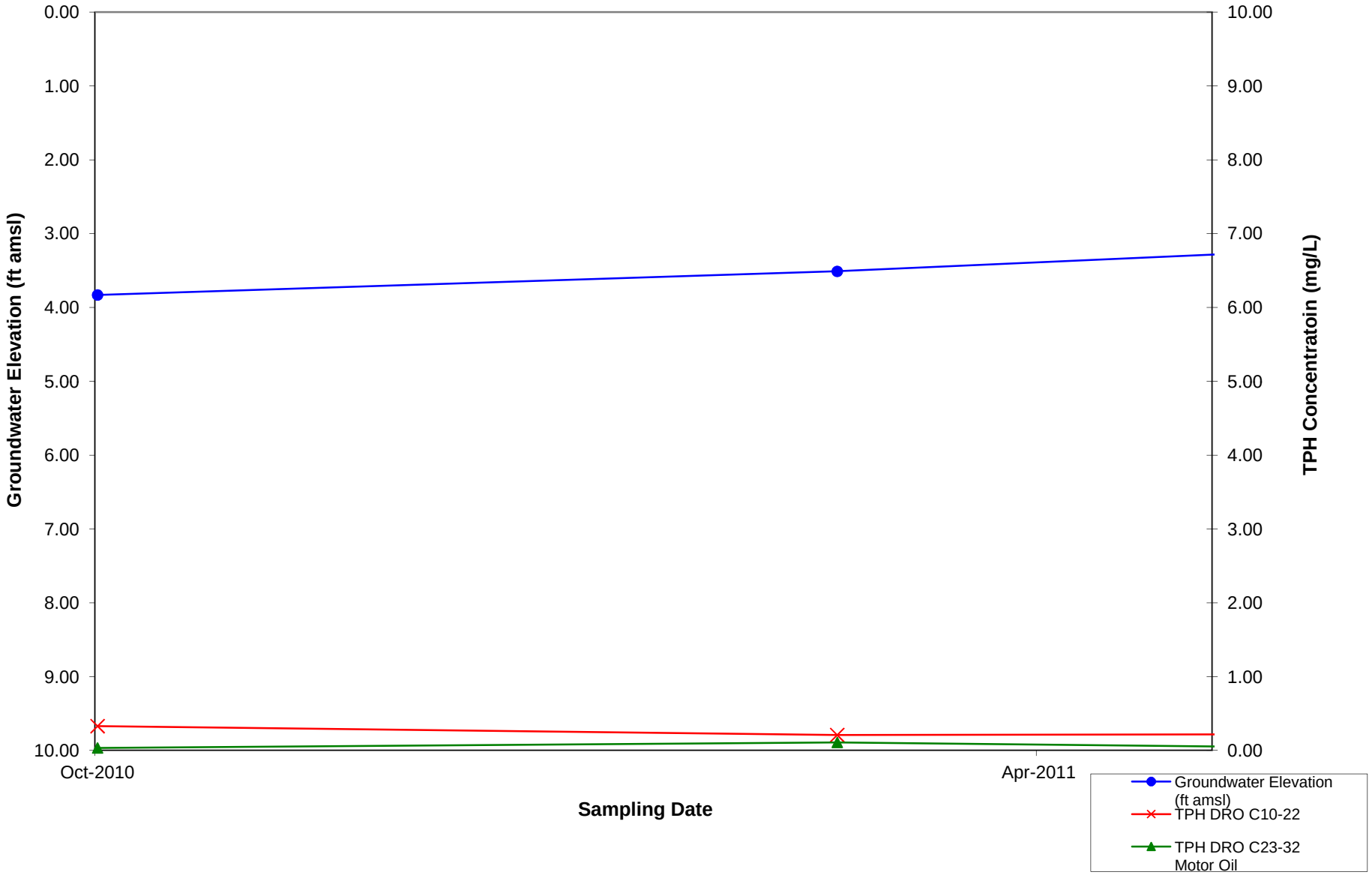
TPH DRO and Groundwater Elevation Trend in MW-9

ARCADIS



TPH DRO and Groundwater Elevation Trend in MW-10

ARCADIS



TPH DRO and Groundwater Elevation Trend in MW-11

ARCADIS