

August 11, 2017

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By Alameda County Environmental Health 11:41 am, Aug 25, 2017

**Re.: Remedial Investigation Report
Automasters
6200 Shattuck Avenue
Oakland, California
ACEH Case #RO0002935**

I declare, that to the best of my knowledge at the present time, the information and/or recommendations contained in the attached document are true and correct.

Submitted by,



Johnny Browning
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15 Mulberry Court, #5
Belmont, CA 94002

**REMEDIAL INVESTIGATION
REPORT**

**AUTOMASTERS
LEAKING UNDERGROUND TANK SITE
CASE No. RO0002935
6200 Shattuck Avenue
Oakland**

Prepared for:

**JOHNNY BROWNING, TRUSTEE
Belmont**

Submitted to:

**ALAMEDA COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH
Oakland**

Prepared by:

**WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS, INC.
Vacaville**

JULY 2017

ACKNOWLEDGMENTS

This Remedial Investigation Report was prepared under authorization of our client, the Automasters property owner, and is intended for his exclusive use.

Groundwater investigation at the Automasters site is under jurisdiction of Alameda County Department of Environmental Health; 5550 Skyline Blvd., Suite A, Oakland, California 95403. The case has been assigned No. RO0002935.

In the preparation of this Site Assessment reliance was made on previous environmental investigation performed by Pangea in 2006.

The Automasters site has been assigned the GeoTracker Global ID T0619748201.

Soil borings were completed by our drilling subcontractor, PeneCore Drilling (C-57 License No. 906899).

In the completion of this project reliance was made on chemical analytical testing performed by McCampbell Analytical in Pittsburg. McCampbell is certified by the State of California for the analyses performed.

This Report was prepared by West & Associates Environmental Engineers, Inc.; 630 Eubanks Ct., Unit G, Vacaville, California 95688. Principal author is Mr. Brian W. West, PE, (707) 761-2307; RCE 32319, expires 12/31/18.



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1.0 INTRODUCTION

This Remedial Investigation (RI) Report describes soil and groundwater investigation activities completed in 2017 at the Automasters leaking underground tank site located at 6200 Shattuck Avenue in Oakland (the Site). A summarized description of site investigation activities completed before 2017 is also included.

The 2017 remedial investigation focused on the shallow soils and the first encountered water bearing zone underlying the Site.

The Automasters site regional setting is indicated on *Figure 1*. An aerial view of the property is presented on *Figure 2*. Both figures appear in *Appendix A*.

1.1 Scope

The scope of this project consisted of performing a remedial investigation in the shallow soils and first encountered groundwater zone at the Site. This site investigation was performed in conformance with a technical Workplan approved by the Alameda County Environmental Health Department. Specific scope items include:

- Obtain soil boring permit from Alameda County Public Works Agency
- Obtain City of Oakland excavation permits for work in 62nd Street and Shattuck Avenue (two separate permits required)
- Contact USA to locate and mark underground utilities in the study area
- Coordinate with site owner and tenant for access and supervise soil borings
- Arrange and supervise a geophysical survey in the area overlying the former USTs, piping and dispensers to see whether additional USTs or piping remain
- Arrange for a C-57 licensed driller to complete 17 Geoprobe borings
- Collect representative soil samples in accordance with the approved workplan
- Hydrologic measurements to determine the local groundwater gradient direction and magnitude
- Collect representative groundwater samples from the 13 Geoprobe borings and the three monitoring wells previously installed
- Backfill and resurface the Geoprobe boreholes
- Underground utility and subsurface structure study within the Site vicinity to identify potential preferred contaminant pathways
- Properly manage solid and liquid investigative derived wastes (IDW)
- Arrange for soil and groundwater sample analysis in a State certified laboratory
- Quality Control/Quality Assurance Measures and evaluation
- Update the Site Conceptual Model (SCM)
- Prepare and submit this written technical report
- Data and report upload to GeoTracker

1.2 Summarized Background

Automasters is an independent automotive repair facility located at the northeast corner of Shattuck Avenue and 62nd Street in Oakland, California. Formerly, the facility included two underground fuel storage tanks and dispensers for retail fuel sales. Also, there has historically been above ground storage for both new and used crankcase oil.

Shortly after purchasing the Site in 1986, Mr. Glenn Logan contracted with Ray Walker Hydraulics of Pleasanton, CA to remove the two small underground gasoline storage tanks (USTs) from the southern portion of the Site. W&A contacted Mr. Walker in December 2014 to gather more information on these USTs and determine whether any contaminated soil was encountered during their removal. Mr. Walker searched his archived files but did not have any written information on this Site as the work was performed almost 30 years ago. To the best of his recollection both USTs were used for gasoline and either 500 or 1,000 gallons in size.

Mr. Logan distinctly remembered that contaminated soil between the USTs was removed and transported offsite for disposal. Attempts to contact the Oakland Fire Department regarding this Site have been unsuccessful, so there is no written documentation of the quantity of soil removed or where it was taken.

Initial Site Assessment: Initial environmental assessment activities at the Automasters site were performed by Pangea in 2006. Pangea completed three soil borings (SB-1, SB-2 & SB-3) at the locations shown on *Figure 2*.

Soil samples collected by Pangea in borings SB-1 and SB-3 were reported to be uncontaminated, i.e. there were no detectable concentrations of TPH-g, BTEX compounds, fuel oxygenates, lead scavengers, TPH-d or TPH-motor oil detected in any of the soil samples collected from either boring. A soil sample collected from boring SB-2 at 11 feet below ground surface (BGS) was reported to contain TPH-g at 3,000 mg/kg, TPH-d at 850 mg/kg, naphthalene at 10 mg/kg, and negligible concentrations of BTEX compounds and fuel additives. The 8-foot and 16-foot deep samples from SB-2 had insignificant concentrations of TPH-g and TPH-d, indicating that the zone of contamination was very limited in vertical extent. Total lead concentrations reported in all soil samples were typical of background levels in the vicinity.

Pangea soil boring SB-2 was advanced to a total depth of 48 feet. It is recorded that no obvious water bearing zone was encountered during the drilling of SB-2. The SB-2 borehole was left open overnight with a 10-foot screen placed near the bottom. The following day groundwater had accumulated in SB-2 to a depth of 8 feet BGS, allowing a grab sample to be collected.

The groundwater grab sample collected from Pangea boring SB-2 was reported to be contaminated with TPH-g at 1,700 µg/L, TPH-d at 1,000 µg/, TPH-motor oil at 1,100 µg/L, and naphthalene at 440 µg/L along with modest concentrations of BTEX compounds and fuel additives. Because accumulated groundwater in boring SB-2 was in direct contact with the contaminated sand and gravel layer at 11-12 feet BGS, it is unclear whether the analytical results are representative of actual groundwater concentrations.

2015 Remedial Investigation: During the 4th quarter of 2015 an extensive remedial investigation was performed at the Site. Seven boreholes were advanced to 20 feet bgs and shallow soil samples were collected from seven additional locations adjacent to the repair shop building. Three of the deep boreholes were completed as monitoring wells.

Sub-surface conditions encountered during the 2015 remedial investigation were consistent with those reported by Pangea in 2006. There is a relatively permeable silty sand strata (USCS 'GM') found between 7 to 12 feet BGS. The silty sand strata is overlain and underlain by a much less permeable clayey silt strata (USCS 'ML'). The potentiometric groundwater surface is at 4-5 feet bgs.

The soil sample analytical results obtained from 7 boreholes sampled to 20 feet bgs are also consistent with the results reported during the limited site investigation program conducted by Pangea. Both sampling events reported significant concentrations of TPH-g and TPH-d in the vicinity of the former fuel dispenser island. Contamination is predominantly found in the permeable silty sand strata between 7 to 12 feet BGS.

By combining subsurface data generated during this remedial investigation with data generated by Pangea, two geologic cross-sections were developed. Cross section A-A, shown on *Figure 3*, trends from the corner of 62nd and Shattuck, northeast through the source area. The other cross-section (B-B), shown on *Figure 4*, runs perpendicular to A-A through the source area. The locations of both cross-sections are shown on *Figure 2*. Reported TPH-g and TPH-d concentrations in soil are indicated on both cross-sections.

Iso-contours for TPH-g and TPH-d concentrations in soil are presented on *Figure 6* and *Figure 6*, respectively. Iso-contours for TPH-g and TPH-d in groundwater are presented on *Figure 7* and *Figure 8*, respectively.

All shallow soil samples (<5 feet BGS) collected from locations adjacent to the facility's current and past waste oil storage containers during the 2015 remedial investigation were reported to be uncontaminated, suggesting that waste oil contamination is not a concern at the Automasters Site.

Tabulated soil and groundwater analytical data generated during the December 2015 remedial investigation appears in *Appendix B*.

2.0 SITE CHARACTERISTICS

In this Section, physical site characteristics pertinent to the remedial assessment are presented.

2.1 Physical Setting

The Automasters facility is located at the northeast corner of Shattuck Avenue and 62nd Street in an area of mixed residential and commercial land use. The elevation of the Site is 131 feet above mean sea level, with local topography sloping gently to the southwest (US Geological Survey [USGS], Oakland West Quadrangle, California). Surrounding properties are primarily single-family and multi-family residences with a few commercial buildings located along Shattuck Avenue to the south and northwest of the Site.

Utilities in the site vicinity are both underground and overhead. The Alameda County Assessor's Parcel Number for this Site is 15-1377-22.

2.2 Subsurface Conditions

Soil: The 2006 Soil and Groundwater Investigation Report prepared by Pangea describes soils underlying the Site as primarily clays and silts, with a sand and gravel layer between about 10 feet and 15 feet below ground surface (BGS). During the 2015 and 2017 remedial investigations the observed soil stratigraphy was found to be generally consistent with conditions reported by Pangea with the sand and gravel layer as shallow as 7 feet BGS at some locations.

Groundwater: First encountered groundwater under the Automasters site is semi-confined. A soil boring advanced to 12 feet BGS will remain dry indefinitely. A soil boring advanced to 20 feet BGS will fill with groundwater to 7 feet BGS over a 24 hour period. The static depth to groundwater in the three onsite monitoring wells ranges from 3.2 to 7.5 BGS.

The local groundwater gradient direction has been determined to be west/southwest, which is generally towards San Francisco Bay. The gradient is quite flat and the seepage velocity is low.

3.0 SOIL AND GROUNDWATER INVESTIGATION

In this Section, methods, equipment, materials and techniques utilized to successfully complete the soil and groundwater investigation are presented.

3.1 Pre-Field Activities

As required by the Alameda County Well Ordinance, a permit was obtained from Alameda County Public Works Agency (ACPWA) for installation of soil borings at this Site. In addition, two separate encroachment permits were required by the City of Oakland to place borings in 62nd Street and Shattuck Avenue. These permits are as follows:

- ACPWA Permit No. W2017-0240 for installation of Geoprobe soil borings
- City of Oakland Public Works Department Permit No. X1700244 for work in 62nd Street
- City of Oakland Public Works Department Permit No. X1700245 for work in Shattuck Avenue

Copies of these permits are included in *Appendix C*. Advance notification for inspection purposes was made to the Alameda County Environmental Health Department in conformance with permit conditions.

The work site was marked for Underground Service Alert and USA ticket No. 058161 opened three days prior to starting subsurface work.

3.2 Geophysical Survey

In order to establish conclusively that no additional USTs or underground piping remain in the source area, a geophysical survey was performed. The survey used horizontal magnetic gradient (HMG), ground penetrating radar (GPR) and metal detection (MD) methods to evaluate a 2000-square foot area in which the USTs, piping and dispensers were known to have been formerly located.

No evidence of any USTs or fuel distribution piping was detected by any of these geophysical methods, so it is concluded that the primary source (all USTs and associated piping) has been removed. A copy of the complete geophysical survey report is included in *Appendix D*.

3.3 Soil Boring Installation

A total of 17 Geoprobe soil borings, including 13 borings to 20 feet BGS and 4 shallow borings to 10 feet BGS, were installed as described in the approved project workplan. Soil samples were collected from each borehole at approximately 5 foot intervals.

3.3.1 Soil Borings

Soil borings B-8 through B-20 were advanced to 20 feet BGS on March 21, 2017 using a Geoprobe direct push drill rig. Soil samples from these borings were collected from the continuous core DPT liner within each 5-foot interval, the specific depth selected as appropriate based on observed evidence of contamination and/or changes in lithology. A minimum of four samples were collected from each of these borings.

On March 21st soil borings WB-1 through WB-3 were also advanced to 10 feet BGS using the Geoprobe rig. Boring WB-4, located inside the repair shop building, was advanced to 5 feet BGS using a hand auger on March 22nd. Samples from these 4 borings were collected at 3 feet and 10 feet BGS, with the exception of WB-4. The hand auger was unable to core more than 5 feet BGS due to encountering an obstruction, so only one soil sample was collected from WB-4.

All borings were supervised and logged under the direction of a California licensed civil engineer. Logs for all 17 borings appear in *Appendix E*.

Soil samples were inspected for lithography and field screened with a calibrated photoionization detector (PID) for the presence of volatile contamination. Soil samples selected for laboratory analysis were sealed, labeled and preserved pending transfer to the testing laboratory.

3.3.2 Groundwater Sampling

Groundwater "grab" samples were collected from boreholes B-8 through B-20 on March 22nd, using an electric pump fitted with new teflon tubing for each sample. The pump was decontaminated after collecting each sample using a trisodium phosphate (TSP) solution followed by triple rinsing. The boreholes were backfilled and resurfaced after collecting these groundwater samples, as specified in the permits. All site work was completed in conformance with West & Associates "Standard Field Procedures".

Groundwater monitoring wells MW-101, MW-102, and MW-103 were also purged and sampled on March 22, 2017. Groundwater samples from the three wells were collected using new, disposable plastic bailers. Upon retrieval to the surface, each water sample was transferred to laboratory-supplied containers for analysis of petroleum compounds as described below. All water samples were labeled, placed into an ice chilled cooler and transported under EPA chain-of-custody protocol to a State certified analytical laboratory for testing.

3.3.3 Residue Management

The Geoprobe DPT liners, decontamination rinsate and purge water were containerized on site in DOT 55-gallon drums. All wastes are presumed to be contaminated until tested. Residue drums were moved to a secure onsite location pending arrangements for proper disposal.

3.3.4 Laboratory Analysis of Soil and Groundwater Samples

Both the soil sample set and the groundwater sample set were submitted to McCampbell Analytical in Pittsburg for chemical analysis. These sample sets were hand carried to the testing laboratory under chain of custody protocol. McCampbell analytical reports and Chain of Custody records for each sample set appears in *Appendix F*.

McCampbell is certified by the State of California for chemical analyses performed.

All soil and groundwater samples from borings B-8 through B-20 were analyzed for TPH-g, TPH-d, TPH-motor oil, and VOCs (including BTEX compounds, MtBE and naphthalene) by EPA Method 8260. Soil samples from the upper 10 feet BGS in these borings were also analyzed for polynuclear aromatics (PNAs) by EPA Method 8270. The shallow soil samples from WB-1 through WB-4 were analyzed for PNAs by 8270 and LUFT 5 metals (cadmium, chromium, lead, nickel and zinc). All laboratory methods and procedures, including minimum detection limits and maximum hold times, complied with EPA guidelines.

Petroleum compound and VOC results for the soil sample set are presented on *Tables 1A and 1B*. The PNA results for all soil samples from borings B-8 through B-20 were less than 0.05 mg/kg, with the following exceptions:

B12-10 contained 1-methylnaphthalene at 1.6 mg/kg, 2-methylnaphthalene at 3.0 mg/kg, and naphthalene at 5.0 mg/kg;

B14-10 contained 1-methylnaphthalene at 2.0 mg/kg, 2-Methylnaphthalene at 3.7 mg/kg, and naphthalene at 7.0 mg/kg.

The PNA results for soil borings WB-1 through WB-4 were all non-detect with a method detection limit (MDL) of 0.01 mg/kg. The LUFT 5 metals results for WB-1 through WB-4 are presented on *Table 2*.

Analytical results for the groundwater sample set are summarized in *Table 3*.

**TABLE 1A - SOIL SAMPLE ANALYTICAL RESULTS
PETROLEUM COMPOUNDS**

(All concentrations in milligrams per kilogram, i.e. mg/kg or ppm)

Sample ID	Date	TPH-g	B ⁽¹⁾	T ⁽²⁾	E ⁽³⁾	X ⁽⁴⁾	MtBE	N ⁽⁵⁾	TPH-d	TPH-mo
B8-5	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B8-10	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B8-15	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B8-20	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B9-5	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1.1	6.9
B9-9	03/21/17	760	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	54	<5.0
B9-15	03/21/17	4.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B9-19	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B10-5	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B10-10	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B10-15	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B10-20	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B11-5	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B11-10	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B11-15	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B11-20	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B12-5	03/21/17	27	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	2.2	<5.0
B12-10	03/21/17	1,800	1.0	<1.0	12	3.6	<1.0	5.1	220	7.3
B12-15	03/21/17	4.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B12-20	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B13-5	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B13-10	3/21/17	2.7	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B13-15	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B13-20	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B14-5	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B14-10	3/21/17	2,000	<2.5	<0.005	<2.5	160	<0.005	6.4	450	9.8
B14-15	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B14-20	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B15-5	3/21/17	42	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	3.8	<5.0
B15-10	3/21/17	8.4	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B15-15	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B15-20	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B16-5	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	4.3	36
B16-10	3/21/17	4.7	<0.005	<0.005	0.011	<0.005	<0.005	0.026	<1.0	<5.0
B16-15	3/21/17	78	<0.005	<0.005	0.039	<0.005	<0.005	0.053	3	<5.0
B16-19	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B17-4	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B17-8	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B18-13	3/21/17	7.7	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1.8	<5.0
B20-8	3/21/17	17	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1.5	<5.0

(1) B= benzene (2) T= toluene (3) E= ethylbenzene (4) X= total xylenes (5) N= naphthalene

**TABLE 1B - SOIL SAMPLE ANALYTICAL RESULTS
OTHER VOCs**

(All concentrations in milligrams per kilogram, i.e. mg/kg or ppm)

Sample ID	Date	n-Butyl benzene	sec-Butyl Benzene	n-Propyl Benzene	Isopropyl Benzene	1,2,4 Trimethyl Benzene	1,3,5 Trimethyl Benzene
B9-9	3/21/17	1.6	1.2	<0.005	<0.005	<0.005	<0.005
B9-15	3/21/17	0.020	0.007	0.013	<0.005	0.034	0.012
B12-5	3/21/17	<0.005	<0.005	0.027	<0.005	<0.005	<0.005
B12-10	3/21/17	5.5	1.5	8.2	2.4	18	6.5
B12-15	3/21/17	<0.005	<0.005	0.006	<0.005	<0.005	<0.005
B14-10	3/21/17	7.2	<2.5	10	3.1	69	23
B15-10	3/21/17	0.012	0.006	0.018	0.006	<0.005	<0.005
B16-10	3/21/17	0.018	0.006	0.052	0.017	<0.005	<0.005
B16-15	3/21/17	0.12	0.037	0.18	0.05	<0.033	<0.033
B20-8	3/21/17	0.005	0.007	<0.005	<0.005	<0.005	<0.005

**TABLE 2 - SOIL SAMPLE ANALYTICAL RESULTS
LUFT 5 METALS**

(All concentrations in milligrams per kilogram, i.e. mg/kg or ppm)

Sample ID	Date	Cadmium	Chromium	Lead	Nickel	Zinc
WB1-3	3/21/17	<0.25	47	7.6	97	69
WB1-10	3/21/17	0.31	42	6.5	43	59
WB2-3	3/21/17	<0.25	52	5.9	45	45
WB2-10	3/21/17	0.25	38	5.9	55	60
WB3-3	3/22/17	<0.25	45	8.3	31	46
WB4-3	3/21/17	<0.25	48	6.5	92	52
WB4-10	3/21/17	0.3	53	6.6	48	68

**TABLE 3A
GROUNDWATER GRAB SAMPLE ANALYTICAL DATA
PETROLEUM COMPOUNDS**

(All concentrations in micrograms per liter, i.e. ug/l or ppb)

Sample Location	Date	TPH-g	B ⁽¹⁾	T ⁽²⁾	E ⁽³⁾	X ⁽⁴⁾	MtBE	N ⁽⁵⁾	TPH-d	TPH-mo
B-8	3/22/17	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<250
B-9	3/22/17	3,700	<2.5	<2.5	8.9	19	<2.5	<2.5	4,000	310
B-10	3/22/17	<50	1.2	<0.5	0.7	1.4	<0.5	2.7	<50	<250
B-11	3/22/17	53	6.4	<0.5	2.6	3.9	<0.5	1.9	69	<250
B-12	3/22/17	11,000	900	37	520	840	<25	160	2,700	<250
B-13	3/22/17	910	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	320	<250
B-14	3/22/17	1,200	<5	5.6	32	180	<5	38	470	<250
B-15	3/22/17	11,000	1,100	27	500	530	<25	240	2,400	<250
B-16	3/22/17	660	47	21	9.1	54	<2.5	32	330	<250
B-17	3/22/17	<50	0.85	<0.5	<0.5	0.6	1.3	<0.5	<150	1,100
B-18	3/22/17	<50	0.55	<0.5	<0.5	<0.5	<0.5	<0.5	<150	<750
B-19	3/22/17	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<250
B-20	3/22/17	1,100	14	<1.0	6.4	<1.0	<1.0	7.2	610	<250

**TABLE 3B
GROUNDWATER GRAB SAMPLE ANALYTICAL DATA
OTHER VOCs**

(All concentrations in micrograms per liter, i.e. ug/l or ppb)

Sample Location	Date	N-Butyl Benzene	Sec-Butyl Benzene	Isopropyl Benzene	4-Isopropyl Toluene	N-Propyl Benzene	1,2,4-Trimethyl Benzene	1,3,5-Trimethyl Benzene
B-8	3/22/17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B-9	3/22/17	48	27	29	13	99	140	68
B-10	3/22/17	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
B-11	3/22/17	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	0.5
B-12	3/22/17	28	<25	37	<25	120	580	170
B-13	3/22/17	4.2	4.9	5.1	<0.5	12	<0.5	<0.5
B-14	3/22/17	<5	<5	<5	<5	5.3	56	12
B-15	3/22/17	<25	<25	<40	<25	110	380	120
B-16	3/22/17	<2.5	<2.5	6.5	<2.5	14	21	5.5
B-17	3/22/17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B-18	3/22/17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B-19	3/22/17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B-20	3/22/17	15	9.9	14	<1.0	38	4.1	<1.0

4.0 SITE CONCEPTUAL MODEL

The Site Conceptual Model (SCM) has been updated to incorporate data and related information gathered during the 2017 remedial investigation program.

Data generated during this project applicable to the SCM include depth to groundwater; presence or absence of LNAPL; lateral and vertical extent of contamination as well as information regarding potential sensitive receptors and exposure pathways. Additionally, the following activities were undertaken to provide input to the SCM:

- Expanded water well survey
- Underground utility survey
- Evaluation of existing and potential land use and exposure scenarios
- Planned land re-development activities in the vicinity

Results of each project activity listed above are described in the following Sections.

4.1 Expanded Well Survey

A formal request was made to the Alameda County Public Works Agency (ACPWA) to supply a list of known water supply wells within a 2,000 ft. radius of the Automasters site. Review of the list of water wells provided by the ACPWA did not reveal any drinking water supply wells within the search area. All wells reported were either monitoring wells or used for non-potable purposes.

4.2 Underground Utility Survey

The following potential underground utilities were researched for this project:

- Storm Sewer
- Sanitary Sewer
- Electric Power
- Natural Gas
- Telephone
- Cable Television
- Water

There are storm sewer inlets located on both sides of the southwest corner of Shattuck and 62nd Street. The westerly inlet ties into the southerly inlet, which then ties into a storm drain line running down the centerline of Shattuck (see *Figure 9*).

A sanitary sewer main runs down the centerline of 62nd Street and a trunk line runs down the centerline of Shattuck. The two intersect under a manhole in the center of the Shattuck/62nd intersection.

A sewer lateral runs from the Automasters restroom to the sanitary sewer main in 62nd Street, as illustrated on *Figure 9*. Sewer laterals also extend from other properties on 62nd to the main in the street.

Most electrical distribution in the study area is overhead. However, the Automasters building is fed underground from a riser coming down a power pole in the sidewalk near the northwest corner of the property.

An underground gas main runs under the northerly half of 62nd Street. The gas line apparently ends at the Shattuck/62nd intersection. An underground gas lateral extends from the main in 62nd Street to the Automasters building. Other buildings on 62nd have similar gas laterals.

Telephone lines in the study area are overhead. However, there is an AT&T manhole in the northbound lane of Shattuck, immediately in front of the Automasters property. It would appear from USA markings that an AT&T underground communication cable of some sort runs north/south under Shattuck (see *Figure 9*).

There is no evidence of any underground cable TV utilities in the study area.

An East Bay Municipal Utility District underground water line runs under 62nd Street. A water lateral serves the Automasters building, as illustrated on *Figure 9*.

In summary, there are multiple underground utility trenches in the study area under both Shattuck Avenue and 62nd Street. The relatively permeable backfill materials in these utility corridors potentially could be preferential pathways for subsurface contaminant migration.

4.3 Existing and Potential Land Use

Land use in the Site vicinity is under jurisdiction of the City of Oakland Planning Department. Land use and potential land use is governed based on the zoning regulations in Chapter 17 of the Oakland Municipal Code. The Automasters property surrounding properties are zoned RM-4, Mixed Housing Residential Zone – 4 as defined in Section 17.17.010 of the Municipal Code. The objective of this zoning classification is to maintain an enhanced residential area “Characterized by a mix of single family homes, townhouses, small multi-unit buildings at somewhat higher densities than RM-3, and neighborhood businesses where appropriate.”

The Automasters property is currently being used for commercial purposes. However, based on the existing zoning, the property could be re-developed with a residential component.

Based on the potential for residential land use, the exposure scenarios listed in the LTCP must be evaluated using residential standards. In particular, the soil concentrations of benzene, ethylbenzene and naphthalene in shallow soils (< 5 feet bgs) must be compared with those listed in the residential column on Table 1 in the Direct Contact and Outdoor Air Exposure section of the LTCP. The concentrations of TPH-g and TPH-d in soils < 10 feet bgs exceed 100 ppm at MW-101, MW-103 and DP-2, consequently, the potential for vapor intrusion to indoor air cannot be dismissed without performing a soil vapor survey.

There are no known re-development activities in the immediate vicinity of the Site planned at this time. The Site vicinity is predominantly residential, which is consistent with the current zoning. Any significant change to the developed character of the Site vicinity would require a zoning change. Consequently, for purposes of evaluating site closure under the LTCP, future changes in the developed character of the Site vicinity is not a consideration.

An updated version of the Site Conceptual Model and the list of remaining data gaps are included in *Appendix G*.

4.4 Sensitive Receptor Survey

A limited sensitive receptor evaluation has been performed based on Sensitive Receptor Surveys performed at nearby sites.

No onsite water supply wells or other sensitive receptors exist at the Site. Based on the data collected during previous investigations in 2006 and 2015, potential onsite receptors include construction workers exposed to gasoline vapors while excavating into contaminated soil during Site development activities. Even this exposure is unlikely since the identified contamination is 10 to 12 feet bgs and the proposed development does not include an underground parking garage.

The homes and small commercial establishments south and west of the Site are located downgradient and are considered the only potential offsite receptors. The probability of this release having an impact on these receptors is unknown based on the fact that significant concentrations of benzene were found in confined groundwater that rises to a depth of 3 to 5 feet bgs in the wells during the winter months.

A well survey of the area performed by Woodward Clyde Consultants (WCC) in 1986 found five wells within a one mile radius of the Site. Two of these wells are (or were) used for industrial purposes, two for irrigation, and one for domestic purposes. No municipal wells were identified anywhere near the Site. The closest well is the irrigation well at 3215 Adeline Street in Berkeley, approximately 1,340 feet west-northwest of the Site. The only other well within a 2000-foot radius of the Site is the domestic well, which is located 1,800 feet south-southeast (cross-gradient) from the Site. Mr. James Yoo of the Alameda Public Works Department confirmed that no new wells have been installed with a one-mile radius of the Site since the WCC well survey.

There are no surface water bodies within a 2,000-foot radius of the Site. The nearest surface water body is Claremont Creek, located approximately 0.8 miles northwest of the Site. San Francisco Bay is located 2 miles west of the Site.

Other potential receptors within 2,000 feet of the Site include the Sankofa Academy Elementary School, whose property begins 400 feet south of the Site, and Colby Park, located 1,800 feet east of the Site. Based on the known direction of groundwater flow in the area, these receptors are cross-gradient and upgradient of the Site, so it is highly unlikely that they would be impacted by this release.

5.0 DISCUSSION

This remedial investigation was completed in conformance with the Alameda County Department of Environmental Health (ACDEH) approved Workplan.

Sub-surface conditions encountered during this remedial investigation were consistent with those found during the initial site assessment by Pangea in 2006 and the 2015 remedial investigation. There is a relatively permeable silty sand strata (USCS 'GM') found between 7-12 feet BGS. The silty sand strata is overlain and underlain by a much less permeable clayey silt strata (USCS 'ML'). The potentiometric groundwater surface is 3-7 feet BGS.

The soil sample analytical results generated during this project are also consistent with the results reported during the two previous site investigation events. Both sampling activities reported significant concentrations of TPH-g and TPH-d in the vicinity of the former fuel dispenser island. Contamination is predominantly found in the permeable silty sand strata between 7 to 12 feet BGS.

All shallow soil samples (<5 feet BGS) collected from locations adjacent to the facility's current and past waste oil storage containers during this investigation were reported to be uncontaminated with 8270 compounds and LUFT 5 metals, indicating that waste oil contamination is not a concern at the Automasters Site.

The full magnitude and extent of offsite groundwater contamination remains undefined, based on the significant concentrations of TPH-g and benzene reported in groundwater at B-20, located in Shattuck Avenue directly south of MW-101.

In summary, this remedial investigation provided much of the information needed to address data gaps in the Site Conceptual Model and demonstrated that subsurface contamination extends beyond the western property boundary.

6.0 RECOMMENDATIONS

The following recommendations for future action are presented for the Automasters leaking underground tank site:

1. Groundwater Monitoring

It is recommended to continue with the regular groundwater monitoring and reporting schedule.

2. Site Assessment

It is recommended to complete the groundwater assessment by installing a groundwater monitoring well on the west side of Shattuck Avenue, in the downgradient direction from the Automasters source area. After researching site constraints, a candidate well location would be proposed in a technical workplan for review by the Alameda County Environmental Health Department.

3. Interim Remediation

It is recommended to initiate interim remediation to reverse or retard the downgradient migration of groundwater contamination. Plume control would be achieved through groundwater extraction at existing wells MW-101 and MW-103. It is proposed to prepare a technical workplan for interim remediation for review by the Alameda County Environmental Health Department.

4. Remedial Planning

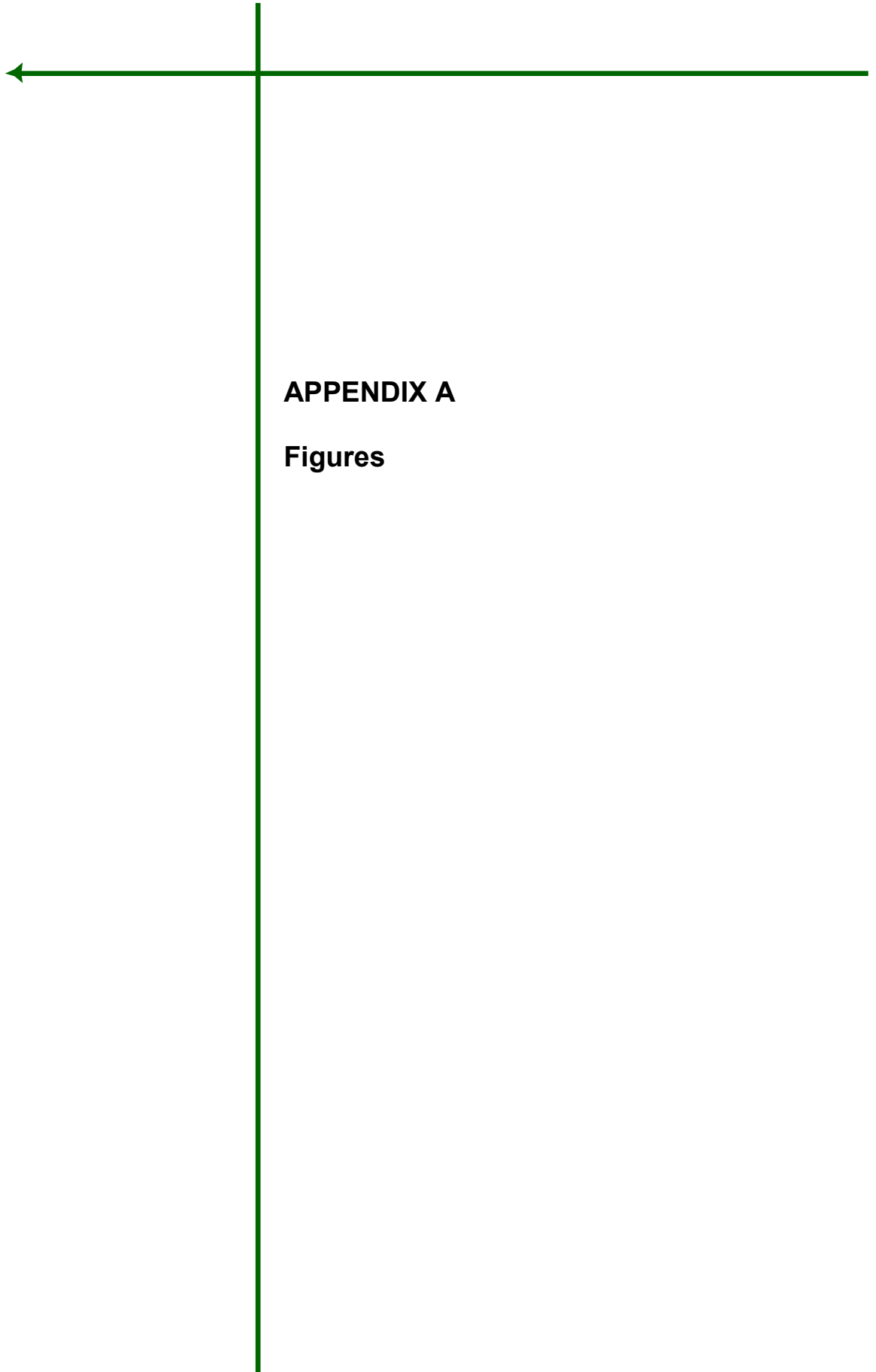
It is recommended to prepare a Project Execution Plan (PEP) for site remediation based on the premise that targeted over-excavation is likely to be the most cost-effective remediation strategy for this site

7.0 ELECTRONIC DATA SUBMITTAL COMPLIANCE

Selected project work product was uploaded to the GeoTracker database in conformance with State requirements. The Automasters site has been assigned GeoTracker Global ID T0619748201. Work product that was uploaded includes:

- Boring logs/well completion diagrams
- Well top survey data
- Analytical data
- Report of Findings

The GeoTracker upload certificates associated with this project appear in *Appendix H*.



APPENDIX A

Figures

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS

PO Box 5891, Vacaville, CA 95696

Legend

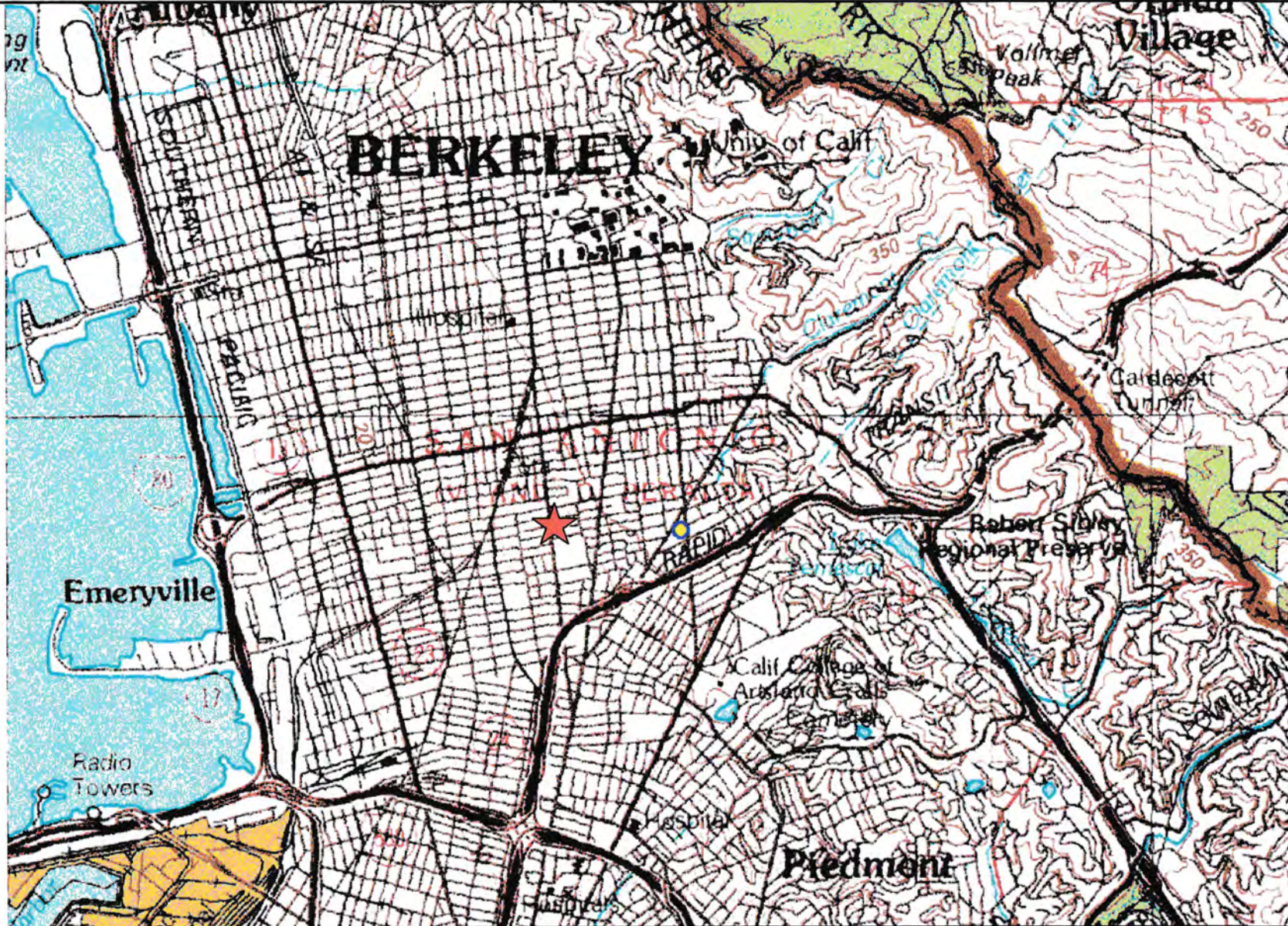
★ Site Location

FIGURE 1
Regional Site Location

Project Name: Automasters Date: February 2016

Location: 6200 Shattuck Avenue, Oakland, CA

Drawing By: DLG Scale: No Scale



WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS

PO Box 5891, Vacaville, CA 95696

Project Name: Automasters

Date: Apr 2017

Location: 6200 Shattuck Avenue, Oakland, CA

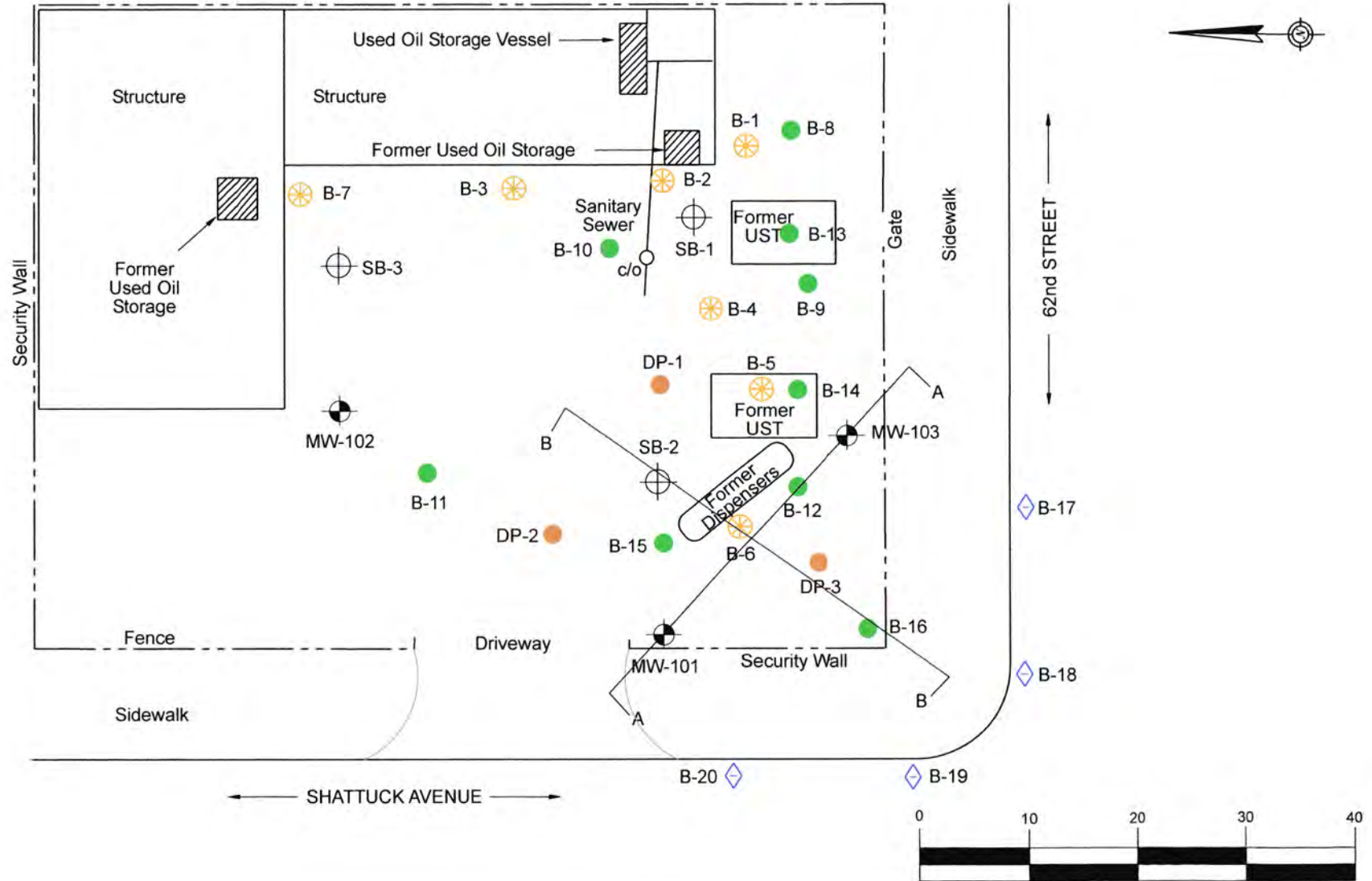
Drawing By: DLG

Scale: 1" = 14 ft

Legend

- Existing Groundwater Monitoring Well
- Previous Deep Soil Boring - Dec 2015
- Previous Shallow Soil Sample - Dec 2015
- Proposed Soil Boring and Groundwater Sample Collection Location - March 2017
- Pangea Boring (2006)
- Groundwater Sample Collection Location March 2017
- Past and Present Above Ground Used Oil Storage Vessels

**FIGURE 2
Site Diagram**



WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS

PO Box 5891, Vacaville, CA 95696

Project Name: Automasters

Date: July 2017

Location: 6200 Shattuck Avenue, Oakland, CA

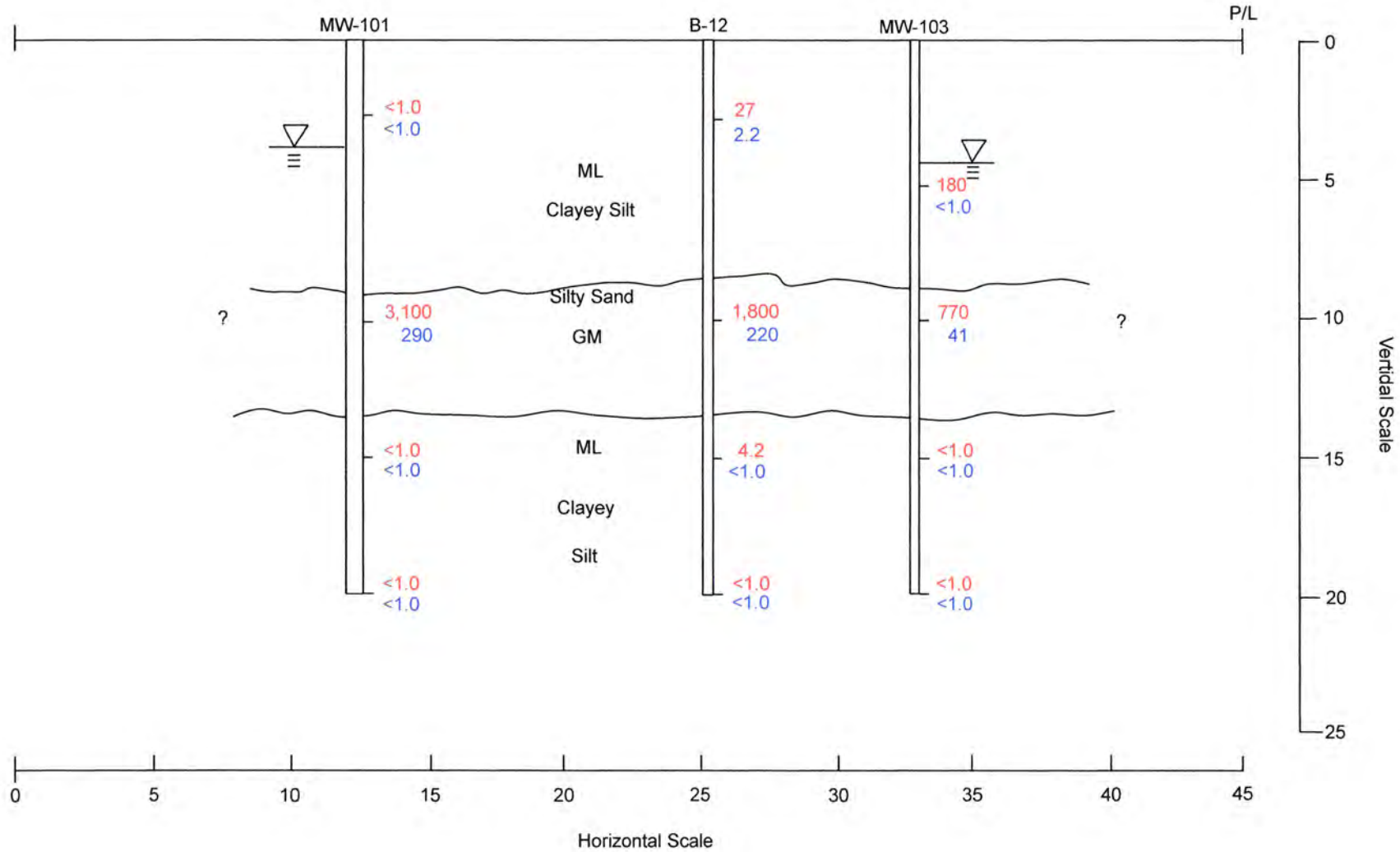
Drawing By: DLG

Scale: See Below

Legend

- 3,100 TPH-gas
- 290 TPH-diesel
- Soil Sample Analysis (mg/kg)
- Static GWE 1/6/2017

**FIGURE 3
Cross Section A-A**



See Figure 2 for Cross Section Location

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS

PO Box 5891, Vacaville, CA 95696

Project Name: Automasters

Date: July 2017

Location: 6200 Shattuck Avenue, Oakland, CA

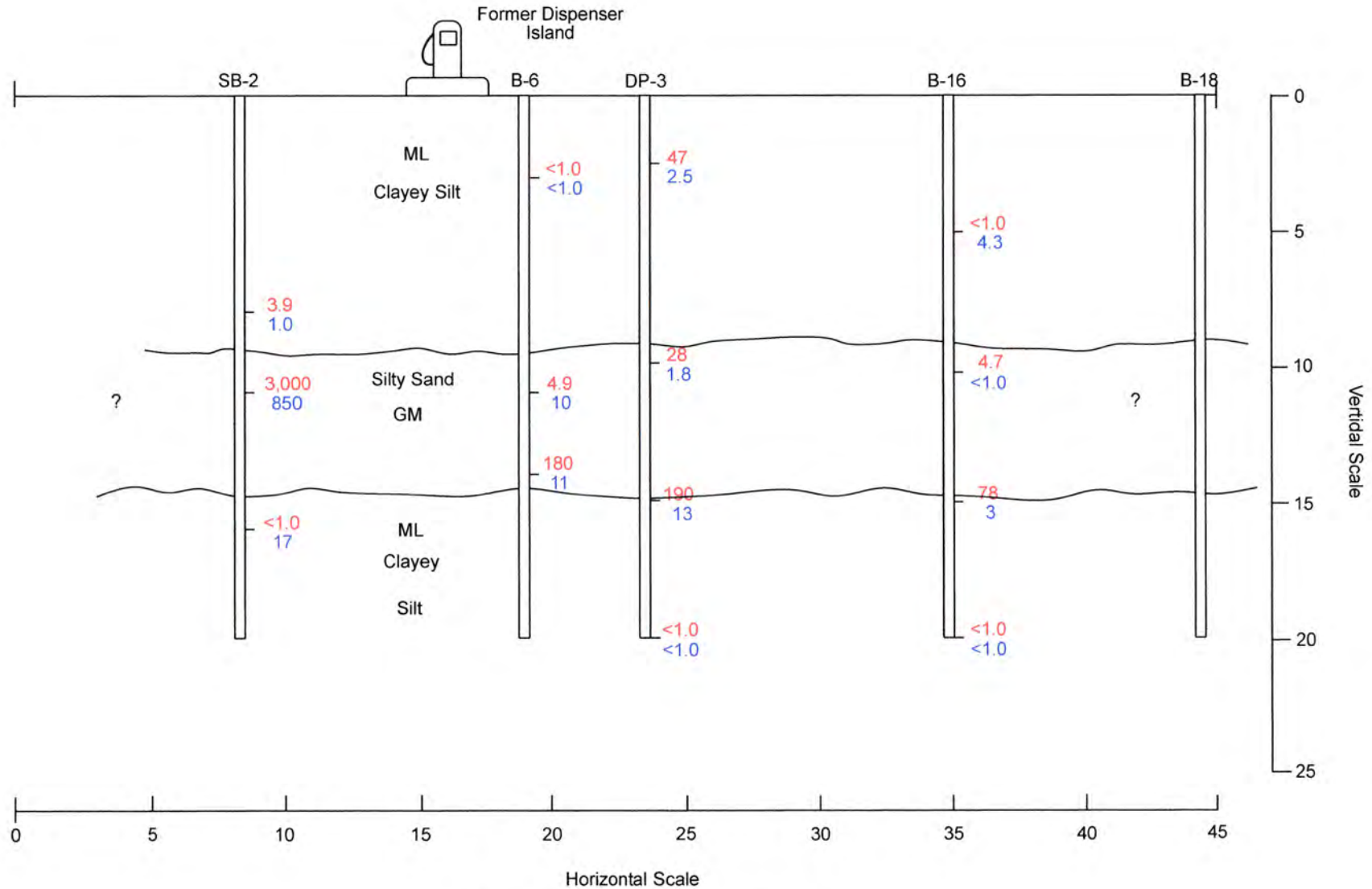
Drawing By: DLG

Scale: See Below

Legend

- 3,000 TPH-gas
- 850 TPH-diesel (mg/kg)
- Soil Sample Analysis

**FIGURE 4
Cross Section B-B**



See Figure 2 for Cross Section Location

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS

PO Box 5891, Vacaville, CA 95696

Project Name: Automasters

Date: July 2017

Location: 6200 Shattuck Avenue, Oakland, CA

Drawing By: DLG

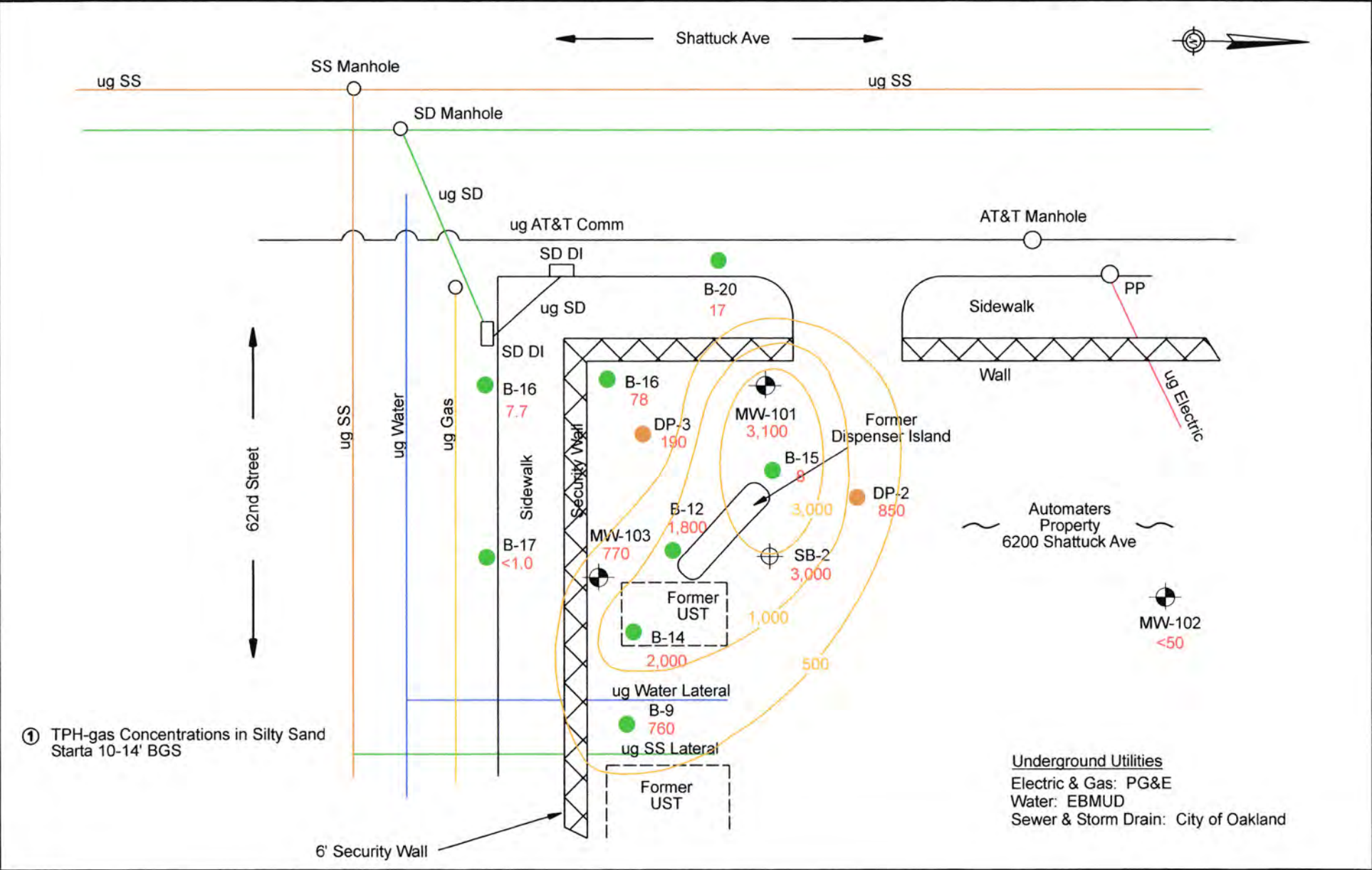
Scale: 1" = 13'

Legend

SD - Storm Drain
 SS - Sanitary Sewer
 DI - Drop Inlet
 ug - Underground
 MW - Monitoring Well
 PP - Power Pole

3,100 TPH-gas Concentration (mg/kg)

FIGURE 5
Iso-Concentration Contours
in Soil ①
TPH-gas
(mg/kg)



WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS

PO Box 5891, Vacaville, CA 95696

Project Name: Automasters

Date: July 2017

Location: 6200 Shattuck Avenue, Oakland, CA

Drawing By: DLG

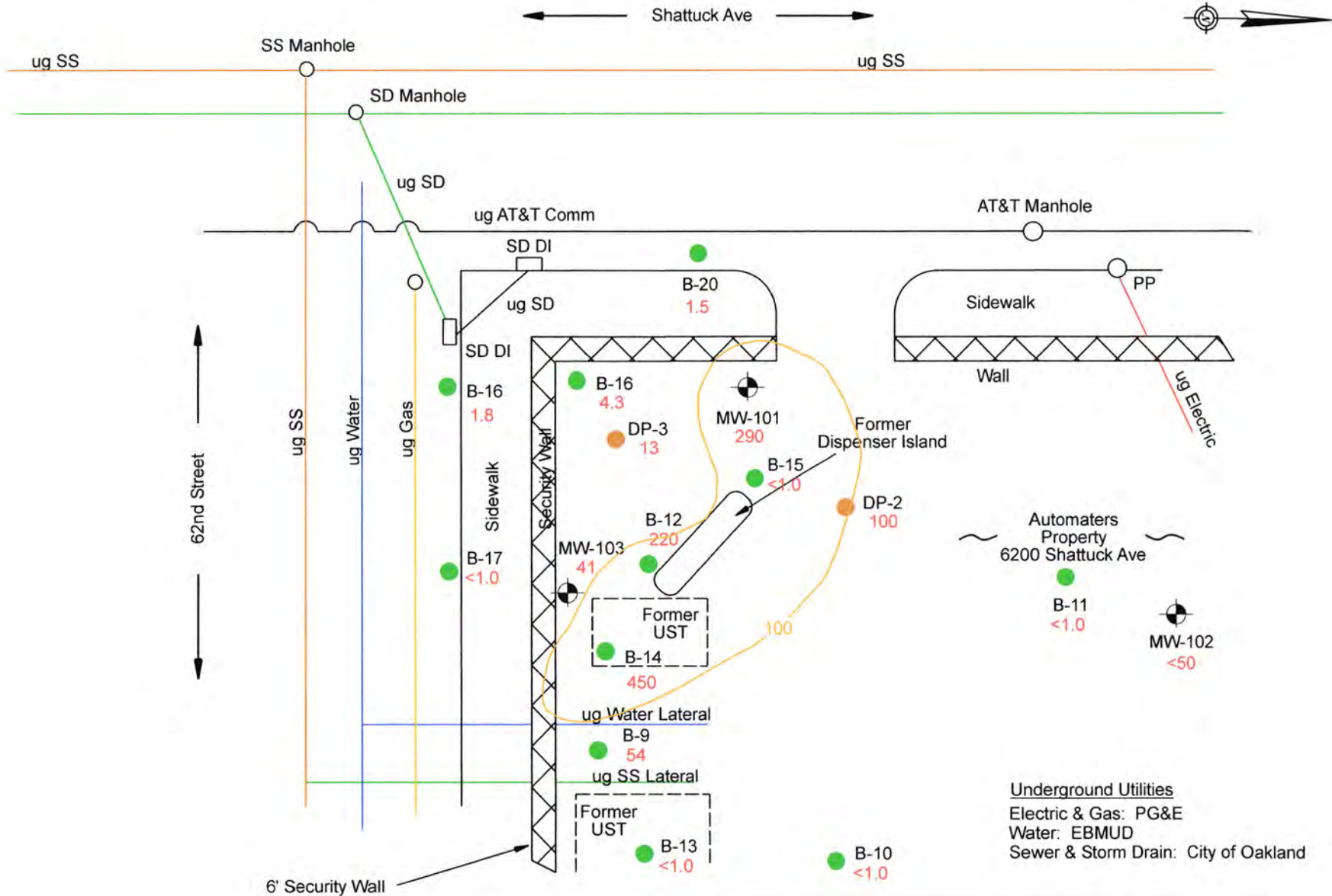
Scale: 1" = 13'

Legend

SD - Storm Drain
 SS - Sanitary Sewer
 DI - Drop Inlet
 ug - Underground
 MW - Monitoring Well
 PP - Power Pole

290 TPH-diesel Concentration (mg/kg)

FIGURE 6
Iso-Concentration Contours
in Soil
TPH-diesel
(mg/kg)



WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS

PO Box 5891, Vacaville, CA 95696

Project Name: Automasters

Date: July 2017

Location: 6200 Shattuck Avenue, Oakland, CA

Drawing By: DLG

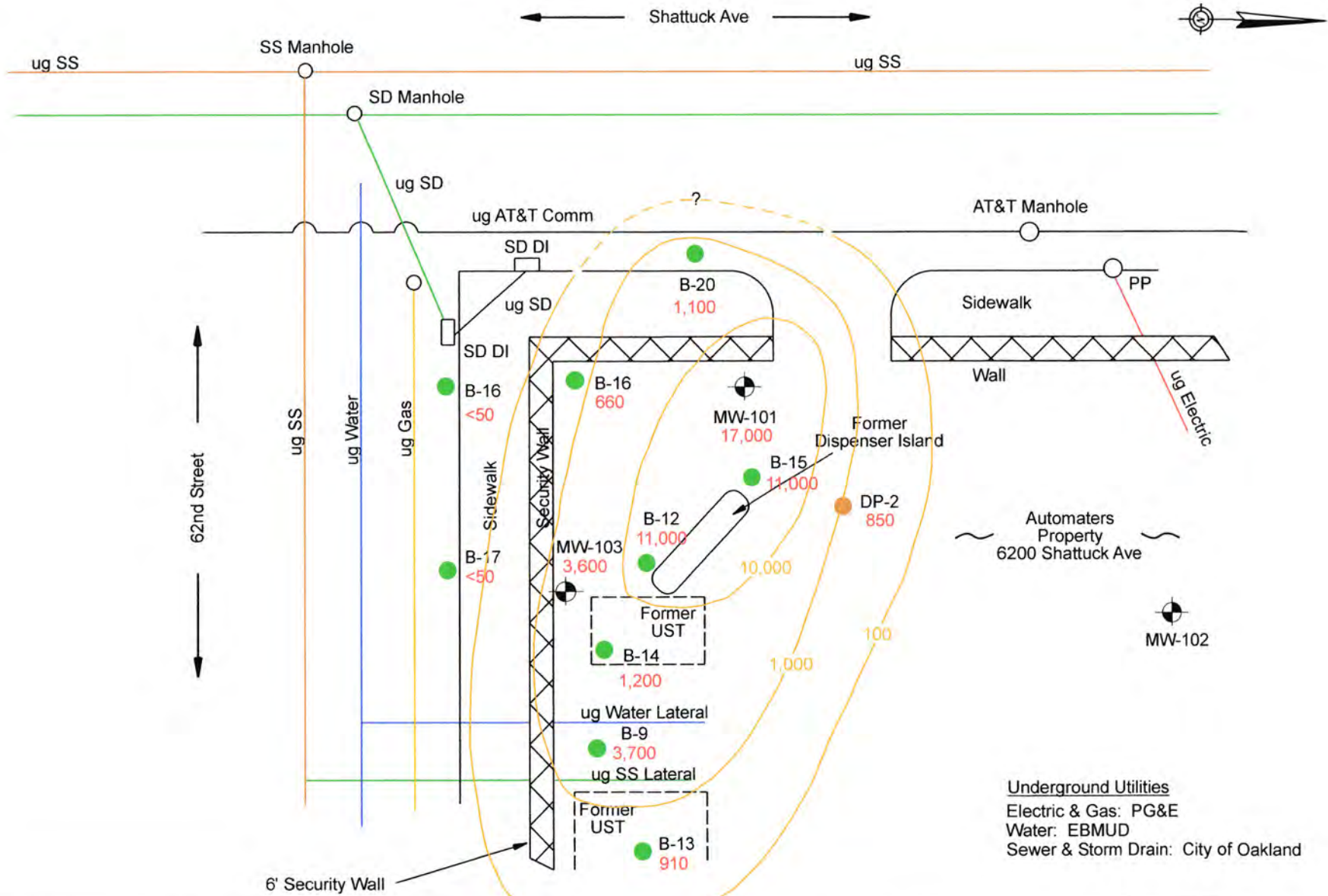
Scale: 1" = 13'

Legend

SD - Storm Drain
 SS - Sanitary Sewer
 DI - Drop Inlet
 ug - Underground
 MW - Monitoring Well
 PP - Power Pole

17,000 TPH-gas Concentration (ug/l)

FIGURE 7
Iso-Concentration Contours
in Groundwater
TPH-gas
(ug/l)



WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS

PO Box 5891, Vacaville, CA 95696

Project Name: Automasters

Date: July 2017

Location: 6200 Shattuck Avenue, Oakland, CA

Drawing By: DLG

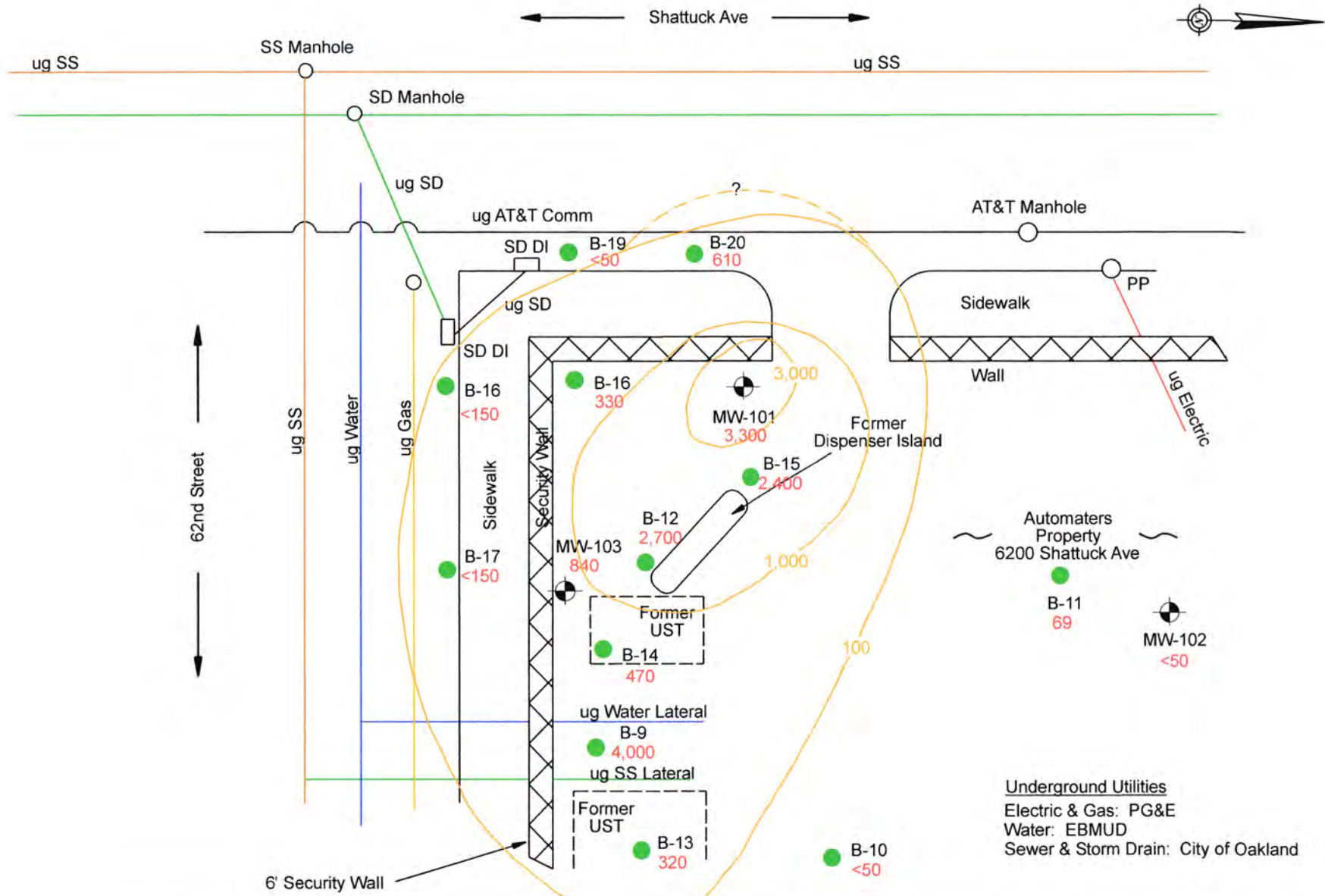
Scale: 1" = 13'

Legend

- SD - Storm Drain
- SS - Sanitary Sewer
- DI - Drop Inlet
- ug - Underground
- MW - Monitoring Well
- PP - Power Pole

3,300 TPH-diesel Concentration (ug/l)

FIGURE 8
Iso-Concentration Contours
in Groundwater
TPH-diesel
(ug/l)



WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS

PO Box 5891, Vacaville, CA 95696

Project Name: Automasters

Date: Dec 2016

Location: 6200 Shattuck Avenue, Oakland, CA

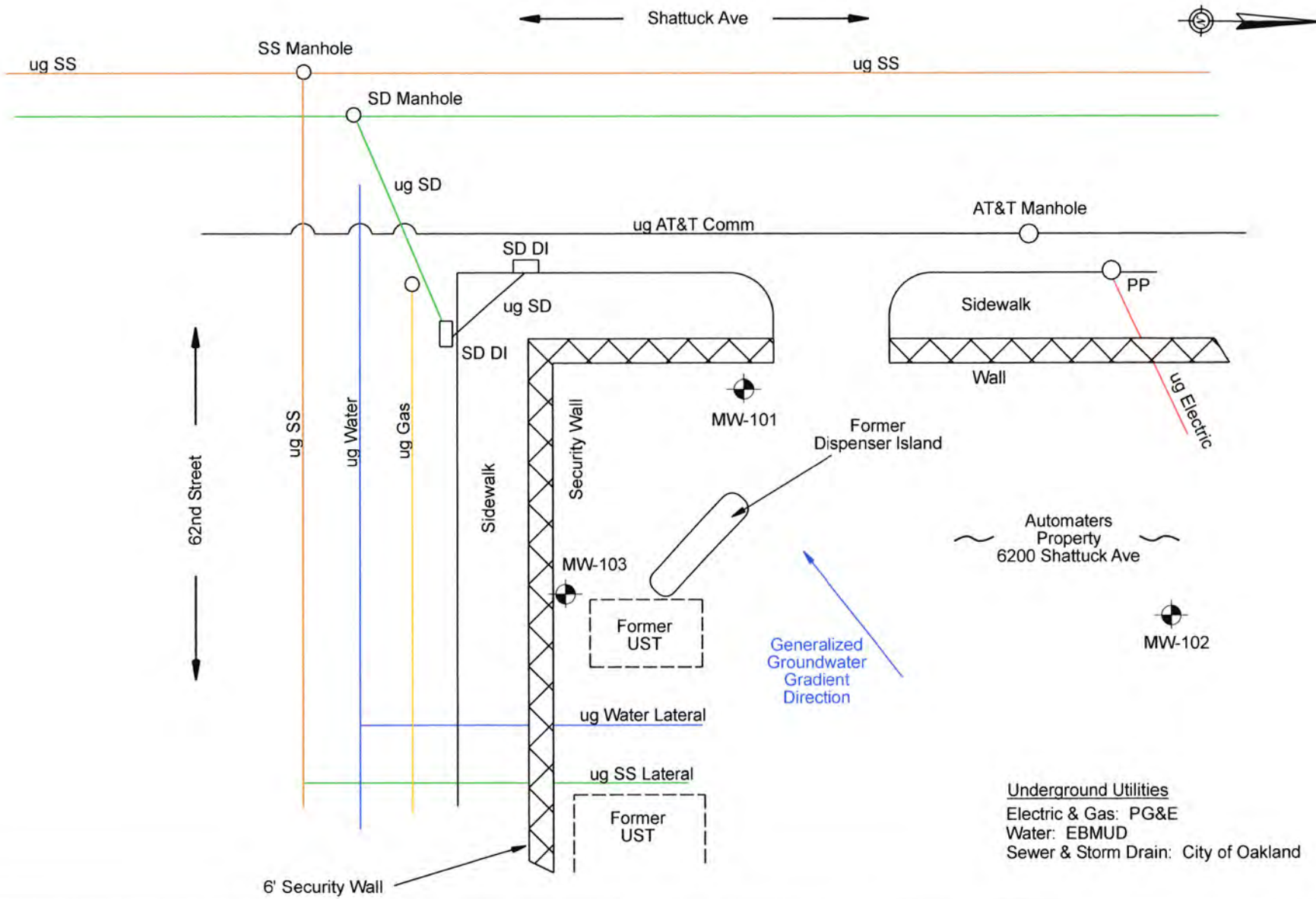
Drawing By: DLG

Scale: 1" = 13'

Legend

- SD - Storm Drain
- SS - Sanitary Sewer
- DI - Drop Inlet
- ug - Underground
- MW - Monitoring Well
- PP - Power Pole

FIGURE 9
Underground Utilities



Underground Utilities
 Electric & Gas: PG&E
 Water: EBMUD
 Sewer & Storm Drain: City of Oakland



APPENDIX B

**Tabulated Soil & Groundwater Analytical
Data**

TABLE B-1a
SOIL SAMPLE ANALYTICAL DATA
TPH-g, BTEX, MtBE, Naphthalene, TPH-d & TPH-mo
Automasters, 6200 Shattuck Ave., Oakland
Pangea Remedial Investigation

(All concentrations in milligrams per kilogram, i.e. mg/kg or ppm)

Sample ID	Date	TPH-g	Benzene	Toluene	Ethyl Benzene	Xylenes	MtBE	Naphthalene	TPH-d	TPH-mo
SB-1-8	6/3/06	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
SB1-12	6/3/06	<1.0	NA	NA	NA	NA	NA	NA	<1.0	<5.0
SB-2-8	6/3/06	3.9	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1.0	<5.0
SB-2-11	6/3/06	3,000	<5.0	<5.0	22	<5.0	<0.005	10	850	<50
SB-2-16	6/3/06	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1.7	<5.0
SB-3-4	6/3/06	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
SB-3-12	6/3/06	<1.0	NA	NA	NA	NA	NA	NA	<1.0	<5.0

NA = Not Analyzed

**TABLE B-1a (cont.)
SOIL SAMPLE ANALYTICAL DATA
TPH-g, BTEX, MtBE, Naphthalene, TPH-d & TPH-mo
Automasters, 6200 Shattuck Ave., Oakland**

(All concentrations in milligrams per kilogram, i.e. mg/kg or ppm)

Sample ID	Date	TPH-g	Benzene	Toluene	Ethyl Benzene	Xylenes	MtBE	Naphthalene	TPH-d	TPH-mo
B1-2.5	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B2-2.5	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B3-2.5	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B4-2.5	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B5-2.5	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B6-2.5	12/14/15	11	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	2.2	<5.0
B6-4	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	<1.0	<5.0
B6-10	12/14/15	4.9	<0.005	<0.005	<0.005	<0.005	<0.005	0.052	10	53
B6-15	12/14/15	180	<0.5	<0.5	<0.5	<0.5	<0.005	1.6	11	<5.0
B6-20	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
DP1-2.5	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
DP1-10	12/14/15	8.1	<0.005	<0.005	<0.005	<0.005	<0.005	0.016	1.0	<5.0
DP1-15	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
DP1-20	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
DP3-2.5	12/14/15	47	<0.005	<0.005	2.2	<0.005	<0.005	<0.005	4.3	<5.0
DP3-10	12/14/15	28	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1.8	<5.0
DP3-15	12/14/15	190	<0.1	<0.1	2.2	<0.1	<0.1	3.7	13	5.7
DP3-20	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
MW101-2.5	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
MW101-10	12/14/15	3,100	2.5	<1.0	16	3.4	<1.0	33	290	46
MW101-15	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
MW101-20	12/14/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0

TABLE B-1a (cont.)
SOIL SAMPLE ANALYTICAL DATA
TPH-g, BTEX, MtBE, Naphthalene, TPH-d & TPH-mo
Automasters, 6200 Shattuck Ave., Oakland

(All concentrations in milligrams per kilogram, i.e. mg/kg or ppm)

Sample ID	Date	TPH-g	Benzene	Toluene	Ethyl Benzene	Xylenes	MtBE	Naphthalene	TPH-d	TPH-mo
B7-2.5	12/15/15	<1.0	<0.005	<0.005	<0.005	<0.005	0.006	<0.005	<1.0	<5.0
DP2-5	12/15/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
DP2-10	12/15/15	850	<1.0	<1.0	5.8	<1.0	<1.0	<1.0	100	5.1
DP12-15	12/15/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	2.6	<5.0
DP2-20	12/15/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
MW102-2.5	12/15/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
MW102-10	12/15/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
MW102-15	12/15/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
MW102-20	12/15/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
MW103-5	12/15/15	180	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
MW103-10	12/15/15	770	<1.0	<1.0	11	29	<1.0	12	41	11
MW103-15	12/15/15	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
MW103-20	12/15/15	<1.0	<0.005	<0.005	<0.005	0.005	<0.005	<0.005	<1.0	<5.0

TABLE B-1a (cont.)
SOIL SAMPLE ANALYTICAL DATA
TPH-g, BTEX, MtBE, Naphthalene, TPH-d & TPH-mo
Automasters, 6200 Shattuck Ave., Oakland

(All concentrations in milligrams per kilogram, i.e. mg/kg or ppm)

Sample ID	Date	TPH-g	Benzene	Toluene	Ethyl Benzene	Xylenes	MtBE	Naphthalene	TPH-d	TPH-mo
B8-5	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B8-10	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B8-15	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B8-20	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B9-5	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1.1	6.9
B9-9	03/21/17	760	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	54	<5.0
B9-15	03/21/17	4.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B9-19	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B10-5	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B10-10	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B10-15	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B10-20	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B11-5	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B11-10	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B11-15	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B11-20	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B12-5	03/21/17	27	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	2.2	<5.0
B12-10	03/21/17	1,800	1.0	<1.0	12	3.6	<1.0	5.1	220	7.3
B12-15	03/21/17	4.2	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B12-20	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0

**TABLE B-1a (cont.)
SOIL SAMPLE ANALYTICAL DATA
TPH-g, BTEX, MtBE, Naphthalene, TPH-d & TPH-mo
Automasters, 6200 Shattuck Ave., Oakland**

(All concentrations in milligrams per kilogram, i.e. mg/kg or ppm)

Sample ID	Date	TPH-g	Benzene	Toluene	Ethyl Benzene	Xylenes	MtBE	Naphthalene	TPH-d	TPH-mo
B13-5	3/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B13-10	03/21/17	2.7	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B13-15	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B13-20	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B14-5	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B14-10	03/21/17	2,000	<2.5	<0.005	<2.5	160	<0.005	6.4	450	9.8
B14-15	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B14-20	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B15-5	03/21/17	42	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	3.8	<5.0
B15-10	03/21/17	8.4	0.01	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B15-15	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B15-20	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B16-5	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	4.3	36
B16-10	03/21/17	4.7	<0.005	<0.005	0.011	<0.005	<0.005	0.026	<1.0	<5.0
B16-15	03/21/17	78	<0.005	<0.005	0.039	<0.005	<0.005	0.053	3	<5.0
B16-19	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B17-4	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B17-8	03/21/17	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<5.0
B18-13	03/21/17	7.7	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1.8	<5.0
B20-8	03/21/17	17	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1.5	<5.0

TABLE B-1b
SOIL SAMPLE ANALYTICAL DATA
Other VOCs (EPA Method 8260)
Automasters, 6200 Shattuck Ave., Oakland

(All concentrations in milligrams per kilogram, i.e. mg/kg or ppm)

Sample ID	Date	n-Butyl benzene	sec-Butyl Benzene	n-Propyl Benzene	Isopropyl Benene	1,2,4 Trimethyl Benzene	1,3,5 Trimethyl Benzene
SB-2-11	6/3/06	8.2	<5.0	11	<5.0	66	15
B6-10	12/14/15	0.01	0.006	0.018	0.006	0.007	<0.005
B6-15	12/14/15	1.5	0.57	2.1	0.8	<0.005	<0.005
DP1-10	12/14/15	0.016	0.006	0.025	<0.005	<0.005	<0.005
DP3-2.5	12/14/15	0.094	0.026	0.020	<0.005	0.086	0.032
DP3-10	12/14/15	0.015	0.01	0.009	<0.005	<0.005	<0.005
DP3--15	12/14/15	1.0	0.35	1.7	0.47	0.53	0.12
DP2-10	12/15/15	3.1	<1.0	4.9	1.4	13	1.4
B9-9	3/21/17	1.6	1.2	<0.005	<0.005	<0.005	<0.005
B9-15	3/21/17	0.020	0.007	0.013	<0.005	0.034	0.012
B12-5	3/21/17	<0.005	<0.005	0.027	<0.005	<0.005	<0.005
B12-10	3/21/17	5.5	1.5	8.2	2.4	18	6.5
B12-15	3/21/17	<0.005	<0.005	0.006	<0.005	<0.005	<0.005
B14-10	3/21/17	7.2	<2.5	10	3.1	69	23
B15-10	3/21/17	0.012	0.006	0.018	0.006	<0.005	<0.005
B16-10	3/21/17	0.018	0.006	0.052	0.017	<0.005	<0.005
B16-15	3/21/17	0.12	0.037	0.18	0.05	<0.033	<0.033
B20-8	3/21/17	0.005	0.007	<0.005	<0.005	<0.005	<0.005

Note: All other VOCs in the 8260 scan not listed on this table were non-detect (ND) at the method detection limit (MDL), which is generally 0.005 mg/kg (this standard MDL was increased due to interferences as follows: DP3-15 = 0.10 mg/kg, B12-10 = 1.0 mg/kg, and SB-2-11, DP2-10, B14-10, and B16-15 as shown on the table).

TABLE B-1c
SOIL SAMPLE ANALYTICAL DATA
PNAs (EPA Method 8270)
Automasters, 6200 Shattuck Ave., Oakland

(All concentrations in milligrams per kilogram, i.e. mg/kg or ppm)

Sample ID	Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
B9-5	03/21/17	<0.010	<0.010	<0.010	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.016	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	0.020
B9-9	3/21/17	0.020	0.015	0.027	0.012	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.010	<0.010	<0.010	0.32	<0.010	<0.010	0.036	0.012
B12-10	3/21/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	1.6	3.0	5.0	<0.010	<0.010
B14-10	3/21/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	2.0	3.7	7.0	<0.010	<0.010
B16-5	3/21/17	<0.010	<0.010	<0.010	0.024	0.021	0.025	0.013	0.010	0.017	<0.010	0.015	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.017
B16-10	3/21/17	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.020	0.028	0.041	<0.010	<0.010

Note: All other PNAs in the 8270 scan not listed on this table were non-detect (ND) at the method detection limit (MDL), which is generally 0.010 mg/kg (the MDL was increased in B12-10 to 0.10 mg/kg and in B14-10 to 0.20 mg/kg)

TABLE B-1d
SOIL SAMPLE ANALYTICAL DATA
LUFT 5 Metals
Automasters, 6200 Shattuck Ave., Oakland

(All concentrations in milligrams per kilogram, i.e. mg/kg or ppm)

Sample ID	Date	Cadmium	Chromium	Lead	Nickel	Zinc
WB1-3	3/21/17	<0.25	47	7.6	97	69
WB1-10	3/21/17	0.31	42	6.5	43	59
WB2-3	3/21/17	<0.25	52	5.9	45	45
WB2-10	3/21/17	0.25	38	5.9	55	60
WB3-3	3/22/17	<0.25	45	8.3	31	46
WB4-3	3/21/17	<0.25	48	6.5	92	52

TABLE B-2a
HISTORICAL GROUNDWATER ELEVATIONS & ANALYTICAL DATA
TPH-g, BTEX, MtBE, Naphthalene, TPH-d & TPH-mo
Automasters, 6200 Shattuck Ave., Oakland

(All concentrations in micrograms per liter, i.e. ug/l or ppb)

Monitoring Well	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Observed Sheen	TPH-g	Benzene	Toluene	Ethyl Benzene	Xylenes	MtBE	Naphthalene	TPH-d	TPH-mo
MW-101 TOC = 128.84 ft	12/31/15	3.70	125.14	None	18,000	1,000	64	320	1,800	<200	210	5,100	<250
	6/30/16	5.35	123.49	None	14,000	980	<50	780	1,000	<50	210	3,000	<250
	10/4/16	6.17	122.67	None	15,000	990	<50	890	1,400	<5	190	3,900	<250
	1/6/17	3.53	125.31	None	17,000	900	35	680	1,100	<5	190	6,200	<250
	3/22/17	3.20	125.64	None	17,000	810	<25	600	810	<25	160	3,300	<250
MW-102 TOC = 130.35 ft	12/31/15	5.20	125.15	None	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<250
	6/30/16	6.90	123.45	None	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<250
	10/4/16	7.51	122.84	None	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<250
	1/6/17	4.68	125.67	None	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<250
	3/22/17	4.56	125.79	None	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<250
MW-103 TOC = 130.03 ft	12/31/15	5.10	124.93	None	4,700	110	11	140	430	<5	78	1,400	<250
	6/30/16	6.56	123.47	None	3,200	70	6.7	160	150	<5	47	750	<250
	10/4/16	7.37	122.76	None	6,400	160	16	340	320	<5	69	1,300	<250
	1/6/17	4.51	125.52	None	5,800	97	10	220	310	<5	47	1,100	<250
	3/22/17	3.76	126.27	None	3,600	110	12	230	270	<5	54	840	<250

**TABLE B-2b
HISTORICAL VOC GROUNDWATER RESULTS
Other VOCs
Automasters, 6200 Shattuck Ave., Oakland**

(All values in micrograms per liter, i.e. ug/l or ppb)

Sample ID	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	N-Butyl Benzene	Isopropyl Benzene	4-Isopropyl Toluene	N-Propyl Benzene	1,2,4-Trimethyl Benzene	1,3,5-Trimethyl Benzene
MW-101 TOC = 128.84 ft	12/31/15	3.70	125.14	<50	<50	<50	<50	770	160
	06/30/16	5.35	123.49	<50	58	<50	160	620	150
	10/04/16	6.17	122.67	<50	71	<50	150	780	150
	1/6/17	3.53	125.31	55	64	<25	150	850	160
	03/22/17	3.20	125.64	26	40	<25	98	680	92
MW-102 TOC = 130.35 ft	12/31/15	5.20	125.15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	06/30/16	6.90	123.45	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	10/04/16	7.51	122.84	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	1/6/17	4.68	125.67	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	03/22/17	4.56	125.79	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-103 TOC = 130.03 ft	12/31/15	5.10	124.93	<10	10	15	12	150	58
	06/30/16	6.56	123.47	9	19	<5	47	130	10
	10/04/16	7.37	122.76	18	35	<12	81	310	28
	1/6/17	4.51	125.52	22	25	<5	64	260	35
	03/22/17	3.76	126.27	20	33	<5	77	230	35

TABLE B-2c
GROUNDWATER GRAB SAMPLE ANALYTICAL DATA
June 5, 2006 and March 22, 2017
TPH-g, BTEX, MtBE, Naphthalene, TPH-d & TPH-mo
Automasters, 6200 Shattuck Ave., Oakland

(All concentrations in micrograms per liter, i.e. ug/l or ppb)

Sample Location	Date	TPH-g	Benzene	Toluene	Ethyl Benzene	Xylenes	MtBE	Naphthalene	TPH-d	TPH-mo
SB-2-W	6/5/06	1,700	14	<0.5	130	12	<0.5	440	1,000	1,200
B-8	3/22/17	<50	<.0.5	<.0.5	<.0.5	<.0.5	<.0.5	<.0.5	<50	<250
B-9	3/22/17	3,700	<2.5	<2.5	8.9	19	<2.5	<2.5	4,000	310
B-10	3/22/17	<50	1.2	<.0.5	0.7	1.4	<.0.5	2.7	<50	<250
B-11	3/22/17	53	6.4	<.0.5	2.6	3.9	<.0.5	1.9	69	<250
B-12	3/22/17	11,000	900	37	520	840	<25	160	2,700	<250
B-13	3/22/17	910	<0.5	<.0.5	<.0.5	<.0.5	<.0.5	<.0.5	320	<250
B-14	3/22/17	1,200	<5	5.6	32	180	<5	38	470	<250
B-15	3/22/17	11,000	1,100	27	500	530	<25	240	2,400	<250
B-16	3/22/17	660	47	21	9.1	54	<2.5	32	330	<250
B-17	3/22/17	<50	0.85	<.0.5	<.0.5	0.6	1.3	<.0.5	<150	1,100
B-18	3/22/17	<50	0.55	<.0.5	<.0.5	<.0.5	<.0.5	<.0.5	<150	<750
B-19	3/22/17	<50	<0.5	<.0.5	<.0.5	<.0.5	<.0.5	<.0.5	<50	<250
B-20	3/22/17	1,100	14	<1.0	6.4	<1.0	<1.0	7.2	610	<250

TABLE B-2d
GROUNDWATER GRAB SAMPLE ANALYTICAL DATA
March 22, 2017
Other VOCs
Automasters, 6200 Shattuck Ave., Oakland

(All concentrations in micrograms per liter, i.e. ug/l or ppb)

Sample Location	N-Butyl Benzene	Sec-Butyl Benzene	Isopropyl Benzene	4-Isopropyl Toluene	N-Propyl Benzene	1,2,4-Trimethyl Benzene	1,3,5-Trimethyl Benzene
SB-2-W	13	3.9	20	<0.5	45	180	37
B-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B-9	48	27	29	13	99	140	68
B-10	<0.5	<0.5	<0.5	<0.5	<0.5	1.4	<0.5
B-11	<0.5	<0.5	<0.5	<0.5	<0.5	2.2	0.5
B-12	28	<25	37	<25	120	580	170
B-13	4.2	4.9	5.1	<0.5	12	<0.5	<0.5
B-14	<5	<5	<5	<5	5.3	56	12
B-15	<25	<25	<40	<25	110	380	120
B-16	<2.5	<2.5	6.5	<2.5	14	21	5.5
B-17	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B-18	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B-19	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
B-20	15	9.9	14	<1.0	38	4.1	<1.0



APPENDIX C

Permits

Alameda County Public Works Agency - Water Resources Well Permit



Public Works Agency
—Alameda County—

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 03/15/2017 By jamesy

Permit Numbers: W2017-0240
Permits Valid from 03/21/2017 to 03/22/2017

Application Id: 1488848408953
Site Location: 6200 Shattuck Avenue
Oakland, CA

City of Project Site:Oakland

Automasters is an independent mototr vehicle repair facility.
Project Start Date: 03/21/2017 Completion Date:03/22/2017
Assigned Inspector: Contact Lindsay Furuyama at (925) 956-2311 or Lfuruyama@groundzonees.com

Applicant: West & Associates - Brian West
630 Eubanks Court, Unit G, Vacaville, CA 95688

Phone: 707-451-1360

Property Owner: Johnny Browning
15 Mulberry Court, #5, Belmont, CA 94002

Phone: 650-271-6842

Client: ** same as Property Owner **
Contact: Bruce Jacobsen

Phone: 707-451-1360
Cell: 925-705-1400

Receipt Number: WR2017-0117 Total Due: \$265.00
Payer Name : Bruce Jacobsen Total Amount Paid: \$265.00
Paid By: VISA PAID IN FULL

Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 13 Boreholes
Driller: Peneore Drilling - Lic #: 906899 - Method: DPcpt

Work Total: \$265.00

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2017-0240	03/15/2017	06/19/2017	13	1.00 in.	20.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.
2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.
3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the

Alameda County Public Works Agency - Water Resources Well Permit

permits and requirements have been approved or obtained.

5. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

7. Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site. Submission dates are set by a Regional Water Board or by a regulatory agency. Once a report/data is successfully uploaded, as required, you have met the reporting requirement (i.e. the compliance measure for electronic submittals is the actual upload itself). The upload date should be on or prior to the regulatory due date.

8. NOTE:

Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

9. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

Permits for which no major inspection has been approved, other than those that expire by limitation, no return more than 30 days after expiration of final.



- SL and X permits valid 90 days
- CGS permit valid 30 days

CHECK REVERSE →

CITY OF OAKLAND

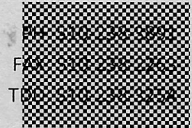
DEPT OF PUBLIC WORKS 4th FLOOR

250 FRANK H. OGAWA PLAZA ▪ 2ND FLOOR ▪ OAKLAND, CA 94612

Planning and Building Department
www.oaklandnet.com

To schedule inspection

Email: pwa_inspections@oaklandnet.com or call 510-238-3651



Filed Date: 3/20/2017

Permit No: X1700244 OPW - Excavation

Job Site: 6200 SHATTUCK AVE

Parcel No: 015 137702200

District:

Project Description: Soil boring(s) on 62ND ST NEXT TO Shattuck between 62ND and 63RD ST. No impact on traffic lane or sidewalk. Please see Map.

Ensure that environmental controls are in place to prevent dust/debris/waste water from contaminating environment.

If working within 25' feet of a monument you must comply with State Law 8771, contact the Inspector prior to starting excavation: minimum \$5,800.00 fine for non-compliance.

Comply with all terms of City of Oakland Public Works Standards, Street Excavation Rules, Revised March 2015 and City Council Ordinance No. 13300 C.M.S. Five day prior notice required for work lasting five days or less in business/commercial districts; 72 hour notice in residential districts. Ten day prior notice required for work lasting six days or more in all districts.

Call PWA INSPECTION prior to start: 510-238-3651. email PWA_inspections@oaklandnet.com. Contact: 925-705-1400

Schedule inspection by calling: 510-238-3651

For SL; X; and CGS permits see **SPECIAL NOTE** below

Related Permits:

	<u>Name</u>	<u>Applicant</u>	<u>Address</u>	<u>Phone</u>	<u>License #</u>
Owner:	LOGAN GLENN D TRUST		6200 SHATTUCK AVE OAKLAND, CA		
Contractor-Employee:	Bruce Jacobsen	X	630 EUBANKS COURT STE G VACAVILLE, CA	925-705-1400	
Contractor:	WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS INC		630 EUBANKS COURT STE G VACAVILLE, CA	(707) 451-1360	734244

ADDRESS

APPLICATION

PERMIT DETAILS: Building/Public Infrastructure/Excavation/NA

General Information

Excavation Type: Private Party Special Paving Detail Required: Tree Removal Involved:

Date Street Last Resurfaced: Holiday Restriction (Nov 1 - Jan 1):

Worker's Compensation Company Name: Limited Operation Area (7AM-9AM) And (4PM-6PM):

Worker's Compensation Policy #:

Key Dates

Approximate Start Date:
Approximate End Date:

TOTAL FEES TO BE PAID AT FILING: \$449.09

YL 3/20/17

Application Fee	\$70.00	Excavation - Private Party Type	\$321.36	Records Management Fee	\$37.18
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SPECIAL NOTE

Technology Enhancement Fee \$0.00
For SL, X, and CGS permits prior to start, email pwa_inspections@oaklandnet.com or call 510-238-3651

- SL and X permits valid 90 days
- CGS permit valid 30 days

Permits for which no major inspection has been approved within 180 days shall expire by limitation. No refund more than 180 days after expiration of final.



- SL and X permits valid 90 days
- CGS permit valid 30 days

CHECK REVERSE →

CITY OF OAKLAND

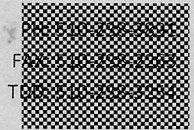
DEPT OF PUBLIC WORKS 4th FLOOR

250 FRANK H. OGAWA PLAZA • 2ND FLOOR • OAKLAND, CA 94612

Planning and Building Department
www.oaklandnet.com

To schedule inspection

Email: pwa_inspections@oaklandnet.com or call 510-238-3651



Filed Date: 3/20/2017

Permit No: X1700245 OPW - Excavation

Job Site: 6200 SHATTUCK AVE

Parcel No: 015 137702200

District:

Project Description:

Soil boring(s) on 62ND ST NEXT TO Shattuck between 62ND and 63RD ST. No impact on traffic lane or sidewalk. Please see Map.

Ensure that environmental controls are in place to prevent dust/debris/waste water from contaminating environment.

If working within 25' feet of a monument you must comply with State Law 8771, contact the Inspector prior to starting excavation: minimum \$5,800.00 fine for non-compliance.

Comply with all terms of City of Oakland Public Works Standards, Street Excavation Rules, Revised March 2015 and City Council Ordinance No. 13300 C.M.S. Five day prior notice required for work lasting five days or less in business/commercial districts; 72 hour notice in residential districts. Ten day prior notice required for work lasting six days or more in all districts.

Call PWA INSPECTION prior to start: 510-238-3651. email PWA_inspections@oaklandnet.com. Contact: 925-705-1400

Related Permits:

For SL; X; and CGS permits see **SPECIAL NOTE** below

ADDRESS

	Name	Applicant	Address	Phone	License #
Owner:	LOGAN GLENN D TRUST		6200 SHATTUCK AVE OAKLAND, CA		
Contractor-Employee:	Bruce Jacobsen	X	630 EUBANKS COURT STE G VACAVILLE, CA	925-705-1400	
Contractor:	WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS INC		630 EUBANKS COURT STE G VACAVILLE, CA	(707) 451-1360	734244

APPLICATION

PERMIT DETAILS: Building/Public Infrastructure/Excavation/NA

General Information

Excavation Type: Private Party Special Paving Detail Required: Tree Removal Involved:
 Date Street Last Resurfaced: Holiday Restriction (Nov 1 - Jan 1):
 Worker's Compensation Company Name: Limited Operation Area (7AM-9AM) And (4PM-6PM):
 Worker's Compensation Policy #:

Key Dates

Approximate Start Date:
Approximate End Date:

TOTAL FEES TO BE PAID AT FILING: \$449.09

Application Fee	\$70.00	Excavation - Private Party	\$321.36	Records Management Fee	\$37.18
Technology Enhancement Fee	\$20.55				

SL, X, and CGS permits: prior to start, email pwa_inspections@oaklandnet.com or call 510-238-3651

- SL and X permits valid 90 days
- CGS permit valid 30 days

#729709-77-03/2017-Check

998.18

City of Oakland
 Planning and Building Department
 250 Frank H. Ogawa Plaza
 510-238-4774

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844 Accela Permit	1x	0.00	0.00
Permit Number: X1700244			
Fee			
Application Fee	1x	70.00	70.00
Fee			
Excavation - Private Party Type	1x	321.36	321.36
Fee			
Technology Enhancement Fee	1x	20.55	20.55
Fee			
Records Management Fee	1x	37.18	37.18
844 Accela Permit			
Permit Number: X1700245	1x	0.00	0.00
Fee			
Application Fee	1x	70.00	70.00
Fee			
Excavation - Private Party Type	1x	321.36	321.36
Fee			
Technology Enhancement Fee	1x	20.55	20.55
Fee			
Records Management Fee	1x	37.18	37.18

Payer Name: BRUCE M JACOBSEN

=====	
SubTotal:	898.18
Total:	898.18
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Check Number : 307	898.18

3/20/2017 11:26
 #0729709 /77/24
 Thank You



APPENDIX D

Geophysical Survey Report

March 28, 2017

6200 Shattuck Partners, LLC
6200 Shattuck Avenue
Oakland, CA 94609

Subject: Geophysical Investigation
Automasters Repair Shop
Oakland, California
NORCAL Job No. NS177004

Attention: Mr. Johnny Browning

This report presents the findings of a geophysical investigation performed by NORCAL Geophysical Consultants, Inc. for 6200 Shattuck Partners, LLC on a portion of the **Automasters** automotive repair shop property in Oakland, California. The work was performed in accordance with NORCAL Contract CNS17704 dated march 7, 2017. The geophysical investigation was conducted on March 9, 2017 by California Professional Geophysicist David J. Bissiri (PGP No. 1009) and Staff Geophysicist Hunter Philson. Background information and site logistical support were provided by Mr. Johnny Browning and Mr. Bruce Jacobsen of West & Associates.

1.0 SITE DESCRIPTION

The **Automasters** automotive repair shop is located at 6200 Shattuck Avenue in Oakland, California, as indicated by the Vicinity Map shown on Plate 1. The repair shop property measures approximately 90-ft north-south by 70-ft east-west and is bordered by 62nd Street on the south and Shattuck Avenue on the west. The repair shop is in an "L"-shaped building that occupies a 20-ft wide strip along the east and north sides of the property. This building houses several service bays and a storeroom/office. A gated concrete-block wall encloses the south and west sides of the property and the area between the wall and the building is used as a parking lot. The lot is paved with a combination of concrete and asphalt patches that appear to be of differing ages. Typically, numerous parked vehicles, abundant amounts of car parts, drums and debris are scattered throughout the lot. However, most of these objects (as many as possible) were moved prior to the start of the geophysical investigation.



According to information provided to NORCAL, the site was previously the location of a gasoline service station that dated from the 1940's. The original building(s) associated with the station were demolished and replaced with the current structures in the not too distant past. However, remnants of what appear to be the former pump island and the floor of the former office remain.

2.0 PURPOSE

It has been reported that the underground storage tanks (USTs) associated with the former gasoline service station were removed by a previous property owner sometime in the early 1980's. Unfortunately, records documenting this are unavailable. Consequently, the purpose of the geophysical survey is to investigate the designated survey area for evidence of underground storage tanks (USTs) associated with the former use of the property as a gasoline service station.

3.0 GEOPHYSICAL METHODS

NORCAL explored the site for UST's using the horizontal magnetic gradient (HMG), ground penetrating radar (GPR) and metal detection (MD) methods. Descriptions of these methods are provided in the following paragraphs.

- Horizontal Magnetic Gradient (HMG) - The HMG method measures local variations in the horizontal gradient of the earth's magnetic field. This is an indication of how rapidly the earth's magnetic field changes with horizontal position as the magnetometer is moved along traverses distributed across the site. The method is useful in delineating the location and lateral extent of buried ferrous objects, especially large steel objects such as USTs.
- Metal Detection (MD) - The MD method is a form of radio-frequency (RF) induction that can be used to detect and delineate shallowly buried metal objects. The MD device consists of a specialized RF-transmitter loop mounted on one end of a 3-foot horizontal staff and a separate receiver loop mounted on the other. In this configuration, the instrument is capable of detecting both relatively large metallic objects like USTs, paved-over manhole covers, vault lids, and reinforced concrete pads and shallowly buried *un-energized* metallic conduits of sufficiently large diameter.
- Ground Penetrating Radar (GPR) - The GPR method provides a means of characterizing variations in the electrical properties of the shallow subsurface. The radar unit repeatedly transmits a radio signal pulse into the ground and determines the amplitude of, and the time required, for reflected signals to return to the surface. By

analyzing the amplitude and the time needed for radio signals to return to a digital control console, a graphical representation of the shallow subsurface can be made. Under favorable conditions the locations and relative depths of USTs, underground utility lines, paved-over manways, vaults, drums, and backfilled zones can be determined. Of the three methods, the success of this one is the most sensitive to site conditions.

More detailed descriptions of the geophysical methods, our standard data acquisition and analysis procedures, the geophysical instrumentation and the limitations of the geophysical methods are provided in Appendix A.

4.0 DATA ACQUISITION AND ANALYSIS

The geophysical investigation was conducted within an approximately 44- by 44-ft square in the accessible portion of the property, as shown on the Geophysical Survey Map, Plate 1. This area is referred to herein as the "Survey Area". We used a fiberglass measuring tape to establish a rectangular coordinate survey grid to be used for horizontal control. The survey grid consisted of a series of lines spaced 4-feet apart oriented parallel to the east wall of the building.

4.1 HORIZONTAL MAGNETIC GRADIENT (HMG) SURVEY

HMG data were collected at approximate 2.5-ft intervals along the survey grid lines described above. The HMG data were then transferred to a field computer and processed on-site to create an HMG contour map. We then evaluated this map for magnetic variations indicative of buried objects. These variations are depicted as a series of closely spaced contours forming closures, whorls and/or convoluted patterns. Such variations that could not be attributed to obvious above-ground sources were deemed anomalous. HMG anomalies are often caused by the effects of former subsurface structures, USTs, and buried metallic debris.

4.2 GROUND PENETRATING RADAR (GPR) SURVEY

While the HMG data were being processed, we collected continuous GPR data along a series of parallel traverses spaced 1-ft apart. We then used 3D GPR processing techniques to collate the data from all of the lines into a single data set that could be viewed either as vertical cross-sections or as horizontal time-slices. The vertical cross-sections, referred to herein as 2D GPR profiles, illustrate variations in radar reflection patterns versus depth and distance beneath a linear traverse. The horizontal time-slices, referred to herein as 3D GPR time-slices, illustrate variations in radar reflection patterns in plan view at selected depth intervals. The resulting images were then evaluated for radar reflections suggestive of UST's or backfilled zones suggestive of where such objects may have been buried and subsequently removed.

4.3 METAL DETECTION (MD) SURVEY

After evaluating the results of the HMG and GPR surveys, we conducted an MD reconnaissance of the survey area. This consisted of carrying the MD instrument at a height of approximately 2-feet along a series of bidirectional traverses spaced approximately 3-feet apart. Anomalous variations in the response of the instrument were considered indicative of subsurface metallic objects. The locations of these anomalies were compared to the results from the HMG and GPR surveys to see if there were any correlations. The locations of the suspected MD targets were marked on the ground surface and plotted on a scaled plan-view map.

5.0 RESULTS

5.1 HORIZONTAL MAGNETIC GRADIENT (HMG) SURVEY

The results of the HMG survey are illustrated by the contour map shown on Plate 2. The contours and color shading depict variations in HMG throughout the survey area. The contours are plotted at an interval of 100 nanoTeslas per meter (nT/m). The relationship between color shading and HMG intensity is indicated by the color bar at the bottom of the contour map.

It is our interpretation that none of the observed HMG variations shown on the contour map are indicative of the existence of a UST. Rather, our comparison of the locations and extent of the strong HMG variations, with those of known near-grade or above-grade cultural features indicate that all the HMG variations can be attributed to the effects of the following:

- Suspected rebar in the concrete block walls
- Steel objects in, or behind, the building wall
- Nearby parked vehicles
- Underground utility line conduits (see MD results, below)
- Stored metallic debris
- Metal objects associated with the former pump island and former office floor
- A localized MD anomaly located in the southeast corner of the survey area (see MD results, Section 5.3)

The HMG variations associated with many of these objects are annotated on Plate 2.

5.2 GROUND PENETRATING RADAR (GPR) SURVEY

The GPR survey results are illustrated by the two images shown on Plate 3. One is a 3D GPR Time-Slice Map (left-hand side of the plate) and the other is a 2D GPR Profile (right-hand side). For both images the relationship between radar signal amplitude and color is indicated by the color scale plotted in the lower left hand corner of the plate.

The 3D GPR Time-Slice Map depicts in plan-view the horizontal distribution and amplitude of radar signals reflected from a depth of approximately 4.5 feet below ground surface (bgs). This depth interval was selected because it is the depth at which most gasoline station USTs are found. The map also displays the locations and extents of surface features such as the building, nearby streets, sidewalks, driveways, pavement types, vehicles, MD anomalies, etc.

The 2D GPR Profile illustrates the variation in GPR reflection patterns versus depth and distance beneath traverse A-A'. The location, length and orientation of this traverse was selected to intersect the metal detector anomaly described in Section 5.3.

It is our interpretation that none of the reflection patterns displayed on the 3D GPR Time-Slice Map or the 2D GPR Profile are consistent with steel USTs. Instead, the reflection pattern displayed on both of those images are consistent with the reflection patterns of the following features:

1. The former pump island
2. Sub-grade material below the former office floor
3. Sub-grade material below the asphalt pavement
4. Sub-grade material below a suspected 8-foot by 6-foot paved over concrete pad
5. A metal detector anomaly noted below

Item No. 5 is depicted as a GPR anomaly on Plate 3.

5.3 METAL DETECTOR (MD) SURVEY

The results of the MD survey are depicted on Plates 1 – 3. The MD survey delineated four sub-grade metallic objects. Three of these appear to be underground utility lines of unknown purpose. These lines are depicted on the plates as the dashed purple labeled "-uu-" (for "undifferentiated utility"). The fourth metallic object is an approximately 6- by 4-ft rectangular metal-detector anomaly located in the southeast portion of the survey area. The MD instrument response suggested that this anomaly is most likely flat-lying, such as a section of reinforced

concrete pad, and buried at a very shallow depth. The GPR results corroborate this interpretation.

6.0 DISCUSSION

Three different geophysical techniques were used to investigate the accessible portion of the 6200 Shattuck Avenue property for indications of underground storage tanks (UST) or backfilled excavations that once housed USTs. Our interpretation of the geophysical data does not indicate the presence of any USTs or the former excavations associated with them. However, our interpretation of the data does indicate the presence of underground utilities and a possible 6- by 4-ft paved over reinforced concrete pad.

7.0 LIMITATIONS

There are limitations unique to the geophysical methods used for this investigation. For example, USTs and/or other metallic objects may be buried deeper than the detection capabilities of the geophysical instruments used. In addition, there may not be sufficient contrast in physical properties between the native soils and buried objects for those objects to be detected. Furthermore, above- or below-ground cultural features such the building and perimeter walls, nearby stored metallic material, reinforced concrete pavement, etc. may have "masked" the effects of nearby buried objects. Since the accuracy of our findings is subject to these limitations, it should be noted that not all buried objects or features can be detected or characterized by the geophysical techniques used for this investigation.

8.0 STANDARD CARE AND WARRANTY

The scope of NORCAL's services for this project consisted of using geophysical methods to characterize the shallow subsurface. The accuracy of our findings is subject to specific site conditions and limitations inherent to the techniques used. We performed our services in a manner consistent with the standard of care ordinarily exercised by members of the profession currently employing similar methods. No warranty, with respect to the performance of services or products delivered under this agreement, expressed or implied, is made by NORCAL.

We appreciate the opportunity to provide our services to you for this project. If you have any questions, or require additional geophysical services, please do not hesitate to call on us.

6200 Shattuck partners, LLC
March 28, 2017
Page 7



Respectfully,

NORCAL Geophysical Consultants, Inc.

A handwritten signature in blue ink, appearing to read "David Bissiri", is written over a light blue horizontal line.

David Bissiri
Professional Geophysicist, PGp-1009



DJB/WEB/tt

Enclosure: Plate 1 – Geophysical Survey Map
Plate 2 – Horizontal Magnetic Gradient Contour Map
Plate 3 – 3D and 2D Ground Penetrating Radar Images
Appendix A – Geophysical Methods, Data Processing, and Limitations

Appendix A

**Geophysical Methodology, Instrumentation,
Data Analysis, and Limitations**

Horizontal Magnetic Gradient and Total Field Measurements

Horizontal Magnetic Gradient (HMG) & Total Field (TF) Methodology

HMG and TF are methods commonly used to detect ferrous objects. This is accomplished by measuring the lateral variations of the earth's magnetic field. Since the magnetic field at any given point on the earth's surface is the vector sum of the earth's field combined with the magnetic fields of nearby metal objects, by removing or suppressing the earth's field the local magnetic variations due to ferrous objects may be detected. The basis for horizontal magnetic gradient surveying starts by determining the total intensity of the magnetic field at two lateral locations with a given survey area. These are referred to as total field measurements (TF) and are recorded in units of nanoTesla (nT). While these total field measurements can be used by themselves, experience has shown that where possible it is often useful to derive the horizontal rate of change of the total field magnetic intensity. This rate of change is referred to as the horizontal magnetic gradient (HMG), and is measured in units of nanoTesla/meter (nT/m).

Both TF and HMG measurements are related to the same phenomena (i.e. the magnetic field); however, each has certain advantages over the other. Between the two, the HMG method is often chosen for environmental/engineering investigations because of the following:

- 1) HMG measurements can be used to reduce the masking effects of nearby *above* ground objects. This reduces magnetic interference caused by such objects.
- 2) HMG measurements are not affected by temporal (diurnal) variations in the earth's magnetic field, unlike TF measurements. This eliminates one more variable from the data.
- 3) HMG effects attenuate more rapidly with increasing distance from magnetic sources than TF measurements, thus allowing more precise determination of a buried object's location. It should be noted, however, that because the HMG method is very sensitive, the effects of small near surface objects can be amplified and act as a source of noise in HMG data.

Instrumentation

A magnetometer is the device that is used to obtain the HMG/TF data. The instrument typically used by NORCAL is a Geometrics 858 Cesium-vapor magnetometer. This instrument operates on the "optical pumping" principle and consists of a control console and two total field magnetic sensors that are mounted on a vertical staff. One sensor is mounted at about shoulder-height and the other sensor is mounted at about knee-height. The magnetometer console features a built-in computer that stores the raw TF data and records survey grid information. The instrument obtains the TF values by simultaneously measuring the total magnetic field intensity at the two sensors. The survey information is recorded and later uploaded to a field computer for further processing.

Computer Processing

HMG/TF data are typically processed in the field on a portable computer. The uploaded data are converted into a format suitable for contouring using the program **SURFER** from Golden Software. This program calculates an evenly spaced array of values (data grid) based on the measured field data. These gridded values are then contoured to produce HMG contour maps for interpretation.

Contour Map Interpretation

Generally speaking, in a region with fairly uniform magnetic conditions the HMG/TF values will vary smoothly from one area to another. Under these conditions, contour lines are usually spaced far apart. In contrast, in those areas where HMG/TF variations are stronger, the contours are closely spaced. In some cases the variations are so strong that the contours become highly contorted and convoluted. These contorted contours may form roughly concentric circles, tightly wound loops and whorls, or elongated parallel lines. Actual magnitude and shape of the contour lines is dependent on the relative position and size of the magnetic object with respect to the location of the magnetic sensors.

Roughly concentric circles that look like bull's-eyes are generally referred to as monopoles. Monopoles that are roughly limited in extent to the data point spacing of the sampling grid are often caused by relatively small, near surface objects with limited cross-section. These typically consist of well caps, pull boxes, balls of wire, etc. On the other hand, larger monopoles that extend across an area of several data points are typically associated with larger, deeper objects such as well casings, reinforced concrete footers, ends of pipelines, etc. In other cases, two monopoles, one positive and one negative, may be in close proximity and form a pair of high-low closures known as a dipole. Dipoles are often, but not always, attributed to larger objects such as USTs, vaults, buried ordnance, etc. that have a substantial diameter or width.

Irregular patterns of loops and whorls are often indicative of several magnetic objects being present with variable shape, mass, and distribution. These HMG/TF patterns are the most challenging to interpret. Past experience has shown that such patterns are usually associated with debris fields, landfills, and demolition sites. In contrast, a series of parallel contours typically indicates that an elongate object such as a building wall, fence, or underground pipeline is the magnetic source.

Regardless of whether the contours form monopoles, dipoles, or irregular whorls, if there are no obvious nearby above ground sources that could cause such magnetic variations, then subsurface objects are suspected. Contours are typically considered anomalous when large differences in data readings (on the order of several hundred to several thousands of nT/m) from one data station to the next are displayed. The anomalous variations are called HMG anomalies.

Limitations

Buried ferrous metal objects produce localized variations in the earth's magnetic field. The magnetic intensity associated with these objects depends on the mass of the metal and the distance the metal object is from the magnetometer sensor. As a general rule, anomaly magnitude typically decreases and anomaly width increases as distance (depth) to the source increases, thereby making detection more difficult. In addition, the ability to detect a buried metal object is based on the intensity of these variations in contrast to the intensity of background variations. The intensity of background variations is based on the amount of above and below ground metal that is present within the survey area. Cultural features such as chain-link fences, buildings, debris, railroad spurs, utilities, above ground electric lines, etc. typically produce magnetic variations with high intensities. These variations may mask the magnetic effects from buried metal objects and thus make it very difficult to determine whether the magnetic variations are associated with below ground metal or above/below ground cultural features.

Ground Penetrating Radar (GPR)

GPR Methodology

Ground penetrating radar is a method that provides a continuous, high resolution graphical cross-section of the shallow subsurface. The method entails repeatedly radiating an electromagnetic pulse into the ground from an antenna as it is moved along a traverse. Reflected signals are received by an antenna (often the same one used to generate the signal) and sent to a control unit for processing. The control unit then converts the varying amplitude of reflected radar signals as a function of time into a cross-sectional image showing signal amplitude as a function of depth.

GPR is particularly sensitive to variations of two electrical properties. One property is conductivity (the ability of a material to conduct a charge when a field is applied) and the other is permittivity (the ability of a material to hold a charge when a field is applied). These two properties determine how far a signal can propagate. They also determine the strength of reflected signals that can be generated at material boundaries. Reflections result because of the differences in these electrical properties on either side of a boundary.

Most soil and earthen-like materials such as concrete are electrically resistive and have a relatively low permittivity. As a result, they are relatively transparent to electromagnetic energy. This means that only a portion of the radar signal incident upon them is reflected back to the surface. On the other hand, when the signal encounters an object composed of a material that has the opposite electrical properties, especially one with a high permittivity (such as metal) much of the incident energy is reflected. This difference in transmittivity and reflectivity

determines how deep a given radar signal can penetrate into the ground and still yield interpretable results.

Instrumentation

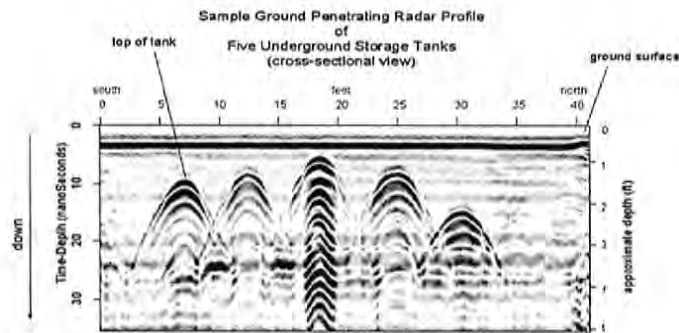
We typically perform GPR surveys using a Geophysical Survey Systems, Inc. SIR-3000 Subsurface Interface Radar System equipped with either a 400 or 500 megahertz (MHz) transducer. This unit is comprised of a combined control/data recording console that is connected by a telemetry cable to the antenna. This system is often chosen for investigating environmental sites since it usually provides both the resolution and depth penetration needed for characterizing the upper three to four feet of the subsurface.

Data Interpretation

The interpretation of GPR data can be done in two ways. The first is referred to as two-dimensional (2-D) and involves examining the graphical records for reflections from buried objects. 2-D GPR records represent a vertical "slice" of the subsurface along a single traverse (or profile) which displays changes in reflected signal strength with horizontal position as a function of arrival time. Reflections that arrive earlier in time are placed in the upper portions of the record and reflections that arrive later are placed lower, towards the bottom of the records. Horizontal position is across the top of the record. For display purposes, almost any color range can be used to denote differences in reflected signal strength, but typically a simple black-and-white display is used.

In areas with relatively uniform conditions, with no buried objects producing reflections, 2-D records, or profiles, typically appear as a series of alternating dark and light horizontal bands. In areas where there are subsurface objects producing reflections, the horizontal banding is disrupted. Discrete objects typically produce reflections having the appearance of inverted "U"s, forming what are known as "hyperbolic reflections". Metallic objects often produce markedly strong reflections, in many cases forming multiple reflections appearing as a series of inverted "Us" cascading down the record. Non-metallic objects can produce similar reflections, but the multiples are typically much weaker.

A sample profile from a different site with five adjacent steel USTs is presented below:

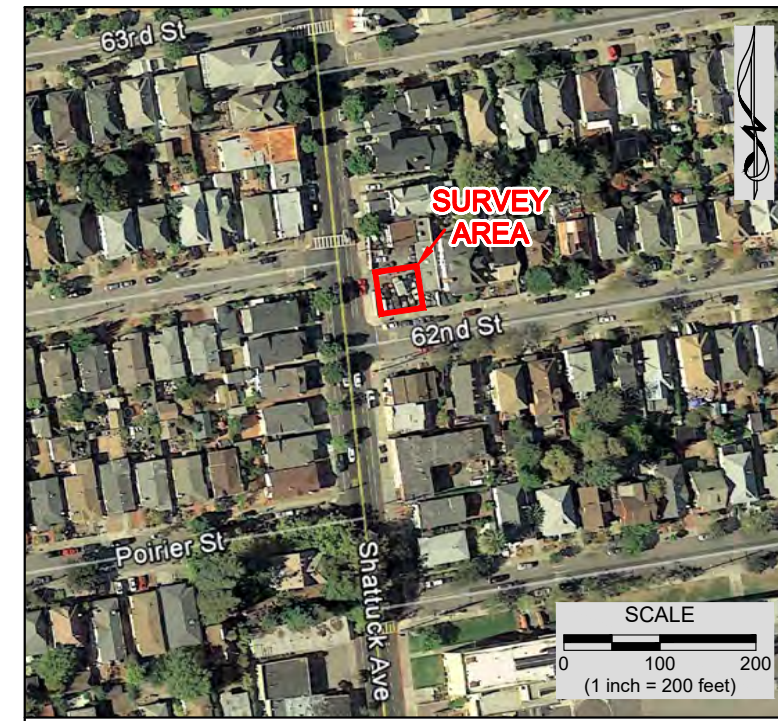


An objects burial depth may also be estimated from GPR profiles. As mentioned above, GPR measures signal amplitude as a function of time. However, the translation of the radar signal's travel time (technically known as time-depth) to an actual distance (true depth) is not always a straight-forward one. Strictly speaking, in order to translate from time-depth to true depth the signal velocity within each time interval must be known. Since this is not easily determined in the field, estimated velocities are often used for determining the approximate depth to a reflector. The empirical values for GPR signal propagation velocities within commonly encountered soils are obtained from published tables.

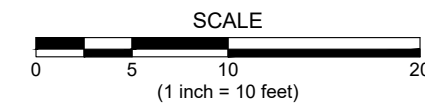
The second way GPR data can be displayed is referred to as a three-dimensional (3-D) time-slice. In this case, the data is displayed as a horizontal "slice" of a plan area at a specified depth below grade. The data for this process is obtained from multiple closely-spaced parallel 2-D traverses which are processed in such a way to display variations in signal amplitude in both horizontal and vertical directions.

Limitations

The ability to detect subsurface targets with GPR is dependent on specific site conditions. These conditions include depth of burial, the size or diameter of the target, the condition of the specific target in question, the type of backfill material associated with the target, and the surface conditions over the target. Typically, the depth of detection will be reduced as the clay and/or moisture content in the subsurface increases. As a result, depths of detection (using a 400 MHz antenna) typically range from as deep as six feet to as little as a few inches.



VICINITY MAP

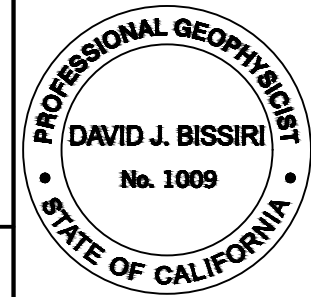


LEGEND

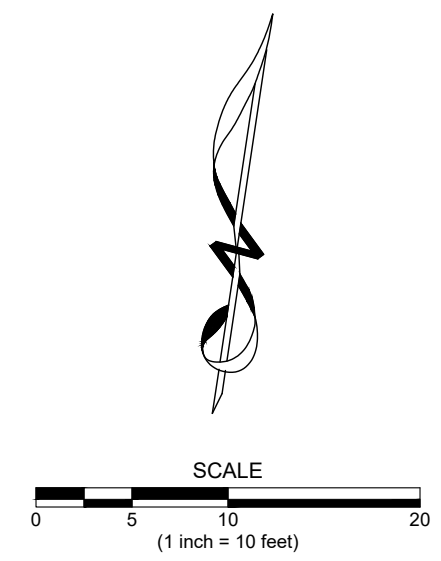
	LIMITS OF GEOPHYSICAL SURVEY
	METAL DETECTOR ANOMALY
	GPR ANOMALY - SUSPECTED PAVED-OVER PAD
	2D GPR TRAVERSE
	UNDIFFERENTIATED UTILITY LINE
	APPARENT UTILITY LINE TERMINATION (LINE BECOMES UNDETECTABLE AND IS SUSPECTED TO END)
	UTILITY LINE CONTINUATION (LINE IS SUSPECTED TO CONTINUE BEYOND DETECTED LOCATION)
	SANITARY SEWER CLEAN OUT
(AC)	ASPHALT
(C)	CONCRETE

NORCAL
 GEOPHYSICAL CONSULTANTS INC.
 A Terracon COMPANY

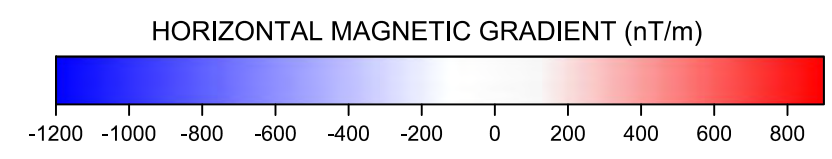
321A BLODGETT STREET PH. (707) 796-7170
 COTATI, CA 94931 FAX. (707) 796-7175
 www.norcalgeophysical.com



GEOPHYSICAL SURVEY MAP 6200 SHATTUCK AVENUE		
LOCATION: OAKLAND, CALIFORNIA		
CLIENT: SHATTUCK PARTNERS, LLC		
JOB #: NS177004	DATE: MARCH 2017	PLATE 1
DRAWN BY: G.RANDALL	APPROVED BY: DJB	
<i>David J. Bissiri</i> 3/28/2017		



LEGEND	
	LIMITS OF HORIZONTAL MAGNETIC GRADIENT SURVEY
	HORIZONTAL MAGNETIC GRADIENT CONTOUR (CONTOUR INTERVAL = 100 nT/m)
	METAL DETECTOR ANOMALY
	UNDIFFERENTIATED UTILITY LINE
	APPARENT UTILITY LINE TERMINATION (LINE BECOMES UNDETECTABLE AND IS SUSPECTED TO END)
	UTILITY LINE CONTINUATION (LINE IS SUSPECTED TO CONTINUE BEYOND DETECTED LOCATION)
(AC)	ASPHALT
(C)	CONCRETE



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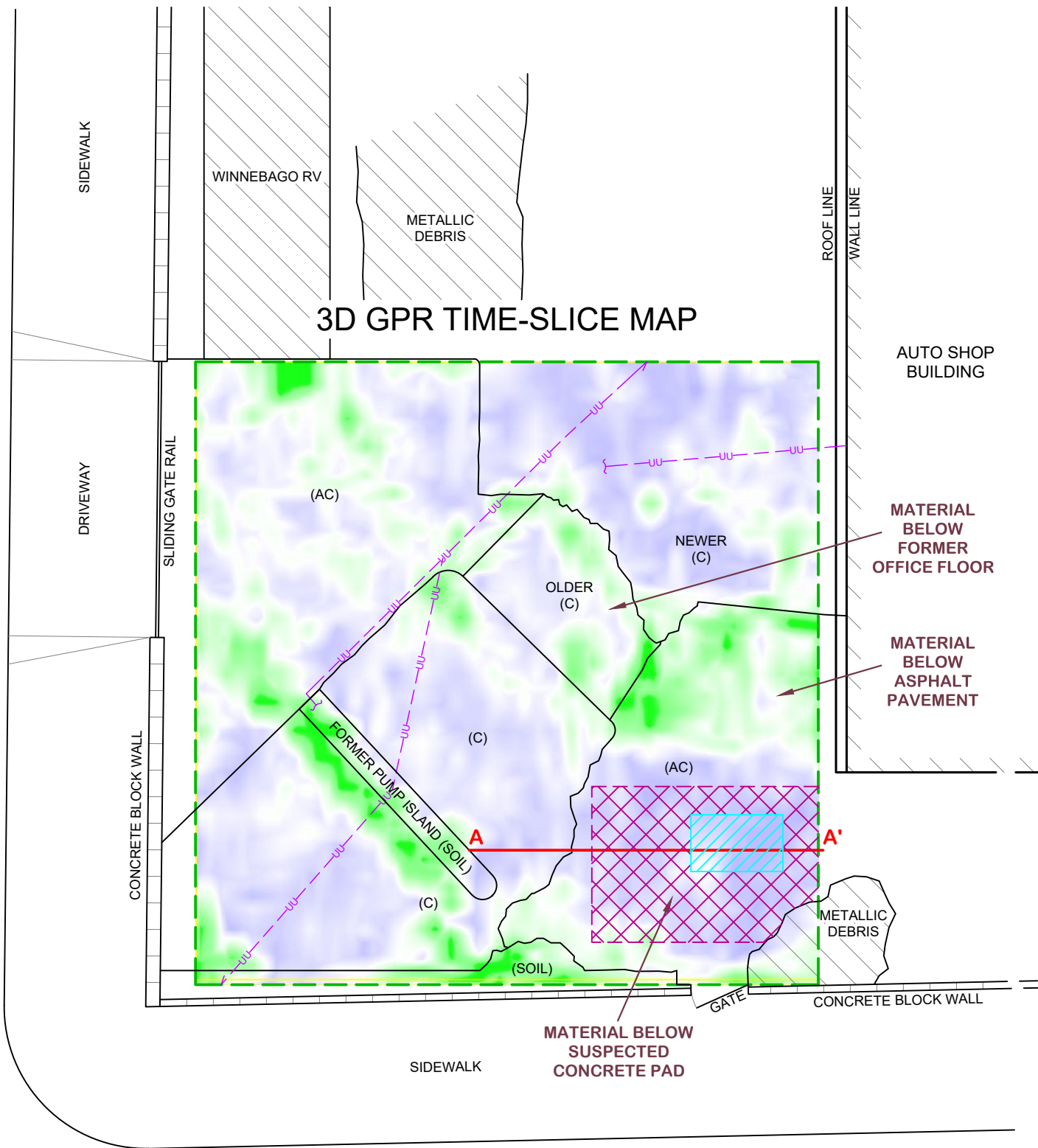
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PROFESSIONAL GEOPHYSICIST
DAVID J. BISSIRI
No. 1009
STATE OF CALIFORNIA

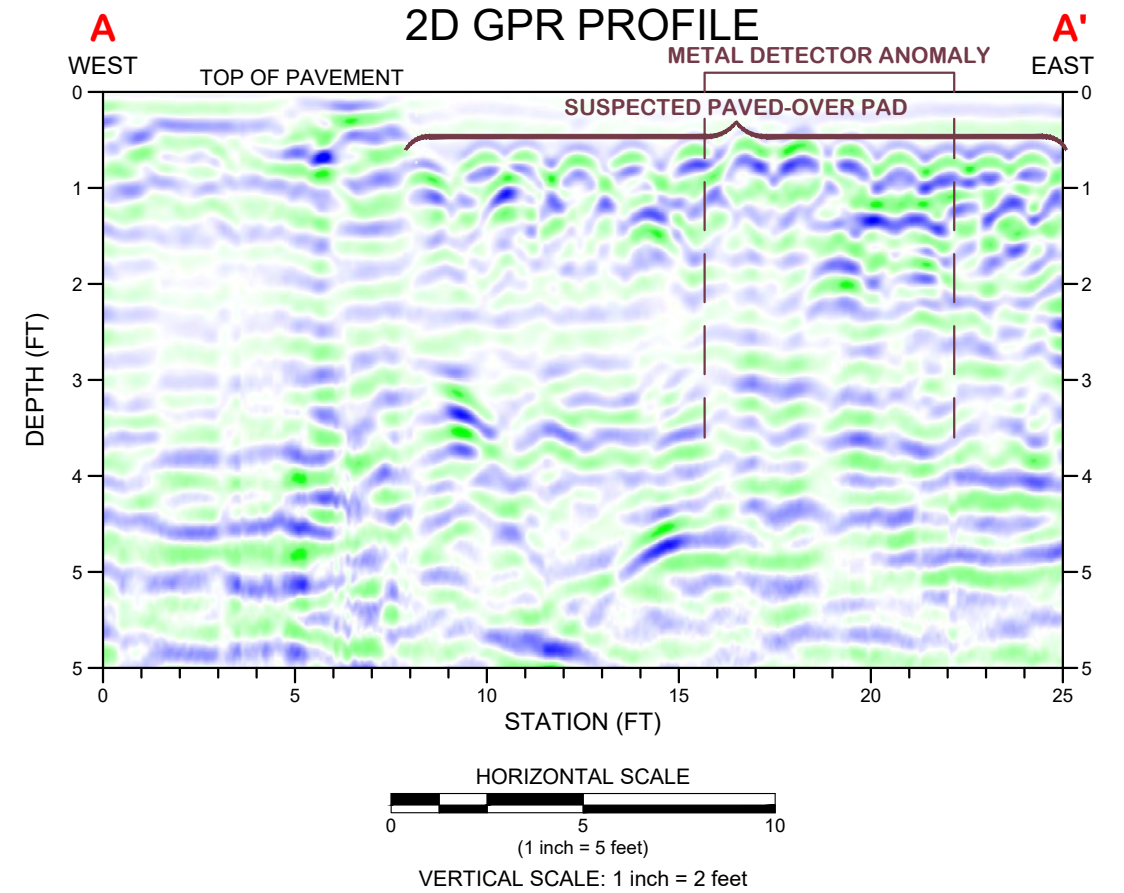
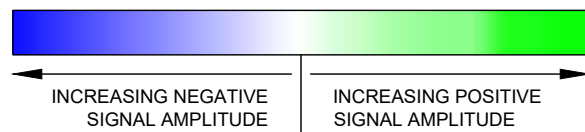
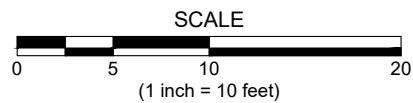
HORIZONTAL MAGNETIC GRADIENT CONTOUR MAP 6200 SHATTUCK AVENUE		
LOCATION: OAKLAND, CALIFORNIA		
CLIENT: SHATTUCK PARTNERS, LLC		
JOB #. NS177004	DATE: MARCH 2017	PLATE
DRAWN BY: G.RANDALL	APPROVED BY: DJB	2
<i>David J. Bissiri</i> 3/28/2017		



SHATTUCK AVENUE



3D GPR TIME-SLICE MAP



LEGEND	
	LIMITS OF 3D GPR SURVEY SURVEY DEPTH ~4.5 FT BELOW GROUND SURFACE
	2D GPR TRAVERSE
	GPR ANOMALY - SUSPECTED PAVED-OVER PAD
	METAL DETECTOR ANOMALY
	UNDIFFERENTIATED UTILITY LINE
	APPARENT UTILITY LINE TERMINATION (LINE BECOMES UNDETECTABLE AND IS SUSPECTED TO END)
	UTILITY LINE CONTINUATION (LINE IS SUSPECTED TO CONTINUE BEYOND DETECTED LOCATION)
(AC)	ASPHALT
(C)	CONCRETE

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PROFESSIONAL GEOPHYSICIST
DAVID J. BISSIRI
No. 1009
STATE OF CALIFORNIA

3D & 2D GROUND PENETRATION
RADAR IMAGES
6200 SHATTUCK AVENUE

LOCATION: OAKLAND, CALIFORNIA
CLIENT: SHATTUCK PARTNERS, LLC

JOB #. NS177004	DATE: MARCH 2017	PLATE 3
DRAWN BY: G.RANDALL	APPROVED BY: DJB	

David J. Bissiri 3/28/2017



APPENDIX E

Boring Logs

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS, INC.

PO Box 5891, Vacaville, CA 95696

Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-8	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: East of Easterly Tank Pit	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 4		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	9:05					Asphalt Pavement		Refer to McCampbell Report #1703B82
				CL		moist silty clay plastic semi-cohesive medium grained		no apparent contamination no odor or staining
5		B8-5	☒			brown silty clay	-0-	TPh-g: ND
						drier lighter small angular gravels		no odor or staining
10	9:10	B8-10	☒	ML		stiff medium plasticity clay - silt	-0-	TPh-g: ND
						increasing density and moisture more cohesive small angular gravels		no odor or staining
15		B8-15	☒				-0-	TPh-g: ND
				MH		gravelly clay - silt		light grey discoloration
20	9:16	B8-20	☒			dense hard dry increasing gravels	0	no odor TPh-g: ND

Boring backfilled with Portland Cement grout 3/22/17

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS, INC.

PO Box 5891, Vacaville, CA 95696

Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-9	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: Against South Property Line	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 4		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	9:45			CL		Asphalt Pavement		Refer to McCampbell Report #1703B82
				CL		silty clay		
				SW		backfill sand well graded		black coloration
5		B9-5	☒	SW		backfill sand perched water	-0-	TPh-g: ND
				CL		silty clay dense cohesive fine grained		— black discoloration strong odor TPh-g: 760 ppm
10		B9-10	☒	CL			500	
	10:00			CL		Very strong gas odor very moist		black gas odor TPh-g: 4.2 ppm
15		B9-15	☒	MH		light brown silty clay		— apparently clean
				MH		very dense dry mottled small angular gravels		light grey discoloration no odor TPh-g: ND
20		B9-19	☒	MH			-0-	

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WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS, INC.

PO Box 5891, Vacaville, CA 95696

Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-10	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: Between Old Tank Pits	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 4		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	11:20					Asphalt Pavement		Refer to McCampbell Report #1703B82
5		B10-5	⊗	CL silty clay moist plastic		gravels in silty clay wet	-0-	dark color no odor TPh-g: ND
10	11:40	B10-10	⊗	GC less gravel mottled		light brown/dark brown/black fine grained silty clay		TPh-g: ND no odor
15		B10-15	⊗	CL apparently clean @ 15'			-0-	TPh-g: ND
20	11:50	B10-20	⊗	MH GM medium gravels dry				apparently clean TPh-g: ND

Boring backfilled with Portland Cement grout 3/22/17

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS, INC.

PO Box 5891, Vacaville, CA 95696

Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-11	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: East of Westerly Tank Pit	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 4		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	11:20					Asphalt Pavement		Refer to McCampbell Report #1703B82
5		B11-5	☒	CL		fine grained silty clay no gravels dark coloration but no odor		slightly contaminated TPh-g: ND
10	11:25	B11-10	☒			silty clay dense, moist cohesive very grey - old olor		TPh-g: ND
15		B11-15	☒	MH		gradual transition cleaning up light/medium brown mottled dry gravels very dense	trace	TPh-g: ND no odor or discoloration clean
20	11:30	B11-20	☒				-0-	TPh-g: ND

Boring backfilled with Portland Cement grout 3/22/17

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS, INC.

PO Box 5891, Vacaville, CA 95696

Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-12	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: Next to Former Dispenser Island	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 4		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	10:25					Asphalt Pavement		Refer to McCampbell Report #1703B82
						lite brown silty clay		
						abrupt color change @ 3-1/2 ft		clean ↑
5		B12-5	⊗			grey - gas odor	>100	contamination ↓ TPh-g: 27 ppm
						finer grained		
				CL		dense - cohesive		
						grey discoloration		
10	10:30	B12-10	⊗			strong odor	>100	TPh-g: 1,800 ppm
						continued discoloration		
								cleans up @ 15'
15		B12-15	⊗					TPh-g: 4.2 ppm
						medium grained		
						lite brown silty clay		
						moist		
20	10:35	B12-20	⊗			firm, plastic	-0-	TPh-g: ND

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WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS, INC.

PO Box 5891, Vacaville, CA 95696

Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-13	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: Over Old East Tank Pit	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 4		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	9:25					Asphalt Pavement		Refer to McCampbell Report #1703B82
5		B13-5	☒	CL		dense brown silty clay moist plastic	-0-	no odor or discoloration TPh-g: ND
10		B13-10	☒			Fine grained dense cohesive silty clay	290	grey discoloration gas odor TPh-g: 2.7 ppm
15		B13-15	☒	MH		gradual transition no gravels	trace	continued obvious contamination TPh-g: ND
20	9:30	B13-20	☒			medium grained dry light brown with mottling sandy silt	-0-	no evidence of contamination below 15' BGS TPh-g: ND

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PO Box 5891, Vacaville, CA 95696

Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-14	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: Over Former Westerly UST Location	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 4		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	10:10					Asphalt Pavement		Refer to McCampbell Report #1703B82
						dense - moist grey silty clay cohesive fine grained		discoloration and odor TPh-g: ND
5		B14-5	☒					
						discoloration silty clay fine grained moist strong gas odor semi-cohesive		and odor TPh-g: 2,000 ppm
10	10:15	B14-10	☒	CL			>100	
						lighter discoloration dense fine grained		cleans up @ 15' TPh-g: ND
15		B14-15	☒					
						lite brown silty clay		
20	10:20	B14-20	☒				-0-	TPh-g: ND

Boring backfilled with Portland Cement grout 3/22/17

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PO Box 5891, Vacaville, CA 95696

Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-15	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: Next to Old Dispenser Island	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 4		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	10:45					Asphalt Pavement		Refer to McCampbell Report #1703B82
5		B15-5	⊗	CL		Silty clay dense cohesive dry fine grained	-0-	grey color no odor TPh-g: 42 ppm
10	10:50	B15-10	⊗			Silty clay medium grained plastic	trace	odor and color contamination TPh-g: 8.4 ppm
15		B15-15	⊗	MH		gradual transition to silty sand minor small gravels angular	100	cleaning up @ 15' TPh-g: ND
20	10:55	B15-20	⊗			dry silty sand light gravels dense medium grained mottled	-0-	clean TPh-g: ND

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Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-16	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: Southwest Corner of Lot	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 4		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	11:00					Asphalt Pavement		Refer to McCampbell Report #1703B82
5		B16-5	☒	CL		silty clay fine grained moist - plastic dry - small gravels	-0-	clean to 4' grey color TPh-g: ND slight odor
10	11:05	B16-10	☒	CL		semi-cohesive silty clay fine grained dense	-0-	possible contamination TPh-g: 4.7 ppm
15		B16-14	☒	CL		silty clay moist plastic medium grained semi-cohesive	trace	discoloration and odor TPh-g: 78 ppm
20	11:10	B16-19	☒	CL		smaller angular gravels very dense dry uncohesive	-0-	clean TPh-g: ND

Boring backfilled with Portland Cement grout 3/22/17

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PO Box 5891, Vacaville, CA 95696

Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-17	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: 62nd Street Gutter	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 2		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	3:30					Asphalt Pavement		Refer to McCampbell Report #1703B82
5		B17-4	☒			moist silty clay plastic - cohesive fine grained lite brown	-0-	no odor or discoloration TPh-g: ND
10		B17-8	☒	CL		continued silty clay dense drier, fine to medium grained less cohesion	-0-	TPh-g: ND apparently clean
15						continued silty clay medium grained		no odor or discoloration
20	3:40					slight mottling		

Boring backfilled with Portland Cement grout 3/22/17

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Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-18	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: Near 62nd/Shattuck Corner	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 1		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	3:00					Asphalt Pavement		Refer to McCampbell Report #1703B82
5				CL		silty clay moist fine to medium grained semi-cohesive lite brown	-0-	no odor or discoloration
10						continued silty clay		apparently clean
15		B18-13	☒			fine grained	-0-	TPh-g: 7.7 ppm
20	3:15					solid brown no mottling		

Boring backfilled with Portland Cement grout 3/22/17

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PO Box 5891, Vacaville, CA 95696

Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-19	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: North of Shattuck/62nd Corner	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17 Finished: 3/21/17	Depth to Groundwater: Not Encountered	
Number of Samples: -0-		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	3:35					Asphalt Pavement		Refer to McCampbell Report #1703B82
5				CL		silty clay fine grained moist medium brown semi-cohesive	-0-	no odor or discoloration
10							-0-	apparently clean
15								no odor or discoloration
20	3:45						medium grained silty clay silty clay drier, lighter color	-0-

Boring backfilled with Portland Cement grout 3/22/17

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS, INC.

PO Box 5891, Vacaville, CA 95696

Project: Automasters Site Investigation		Page No: 1 of 1
Location: 6200 Shattuck Avenue, Oakland		Date: 3/21/17
Boring Designation: B-20	Driller: Penecore	
Logged By: Brian West, RCE 32319	Base: Woodland	
Boring Location: In Shattuck Gutter	Drill Equipment: Geo-Probe	
Soils Classification System: USGS	Diameter & Type Well Casing: NA	
Sample Type: Direct Push	Elevation & Datum:	
VOC Screening: MiniRae 2000	Completion Depth: 20 ft BGS	
Date Started: 3/21/17	Finished: 3/21/17	Depth to Groundwater: Not Encountered
Number of Samples: 1		

Depth (feet)	Time	Sample Number	Sample	Lithology	Blow Counts	Observations	PID (ppm)	Remarks
0	3:20					Asphalt Pavement		Refer to McCampbell Report #1703B82
5						silty clay moist fine - medium grained cohesive	-0-	no odor or discoloration
10		B20-8	☒	CL			trace	TPh-g: 17 ppm
15						more silty clay medium grained drier		
20	3:30					silty clay less cohesive no mottling	-0-	apparently clean

Boring backfilled with Portland Cement grout 3/22/17

WEST & ASSOCIATES ENVIRONMENTAL ENGINEERS

PO Box 5891, Vacaville, CA 95696

Project Name: Automasters

Date: Apr 2017

Location: 6200 Shattuck Avenue, Oakland, CA

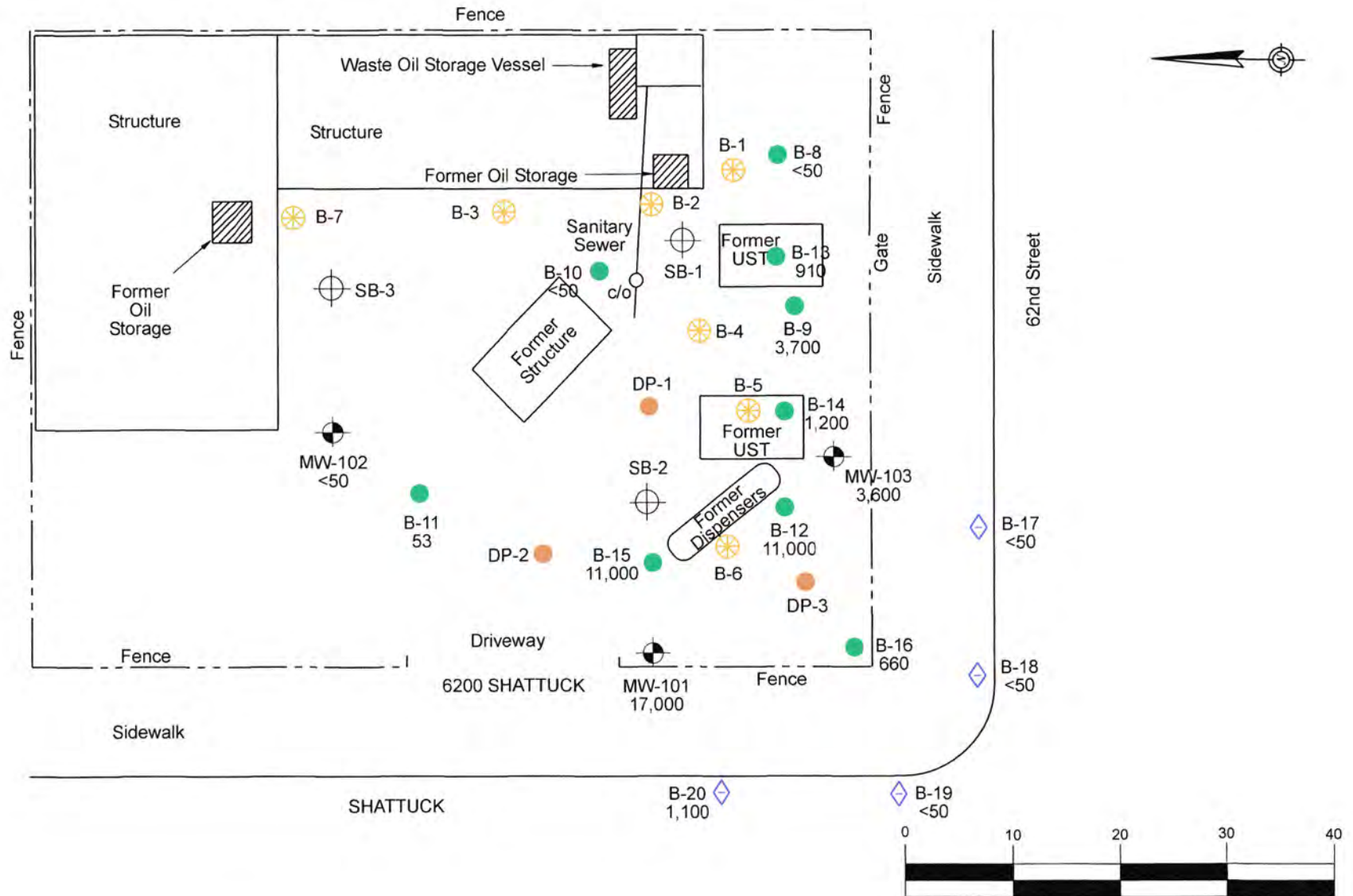
Drawing By: DLG

Scale: 1" = 14 ft

Legend

- Existing Groundwater Monitoring Well
- Previous Deep Soil Boring - Dec 2015
- Previous Shallow Soil Sample - Dec 2015
- Soil Boring and Groundwater Sample Collection Locations
- Pangea Boring (2006)
- Groundwater Sample Collection Location

**Groundwater Analytical Results
TPH-g
(ug/l)**





APPENDIX F

McC Campbell Analytical Report:

Work Order No. 1703B82



McC Campbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1703B82

Report Created for: West & Associates

630 Eubanks Ct, Unit #G
Vacaville, CA 95688

Project Contact: Bruce Jacobsen

Project P.O.:

Project Name: Automasters

Project Received: 03/23/2017

Analytical Report reviewed & approved for release on 03/31/2017 by:

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.





Glossary of Terms & Qualifier Definitions

Client: West & Associates
Project: Automasters
WorkOrder: 1703B82

Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



Glossary of Terms & Qualifier Definitions

Client: West & Associates
Project: Automasters
WorkOrder: 1703B82

Analytical Qualifiers

S	surrogate spike recovery outside accepted recovery limits
a3	sample diluted due to high organic content.
b1	aqueous sample that contains greater than ~1 vol. % sediment
c2	surrogate recovery outside of the control limits due to matrix interference.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
c7	surrogate value diluted out of range
d1	weakly modified or unmodified gasoline is significant
d2	heavier gasoline range compounds are significant (aged gasoline?)
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
d9	no recognizable pattern
d17	Reporting limit for MTBE raised due to co-elution with non-target peaks.
e2	diesel range compounds are significant; no recognizable pattern
e4	gasoline range compounds are significant.
e4/e11	gasoline range compounds are significant.; and/or stoddard solvent/mineral spirit (?)
e7	oil range compounds are significant
e11/e4	stoddard solvent/mineral spirit (?); and/or gasoline range compounds are significant.

Quality Control Qualifiers

F2 LCS/LCSD recovery and/or RPD is out of acceptance criteria.



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-5	1703B82-001A	Soil	03/21/2017 09:05	GC10	136105
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	03/24/2017 13:08
tert-Amyl methyl ether (TAME)	ND		0.0050	1	03/24/2017 13:08
Benzene	ND		0.0050	1	03/24/2017 13:08
Bromobenzene	ND		0.0050	1	03/24/2017 13:08
Bromochloromethane	ND		0.0050	1	03/24/2017 13:08
Bromodichloromethane	ND		0.0050	1	03/24/2017 13:08
Bromoform	ND		0.0050	1	03/24/2017 13:08
Bromomethane	ND		0.0050	1	03/24/2017 13:08
2-Butanone (MEK)	ND		0.020	1	03/24/2017 13:08
t-Butyl alcohol (TBA)	ND		0.050	1	03/24/2017 13:08
n-Butyl benzene	ND		0.0050	1	03/24/2017 13:08
sec-Butyl benzene	ND		0.0050	1	03/24/2017 13:08
tert-Butyl benzene	ND		0.0050	1	03/24/2017 13:08
Carbon Disulfide	ND		0.0050	1	03/24/2017 13:08
Carbon Tetrachloride	ND		0.0050	1	03/24/2017 13:08
Chlorobenzene	ND		0.0050	1	03/24/2017 13:08
Chloroethane	ND		0.0050	1	03/24/2017 13:08
Chloroform	ND		0.0050	1	03/24/2017 13:08
Chloromethane	ND		0.0050	1	03/24/2017 13:08
2-Chlorotoluene	ND		0.0050	1	03/24/2017 13:08
4-Chlorotoluene	ND		0.0050	1	03/24/2017 13:08
Dibromochloromethane	ND		0.0050	1	03/24/2017 13:08
1,2-Dibromo-3-chloropropane	ND		0.0040	1	03/24/2017 13:08
1,2-Dibromoethane (EDB)	ND		0.0040	1	03/24/2017 13:08
Dibromomethane	ND		0.0050	1	03/24/2017 13:08
1,2-Dichlorobenzene	ND		0.0050	1	03/24/2017 13:08
1,3-Dichlorobenzene	ND		0.0050	1	03/24/2017 13:08
1,4-Dichlorobenzene	ND		0.0050	1	03/24/2017 13:08
Dichlorodifluoromethane	ND		0.0050	1	03/24/2017 13:08
1,1-Dichloroethane	ND		0.0050	1	03/24/2017 13:08
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	03/24/2017 13:08
1,1-Dichloroethene	ND		0.0050	1	03/24/2017 13:08
cis-1,2-Dichloroethene	ND		0.0050	1	03/24/2017 13:08
trans-1,2-Dichloroethene	ND		0.0050	1	03/24/2017 13:08
1,2-Dichloropropane	ND		0.0050	1	03/24/2017 13:08
1,3-Dichloropropane	ND		0.0050	1	03/24/2017 13:08
2,2-Dichloropropane	ND		0.0050	1	03/24/2017 13:08

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-5	1703B82-001A	Soil	03/21/2017 09:05	GC10	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/24/2017 13:08
cis-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 13:08
trans-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 13:08
Diisopropyl ether (DIPE)	ND	0.0050	1	03/24/2017 13:08
Ethylbenzene	ND	0.0050	1	03/24/2017 13:08
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/24/2017 13:08
Freon 113	ND	0.0050	1	03/24/2017 13:08
Hexachlorobutadiene	ND	0.0050	1	03/24/2017 13:08
Hexachloroethane	ND	0.0050	1	03/24/2017 13:08
2-Hexanone	ND	0.0050	1	03/24/2017 13:08
Isopropylbenzene	ND	0.0050	1	03/24/2017 13:08
4-Isopropyl toluene	ND	0.0050	1	03/24/2017 13:08
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/24/2017 13:08
Methylene chloride	ND	0.0050	1	03/24/2017 13:08
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/24/2017 13:08
Naphthalene	ND	0.0050	1	03/24/2017 13:08
n-Propyl benzene	ND	0.0050	1	03/24/2017 13:08
Styrene	ND	0.0050	1	03/24/2017 13:08
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 13:08
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 13:08
Tetrachloroethene	ND	0.0050	1	03/24/2017 13:08
Toluene	ND	0.0050	1	03/24/2017 13:08
1,2,3-Trichlorobenzene	ND	0.0050	1	03/24/2017 13:08
1,2,4-Trichlorobenzene	ND	0.0050	1	03/24/2017 13:08
1,1,1-Trichloroethane	ND	0.0050	1	03/24/2017 13:08
1,1,2-Trichloroethane	ND	0.0050	1	03/24/2017 13:08
Trichloroethene	ND	0.0050	1	03/24/2017 13:08
Trichlorofluoromethane	ND	0.0050	1	03/24/2017 13:08
1,2,3-Trichloropropane	ND	0.0050	1	03/24/2017 13:08
1,2,4-Trimethylbenzene	ND	0.0050	1	03/24/2017 13:08
1,3,5-Trimethylbenzene	ND	0.0050	1	03/24/2017 13:08
Vinyl Chloride	ND	0.0050	1	03/24/2017 13:08
Xylenes, Total	ND	0.0050	1	03/24/2017 13:08

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-5	1703B82-001A	Soil	03/21/2017 09:05	GC10	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	90	70-130		03/24/2017 13:08
Toluene-d8	112	70-130		03/24/2017 13:08
4-BFB	89	70-130		03/24/2017 13:08
Benzene-d6	87	60-140		03/24/2017 13:08
Ethylbenzene-d10	108	60-140		03/24/2017 13:08
1,2-DCB-d4	76	60-140		03/24/2017 13:08

Analyst(s): HK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-10	1703B82-002A	Soil	03/21/2017 09:09	GC10	136105
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	03/24/2017 13:47
tert-Amyl methyl ether (TAME)	ND		0.0050	1	03/24/2017 13:47
Benzene	ND		0.0050	1	03/24/2017 13:47
Bromobenzene	ND		0.0050	1	03/24/2017 13:47
Bromochloromethane	ND		0.0050	1	03/24/2017 13:47
Bromodichloromethane	ND		0.0050	1	03/24/2017 13:47
Bromoform	ND		0.0050	1	03/24/2017 13:47
Bromomethane	ND		0.0050	1	03/24/2017 13:47
2-Butanone (MEK)	ND		0.020	1	03/24/2017 13:47
t-Butyl alcohol (TBA)	ND		0.050	1	03/24/2017 13:47
n-Butyl benzene	ND		0.0050	1	03/24/2017 13:47
sec-Butyl benzene	ND		0.0050	1	03/24/2017 13:47
tert-Butyl benzene	ND		0.0050	1	03/24/2017 13:47
Carbon Disulfide	ND		0.0050	1	03/24/2017 13:47
Carbon Tetrachloride	ND		0.0050	1	03/24/2017 13:47
Chlorobenzene	ND		0.0050	1	03/24/2017 13:47
Chloroethane	ND		0.0050	1	03/24/2017 13:47
Chloroform	ND		0.0050	1	03/24/2017 13:47
Chloromethane	ND		0.0050	1	03/24/2017 13:47
2-Chlorotoluene	ND		0.0050	1	03/24/2017 13:47
4-Chlorotoluene	ND		0.0050	1	03/24/2017 13:47
Dibromochloromethane	ND		0.0050	1	03/24/2017 13:47
1,2-Dibromo-3-chloropropane	ND		0.0040	1	03/24/2017 13:47
1,2-Dibromoethane (EDB)	ND		0.0040	1	03/24/2017 13:47
Dibromomethane	ND		0.0050	1	03/24/2017 13:47
1,2-Dichlorobenzene	ND		0.0050	1	03/24/2017 13:47
1,3-Dichlorobenzene	ND		0.0050	1	03/24/2017 13:47
1,4-Dichlorobenzene	ND		0.0050	1	03/24/2017 13:47
Dichlorodifluoromethane	ND		0.0050	1	03/24/2017 13:47
1,1-Dichloroethane	ND		0.0050	1	03/24/2017 13:47
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	03/24/2017 13:47
1,1-Dichloroethene	ND		0.0050	1	03/24/2017 13:47
cis-1,2-Dichloroethene	ND		0.0050	1	03/24/2017 13:47
trans-1,2-Dichloroethene	ND		0.0050	1	03/24/2017 13:47
1,2-Dichloropropane	ND		0.0050	1	03/24/2017 13:47
1,3-Dichloropropane	ND		0.0050	1	03/24/2017 13:47
2,2-Dichloropropane	ND		0.0050	1	03/24/2017 13:47

(Cont.)



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-10	1703B82-002A	Soil	03/21/2017 09:09	GC10	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/24/2017 13:47
cis-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 13:47
trans-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 13:47
Diisopropyl ether (DIPE)	ND	0.0050	1	03/24/2017 13:47
Ethylbenzene	ND	0.0050	1	03/24/2017 13:47
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/24/2017 13:47
Freon 113	ND	0.0050	1	03/24/2017 13:47
Hexachlorobutadiene	ND	0.0050	1	03/24/2017 13:47
Hexachloroethane	ND	0.0050	1	03/24/2017 13:47
2-Hexanone	ND	0.0050	1	03/24/2017 13:47
Isopropylbenzene	ND	0.0050	1	03/24/2017 13:47
4-Isopropyl toluene	ND	0.0050	1	03/24/2017 13:47
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/24/2017 13:47
Methylene chloride	ND	0.0050	1	03/24/2017 13:47
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/24/2017 13:47
Naphthalene	ND	0.0050	1	03/24/2017 13:47
n-Propyl benzene	ND	0.0050	1	03/24/2017 13:47
Styrene	ND	0.0050	1	03/24/2017 13:47
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 13:47
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 13:47
Tetrachloroethene	ND	0.0050	1	03/24/2017 13:47
Toluene	ND	0.0050	1	03/24/2017 13:47
1,2,3-Trichlorobenzene	ND	0.0050	1	03/24/2017 13:47
1,2,4-Trichlorobenzene	ND	0.0050	1	03/24/2017 13:47
1,1,1-Trichloroethane	ND	0.0050	1	03/24/2017 13:47
1,1,2-Trichloroethane	ND	0.0050	1	03/24/2017 13:47
Trichloroethene	ND	0.0050	1	03/24/2017 13:47
Trichlorofluoromethane	ND	0.0050	1	03/24/2017 13:47
1,2,3-Trichloropropane	ND	0.0050	1	03/24/2017 13:47
1,2,4-Trimethylbenzene	ND	0.0050	1	03/24/2017 13:47
1,3,5-Trimethylbenzene	ND	0.0050	1	03/24/2017 13:47
Vinyl Chloride	ND	0.0050	1	03/24/2017 13:47
Xylenes, Total	ND	0.0050	1	03/24/2017 13:47

(Cont.)



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-10	1703B82-002A	Soil	03/21/2017 09:09	GC10	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	90	70-130		03/24/2017 13:47
Toluene-d8	112	70-130		03/24/2017 13:47
4-BFB	86	70-130		03/24/2017 13:47
Benzene-d6	82	60-140		03/24/2017 13:47
Ethylbenzene-d10	104	60-140		03/24/2017 13:47
1,2-DCB-d4	75	60-140		03/24/2017 13:47

Analyst(s): HK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-15	1703B82-003A	Soil	03/21/2017 09:13	GC28	136105
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/24/2017 14:28	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/24/2017 14:28	
Benzene	ND	0.0050	1	03/24/2017 14:28	
Bromobenzene	ND	0.0050	1	03/24/2017 14:28	
Bromochloromethane	ND	0.0050	1	03/24/2017 14:28	
Bromodichloromethane	ND	0.0050	1	03/24/2017 14:28	
Bromoform	ND	0.0050	1	03/24/2017 14:28	
Bromomethane	ND	0.0050	1	03/24/2017 14:28	
2-Butanone (MEK)	ND	0.020	1	03/24/2017 14:28	
t-Butyl alcohol (TBA)	ND	0.050	1	03/24/2017 14:28	
n-Butyl benzene	ND	0.0050	1	03/24/2017 14:28	
sec-Butyl benzene	ND	0.0050	1	03/24/2017 14:28	
tert-Butyl benzene	ND	0.0050	1	03/24/2017 14:28	
Carbon Disulfide	ND	0.0050	1	03/24/2017 14:28	
Carbon Tetrachloride	ND	0.0050	1	03/24/2017 14:28	
Chlorobenzene	ND	0.0050	1	03/24/2017 14:28	
Chloroethane	ND	0.0050	1	03/24/2017 14:28	
Chloroform	ND	0.0050	1	03/24/2017 14:28	
Chloromethane	ND	0.0050	1	03/24/2017 14:28	
2-Chlorotoluene	ND	0.0050	1	03/24/2017 14:28	
4-Chlorotoluene	ND	0.0050	1	03/24/2017 14:28	
Dibromochloromethane	ND	0.0050	1	03/24/2017 14:28	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/24/2017 14:28	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/24/2017 14:28	
Dibromomethane	ND	0.0050	1	03/24/2017 14:28	
1,2-Dichlorobenzene	ND	0.0050	1	03/24/2017 14:28	
1,3-Dichlorobenzene	ND	0.0050	1	03/24/2017 14:28	
1,4-Dichlorobenzene	ND	0.0050	1	03/24/2017 14:28	
Dichlorodifluoromethane	ND	0.0050	1	03/24/2017 14:28	
1,1-Dichloroethane	ND	0.0050	1	03/24/2017 14:28	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/24/2017 14:28	
1,1-Dichloroethene	ND	0.0050	1	03/24/2017 14:28	
cis-1,2-Dichloroethene	ND	0.0050	1	03/24/2017 14:28	
trans-1,2-Dichloroethene	ND	0.0050	1	03/24/2017 14:28	
1,2-Dichloropropane	ND	0.0050	1	03/24/2017 14:28	
1,3-Dichloropropane	ND	0.0050	1	03/24/2017 14:28	
2,2-Dichloropropane	ND	0.0050	1	03/24/2017 14:28	

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-15	1703B82-003A	Soil	03/21/2017 09:13	GC28	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/24/2017 14:28
cis-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 14:28
trans-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 14:28
Diisopropyl ether (DIPE)	ND	0.0050	1	03/24/2017 14:28
Ethylbenzene	ND	0.0050	1	03/24/2017 14:28
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/24/2017 14:28
Freon 113	ND	0.0050	1	03/24/2017 14:28
Hexachlorobutadiene	ND	0.0050	1	03/24/2017 14:28
Hexachloroethane	ND	0.0050	1	03/24/2017 14:28
2-Hexanone	ND	0.0050	1	03/24/2017 14:28
Isopropylbenzene	ND	0.0050	1	03/24/2017 14:28
4-Isopropyl toluene	ND	0.0050	1	03/24/2017 14:28
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/24/2017 14:28
Methylene chloride	ND	0.0050	1	03/24/2017 14:28
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/24/2017 14:28
Naphthalene	ND	0.0050	1	03/24/2017 14:28
n-Propyl benzene	ND	0.0050	1	03/24/2017 14:28
Styrene	ND	0.0050	1	03/24/2017 14:28
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 14:28
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 14:28
Tetrachloroethene	ND	0.0050	1	03/24/2017 14:28
Toluene	ND	0.0050	1	03/24/2017 14:28
1,2,3-Trichlorobenzene	ND	0.0050	1	03/24/2017 14:28
1,2,4-Trichlorobenzene	ND	0.0050	1	03/24/2017 14:28
1,1,1-Trichloroethane	ND	0.0050	1	03/24/2017 14:28
1,1,2-Trichloroethane	ND	0.0050	1	03/24/2017 14:28
Trichloroethene	ND	0.0050	1	03/24/2017 14:28
Trichlorofluoromethane	ND	0.0050	1	03/24/2017 14:28
1,2,3-Trichloropropane	ND	0.0050	1	03/24/2017 14:28
1,2,4-Trimethylbenzene	ND	0.0050	1	03/24/2017 14:28
1,3,5-Trimethylbenzene	ND	0.0050	1	03/24/2017 14:28
Vinyl Chloride	ND	0.0050	1	03/24/2017 14:28
Xylenes, Total	ND	0.0050	1	03/24/2017 14:28

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-15	1703B82-003A	Soil	03/21/2017 09:13	GC28	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	96	70-130		03/24/2017 14:28
Toluene-d8	110	70-130		03/24/2017 14:28
4-BFB	87	70-130		03/24/2017 14:28
Benzene-d6	82	60-140		03/24/2017 14:28
Ethylbenzene-d10	105	60-140		03/24/2017 14:28
1,2-DCB-d4	75	60-140		03/24/2017 14:28

Analyst(s): HK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-20	1703B82-004A	Soil	03/21/2017 09:16	GC16	136105
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/28/2017 17:37	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/28/2017 17:37	
Benzene	ND	0.0050	1	03/28/2017 17:37	
Bromobenzene	ND	0.0050	1	03/28/2017 17:37	
Bromochloromethane	ND	0.0050	1	03/28/2017 17:37	
Bromodichloromethane	ND	0.0050	1	03/28/2017 17:37	
Bromoform	ND	0.0050	1	03/28/2017 17:37	
Bromomethane	ND	0.0050	1	03/28/2017 17:37	
2-Butanone (MEK)	ND	0.020	1	03/28/2017 17:37	
t-Butyl alcohol (TBA)	ND	0.050	1	03/28/2017 17:37	
n-Butyl benzene	ND	0.0050	1	03/28/2017 17:37	
sec-Butyl benzene	ND	0.0050	1	03/28/2017 17:37	
tert-Butyl benzene	ND	0.0050	1	03/28/2017 17:37	
Carbon Disulfide	ND	0.0050	1	03/28/2017 17:37	
Carbon Tetrachloride	ND	0.0050	1	03/28/2017 17:37	
Chlorobenzene	ND	0.0050	1	03/28/2017 17:37	
Chloroethane	ND	0.0050	1	03/28/2017 17:37	
Chloroform	ND	0.0050	1	03/28/2017 17:37	
Chloromethane	ND	0.0050	1	03/28/2017 17:37	
2-Chlorotoluene	ND	0.0050	1	03/28/2017 17:37	
4-Chlorotoluene	ND	0.0050	1	03/28/2017 17:37	
Dibromochloromethane	ND	0.0050	1	03/28/2017 17:37	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/28/2017 17:37	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/28/2017 17:37	
Dibromomethane	ND	0.0050	1	03/28/2017 17:37	
1,2-Dichlorobenzene	ND	0.0050	1	03/28/2017 17:37	
1,3-Dichlorobenzene	ND	0.0050	1	03/28/2017 17:37	
1,4-Dichlorobenzene	ND	0.0050	1	03/28/2017 17:37	
Dichlorodifluoromethane	ND	0.0050	1	03/28/2017 17:37	
1,1-Dichloroethane	ND	0.0050	1	03/28/2017 17:37	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/28/2017 17:37	
1,1-Dichloroethene	ND	0.0050	1	03/28/2017 17:37	
cis-1,2-Dichloroethene	ND	0.0050	1	03/28/2017 17:37	
trans-1,2-Dichloroethene	ND	0.0050	1	03/28/2017 17:37	
1,2-Dichloropropane	ND	0.0050	1	03/28/2017 17:37	
1,3-Dichloropropane	ND	0.0050	1	03/28/2017 17:37	
2,2-Dichloropropane	ND	0.0050	1	03/28/2017 17:37	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-20	1703B82-004A	Soil	03/21/2017 09:16	GC16	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/28/2017 17:37
cis-1,3-Dichloropropene	ND	0.0050	1	03/28/2017 17:37
trans-1,3-Dichloropropene	ND	0.0050	1	03/28/2017 17:37
Diisopropyl ether (DIPE)	ND	0.0050	1	03/28/2017 17:37
Ethylbenzene	ND	0.0050	1	03/28/2017 17:37
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/28/2017 17:37
Freon 113	ND	0.0050	1	03/28/2017 17:37
Hexachlorobutadiene	ND	0.0050	1	03/28/2017 17:37
Hexachloroethane	ND	0.0050	1	03/28/2017 17:37
2-Hexanone	ND	0.0050	1	03/28/2017 17:37
Isopropylbenzene	ND	0.0050	1	03/28/2017 17:37
4-Isopropyl toluene	ND	0.0050	1	03/28/2017 17:37
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/28/2017 17:37
Methylene chloride	ND	0.0050	1	03/28/2017 17:37
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/28/2017 17:37
Naphthalene	ND	0.0050	1	03/28/2017 17:37
n-Propyl benzene	ND	0.0050	1	03/28/2017 17:37
Styrene	ND	0.0050	1	03/28/2017 17:37
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/28/2017 17:37
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/28/2017 17:37
Tetrachloroethene	ND	0.0050	1	03/28/2017 17:37
Toluene	ND	0.0050	1	03/28/2017 17:37
1,2,3-Trichlorobenzene	ND	0.0050	1	03/28/2017 17:37
1,2,4-Trichlorobenzene	ND	0.0050	1	03/28/2017 17:37
1,1,1-Trichloroethane	ND	0.0050	1	03/28/2017 17:37
1,1,2-Trichloroethane	ND	0.0050	1	03/28/2017 17:37
Trichloroethene	ND	0.0050	1	03/28/2017 17:37
Trichlorofluoromethane	ND	0.0050	1	03/28/2017 17:37
1,2,3-Trichloropropane	ND	0.0050	1	03/28/2017 17:37
1,2,4-Trimethylbenzene	ND	0.0050	1	03/28/2017 17:37
1,3,5-Trimethylbenzene	ND	0.0050	1	03/28/2017 17:37
Vinyl Chloride	ND	0.0050	1	03/28/2017 17:37
Xylenes, Total	ND	0.0050	1	03/28/2017 17:37

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-20	1703B82-004A	Soil	03/21/2017 09:16	GC16	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	90	70-130		03/28/2017 17:37
Toluene-d8	103	70-130		03/28/2017 17:37
4-BFB	118	70-130		03/28/2017 17:37
Benzene-d6	72	60-140		03/28/2017 17:37
Ethylbenzene-d10	83	60-140		03/28/2017 17:37
1,2-DCB-d4	66	60-140		03/28/2017 17:37

Analyst(s): JEM



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-5	1703B82-005A	Soil	03/21/2017 09:25	GC28	136105
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/24/2017 12:32	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/24/2017 12:32	
Benzene	ND	0.0050	1	03/24/2017 12:32	
Bromobenzene	ND	0.0050	1	03/24/2017 12:32	
Bromochloromethane	ND	0.0050	1	03/24/2017 12:32	
Bromodichloromethane	ND	0.0050	1	03/24/2017 12:32	
Bromoform	ND	0.0050	1	03/24/2017 12:32	
Bromomethane	ND	0.0050	1	03/24/2017 12:32	
2-Butanone (MEK)	ND	0.020	1	03/24/2017 12:32	
t-Butyl alcohol (TBA)	ND	0.050	1	03/24/2017 12:32	
n-Butyl benzene	ND	0.0050	1	03/24/2017 12:32	
sec-Butyl benzene	ND	0.0050	1	03/24/2017 12:32	
tert-Butyl benzene	ND	0.0050	1	03/24/2017 12:32	
Carbon Disulfide	ND	0.0050	1	03/24/2017 12:32	
Carbon Tetrachloride	ND	0.0050	1	03/24/2017 12:32	
Chlorobenzene	ND	0.0050	1	03/24/2017 12:32	
Chloroethane	ND	0.0050	1	03/24/2017 12:32	
Chloroform	ND	0.0050	1	03/24/2017 12:32	
Chloromethane	ND	0.0050	1	03/24/2017 12:32	
2-Chlorotoluene	ND	0.0050	1	03/24/2017 12:32	
4-Chlorotoluene	ND	0.0050	1	03/24/2017 12:32	
Dibromochloromethane	ND	0.0050	1	03/24/2017 12:32	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/24/2017 12:32	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/24/2017 12:32	
Dibromomethane	ND	0.0050	1	03/24/2017 12:32	
1,2-Dichlorobenzene	ND	0.0050	1	03/24/2017 12:32	
1,3-Dichlorobenzene	ND	0.0050	1	03/24/2017 12:32	
1,4-Dichlorobenzene	ND	0.0050	1	03/24/2017 12:32	
Dichlorodifluoromethane	ND	0.0050	1	03/24/2017 12:32	
1,1-Dichloroethane	ND	0.0050	1	03/24/2017 12:32	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/24/2017 12:32	
1,1-Dichloroethene	ND	0.0050	1	03/24/2017 12:32	
cis-1,2-Dichloroethene	ND	0.0050	1	03/24/2017 12:32	
trans-1,2-Dichloroethene	ND	0.0050	1	03/24/2017 12:32	
1,2-Dichloropropane	ND	0.0050	1	03/24/2017 12:32	
1,3-Dichloropropane	ND	0.0050	1	03/24/2017 12:32	
2,2-Dichloropropane	ND	0.0050	1	03/24/2017 12:32	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-5	1703B82-005A	Soil	03/21/2017 09:25	GC28	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/24/2017 12:32
cis-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 12:32
trans-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 12:32
Diisopropyl ether (DIPE)	ND	0.0050	1	03/24/2017 12:32
Ethylbenzene	ND	0.0050	1	03/24/2017 12:32
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/24/2017 12:32
Freon 113	ND	0.0050	1	03/24/2017 12:32
Hexachlorobutadiene	ND	0.0050	1	03/24/2017 12:32
Hexachloroethane	ND	0.0050	1	03/24/2017 12:32
2-Hexanone	ND	0.0050	1	03/24/2017 12:32
Isopropylbenzene	ND	0.0050	1	03/24/2017 12:32
4-Isopropyl toluene	ND	0.0050	1	03/24/2017 12:32
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/24/2017 12:32
Methylene chloride	ND	0.0050	1	03/24/2017 12:32
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/24/2017 12:32
Naphthalene	ND	0.0050	1	03/24/2017 12:32
n-Propyl benzene	ND	0.0050	1	03/24/2017 12:32
Styrene	ND	0.0050	1	03/24/2017 12:32
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 12:32
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 12:32
Tetrachloroethene	ND	0.0050	1	03/24/2017 12:32
Toluene	ND	0.0050	1	03/24/2017 12:32
1,2,3-Trichlorobenzene	ND	0.0050	1	03/24/2017 12:32
1,2,4-Trichlorobenzene	ND	0.0050	1	03/24/2017 12:32
1,1,1-Trichloroethane	ND	0.0050	1	03/24/2017 12:32
1,1,2-Trichloroethane	ND	0.0050	1	03/24/2017 12:32
Trichloroethene	ND	0.0050	1	03/24/2017 12:32
Trichlorofluoromethane	ND	0.0050	1	03/24/2017 12:32
1,2,3-Trichloropropane	ND	0.0050	1	03/24/2017 12:32
1,2,4-Trimethylbenzene	ND	0.0050	1	03/24/2017 12:32
1,3,5-Trimethylbenzene	ND	0.0050	1	03/24/2017 12:32
Vinyl Chloride	ND	0.0050	1	03/24/2017 12:32
Xylenes, Total	ND	0.0050	1	03/24/2017 12:32

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-5	1703B82-005A	Soil	03/21/2017 09:25	GC28	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	93	70-130		03/24/2017 12:32
Toluene-d8	110	70-130		03/24/2017 12:32
4-BFB	88	70-130		03/24/2017 12:32
Benzene-d6	85	60-140		03/24/2017 12:32
Ethylbenzene-d10	111	60-140		03/24/2017 12:32
1,2-DCB-d4	78	60-140		03/24/2017 12:32

Analyst(s): HK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-10	1703B82-006A	Soil	03/21/2017 09:27	GC16	136105

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/28/2017 15:29
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/28/2017 15:29
Benzene	ND	0.0050	1	03/28/2017 15:29
Bromobenzene	ND	0.0050	1	03/28/2017 15:29
Bromochloromethane	ND	0.0050	1	03/28/2017 15:29
Bromodichloromethane	ND	0.0050	1	03/28/2017 15:29
Bromoform	ND	0.0050	1	03/28/2017 15:29
Bromomethane	ND	0.0050	1	03/28/2017 15:29
2-Butanone (MEK)	ND	0.020	1	03/28/2017 15:29
t-Butyl alcohol (TBA)	ND	0.050	1	03/28/2017 15:29
n-Butyl benzene	ND	0.0050	1	03/28/2017 15:29
sec-Butyl benzene	ND	0.0050	1	03/28/2017 15:29
tert-Butyl benzene	ND	0.0050	1	03/28/2017 15:29
Carbon Disulfide	ND	0.0050	1	03/28/2017 15:29
Carbon Tetrachloride	ND	0.0050	1	03/28/2017 15:29
Chlorobenzene	ND	0.0050	1	03/28/2017 15:29
Chloroethane	ND	0.0050	1	03/28/2017 15:29
Chloroform	ND	0.0050	1	03/28/2017 15:29
Chloromethane	ND	0.0050	1	03/28/2017 15:29
2-Chlorotoluene	ND	0.0050	1	03/28/2017 15:29
4-Chlorotoluene	ND	0.0050	1	03/28/2017 15:29
Dibromochloromethane	ND	0.0050	1	03/28/2017 15:29
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/28/2017 15:29
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/28/2017 15:29
Dibromomethane	ND	0.0050	1	03/28/2017 15:29
1,2-Dichlorobenzene	ND	0.0050	1	03/28/2017 15:29
1,3-Dichlorobenzene	ND	0.0050	1	03/28/2017 15:29
1,4-Dichlorobenzene	ND	0.0050	1	03/28/2017 15:29
Dichlorodifluoromethane	ND	0.0050	1	03/28/2017 15:29
1,1-Dichloroethane	ND	0.0050	1	03/28/2017 15:29
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/28/2017 15:29
1,1-Dichloroethene	ND	0.0050	1	03/28/2017 15:29
cis-1,2-Dichloroethene	ND	0.0050	1	03/28/2017 15:29
trans-1,2-Dichloroethene	ND	0.0050	1	03/28/2017 15:29
1,2-Dichloropropane	ND	0.0050	1	03/28/2017 15:29
1,3-Dichloropropane	ND	0.0050	1	03/28/2017 15:29
2,2-Dichloropropane	ND	0.0050	1	03/28/2017 15:29

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-10	1703B82-006A	Soil	03/21/2017 09:27	GC16	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/28/2017 15:29
cis-1,3-Dichloropropene	ND	0.0050	1	03/28/2017 15:29
trans-1,3-Dichloropropene	ND	0.0050	1	03/28/2017 15:29
Diisopropyl ether (DIPE)	ND	0.0050	1	03/28/2017 15:29
Ethylbenzene	ND	0.0050	1	03/28/2017 15:29
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/28/2017 15:29
Freon 113	ND	0.0050	1	03/28/2017 15:29
Hexachlorobutadiene	ND	0.0050	1	03/28/2017 15:29
Hexachloroethane	ND	0.0050	1	03/28/2017 15:29
2-Hexanone	ND	0.0050	1	03/28/2017 15:29
Isopropylbenzene	ND	0.0050	1	03/28/2017 15:29
4-Isopropyl toluene	ND	0.0050	1	03/28/2017 15:29
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/28/2017 15:29
Methylene chloride	ND	0.0050	1	03/28/2017 15:29
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/28/2017 15:29
Naphthalene	ND	0.0050	1	03/28/2017 15:29
n-Propyl benzene	ND	0.0050	1	03/28/2017 15:29
Styrene	ND	0.0050	1	03/28/2017 15:29
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/28/2017 15:29
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/28/2017 15:29
Tetrachloroethene	ND	0.0050	1	03/28/2017 15:29
Toluene	ND	0.0050	1	03/28/2017 15:29
1,2,3-Trichlorobenzene	ND	0.0050	1	03/28/2017 15:29
1,2,4-Trichlorobenzene	ND	0.0050	1	03/28/2017 15:29
1,1,1-Trichloroethane	ND	0.0050	1	03/28/2017 15:29
1,1,2-Trichloroethane	ND	0.0050	1	03/28/2017 15:29
Trichloroethene	ND	0.0050	1	03/28/2017 15:29
Trichlorofluoromethane	ND	0.0050	1	03/28/2017 15:29
1,2,3-Trichloropropane	ND	0.0050	1	03/28/2017 15:29
1,2,4-Trimethylbenzene	ND	0.0050	1	03/28/2017 15:29
1,3,5-Trimethylbenzene	ND	0.0050	1	03/28/2017 15:29
Vinyl Chloride	ND	0.0050	1	03/28/2017 15:29
Xylenes, Total	ND	0.0050	1	03/28/2017 15:29

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-10	1703B82-006A	Soil	03/21/2017 09:27	GC16	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	88	70-130		03/28/2017 15:29
Toluene-d8	103	70-130		03/28/2017 15:29
4-BFB	116	70-130		03/28/2017 15:29
Benzene-d6	83	60-140		03/28/2017 15:29
Ethylbenzene-d10	96	60-140		03/28/2017 15:29
1,2-DCB-d4	68	60-140		03/28/2017 15:29

Analyst(s): JEM



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-15	1703B82-007A	Soil	03/21/2017 09:30	GC28	136105
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/24/2017 15:06	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/24/2017 15:06	
Benzene	ND	0.0050	1	03/24/2017 15:06	
Bromobenzene	ND	0.0050	1	03/24/2017 15:06	
Bromochloromethane	ND	0.0050	1	03/24/2017 15:06	
Bromodichloromethane	ND	0.0050	1	03/24/2017 15:06	
Bromoform	ND	0.0050	1	03/24/2017 15:06	
Bromomethane	ND	0.0050	1	03/24/2017 15:06	
2-Butanone (MEK)	ND	0.020	1	03/24/2017 15:06	
t-Butyl alcohol (TBA)	ND	0.050	1	03/24/2017 15:06	
n-Butyl benzene	ND	0.0050	1	03/24/2017 15:06	
sec-Butyl benzene	ND	0.0050	1	03/24/2017 15:06	
tert-Butyl benzene	ND	0.0050	1	03/24/2017 15:06	
Carbon Disulfide	ND	0.0050	1	03/24/2017 15:06	
Carbon Tetrachloride	ND	0.0050	1	03/24/2017 15:06	
Chlorobenzene	ND	0.0050	1	03/24/2017 15:06	
Chloroethane	ND	0.0050	1	03/24/2017 15:06	
Chloroform	ND	0.0050	1	03/24/2017 15:06	
Chloromethane	ND	0.0050	1	03/24/2017 15:06	
2-Chlorotoluene	ND	0.0050	1	03/24/2017 15:06	
4-Chlorotoluene	ND	0.0050	1	03/24/2017 15:06	
Dibromochloromethane	ND	0.0050	1	03/24/2017 15:06	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/24/2017 15:06	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/24/2017 15:06	
Dibromomethane	ND	0.0050	1	03/24/2017 15:06	
1,2-Dichlorobenzene	ND	0.0050	1	03/24/2017 15:06	
1,3-Dichlorobenzene	ND	0.0050	1	03/24/2017 15:06	
1,4-Dichlorobenzene	ND	0.0050	1	03/24/2017 15:06	
Dichlorodifluoromethane	ND	0.0050	1	03/24/2017 15:06	
1,1-Dichloroethane	ND	0.0050	1	03/24/2017 15:06	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/24/2017 15:06	
1,1-Dichloroethene	ND	0.0050	1	03/24/2017 15:06	
cis-1,2-Dichloroethene	ND	0.0050	1	03/24/2017 15:06	
trans-1,2-Dichloroethene	ND	0.0050	1	03/24/2017 15:06	
1,2-Dichloropropane	ND	0.0050	1	03/24/2017 15:06	
1,3-Dichloropropane	ND	0.0050	1	03/24/2017 15:06	
2,2-Dichloropropane	ND	0.0050	1	03/24/2017 15:06	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-15	1703B82-007A	Soil	03/21/2017 09:30	GC28	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/24/2017 15:06
cis-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 15:06
trans-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 15:06
Diisopropyl ether (DIPE)	ND	0.0050	1	03/24/2017 15:06
Ethylbenzene	ND	0.0050	1	03/24/2017 15:06
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/24/2017 15:06
Freon 113	ND	0.0050	1	03/24/2017 15:06
Hexachlorobutadiene	ND	0.0050	1	03/24/2017 15:06
Hexachloroethane	ND	0.0050	1	03/24/2017 15:06
2-Hexanone	ND	0.0050	1	03/24/2017 15:06
Isopropylbenzene	ND	0.0050	1	03/24/2017 15:06
4-Isopropyl toluene	ND	0.0050	1	03/24/2017 15:06
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/24/2017 15:06
Methylene chloride	ND	0.0050	1	03/24/2017 15:06
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/24/2017 15:06
Naphthalene	ND	0.0050	1	03/24/2017 15:06
n-Propyl benzene	ND	0.0050	1	03/24/2017 15:06
Styrene	ND	0.0050	1	03/24/2017 15:06
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 15:06
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 15:06
Tetrachloroethene	ND	0.0050	1	03/24/2017 15:06
Toluene	ND	0.0050	1	03/24/2017 15:06
1,2,3-Trichlorobenzene	ND	0.0050	1	03/24/2017 15:06
1,2,4-Trichlorobenzene	ND	0.0050	1	03/24/2017 15:06
1,1,1-Trichloroethane	ND	0.0050	1	03/24/2017 15:06
1,1,2-Trichloroethane	ND	0.0050	1	03/24/2017 15:06
Trichloroethene	ND	0.0050	1	03/24/2017 15:06
Trichlorofluoromethane	ND	0.0050	1	03/24/2017 15:06
1,2,3-Trichloropropane	ND	0.0050	1	03/24/2017 15:06
1,2,4-Trimethylbenzene	ND	0.0050	1	03/24/2017 15:06
1,3,5-Trimethylbenzene	ND	0.0050	1	03/24/2017 15:06
Vinyl Chloride	ND	0.0050	1	03/24/2017 15:06
Xylenes, Total	ND	0.0050	1	03/24/2017 15:06

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-15	1703B82-007A	Soil	03/21/2017 09:30	GC28	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	96	70-130		03/24/2017 15:06
Toluene-d8	110	70-130		03/24/2017 15:06
4-BFB	91	70-130		03/24/2017 15:06
Benzene-d6	83	60-140		03/24/2017 15:06
Ethylbenzene-d10	107	60-140		03/24/2017 15:06
1,2-DCB-d4	76	60-140		03/24/2017 15:06

Analyst(s): HK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-20	1703B82-008A	Soil	03/21/2017 09:32	GC28	136105

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/24/2017 15:45
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/24/2017 15:45
Benzene	ND	0.0050	1	03/24/2017 15:45
Bromobenzene	ND	0.0050	1	03/24/2017 15:45
Bromochloromethane	ND	0.0050	1	03/24/2017 15:45
Bromodichloromethane	ND	0.0050	1	03/24/2017 15:45
Bromoform	ND	0.0050	1	03/24/2017 15:45
Bromomethane	ND	0.0050	1	03/24/2017 15:45
2-Butanone (MEK)	ND	0.020	1	03/24/2017 15:45
t-Butyl alcohol (TBA)	ND	0.050	1	03/24/2017 15:45
n-Butyl benzene	ND	0.0050	1	03/24/2017 15:45
sec-Butyl benzene	ND	0.0050	1	03/24/2017 15:45
tert-Butyl benzene	ND	0.0050	1	03/24/2017 15:45
Carbon Disulfide	ND	0.0050	1	03/24/2017 15:45
Carbon Tetrachloride	ND	0.0050	1	03/24/2017 15:45
Chlorobenzene	ND	0.0050	1	03/24/2017 15:45
Chloroethane	ND	0.0050	1	03/24/2017 15:45
Chloroform	ND	0.0050	1	03/24/2017 15:45
Chloromethane	ND	0.0050	1	03/24/2017 15:45
2-Chlorotoluene	ND	0.0050	1	03/24/2017 15:45
4-Chlorotoluene	ND	0.0050	1	03/24/2017 15:45
Dibromochloromethane	ND	0.0050	1	03/24/2017 15:45
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/24/2017 15:45
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/24/2017 15:45
Dibromomethane	ND	0.0050	1	03/24/2017 15:45
1,2-Dichlorobenzene	ND	0.0050	1	03/24/2017 15:45
1,3-Dichlorobenzene	ND	0.0050	1	03/24/2017 15:45
1,4-Dichlorobenzene	ND	0.0050	1	03/24/2017 15:45
Dichlorodifluoromethane	ND	0.0050	1	03/24/2017 15:45
1,1-Dichloroethane	ND	0.0050	1	03/24/2017 15:45
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/24/2017 15:45
1,1-Dichloroethene	ND	0.0050	1	03/24/2017 15:45
cis-1,2-Dichloroethene	ND	0.0050	1	03/24/2017 15:45
trans-1,2-Dichloroethene	ND	0.0050	1	03/24/2017 15:45
1,2-Dichloropropane	ND	0.0050	1	03/24/2017 15:45
1,3-Dichloropropane	ND	0.0050	1	03/24/2017 15:45
2,2-Dichloropropane	ND	0.0050	1	03/24/2017 15:45

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-20	1703B82-008A	Soil	03/21/2017 09:32	GC28	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/24/2017 15:45
cis-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 15:45
trans-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 15:45
Diisopropyl ether (DIPE)	ND	0.0050	1	03/24/2017 15:45
Ethylbenzene	ND	0.0050	1	03/24/2017 15:45
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/24/2017 15:45
Freon 113	ND	0.0050	1	03/24/2017 15:45
Hexachlorobutadiene	ND	0.0050	1	03/24/2017 15:45
Hexachloroethane	ND	0.0050	1	03/24/2017 15:45
2-Hexanone	ND	0.0050	1	03/24/2017 15:45
Isopropylbenzene	ND	0.0050	1	03/24/2017 15:45
4-Isopropyl toluene	ND	0.0050	1	03/24/2017 15:45
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/24/2017 15:45
Methylene chloride	ND	0.0050	1	03/24/2017 15:45
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/24/2017 15:45
Naphthalene	ND	0.0050	1	03/24/2017 15:45
n-Propyl benzene	ND	0.0050	1	03/24/2017 15:45
Styrene	ND	0.0050	1	03/24/2017 15:45
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 15:45
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 15:45
Tetrachloroethene	ND	0.0050	1	03/24/2017 15:45
Toluene	ND	0.0050	1	03/24/2017 15:45
1,2,3-Trichlorobenzene	ND	0.0050	1	03/24/2017 15:45
1,2,4-Trichlorobenzene	ND	0.0050	1	03/24/2017 15:45
1,1,1-Trichloroethane	ND	0.0050	1	03/24/2017 15:45
1,1,2-Trichloroethane	ND	0.0050	1	03/24/2017 15:45
Trichloroethene	ND	0.0050	1	03/24/2017 15:45
Trichlorofluoromethane	ND	0.0050	1	03/24/2017 15:45
1,2,3-Trichloropropane	ND	0.0050	1	03/24/2017 15:45
1,2,4-Trimethylbenzene	ND	0.0050	1	03/24/2017 15:45
1,3,5-Trimethylbenzene	ND	0.0050	1	03/24/2017 15:45
Vinyl Chloride	ND	0.0050	1	03/24/2017 15:45
Xylenes, Total	ND	0.0050	1	03/24/2017 15:45

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-20	1703B82-008A	Soil	03/21/2017 09:32	GC28	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	96	70-130		03/24/2017 15:45
Toluene-d8	111	70-130		03/24/2017 15:45
4-BFB	87	70-130		03/24/2017 15:45
Benzene-d6	84	60-140		03/24/2017 15:45
Ethylbenzene-d10	110	60-140		03/24/2017 15:45
1,2-DCB-d4	78	60-140		03/24/2017 15:45

Analyst(s): HK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-5	1703B82-009A	Soil	03/21/2017 09:52	GC10	136105

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/24/2017 15:45
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/24/2017 15:45
Benzene	ND	0.0050	1	03/24/2017 15:45
Bromobenzene	ND	0.0050	1	03/24/2017 15:45
Bromochloromethane	ND	0.0050	1	03/24/2017 15:45
Bromodichloromethane	ND	0.0050	1	03/24/2017 15:45
Bromoform	ND	0.0050	1	03/24/2017 15:45
Bromomethane	ND	0.0050	1	03/24/2017 15:45
2-Butanone (MEK)	ND	0.020	1	03/24/2017 15:45
t-Butyl alcohol (TBA)	ND	0.050	1	03/24/2017 15:45
n-Butyl benzene	ND	0.0050	1	03/24/2017 15:45
sec-Butyl benzene	ND	0.0050	1	03/24/2017 15:45
tert-Butyl benzene	ND	0.0050	1	03/24/2017 15:45
Carbon Disulfide	ND	0.0050	1	03/24/2017 15:45
Carbon Tetrachloride	ND	0.0050	1	03/24/2017 15:45
Chlorobenzene	ND	0.0050	1	03/24/2017 15:45
Chloroethane	ND	0.0050	1	03/24/2017 15:45
Chloroform	ND	0.0050	1	03/24/2017 15:45
Chloromethane	ND	0.0050	1	03/24/2017 15:45
2-Chlorotoluene	ND	0.0050	1	03/24/2017 15:45
4-Chlorotoluene	ND	0.0050	1	03/24/2017 15:45
Dibromochloromethane	ND	0.0050	1	03/24/2017 15:45
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/24/2017 15:45
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/24/2017 15:45
Dibromomethane	ND	0.0050	1	03/24/2017 15:45
1,2-Dichlorobenzene	ND	0.0050	1	03/24/2017 15:45
1,3-Dichlorobenzene	ND	0.0050	1	03/24/2017 15:45
1,4-Dichlorobenzene	ND	0.0050	1	03/24/2017 15:45
Dichlorodifluoromethane	ND	0.0050	1	03/24/2017 15:45
1,1-Dichloroethane	ND	0.0050	1	03/24/2017 15:45
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/24/2017 15:45
1,1-Dichloroethene	ND	0.0050	1	03/24/2017 15:45
cis-1,2-Dichloroethene	ND	0.0050	1	03/24/2017 15:45
trans-1,2-Dichloroethene	ND	0.0050	1	03/24/2017 15:45
1,2-Dichloropropane	ND	0.0050	1	03/24/2017 15:45
1,3-Dichloropropane	ND	0.0050	1	03/24/2017 15:45
2,2-Dichloropropane	ND	0.0050	1	03/24/2017 15:45

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-5	1703B82-009A	Soil	03/21/2017 09:52	GC10	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/24/2017 15:45
cis-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 15:45
trans-1,3-Dichloropropene	ND	0.0050	1	03/24/2017 15:45
Diisopropyl ether (DIPE)	ND	0.0050	1	03/24/2017 15:45
Ethylbenzene	ND	0.0050	1	03/24/2017 15:45
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/24/2017 15:45
Freon 113	ND	0.0050	1	03/24/2017 15:45
Hexachlorobutadiene	ND	0.0050	1	03/24/2017 15:45
Hexachloroethane	ND	0.0050	1	03/24/2017 15:45
2-Hexanone	ND	0.0050	1	03/24/2017 15:45
Isopropylbenzene	ND	0.0050	1	03/24/2017 15:45
4-Isopropyl toluene	ND	0.0050	1	03/24/2017 15:45
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/24/2017 15:45
Methylene chloride	ND	0.0050	1	03/24/2017 15:45
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/24/2017 15:45
Naphthalene	ND	0.0050	1	03/24/2017 15:45
n-Propyl benzene	ND	0.0050	1	03/24/2017 15:45
Styrene	ND	0.0050	1	03/24/2017 15:45
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 15:45
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/24/2017 15:45
Tetrachloroethene	ND	0.0050	1	03/24/2017 15:45
Toluene	ND	0.0050	1	03/24/2017 15:45
1,2,3-Trichlorobenzene	ND	0.0050	1	03/24/2017 15:45
1,2,4-Trichlorobenzene	ND	0.0050	1	03/24/2017 15:45
1,1,1-Trichloroethane	ND	0.0050	1	03/24/2017 15:45
1,1,2-Trichloroethane	ND	0.0050	1	03/24/2017 15:45
Trichloroethene	ND	0.0050	1	03/24/2017 15:45
Trichlorofluoromethane	ND	0.0050	1	03/24/2017 15:45
1,2,3-Trichloropropane	ND	0.0050	1	03/24/2017 15:45
1,2,4-Trimethylbenzene	ND	0.0050	1	03/24/2017 15:45
1,3,5-Trimethylbenzene	ND	0.0050	1	03/24/2017 15:45
Vinyl Chloride	ND	0.0050	1	03/24/2017 15:45
Xylenes, Total	ND	0.0050	1	03/24/2017 15:45

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-5	1703B82-009A	Soil	03/21/2017 09:52	GC10	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	88	70-130		03/24/2017 15:45
Toluene-d8	111	70-130		03/24/2017 15:45
4-BFB	84	70-130		03/24/2017 15:45
Benzene-d6	72	60-140		03/24/2017 15:45
Ethylbenzene-d10	87	60-140		03/24/2017 15:45
1,2-DCB-d4	64	60-140		03/24/2017 15:45

Analyst(s): HK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-9	1703B82-010A	Soil	03/21/2017 09:55	GC18	136105
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		20	200	03/27/2017 14:03
tert-Amyl methyl ether (TAME)	ND		1.0	200	03/27/2017 14:03
Benzene	ND		1.0	200	03/27/2017 14:03
Bromobenzene	ND		1.0	200	03/27/2017 14:03
Bromochloromethane	ND		1.0	200	03/27/2017 14:03
Bromodichloromethane	ND		1.0	200	03/27/2017 14:03
Bromoform	ND		1.0	200	03/27/2017 14:03
Bromomethane	ND		1.0	200	03/27/2017 14:03
2-Butanone (MEK)	ND		4.0	200	03/27/2017 14:03
t-Butyl alcohol (TBA)	ND		10	200	03/27/2017 14:03
n-Butyl benzene	1.6		1.0	200	03/27/2017 14:03
sec-Butyl benzene	1.2		1.0	200	03/27/2017 14:03
tert-Butyl benzene	ND		1.0	200	03/27/2017 14:03
Carbon Disulfide	ND		1.0	200	03/27/2017 14:03
Carbon Tetrachloride	ND		1.0	200	03/27/2017 14:03
Chlorobenzene	ND		1.0	200	03/27/2017 14:03
Chloroethane	ND		1.0	200	03/27/2017 14:03
Chloroform	ND		1.0	200	03/27/2017 14:03
Chloromethane	ND		1.0	200	03/27/2017 14:03
2-Chlorotoluene	ND		1.0	200	03/27/2017 14:03
4-Chlorotoluene	ND		1.0	200	03/27/2017 14:03
Dibromochloromethane	ND		1.0	200	03/27/2017 14:03
1,2-Dibromo-3-chloropropane	ND		0.80	200	03/27/2017 14:03
1,2-Dibromoethane (EDB)	ND		0.80	200	03/27/2017 14:03
Dibromomethane	ND		1.0	200	03/27/2017 14:03
1,2-Dichlorobenzene	ND		1.0	200	03/27/2017 14:03
1,3-Dichlorobenzene	ND		1.0	200	03/27/2017 14:03
1,4-Dichlorobenzene	ND		1.0	200	03/27/2017 14:03
Dichlorodifluoromethane	ND		1.0	200	03/27/2017 14:03
1,1-Dichloroethane	ND		1.0	200	03/27/2017 14:03
1,2-Dichloroethane (1,2-DCA)	ND		0.80	200	03/27/2017 14:03
1,1-Dichloroethene	ND		1.0	200	03/27/2017 14:03
cis-1,2-Dichloroethene	ND		1.0	200	03/27/2017 14:03
trans-1,2-Dichloroethene	ND		1.0	200	03/27/2017 14:03
1,2-Dichloropropane	ND		1.0	200	03/27/2017 14:03
1,3-Dichloropropane	ND		1.0	200	03/27/2017 14:03
2,2-Dichloropropane	ND		1.0	200	03/27/2017 14:03

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-9	1703B82-010A	Soil	03/21/2017 09:55	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	1.0	200	03/27/2017 14:03
cis-1,3-Dichloropropene	ND	1.0	200	03/27/2017 14:03
trans-1,3-Dichloropropene	ND	1.0	200	03/27/2017 14:03
Diisopropyl ether (DIPE)	ND	1.0	200	03/27/2017 14:03
Ethylbenzene	ND	1.0	200	03/27/2017 14:03
Ethyl tert-butyl ether (ETBE)	ND	1.0	200	03/27/2017 14:03
Freon 113	ND	1.0	200	03/27/2017 14:03
Hexachlorobutadiene	ND	1.0	200	03/27/2017 14:03
Hexachloroethane	ND	1.0	200	03/27/2017 14:03
2-Hexanone	ND	1.0	200	03/27/2017 14:03
Isopropylbenzene	ND	1.0	200	03/27/2017 14:03
4-Isopropyl toluene	ND	1.0	200	03/27/2017 14:03
Methyl-t-butyl ether (MTBE)	ND	1.0	200	03/27/2017 14:03
Methylene chloride	ND	1.0	200	03/27/2017 14:03
4-Methyl-2-pentanone (MIBK)	ND	1.0	200	03/27/2017 14:03
Naphthalene	ND	1.0	200	03/27/2017 14:03
n-Propyl benzene	ND	1.0	200	03/27/2017 14:03
Styrene	ND	1.0	200	03/27/2017 14:03
1,1,1,2-Tetrachloroethane	ND	1.0	200	03/27/2017 14:03
1,1,2,2-Tetrachloroethane	ND	1.0	200	03/27/2017 14:03
Tetrachloroethene	ND	1.0	200	03/27/2017 14:03
Toluene	ND	1.0	200	03/27/2017 14:03
1,2,3-Trichlorobenzene	ND	1.0	200	03/27/2017 14:03
1,2,4-Trichlorobenzene	ND	1.0	200	03/27/2017 14:03
1,1,1-Trichloroethane	ND	1.0	200	03/27/2017 14:03
1,1,2-Trichloroethane	ND	1.0	200	03/27/2017 14:03
Trichloroethene	ND	1.0	200	03/27/2017 14:03
Trichlorofluoromethane	ND	1.0	200	03/27/2017 14:03
1,2,3-Trichloropropane	ND	1.0	200	03/27/2017 14:03
1,2,4-Trimethylbenzene	ND	1.0	200	03/27/2017 14:03
1,3,5-Trimethylbenzene	ND	1.0	200	03/27/2017 14:03
Vinyl Chloride	ND	1.0	200	03/27/2017 14:03
Xylenes, Total	ND	1.0	200	03/27/2017 14:03

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-9	1703B82-010A	Soil	03/21/2017 09:55	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
Dibromofluoromethane	103		70-130	03/27/2017 14:03
Toluene-d8	97		70-130	03/27/2017 14:03
4-BFB	92		70-130	03/27/2017 14:03
Benzene-d6	92		60-140	03/27/2017 14:03
Ethylbenzene-d10	241	S	60-140	03/27/2017 14:03
1,2-DCB-d4	140		60-140	03/27/2017 14:03

Analyst(s): KF

Analytical Comments: c7



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-15	1703B82-011A	Soil	03/21/2017 09:57	GC18	136105
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	03/29/2017 20:03
tert-Amyl methyl ether (TAME)	ND		0.0050	1	03/29/2017 20:03
Benzene	ND		0.0050	1	03/29/2017 20:03
Bromobenzene	ND		0.0050	1	03/29/2017 20:03
Bromochloromethane	ND		0.0050	1	03/29/2017 20:03
Bromodichloromethane	ND		0.0050	1	03/29/2017 20:03
Bromoform	ND		0.0050	1	03/29/2017 20:03
Bromomethane	ND		0.0050	1	03/29/2017 20:03
2-Butanone (MEK)	ND		0.020	1	03/29/2017 20:03
t-Butyl alcohol (TBA)	ND		0.050	1	03/29/2017 20:03
n-Butyl benzene	0.020		0.0050	1	03/29/2017 20:03
sec-Butyl benzene	0.0069		0.0050	1	03/29/2017 20:03
tert-Butyl benzene	ND		0.0050	1	03/29/2017 20:03
Carbon Disulfide	ND		0.0050	1	03/29/2017 20:03
Carbon Tetrachloride	ND		0.0050	1	03/29/2017 20:03
Chlorobenzene	ND		0.0050	1	03/29/2017 20:03
Chloroethane	ND		0.0050	1	03/29/2017 20:03
Chloroform	ND		0.0050	1	03/29/2017 20:03
Chloromethane	ND		0.0050	1	03/29/2017 20:03
2-Chlorotoluene	ND		0.0050	1	03/29/2017 20:03
4-Chlorotoluene	ND		0.0050	1	03/29/2017 20:03
Dibromochloromethane	ND		0.0050	1	03/29/2017 20:03
1,2-Dibromo-3-chloropropane	ND		0.0040	1	03/29/2017 20:03
1,2-Dibromoethane (EDB)	ND		0.0040	1	03/29/2017 20:03
Dibromomethane	ND		0.0050	1	03/29/2017 20:03
1,2-Dichlorobenzene	ND		0.0050	1	03/29/2017 20:03
1,3-Dichlorobenzene	ND		0.0050	1	03/29/2017 20:03
1,4-Dichlorobenzene	ND		0.0050	1	03/29/2017 20:03
Dichlorodifluoromethane	ND		0.0050	1	03/29/2017 20:03
1,1-Dichloroethane	ND		0.0050	1	03/29/2017 20:03
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	03/29/2017 20:03
1,1-Dichloroethene	ND		0.0050	1	03/29/2017 20:03
cis-1,2-Dichloroethene	ND		0.0050	1	03/29/2017 20:03
trans-1,2-Dichloroethene	ND		0.0050	1	03/29/2017 20:03
1,2-Dichloropropane	ND		0.0050	1	03/29/2017 20:03
1,3-Dichloropropane	ND		0.0050	1	03/29/2017 20:03
2,2-Dichloropropane	ND		0.0050	1	03/29/2017 20:03

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-15	1703B82-011A	Soil	03/21/2017 09:57	GC18	136105
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	03/29/2017 20:03
cis-1,3-Dichloropropene	ND		0.0050	1	03/29/2017 20:03
trans-1,3-Dichloropropene	ND		0.0050	1	03/29/2017 20:03
Diisopropyl ether (DIPE)	ND		0.0050	1	03/29/2017 20:03
Ethylbenzene	ND		0.0050	1	03/29/2017 20:03
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	03/29/2017 20:03
Freon 113	ND		0.0050	1	03/29/2017 20:03
Hexachlorobutadiene	ND		0.0050	1	03/29/2017 20:03
Hexachloroethane	ND		0.0050	1	03/29/2017 20:03
2-Hexanone	ND		0.0050	1	03/29/2017 20:03
Isopropylbenzene	ND		0.0050	1	03/29/2017 20:03
4-Isopropyl toluene	ND		0.0050	1	03/29/2017 20:03
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	03/29/2017 20:03
Methylene chloride	ND		0.0050	1	03/29/2017 20:03
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	03/29/2017 20:03
Naphthalene	ND		0.0050	1	03/29/2017 20:03
n-Propyl benzene	0.013		0.0050	1	03/29/2017 20:03
Styrene	ND		0.0050	1	03/29/2017 20:03
1,1,1,2-Tetrachloroethane	ND		0.0050	1	03/29/2017 20:03
1,1,2,2-Tetrachloroethane	ND		0.0050	1	03/29/2017 20:03
Tetrachloroethene	ND		0.0050	1	03/29/2017 20:03
Toluene	ND		0.0050	1	03/29/2017 20:03
1,2,3-Trichlorobenzene	ND		0.0050	1	03/29/2017 20:03
1,2,4-Trichlorobenzene	ND		0.0050	1	03/29/2017 20:03
1,1,1-Trichloroethane	ND		0.0050	1	03/29/2017 20:03
1,1,2-Trichloroethane	ND		0.0050	1	03/29/2017 20:03
Trichloroethene	ND		0.0050	1	03/29/2017 20:03
Trichlorofluoromethane	ND		0.0050	1	03/29/2017 20:03
1,2,3-Trichloropropane	ND		0.0050	1	03/29/2017 20:03
1,2,4-Trimethylbenzene	0.034		0.0050	1	03/29/2017 20:03
1,3,5-Trimethylbenzene	0.012		0.0050	1	03/29/2017 20:03
Vinyl Chloride	ND		0.0050	1	03/29/2017 20:03
Xylenes, Total	ND		0.0050	1	03/29/2017 20:03

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-15	1703B82-011A	Soil	03/21/2017 09:57	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	98	70-130		03/29/2017 20:03
Toluene-d8	107	70-130		03/29/2017 20:03
4-BFB	97	70-130		03/29/2017 20:03
Benzene-d6	80	60-140		03/29/2017 20:03
Ethylbenzene-d10	94	60-140		03/29/2017 20:03
1,2-DCB-d4	75	60-140		03/29/2017 20:03

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-19	1703B82-012A	Soil	03/21/2017 10:01	GC18	136105
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/28/2017 15:47	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/28/2017 15:47	
Benzene	ND	0.0050	1	03/28/2017 15:47	
Bromobenzene	ND	0.0050	1	03/28/2017 15:47	
Bromochloromethane	ND	0.0050	1	03/28/2017 15:47	
Bromodichloromethane	ND	0.0050	1	03/28/2017 15:47	
Bromoform	ND	0.0050	1	03/28/2017 15:47	
Bromomethane	ND	0.0050	1	03/28/2017 15:47	
2-Butanone (MEK)	ND	0.020	1	03/28/2017 15:47	
t-Butyl alcohol (TBA)	ND	0.050	1	03/28/2017 15:47	
n-Butyl benzene	ND	0.0050	1	03/28/2017 15:47	
sec-Butyl benzene	ND	0.0050	1	03/28/2017 15:47	
tert-Butyl benzene	ND	0.0050	1	03/28/2017 15:47	
Carbon Disulfide	ND	0.0050	1	03/28/2017 15:47	
Carbon Tetrachloride	ND	0.0050	1	03/28/2017 15:47	
Chlorobenzene	ND	0.0050	1	03/28/2017 15:47	
Chloroethane	ND	0.0050	1	03/28/2017 15:47	
Chloroform	ND	0.0050	1	03/28/2017 15:47	
Chloromethane	ND	0.0050	1	03/28/2017 15:47	
2-Chlorotoluene	ND	0.0050	1	03/28/2017 15:47	
4-Chlorotoluene	ND	0.0050	1	03/28/2017 15:47	
Dibromochloromethane	ND	0.0050	1	03/28/2017 15:47	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/28/2017 15:47	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/28/2017 15:47	
Dibromomethane	ND	0.0050	1	03/28/2017 15:47	
1,2-Dichlorobenzene	ND	0.0050	1	03/28/2017 15:47	
1,3-Dichlorobenzene	ND	0.0050	1	03/28/2017 15:47	
1,4-Dichlorobenzene	ND	0.0050	1	03/28/2017 15:47	
Dichlorodifluoromethane	ND	0.0050	1	03/28/2017 15:47	
1,1-Dichloroethane	ND	0.0050	1	03/28/2017 15:47	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/28/2017 15:47	
1,1-Dichloroethene	ND	0.0050	1	03/28/2017 15:47	
cis-1,2-Dichloroethene	ND	0.0050	1	03/28/2017 15:47	
trans-1,2-Dichloroethene	ND	0.0050	1	03/28/2017 15:47	
1,2-Dichloropropane	ND	0.0050	1	03/28/2017 15:47	
1,3-Dichloropropane	ND	0.0050	1	03/28/2017 15:47	
2,2-Dichloropropane	ND	0.0050	1	03/28/2017 15:47	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-19	1703B82-012A	Soil	03/21/2017 10:01	GC18	136105
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.0050	1	03/28/2017 15:47
cis-1,3-Dichloropropene	ND		0.0050	1	03/28/2017 15:47
trans-1,3-Dichloropropene	ND		0.0050	1	03/28/2017 15:47
Diisopropyl ether (DIPE)	ND		0.0050	1	03/28/2017 15:47
Ethylbenzene	ND		0.0050	1	03/28/2017 15:47
Ethyl tert-butyl ether (ETBE)	ND		0.0050	1	03/28/2017 15:47
Freon 113	ND		0.0050	1	03/28/2017 15:47
Hexachlorobutadiene	ND		0.0050	1	03/28/2017 15:47
Hexachloroethane	ND		0.0050	1	03/28/2017 15:47
2-Hexanone	ND		0.0050	1	03/28/2017 15:47
Isopropylbenzene	ND		0.0050	1	03/28/2017 15:47
4-Isopropyl toluene	ND		0.0050	1	03/28/2017 15:47
Methyl-t-butyl ether (MTBE)	ND		0.0050	1	03/28/2017 15:47
Methylene chloride	ND		0.0050	1	03/28/2017 15:47
4-Methyl-2-pentanone (MIBK)	ND		0.0050	1	03/28/2017 15:47
Naphthalene	ND		0.0050	1	03/28/2017 15:47
n-Propyl benzene	ND		0.0050	1	03/28/2017 15:47
Styrene	ND		0.0050	1	03/28/2017 15:47
1,1,1,2-Tetrachloroethane	ND		0.0050	1	03/28/2017 15:47
1,1,2,2-Tetrachloroethane	ND		0.0050	1	03/28/2017 15:47
Tetrachloroethene	ND		0.0050	1	03/28/2017 15:47
Toluene	ND		0.0050	1	03/28/2017 15:47
1,2,3-Trichlorobenzene	ND		0.0050	1	03/28/2017 15:47
1,2,4-Trichlorobenzene	ND		0.0050	1	03/28/2017 15:47
1,1,1-Trichloroethane	ND		0.0050	1	03/28/2017 15:47
1,1,2-Trichloroethane	ND		0.0050	1	03/28/2017 15:47
Trichloroethene	ND		0.0050	1	03/28/2017 15:47
Trichlorofluoromethane	ND		0.0050	1	03/28/2017 15:47
1,2,3-Trichloropropane	ND		0.0050	1	03/28/2017 15:47
1,2,4-Trimethylbenzene	ND		0.0050	1	03/28/2017 15:47
1,3,5-Trimethylbenzene	ND		0.0050	1	03/28/2017 15:47
Vinyl Chloride	ND		0.0050	1	03/28/2017 15:47
Xylenes, Total	ND		0.0050	1	03/28/2017 15:47

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-19	1703B82-012A	Soil	03/21/2017 10:01	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	100	70-130		03/28/2017 15:47
Toluene-d8	105	70-130		03/28/2017 15:47
4-BFB	95	70-130		03/28/2017 15:47
Benzene-d6	73	60-140		03/28/2017 15:47
Ethylbenzene-d10	84	60-140		03/28/2017 15:47
1,2-DCB-d4	71	60-140		03/28/2017 15:47

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-5	1703B82-013A	Soil	03/21/2017 10:12	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/29/2017 17:24
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/29/2017 17:24
Benzene	ND	0.0050	1	03/29/2017 17:24
Bromobenzene	ND	0.0050	1	03/29/2017 17:24
Bromochloromethane	ND	0.0050	1	03/29/2017 17:24
Bromodichloromethane	ND	0.0050	1	03/29/2017 17:24
Bromoform	ND	0.0050	1	03/29/2017 17:24
Bromomethane	ND	0.0050	1	03/29/2017 17:24
2-Butanone (MEK)	ND	0.020	1	03/29/2017 17:24
t-Butyl alcohol (TBA)	ND	0.050	1	03/29/2017 17:24
n-Butyl benzene	ND	0.0050	1	03/29/2017 17:24
sec-Butyl benzene	ND	0.0050	1	03/29/2017 17:24
tert-Butyl benzene	ND	0.0050	1	03/29/2017 17:24
Carbon Disulfide	ND	0.0050	1	03/29/2017 17:24
Carbon Tetrachloride	ND	0.0050	1	03/29/2017 17:24
Chlorobenzene	ND	0.0050	1	03/29/2017 17:24
Chloroethane	ND	0.0050	1	03/29/2017 17:24
Chloroform	ND	0.0050	1	03/29/2017 17:24
Chloromethane	ND	0.0050	1	03/29/2017 17:24
2-Chlorotoluene	ND	0.0050	1	03/29/2017 17:24
4-Chlorotoluene	ND	0.0050	1	03/29/2017 17:24
Dibromochloromethane	ND	0.0050	1	03/29/2017 17:24
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/29/2017 17:24
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/29/2017 17:24
Dibromomethane	ND	0.0050	1	03/29/2017 17:24
1,2-Dichlorobenzene	ND	0.0050	1	03/29/2017 17:24
1,3-Dichlorobenzene	ND	0.0050	1	03/29/2017 17:24
1,4-Dichlorobenzene	ND	0.0050	1	03/29/2017 17:24
Dichlorodifluoromethane	ND	0.0050	1	03/29/2017 17:24
1,1-Dichloroethane	ND	0.0050	1	03/29/2017 17:24
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/29/2017 17:24
1,1-Dichloroethene	ND	0.0050	1	03/29/2017 17:24
cis-1,2-Dichloroethene	ND	0.0050	1	03/29/2017 17:24
trans-1,2-Dichloroethene	ND	0.0050	1	03/29/2017 17:24
1,2-Dichloropropane	ND	0.0050	1	03/29/2017 17:24
1,3-Dichloropropane	ND	0.0050	1	03/29/2017 17:24
2,2-Dichloropropane	ND	0.0050	1	03/29/2017 17:24

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-5	1703B82-013A	Soil	03/21/2017 10:12	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/29/2017 17:24
cis-1,3-Dichloropropene	ND	0.0050	1	03/29/2017 17:24
trans-1,3-Dichloropropene	ND	0.0050	1	03/29/2017 17:24
Diisopropyl ether (DIPE)	ND	0.0050	1	03/29/2017 17:24
Ethylbenzene	ND	0.0050	1	03/29/2017 17:24
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/29/2017 17:24
Freon 113	ND	0.0050	1	03/29/2017 17:24
Hexachlorobutadiene	ND	0.0050	1	03/29/2017 17:24
Hexachloroethane	ND	0.0050	1	03/29/2017 17:24
2-Hexanone	ND	0.0050	1	03/29/2017 17:24
Isopropylbenzene	ND	0.0050	1	03/29/2017 17:24
4-Isopropyl toluene	ND	0.0050	1	03/29/2017 17:24
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/29/2017 17:24
Methylene chloride	ND	0.0050	1	03/29/2017 17:24
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/29/2017 17:24
Naphthalene	ND	0.0050	1	03/29/2017 17:24
n-Propyl benzene	ND	0.0050	1	03/29/2017 17:24
Styrene	ND	0.0050	1	03/29/2017 17:24
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/29/2017 17:24
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/29/2017 17:24
Tetrachloroethene	ND	0.0050	1	03/29/2017 17:24
Toluene	ND	0.0050	1	03/29/2017 17:24
1,2,3-Trichlorobenzene	ND	0.0050	1	03/29/2017 17:24
1,2,4-Trichlorobenzene	ND	0.0050	1	03/29/2017 17:24
1,1,1-Trichloroethane	ND	0.0050	1	03/29/2017 17:24
1,1,2-Trichloroethane	ND	0.0050	1	03/29/2017 17:24
Trichloroethene	ND	0.0050	1	03/29/2017 17:24
Trichlorofluoromethane	ND	0.0050	1	03/29/2017 17:24
1,2,3-Trichloropropane	ND	0.0050	1	03/29/2017 17:24
1,2,4-Trimethylbenzene	ND	0.0050	1	03/29/2017 17:24
1,3,5-Trimethylbenzene	ND	0.0050	1	03/29/2017 17:24
Vinyl Chloride	ND	0.0050	1	03/29/2017 17:24
Xylenes, Total	ND	0.0050	1	03/29/2017 17:24

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-5	1703B82-013A	Soil	03/21/2017 10:12	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	100	70-130		03/29/2017 17:24
Toluene-d8	106	70-130		03/29/2017 17:24
4-BFB	94	70-130		03/29/2017 17:24
Benzene-d6	81	60-140		03/29/2017 17:24
Ethylbenzene-d10	92	60-140		03/29/2017 17:24
1,2-DCB-d4	71	60-140		03/29/2017 17:24

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-10	1703B82-014A	Soil	03/21/2017 10:14	GC18	136105
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		50	500	03/30/2017 13:10
tert-Amyl methyl ether (TAME)	ND		2.5	500	03/30/2017 13:10
Benzene	ND		2.5	500	03/30/2017 13:10
Bromobenzene	ND		2.5	500	03/30/2017 13:10
Bromochloromethane	ND		2.5	500	03/30/2017 13:10
Bromodichloromethane	ND		2.5	500	03/30/2017 13:10
Bromoform	ND		2.5	500	03/30/2017 13:10
Bromomethane	ND		2.5	500	03/30/2017 13:10
2-Butanone (MEK)	ND		10	500	03/30/2017 13:10
t-Butyl alcohol (TBA)	ND		25	500	03/30/2017 13:10
n-Butyl benzene	7.2		2.5	500	03/30/2017 13:10
sec-Butyl benzene	ND		2.5	500	03/30/2017 13:10
tert-Butyl benzene	ND		2.5	500	03/30/2017 13:10
Carbon Disulfide	ND		2.5	500	03/30/2017 13:10
Carbon Tetrachloride	ND		2.5	500	03/30/2017 13:10
Chlorobenzene	ND		2.5	500	03/30/2017 13:10
Chloroethane	ND		2.5	500	03/30/2017 13:10
Chloroform	ND		2.5	500	03/30/2017 13:10
Chloromethane	ND		2.5	500	03/30/2017 13:10
2-Chlorotoluene	ND		2.5	500	03/30/2017 13:10
4-Chlorotoluene	ND		2.5	500	03/30/2017 13:10
Dibromochloromethane	ND		2.5	500	03/30/2017 13:10
1,2-Dibromo-3-chloropropane	ND		2.0	500	03/30/2017 13:10
1,2-Dibromoethane (EDB)	ND		2.0	500	03/30/2017 13:10
Dibromomethane	ND		2.5	500	03/30/2017 13:10
1,2-Dichlorobenzene	ND		2.5	500	03/30/2017 13:10
1,3-Dichlorobenzene	ND		2.5	500	03/30/2017 13:10
1,4-Dichlorobenzene	ND		2.5	500	03/30/2017 13:10
Dichlorodifluoromethane	ND		2.5	500	03/30/2017 13:10
1,1-Dichloroethane	ND		2.5	500	03/30/2017 13:10
1,2-Dichloroethane (1,2-DCA)	ND		2.0	500	03/30/2017 13:10
1,1-Dichloroethene	ND		2.5	500	03/30/2017 13:10
cis-1,2-Dichloroethene	ND		2.5	500	03/30/2017 13:10
trans-1,2-Dichloroethene	ND		2.5	500	03/30/2017 13:10
1,2-Dichloropropane	ND		2.5	500	03/30/2017 13:10
1,3-Dichloropropane	ND		2.5	500	03/30/2017 13:10
2,2-Dichloropropane	ND		2.5	500	03/30/2017 13:10

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-10	1703B82-014A	Soil	03/21/2017 10:14	GC18	136105
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		2.5	500	03/30/2017 13:10
cis-1,3-Dichloropropene	ND		2.5	500	03/30/2017 13:10
trans-1,3-Dichloropropene	ND		2.5	500	03/30/2017 13:10
Diisopropyl ether (DIPE)	ND		2.5	500	03/30/2017 13:10
Ethylbenzene	28		2.5	500	03/30/2017 13:10
Ethyl tert-butyl ether (ETBE)	ND		2.5	500	03/30/2017 13:10
Freon 113	ND		2.5	500	03/30/2017 13:10
Hexachlorobutadiene	ND		2.5	500	03/30/2017 13:10
Hexachloroethane	ND		2.5	500	03/30/2017 13:10
2-Hexanone	ND		2.5	500	03/30/2017 13:10
Isopropylbenzene	3.1		2.5	500	03/30/2017 13:10
4-Isopropyl toluene	ND		2.5	500	03/30/2017 13:10
Methyl-t-butyl ether (MTBE)	ND		2.5	500	03/30/2017 13:10
Methylene chloride	ND		2.5	500	03/30/2017 13:10
4-Methyl-2-pentanone (MIBK)	ND		2.5	500	03/30/2017 13:10
Naphthalene	6.4		2.5	500	03/30/2017 13:10
n-Propyl benzene	10		2.5	500	03/30/2017 13:10
Styrene	ND		2.5	500	03/30/2017 13:10
1,1,1,2-Tetrachloroethane	ND		2.5	500	03/30/2017 13:10
1,1,2,2-Tetrachloroethane	ND		2.5	500	03/30/2017 13:10
Tetrachloroethene	ND		2.5	500	03/30/2017 13:10
Toluene	ND		2.5	500	03/30/2017 13:10
1,2,3-Trichlorobenzene	ND		2.5	500	03/30/2017 13:10
1,2,4-Trichlorobenzene	ND		2.5	500	03/30/2017 13:10
1,1,1-Trichloroethane	ND		2.5	500	03/30/2017 13:10
1,1,2-Trichloroethane	ND		2.5	500	03/30/2017 13:10
Trichloroethene	ND		2.5	500	03/30/2017 13:10
Trichlorofluoromethane	ND		2.5	500	03/30/2017 13:10
1,2,3-Trichloropropane	ND		2.5	500	03/30/2017 13:10
1,2,4-Trimethylbenzene	69		2.5	500	03/30/2017 13:10
1,3,5-Trimethylbenzene	23		2.5	500	03/30/2017 13:10
Vinyl Chloride	ND		2.5	500	03/30/2017 13:10
Xylenes, Total	160		2.5	500	03/30/2017 13:10

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-10	1703B82-014A	Soil	03/21/2017 10:14	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
Dibromofluoromethane	92		70-130	03/30/2017 13:10
Toluene-d8	89		70-130	03/30/2017 13:10
4-BFB	82		70-130	03/30/2017 13:10
Benzene-d6	105		60-140	03/30/2017 13:10
Ethylbenzene-d10	306	S	60-140	03/30/2017 13:10
1,2-DCB-d4	226	S	60-140	03/30/2017 13:10

Analyst(s): KF

Analytical Comments: c7



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-15	1703B82-015A	Soil	03/21/2017 10:17	GC10	136485
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	03/30/2017 12:42
tert-Amyl methyl ether (TAME)	ND		0.0050	1	03/30/2017 12:42
Benzene	ND		0.0050	1	03/30/2017 12:42
Bromobenzene	ND		0.0050	1	03/30/2017 12:42
Bromochloromethane	ND		0.0050	1	03/30/2017 12:42
Bromodichloromethane	ND		0.0050	1	03/30/2017 12:42
Bromoform	ND		0.0050	1	03/30/2017 12:42
Bromomethane	ND		0.0050	1	03/30/2017 12:42
2-Butanone (MEK)	ND		0.020	1	03/30/2017 12:42
t-Butyl alcohol (TBA)	ND		0.050	1	03/30/2017 12:42
n-Butyl benzene	ND		0.0050	1	03/30/2017 12:42
sec-Butyl benzene	ND		0.0050	1	03/30/2017 12:42
tert-Butyl benzene	ND		0.0050	1	03/30/2017 12:42
Carbon Disulfide	ND		0.0050	1	03/30/2017 12:42
Carbon Tetrachloride	ND		0.0050	1	03/30/2017 12:42
Chlorobenzene	ND		0.0050	1	03/30/2017 12:42
Chloroethane	ND		0.0050	1	03/30/2017 12:42
Chloroform	ND		0.0050	1	03/30/2017 12:42
Chloromethane	ND		0.0050	1	03/30/2017 12:42
2-Chlorotoluene	ND		0.0050	1	03/30/2017 12:42
4-Chlorotoluene	ND		0.0050	1	03/30/2017 12:42
Dibromochloromethane	ND		0.0050	1	03/30/2017 12:42
1,2-Dibromo-3-chloropropane	ND		0.0040	1	03/30/2017 12:42
1,2-Dibromoethane (EDB)	ND		0.0040	1	03/30/2017 12:42
Dibromomethane	ND		0.0050	1	03/30/2017 12:42
1,2-Dichlorobenzene	ND		0.0050	1	03/30/2017 12:42
1,3-Dichlorobenzene	ND		0.0050	1	03/30/2017 12:42
1,4-Dichlorobenzene	ND		0.0050	1	03/30/2017 12:42
Dichlorodifluoromethane	ND		0.0050	1	03/30/2017 12:42
1,1-Dichloroethane	ND		0.0050	1	03/30/2017 12:42
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	03/30/2017 12:42
1,1-Dichloroethene	ND		0.0050	1	03/30/2017 12:42
cis-1,2-Dichloroethene	ND		0.0050	1	03/30/2017 12:42
trans-1,2-Dichloroethene	ND		0.0050	1	03/30/2017 12:42
1,2-Dichloropropane	ND		0.0050	1	03/30/2017 12:42
1,3-Dichloropropane	ND		0.0050	1	03/30/2017 12:42
2,2-Dichloropropane	ND		0.0050	1	03/30/2017 12:42

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-15	1703B82-015A	Soil	03/21/2017 10:17	GC10	136485

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 12:42
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 12:42
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 12:42
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 12:42
Ethylbenzene	ND	0.0050	1	03/30/2017 12:42
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 12:42
Freon 113	ND	0.0050	1	03/30/2017 12:42
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 12:42
Hexachloroethane	ND	0.0050	1	03/30/2017 12:42
2-Hexanone	ND	0.0050	1	03/30/2017 12:42
Isopropylbenzene	ND	0.0050	1	03/30/2017 12:42
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 12:42
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 12:42
Methylene chloride	ND	0.0050	1	03/30/2017 12:42
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 12:42
Naphthalene	ND	0.0050	1	03/30/2017 12:42
n-Propyl benzene	ND	0.0050	1	03/30/2017 12:42
Styrene	ND	0.0050	1	03/30/2017 12:42
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 12:42
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 12:42
Tetrachloroethene	ND	0.0050	1	03/30/2017 12:42
Toluene	ND	0.0050	1	03/30/2017 12:42
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 12:42
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 12:42
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 12:42
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 12:42
Trichloroethene	ND	0.0050	1	03/30/2017 12:42
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 12:42
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 12:42
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 12:42
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 12:42
Vinyl Chloride	ND	0.0050	1	03/30/2017 12:42
Xylenes, Total	ND	0.0050	1	03/30/2017 12:42

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-15	1703B82-015A	Soil	03/21/2017 10:17	GC10	136485

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	87	70-130		03/30/2017 12:42
Toluene-d8	106	70-130		03/30/2017 12:42
4-BFB	88	70-130		03/30/2017 12:42
Benzene-d6	84	60-140		03/30/2017 12:42
Ethylbenzene-d10	106	60-140		03/30/2017 12:42
1,2-DCB-d4	78	60-140		03/30/2017 12:42

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-20	1703B82-016A	Soil	03/21/2017 10:20	GC18	136105
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/29/2017 21:20	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/29/2017 21:20	
Benzene	ND	0.0050	1	03/29/2017 21:20	
Bromobenzene	ND	0.0050	1	03/29/2017 21:20	
Bromochloromethane	ND	0.0050	1	03/29/2017 21:20	
Bromodichloromethane	ND	0.0050	1	03/29/2017 21:20	
Bromoform	ND	0.0050	1	03/29/2017 21:20	
Bromomethane	ND	0.0050	1	03/29/2017 21:20	
2-Butanone (MEK)	ND	0.020	1	03/29/2017 21:20	
t-Butyl alcohol (TBA)	ND	0.050	1	03/29/2017 21:20	
n-Butyl benzene	ND	0.0050	1	03/29/2017 21:20	
sec-Butyl benzene	ND	0.0050	1	03/29/2017 21:20	
tert-Butyl benzene	ND	0.0050	1	03/29/2017 21:20	
Carbon Disulfide	ND	0.0050	1	03/29/2017 21:20	
Carbon Tetrachloride	ND	0.0050	1	03/29/2017 21:20	
Chlorobenzene	ND	0.0050	1	03/29/2017 21:20	
Chloroethane	ND	0.0050	1	03/29/2017 21:20	
Chloroform	ND	0.0050	1	03/29/2017 21:20	
Chloromethane	ND	0.0050	1	03/29/2017 21:20	
2-Chlorotoluene	ND	0.0050	1	03/29/2017 21:20	
4-Chlorotoluene	ND	0.0050	1	03/29/2017 21:20	
Dibromochloromethane	ND	0.0050	1	03/29/2017 21:20	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/29/2017 21:20	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/29/2017 21:20	
Dibromomethane	ND	0.0050	1	03/29/2017 21:20	
1,2-Dichlorobenzene	ND	0.0050	1	03/29/2017 21:20	
1,3-Dichlorobenzene	ND	0.0050	1	03/29/2017 21:20	
1,4-Dichlorobenzene	ND	0.0050	1	03/29/2017 21:20	
Dichlorodifluoromethane	ND	0.0050	1	03/29/2017 21:20	
1,1-Dichloroethane	ND	0.0050	1	03/29/2017 21:20	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/29/2017 21:20	
1,1-Dichloroethene	ND	0.0050	1	03/29/2017 21:20	
cis-1,2-Dichloroethene	ND	0.0050	1	03/29/2017 21:20	
trans-1,2-Dichloroethene	ND	0.0050	1	03/29/2017 21:20	
1,2-Dichloropropane	ND	0.0050	1	03/29/2017 21:20	
1,3-Dichloropropane	ND	0.0050	1	03/29/2017 21:20	
2,2-Dichloropropane	ND	0.0050	1	03/29/2017 21:20	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-20	1703B82-016A	Soil	03/21/2017 10:20	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/29/2017 21:20
cis-1,3-Dichloropropene	ND	0.0050	1	03/29/2017 21:20
trans-1,3-Dichloropropene	ND	0.0050	1	03/29/2017 21:20
Diisopropyl ether (DIPE)	ND	0.0050	1	03/29/2017 21:20
Ethylbenzene	ND	0.0050	1	03/29/2017 21:20
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/29/2017 21:20
Freon 113	ND	0.0050	1	03/29/2017 21:20
Hexachlorobutadiene	ND	0.0050	1	03/29/2017 21:20
Hexachloroethane	ND	0.0050	1	03/29/2017 21:20
2-Hexanone	ND	0.0050	1	03/29/2017 21:20
Isopropylbenzene	ND	0.0050	1	03/29/2017 21:20
4-Isopropyl toluene	ND	0.0050	1	03/29/2017 21:20
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/29/2017 21:20
Methylene chloride	ND	0.0050	1	03/29/2017 21:20
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/29/2017 21:20
Naphthalene	ND	0.0050	1	03/29/2017 21:20
n-Propyl benzene	ND	0.0050	1	03/29/2017 21:20
Styrene	ND	0.0050	1	03/29/2017 21:20
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/29/2017 21:20
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/29/2017 21:20
Tetrachloroethene	ND	0.0050	1	03/29/2017 21:20
Toluene	ND	0.0050	1	03/29/2017 21:20
1,2,3-Trichlorobenzene	ND	0.0050	1	03/29/2017 21:20
1,2,4-Trichlorobenzene	ND	0.0050	1	03/29/2017 21:20
1,1,1-Trichloroethane	ND	0.0050	1	03/29/2017 21:20
1,1,2-Trichloroethane	ND	0.0050	1	03/29/2017 21:20
Trichloroethene	ND	0.0050	1	03/29/2017 21:20
Trichlorofluoromethane	ND	0.0050	1	03/29/2017 21:20
1,2,3-Trichloropropane	ND	0.0050	1	03/29/2017 21:20
1,2,4-Trimethylbenzene	ND	0.0050	1	03/29/2017 21:20
1,3,5-Trimethylbenzene	ND	0.0050	1	03/29/2017 21:20
Vinyl Chloride	ND	0.0050	1	03/29/2017 21:20
Xylenes, Total	ND	0.0050	1	03/29/2017 21:20

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-20	1703B82-016A	Soil	03/21/2017 10:20	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	98	70-130		03/29/2017 21:20
Toluene-d8	105	70-130		03/29/2017 21:20
4-BFB	98	70-130		03/29/2017 21:20
Benzene-d6	82	60-140		03/29/2017 21:20
Ethylbenzene-d10	94	60-140		03/29/2017 21:20
1,2-DCB-d4	75	60-140		03/29/2017 21:20

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-5	1703B82-017A	Soil	03/21/2017 10:26	GC18	136105
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.40	4	03/29/2017 21:59	
tert-Amyl methyl ether (TAME)	ND	0.020	4	03/29/2017 21:59	
Benzene	ND	0.020	4	03/29/2017 21:59	
Bromobenzene	ND	0.020	4	03/29/2017 21:59	
Bromochloromethane	ND	0.020	4	03/29/2017 21:59	
Bromodichloromethane	ND	0.020	4	03/29/2017 21:59	
Bromoform	ND	0.020	4	03/29/2017 21:59	
Bromomethane	ND	0.020	4	03/29/2017 21:59	
2-Butanone (MEK)	ND	0.080	4	03/29/2017 21:59	
t-Butyl alcohol (TBA)	ND	0.20	4	03/29/2017 21:59	
n-Butyl benzene	ND	0.020	4	03/29/2017 21:59	
sec-Butyl benzene	ND	0.020	4	03/29/2017 21:59	
tert-Butyl benzene	ND	0.020	4	03/29/2017 21:59	
Carbon Disulfide	ND	0.020	4	03/29/2017 21:59	
Carbon Tetrachloride	ND	0.020	4	03/29/2017 21:59	
Chlorobenzene	ND	0.020	4	03/29/2017 21:59	
Chloroethane	ND	0.020	4	03/29/2017 21:59	
Chloroform	ND	0.020	4	03/29/2017 21:59	
Chloromethane	ND	0.020	4	03/29/2017 21:59	
2-Chlorotoluene	ND	0.020	4	03/29/2017 21:59	
4-Chlorotoluene	ND	0.020	4	03/29/2017 21:59	
Dibromochloromethane	ND	0.020	4	03/29/2017 21:59	
1,2-Dibromo-3-chloropropane	ND	0.016	4	03/29/2017 21:59	
1,2-Dibromoethane (EDB)	ND	0.016	4	03/29/2017 21:59	
Dibromomethane	ND	0.020	4	03/29/2017 21:59	
1,2-Dichlorobenzene	ND	0.020	4	03/29/2017 21:59	
1,3-Dichlorobenzene	ND	0.020	4	03/29/2017 21:59	
1,4-Dichlorobenzene	ND	0.020	4	03/29/2017 21:59	
Dichlorodifluoromethane	ND	0.020	4	03/29/2017 21:59	
1,1-Dichloroethane	ND	0.020	4	03/29/2017 21:59	
1,2-Dichloroethane (1,2-DCA)	ND	0.016	4	03/29/2017 21:59	
1,1-Dichloroethene	ND	0.020	4	03/29/2017 21:59	
cis-1,2-Dichloroethene	ND	0.020	4	03/29/2017 21:59	
trans-1,2-Dichloroethene	ND	0.020	4	03/29/2017 21:59	
1,2-Dichloropropane	ND	0.020	4	03/29/2017 21:59	
1,3-Dichloropropane	ND	0.020	4	03/29/2017 21:59	
2,2-Dichloropropane	ND	0.020	4	03/29/2017 21:59	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-5	1703B82-017A	Soil	03/21/2017 10:26	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.020	4	03/29/2017 21:59
cis-1,3-Dichloropropene	ND	0.020	4	03/29/2017 21:59
trans-1,3-Dichloropropene	ND	0.020	4	03/29/2017 21:59
Diisopropyl ether (DIPE)	ND	0.020	4	03/29/2017 21:59
Ethylbenzene	ND	0.020	4	03/29/2017 21:59
Ethyl tert-butyl ether (ETBE)	ND	0.020	4	03/29/2017 21:59
Freon 113	ND	0.020	4	03/29/2017 21:59
Hexachlorobutadiene	ND	0.020	4	03/29/2017 21:59
Hexachloroethane	ND	0.020	4	03/29/2017 21:59
2-Hexanone	ND	0.020	4	03/29/2017 21:59
Isopropylbenzene	ND	0.020	4	03/29/2017 21:59
4-Isopropyl toluene	ND	0.020	4	03/29/2017 21:59
Methyl-t-butyl ether (MTBE)	ND	0.020	4	03/29/2017 21:59
Methylene chloride	ND	0.020	4	03/29/2017 21:59
4-Methyl-2-pentanone (MIBK)	ND	0.020	4	03/29/2017 21:59
Naphthalene	ND	0.020	4	03/29/2017 21:59
n-Propyl benzene	0.027	0.020	4	03/29/2017 21:59
Styrene	ND	0.020	4	03/29/2017 21:59
1,1,1,2-Tetrachloroethane	ND	0.020	4	03/29/2017 21:59
1,1,2,2-Tetrachloroethane	ND	0.020	4	03/29/2017 21:59
Tetrachloroethene	ND	0.020	4	03/29/2017 21:59
Toluene	ND	0.020	4	03/29/2017 21:59
1,2,3-Trichlorobenzene	ND	0.020	4	03/29/2017 21:59
1,2,4-Trichlorobenzene	ND	0.020	4	03/29/2017 21:59
1,1,1-Trichloroethane	ND	0.020	4	03/29/2017 21:59
1,1,2-Trichloroethane	ND	0.020	4	03/29/2017 21:59
Trichloroethene	ND	0.020	4	03/29/2017 21:59
Trichlorofluoromethane	ND	0.020	4	03/29/2017 21:59
1,2,3-Trichloropropane	ND	0.020	4	03/29/2017 21:59
1,2,4-Trimethylbenzene	ND	0.020	4	03/29/2017 21:59
1,3,5-Trimethylbenzene	ND	0.020	4	03/29/2017 21:59
Vinyl Chloride	ND	0.020	4	03/29/2017 21:59
Xylenes, Total	ND	0.020	4	03/29/2017 21:59

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-5	1703B82-017A	Soil	03/21/2017 10:26	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	101	70-130		03/29/2017 21:59
Toluene-d8	98	70-130		03/29/2017 21:59
4-BFB	91	70-130		03/29/2017 21:59
Benzene-d6	84	60-140		03/29/2017 21:59
Ethylbenzene-d10	87	60-140		03/29/2017 21:59
1,2-DCB-d4	85	60-140		03/29/2017 21:59

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-10	1703B82-018A	Soil	03/21/2017 10:29	GC18	136105
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		20	200	03/27/2017 17:28
tert-Amyl methyl ether (TAME)	ND		1.0	200	03/27/2017 17:28
Benzene	1.0		1.0	200	03/27/2017 17:28
Bromobenzene	ND		1.0	200	03/27/2017 17:28
Bromochloromethane	ND		1.0	200	03/27/2017 17:28
Bromodichloromethane	ND		1.0	200	03/27/2017 17:28
Bromoform	ND		1.0	200	03/27/2017 17:28
Bromomethane	ND		1.0	200	03/27/2017 17:28
2-Butanone (MEK)	ND		4.0	200	03/27/2017 17:28
t-Butyl alcohol (TBA)	ND		10	200	03/27/2017 17:28
n-Butyl benzene	5.5		1.0	200	03/27/2017 17:28
sec-Butyl benzene	1.5		1.0	200	03/27/2017 17:28
tert-Butyl benzene	ND		1.0	200	03/27/2017 17:28
Carbon Disulfide	ND		1.0	200	03/27/2017 17:28
Carbon Tetrachloride	ND		1.0	200	03/27/2017 17:28
Chlorobenzene	ND		1.0	200	03/27/2017 17:28
Chloroethane	ND		1.0	200	03/27/2017 17:28
Chloroform	ND		1.0	200	03/27/2017 17:28
Chloromethane	ND		1.0	200	03/27/2017 17:28
2-Chlorotoluene	ND		1.0	200	03/27/2017 17:28
4-Chlorotoluene	ND		1.0	200	03/27/2017 17:28
Dibromochloromethane	ND		1.0	200	03/27/2017 17:28
1,2-Dibromo-3-chloropropane	ND		0.80	200	03/27/2017 17:28
1,2-Dibromoethane (EDB)	ND		0.80	200	03/27/2017 17:28
Dibromomethane	ND		1.0	200	03/27/2017 17:28
1,2-Dichlorobenzene	ND		1.0	200	03/27/2017 17:28
1,3-Dichlorobenzene	ND		1.0	200	03/27/2017 17:28
1,4-Dichlorobenzene	ND		1.0	200	03/27/2017 17:28
Dichlorodifluoromethane	ND		1.0	200	03/27/2017 17:28
1,1-Dichloroethane	ND		1.0	200	03/27/2017 17:28
1,2-Dichloroethane (1,2-DCA)	ND		0.80	200	03/27/2017 17:28
1,1-Dichloroethene	ND		1.0	200	03/27/2017 17:28
cis-1,2-Dichloroethene	ND		1.0	200	03/27/2017 17:28
trans-1,2-Dichloroethene	ND		1.0	200	03/27/2017 17:28
1,2-Dichloropropane	ND		1.0	200	03/27/2017 17:28
1,3-Dichloropropane	ND		1.0	200	03/27/2017 17:28
2,2-Dichloropropane	ND		1.0	200	03/27/2017 17:28

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-10	1703B82-018A	Soil	03/21/2017 10:29	GC18	136105
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		1.0	200	03/27/2017 17:28
cis-1,3-Dichloropropene	ND		1.0	200	03/27/2017 17:28
trans-1,3-Dichloropropene	ND		1.0	200	03/27/2017 17:28
Diisopropyl ether (DIPE)	ND		1.0	200	03/27/2017 17:28
Ethylbenzene	12		1.0	200	03/27/2017 17:28
Ethyl tert-butyl ether (ETBE)	ND		1.0	200	03/27/2017 17:28
Freon 113	ND		1.0	200	03/27/2017 17:28
Hexachlorobutadiene	ND		1.0	200	03/27/2017 17:28
Hexachloroethane	ND		1.0	200	03/27/2017 17:28
2-Hexanone	ND		1.0	200	03/27/2017 17:28
Isopropylbenzene	2.4		1.0	200	03/27/2017 17:28
4-Isopropyl toluene	ND		1.0	200	03/27/2017 17:28
Methyl-t-butyl ether (MTBE)	ND		1.0	200	03/27/2017 17:28
Methylene chloride	ND		1.0	200	03/27/2017 17:28
4-Methyl-2-pentanone (MIBK)	ND		1.0	200	03/27/2017 17:28
Naphthalene	5.1		1.0	200	03/27/2017 17:28
n-Propyl benzene	8.2		1.0	200	03/27/2017 17:28
Styrene	ND		1.0	200	03/27/2017 17:28
1,1,1,2-Tetrachloroethane	ND		1.0	200	03/27/2017 17:28
1,1,2,2-Tetrachloroethane	ND		1.0	200	03/27/2017 17:28
Tetrachloroethene	ND		1.0	200	03/27/2017 17:28
Toluene	ND		1.0	200	03/27/2017 17:28
1,2,3-Trichlorobenzene	ND		1.0	200	03/27/2017 17:28
1,2,4-Trichlorobenzene	ND		1.0	200	03/27/2017 17:28
1,1,1-Trichloroethane	ND		1.0	200	03/27/2017 17:28
1,1,2-Trichloroethane	ND		1.0	200	03/27/2017 17:28
Trichloroethene	ND		1.0	200	03/27/2017 17:28
Trichlorofluoromethane	ND		1.0	200	03/27/2017 17:28
1,2,3-Trichloropropane	ND		1.0	200	03/27/2017 17:28
1,2,4-Trimethylbenzene	18		1.0	200	03/27/2017 17:28
1,3,5-Trimethylbenzene	6.5		1.0	200	03/27/2017 17:28
Vinyl Chloride	ND		1.0	200	03/27/2017 17:28
Xylenes, Total	3.6		1.0	200	03/27/2017 17:28

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-10	1703B82-018A	Soil	03/21/2017 10:29	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
Dibromofluoromethane	102		70-130	03/27/2017 17:28
Toluene-d8	101		70-130	03/27/2017 17:28
4-BFB	87		70-130	03/27/2017 17:28
Benzene-d6	90		60-140	03/27/2017 17:28
Ethylbenzene-d10	271	S	60-140	03/27/2017 17:28
1,2-DCB-d4	131		60-140	03/27/2017 17:28

Analyst(s): KF

Analytical Comments: c7



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-15	1703B82-019A	Soil	03/21/2017 10:31	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/29/2017 22:38
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/29/2017 22:38
Benzene	ND	0.0050	1	03/29/2017 22:38
Bromobenzene	ND	0.0050	1	03/29/2017 22:38
Bromochloromethane	ND	0.0050	1	03/29/2017 22:38
Bromodichloromethane	ND	0.0050	1	03/29/2017 22:38
Bromoform	ND	0.0050	1	03/29/2017 22:38
Bromomethane	ND	0.0050	1	03/29/2017 22:38
2-Butanone (MEK)	ND	0.020	1	03/29/2017 22:38
t-Butyl alcohol (TBA)	ND	0.050	1	03/29/2017 22:38
n-Butyl benzene	ND	0.0050	1	03/29/2017 22:38
sec-Butyl benzene	ND	0.0050	1	03/29/2017 22:38
tert-Butyl benzene	ND	0.0050	1	03/29/2017 22:38
Carbon Disulfide	ND	0.0050	1	03/29/2017 22:38
Carbon Tetrachloride	ND	0.0050	1	03/29/2017 22:38
Chlorobenzene	ND	0.0050	1	03/29/2017 22:38
Chloroethane	ND	0.0050	1	03/29/2017 22:38
Chloroform	ND	0.0050	1	03/29/2017 22:38
Chloromethane	ND	0.0050	1	03/29/2017 22:38
2-Chlorotoluene	ND	0.0050	1	03/29/2017 22:38
4-Chlorotoluene	ND	0.0050	1	03/29/2017 22:38
Dibromochloromethane	ND	0.0050	1	03/29/2017 22:38
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/29/2017 22:38
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/29/2017 22:38
Dibromomethane	ND	0.0050	1	03/29/2017 22:38
1,2-Dichlorobenzene	ND	0.0050	1	03/29/2017 22:38
1,3-Dichlorobenzene	ND	0.0050	1	03/29/2017 22:38
1,4-Dichlorobenzene	ND	0.0050	1	03/29/2017 22:38
Dichlorodifluoromethane	ND	0.0050	1	03/29/2017 22:38
1,1-Dichloroethane	ND	0.0050	1	03/29/2017 22:38
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/29/2017 22:38
1,1-Dichloroethene	ND	0.0050	1	03/29/2017 22:38
cis-1,2-Dichloroethene	ND	0.0050	1	03/29/2017 22:38
trans-1,2-Dichloroethene	ND	0.0050	1	03/29/2017 22:38
1,2-Dichloropropane	ND	0.0050	1	03/29/2017 22:38
1,3-Dichloropropane	ND	0.0050	1	03/29/2017 22:38
2,2-Dichloropropane	ND	0.0050	1	03/29/2017 22:38

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-15	1703B82-019A	Soil	03/21/2017 10:31	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/29/2017 22:38
cis-1,3-Dichloropropene	ND	0.0050	1	03/29/2017 22:38
trans-1,3-Dichloropropene	ND	0.0050	1	03/29/2017 22:38
Diisopropyl ether (DIPE)	ND	0.0050	1	03/29/2017 22:38
Ethylbenzene	ND	0.0050	1	03/29/2017 22:38
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/29/2017 22:38
Freon 113	ND	0.0050	1	03/29/2017 22:38
Hexachlorobutadiene	ND	0.0050	1	03/29/2017 22:38
Hexachloroethane	ND	0.0050	1	03/29/2017 22:38
2-Hexanone	ND	0.0050	1	03/29/2017 22:38
Isopropylbenzene	ND	0.0050	1	03/29/2017 22:38
4-Isopropyl toluene	ND	0.0050	1	03/29/2017 22:38
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/29/2017 22:38
Methylene chloride	ND	0.0050	1	03/29/2017 22:38
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/29/2017 22:38
Naphthalene	ND	0.0050	1	03/29/2017 22:38
n-Propyl benzene	0.0064	0.0050	1	03/29/2017 22:38
Styrene	ND	0.0050	1	03/29/2017 22:38
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/29/2017 22:38
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/29/2017 22:38
Tetrachloroethene	ND	0.0050	1	03/29/2017 22:38
Toluene	ND	0.0050	1	03/29/2017 22:38
1,2,3-Trichlorobenzene	ND	0.0050	1	03/29/2017 22:38
1,2,4-Trichlorobenzene	ND	0.0050	1	03/29/2017 22:38
1,1,1-Trichloroethane	ND	0.0050	1	03/29/2017 22:38
1,1,2-Trichloroethane	ND	0.0050	1	03/29/2017 22:38
Trichloroethene	ND	0.0050	1	03/29/2017 22:38
Trichlorofluoromethane	ND	0.0050	1	03/29/2017 22:38
1,2,3-Trichloropropane	ND	0.0050	1	03/29/2017 22:38
1,2,4-Trimethylbenzene	ND	0.0050	1	03/29/2017 22:38
1,3,5-Trimethylbenzene	ND	0.0050	1	03/29/2017 22:38
Vinyl Chloride	ND	0.0050	1	03/29/2017 22:38
Xylenes, Total	ND	0.0050	1	03/29/2017 22:38

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-15	1703B82-019A	Soil	03/21/2017 10:31	GC18	136105

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	98	70-130		03/29/2017 22:38
Toluene-d8	105	70-130		03/29/2017 22:38
4-BFB	105	70-130		03/29/2017 22:38
Benzene-d6	88	60-140		03/29/2017 22:38
Ethylbenzene-d10	101	60-140		03/29/2017 22:38
1,2-DCB-d4	78	60-140		03/29/2017 22:38

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-20	1703B82-020A	Soil	03/21/2017 10:33	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/29/2017 23:16
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/29/2017 23:16
Benzene	ND	0.0050	1	03/29/2017 23:16
Bromobenzene	ND	0.0050	1	03/29/2017 23:16
Bromochloromethane	ND	0.0050	1	03/29/2017 23:16
Bromodichloromethane	ND	0.0050	1	03/29/2017 23:16
Bromoform	ND	0.0050	1	03/29/2017 23:16
Bromomethane	ND	0.0050	1	03/29/2017 23:16
2-Butanone (MEK)	ND	0.020	1	03/29/2017 23:16
t-Butyl alcohol (TBA)	ND	0.050	1	03/29/2017 23:16
n-Butyl benzene	ND	0.0050	1	03/29/2017 23:16
sec-Butyl benzene	ND	0.0050	1	03/29/2017 23:16
tert-Butyl benzene	ND	0.0050	1	03/29/2017 23:16
Carbon Disulfide	ND	0.0050	1	03/29/2017 23:16
Carbon Tetrachloride	ND	0.0050	1	03/29/2017 23:16
Chlorobenzene	ND	0.0050	1	03/29/2017 23:16
Chloroethane	ND	0.0050	1	03/29/2017 23:16
Chloroform	ND	0.0050	1	03/29/2017 23:16
Chloromethane	ND	0.0050	1	03/29/2017 23:16
2-Chlorotoluene	ND	0.0050	1	03/29/2017 23:16
4-Chlorotoluene	ND	0.0050	1	03/29/2017 23:16
Dibromochloromethane	ND	0.0050	1	03/29/2017 23:16
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/29/2017 23:16
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/29/2017 23:16
Dibromomethane	ND	0.0050	1	03/29/2017 23:16
1,2-Dichlorobenzene	ND	0.0050	1	03/29/2017 23:16
1,3-Dichlorobenzene	ND	0.0050	1	03/29/2017 23:16
1,4-Dichlorobenzene	ND	0.0050	1	03/29/2017 23:16
Dichlorodifluoromethane	ND	0.0050	1	03/29/2017 23:16
1,1-Dichloroethane	ND	0.0050	1	03/29/2017 23:16
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/29/2017 23:16
1,1-Dichloroethene	ND	0.0050	1	03/29/2017 23:16
cis-1,2-Dichloroethene	ND	0.0050	1	03/29/2017 23:16
trans-1,2-Dichloroethene	ND	0.0050	1	03/29/2017 23:16
1,2-Dichloropropane	ND	0.0050	1	03/29/2017 23:16
1,3-Dichloropropane	ND	0.0050	1	03/29/2017 23:16
2,2-Dichloropropane	ND	0.0050	1	03/29/2017 23:16

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-20	1703B82-020A	Soil	03/21/2017 10:33	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/29/2017 23:16
cis-1,3-Dichloropropene	ND	0.0050	1	03/29/2017 23:16
trans-1,3-Dichloropropene	ND	0.0050	1	03/29/2017 23:16
Diisopropyl ether (DIPE)	ND	0.0050	1	03/29/2017 23:16
Ethylbenzene	ND	0.0050	1	03/29/2017 23:16
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/29/2017 23:16
Freon 113	ND	0.0050	1	03/29/2017 23:16
Hexachlorobutadiene	ND	0.0050	1	03/29/2017 23:16
Hexachloroethane	ND	0.0050	1	03/29/2017 23:16
2-Hexanone	ND	0.0050	1	03/29/2017 23:16
Isopropylbenzene	ND	0.0050	1	03/29/2017 23:16
4-Isopropyl toluene	ND	0.0050	1	03/29/2017 23:16
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/29/2017 23:16
Methylene chloride	ND	0.0050	1	03/29/2017 23:16
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/29/2017 23:16
Naphthalene	ND	0.0050	1	03/29/2017 23:16
n-Propyl benzene	ND	0.0050	1	03/29/2017 23:16
Styrene	ND	0.0050	1	03/29/2017 23:16
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/29/2017 23:16
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/29/2017 23:16
Tetrachloroethene	ND	0.0050	1	03/29/2017 23:16
Toluene	ND	0.0050	1	03/29/2017 23:16
1,2,3-Trichlorobenzene	ND	0.0050	1	03/29/2017 23:16
1,2,4-Trichlorobenzene	ND	0.0050	1	03/29/2017 23:16
1,1,1-Trichloroethane	ND	0.0050	1	03/29/2017 23:16
1,1,2-Trichloroethane	ND	0.0050	1	03/29/2017 23:16
Trichloroethene	ND	0.0050	1	03/29/2017 23:16
Trichlorofluoromethane	ND	0.0050	1	03/29/2017 23:16
1,2,3-Trichloropropane	ND	0.0050	1	03/29/2017 23:16
1,2,4-Trimethylbenzene	ND	0.0050	1	03/29/2017 23:16
1,3,5-Trimethylbenzene	ND	0.0050	1	03/29/2017 23:16
Vinyl Chloride	ND	0.0050	1	03/29/2017 23:16
Xylenes, Total	ND	0.0050	1	03/29/2017 23:16

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-20	1703B82-020A	Soil	03/21/2017 10:33	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	99	70-130		03/29/2017 23:16
Toluene-d8	105	70-130		03/29/2017 23:16
4-BFB	101	70-130		03/29/2017 23:16
Benzene-d6	82	60-140		03/29/2017 23:16
Ethylbenzene-d10	92	60-140		03/29/2017 23:16
1,2-DCB-d4	73	60-140		03/29/2017 23:16

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-5	1703B82-021A	Soil	03/21/2017 10:45	GC18	136111
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.40	4	03/29/2017 23:55
tert-Amyl methyl ether (TAME)	ND		0.020	4	03/29/2017 23:55
Benzene	ND		0.020	4	03/29/2017 23:55
Bromobenzene	ND		0.020	4	03/29/2017 23:55
Bromochloromethane	ND		0.020	4	03/29/2017 23:55
Bromodichloromethane	ND		0.020	4	03/29/2017 23:55
Bromoform	ND		0.020	4	03/29/2017 23:55
Bromomethane	ND		0.020	4	03/29/2017 23:55
2-Butanone (MEK)	ND		0.080	4	03/29/2017 23:55
t-Butyl alcohol (TBA)	ND		0.20	4	03/29/2017 23:55
n-Butyl benzene	ND		0.020	4	03/29/2017 23:55
sec-Butyl benzene	ND		0.020	4	03/29/2017 23:55
tert-Butyl benzene	ND		0.020	4	03/29/2017 23:55
Carbon Disulfide	ND		0.020	4	03/29/2017 23:55
Carbon Tetrachloride	ND		0.020	4	03/29/2017 23:55
Chlorobenzene	ND		0.020	4	03/29/2017 23:55
Chloroethane	ND		0.020	4	03/29/2017 23:55
Chloroform	ND		0.020	4	03/29/2017 23:55
Chloromethane	ND		0.020	4	03/29/2017 23:55
2-Chlorotoluene	ND		0.020	4	03/29/2017 23:55
4-Chlorotoluene	ND		0.020	4	03/29/2017 23:55
Dibromochloromethane	ND		0.020	4	03/29/2017 23:55
1,2-Dibromo-3-chloropropane	ND		0.016	4	03/29/2017 23:55
1,2-Dibromoethane (EDB)	ND		0.016	4	03/29/2017 23:55
Dibromomethane	ND		0.020	4	03/29/2017 23:55
1,2-Dichlorobenzene	ND		0.020	4	03/29/2017 23:55
1,3-Dichlorobenzene	ND		0.020	4	03/29/2017 23:55
1,4-Dichlorobenzene	ND		0.020	4	03/29/2017 23:55
Dichlorodifluoromethane	ND		0.020	4	03/29/2017 23:55
1,1-Dichloroethane	ND		0.020	4	03/29/2017 23:55
1,2-Dichloroethane (1,2-DCA)	ND		0.016	4	03/29/2017 23:55
1,1-Dichloroethene	ND		0.020	4	03/29/2017 23:55
cis-1,2-Dichloroethene	ND		0.020	4	03/29/2017 23:55
trans-1,2-Dichloroethene	ND		0.020	4	03/29/2017 23:55
1,2-Dichloropropane	ND		0.020	4	03/29/2017 23:55
1,3-Dichloropropane	ND		0.020	4	03/29/2017 23:55
2,2-Dichloropropane	ND		0.020	4	03/29/2017 23:55

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-5	1703B82-021A	Soil	03/21/2017 10:45	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.020	4	03/29/2017 23:55
cis-1,3-Dichloropropene	ND	0.020	4	03/29/2017 23:55
trans-1,3-Dichloropropene	ND	0.020	4	03/29/2017 23:55
Diisopropyl ether (DIPE)	ND	0.020	4	03/29/2017 23:55
Ethylbenzene	ND	0.020	4	03/29/2017 23:55
Ethyl tert-butyl ether (ETBE)	ND	0.020	4	03/29/2017 23:55
Freon 113	ND	0.020	4	03/29/2017 23:55
Hexachlorobutadiene	ND	0.020	4	03/29/2017 23:55
Hexachloroethane	ND	0.020	4	03/29/2017 23:55
2-Hexanone	ND	0.020	4	03/29/2017 23:55
Isopropylbenzene	ND	0.020	4	03/29/2017 23:55
4-Isopropyl toluene	ND	0.020	4	03/29/2017 23:55
Methyl-t-butyl ether (MTBE)	ND	0.020	4	03/29/2017 23:55
Methylene chloride	ND	0.020	4	03/29/2017 23:55
4-Methyl-2-pentanone (MIBK)	ND	0.020	4	03/29/2017 23:55
Naphthalene	ND	0.020	4	03/29/2017 23:55
n-Propyl benzene	ND	0.020	4	03/29/2017 23:55
Styrene	ND	0.020	4	03/29/2017 23:55
1,1,1,2-Tetrachloroethane	ND	0.020	4	03/29/2017 23:55
1,1,2,2-Tetrachloroethane	ND	0.020	4	03/29/2017 23:55
Tetrachloroethene	ND	0.020	4	03/29/2017 23:55
Toluene	ND	0.020	4	03/29/2017 23:55
1,2,3-Trichlorobenzene	ND	0.020	4	03/29/2017 23:55
1,2,4-Trichlorobenzene	ND	0.020	4	03/29/2017 23:55
1,1,1-Trichloroethane	ND	0.020	4	03/29/2017 23:55
1,1,2-Trichloroethane	ND	0.020	4	03/29/2017 23:55
Trichloroethene	ND	0.020	4	03/29/2017 23:55
Trichlorofluoromethane	ND	0.020	4	03/29/2017 23:55
1,2,3-Trichloropropane	ND	0.020	4	03/29/2017 23:55
1,2,4-Trimethylbenzene	ND	0.020	4	03/29/2017 23:55
1,3,5-Trimethylbenzene	ND	0.020	4	03/29/2017 23:55
Vinyl Chloride	ND	0.020	4	03/29/2017 23:55
Xylenes, Total	ND	0.020	4	03/29/2017 23:55

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-5	1703B82-021A	Soil	03/21/2017 10:45	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	102	70-130		03/29/2017 23:55
Toluene-d8	97	70-130		03/29/2017 23:55
4-BFB	92	70-130		03/29/2017 23:55
Benzene-d6	86	60-140		03/29/2017 23:55
Ethylbenzene-d10	91	60-140		03/29/2017 23:55
1,2-DCB-d4	87	60-140		03/29/2017 23:55

Analyst(s): KF

Analytical Comments: a3



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-10	1703B82-022A	Soil	03/21/2017 10:48	GC18	136111
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	03/30/2017 00:34
tert-Amyl methyl ether (TAME)	ND		0.0050	1	03/30/2017 00:34
Benzene	0.0063		0.0050	1	03/30/2017 00:34
Bromobenzene	ND		0.0050	1	03/30/2017 00:34
Bromochloromethane	ND		0.0050	1	03/30/2017 00:34
Bromodichloromethane	ND		0.0050	1	03/30/2017 00:34
Bromoform	ND		0.0050	1	03/30/2017 00:34
Bromomethane	ND		0.0050	1	03/30/2017 00:34
2-Butanone (MEK)	ND		0.020	1	03/30/2017 00:34
t-Butyl alcohol (TBA)	ND		0.050	1	03/30/2017 00:34
n-Butyl benzene	0.012		0.0050	1	03/30/2017 00:34
sec-Butyl benzene	0.0055		0.0050	1	03/30/2017 00:34
tert-Butyl benzene	ND		0.0050	1	03/30/2017 00:34
Carbon Disulfide	ND		0.0050	1	03/30/2017 00:34
Carbon Tetrachloride	ND		0.0050	1	03/30/2017 00:34
Chlorobenzene	ND		0.0050	1	03/30/2017 00:34
Chloroethane	ND		0.0050	1	03/30/2017 00:34
Chloroform	ND		0.0050	1	03/30/2017 00:34
Chloromethane	ND		0.0050	1	03/30/2017 00:34
2-Chlorotoluene	ND		0.0050	1	03/30/2017 00:34
4-Chlorotoluene	ND		0.0050	1	03/30/2017 00:34
Dibromochloromethane	ND		0.0050	1	03/30/2017 00:34
1,2-Dibromo-3-chloropropane	ND		0.0040	1	03/30/2017 00:34
1,2-Dibromoethane (EDB)	ND		0.0040	1	03/30/2017 00:34
Dibromomethane	ND		0.0050	1	03/30/2017 00:34
1,2-Dichlorobenzene	ND		0.0050	1	03/30/2017 00:34
1,3-Dichlorobenzene	ND		0.0050	1	03/30/2017 00:34
1,4-Dichlorobenzene	ND		0.0050	1	03/30/2017 00:34
Dichlorodifluoromethane	ND		0.0050	1	03/30/2017 00:34
1,1-Dichloroethane	ND		0.0050	1	03/30/2017 00:34
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	03/30/2017 00:34
1,1-Dichloroethene	ND		0.0050	1	03/30/2017 00:34
cis-1,2-Dichloroethene	ND		0.0050	1	03/30/2017 00:34
trans-1,2-Dichloroethene	ND		0.0050	1	03/30/2017 00:34
1,2-Dichloropropane	ND		0.0050	1	03/30/2017 00:34
1,3-Dichloropropane	ND		0.0050	1	03/30/2017 00:34
2,2-Dichloropropane	ND		0.0050	1	03/30/2017 00:34

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-10	1703B82-022A	Soil	03/21/2017 10:48	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 00:34
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 00:34
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 00:34
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 00:34
Ethylbenzene	ND	0.0050	1	03/30/2017 00:34
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 00:34
Freon 113	ND	0.0050	1	03/30/2017 00:34
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 00:34
Hexachloroethane	ND	0.0050	1	03/30/2017 00:34
2-Hexanone	ND	0.0050	1	03/30/2017 00:34
Isopropylbenzene	0.0063	0.0050	1	03/30/2017 00:34
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 00:34
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 00:34
Methylene chloride	ND	0.0050	1	03/30/2017 00:34
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 00:34
Naphthalene	ND	0.0050	1	03/30/2017 00:34
n-Propyl benzene	0.018	0.0050	1	03/30/2017 00:34
Styrene	ND	0.0050	1	03/30/2017 00:34
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 00:34
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 00:34
Tetrachloroethene	ND	0.0050	1	03/30/2017 00:34
Toluene	ND	0.0050	1	03/30/2017 00:34
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 00:34
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 00:34
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 00:34
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 00:34
Trichloroethene	ND	0.0050	1	03/30/2017 00:34
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 00:34
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 00:34
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 00:34
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 00:34
Vinyl Chloride	ND	0.0050	1	03/30/2017 00:34
Xylenes, Total	ND	0.0050	1	03/30/2017 00:34

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-10	1703B82-022A	Soil	03/21/2017 10:48	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	98	70-130		03/30/2017 00:34
Toluene-d8	106	70-130		03/30/2017 00:34
4-BFB	94	70-130		03/30/2017 00:34
Benzene-d6	83	60-140		03/30/2017 00:34
Ethylbenzene-d10	94	60-140		03/30/2017 00:34
1,2-DCB-d4	76	60-140		03/30/2017 00:34

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-15	1703B82-023A	Soil	03/21/2017 10:51	GC10	136485

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/30/2017 13:22
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 13:22
Benzene	ND	0.0050	1	03/30/2017 13:22
Bromobenzene	ND	0.0050	1	03/30/2017 13:22
Bromochloromethane	ND	0.0050	1	03/30/2017 13:22
Bromodichloromethane	ND	0.0050	1	03/30/2017 13:22
Bromoform	ND	0.0050	1	03/30/2017 13:22
Bromomethane	ND	0.0050	1	03/30/2017 13:22
2-Butanone (MEK)	ND	0.020	1	03/30/2017 13:22
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 13:22
n-Butyl benzene	ND	0.0050	1	03/30/2017 13:22
sec-Butyl benzene	ND	0.0050	1	03/30/2017 13:22
tert-Butyl benzene	ND	0.0050	1	03/30/2017 13:22
Carbon Disulfide	ND	0.0050	1	03/30/2017 13:22
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 13:22
Chlorobenzene	ND	0.0050	1	03/30/2017 13:22
Chloroethane	ND	0.0050	1	03/30/2017 13:22
Chloroform	ND	0.0050	1	03/30/2017 13:22
Chloromethane	ND	0.0050	1	03/30/2017 13:22
2-Chlorotoluene	ND	0.0050	1	03/30/2017 13:22
4-Chlorotoluene	ND	0.0050	1	03/30/2017 13:22
Dibromochloromethane	ND	0.0050	1	03/30/2017 13:22
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 13:22
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 13:22
Dibromomethane	ND	0.0050	1	03/30/2017 13:22
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 13:22
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 13:22
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 13:22
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 13:22
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 13:22
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 13:22
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 13:22
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 13:22
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 13:22
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 13:22
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 13:22
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 13:22

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-15	1703B82-023A	Soil	03/21/2017 10:51	GC10	136485

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 13:22
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 13:22
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 13:22
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 13:22
Ethylbenzene	ND	0.0050	1	03/30/2017 13:22
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 13:22
Freon 113	ND	0.0050	1	03/30/2017 13:22
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 13:22
Hexachloroethane	ND	0.0050	1	03/30/2017 13:22
2-Hexanone	ND	0.0050	1	03/30/2017 13:22
Isopropylbenzene	ND	0.0050	1	03/30/2017 13:22
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 13:22
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 13:22
Methylene chloride	ND	0.0050	1	03/30/2017 13:22
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 13:22
Naphthalene	ND	0.0050	1	03/30/2017 13:22
n-Propyl benzene	ND	0.0050	1	03/30/2017 13:22
Styrene	ND	0.0050	1	03/30/2017 13:22
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 13:22
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 13:22
Tetrachloroethene	ND	0.0050	1	03/30/2017 13:22
Toluene	ND	0.0050	1	03/30/2017 13:22
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 13:22
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 13:22
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 13:22
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 13:22
Trichloroethene	ND	0.0050	1	03/30/2017 13:22
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 13:22
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 13:22
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 13:22
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 13:22
Vinyl Chloride	ND	0.0050	1	03/30/2017 13:22
Xylenes, Total	ND	0.0050	1	03/30/2017 13:22

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-15	1703B82-023A	Soil	03/21/2017 10:51	GC10	136485

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	88	70-130		03/30/2017 13:22
Toluene-d8	108	70-130		03/30/2017 13:22
4-BFB	81	70-130		03/30/2017 13:22
Benzene-d6	80	60-140		03/30/2017 13:22
Ethylbenzene-d10	101	60-140		03/30/2017 13:22
1,2-DCB-d4	73	60-140		03/30/2017 13:22

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-20	1703B82-024A	Soil	03/21/2017 10:53	GC18	136111
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/30/2017 01:51	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 01:51	
Benzene	ND	0.0050	1	03/30/2017 01:51	
Bromobenzene	ND	0.0050	1	03/30/2017 01:51	
Bromochloromethane	ND	0.0050	1	03/30/2017 01:51	
Bromodichloromethane	ND	0.0050	1	03/30/2017 01:51	
Bromoform	ND	0.0050	1	03/30/2017 01:51	
Bromomethane	ND	0.0050	1	03/30/2017 01:51	
2-Butanone (MEK)	ND	0.020	1	03/30/2017 01:51	
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 01:51	
n-Butyl benzene	ND	0.0050	1	03/30/2017 01:51	
sec-Butyl benzene	ND	0.0050	1	03/30/2017 01:51	
tert-Butyl benzene	ND	0.0050	1	03/30/2017 01:51	
Carbon Disulfide	ND	0.0050	1	03/30/2017 01:51	
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 01:51	
Chlorobenzene	ND	0.0050	1	03/30/2017 01:51	
Chloroethane	ND	0.0050	1	03/30/2017 01:51	
Chloroform	ND	0.0050	1	03/30/2017 01:51	
Chloromethane	ND	0.0050	1	03/30/2017 01:51	
2-Chlorotoluene	ND	0.0050	1	03/30/2017 01:51	
4-Chlorotoluene	ND	0.0050	1	03/30/2017 01:51	
Dibromochloromethane	ND	0.0050	1	03/30/2017 01:51	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 01:51	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 01:51	
Dibromomethane	ND	0.0050	1	03/30/2017 01:51	
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 01:51	
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 01:51	
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 01:51	
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 01:51	
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 01:51	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 01:51	
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 01:51	
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 01:51	
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 01:51	
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 01:51	
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 01:51	
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 01:51	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-20	1703B82-024A	Soil	03/21/2017 10:53	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 01:51
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 01:51
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 01:51
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 01:51
Ethylbenzene	ND	0.0050	1	03/30/2017 01:51
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 01:51
Freon 113	ND	0.0050	1	03/30/2017 01:51
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 01:51
Hexachloroethane	ND	0.0050	1	03/30/2017 01:51
2-Hexanone	ND	0.0050	1	03/30/2017 01:51
Isopropylbenzene	ND	0.0050	1	03/30/2017 01:51
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 01:51
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 01:51
Methylene chloride	ND	0.0050	1	03/30/2017 01:51
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 01:51
Naphthalene	ND	0.0050	1	03/30/2017 01:51
n-Propyl benzene	ND	0.0050	1	03/30/2017 01:51
Styrene	ND	0.0050	1	03/30/2017 01:51
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 01:51
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 01:51
Tetrachloroethene	ND	0.0050	1	03/30/2017 01:51
Toluene	ND	0.0050	1	03/30/2017 01:51
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 01:51
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 01:51
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 01:51
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 01:51
Trichloroethene	ND	0.0050	1	03/30/2017 01:51
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 01:51
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 01:51
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 01:51
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 01:51
Vinyl Chloride	ND	0.0050	1	03/30/2017 01:51
Xylenes, Total	ND	0.0050	1	03/30/2017 01:51

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-20	1703B82-024A	Soil	03/21/2017 10:53	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	99	70-130		03/30/2017 01:51
Toluene-d8	106	70-130		03/30/2017 01:51
4-BFB	100	70-130		03/30/2017 01:51
Benzene-d6	85	60-140		03/30/2017 01:51
Ethylbenzene-d10	97	60-140		03/30/2017 01:51
1,2-DCB-d4	76	60-140		03/30/2017 01:51

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-5	1703B82-025A	Soil	03/21/2017 11:02	GC18	136111
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/30/2017 02:30	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 02:30	
Benzene	ND	0.0050	1	03/30/2017 02:30	
Bromobenzene	ND	0.0050	1	03/30/2017 02:30	
Bromochloromethane	ND	0.0050	1	03/30/2017 02:30	
Bromodichloromethane	ND	0.0050	1	03/30/2017 02:30	
Bromoform	ND	0.0050	1	03/30/2017 02:30	
Bromomethane	ND	0.0050	1	03/30/2017 02:30	
2-Butanone (MEK)	ND	0.020	1	03/30/2017 02:30	
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 02:30	
n-Butyl benzene	ND	0.0050	1	03/30/2017 02:30	
sec-Butyl benzene	ND	0.0050	1	03/30/2017 02:30	
tert-Butyl benzene	ND	0.0050	1	03/30/2017 02:30	
Carbon Disulfide	ND	0.0050	1	03/30/2017 02:30	
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 02:30	
Chlorobenzene	ND	0.0050	1	03/30/2017 02:30	
Chloroethane	ND	0.0050	1	03/30/2017 02:30	
Chloroform	ND	0.0050	1	03/30/2017 02:30	
Chloromethane	ND	0.0050	1	03/30/2017 02:30	
2-Chlorotoluene	ND	0.0050	1	03/30/2017 02:30	
4-Chlorotoluene	ND	0.0050	1	03/30/2017 02:30	
Dibromochloromethane	ND	0.0050	1	03/30/2017 02:30	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 02:30	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 02:30	
Dibromomethane	ND	0.0050	1	03/30/2017 02:30	
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 02:30	
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 02:30	
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 02:30	
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 02:30	
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 02:30	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 02:30	
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 02:30	
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 02:30	
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 02:30	
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 02:30	
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 02:30	
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 02:30	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-5	1703B82-025A	Soil	03/21/2017 11:02	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 02:30
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 02:30
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 02:30
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 02:30
Ethylbenzene	ND	0.0050	1	03/30/2017 02:30
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 02:30
Freon 113	ND	0.0050	1	03/30/2017 02:30
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 02:30
Hexachloroethane	ND	0.0050	1	03/30/2017 02:30
2-Hexanone	ND	0.0050	1	03/30/2017 02:30
Isopropylbenzene	ND	0.0050	1	03/30/2017 02:30
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 02:30
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 02:30
Methylene chloride	ND	0.0050	1	03/30/2017 02:30
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 02:30
Naphthalene	ND	0.0050	1	03/30/2017 02:30
n-Propyl benzene	ND	0.0050	1	03/30/2017 02:30
Styrene	ND	0.0050	1	03/30/2017 02:30
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 02:30
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 02:30
Tetrachloroethene	ND	0.0050	1	03/30/2017 02:30
Toluene	ND	0.0050	1	03/30/2017 02:30
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 02:30
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 02:30
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 02:30
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 02:30
Trichloroethene	ND	0.0050	1	03/30/2017 02:30
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 02:30
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 02:30
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 02:30
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 02:30
Vinyl Chloride	ND	0.0050	1	03/30/2017 02:30
Xylenes, Total	ND	0.0050	1	03/30/2017 02:30

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-5	1703B82-025A	Soil	03/21/2017 11:02	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	99	70-130		03/30/2017 02:30
Toluene-d8	105	70-130		03/30/2017 02:30
4-BFB	103	70-130		03/30/2017 02:30
Benzene-d6	86	60-140		03/30/2017 02:30
Ethylbenzene-d10	98	60-140		03/30/2017 02:30
1,2-DCB-d4	77	60-140		03/30/2017 02:30

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-10	1703B82-026A	Soil	03/21/2017 11:05	GC18	136111
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.10	1	03/30/2017 03:09
tert-Amyl methyl ether (TAME)	ND		0.0050	1	03/30/2017 03:09
Benzene	ND		0.0050	1	03/30/2017 03:09
Bromobenzene	ND		0.0050	1	03/30/2017 03:09
Bromochloromethane	ND		0.0050	1	03/30/2017 03:09
Bromodichloromethane	ND		0.0050	1	03/30/2017 03:09
Bromoform	ND		0.0050	1	03/30/2017 03:09
Bromomethane	ND		0.0050	1	03/30/2017 03:09
2-Butanone (MEK)	ND		0.020	1	03/30/2017 03:09
t-Butyl alcohol (TBA)	ND		0.050	1	03/30/2017 03:09
n-Butyl benzene	0.018		0.0050	1	03/30/2017 03:09
sec-Butyl benzene	0.0059		0.0050	1	03/30/2017 03:09
tert-Butyl benzene	ND		0.0050	1	03/30/2017 03:09
Carbon Disulfide	ND		0.0050	1	03/30/2017 03:09
Carbon Tetrachloride	ND		0.0050	1	03/30/2017 03:09
Chlorobenzene	ND		0.0050	1	03/30/2017 03:09
Chloroethane	ND		0.0050	1	03/30/2017 03:09
Chloroform	ND		0.0050	1	03/30/2017 03:09
Chloromethane	ND		0.0050	1	03/30/2017 03:09
2-Chlorotoluene	ND		0.0050	1	03/30/2017 03:09
4-Chlorotoluene	ND		0.0050	1	03/30/2017 03:09
Dibromochloromethane	ND		0.0050	1	03/30/2017 03:09
1,2-Dibromo-3-chloropropane	ND		0.0040	1	03/30/2017 03:09
1,2-Dibromoethane (EDB)	ND		0.0040	1	03/30/2017 03:09
Dibromomethane	ND		0.0050	1	03/30/2017 03:09
1,2-Dichlorobenzene	ND		0.0050	1	03/30/2017 03:09
1,3-Dichlorobenzene	ND		0.0050	1	03/30/2017 03:09
1,4-Dichlorobenzene	ND		0.0050	1	03/30/2017 03:09
Dichlorodifluoromethane	ND		0.0050	1	03/30/2017 03:09
1,1-Dichloroethane	ND		0.0050	1	03/30/2017 03:09
1,2-Dichloroethane (1,2-DCA)	ND		0.0040	1	03/30/2017 03:09
1,1-Dichloroethene	ND		0.0050	1	03/30/2017 03:09
cis-1,2-Dichloroethene	ND		0.0050	1	03/30/2017 03:09
trans-1,2-Dichloroethene	ND		0.0050	1	03/30/2017 03:09
1,2-Dichloropropane	ND		0.0050	1	03/30/2017 03:09
1,3-Dichloropropane	ND		0.0050	1	03/30/2017 03:09
2,2-Dichloropropane	ND		0.0050	1	03/30/2017 03:09

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-10	1703B82-026A	Soil	03/21/2017 11:05	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 03:09
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 03:09
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 03:09
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 03:09
Ethylbenzene	0.011	0.0050	1	03/30/2017 03:09
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 03:09
Freon 113	ND	0.0050	1	03/30/2017 03:09
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 03:09
Hexachloroethane	ND	0.0050	1	03/30/2017 03:09
2-Hexanone	ND	0.0050	1	03/30/2017 03:09
Isopropylbenzene	0.017	0.0050	1	03/30/2017 03:09
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 03:09
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 03:09
Methylene chloride	ND	0.0050	1	03/30/2017 03:09
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 03:09
Naphthalene	0.026	0.0050	1	03/30/2017 03:09
n-Propyl benzene	0.052	0.0050	1	03/30/2017 03:09
Styrene	ND	0.0050	1	03/30/2017 03:09
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 03:09
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 03:09
Tetrachloroethene	ND	0.0050	1	03/30/2017 03:09
Toluene	ND	0.0050	1	03/30/2017 03:09
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 03:09
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 03:09
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 03:09
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 03:09
Trichloroethene	ND	0.0050	1	03/30/2017 03:09
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 03:09
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 03:09
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 03:09
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 03:09
Vinyl Chloride	ND	0.0050	1	03/30/2017 03:09
Xylenes, Total	ND	0.0050	1	03/30/2017 03:09

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-10	1703B82-026A	Soil	03/21/2017 11:05	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	99	70-130		03/30/2017 03:09
Toluene-d8	107	70-130		03/30/2017 03:09
4-BFB	100	70-130		03/30/2017 03:09
Benzene-d6	81	60-140		03/30/2017 03:09
Ethylbenzene-d10	93	60-140		03/30/2017 03:09
1,2-DCB-d4	74	60-140		03/30/2017 03:09

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-15	1703B82-027A	Soil	03/21/2017 11:07	GC18	136111
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		0.67	6.7	03/30/2017 03:48
tert-Amyl methyl ether (TAME)	ND		0.033	6.7	03/30/2017 03:48
Benzene	ND		0.033	6.7	03/30/2017 03:48
Bromobenzene	ND		0.033	6.7	03/30/2017 03:48
Bromochloromethane	ND		0.033	6.7	03/30/2017 03:48
Bromodichloromethane	ND		0.033	6.7	03/30/2017 03:48
Bromoform	ND		0.033	6.7	03/30/2017 03:48
Bromomethane	ND		0.033	6.7	03/30/2017 03:48
2-Butanone (MEK)	ND		0.13	6.7	03/30/2017 03:48
t-Butyl alcohol (TBA)	ND		0.33	6.7	03/30/2017 03:48
n-Butyl benzene	0.12		0.033	6.7	03/30/2017 03:48
sec-Butyl benzene	0.037		0.033	6.7	03/30/2017 03:48
tert-Butyl benzene	ND		0.033	6.7	03/30/2017 03:48
Carbon Disulfide	ND		0.033	6.7	03/30/2017 03:48
Carbon Tetrachloride	ND		0.033	6.7	03/30/2017 03:48
Chlorobenzene	ND		0.033	6.7	03/30/2017 03:48
Chloroethane	ND		0.033	6.7	03/30/2017 03:48
Chloroform	ND		0.033	6.7	03/30/2017 03:48
Chloromethane	ND		0.033	6.7	03/30/2017 03:48
2-Chlorotoluene	ND		0.033	6.7	03/30/2017 03:48
4-Chlorotoluene	ND		0.033	6.7	03/30/2017 03:48
Dibromochloromethane	ND		0.033	6.7	03/30/2017 03:48
1,2-Dibromo-3-chloropropane	ND		0.027	6.7	03/30/2017 03:48
1,2-Dibromoethane (EDB)	ND		0.027	6.7	03/30/2017 03:48
Dibromomethane	ND		0.033	6.7	03/30/2017 03:48
1,2-Dichlorobenzene	ND		0.033	6.7	03/30/2017 03:48
1,3-Dichlorobenzene	ND		0.033	6.7	03/30/2017 03:48
1,4-Dichlorobenzene	ND		0.033	6.7	03/30/2017 03:48
Dichlorodifluoromethane	ND		0.033	6.7	03/30/2017 03:48
1,1-Dichloroethane	ND		0.033	6.7	03/30/2017 03:48
1,2-Dichloroethane (1,2-DCA)	ND		0.027	6.7	03/30/2017 03:48
1,1-Dichloroethene	ND		0.033	6.7	03/30/2017 03:48
cis-1,2-Dichloroethene	ND		0.033	6.7	03/30/2017 03:48
trans-1,2-Dichloroethene	ND		0.033	6.7	03/30/2017 03:48
1,2-Dichloropropane	ND		0.033	6.7	03/30/2017 03:48
1,3-Dichloropropane	ND		0.033	6.7	03/30/2017 03:48
2,2-Dichloropropane	ND		0.033	6.7	03/30/2017 03:48

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-15	1703B82-027A	Soil	03/21/2017 11:07	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.033	6.7	03/30/2017 03:48
cis-1,3-Dichloropropene	ND	0.033	6.7	03/30/2017 03:48
trans-1,3-Dichloropropene	ND	0.033	6.7	03/30/2017 03:48
Diisopropyl ether (DIPE)	ND	0.033	6.7	03/30/2017 03:48
Ethylbenzene	0.039	0.033	6.7	03/30/2017 03:48
Ethyl tert-butyl ether (ETBE)	ND	0.033	6.7	03/30/2017 03:48
Freon 113	ND	0.033	6.7	03/30/2017 03:48
Hexachlorobutadiene	ND	0.033	6.7	03/30/2017 03:48
Hexachloroethane	ND	0.033	6.7	03/30/2017 03:48
2-Hexanone	ND	0.033	6.7	03/30/2017 03:48
Isopropylbenzene	0.050	0.033	6.7	03/30/2017 03:48
4-Isopropyl toluene	ND	0.033	6.7	03/30/2017 03:48
Methyl-t-butyl ether (MTBE)	ND	0.033	6.7	03/30/2017 03:48
Methylene chloride	ND	0.033	6.7	03/30/2017 03:48
4-Methyl-2-pentanone (MIBK)	ND	0.033	6.7	03/30/2017 03:48
Naphthalene	0.053	0.033	6.7	03/30/2017 03:48
n-Propyl benzene	0.18	0.033	6.7	03/30/2017 03:48
Styrene	ND	0.033	6.7	03/30/2017 03:48
1,1,1,2-Tetrachloroethane	ND	0.033	6.7	03/30/2017 03:48
1,1,2,2-Tetrachloroethane	ND	0.033	6.7	03/30/2017 03:48
Tetrachloroethene	ND	0.033	6.7	03/30/2017 03:48
Toluene	ND	0.033	6.7	03/30/2017 03:48
1,2,3-Trichlorobenzene	ND	0.033	6.7	03/30/2017 03:48
1,2,4-Trichlorobenzene	ND	0.033	6.7	03/30/2017 03:48
1,1,1-Trichloroethane	ND	0.033	6.7	03/30/2017 03:48
1,1,2-Trichloroethane	ND	0.033	6.7	03/30/2017 03:48
Trichloroethene	ND	0.033	6.7	03/30/2017 03:48
Trichlorofluoromethane	ND	0.033	6.7	03/30/2017 03:48
1,2,3-Trichloropropane	ND	0.033	6.7	03/30/2017 03:48
1,2,4-Trimethylbenzene	ND	0.033	6.7	03/30/2017 03:48
1,3,5-Trimethylbenzene	ND	0.033	6.7	03/30/2017 03:48
Vinyl Chloride	ND	0.033	6.7	03/30/2017 03:48
Xylenes, Total	ND	0.033	6.7	03/30/2017 03:48

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-15	1703B82-027A	Soil	03/21/2017 11:07	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	102	70-130		03/30/2017 03:48
Toluene-d8	100	70-130		03/30/2017 03:48
4-BFB	97	70-130		03/30/2017 03:48
Benzene-d6	85	60-140		03/30/2017 03:48
Ethylbenzene-d10	92	60-140		03/30/2017 03:48
1,2-DCB-d4	88	60-140		03/30/2017 03:48

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-19	1703B82-028A	Soil	03/21/2017 11:11	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/30/2017 04:27
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 04:27
Benzene	ND	0.0050	1	03/30/2017 04:27
Bromobenzene	ND	0.0050	1	03/30/2017 04:27
Bromochloromethane	ND	0.0050	1	03/30/2017 04:27
Bromodichloromethane	ND	0.0050	1	03/30/2017 04:27
Bromoform	ND	0.0050	1	03/30/2017 04:27
Bromomethane	ND	0.0050	1	03/30/2017 04:27
2-Butanone (MEK)	ND	0.020	1	03/30/2017 04:27
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 04:27
n-Butyl benzene	ND	0.0050	1	03/30/2017 04:27
sec-Butyl benzene	ND	0.0050	1	03/30/2017 04:27
tert-Butyl benzene	ND	0.0050	1	03/30/2017 04:27
Carbon Disulfide	ND	0.0050	1	03/30/2017 04:27
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 04:27
Chlorobenzene	ND	0.0050	1	03/30/2017 04:27
Chloroethane	ND	0.0050	1	03/30/2017 04:27
Chloroform	ND	0.0050	1	03/30/2017 04:27
Chloromethane	ND	0.0050	1	03/30/2017 04:27
2-Chlorotoluene	ND	0.0050	1	03/30/2017 04:27
4-Chlorotoluene	ND	0.0050	1	03/30/2017 04:27
Dibromochloromethane	ND	0.0050	1	03/30/2017 04:27
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 04:27
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 04:27
Dibromomethane	ND	0.0050	1	03/30/2017 04:27
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 04:27
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 04:27
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 04:27
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 04:27
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 04:27
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 04:27
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 04:27
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 04:27
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 04:27
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 04:27
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 04:27
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 04:27

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-19	1703B82-028A	Soil	03/21/2017 11:11	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 04:27
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 04:27
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 04:27
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 04:27
Ethylbenzene	ND	0.0050	1	03/30/2017 04:27
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 04:27
Freon 113	ND	0.0050	1	03/30/2017 04:27
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 04:27
Hexachloroethane	ND	0.0050	1	03/30/2017 04:27
2-Hexanone	ND	0.0050	1	03/30/2017 04:27
Isopropylbenzene	ND	0.0050	1	03/30/2017 04:27
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 04:27
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 04:27
Methylene chloride	ND	0.0050	1	03/30/2017 04:27
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 04:27
Naphthalene	ND	0.0050	1	03/30/2017 04:27
n-Propyl benzene	ND	0.0050	1	03/30/2017 04:27
Styrene	ND	0.0050	1	03/30/2017 04:27
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 04:27
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 04:27
Tetrachloroethene	ND	0.0050	1	03/30/2017 04:27
Toluene	ND	0.0050	1	03/30/2017 04:27
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 04:27
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 04:27
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 04:27
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 04:27
Trichloroethene	ND	0.0050	1	03/30/2017 04:27
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 04:27
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 04:27
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 04:27
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 04:27
Vinyl Chloride	ND	0.0050	1	03/30/2017 04:27
Xylenes, Total	ND	0.0050	1	03/30/2017 04:27

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-19	1703B82-028A	Soil	03/21/2017 11:11	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	99	70-130		03/30/2017 04:27
Toluene-d8	106	70-130		03/30/2017 04:27
4-BFB	100	70-130		03/30/2017 04:27
Benzene-d6	83	60-140		03/30/2017 04:27
Ethylbenzene-d10	94	60-140		03/30/2017 04:27
1,2-DCB-d4	75	60-140		03/30/2017 04:27

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-5	1703B82-029A	Soil	03/21/2017 11:21	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/30/2017 05:06
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 05:06
Benzene	ND	0.0050	1	03/30/2017 05:06
Bromobenzene	ND	0.0050	1	03/30/2017 05:06
Bromochloromethane	ND	0.0050	1	03/30/2017 05:06
Bromodichloromethane	ND	0.0050	1	03/30/2017 05:06
Bromoform	ND	0.0050	1	03/30/2017 05:06
Bromomethane	ND	0.0050	1	03/30/2017 05:06
2-Butanone (MEK)	ND	0.020	1	03/30/2017 05:06
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 05:06
n-Butyl benzene	ND	0.0050	1	03/30/2017 05:06
sec-Butyl benzene	ND	0.0050	1	03/30/2017 05:06
tert-Butyl benzene	ND	0.0050	1	03/30/2017 05:06
Carbon Disulfide	ND	0.0050	1	03/30/2017 05:06
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 05:06
Chlorobenzene	ND	0.0050	1	03/30/2017 05:06
Chloroethane	ND	0.0050	1	03/30/2017 05:06
Chloroform	ND	0.0050	1	03/30/2017 05:06
Chloromethane	ND	0.0050	1	03/30/2017 05:06
2-Chlorotoluene	ND	0.0050	1	03/30/2017 05:06
4-Chlorotoluene	ND	0.0050	1	03/30/2017 05:06
Dibromochloromethane	ND	0.0050	1	03/30/2017 05:06
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 05:06
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 05:06
Dibromomethane	ND	0.0050	1	03/30/2017 05:06
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 05:06
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 05:06
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 05:06
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 05:06
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 05:06
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 05:06
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 05:06
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 05:06
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 05:06
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 05:06
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 05:06
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 05:06

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-5	1703B82-029A	Soil	03/21/2017 11:21	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 05:06
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 05:06
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 05:06
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 05:06
Ethylbenzene	ND	0.0050	1	03/30/2017 05:06
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 05:06
Freon 113	ND	0.0050	1	03/30/2017 05:06
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 05:06
Hexachloroethane	ND	0.0050	1	03/30/2017 05:06
2-Hexanone	ND	0.0050	1	03/30/2017 05:06
Isopropylbenzene	ND	0.0050	1	03/30/2017 05:06
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 05:06
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 05:06
Methylene chloride	ND	0.0050	1	03/30/2017 05:06
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 05:06
Naphthalene	ND	0.0050	1	03/30/2017 05:06
n-Propyl benzene	ND	0.0050	1	03/30/2017 05:06
Styrene	ND	0.0050	1	03/30/2017 05:06
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 05:06
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 05:06
Tetrachloroethene	ND	0.0050	1	03/30/2017 05:06
Toluene	ND	0.0050	1	03/30/2017 05:06
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 05:06
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 05:06
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 05:06
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 05:06
Trichloroethene	ND	0.0050	1	03/30/2017 05:06
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 05:06
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 05:06
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 05:06
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 05:06
Vinyl Chloride	ND	0.0050	1	03/30/2017 05:06
Xylenes, Total	ND	0.0050	1	03/30/2017 05:06

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-5	1703B82-029A	Soil	03/21/2017 11:21	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	99	70-130		03/30/2017 05:06
Toluene-d8	105	70-130		03/30/2017 05:06
4-BFB	101	70-130		03/30/2017 05:06
Benzene-d6	85	60-140		03/30/2017 05:06
Ethylbenzene-d10	97	60-140		03/30/2017 05:06
1,2-DCB-d4	76	60-140		03/30/2017 05:06

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-10	1703B82-030A	Soil	03/21/2017 11:23	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/30/2017 05:44
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 05:44
Benzene	ND	0.0050	1	03/30/2017 05:44
Bromobenzene	ND	0.0050	1	03/30/2017 05:44
Bromochloromethane	ND	0.0050	1	03/30/2017 05:44
Bromodichloromethane	ND	0.0050	1	03/30/2017 05:44
Bromoform	ND	0.0050	1	03/30/2017 05:44
Bromomethane	ND	0.0050	1	03/30/2017 05:44
2-Butanone (MEK)	ND	0.020	1	03/30/2017 05:44
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 05:44
n-Butyl benzene	ND	0.0050	1	03/30/2017 05:44
sec-Butyl benzene	ND	0.0050	1	03/30/2017 05:44
tert-Butyl benzene	ND	0.0050	1	03/30/2017 05:44
Carbon Disulfide	ND	0.0050	1	03/30/2017 05:44
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 05:44
Chlorobenzene	ND	0.0050	1	03/30/2017 05:44
Chloroethane	ND	0.0050	1	03/30/2017 05:44
Chloroform	ND	0.0050	1	03/30/2017 05:44
Chloromethane	ND	0.0050	1	03/30/2017 05:44
2-Chlorotoluene	ND	0.0050	1	03/30/2017 05:44
4-Chlorotoluene	ND	0.0050	1	03/30/2017 05:44
Dibromochloromethane	ND	0.0050	1	03/30/2017 05:44
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 05:44
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 05:44
Dibromomethane	ND	0.0050	1	03/30/2017 05:44
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 05:44
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 05:44
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 05:44
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 05:44
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 05:44
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 05:44
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 05:44
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 05:44
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 05:44
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 05:44
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 05:44
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 05:44

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-10	1703B82-030A	Soil	03/21/2017 11:23	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 05:44
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 05:44
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 05:44
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 05:44
Ethylbenzene	ND	0.0050	1	03/30/2017 05:44
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 05:44
Freon 113	ND	0.0050	1	03/30/2017 05:44
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 05:44
Hexachloroethane	ND	0.0050	1	03/30/2017 05:44
2-Hexanone	ND	0.0050	1	03/30/2017 05:44
Isopropylbenzene	ND	0.0050	1	03/30/2017 05:44
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 05:44
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 05:44
Methylene chloride	ND	0.0050	1	03/30/2017 05:44
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 05:44
Naphthalene	ND	0.0050	1	03/30/2017 05:44
n-Propyl benzene	ND	0.0050	1	03/30/2017 05:44
Styrene	ND	0.0050	1	03/30/2017 05:44
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 05:44
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 05:44
Tetrachloroethene	ND	0.0050	1	03/30/2017 05:44
Toluene	ND	0.0050	1	03/30/2017 05:44
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 05:44
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 05:44
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 05:44
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 05:44
Trichloroethene	ND	0.0050	1	03/30/2017 05:44
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 05:44
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 05:44
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 05:44
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 05:44
Vinyl Chloride	ND	0.0050	1	03/30/2017 05:44
Xylenes, Total	ND	0.0050	1	03/30/2017 05:44

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-10	1703B82-030A	Soil	03/21/2017 11:23	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	98	70-130		03/30/2017 05:44
Toluene-d8	106	70-130		03/30/2017 05:44
4-BFB	101	70-130		03/30/2017 05:44
Benzene-d6	85	60-140		03/30/2017 05:44
Ethylbenzene-d10	97	60-140		03/30/2017 05:44
1,2-DCB-d4	76	60-140		03/30/2017 05:44

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-15	1703B82-031A	Soil	03/21/2017 11:25	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/30/2017 00:25
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 00:25
Benzene	ND	0.0050	1	03/30/2017 00:25
Bromobenzene	ND	0.0050	1	03/30/2017 00:25
Bromochloromethane	ND	0.0050	1	03/30/2017 00:25
Bromodichloromethane	ND	0.0050	1	03/30/2017 00:25
Bromoform	ND	0.0050	1	03/30/2017 00:25
Bromomethane	ND	0.0050	1	03/30/2017 00:25
2-Butanone (MEK)	ND	0.020	1	03/30/2017 00:25
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 00:25
n-Butyl benzene	ND	0.0050	1	03/30/2017 00:25
sec-Butyl benzene	ND	0.0050	1	03/30/2017 00:25
tert-Butyl benzene	ND	0.0050	1	03/30/2017 00:25
Carbon Disulfide	ND	0.0050	1	03/30/2017 00:25
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 00:25
Chlorobenzene	ND	0.0050	1	03/30/2017 00:25
Chloroethane	ND	0.0050	1	03/30/2017 00:25
Chloroform	ND	0.0050	1	03/30/2017 00:25
Chloromethane	ND	0.0050	1	03/30/2017 00:25
2-Chlorotoluene	ND	0.0050	1	03/30/2017 00:25
4-Chlorotoluene	ND	0.0050	1	03/30/2017 00:25
Dibromochloromethane	ND	0.0050	1	03/30/2017 00:25
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 00:25
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 00:25
Dibromomethane	ND	0.0050	1	03/30/2017 00:25
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 00:25
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 00:25
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 00:25
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 00:25
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 00:25
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 00:25
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 00:25
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 00:25
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 00:25
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 00:25
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 00:25
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 00:25

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-15	1703B82-031A	Soil	03/21/2017 11:25	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 00:25
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 00:25
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 00:25
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 00:25
Ethylbenzene	ND	0.0050	1	03/30/2017 00:25
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 00:25
Freon 113	ND	0.0050	1	03/30/2017 00:25
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 00:25
Hexachloroethane	ND	0.0050	1	03/30/2017 00:25
2-Hexanone	ND	0.0050	1	03/30/2017 00:25
Isopropylbenzene	ND	0.0050	1	03/30/2017 00:25
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 00:25
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 00:25
Methylene chloride	ND	0.0050	1	03/30/2017 00:25
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 00:25
Naphthalene	ND	0.0050	1	03/30/2017 00:25
n-Propyl benzene	ND	0.0050	1	03/30/2017 00:25
Styrene	ND	0.0050	1	03/30/2017 00:25
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 00:25
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 00:25
Tetrachloroethene	ND	0.0050	1	03/30/2017 00:25
Toluene	ND	0.0050	1	03/30/2017 00:25
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 00:25
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 00:25
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 00:25
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 00:25
Trichloroethene	ND	0.0050	1	03/30/2017 00:25
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 00:25
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 00:25
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 00:25
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 00:25
Vinyl Chloride	ND	0.0050	1	03/30/2017 00:25
Xylenes, Total	ND	0.0050	1	03/30/2017 00:25

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-15	1703B82-031A	Soil	03/21/2017 11:25	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	86	70-130		03/30/2017 00:25
Toluene-d8	105	70-130		03/30/2017 00:25
4-BFB	82	70-130		03/30/2017 00:25
Benzene-d6	83	60-140		03/30/2017 00:25
Ethylbenzene-d10	103	60-140		03/30/2017 00:25
1,2-DCB-d4	76	60-140		03/30/2017 00:25

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-20	1703B82-032A	Soil	03/21/2017 11:30	GC10	136111
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/30/2017 01:04	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 01:04	
Benzene	ND	0.0050	1	03/30/2017 01:04	
Bromobenzene	ND	0.0050	1	03/30/2017 01:04	
Bromochloromethane	ND	0.0050	1	03/30/2017 01:04	
Bromodichloromethane	ND	0.0050	1	03/30/2017 01:04	
Bromoform	ND	0.0050	1	03/30/2017 01:04	
Bromomethane	ND	0.0050	1	03/30/2017 01:04	
2-Butanone (MEK)	ND	0.020	1	03/30/2017 01:04	
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 01:04	
n-Butyl benzene	ND	0.0050	1	03/30/2017 01:04	
sec-Butyl benzene	ND	0.0050	1	03/30/2017 01:04	
tert-Butyl benzene	ND	0.0050	1	03/30/2017 01:04	
Carbon Disulfide	ND	0.0050	1	03/30/2017 01:04	
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 01:04	
Chlorobenzene	ND	0.0050	1	03/30/2017 01:04	
Chloroethane	ND	0.0050	1	03/30/2017 01:04	
Chloroform	ND	0.0050	1	03/30/2017 01:04	
Chloromethane	ND	0.0050	1	03/30/2017 01:04	
2-Chlorotoluene	ND	0.0050	1	03/30/2017 01:04	
4-Chlorotoluene	ND	0.0050	1	03/30/2017 01:04	
Dibromochloromethane	ND	0.0050	1	03/30/2017 01:04	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 01:04	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 01:04	
Dibromomethane	ND	0.0050	1	03/30/2017 01:04	
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 01:04	
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 01:04	
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 01:04	
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 01:04	
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 01:04	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 01:04	
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 01:04	
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 01:04	
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 01:04	
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 01:04	
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 01:04	
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 01:04	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-20	1703B82-032A	Soil	03/21/2017 11:30	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 01:04
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 01:04
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 01:04
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 01:04
Ethylbenzene	ND	0.0050	1	03/30/2017 01:04
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 01:04
Freon 113	ND	0.0050	1	03/30/2017 01:04
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 01:04
Hexachloroethane	ND	0.0050	1	03/30/2017 01:04
2-Hexanone	ND	0.0050	1	03/30/2017 01:04
Isopropylbenzene	ND	0.0050	1	03/30/2017 01:04
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 01:04
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 01:04
Methylene chloride	ND	0.0050	1	03/30/2017 01:04
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 01:04
Naphthalene	ND	0.0050	1	03/30/2017 01:04
n-Propyl benzene	ND	0.0050	1	03/30/2017 01:04
Styrene	ND	0.0050	1	03/30/2017 01:04
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 01:04
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 01:04
Tetrachloroethene	ND	0.0050	1	03/30/2017 01:04
Toluene	ND	0.0050	1	03/30/2017 01:04
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 01:04
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 01:04
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 01:04
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 01:04
Trichloroethene	ND	0.0050	1	03/30/2017 01:04
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 01:04
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 01:04
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 01:04
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 01:04
Vinyl Chloride	ND	0.0050	1	03/30/2017 01:04
Xylenes, Total	ND	0.0050	1	03/30/2017 01:04

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-20	1703B82-032A	Soil	03/21/2017 11:30	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	86	70-130		03/30/2017 01:04
Toluene-d8	104	70-130		03/30/2017 01:04
4-BFB	79	70-130		03/30/2017 01:04
Benzene-d6	77	60-140		03/30/2017 01:04
Ethylbenzene-d10	96	60-140		03/30/2017 01:04
1,2-DCB-d4	75	60-140		03/30/2017 01:04

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-5	1703B82-033A	Soil	03/21/2017 11:39	GC10	136111
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/30/2017 01:44	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 01:44	
Benzene	ND	0.0050	1	03/30/2017 01:44	
Bromobenzene	ND	0.0050	1	03/30/2017 01:44	
Bromochloromethane	ND	0.0050	1	03/30/2017 01:44	
Bromodichloromethane	ND	0.0050	1	03/30/2017 01:44	
Bromoform	ND	0.0050	1	03/30/2017 01:44	
Bromomethane	ND	0.0050	1	03/30/2017 01:44	
2-Butanone (MEK)	ND	0.020	1	03/30/2017 01:44	
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 01:44	
n-Butyl benzene	ND	0.0050	1	03/30/2017 01:44	
sec-Butyl benzene	ND	0.0050	1	03/30/2017 01:44	
tert-Butyl benzene	ND	0.0050	1	03/30/2017 01:44	
Carbon Disulfide	ND	0.0050	1	03/30/2017 01:44	
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 01:44	
Chlorobenzene	ND	0.0050	1	03/30/2017 01:44	
Chloroethane	ND	0.0050	1	03/30/2017 01:44	
Chloroform	ND	0.0050	1	03/30/2017 01:44	
Chloromethane	ND	0.0050	1	03/30/2017 01:44	
2-Chlorotoluene	ND	0.0050	1	03/30/2017 01:44	
4-Chlorotoluene	ND	0.0050	1	03/30/2017 01:44	
Dibromochloromethane	ND	0.0050	1	03/30/2017 01:44	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 01:44	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 01:44	
Dibromomethane	ND	0.0050	1	03/30/2017 01:44	
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 01:44	
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 01:44	
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 01:44	
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 01:44	
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 01:44	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 01:44	
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 01:44	
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 01:44	
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 01:44	
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 01:44	
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 01:44	
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 01:44	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-5	1703B82-033A	Soil	03/21/2017 11:39	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 01:44
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 01:44
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 01:44
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 01:44
Ethylbenzene	ND	0.0050	1	03/30/2017 01:44
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 01:44
Freon 113	ND	0.0050	1	03/30/2017 01:44
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 01:44
Hexachloroethane	ND	0.0050	1	03/30/2017 01:44
2-Hexanone	ND	0.0050	1	03/30/2017 01:44
Isopropylbenzene	ND	0.0050	1	03/30/2017 01:44
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 01:44
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 01:44
Methylene chloride	ND	0.0050	1	03/30/2017 01:44
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 01:44
Naphthalene	ND	0.0050	1	03/30/2017 01:44
n-Propyl benzene	ND	0.0050	1	03/30/2017 01:44
Styrene	ND	0.0050	1	03/30/2017 01:44
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 01:44
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 01:44
Tetrachloroethene	ND	0.0050	1	03/30/2017 01:44
Toluene	ND	0.0050	1	03/30/2017 01:44
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 01:44
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 01:44
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 01:44
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 01:44
Trichloroethene	ND	0.0050	1	03/30/2017 01:44
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 01:44
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 01:44
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 01:44
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 01:44
Vinyl Chloride	ND	0.0050	1	03/30/2017 01:44
Xylenes, Total	ND	0.0050	1	03/30/2017 01:44

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-5	1703B82-033A	Soil	03/21/2017 11:39	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	86	70-130		03/30/2017 01:44
Toluene-d8	105	70-130		03/30/2017 01:44
4-BFB	80	70-130		03/30/2017 01:44
Benzene-d6	83	60-140		03/30/2017 01:44
Ethylbenzene-d10	102	60-140		03/30/2017 01:44
1,2-DCB-d4	77	60-140		03/30/2017 01:44

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10	1703B82-034A	Soil	03/21/2017 11:41	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/30/2017 02:24
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 02:24
Benzene	ND	0.0050	1	03/30/2017 02:24
Bromobenzene	ND	0.0050	1	03/30/2017 02:24
Bromochloromethane	ND	0.0050	1	03/30/2017 02:24
Bromodichloromethane	ND	0.0050	1	03/30/2017 02:24
Bromoform	ND	0.0050	1	03/30/2017 02:24
Bromomethane	ND	0.0050	1	03/30/2017 02:24
2-Butanone (MEK)	ND	0.020	1	03/30/2017 02:24
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 02:24
n-Butyl benzene	ND	0.0050	1	03/30/2017 02:24
sec-Butyl benzene	ND	0.0050	1	03/30/2017 02:24
tert-Butyl benzene	ND	0.0050	1	03/30/2017 02:24
Carbon Disulfide	ND	0.0050	1	03/30/2017 02:24
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 02:24
Chlorobenzene	ND	0.0050	1	03/30/2017 02:24
Chloroethane	ND	0.0050	1	03/30/2017 02:24
Chloroform	ND	0.0050	1	03/30/2017 02:24
Chloromethane	ND	0.0050	1	03/30/2017 02:24
2-Chlorotoluene	ND	0.0050	1	03/30/2017 02:24
4-Chlorotoluene	ND	0.0050	1	03/30/2017 02:24
Dibromochloromethane	ND	0.0050	1	03/30/2017 02:24
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 02:24
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 02:24
Dibromomethane	ND	0.0050	1	03/30/2017 02:24
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 02:24
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 02:24
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 02:24
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 02:24
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 02:24
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 02:24
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 02:24
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 02:24
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 02:24
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 02:24
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 02:24
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 02:24

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10	1703B82-034A	Soil	03/21/2017 11:41	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 02:24
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 02:24
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 02:24
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 02:24
Ethylbenzene	ND	0.0050	1	03/30/2017 02:24
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 02:24
Freon 113	ND	0.0050	1	03/30/2017 02:24
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 02:24
Hexachloroethane	ND	0.0050	1	03/30/2017 02:24
2-Hexanone	ND	0.0050	1	03/30/2017 02:24
Isopropylbenzene	ND	0.0050	1	03/30/2017 02:24
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 02:24
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 02:24
Methylene chloride	ND	0.0050	1	03/30/2017 02:24
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 02:24
Naphthalene	ND	0.0050	1	03/30/2017 02:24
n-Propyl benzene	ND	0.0050	1	03/30/2017 02:24
Styrene	ND	0.0050	1	03/30/2017 02:24
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 02:24
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 02:24
Tetrachloroethene	ND	0.0050	1	03/30/2017 02:24
Toluene	ND	0.0050	1	03/30/2017 02:24
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 02:24
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 02:24
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 02:24
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 02:24
Trichloroethene	ND	0.0050	1	03/30/2017 02:24
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 02:24
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 02:24
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 02:24
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 02:24
Vinyl Chloride	ND	0.0050	1	03/30/2017 02:24
Xylenes, Total	ND	0.0050	1	03/30/2017 02:24

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10	1703B82-034A	Soil	03/21/2017 11:41	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	86	70-130		03/30/2017 02:24
Toluene-d8	105	70-130		03/30/2017 02:24
4-BFB	79	70-130		03/30/2017 02:24
Benzene-d6	82	60-140		03/30/2017 02:24
Ethylbenzene-d10	99	60-140		03/30/2017 02:24
1,2-DCB-d4	74	60-140		03/30/2017 02:24

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-15	1703B82-035A	Soil	03/21/2017 11:43	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/30/2017 03:04
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 03:04
Benzene	ND	0.0050	1	03/30/2017 03:04
Bromobenzene	ND	0.0050	1	03/30/2017 03:04
Bromochloromethane	ND	0.0050	1	03/30/2017 03:04
Bromodichloromethane	ND	0.0050	1	03/30/2017 03:04
Bromoform	ND	0.0050	1	03/30/2017 03:04
Bromomethane	ND	0.0050	1	03/30/2017 03:04
2-Butanone (MEK)	ND	0.020	1	03/30/2017 03:04
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 03:04
n-Butyl benzene	ND	0.0050	1	03/30/2017 03:04
sec-Butyl benzene	ND	0.0050	1	03/30/2017 03:04
tert-Butyl benzene	ND	0.0050	1	03/30/2017 03:04
Carbon Disulfide	ND	0.0050	1	03/30/2017 03:04
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 03:04
Chlorobenzene	ND	0.0050	1	03/30/2017 03:04
Chloroethane	ND	0.0050	1	03/30/2017 03:04
Chloroform	ND	0.0050	1	03/30/2017 03:04
Chloromethane	ND	0.0050	1	03/30/2017 03:04
2-Chlorotoluene	ND	0.0050	1	03/30/2017 03:04
4-Chlorotoluene	ND	0.0050	1	03/30/2017 03:04
Dibromochloromethane	ND	0.0050	1	03/30/2017 03:04
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 03:04
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 03:04
Dibromomethane	ND	0.0050	1	03/30/2017 03:04
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 03:04
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 03:04
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 03:04
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 03:04
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 03:04
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 03:04
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 03:04
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 03:04
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 03:04
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 03:04
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 03:04
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 03:04

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-15	1703B82-035A	Soil	03/21/2017 11:43	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 03:04
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 03:04
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 03:04
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 03:04
Ethylbenzene	ND	0.0050	1	03/30/2017 03:04
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 03:04
Freon 113	ND	0.0050	1	03/30/2017 03:04
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 03:04
Hexachloroethane	ND	0.0050	1	03/30/2017 03:04
2-Hexanone	ND	0.0050	1	03/30/2017 03:04
Isopropylbenzene	ND	0.0050	1	03/30/2017 03:04
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 03:04
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 03:04
Methylene chloride	ND	0.0050	1	03/30/2017 03:04
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 03:04
Naphthalene	ND	0.0050	1	03/30/2017 03:04
n-Propyl benzene	ND	0.0050	1	03/30/2017 03:04
Styrene	ND	0.0050	1	03/30/2017 03:04
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 03:04
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 03:04
Tetrachloroethene	ND	0.0050	1	03/30/2017 03:04
Toluene	ND	0.0050	1	03/30/2017 03:04
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 03:04
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 03:04
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 03:04
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 03:04
Trichloroethene	ND	0.0050	1	03/30/2017 03:04
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 03:04
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 03:04
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 03:04
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 03:04
Vinyl Chloride	ND	0.0050	1	03/30/2017 03:04
Xylenes, Total	ND	0.0050	1	03/30/2017 03:04

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-15	1703B82-035A	Soil	03/21/2017 11:43	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	86	70-130		03/30/2017 03:04
Toluene-d8	104	70-130		03/30/2017 03:04
4-BFB	79	70-130		03/30/2017 03:04
Benzene-d6	83	60-140		03/30/2017 03:04
Ethylbenzene-d10	102	60-140		03/30/2017 03:04
1,2-DCB-d4	76	60-140		03/30/2017 03:04

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-20	1703B82-036A	Soil	03/21/2017 11:47	GC10	136111
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/30/2017 03:44	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 03:44	
Benzene	ND	0.0050	1	03/30/2017 03:44	
Bromobenzene	ND	0.0050	1	03/30/2017 03:44	
Bromochloromethane	ND	0.0050	1	03/30/2017 03:44	
Bromodichloromethane	ND	0.0050	1	03/30/2017 03:44	
Bromoform	ND	0.0050	1	03/30/2017 03:44	
Bromomethane	ND	0.0050	1	03/30/2017 03:44	
2-Butanone (MEK)	ND	0.020	1	03/30/2017 03:44	
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 03:44	
n-Butyl benzene	ND	0.0050	1	03/30/2017 03:44	
sec-Butyl benzene	ND	0.0050	1	03/30/2017 03:44	
tert-Butyl benzene	ND	0.0050	1	03/30/2017 03:44	
Carbon Disulfide	ND	0.0050	1	03/30/2017 03:44	
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 03:44	
Chlorobenzene	ND	0.0050	1	03/30/2017 03:44	
Chloroethane	ND	0.0050	1	03/30/2017 03:44	
Chloroform	ND	0.0050	1	03/30/2017 03:44	
Chloromethane	ND	0.0050	1	03/30/2017 03:44	
2-Chlorotoluene	ND	0.0050	1	03/30/2017 03:44	
4-Chlorotoluene	ND	0.0050	1	03/30/2017 03:44	
Dibromochloromethane	ND	0.0050	1	03/30/2017 03:44	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 03:44	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 03:44	
Dibromomethane	ND	0.0050	1	03/30/2017 03:44	
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 03:44	
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 03:44	
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 03:44	
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 03:44	
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 03:44	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 03:44	
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 03:44	
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 03:44	
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 03:44	
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 03:44	
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 03:44	
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 03:44	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-20	1703B82-036A	Soil	03/21/2017 11:47	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 03:44
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 03:44
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 03:44
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 03:44
Ethylbenzene	ND	0.0050	1	03/30/2017 03:44
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 03:44
Freon 113	ND	0.0050	1	03/30/2017 03:44
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 03:44
Hexachloroethane	ND	0.0050	1	03/30/2017 03:44
2-Hexanone	ND	0.0050	1	03/30/2017 03:44
Isopropylbenzene	ND	0.0050	1	03/30/2017 03:44
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 03:44
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 03:44
Methylene chloride	ND	0.0050	1	03/30/2017 03:44
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 03:44
Naphthalene	ND	0.0050	1	03/30/2017 03:44
n-Propyl benzene	ND	0.0050	1	03/30/2017 03:44
Styrene	ND	0.0050	1	03/30/2017 03:44
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 03:44
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 03:44
Tetrachloroethene	ND	0.0050	1	03/30/2017 03:44
Toluene	ND	0.0050	1	03/30/2017 03:44
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 03:44
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 03:44
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 03:44
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 03:44
Trichloroethene	ND	0.0050	1	03/30/2017 03:44
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 03:44
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 03:44
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 03:44
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 03:44
Vinyl Chloride	ND	0.0050	1	03/30/2017 03:44
Xylenes, Total	ND	0.0050	1	03/30/2017 03:44

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-20	1703B82-036A	Soil	03/21/2017 11:47	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	86	70-130		03/30/2017 03:44
Toluene-d8	104	70-130		03/30/2017 03:44
4-BFB	81	70-130		03/30/2017 03:44
Benzene-d6	83	60-140		03/30/2017 03:44
Ethylbenzene-d10	102	60-140		03/30/2017 03:44
1,2-DCB-d4	77	60-140		03/30/2017 03:44

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-8	1703B82-041A	Soil	03/21/2017 14:35	GC28	136111
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/28/2017 18:27	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/28/2017 18:27	
Benzene	ND	0.0050	1	03/28/2017 18:27	
Bromobenzene	ND	0.0050	1	03/28/2017 18:27	
Bromochloromethane	ND	0.0050	1	03/28/2017 18:27	
Bromodichloromethane	ND	0.0050	1	03/28/2017 18:27	
Bromoform	ND	0.0050	1	03/28/2017 18:27	
Bromomethane	ND	0.0050	1	03/28/2017 18:27	
2-Butanone (MEK)	ND	0.020	1	03/28/2017 18:27	
t-Butyl alcohol (TBA)	ND	0.050	1	03/28/2017 18:27	
n-Butyl benzene	0.0050	0.0050	1	03/28/2017 18:27	
sec-Butyl benzene	0.0067	0.0050	1	03/28/2017 18:27	
tert-Butyl benzene	ND	0.0050	1	03/28/2017 18:27	
Carbon Disulfide	ND	0.0050	1	03/28/2017 18:27	
Carbon Tetrachloride	ND	0.0050	1	03/28/2017 18:27	
Chlorobenzene	ND	0.0050	1	03/28/2017 18:27	
Chloroethane	ND	0.0050	1	03/28/2017 18:27	
Chloroform	ND	0.0050	1	03/28/2017 18:27	
Chloromethane	ND	0.0050	1	03/28/2017 18:27	
2-Chlorotoluene	ND	0.0050	1	03/28/2017 18:27	
4-Chlorotoluene	ND	0.0050	1	03/28/2017 18:27	
Dibromochloromethane	ND	0.0050	1	03/28/2017 18:27	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/28/2017 18:27	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/28/2017 18:27	
Dibromomethane	ND	0.0050	1	03/28/2017 18:27	
1,2-Dichlorobenzene	ND	0.0050	1	03/28/2017 18:27	
1,3-Dichlorobenzene	ND	0.0050	1	03/28/2017 18:27	
1,4-Dichlorobenzene	ND	0.0050	1	03/28/2017 18:27	
Dichlorodifluoromethane	ND	0.0050	1	03/28/2017 18:27	
1,1-Dichloroethane	ND	0.0050	1	03/28/2017 18:27	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/28/2017 18:27	
1,1-Dichloroethene	ND	0.0050	1	03/28/2017 18:27	
cis-1,2-Dichloroethene	ND	0.0050	1	03/28/2017 18:27	
trans-1,2-Dichloroethene	ND	0.0050	1	03/28/2017 18:27	
1,2-Dichloropropane	ND	0.0050	1	03/28/2017 18:27	
1,3-Dichloropropane	ND	0.0050	1	03/28/2017 18:27	
2,2-Dichloropropane	ND	0.0050	1	03/28/2017 18:27	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-8	1703B82-041A	Soil	03/21/2017 14:35	GC28	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/28/2017 18:27
cis-1,3-Dichloropropene	ND	0.0050	1	03/28/2017 18:27
trans-1,3-Dichloropropene	ND	0.0050	1	03/28/2017 18:27
Diisopropyl ether (DIPE)	ND	0.0050	1	03/28/2017 18:27
Ethylbenzene	ND	0.0050	1	03/28/2017 18:27
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/28/2017 18:27
Freon 113	ND	0.0050	1	03/28/2017 18:27
Hexachlorobutadiene	ND	0.0050	1	03/28/2017 18:27
Hexachloroethane	ND	0.0050	1	03/28/2017 18:27
2-Hexanone	ND	0.0050	1	03/28/2017 18:27
Isopropylbenzene	ND	0.0050	1	03/28/2017 18:27
4-Isopropyl toluene	ND	0.0050	1	03/28/2017 18:27
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/28/2017 18:27
Methylene chloride	ND	0.0050	1	03/28/2017 18:27
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/28/2017 18:27
Naphthalene	ND	0.0050	1	03/28/2017 18:27
n-Propyl benzene	ND	0.0050	1	03/28/2017 18:27
Styrene	ND	0.0050	1	03/28/2017 18:27
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/28/2017 18:27
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/28/2017 18:27
Tetrachloroethene	ND	0.0050	1	03/28/2017 18:27
Toluene	ND	0.0050	1	03/28/2017 18:27
1,2,3-Trichlorobenzene	ND	0.0050	1	03/28/2017 18:27
1,2,4-Trichlorobenzene	ND	0.0050	1	03/28/2017 18:27
1,1,1-Trichloroethane	ND	0.0050	1	03/28/2017 18:27
1,1,2-Trichloroethane	ND	0.0050	1	03/28/2017 18:27
Trichloroethene	ND	0.0050	1	03/28/2017 18:27
Trichlorofluoromethane	ND	0.0050	1	03/28/2017 18:27
1,2,3-Trichloropropane	ND	0.0050	1	03/28/2017 18:27
1,2,4-Trimethylbenzene	ND	0.0050	1	03/28/2017 18:27
1,3,5-Trimethylbenzene	ND	0.0050	1	03/28/2017 18:27
Vinyl Chloride	ND	0.0050	1	03/28/2017 18:27
Xylenes, Total	ND	0.0050	1	03/28/2017 18:27

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-8	1703B82-041A	Soil	03/21/2017 14:35	GC28	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	93	70-130		03/28/2017 18:27
Toluene-d8	101	70-130		03/28/2017 18:27
4-BFB	98	70-130		03/28/2017 18:27
Benzene-d6	81	60-140		03/28/2017 18:27
Ethylbenzene-d10	104	60-140		03/28/2017 18:27
1,2-DCB-d4	72	60-140		03/28/2017 18:27

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-13	1703B82-042A	Soil	03/21/2017 15:11	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	03/30/2017 04:23
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/30/2017 04:23
Benzene	ND	0.0050	1	03/30/2017 04:23
Bromobenzene	ND	0.0050	1	03/30/2017 04:23
Bromochloromethane	ND	0.0050	1	03/30/2017 04:23
Bromodichloromethane	ND	0.0050	1	03/30/2017 04:23
Bromoform	ND	0.0050	1	03/30/2017 04:23
Bromomethane	ND	0.0050	1	03/30/2017 04:23
2-Butanone (MEK)	ND	0.020	1	03/30/2017 04:23
t-Butyl alcohol (TBA)	ND	0.050	1	03/30/2017 04:23
n-Butyl benzene	ND	0.0050	1	03/30/2017 04:23
sec-Butyl benzene	ND	0.0050	1	03/30/2017 04:23
tert-Butyl benzene	ND	0.0050	1	03/30/2017 04:23
Carbon Disulfide	ND	0.0050	1	03/30/2017 04:23
Carbon Tetrachloride	ND	0.0050	1	03/30/2017 04:23
Chlorobenzene	ND	0.0050	1	03/30/2017 04:23
Chloroethane	ND	0.0050	1	03/30/2017 04:23
Chloroform	ND	0.0050	1	03/30/2017 04:23
Chloromethane	ND	0.0050	1	03/30/2017 04:23
2-Chlorotoluene	ND	0.0050	1	03/30/2017 04:23
4-Chlorotoluene	ND	0.0050	1	03/30/2017 04:23
Dibromochloromethane	ND	0.0050	1	03/30/2017 04:23
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/30/2017 04:23
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/30/2017 04:23
Dibromomethane	ND	0.0050	1	03/30/2017 04:23
1,2-Dichlorobenzene	ND	0.0050	1	03/30/2017 04:23
1,3-Dichlorobenzene	ND	0.0050	1	03/30/2017 04:23
1,4-Dichlorobenzene	ND	0.0050	1	03/30/2017 04:23
Dichlorodifluoromethane	ND	0.0050	1	03/30/2017 04:23
1,1-Dichloroethane	ND	0.0050	1	03/30/2017 04:23
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/30/2017 04:23
1,1-Dichloroethene	ND	0.0050	1	03/30/2017 04:23
cis-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 04:23
trans-1,2-Dichloroethene	ND	0.0050	1	03/30/2017 04:23
1,2-Dichloropropane	ND	0.0050	1	03/30/2017 04:23
1,3-Dichloropropane	ND	0.0050	1	03/30/2017 04:23
2,2-Dichloropropane	ND	0.0050	1	03/30/2017 04:23

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-13	1703B82-042A	Soil	03/21/2017 15:11	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/30/2017 04:23
cis-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 04:23
trans-1,3-Dichloropropene	ND	0.0050	1	03/30/2017 04:23
Diisopropyl ether (DIPE)	ND	0.0050	1	03/30/2017 04:23
Ethylbenzene	ND	0.0050	1	03/30/2017 04:23
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/30/2017 04:23
Freon 113	ND	0.0050	1	03/30/2017 04:23
Hexachlorobutadiene	ND	0.0050	1	03/30/2017 04:23
Hexachloroethane	ND	0.0050	1	03/30/2017 04:23
2-Hexanone	ND	0.0050	1	03/30/2017 04:23
Isopropylbenzene	ND	0.0050	1	03/30/2017 04:23
4-Isopropyl toluene	ND	0.0050	1	03/30/2017 04:23
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/30/2017 04:23
Methylene chloride	ND	0.0050	1	03/30/2017 04:23
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/30/2017 04:23
Naphthalene	ND	0.0050	1	03/30/2017 04:23
n-Propyl benzene	ND	0.0050	1	03/30/2017 04:23
Styrene	ND	0.0050	1	03/30/2017 04:23
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 04:23
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/30/2017 04:23
Tetrachloroethene	ND	0.0050	1	03/30/2017 04:23
Toluene	ND	0.0050	1	03/30/2017 04:23
1,2,3-Trichlorobenzene	ND	0.0050	1	03/30/2017 04:23
1,2,4-Trichlorobenzene	ND	0.0050	1	03/30/2017 04:23
1,1,1-Trichloroethane	ND	0.0050	1	03/30/2017 04:23
1,1,2-Trichloroethane	ND	0.0050	1	03/30/2017 04:23
Trichloroethene	ND	0.0050	1	03/30/2017 04:23
Trichlorofluoromethane	ND	0.0050	1	03/30/2017 04:23
1,2,3-Trichloropropane	ND	0.0050	1	03/30/2017 04:23
1,2,4-Trimethylbenzene	ND	0.0050	1	03/30/2017 04:23
1,3,5-Trimethylbenzene	ND	0.0050	1	03/30/2017 04:23
Vinyl Chloride	ND	0.0050	1	03/30/2017 04:23
Xylenes, Total	ND	0.0050	1	03/30/2017 04:23

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-13	1703B82-042A	Soil	03/21/2017 15:11	GC10	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
Dibromofluoromethane	86		70-130	03/30/2017 04:23
Toluene-d8	102		70-130	03/30/2017 04:23
4-BFB	297	S	70-130	03/30/2017 04:23
Benzene-d6	86		60-140	03/30/2017 04:23
Ethylbenzene-d10	112		60-140	03/30/2017 04:23
1,2-DCB-d4	85		60-140	03/30/2017 04:23

Analyst(s): KF

Analytical Comments: c2



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-4	1703B82-043A	Soil	03/21/2017 15:29	GC18	136111
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/25/2017 23:50	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/25/2017 23:50	
Benzene	ND	0.0050	1	03/25/2017 23:50	
Bromobenzene	ND	0.0050	1	03/25/2017 23:50	
Bromochloromethane	ND	0.0050	1	03/25/2017 23:50	
Bromodichloromethane	ND	0.0050	1	03/25/2017 23:50	
Bromoform	ND	0.0050	1	03/25/2017 23:50	
Bromomethane	ND	0.0050	1	03/25/2017 23:50	
2-Butanone (MEK)	ND	0.020	1	03/25/2017 23:50	
t-Butyl alcohol (TBA)	ND	0.050	1	03/25/2017 23:50	
n-Butyl benzene	ND	0.0050	1	03/25/2017 23:50	
sec-Butyl benzene	ND	0.0050	1	03/25/2017 23:50	
tert-Butyl benzene	ND	0.0050	1	03/25/2017 23:50	
Carbon Disulfide	ND	0.0050	1	03/25/2017 23:50	
Carbon Tetrachloride	ND	0.0050	1	03/25/2017 23:50	
Chlorobenzene	ND	0.0050	1	03/25/2017 23:50	
Chloroethane	ND	0.0050	1	03/25/2017 23:50	
Chloroform	ND	0.0050	1	03/25/2017 23:50	
Chloromethane	ND	0.0050	1	03/25/2017 23:50	
2-Chlorotoluene	ND	0.0050	1	03/25/2017 23:50	
4-Chlorotoluene	ND	0.0050	1	03/25/2017 23:50	
Dibromochloromethane	ND	0.0050	1	03/25/2017 23:50	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/25/2017 23:50	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/25/2017 23:50	
Dibromomethane	ND	0.0050	1	03/25/2017 23:50	
1,2-Dichlorobenzene	ND	0.0050	1	03/25/2017 23:50	
1,3-Dichlorobenzene	ND	0.0050	1	03/25/2017 23:50	
1,4-Dichlorobenzene	ND	0.0050	1	03/25/2017 23:50	
Dichlorodifluoromethane	ND	0.0050	1	03/25/2017 23:50	
1,1-Dichloroethane	ND	0.0050	1	03/25/2017 23:50	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/25/2017 23:50	
1,1-Dichloroethene	ND	0.0050	1	03/25/2017 23:50	
cis-1,2-Dichloroethene	ND	0.0050	1	03/25/2017 23:50	
trans-1,2-Dichloroethene	ND	0.0050	1	03/25/2017 23:50	
1,2-Dichloropropane	ND	0.0050	1	03/25/2017 23:50	
1,3-Dichloropropane	ND	0.0050	1	03/25/2017 23:50	
2,2-Dichloropropane	ND	0.0050	1	03/25/2017 23:50	

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-4	1703B82-043A	Soil	03/21/2017 15:29	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/25/2017 23:50
cis-1,3-Dichloropropene	ND	0.0050	1	03/25/2017 23:50
trans-1,3-Dichloropropene	ND	0.0050	1	03/25/2017 23:50
Diisopropyl ether (DIPE)	ND	0.0050	1	03/25/2017 23:50
Ethylbenzene	ND	0.0050	1	03/25/2017 23:50
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/25/2017 23:50
Freon 113	ND	0.0050	1	03/25/2017 23:50
Hexachlorobutadiene	ND	0.0050	1	03/25/2017 23:50
Hexachloroethane	ND	0.0050	1	03/25/2017 23:50
2-Hexanone	ND	0.0050	1	03/25/2017 23:50
Isopropylbenzene	ND	0.0050	1	03/25/2017 23:50
4-Isopropyl toluene	ND	0.0050	1	03/25/2017 23:50
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/25/2017 23:50
Methylene chloride	ND	0.0050	1	03/25/2017 23:50
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/25/2017 23:50
Naphthalene	ND	0.0050	1	03/25/2017 23:50
n-Propyl benzene	ND	0.0050	1	03/25/2017 23:50
Styrene	ND	0.0050	1	03/25/2017 23:50
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/25/2017 23:50
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/25/2017 23:50
Tetrachloroethene	ND	0.0050	1	03/25/2017 23:50
Toluene	ND	0.0050	1	03/25/2017 23:50
1,2,3-Trichlorobenzene	ND	0.0050	1	03/25/2017 23:50
1,2,4-Trichlorobenzene	ND	0.0050	1	03/25/2017 23:50
1,1,1-Trichloroethane	ND	0.0050	1	03/25/2017 23:50
1,1,2-Trichloroethane	ND	0.0050	1	03/25/2017 23:50
Trichloroethene	ND	0.0050	1	03/25/2017 23:50
Trichlorofluoromethane	ND	0.0050	1	03/25/2017 23:50
1,2,3-Trichloropropane	ND	0.0050	1	03/25/2017 23:50
1,2,4-Trimethylbenzene	ND	0.0050	1	03/25/2017 23:50
1,3,5-Trimethylbenzene	ND	0.0050	1	03/25/2017 23:50
Vinyl Chloride	ND	0.0050	1	03/25/2017 23:50
Xylenes, Total	ND	0.0050	1	03/25/2017 23:50

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-4	1703B82-043A	Soil	03/21/2017 15:29	GC18	136111

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	97	70-130		03/25/2017 23:50
Toluene-d8	108	70-130		03/25/2017 23:50
4-BFB	101	70-130		03/25/2017 23:50
Benzene-d6	88	60-140		03/25/2017 23:50
Ethylbenzene-d10	102	60-140		03/25/2017 23:50
1,2-DCB-d4	79	60-140		03/25/2017 23:50

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-8	1703B82-044A	Soil	03/21/2017 15:31	GC18	136112
Analytes	Result	RL	DF	Date Analyzed	
Acetone	ND	0.10	1	03/27/2017 13:19	
tert-Amyl methyl ether (TAME)	ND	0.0050	1	03/27/2017 13:19	
Benzene	ND	0.0050	1	03/27/2017 13:19	
Bromobenzene	ND	0.0050	1	03/27/2017 13:19	
Bromochloromethane	ND	0.0050	1	03/27/2017 13:19	
Bromodichloromethane	ND	0.0050	1	03/27/2017 13:19	
Bromoform	ND	0.0050	1	03/27/2017 13:19	
Bromomethane	ND	0.0050	1	03/27/2017 13:19	
2-Butanone (MEK)	ND	0.020	1	03/27/2017 13:19	
t-Butyl alcohol (TBA)	ND	0.050	1	03/27/2017 13:19	
n-Butyl benzene	ND	0.0050	1	03/27/2017 13:19	
sec-Butyl benzene	ND	0.0050	1	03/27/2017 13:19	
tert-Butyl benzene	ND	0.0050	1	03/27/2017 13:19	
Carbon Disulfide	ND	0.0050	1	03/27/2017 13:19	
Carbon Tetrachloride	ND	0.0050	1	03/27/2017 13:19	
Chlorobenzene	ND	0.0050	1	03/27/2017 13:19	
Chloroethane	ND	0.0050	1	03/27/2017 13:19	
Chloroform	ND	0.0050	1	03/27/2017 13:19	
Chloromethane	ND	0.0050	1	03/27/2017 13:19	
2-Chlorotoluene	ND	0.0050	1	03/27/2017 13:19	
4-Chlorotoluene	ND	0.0050	1	03/27/2017 13:19	
Dibromochloromethane	ND	0.0050	1	03/27/2017 13:19	
1,2-Dibromo-3-chloropropane	ND	0.0040	1	03/27/2017 13:19	
1,2-Dibromoethane (EDB)	ND	0.0040	1	03/27/2017 13:19	
Dibromomethane	ND	0.0050	1	03/27/2017 13:19	
1,2-Dichlorobenzene	ND	0.0050	1	03/27/2017 13:19	
1,3-Dichlorobenzene	ND	0.0050	1	03/27/2017 13:19	
1,4-Dichlorobenzene	ND	0.0050	1	03/27/2017 13:19	
Dichlorodifluoromethane	ND	0.0050	1	03/27/2017 13:19	
1,1-Dichloroethane	ND	0.0050	1	03/27/2017 13:19	
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	03/27/2017 13:19	
1,1-Dichloroethene	ND	0.0050	1	03/27/2017 13:19	
cis-1,2-Dichloroethene	ND	0.0050	1	03/27/2017 13:19	
trans-1,2-Dichloroethene	ND	0.0050	1	03/27/2017 13:19	
1,2-Dichloropropane	ND	0.0050	1	03/27/2017 13:19	
1,3-Dichloropropane	ND	0.0050	1	03/27/2017 13:19	
2,2-Dichloropropane	ND	0.0050	1	03/27/2017 13:19	

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-8	1703B82-044A	Soil	03/21/2017 15:31	GC18	136112

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	03/27/2017 13:19
cis-1,3-Dichloropropene	ND	0.0050	1	03/27/2017 13:19
trans-1,3-Dichloropropene	ND	0.0050	1	03/27/2017 13:19
Diisopropyl ether (DIPE)	ND	0.0050	1	03/27/2017 13:19
Ethylbenzene	ND	0.0050	1	03/27/2017 13:19
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	03/27/2017 13:19
Freon 113	ND	0.0050	1	03/27/2017 13:19
Hexachlorobutadiene	ND	0.0050	1	03/27/2017 13:19
Hexachloroethane	ND	0.0050	1	03/27/2017 13:19
2-Hexanone	ND	0.0050	1	03/27/2017 13:19
Isopropylbenzene	ND	0.0050	1	03/27/2017 13:19
4-Isopropyl toluene	ND	0.0050	1	03/27/2017 13:19
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	03/27/2017 13:19
Methylene chloride	ND	0.0050	1	03/27/2017 13:19
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	03/27/2017 13:19
Naphthalene	ND	0.0050	1	03/27/2017 13:19
n-Propyl benzene	ND	0.0050	1	03/27/2017 13:19
Styrene	ND	0.0050	1	03/27/2017 13:19
1,1,1,2-Tetrachloroethane	ND	0.0050	1	03/27/2017 13:19
1,1,2,2-Tetrachloroethane	ND	0.0050	1	03/27/2017 13:19
Tetrachloroethene	ND	0.0050	1	03/27/2017 13:19
Toluene	ND	0.0050	1	03/27/2017 13:19
1,2,3-Trichlorobenzene	ND	0.0050	1	03/27/2017 13:19
1,2,4-Trichlorobenzene	ND	0.0050	1	03/27/2017 13:19
1,1,1-Trichloroethane	ND	0.0050	1	03/27/2017 13:19
1,1,2-Trichloroethane	ND	0.0050	1	03/27/2017 13:19
Trichloroethene	ND	0.0050	1	03/27/2017 13:19
Trichlorofluoromethane	ND	0.0050	1	03/27/2017 13:19
1,2,3-Trichloropropane	ND	0.0050	1	03/27/2017 13:19
1,2,4-Trimethylbenzene	ND	0.0050	1	03/27/2017 13:19
1,3,5-Trimethylbenzene	ND	0.0050	1	03/27/2017 13:19
Vinyl Chloride	ND	0.0050	1	03/27/2017 13:19
Xylenes, Total	ND	0.0050	1	03/27/2017 13:19

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-8	1703B82-044A	Soil	03/21/2017 15:31	GC18	136112

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	100	70-130		03/27/2017 13:19
Toluene-d8	105	70-130		03/27/2017 13:19
4-BFB	100	70-130		03/27/2017 13:19
Benzene-d6	92	60-140		03/27/2017 13:19
Ethylbenzene-d10	102	60-140		03/27/2017 13:19
1,2-DCB-d4	78	60-140		03/27/2017 13:19

Analyst(s): JEM



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-W	1703B82-048B	Water	03/22/2017 08:24	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/24/2017 10:43
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/24/2017 10:43
Benzene	ND	0.50	1	03/24/2017 10:43
Bromobenzene	ND	0.50	1	03/24/2017 10:43
Bromochloromethane	ND	0.50	1	03/24/2017 10:43
Bromodichloromethane	ND	0.50	1	03/24/2017 10:43
Bromoform	ND	0.50	1	03/24/2017 10:43
Bromomethane	ND	0.50	1	03/24/2017 10:43
2-Butanone (MEK)	ND	2.0	1	03/24/2017 10:43
t-Butyl alcohol (TBA)	ND	2.0	1	03/24/2017 10:43
n-Butyl benzene	4.2	0.50	1	03/24/2017 10:43
sec-Butyl benzene	4.9	0.50	1	03/24/2017 10:43
tert-Butyl benzene	ND	0.50	1	03/24/2017 10:43
Carbon Disulfide	ND	0.50	1	03/24/2017 10:43
Carbon Tetrachloride	ND	0.50	1	03/24/2017 10:43
Chlorobenzene	ND	0.50	1	03/24/2017 10:43
Chloroethane	ND	0.50	1	03/24/2017 10:43
Chloroform	ND	0.50	1	03/24/2017 10:43
Chloromethane	ND	0.50	1	03/24/2017 10:43
2-Chlorotoluene	ND	0.50	1	03/24/2017 10:43
4-Chlorotoluene	ND	0.50	1	03/24/2017 10:43
Dibromochloromethane	ND	0.50	1	03/24/2017 10:43
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/24/2017 10:43
1,2-Dibromoethane (EDB)	ND	0.50	1	03/24/2017 10:43
Dibromomethane	ND	0.50	1	03/24/2017 10:43
1,2-Dichlorobenzene	ND	0.50	1	03/24/2017 10:43
1,3-Dichlorobenzene	ND	0.50	1	03/24/2017 10:43
1,4-Dichlorobenzene	ND	0.50	1	03/24/2017 10:43
Dichlorodifluoromethane	ND	0.50	1	03/24/2017 10:43
1,1-Dichloroethane	ND	0.50	1	03/24/2017 10:43
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/24/2017 10:43
1,1-Dichloroethene	ND	0.50	1	03/24/2017 10:43
cis-1,2-Dichloroethene	ND	0.50	1	03/24/2017 10:43
trans-1,2-Dichloroethene	ND	0.50	1	03/24/2017 10:43
1,2-Dichloropropane	ND	0.50	1	03/24/2017 10:43
1,3-Dichloropropane	ND	0.50	1	03/24/2017 10:43
2,2-Dichloropropane	ND	0.50	1	03/24/2017 10:43

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-W	1703B82-048B	Water	03/22/2017 08:24	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/24/2017 10:43
cis-1,3-Dichloropropene	ND	0.50	1	03/24/2017 10:43
trans-1,3-Dichloropropene	ND	0.50	1	03/24/2017 10:43
Diisopropyl ether (DIPE)	ND	0.50	1	03/24/2017 10:43
Ethylbenzene	ND	0.50	1	03/24/2017 10:43
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/24/2017 10:43
Freon 113	ND	0.50	1	03/24/2017 10:43
Hexachlorobutadiene	ND	0.50	1	03/24/2017 10:43
Hexachloroethane	ND	0.50	1	03/24/2017 10:43
2-Hexanone	ND	0.50	1	03/24/2017 10:43
Isopropylbenzene	5.1	0.50	1	03/24/2017 10:43
4-Isopropyl toluene	ND	0.50	1	03/24/2017 10:43
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/24/2017 10:43
Methylene chloride	ND	0.50	1	03/24/2017 10:43
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/24/2017 10:43
Naphthalene	ND	0.50	1	03/24/2017 10:43
n-Propyl benzene	12	0.50	1	03/24/2017 10:43
Styrene	ND	0.50	1	03/24/2017 10:43
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/24/2017 10:43
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/24/2017 10:43
Tetrachloroethene	ND	0.50	1	03/24/2017 10:43
Toluene	ND	0.50	1	03/24/2017 10:43
1,2,3-Trichlorobenzene	ND	0.50	1	03/24/2017 10:43
1,2,4-Trichlorobenzene	ND	0.50	1	03/24/2017 10:43
1,1,1-Trichloroethane	ND	0.50	1	03/24/2017 10:43
1,1,2-Trichloroethane	ND	0.50	1	03/24/2017 10:43
Trichloroethene	ND	0.50	1	03/24/2017 10:43
Trichlorofluoromethane	ND	0.50	1	03/24/2017 10:43
1,2,3-Trichloropropane	ND	0.50	1	03/24/2017 10:43
1,2,4-Trimethylbenzene	ND	0.50	1	03/24/2017 10:43
1,3,5-Trimethylbenzene	ND	0.50	1	03/24/2017 10:43
Vinyl Chloride	ND	0.50	1	03/24/2017 10:43
Xylenes, Total	ND	0.50	1	03/24/2017 10:43

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-W	1703B82-048B	Water	03/22/2017 08:24	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	89	70-130		03/24/2017 10:43
Toluene-d8	97	70-130		03/24/2017 10:43
4-BFB	104	70-130		03/24/2017 10:43

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-W	1703B82-049B	Water	03/22/2017 08:28	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/24/2017 11:22
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/24/2017 11:22
Benzene	ND	0.50	1	03/24/2017 11:22
Bromobenzene	ND	0.50	1	03/24/2017 11:22
Bromochloromethane	ND	0.50	1	03/24/2017 11:22
Bromodichloromethane	ND	0.50	1	03/24/2017 11:22
Bromoform	ND	0.50	1	03/24/2017 11:22
Bromomethane	ND	0.50	1	03/24/2017 11:22
2-Butanone (MEK)	ND	2.0	1	03/24/2017 11:22
t-Butyl alcohol (TBA)	ND	2.0	1	03/24/2017 11:22
n-Butyl benzene	ND	0.50	1	03/24/2017 11:22
sec-Butyl benzene	ND	0.50	1	03/24/2017 11:22
tert-Butyl benzene	ND	0.50	1	03/24/2017 11:22
Carbon Disulfide	ND	0.50	1	03/24/2017 11:22
Carbon Tetrachloride	ND	0.50	1	03/24/2017 11:22
Chlorobenzene	ND	0.50	1	03/24/2017 11:22
Chloroethane	ND	0.50	1	03/24/2017 11:22
Chloroform	ND	0.50	1	03/24/2017 11:22
Chloromethane	0.62	0.50	1	03/24/2017 11:22
2-Chlorotoluene	ND	0.50	1	03/24/2017 11:22
4-Chlorotoluene	ND	0.50	1	03/24/2017 11:22
Dibromochloromethane	ND	0.50	1	03/24/2017 11:22
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/24/2017 11:22
1,2-Dibromoethane (EDB)	ND	0.50	1	03/24/2017 11:22
Dibromomethane	ND	0.50	1	03/24/2017 11:22
1,2-Dichlorobenzene	ND	0.50	1	03/24/2017 11:22
1,3-Dichlorobenzene	ND	0.50	1	03/24/2017 11:22
1,4-Dichlorobenzene	ND	0.50	1	03/24/2017 11:22
Dichlorodifluoromethane	ND	0.50	1	03/24/2017 11:22
1,1-Dichloroethane	ND	0.50	1	03/24/2017 11:22
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/24/2017 11:22
1,1-Dichloroethene	ND	0.50	1	03/24/2017 11:22
cis-1,2-Dichloroethene	ND	0.50	1	03/24/2017 11:22
trans-1,2-Dichloroethene	ND	0.50	1	03/24/2017 11:22
1,2-Dichloropropane	ND	0.50	1	03/24/2017 11:22
1,3-Dichloropropane	ND	0.50	1	03/24/2017 11:22
2,2-Dichloropropane	ND	0.50	1	03/24/2017 11:22

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-W	1703B82-049B	Water	03/22/2017 08:28	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/24/2017 11:22
cis-1,3-Dichloropropene	ND	0.50	1	03/24/2017 11:22
trans-1,3-Dichloropropene	ND	0.50	1	03/24/2017 11:22
Diisopropyl ether (DIPE)	ND	0.50	1	03/24/2017 11:22
Ethylbenzene	ND	0.50	1	03/24/2017 11:22
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/24/2017 11:22
Freon 113	ND	0.50	1	03/24/2017 11:22
Hexachlorobutadiene	ND	0.50	1	03/24/2017 11:22
Hexachloroethane	ND	0.50	1	03/24/2017 11:22
2-Hexanone	ND	0.50	1	03/24/2017 11:22
Isopropylbenzene	ND	0.50	1	03/24/2017 11:22
4-Isopropyl toluene	ND	0.50	1	03/24/2017 11:22
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/24/2017 11:22
Methylene chloride	ND	0.50	1	03/24/2017 11:22
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/24/2017 11:22
Naphthalene	ND	0.50	1	03/24/2017 11:22
n-Propyl benzene	ND	0.50	1	03/24/2017 11:22
Styrene	ND	0.50	1	03/24/2017 11:22
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/24/2017 11:22
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/24/2017 11:22
Tetrachloroethene	ND	0.50	1	03/24/2017 11:22
Toluene	ND	0.50	1	03/24/2017 11:22
1,2,3-Trichlorobenzene	ND	0.50	1	03/24/2017 11:22
1,2,4-Trichlorobenzene	ND	0.50	1	03/24/2017 11:22
1,1,1-Trichloroethane	ND	0.50	1	03/24/2017 11:22
1,1,2-Trichloroethane	ND	0.50	1	03/24/2017 11:22
Trichloroethene	ND	0.50	1	03/24/2017 11:22
Trichlorofluoromethane	ND	0.50	1	03/24/2017 11:22
1,2,3-Trichloropropane	ND	0.50	1	03/24/2017 11:22
1,2,4-Trimethylbenzene	ND	0.50	1	03/24/2017 11:22
1,3,5-Trimethylbenzene	ND	0.50	1	03/24/2017 11:22
Vinyl Chloride	ND	0.50	1	03/24/2017 11:22
Xylenes, Total	ND	0.50	1	03/24/2017 11:22

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-W	1703B82-049B	Water	03/22/2017 08:28	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	90		70-130	03/24/2017 11:22
Toluene-d8	94		70-130	03/24/2017 11:22
4-BFB	107		70-130	03/24/2017 11:22

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-W	1703B82-050B	Water	03/22/2017 08:35	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	50	5	03/24/2017 12:41
tert-Amyl methyl ether (TAME)	ND	2.5	5	03/24/2017 12:41
Benzene	ND	2.5	5	03/24/2017 12:41
Bromobenzene	ND	2.5	5	03/24/2017 12:41
Bromochloromethane	ND	2.5	5	03/24/2017 12:41
Bromodichloromethane	ND	2.5	5	03/24/2017 12:41
Bromoform	ND	2.5	5	03/24/2017 12:41
Bromomethane	ND	2.5	5	03/24/2017 12:41
2-Butanone (MEK)	ND	10	5	03/24/2017 12:41
t-Butyl alcohol (TBA)	ND	10	5	03/24/2017 12:41
n-Butyl benzene	48	2.5	5	03/24/2017 12:41
sec-Butyl benzene	27	2.5	5	03/24/2017 12:41
tert-Butyl benzene	ND	2.5	5	03/24/2017 12:41
Carbon Disulfide	ND	2.5	5	03/24/2017 12:41
Carbon Tetrachloride	ND	2.5	5	03/24/2017 12:41
Chlorobenzene	ND	2.5	5	03/24/2017 12:41
Chloroethane	ND	2.5	5	03/24/2017 12:41
Chloroform	ND	2.5	5	03/24/2017 12:41
Chloromethane	ND	2.5	5	03/24/2017 12:41
2-Chlorotoluene	ND	2.5	5	03/24/2017 12:41
4-Chlorotoluene	ND	2.5	5	03/24/2017 12:41
Dibromochloromethane	ND	2.5	5	03/24/2017 12:41
1,2-Dibromo-3-chloropropane	ND	1.0	5	03/24/2017 12:41
1,2-Dibromoethane (EDB)	ND	2.5	5	03/24/2017 12:41
Dibromomethane	ND	2.5	5	03/24/2017 12:41
1,2-Dichlorobenzene	ND	2.5	5	03/24/2017 12:41
1,3-Dichlorobenzene	ND	2.5	5	03/24/2017 12:41
1,4-Dichlorobenzene	ND	2.5	5	03/24/2017 12:41
Dichlorodifluoromethane	ND	2.5	5	03/24/2017 12:41
1,1-Dichloroethane	ND	2.5	5	03/24/2017 12:41
1,2-Dichloroethane (1,2-DCA)	ND	2.5	5	03/24/2017 12:41
1,1-Dichloroethene	ND	2.5	5	03/24/2017 12:41
cis-1,2-Dichloroethene	ND	2.5	5	03/24/2017 12:41
trans-1,2-Dichloroethene	ND	2.5	5	03/24/2017 12:41
1,2-Dichloropropane	ND	2.5	5	03/24/2017 12:41
1,3-Dichloropropane	ND	2.5	5	03/24/2017 12:41
2,2-Dichloropropane	ND	2.5	5	03/24/2017 12:41

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-W	1703B82-050B	Water	03/22/2017 08:35	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	2.5	5	03/24/2017 12:41
cis-1,3-Dichloropropene	ND	2.5	5	03/24/2017 12:41
trans-1,3-Dichloropropene	ND	2.5	5	03/24/2017 12:41
Diisopropyl ether (DIPE)	ND	2.5	5	03/24/2017 12:41
Ethylbenzene	8.9	2.5	5	03/24/2017 12:41
Ethyl tert-butyl ether (ETBE)	ND	2.5	5	03/24/2017 12:41
Freon 113	ND	2.5	5	03/24/2017 12:41
Hexachlorobutadiene	ND	2.5	5	03/24/2017 12:41
Hexachloroethane	ND	2.5	5	03/24/2017 12:41
2-Hexanone	ND	2.5	5	03/24/2017 12:41
Isopropylbenzene	29	2.5	5	03/24/2017 12:41
4-Isopropyl toluene	13	2.5	5	03/24/2017 12:41
Methyl-t-butyl ether (MTBE)	ND	2.5	5	03/24/2017 12:41
Methylene chloride	ND	2.5	5	03/24/2017 12:41
4-Methyl-2-pentanone (MIBK)	ND	2.5	5	03/24/2017 12:41
Naphthalene	ND	2.5	5	03/24/2017 12:41
n-Propyl benzene	99	2.5	5	03/24/2017 12:41
Styrene	ND	2.5	5	03/24/2017 12:41
1,1,1,2-Tetrachloroethane	ND	2.5	5	03/24/2017 12:41
1,1,2,2-Tetrachloroethane	ND	2.5	5	03/24/2017 12:41
Tetrachloroethene	ND	2.5	5	03/24/2017 12:41
Toluene	ND	2.5	5	03/24/2017 12:41
1,2,3-Trichlorobenzene	ND	2.5	5	03/24/2017 12:41
1,2,4-Trichlorobenzene	ND	2.5	5	03/24/2017 12:41
1,1,1-Trichloroethane	ND	2.5	5	03/24/2017 12:41
1,1,2-Trichloroethane	ND	2.5	5	03/24/2017 12:41
Trichloroethene	ND	2.5	5	03/24/2017 12:41
Trichlorofluoromethane	ND	2.5	5	03/24/2017 12:41
1,2,3-Trichloropropane	ND	2.5	5	03/24/2017 12:41
1,2,4-Trimethylbenzene	140	2.5	5	03/24/2017 12:41
1,3,5-Trimethylbenzene	68	2.5	5	03/24/2017 12:41
Vinyl Chloride	ND	2.5	5	03/24/2017 12:41
Xylenes, Total	19	2.5	5	03/24/2017 12:41

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-W	1703B82-050B	Water	03/22/2017 08:35	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	91	70-130		03/24/2017 12:41
Toluene-d8	94	70-130		03/24/2017 12:41
4-BFB	99	70-130		03/24/2017 12:41
Analyst(s): KF	Analytical Comments: b1			



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-W	1703B82-051B	Water	03/22/2017 08:42	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	500	50	03/30/2017 15:34
tert-Amyl methyl ether (TAME)	ND	25	50	03/30/2017 15:34
Benzene	900	25	50	03/30/2017 15:34
Bromobenzene	ND	25	50	03/30/2017 15:34
Bromochloromethane	ND	25	50	03/30/2017 15:34
Bromodichloromethane	ND	25	50	03/30/2017 15:34
Bromoform	ND	25	50	03/30/2017 15:34
Bromomethane	ND	25	50	03/30/2017 15:34
2-Butanone (MEK)	ND	100	50	03/30/2017 15:34
t-Butyl alcohol (TBA)	ND	100	50	03/30/2017 15:34
n-Butyl benzene	28	25	50	03/30/2017 15:34
sec-Butyl benzene	ND	25	50	03/30/2017 15:34
tert-Butyl benzene	ND	25	50	03/30/2017 15:34
Carbon Disulfide	ND	25	50	03/30/2017 15:34
Carbon Tetrachloride	ND	25	50	03/30/2017 15:34
Chlorobenzene	ND	25	50	03/30/2017 15:34
Chloroethane	ND	25	50	03/30/2017 15:34
Chloroform	ND	25	50	03/30/2017 15:34
Chloromethane	ND	25	50	03/30/2017 15:34
2-Chlorotoluene	ND	25	50	03/30/2017 15:34
4-Chlorotoluene	ND	25	50	03/30/2017 15:34
Dibromochloromethane	ND	25	50	03/30/2017 15:34
1,2-Dibromo-3-chloropropane	ND	10	50	03/30/2017 15:34
1,2-Dibromoethane (EDB)	ND	25	50	03/30/2017 15:34
Dibromomethane	ND	25	50	03/30/2017 15:34
1,2-Dichlorobenzene	ND	25	50	03/30/2017 15:34
1,3-Dichlorobenzene	ND	25	50	03/30/2017 15:34
1,4-Dichlorobenzene	ND	25	50	03/30/2017 15:34
Dichlorodifluoromethane	ND	25	50	03/30/2017 15:34
1,1-Dichloroethane	ND	25	50	03/30/2017 15:34
1,2-Dichloroethane (1,2-DCA)	ND	25	50	03/30/2017 15:34
1,1-Dichloroethene	ND	25	50	03/30/2017 15:34
cis-1,2-Dichloroethene	ND	25	50	03/30/2017 15:34
trans-1,2-Dichloroethene	ND	25	50	03/30/2017 15:34
1,2-Dichloropropane	ND	25	50	03/30/2017 15:34
1,3-Dichloropropane	ND	25	50	03/30/2017 15:34
2,2-Dichloropropane	ND	25	50	03/30/2017 15:34

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-W	1703B82-051B	Water	03/22/2017 08:42	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	25	50	03/30/2017 15:34
cis-1,3-Dichloropropene	ND	25	50	03/30/2017 15:34
trans-1,3-Dichloropropene	ND	25	50	03/30/2017 15:34
Diisopropyl ether (DIPE)	ND	25	50	03/30/2017 15:34
Ethylbenzene	520	25	50	03/30/2017 15:34
Ethyl tert-butyl ether (ETBE)	ND	25	50	03/30/2017 15:34
Freon 113	ND	25	50	03/30/2017 15:34
Hexachlorobutadiene	ND	25	50	03/30/2017 15:34
Hexachloroethane	ND	25	50	03/30/2017 15:34
2-Hexanone	ND	25	50	03/30/2017 15:34
Isopropylbenzene	37	25	50	03/30/2017 15:34
4-Isopropyl toluene	ND	25	50	03/30/2017 15:34
Methyl-t-butyl ether (MTBE)	ND	25	50	03/30/2017 15:34
Methylene chloride	ND	25	50	03/30/2017 15:34
4-Methyl-2-pentanone (MIBK)	ND	25	50	03/30/2017 15:34
Naphthalene	160	25	50	03/30/2017 15:34
n-Propyl benzene	120	25	50	03/30/2017 15:34
Styrene	ND	25	50	03/30/2017 15:34
1,1,1,2-Tetrachloroethane	ND	25	50	03/30/2017 15:34
1,1,2,2-Tetrachloroethane	ND	25	50	03/30/2017 15:34
Tetrachloroethene	ND	25	50	03/30/2017 15:34
Toluene	37	25	50	03/30/2017 15:34
1,2,3-Trichlorobenzene	ND	25	50	03/30/2017 15:34
1,2,4-Trichlorobenzene	ND	25	50	03/30/2017 15:34
1,1,1-Trichloroethane	ND	25	50	03/30/2017 15:34
1,1,2-Trichloroethane	ND	25	50	03/30/2017 15:34
Trichloroethene	ND	25	50	03/30/2017 15:34
Trichlorofluoromethane	ND	25	50	03/30/2017 15:34
1,2,3-Trichloropropane	ND	25	50	03/30/2017 15:34
1,2,4-Trimethylbenzene	580	25	50	03/30/2017 15:34
1,3,5-Trimethylbenzene	170	25	50	03/30/2017 15:34
Vinyl Chloride	ND	25	50	03/30/2017 15:34
Xylenes, Total	840	25	50	03/30/2017 15:34

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-W	1703B82-051B	Water	03/22/2017 08:42	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	94	70-130		03/30/2017 15:34
Toluene-d8	97	70-130		03/30/2017 15:34
4-BFB	104	70-130		03/30/2017 15:34

Analyst(s): JEM



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-W	1703B82-052B	Water	03/22/2017 08:46	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	50	5	03/24/2017 14:02
tert-Amyl methyl ether (TAME)	ND	2.5	5	03/24/2017 14:02
Benzene	47	2.5	5	03/24/2017 14:02
Bromobenzene	ND	2.5	5	03/24/2017 14:02
Bromochloromethane	ND	2.5	5	03/24/2017 14:02
Bromodichloromethane	ND	2.5	5	03/24/2017 14:02
Bromoform	ND	2.5	5	03/24/2017 14:02
Bromomethane	ND	2.5	5	03/24/2017 14:02
2-Butanone (MEK)	ND	10	5	03/24/2017 14:02
t-Butyl alcohol (TBA)	ND	10	5	03/24/2017 14:02
n-Butyl benzene	ND	2.5	5	03/24/2017 14:02
sec-Butyl benzene	ND	2.5	5	03/24/2017 14:02
tert-Butyl benzene	ND	2.5	5	03/24/2017 14:02
Carbon Disulfide	ND	2.5	5	03/24/2017 14:02
Carbon Tetrachloride	ND	2.5	5	03/24/2017 14:02
Chlorobenzene	ND	2.5	5	03/24/2017 14:02
Chloroethane	ND	2.5	5	03/24/2017 14:02
Chloroform	ND	2.5	5	03/24/2017 14:02
Chloromethane	ND	2.5	5	03/24/2017 14:02
2-Chlorotoluene	ND	2.5	5	03/24/2017 14:02
4-Chlorotoluene	ND	2.5	5	03/24/2017 14:02
Dibromochloromethane	ND	2.5	5	03/24/2017 14:02
1,2-Dibromo-3-chloropropane	ND	1.0	5	03/24/2017 14:02
1,2-Dibromoethane (EDB)	ND	2.5	5	03/24/2017 14:02
Dibromomethane	ND	2.5	5	03/24/2017 14:02
1,2-Dichlorobenzene	ND	2.5	5	03/24/2017 14:02
1,3-Dichlorobenzene	ND	2.5	5	03/24/2017 14:02
1,4-Dichlorobenzene	ND	2.5	5	03/24/2017 14:02
Dichlorodifluoromethane	ND	2.5	5	03/24/2017 14:02
1,1-Dichloroethane	ND	2.5	5	03/24/2017 14:02
1,2-Dichloroethane (1,2-DCA)	ND	2.5	5	03/24/2017 14:02
1,1-Dichloroethene	ND	2.5	5	03/24/2017 14:02
cis-1,2-Dichloroethene	ND	2.5	5	03/24/2017 14:02
trans-1,2-Dichloroethene	ND	2.5	5	03/24/2017 14:02
1,2-Dichloropropane	ND	2.5	5	03/24/2017 14:02
1,3-Dichloropropane	ND	2.5	5	03/24/2017 14:02
2,2-Dichloropropane	ND	2.5	5	03/24/2017 14:02

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-W	1703B82-052B	Water	03/22/2017 08:46	GC16	136217
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		2.5	5	03/24/2017 14:02
cis-1,3-Dichloropropene	ND		2.5	5	03/24/2017 14:02
trans-1,3-Dichloropropene	ND		2.5	5	03/24/2017 14:02
Diisopropyl ether (DIPE)	ND		2.5	5	03/24/2017 14:02
Ethylbenzene	9.1		2.5	5	03/24/2017 14:02
Ethyl tert-butyl ether (ETBE)	ND		2.5	5	03/24/2017 14:02
Freon 113	ND		2.5	5	03/24/2017 14:02
Hexachlorobutadiene	ND		2.5	5	03/24/2017 14:02
Hexachloroethane	ND		2.5	5	03/24/2017 14:02
2-Hexanone	ND		2.5	5	03/24/2017 14:02
Isopropylbenzene	6.5		2.5	5	03/24/2017 14:02
4-Isopropyl toluene	ND		2.5	5	03/24/2017 14:02
Methyl-t-butyl ether (MTBE)	ND		2.5	5	03/24/2017 14:02
Methylene chloride	ND		2.5	5	03/24/2017 14:02
4-Methyl-2-pentanone (MIBK)	2.8		2.5	5	03/24/2017 14:02
Naphthalene	32		2.5	5	03/24/2017 14:02
n-Propyl benzene	14		2.5	5	03/24/2017 14:02
Styrene	ND		2.5	5	03/24/2017 14:02
1,1,1,2-Tetrachloroethane	ND		2.5	5	03/24/2017 14:02
1,1,2,2-Tetrachloroethane	ND		2.5	5	03/24/2017 14:02
Tetrachloroethene	ND		2.5	5	03/24/2017 14:02
Toluene	21		2.5	5	03/24/2017 14:02
1,2,3-Trichlorobenzene	ND		2.5	5	03/24/2017 14:02
1,2,4-Trichlorobenzene	ND		2.5	5	03/24/2017 14:02
1,1,1-Trichloroethane	ND		2.5	5	03/24/2017 14:02
1,1,2-Trichloroethane	ND		2.5	5	03/24/2017 14:02
Trichloroethene	ND		2.5	5	03/24/2017 14:02
Trichlorofluoromethane	ND		2.5	5	03/24/2017 14:02
1,2,3-Trichloropropane	ND		2.5	5	03/24/2017 14:02
1,2,4-Trimethylbenzene	21		2.5	5	03/24/2017 14:02
1,3,5-Trimethylbenzene	5.5		2.5	5	03/24/2017 14:02
Vinyl Chloride	ND		2.5	5	03/24/2017 14:02
Xylenes, Total	54		2.5	5	03/24/2017 14:02

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-W	1703B82-052B	Water	03/22/2017 08:46	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	89		70-130	03/24/2017 14:02
Toluene-d8	96		70-130	03/24/2017 14:02
4-BFB	95		70-130	03/24/2017 14:02

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-W	1703B82-053B	Water	03/22/2017 08:50	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	500	50	03/28/2017 11:30
tert-Amyl methyl ether (TAME)	ND	25	50	03/28/2017 11:30
Benzene	1100	25	50	03/28/2017 11:30
Bromobenzene	ND	25	50	03/28/2017 11:30
Bromochloromethane	ND	25	50	03/28/2017 11:30
Bromodichloromethane	ND	25	50	03/28/2017 11:30
Bromoform	ND	25	50	03/28/2017 11:30
Bromomethane	ND	25	50	03/28/2017 11:30
2-Butanone (MEK)	ND	100	50	03/28/2017 11:30
t-Butyl alcohol (TBA)	ND	100	50	03/28/2017 11:30
n-Butyl benzene	ND	25	50	03/28/2017 11:30
sec-Butyl benzene	ND	25	50	03/28/2017 11:30
tert-Butyl benzene	ND	25	50	03/28/2017 11:30
Carbon Disulfide	ND	25	50	03/28/2017 11:30
Carbon Tetrachloride	ND	25	50	03/28/2017 11:30
Chlorobenzene	ND	25	50	03/28/2017 11:30
Chloroethane	ND	25	50	03/28/2017 11:30
Chloroform	ND	25	50	03/28/2017 11:30
Chloromethane	ND	25	50	03/28/2017 11:30
2-Chlorotoluene	ND	25	50	03/28/2017 11:30
4-Chlorotoluene	ND	25	50	03/28/2017 11:30
Dibromochloromethane	ND	25	50	03/28/2017 11:30
1,2-Dibromo-3-chloropropane	ND	10	50	03/28/2017 11:30
1,2-Dibromoethane (EDB)	ND	25	50	03/28/2017 11:30
Dibromomethane	ND	25	50	03/28/2017 11:30
1,2-Dichlorobenzene	ND	25	50	03/28/2017 11:30
1,3-Dichlorobenzene	ND	25	50	03/28/2017 11:30
1,4-Dichlorobenzene	ND	25	50	03/28/2017 11:30
Dichlorodifluoromethane	ND	25	50	03/28/2017 11:30
1,1-Dichloroethane	ND	25	50	03/28/2017 11:30
1,2-Dichloroethane (1,2-DCA)	ND	25	50	03/28/2017 11:30
1,1-Dichloroethene	ND	25	50	03/28/2017 11:30
cis-1,2-Dichloroethene	ND	25	50	03/28/2017 11:30
trans-1,2-Dichloroethene	ND	25	50	03/28/2017 11:30
1,2-Dichloropropane	ND	25	50	03/28/2017 11:30
1,3-Dichloropropane	ND	25	50	03/28/2017 11:30
2,2-Dichloropropane	ND	25	50	03/28/2017 11:30

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-W	1703B82-053B	Water	03/22/2017 08:50	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	25	50	03/28/2017 11:30
cis-1,3-Dichloropropene	ND	25	50	03/28/2017 11:30
trans-1,3-Dichloropropene	ND	25	50	03/28/2017 11:30
Diisopropyl ether (DIPE)	ND	25	50	03/28/2017 11:30
Ethylbenzene	500	25	50	03/28/2017 11:30
Ethyl tert-butyl ether (ETBE)	ND	25	50	03/28/2017 11:30
Freon 113	ND	25	50	03/28/2017 11:30
Hexachlorobutadiene	ND	25	50	03/28/2017 11:30
Hexachloroethane	ND	25	50	03/28/2017 11:30
2-Hexanone	ND	25	50	03/28/2017 11:30
Isopropylbenzene	40	25	50	03/28/2017 11:30
4-Isopropyl toluene	ND	25	50	03/28/2017 11:30
Methyl-t-butyl ether (MTBE)	ND	25	50	03/28/2017 11:30
Methylene chloride	ND	25	50	03/28/2017 11:30
4-Methyl-2-pentanone (MIBK)	ND	25	50	03/28/2017 11:30
Naphthalene	240	25	50	03/28/2017 11:30
n-Propyl benzene	110	25	50	03/28/2017 11:30
Styrene	ND	25	50	03/28/2017 11:30
1,1,1,2-Tetrachloroethane	ND	25	50	03/28/2017 11:30
1,1,2,2-Tetrachloroethane	ND	25	50	03/28/2017 11:30
Tetrachloroethene	ND	25	50	03/28/2017 11:30
Toluene	27	25	50	03/28/2017 11:30
1,2,3-Trichlorobenzene	ND	25	50	03/28/2017 11:30
1,2,4-Trichlorobenzene	ND	25	50	03/28/2017 11:30
1,1,1-Trichloroethane	ND	25	50	03/28/2017 11:30
1,1,2-Trichloroethane	ND	25	50	03/28/2017 11:30
Trichloroethene	ND	25	50	03/28/2017 11:30
Trichlorofluoromethane	ND	25	50	03/28/2017 11:30
1,2,3-Trichloropropane	ND	25	50	03/28/2017 11:30
1,2,4-Trimethylbenzene	380	25	50	03/28/2017 11:30
1,3,5-Trimethylbenzene	120	25	50	03/28/2017 11:30
Vinyl Chloride	ND	25	50	03/28/2017 11:30
Xylenes, Total	530	25	50	03/28/2017 11:30

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-W	1703B82-053B	Water	03/22/2017 08:50	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	95		70-130	03/28/2017 11:30
Toluene-d8	96		70-130	03/28/2017 11:30
4-BFB	117		70-130	03/28/2017 11:30

Analyst(s): JEM



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-W	1703B82-054B	Water	03/22/2017 08:55	GC18	136217

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/29/2017 03:35
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/29/2017 03:35
Benzene	6.4	0.50	1	03/29/2017 03:35
Bromobenzene	ND	0.50	1	03/29/2017 03:35
Bromochloromethane	ND	0.50	1	03/29/2017 03:35
Bromodichloromethane	ND	0.50	1	03/29/2017 03:35
Bromoform	ND	0.50	1	03/29/2017 03:35
Bromomethane	ND	0.50	1	03/29/2017 03:35
2-Butanone (MEK)	ND	2.0	1	03/29/2017 03:35
t-Butyl alcohol (TBA)	ND	2.0	1	03/29/2017 03:35
n-Butyl benzene	ND	0.50	1	03/29/2017 03:35
sec-Butyl benzene	ND	0.50	1	03/29/2017 03:35
tert-Butyl benzene	ND	0.50	1	03/29/2017 03:35
Carbon Disulfide	ND	0.50	1	03/29/2017 03:35
Carbon Tetrachloride	ND	0.50	1	03/29/2017 03:35
Chlorobenzene	ND	0.50	1	03/29/2017 03:35
Chloroethane	ND	0.50	1	03/29/2017 03:35
Chloroform	ND	0.50	1	03/29/2017 03:35
Chloromethane	ND	0.50	1	03/29/2017 03:35
2-Chlorotoluene	ND	0.50	1	03/29/2017 03:35
4-Chlorotoluene	ND	0.50	1	03/29/2017 03:35
Dibromochloromethane	ND	0.50	1	03/29/2017 03:35
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/29/2017 03:35
1,2-Dibromoethane (EDB)	ND	0.50	1	03/29/2017 03:35
Dibromomethane	ND	0.50	1	03/29/2017 03:35
1,2-Dichlorobenzene	ND	0.50	1	03/29/2017 03:35
1,3-Dichlorobenzene	ND	0.50	1	03/29/2017 03:35
1,4-Dichlorobenzene	ND	0.50	1	03/29/2017 03:35
Dichlorodifluoromethane	ND	0.50	1	03/29/2017 03:35
1,1-Dichloroethane	ND	0.50	1	03/29/2017 03:35
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/29/2017 03:35
1,1-Dichloroethene	ND	0.50	1	03/29/2017 03:35
cis-1,2-Dichloroethene	ND	0.50	1	03/29/2017 03:35
trans-1,2-Dichloroethene	ND	0.50	1	03/29/2017 03:35
1,2-Dichloropropane	ND	0.50	1	03/29/2017 03:35
1,3-Dichloropropane	ND	0.50	1	03/29/2017 03:35
2,2-Dichloropropane	ND	0.50	1	03/29/2017 03:35

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-W	1703B82-054B	Water	03/22/2017 08:55	GC18	136217

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/29/2017 03:35
cis-1,3-Dichloropropene	ND	0.50	1	03/29/2017 03:35
trans-1,3-Dichloropropene	ND	0.50	1	03/29/2017 03:35
Diisopropyl ether (DIPE)	ND	0.50	1	03/29/2017 03:35
Ethylbenzene	2.6	0.50	1	03/29/2017 03:35
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/29/2017 03:35
Freon 113	ND	0.50	1	03/29/2017 03:35
Hexachlorobutadiene	ND	0.50	1	03/29/2017 03:35
Hexachloroethane	ND	0.50	1	03/29/2017 03:35
2-Hexanone	ND	0.50	1	03/29/2017 03:35
Isopropylbenzene	ND	0.50	1	03/29/2017 03:35
4-Isopropyl toluene	ND	0.50	1	03/29/2017 03:35
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/29/2017 03:35
Methylene chloride	ND	0.50	1	03/29/2017 03:35
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/29/2017 03:35
Naphthalene	1.9	0.50	1	03/29/2017 03:35
n-Propyl benzene	ND	0.50	1	03/29/2017 03:35
Styrene	ND	0.50	1	03/29/2017 03:35
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/29/2017 03:35
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/29/2017 03:35
Tetrachloroethene	ND	0.50	1	03/29/2017 03:35
Toluene	ND	0.50	1	03/29/2017 03:35
1,2,3-Trichlorobenzene	ND	0.50	1	03/29/2017 03:35
1,2,4-Trichlorobenzene	ND	0.50	1	03/29/2017 03:35
1,1,1-Trichloroethane	ND	0.50	1	03/29/2017 03:35
1,1,2-Trichloroethane	ND	0.50	1	03/29/2017 03:35
Trichloroethene	ND	0.50	1	03/29/2017 03:35
Trichlorofluoromethane	ND	0.50	1	03/29/2017 03:35
1,2,3-Trichloropropane	ND	0.50	1	03/29/2017 03:35
1,2,4-Trimethylbenzene	2.2	0.50	1	03/29/2017 03:35
1,3,5-Trimethylbenzene	0.55	0.50	1	03/29/2017 03:35
Vinyl Chloride	ND	0.50	1	03/29/2017 03:35
Xylenes, Total	3.9	0.50	1	03/29/2017 03:35

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-W	1703B82-054B	Water	03/22/2017 08:55	GC18	136217

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	106		70-130	03/29/2017 03:35
Toluene-d8	95		70-130	03/29/2017 03:35
4-BFB	88		70-130	03/29/2017 03:35

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-W	1703B82-055B	Water	03/22/2017 09:00	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/28/2017 14:46
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/28/2017 14:46
Benzene	1.2	0.50	1	03/28/2017 14:46
Bromobenzene	ND	0.50	1	03/28/2017 14:46
Bromochloromethane	ND	0.50	1	03/28/2017 14:46
Bromodichloromethane	ND	0.50	1	03/28/2017 14:46
Bromoform	ND	0.50	1	03/28/2017 14:46
Bromomethane	ND	0.50	1	03/28/2017 14:46
2-Butanone (MEK)	ND	2.0	1	03/28/2017 14:46
t-Butyl alcohol (TBA)	ND	2.0	1	03/28/2017 14:46
n-Butyl benzene	ND	0.50	1	03/28/2017 14:46
sec-Butyl benzene	ND	0.50	1	03/28/2017 14:46
tert-Butyl benzene	ND	0.50	1	03/28/2017 14:46
Carbon Disulfide	ND	0.50	1	03/28/2017 14:46
Carbon Tetrachloride	ND	0.50	1	03/28/2017 14:46
Chlorobenzene	ND	0.50	1	03/28/2017 14:46
Chloroethane	ND	0.50	1	03/28/2017 14:46
Chloroform	ND	0.50	1	03/28/2017 14:46
Chloromethane	ND	0.50	1	03/28/2017 14:46
2-Chlorotoluene	ND	0.50	1	03/28/2017 14:46
4-Chlorotoluene	ND	0.50	1	03/28/2017 14:46
Dibromochloromethane	ND	0.50	1	03/28/2017 14:46
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/28/2017 14:46
1,2-Dibromoethane (EDB)	ND	0.50	1	03/28/2017 14:46
Dibromomethane	ND	0.50	1	03/28/2017 14:46
1,2-Dichlorobenzene	ND	0.50	1	03/28/2017 14:46
1,3-Dichlorobenzene	ND	0.50	1	03/28/2017 14:46
1,4-Dichlorobenzene	ND	0.50	1	03/28/2017 14:46
Dichlorodifluoromethane	ND	0.50	1	03/28/2017 14:46
1,1-Dichloroethane	ND	0.50	1	03/28/2017 14:46
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/28/2017 14:46
1,1-Dichloroethene	ND	0.50	1	03/28/2017 14:46
cis-1,2-Dichloroethene	ND	0.50	1	03/28/2017 14:46
trans-1,2-Dichloroethene	ND	0.50	1	03/28/2017 14:46
1,2-Dichloropropane	ND	0.50	1	03/28/2017 14:46
1,3-Dichloropropane	ND	0.50	1	03/28/2017 14:46
2,2-Dichloropropane	ND	0.50	1	03/28/2017 14:46

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-W	1703B82-055B	Water	03/22/2017 09:00	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/28/2017 14:46
cis-1,3-Dichloropropene	ND	0.50	1	03/28/2017 14:46
trans-1,3-Dichloropropene	ND	0.50	1	03/28/2017 14:46
Diisopropyl ether (DIPE)	ND	0.50	1	03/28/2017 14:46
Ethylbenzene	0.69	0.50	1	03/28/2017 14:46
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/28/2017 14:46
Freon 113	ND	0.50	1	03/28/2017 14:46
Hexachlorobutadiene	ND	0.50	1	03/28/2017 14:46
Hexachloroethane	ND	0.50	1	03/28/2017 14:46
2-Hexanone	ND	0.50	1	03/28/2017 14:46
Isopropylbenzene	ND	0.50	1	03/28/2017 14:46
4-Isopropyl toluene	ND	0.50	1	03/28/2017 14:46
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/28/2017 14:46
Methylene chloride	ND	0.50	1	03/28/2017 14:46
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/28/2017 14:46
Naphthalene	2.7	0.50	1	03/28/2017 14:46
n-Propyl benzene	ND	0.50	1	03/28/2017 14:46
Styrene	ND	0.50	1	03/28/2017 14:46
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/28/2017 14:46
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/28/2017 14:46
Tetrachloroethene	ND	0.50	1	03/28/2017 14:46
Toluene	ND	0.50	1	03/28/2017 14:46
1,2,3-Trichlorobenzene	ND	0.50	1	03/28/2017 14:46
1,2,4-Trichlorobenzene	ND	0.50	1	03/28/2017 14:46
1,1,1-Trichloroethane	ND	0.50	1	03/28/2017 14:46
1,1,2-Trichloroethane	ND	0.50	1	03/28/2017 14:46
Trichloroethene	ND	0.50	1	03/28/2017 14:46
Trichlorofluoromethane	ND	0.50	1	03/28/2017 14:46
1,2,3-Trichloropropane	ND	0.50	1	03/28/2017 14:46
1,2,4-Trimethylbenzene	1.4	0.50	1	03/28/2017 14:46
1,3,5-Trimethylbenzene	ND	0.50	1	03/28/2017 14:46
Vinyl Chloride	ND	0.50	1	03/28/2017 14:46
Xylenes, Total	1.4	0.50	1	03/28/2017 14:46

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-W	1703B82-055B	Water	03/22/2017 09:00	GC16	136217

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	93	70-130		03/28/2017 14:46
Toluene-d8	95	70-130		03/28/2017 14:46
4-BFB	109	70-130		03/28/2017 14:46

Analyst(s): JEM



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-W	1703B82-056B	Water	03/22/2017 09:09	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/25/2017 00:24
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/25/2017 00:24
Benzene	0.85	0.50	1	03/25/2017 00:24
Bromobenzene	ND	0.50	1	03/25/2017 00:24
Bromochloromethane	ND	0.50	1	03/25/2017 00:24
Bromodichloromethane	ND	0.50	1	03/25/2017 00:24
Bromoform	ND	0.50	1	03/25/2017 00:24
Bromomethane	ND	0.50	1	03/25/2017 00:24
2-Butanone (MEK)	ND	2.0	1	03/25/2017 00:24
t-Butyl alcohol (TBA)	ND	2.0	1	03/25/2017 00:24
n-Butyl benzene	ND	0.50	1	03/25/2017 00:24
sec-Butyl benzene	ND	0.50	1	03/25/2017 00:24
tert-Butyl benzene	ND	0.50	1	03/25/2017 00:24
Carbon Disulfide	ND	0.50	1	03/25/2017 00:24
Carbon Tetrachloride	ND	0.50	1	03/25/2017 00:24
Chlorobenzene	ND	0.50	1	03/25/2017 00:24
Chloroethane	ND	0.50	1	03/25/2017 00:24
Chloroform	ND	0.50	1	03/25/2017 00:24
Chloromethane	ND	0.50	1	03/25/2017 00:24
2-Chlorotoluene	ND	0.50	1	03/25/2017 00:24
4-Chlorotoluene	ND	0.50	1	03/25/2017 00:24
Dibromochloromethane	ND	0.50	1	03/25/2017 00:24
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/25/2017 00:24
1,2-Dibromoethane (EDB)	ND	0.50	1	03/25/2017 00:24
Dibromomethane	ND	0.50	1	03/25/2017 00:24
1,2-Dichlorobenzene	ND	0.50	1	03/25/2017 00:24
1,3-Dichlorobenzene	ND	0.50	1	03/25/2017 00:24
1,4-Dichlorobenzene	ND	0.50	1	03/25/2017 00:24
Dichlorodifluoromethane	ND	0.50	1	03/25/2017 00:24
1,1-Dichloroethane	ND	0.50	1	03/25/2017 00:24
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/25/2017 00:24
1,1-Dichloroethene	ND	0.50	1	03/25/2017 00:24
cis-1,2-Dichloroethene	ND	0.50	1	03/25/2017 00:24
trans-1,2-Dichloroethene	ND	0.50	1	03/25/2017 00:24
1,2-Dichloropropane	ND	0.50	1	03/25/2017 00:24
1,3-Dichloropropane	ND	0.50	1	03/25/2017 00:24
2,2-Dichloropropane	ND	0.50	1	03/25/2017 00:24

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-W	1703B82-056B	Water	03/22/2017 09:09	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/25/2017 00:24
cis-1,3-Dichloropropene	ND	0.50	1	03/25/2017 00:24
trans-1,3-Dichloropropene	ND	0.50	1	03/25/2017 00:24
Diisopropyl ether (DIPE)	ND	0.50	1	03/25/2017 00:24
Ethylbenzene	ND	0.50	1	03/25/2017 00:24
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/25/2017 00:24
Freon 113	ND	0.50	1	03/25/2017 00:24
Hexachlorobutadiene	ND	0.50	1	03/25/2017 00:24
Hexachloroethane	ND	0.50	1	03/25/2017 00:24
2-Hexanone	ND	0.50	1	03/25/2017 00:24
Isopropylbenzene	ND	0.50	1	03/25/2017 00:24
4-Isopropyl toluene	ND	0.50	1	03/25/2017 00:24
Methyl-t-butyl ether (MTBE)	1.3	0.50	1	03/25/2017 00:24
Methylene chloride	ND	0.50	1	03/25/2017 00:24
4-Methyl-2-pentanone (MIBK)	0.76	0.50	1	03/25/2017 00:24
Naphthalene	ND	0.50	1	03/25/2017 00:24
n-Propyl benzene	ND	0.50	1	03/25/2017 00:24
Styrene	ND	0.50	1	03/25/2017 00:24
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/25/2017 00:24
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/25/2017 00:24
Tetrachloroethene	ND	0.50	1	03/25/2017 00:24
Toluene	ND	0.50	1	03/25/2017 00:24
1,2,3-Trichlorobenzene	ND	0.50	1	03/25/2017 00:24
1,2,4-Trichlorobenzene	ND	0.50	1	03/25/2017 00:24
1,1,1-Trichloroethane	ND	0.50	1	03/25/2017 00:24
1,1,2-Trichloroethane	ND	0.50	1	03/25/2017 00:24
Trichloroethene	ND	0.50	1	03/25/2017 00:24
Trichlorofluoromethane	ND	0.50	1	03/25/2017 00:24
1,2,3-Trichloropropane	ND	0.50	1	03/25/2017 00:24
1,2,4-Trimethylbenzene	ND	0.50	1	03/25/2017 00:24
1,3,5-Trimethylbenzene	ND	0.50	1	03/25/2017 00:24
Vinyl Chloride	ND	0.50	1	03/25/2017 00:24
Xylenes, Total	0.60	0.50	1	03/25/2017 00:24

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-W	1703B82-056B	Water	03/22/2017 09:09	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	102		70-130	03/25/2017 00:24
Toluene-d8	96		70-130	03/25/2017 00:24
4-BFB	92		70-130	03/25/2017 00:24
<u>Analyst(s):</u> KF			<u>Analytical Comments:</u> b1	



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-W	1703B82-057B	Water	03/22/2017 09:14	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/25/2017 01:03
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/25/2017 01:03
Benzene	0.55	0.50	1	03/25/2017 01:03
Bromobenzene	ND	0.50	1	03/25/2017 01:03
Bromochloromethane	ND	0.50	1	03/25/2017 01:03
Bromodichloromethane	ND	0.50	1	03/25/2017 01:03
Bromoform	ND	0.50	1	03/25/2017 01:03
Bromomethane	ND	0.50	1	03/25/2017 01:03
2-Butanone (MEK)	ND	2.0	1	03/25/2017 01:03
t-Butyl alcohol (TBA)	ND	2.0	1	03/25/2017 01:03
n-Butyl benzene	ND	0.50	1	03/25/2017 01:03
sec-Butyl benzene	ND	0.50	1	03/25/2017 01:03
tert-Butyl benzene	ND	0.50	1	03/25/2017 01:03
Carbon Disulfide	ND	0.50	1	03/25/2017 01:03
Carbon Tetrachloride	ND	0.50	1	03/25/2017 01:03
Chlorobenzene	ND	0.50	1	03/25/2017 01:03
Chloroethane	ND	0.50	1	03/25/2017 01:03
Chloroform	ND	0.50	1	03/25/2017 01:03
Chloromethane	ND	0.50	1	03/25/2017 01:03
2-Chlorotoluene	ND	0.50	1	03/25/2017 01:03
4-Chlorotoluene	ND	0.50	1	03/25/2017 01:03
Dibromochloromethane	ND	0.50	1	03/25/2017 01:03
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/25/2017 01:03
1,2-Dibromoethane (EDB)	ND	0.50	1	03/25/2017 01:03
Dibromomethane	ND	0.50	1	03/25/2017 01:03
1,2-Dichlorobenzene	ND	0.50	1	03/25/2017 01:03
1,3-Dichlorobenzene	ND	0.50	1	03/25/2017 01:03
1,4-Dichlorobenzene	ND	0.50	1	03/25/2017 01:03
Dichlorodifluoromethane	ND	0.50	1	03/25/2017 01:03
1,1-Dichloroethane	ND	0.50	1	03/25/2017 01:03
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/25/2017 01:03
1,1-Dichloroethene	ND	0.50	1	03/25/2017 01:03
cis-1,2-Dichloroethene	ND	0.50	1	03/25/2017 01:03
trans-1,2-Dichloroethene	ND	0.50	1	03/25/2017 01:03
1,2-Dichloropropane	ND	0.50	1	03/25/2017 01:03
1,3-Dichloropropane	ND	0.50	1	03/25/2017 01:03
2,2-Dichloropropane	ND	0.50	1	03/25/2017 01:03

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-W	1703B82-057B	Water	03/22/2017 09:14	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/25/2017 01:03
cis-1,3-Dichloropropene	ND	0.50	1	03/25/2017 01:03
trans-1,3-Dichloropropene	ND	0.50	1	03/25/2017 01:03
Diisopropyl ether (DIPE)	ND	0.50	1	03/25/2017 01:03
Ethylbenzene	ND	0.50	1	03/25/2017 01:03
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/25/2017 01:03
Freon 113	ND	0.50	1	03/25/2017 01:03
Hexachlorobutadiene	ND	0.50	1	03/25/2017 01:03
Hexachloroethane	ND	0.50	1	03/25/2017 01:03
2-Hexanone	ND	0.50	1	03/25/2017 01:03
Isopropylbenzene	ND	0.50	1	03/25/2017 01:03
4-Isopropyl toluene	ND	0.50	1	03/25/2017 01:03
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/25/2017 01:03
Methylene chloride	ND	0.50	1	03/25/2017 01:03
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/25/2017 01:03
Naphthalene	ND	0.50	1	03/25/2017 01:03
n-Propyl benzene	ND	0.50	1	03/25/2017 01:03
Styrene	ND	0.50	1	03/25/2017 01:03
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/25/2017 01:03
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/25/2017 01:03
Tetrachloroethene	ND	0.50	1	03/25/2017 01:03
Toluene	ND	0.50	1	03/25/2017 01:03
1,2,3-Trichlorobenzene	ND	0.50	1	03/25/2017 01:03
1,2,4-Trichlorobenzene	ND	0.50	1	03/25/2017 01:03
1,1,1-Trichloroethane	ND	0.50	1	03/25/2017 01:03
1,1,2-Trichloroethane	ND	0.50	1	03/25/2017 01:03
Trichloroethene	ND	0.50	1	03/25/2017 01:03
Trichlorofluoromethane	ND	0.50	1	03/25/2017 01:03
1,2,3-Trichloropropane	ND	0.50	1	03/25/2017 01:03
1,2,4-Trimethylbenzene	ND	0.50	1	03/25/2017 01:03
1,3,5-Trimethylbenzene	ND	0.50	1	03/25/2017 01:03
Vinyl Chloride	ND	0.50	1	03/25/2017 01:03
Xylenes, Total	ND	0.50	1	03/25/2017 01:03

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-W	1703B82-057B	Water	03/22/2017 09:14	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	103		70-130	03/25/2017 01:03
Toluene-d8	97		70-130	03/25/2017 01:03
4-BFB	91		70-130	03/25/2017 01:03
<u>Analyst(s):</u> KF			<u>Analytical Comments:</u> b1	



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-W	1703B82-058B	Water	03/22/2017 09:18	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/25/2017 01:41
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/25/2017 01:41
Benzene	ND	0.50	1	03/25/2017 01:41
Bromobenzene	ND	0.50	1	03/25/2017 01:41
Bromochloromethane	ND	0.50	1	03/25/2017 01:41
Bromodichloromethane	ND	0.50	1	03/25/2017 01:41
Bromoform	ND	0.50	1	03/25/2017 01:41
Bromomethane	ND	0.50	1	03/25/2017 01:41
2-Butanone (MEK)	ND	2.0	1	03/25/2017 01:41
t-Butyl alcohol (TBA)	ND	2.0	1	03/25/2017 01:41
n-Butyl benzene	ND	0.50	1	03/25/2017 01:41
sec-Butyl benzene	ND	0.50	1	03/25/2017 01:41
tert-Butyl benzene	ND	0.50	1	03/25/2017 01:41
Carbon Disulfide	ND	0.50	1	03/25/2017 01:41
Carbon Tetrachloride	ND	0.50	1	03/25/2017 01:41
Chlorobenzene	ND	0.50	1	03/25/2017 01:41
Chloroethane	ND	0.50	1	03/25/2017 01:41
Chloroform	ND	0.50	1	03/25/2017 01:41
Chloromethane	ND	0.50	1	03/25/2017 01:41
2-Chlorotoluene	ND	0.50	1	03/25/2017 01:41
4-Chlorotoluene	ND	0.50	1	03/25/2017 01:41
Dibromochloromethane	ND	0.50	1	03/25/2017 01:41
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/25/2017 01:41
1,2-Dibromoethane (EDB)	ND	0.50	1	03/25/2017 01:41
Dibromomethane	ND	0.50	1	03/25/2017 01:41
1,2-Dichlorobenzene	ND	0.50	1	03/25/2017 01:41
1,3-Dichlorobenzene	ND	0.50	1	03/25/2017 01:41
1,4-Dichlorobenzene	ND	0.50	1	03/25/2017 01:41
Dichlorodifluoromethane	ND	0.50	1	03/25/2017 01:41
1,1-Dichloroethane	ND	0.50	1	03/25/2017 01:41
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/25/2017 01:41
1,1-Dichloroethene	ND	0.50	1	03/25/2017 01:41
cis-1,2-Dichloroethene	ND	0.50	1	03/25/2017 01:41
trans-1,2-Dichloroethene	ND	0.50	1	03/25/2017 01:41
1,2-Dichloropropane	ND	0.50	1	03/25/2017 01:41
1,3-Dichloropropane	ND	0.50	1	03/25/2017 01:41
2,2-Dichloropropane	ND	0.50	1	03/25/2017 01:41

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-W	1703B82-058B	Water	03/22/2017 09:18	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/25/2017 01:41
cis-1,3-Dichloropropene	ND	0.50	1	03/25/2017 01:41
trans-1,3-Dichloropropene	ND	0.50	1	03/25/2017 01:41
Diisopropyl ether (DIPE)	ND	0.50	1	03/25/2017 01:41
Ethylbenzene	ND	0.50	1	03/25/2017 01:41
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/25/2017 01:41
Freon 113	ND	0.50	1	03/25/2017 01:41
Hexachlorobutadiene	ND	0.50	1	03/25/2017 01:41
Hexachloroethane	ND	0.50	1	03/25/2017 01:41
2-Hexanone	ND	0.50	1	03/25/2017 01:41
Isopropylbenzene	ND	0.50	1	03/25/2017 01:41
4-Isopropyl toluene	ND	0.50	1	03/25/2017 01:41
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/25/2017 01:41
Methylene chloride	ND	0.50	1	03/25/2017 01:41
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/25/2017 01:41
Naphthalene	ND	0.50	1	03/25/2017 01:41
n-Propyl benzene	ND	0.50	1	03/25/2017 01:41
Styrene	ND	0.50	1	03/25/2017 01:41
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/25/2017 01:41
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/25/2017 01:41
Tetrachloroethene	ND	0.50	1	03/25/2017 01:41
Toluene	ND	0.50	1	03/25/2017 01:41
1,2,3-Trichlorobenzene	ND	0.50	1	03/25/2017 01:41
1,2,4-Trichlorobenzene	ND	0.50	1	03/25/2017 01:41
1,1,1-Trichloroethane	ND	0.50	1	03/25/2017 01:41
1,1,2-Trichloroethane	ND	0.50	1	03/25/2017 01:41
Trichloroethene	ND	0.50	1	03/25/2017 01:41
Trichlorofluoromethane	ND	0.50	1	03/25/2017 01:41
1,2,3-Trichloropropane	ND	0.50	1	03/25/2017 01:41
1,2,4-Trimethylbenzene	ND	0.50	1	03/25/2017 01:41
1,3,5-Trimethylbenzene	ND	0.50	1	03/25/2017 01:41
Vinyl Chloride	ND	0.50	1	03/25/2017 01:41
Xylenes, Total	ND	0.50	1	03/25/2017 01:41

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-W	1703B82-058B	Water	03/22/2017 09:18	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	103		70-130	03/25/2017 01:41
Toluene-d8	97		70-130	03/25/2017 01:41
4-BFB	89		70-130	03/25/2017 01:41
<u>Analyst(s):</u> KF			<u>Analytical Comments:</u> b1	



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-W	1703B82-059B	Water	03/22/2017 09:25	GC16	136218

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	20	2	03/28/2017 12:10
tert-Amyl methyl ether (TAME)	ND	1.0	2	03/28/2017 12:10
Benzene	14	1.0	2	03/28/2017 12:10
Bromobenzene	ND	1.0	2	03/28/2017 12:10
Bromochloromethane	ND	1.0	2	03/28/2017 12:10
Bromodichloromethane	ND	1.0	2	03/28/2017 12:10
Bromoform	ND	1.0	2	03/28/2017 12:10
Bromomethane	ND	1.0	2	03/28/2017 12:10
2-Butanone (MEK)	ND	4.0	2	03/28/2017 12:10
t-Butyl alcohol (TBA)	ND	4.0	2	03/28/2017 12:10
n-Butyl benzene	15	1.0	2	03/28/2017 12:10
sec-Butyl benzene	9.9	1.0	2	03/28/2017 12:10
tert-Butyl benzene	ND	1.0	2	03/28/2017 12:10
Carbon Disulfide	ND	1.0	2	03/28/2017 12:10
Carbon Tetrachloride	ND	1.0	2	03/28/2017 12:10
Chlorobenzene	ND	1.0	2	03/28/2017 12:10
Chloroethane	ND	1.0	2	03/28/2017 12:10
Chloroform	ND	1.0	2	03/28/2017 12:10
Chloromethane	ND	1.0	2	03/28/2017 12:10
2-Chlorotoluene	ND	1.0	2	03/28/2017 12:10
4-Chlorotoluene	ND	1.0	2	03/28/2017 12:10
Dibromochloromethane	ND	1.0	2	03/28/2017 12:10
1,2-Dibromo-3-chloropropane	ND	0.40	2	03/28/2017 12:10
1,2-Dibromoethane (EDB)	ND	1.0	2	03/28/2017 12:10
Dibromomethane	ND	1.0	2	03/28/2017 12:10
1,2-Dichlorobenzene	ND	1.0	2	03/28/2017 12:10
1,3-Dichlorobenzene	ND	1.0	2	03/28/2017 12:10
1,4-Dichlorobenzene	ND	1.0	2	03/28/2017 12:10
Dichlorodifluoromethane	ND	1.0	2	03/28/2017 12:10
1,1-Dichloroethane	ND	1.0	2	03/28/2017 12:10
1,2-Dichloroethane (1,2-DCA)	ND	1.0	2	03/28/2017 12:10
1,1-Dichloroethene	ND	1.0	2	03/28/2017 12:10
cis-1,2-Dichloroethene	ND	1.0	2	03/28/2017 12:10
trans-1,2-Dichloroethene	ND	1.0	2	03/28/2017 12:10
1,2-Dichloropropane	ND	1.0	2	03/28/2017 12:10
1,3-Dichloropropane	ND	1.0	2	03/28/2017 12:10
2,2-Dichloropropane	ND	1.0	2	03/28/2017 12:10

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-W	1703B82-059B	Water	03/22/2017 09:25	GC16	136218

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	1.0	2	03/28/2017 12:10
cis-1,3-Dichloropropene	ND	1.0	2	03/28/2017 12:10
trans-1,3-Dichloropropene	ND	1.0	2	03/28/2017 12:10
Diisopropyl ether (DIPE)	ND	1.0	2	03/28/2017 12:10
Ethylbenzene	6.4	1.0	2	03/28/2017 12:10
Ethyl tert-butyl ether (ETBE)	ND	1.0	2	03/28/2017 12:10
Freon 113	ND	1.0	2	03/28/2017 12:10
Hexachlorobutadiene	ND	1.0	2	03/28/2017 12:10
Hexachloroethane	ND	1.0	2	03/28/2017 12:10
2-Hexanone	ND	1.0	2	03/28/2017 12:10
Isopropylbenzene	14	1.0	2	03/28/2017 12:10
4-Isopropyl toluene	ND	1.0	2	03/28/2017 12:10
Methyl-t-butyl ether (MTBE)	ND	1.0	2	03/28/2017 12:10
Methylene chloride	ND	1.0	2	03/28/2017 12:10
4-Methyl-2-pentanone (MIBK)	ND	1.0	2	03/28/2017 12:10
Naphthalene	7.2	1.0	2	03/28/2017 12:10
n-Propyl benzene	38	1.0	2	03/28/2017 12:10
Styrene	ND	1.0	2	03/28/2017 12:10
1,1,1,2-Tetrachloroethane	ND	1.0	2	03/28/2017 12:10
1,1,2,2-Tetrachloroethane	ND	1.0	2	03/28/2017 12:10
Tetrachloroethene	ND	1.0	2	03/28/2017 12:10
Toluene	ND	1.0	2	03/28/2017 12:10
1,2,3-Trichlorobenzene	ND	1.0	2	03/28/2017 12:10
1,2,4-Trichlorobenzene	ND	1.0	2	03/28/2017 12:10
1,1,1-Trichloroethane	ND	1.0	2	03/28/2017 12:10
1,1,2-Trichloroethane	ND	1.0	2	03/28/2017 12:10
Trichloroethene	ND	1.0	2	03/28/2017 12:10
Trichlorofluoromethane	ND	1.0	2	03/28/2017 12:10
1,2,3-Trichloropropane	ND	1.0	2	03/28/2017 12:10
1,2,4-Trimethylbenzene	4.1	1.0	2	03/28/2017 12:10
1,3,5-Trimethylbenzene	ND	1.0	2	03/28/2017 12:10
Vinyl Chloride	ND	1.0	2	03/28/2017 12:10
Xylenes, Total	ND	1.0	2	03/28/2017 12:10

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-W	1703B82-059B	Water	03/22/2017 09:25	GC16	136218

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	95		70-130	03/28/2017 12:10
Toluene-d8	96		70-130	03/28/2017 12:10
4-BFB	116		70-130	03/28/2017 12:10

Analyst(s): JEM



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-W	1703B82-060B	Water	03/22/2017 09:32	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	100	10	03/25/2017 02:59
tert-Amyl methyl ether (TAME)	ND	5.0	10	03/25/2017 02:59
Benzene	ND	5.0	10	03/25/2017 02:59
Bromobenzene	ND	5.0	10	03/25/2017 02:59
Bromochloromethane	ND	5.0	10	03/25/2017 02:59
Bromodichloromethane	ND	5.0	10	03/25/2017 02:59
Bromoform	ND	5.0	10	03/25/2017 02:59
Bromomethane	ND	5.0	10	03/25/2017 02:59
2-Butanone (MEK)	ND	20	10	03/25/2017 02:59
t-Butyl alcohol (TBA)	ND	20	10	03/25/2017 02:59
n-Butyl benzene	ND	5.0	10	03/25/2017 02:59
sec-Butyl benzene	ND	5.0	10	03/25/2017 02:59
tert-Butyl benzene	ND	5.0	10	03/25/2017 02:59
Carbon Disulfide	ND	5.0	10	03/25/2017 02:59
Carbon Tetrachloride	ND	5.0	10	03/25/2017 02:59
Chlorobenzene	ND	5.0	10	03/25/2017 02:59
Chloroethane	ND	5.0	10	03/25/2017 02:59
Chloroform	ND	5.0	10	03/25/2017 02:59
Chloromethane	ND	5.0	10	03/25/2017 02:59
2-Chlorotoluene	ND	5.0	10	03/25/2017 02:59
4-Chlorotoluene	ND	5.0	10	03/25/2017 02:59
Dibromochloromethane	ND	5.0	10	03/25/2017 02:59
1,2-Dibromo-3-chloropropane	ND	2.0	10	03/25/2017 02:59
1,2-Dibromoethane (EDB)	ND	5.0	10	03/25/2017 02:59
Dibromomethane	ND	5.0	10	03/25/2017 02:59
1,2-Dichlorobenzene	ND	5.0	10	03/25/2017 02:59
1,3-Dichlorobenzene	ND	5.0	10	03/25/2017 02:59
1,4-Dichlorobenzene	ND	5.0	10	03/25/2017 02:59
Dichlorodifluoromethane	ND	5.0	10	03/25/2017 02:59
1,1-Dichloroethane	ND	5.0	10	03/25/2017 02:59
1,2-Dichloroethane (1,2-DCA)	ND	5.0	10	03/25/2017 02:59
1,1-Dichloroethene	ND	5.0	10	03/25/2017 02:59
cis-1,2-Dichloroethene	ND	5.0	10	03/25/2017 02:59
trans-1,2-Dichloroethene	ND	5.0	10	03/25/2017 02:59
1,2-Dichloropropane	ND	5.0	10	03/25/2017 02:59
1,3-Dichloropropane	ND	5.0	10	03/25/2017 02:59
2,2-Dichloropropane	ND	5.0	10	03/25/2017 02:59

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-W	1703B82-060B	Water	03/22/2017 09:32	GC18	136218
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		5.0	10	03/25/2017 02:59
cis-1,3-Dichloropropene	ND		5.0	10	03/25/2017 02:59
trans-1,3-Dichloropropene	ND		5.0	10	03/25/2017 02:59
Diisopropyl ether (DIPE)	ND		5.0	10	03/25/2017 02:59
Ethylbenzene	32		5.0	10	03/25/2017 02:59
Ethyl tert-butyl ether (ETBE)	ND		5.0	10	03/25/2017 02:59
Freon 113	ND		5.0	10	03/25/2017 02:59
Hexachlorobutadiene	ND		5.0	10	03/25/2017 02:59
Hexachloroethane	ND		5.0	10	03/25/2017 02:59
2-Hexanone	ND		5.0	10	03/25/2017 02:59
Isopropylbenzene	ND		5.0	10	03/25/2017 02:59
4-Isopropyl toluene	ND		5.0	10	03/25/2017 02:59
Methyl-t-butyl ether (MTBE)	ND		5.0	10	03/25/2017 02:59
Methylene chloride	ND		5.0	10	03/25/2017 02:59
4-Methyl-2-pentanone (MIBK)	ND		5.0	10	03/25/2017 02:59
Naphthalene	38		5.0	10	03/25/2017 02:59
n-Propyl benzene	5.3		5.0	10	03/25/2017 02:59
Styrene	ND		5.0	10	03/25/2017 02:59
1,1,1,2-Tetrachloroethane	ND		5.0	10	03/25/2017 02:59
1,1,2,2-Tetrachloroethane	ND		5.0	10	03/25/2017 02:59
Tetrachloroethene	ND		5.0	10	03/25/2017 02:59
Toluene	5.6		5.0	10	03/25/2017 02:59
1,2,3-Trichlorobenzene	ND		5.0	10	03/25/2017 02:59
1,2,4-Trichlorobenzene	ND		5.0	10	03/25/2017 02:59
1,1,1-Trichloroethane	ND		5.0	10	03/25/2017 02:59
1,1,2-Trichloroethane	ND		5.0	10	03/25/2017 02:59
Trichloroethene	ND		5.0	10	03/25/2017 02:59
Trichlorofluoromethane	ND		5.0	10	03/25/2017 02:59
1,2,3-Trichloropropane	ND		5.0	10	03/25/2017 02:59
1,2,4-Trimethylbenzene	56		5.0	10	03/25/2017 02:59
1,3,5-Trimethylbenzene	12		5.0	10	03/25/2017 02:59
Vinyl Chloride	ND		5.0	10	03/25/2017 02:59
Xylenes, Total	180		5.0	10	03/25/2017 02:59

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-W	1703B82-060B	Water	03/22/2017 09:32	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	101		70-130	03/25/2017 02:59
Toluene-d8	97		70-130	03/25/2017 02:59
4-BFB	97		70-130	03/25/2017 02:59

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-101	1703B82-061B	Water	03/22/2017	GC28	136218
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		500	50	03/28/2017 14:17
tert-Amyl methyl ether (TAME)	ND		25	50	03/28/2017 14:17
Benzene	810		25	50	03/28/2017 14:17
Bromobenzene	ND		25	50	03/28/2017 14:17
Bromochloromethane	ND		25	50	03/28/2017 14:17
Bromodichloromethane	ND		25	50	03/28/2017 14:17
Bromoform	ND		25	50	03/28/2017 14:17
Bromomethane	ND		25	50	03/28/2017 14:17
2-Butanone (MEK)	ND		100	50	03/28/2017 14:17
t-Butyl alcohol (TBA)	ND		100	50	03/28/2017 14:17
n-Butyl benzene	26		25	50	03/28/2017 14:17
sec-Butyl benzene	ND		25	50	03/28/2017 14:17
tert-Butyl benzene	ND		25	50	03/28/2017 14:17
Carbon Disulfide	ND		25	50	03/28/2017 14:17
Carbon Tetrachloride	ND		25	50	03/28/2017 14:17
Chlorobenzene	ND		25	50	03/28/2017 14:17
Chloroethane	ND		25	50	03/28/2017 14:17
Chloroform	ND		25	50	03/28/2017 14:17
Chloromethane	ND		25	50	03/28/2017 14:17
2-Chlorotoluene	ND		25	50	03/28/2017 14:17
4-Chlorotoluene	ND		25	50	03/28/2017 14:17
Dibromochloromethane	ND		25	50	03/28/2017 14:17
1,2-Dibromo-3-chloropropane	ND		10	50	03/28/2017 14:17
1,2-Dibromoethane (EDB)	ND		25	50	03/28/2017 14:17
Dibromomethane	ND		25	50	03/28/2017 14:17
1,2-Dichlorobenzene	ND		25	50	03/28/2017 14:17
1,3-Dichlorobenzene	ND		25	50	03/28/2017 14:17
1,4-Dichlorobenzene	ND		25	50	03/28/2017 14:17
Dichlorodifluoromethane	ND		25	50	03/28/2017 14:17
1,1-Dichloroethane	ND		25	50	03/28/2017 14:17
1,2-Dichloroethane (1,2-DCA)	ND		25	50	03/28/2017 14:17
1,1-Dichloroethene	ND		25	50	03/28/2017 14:17
cis-1,2-Dichloroethene	ND		25	50	03/28/2017 14:17
trans-1,2-Dichloroethene	ND		25	50	03/28/2017 14:17
1,2-Dichloropropane	ND		25	50	03/28/2017 14:17
1,3-Dichloropropane	ND		25	50	03/28/2017 14:17
2,2-Dichloropropane	ND		25	50	03/28/2017 14:17

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-101	1703B82-061B	Water	03/22/2017	GC28	136218

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	25	50	03/28/2017 14:17
cis-1,3-Dichloropropene	ND	25	50	03/28/2017 14:17
trans-1,3-Dichloropropene	ND	25	50	03/28/2017 14:17
Diisopropyl ether (DIPE)	ND	25	50	03/28/2017 14:17
Ethylbenzene	600	25	50	03/28/2017 14:17
Ethyl tert-butyl ether (ETBE)	ND	25	50	03/28/2017 14:17
Freon 113	ND	25	50	03/28/2017 14:17
Hexachlorobutadiene	ND	25	50	03/28/2017 14:17
Hexachloroethane	ND	25	50	03/28/2017 14:17
2-Hexanone	ND	25	50	03/28/2017 14:17
Isopropylbenzene	40	25	50	03/28/2017 14:17
4-Isopropyl toluene	ND	25	50	03/28/2017 14:17
Methyl-t-butyl ether (MTBE)	ND	25	50	03/28/2017 14:17
Methylene chloride	ND	25	50	03/28/2017 14:17
4-Methyl-2-pentanone (MIBK)	ND	25	50	03/28/2017 14:17
Naphthalene	160	25	50	03/28/2017 14:17
n-Propyl benzene	98	25	50	03/28/2017 14:17
Styrene	ND	25	50	03/28/2017 14:17
1,1,1,2-Tetrachloroethane	ND	25	50	03/28/2017 14:17
1,1,2,2-Tetrachloroethane	ND	25	50	03/28/2017 14:17
Tetrachloroethene	ND	25	50	03/28/2017 14:17
Toluene	ND	25	50	03/28/2017 14:17
1,2,3-Trichlorobenzene	ND	25	50	03/28/2017 14:17
1,2,4-Trichlorobenzene	ND	25	50	03/28/2017 14:17
1,1,1-Trichloroethane	ND	25	50	03/28/2017 14:17
1,1,2-Trichloroethane	ND	25	50	03/28/2017 14:17
Trichloroethene	ND	25	50	03/28/2017 14:17
Trichlorofluoromethane	ND	25	50	03/28/2017 14:17
1,2,3-Trichloropropane	ND	25	50	03/28/2017 14:17
1,2,4-Trimethylbenzene	680	25	50	03/28/2017 14:17
1,3,5-Trimethylbenzene	92	25	50	03/28/2017 14:17
Vinyl Chloride	ND	25	50	03/28/2017 14:17
Xylenes, Total	810	25	50	03/28/2017 14:17

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-101	1703B82-061B	Water	03/22/2017	GC28	136218

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
Dibromofluoromethane	104	70-130		03/28/2017 14:17
Toluene-d8	99	70-130		03/28/2017 14:17
4-BFB	82	70-130		03/28/2017 14:17

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-102	1703B82-062B	Water	03/22/2017 12:42	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	03/24/2017 23:46
tert-Amyl methyl ether (TAME)	ND	0.50	1	03/24/2017 23:46
Benzene	ND	0.50	1	03/24/2017 23:46
Bromobenzene	ND	0.50	1	03/24/2017 23:46
Bromochloromethane	ND	0.50	1	03/24/2017 23:46
Bromodichloromethane	ND	0.50	1	03/24/2017 23:46
Bromoform	ND	0.50	1	03/24/2017 23:46
Bromomethane	ND	0.50	1	03/24/2017 23:46
2-Butanone (MEK)	ND	2.0	1	03/24/2017 23:46
t-Butyl alcohol (TBA)	ND	2.0	1	03/24/2017 23:46
n-Butyl benzene	ND	0.50	1	03/24/2017 23:46
sec-Butyl benzene	ND	0.50	1	03/24/2017 23:46
tert-Butyl benzene	ND	0.50	1	03/24/2017 23:46
Carbon Disulfide	ND	0.50	1	03/24/2017 23:46
Carbon Tetrachloride	ND	0.50	1	03/24/2017 23:46
Chlorobenzene	ND	0.50	1	03/24/2017 23:46
Chloroethane	ND	0.50	1	03/24/2017 23:46
Chloroform	ND	0.50	1	03/24/2017 23:46
Chloromethane	ND	0.50	1	03/24/2017 23:46
2-Chlorotoluene	ND	0.50	1	03/24/2017 23:46
4-Chlorotoluene	ND	0.50	1	03/24/2017 23:46
Dibromochloromethane	ND	0.50	1	03/24/2017 23:46
1,2-Dibromo-3-chloropropane	ND	0.20	1	03/24/2017 23:46
1,2-Dibromoethane (EDB)	ND	0.50	1	03/24/2017 23:46
Dibromomethane	ND	0.50	1	03/24/2017 23:46
1,2-Dichlorobenzene	ND	0.50	1	03/24/2017 23:46
1,3-Dichlorobenzene	ND	0.50	1	03/24/2017 23:46
1,4-Dichlorobenzene	ND	0.50	1	03/24/2017 23:46
Dichlorodifluoromethane	ND	0.50	1	03/24/2017 23:46
1,1-Dichloroethane	ND	0.50	1	03/24/2017 23:46
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	03/24/2017 23:46
1,1-Dichloroethene	ND	0.50	1	03/24/2017 23:46
cis-1,2-Dichloroethene	ND	0.50	1	03/24/2017 23:46
trans-1,2-Dichloroethene	ND	0.50	1	03/24/2017 23:46
1,2-Dichloropropane	ND	0.50	1	03/24/2017 23:46
1,3-Dichloropropane	ND	0.50	1	03/24/2017 23:46
2,2-Dichloropropane	ND	0.50	1	03/24/2017 23:46

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-102	1703B82-062B	Water	03/22/2017 12:42	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	03/24/2017 23:46
cis-1,3-Dichloropropene	ND	0.50	1	03/24/2017 23:46
trans-1,3-Dichloropropene	ND	0.50	1	03/24/2017 23:46
Diisopropyl ether (DIPE)	ND	0.50	1	03/24/2017 23:46
Ethylbenzene	ND	0.50	1	03/24/2017 23:46
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	03/24/2017 23:46
Freon 113	ND	0.50	1	03/24/2017 23:46
Hexachlorobutadiene	ND	0.50	1	03/24/2017 23:46
Hexachloroethane	ND	0.50	1	03/24/2017 23:46
2-Hexanone	ND	0.50	1	03/24/2017 23:46
Isopropylbenzene	ND	0.50	1	03/24/2017 23:46
4-Isopropyl toluene	ND	0.50	1	03/24/2017 23:46
Methyl-t-butyl ether (MTBE)	ND	0.50	1	03/24/2017 23:46
Methylene chloride	ND	0.50	1	03/24/2017 23:46
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	03/24/2017 23:46
Naphthalene	ND	0.50	1	03/24/2017 23:46
n-Propyl benzene	ND	0.50	1	03/24/2017 23:46
Styrene	ND	0.50	1	03/24/2017 23:46
1,1,1,2-Tetrachloroethane	ND	0.50	1	03/24/2017 23:46
1,1,2,2-Tetrachloroethane	ND	0.50	1	03/24/2017 23:46
Tetrachloroethene	ND	0.50	1	03/24/2017 23:46
Toluene	ND	0.50	1	03/24/2017 23:46
1,2,3-Trichlorobenzene	ND	0.50	1	03/24/2017 23:46
1,2,4-Trichlorobenzene	ND	0.50	1	03/24/2017 23:46
1,1,1-Trichloroethane	ND	0.50	1	03/24/2017 23:46
1,1,2-Trichloroethane	ND	0.50	1	03/24/2017 23:46
Trichloroethene	ND	0.50	1	03/24/2017 23:46
Trichlorofluoromethane	ND	0.50	1	03/24/2017 23:46
1,2,3-Trichloropropane	ND	0.50	1	03/24/2017 23:46
1,2,4-Trimethylbenzene	ND	0.50	1	03/24/2017 23:46
1,3,5-Trimethylbenzene	ND	0.50	1	03/24/2017 23:46
Vinyl Chloride	ND	0.50	1	03/24/2017 23:46
Xylenes, Total	ND	0.50	1	03/24/2017 23:46

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-102	1703B82-062B	Water	03/22/2017 12:42	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	102	70-130		03/24/2017 23:46
Toluene-d8	97	70-130		03/24/2017 23:46
4-BFB	89	70-130		03/24/2017 23:46

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-103	1703B82-063B	Water	03/22/2017 12:59	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	100	10	03/25/2017 04:16
tert-Amyl methyl ether (TAME)	ND	5.0	10	03/25/2017 04:16
Benzene	110	5.0	10	03/25/2017 04:16
Bromobenzene	ND	5.0	10	03/25/2017 04:16
Bromochloromethane	ND	5.0	10	03/25/2017 04:16
Bromodichloromethane	ND	5.0	10	03/25/2017 04:16
Bromoform	ND	5.0	10	03/25/2017 04:16
Bromomethane	ND	5.0	10	03/25/2017 04:16
2-Butanone (MEK)	ND	20	10	03/25/2017 04:16
t-Butyl alcohol (TBA)	ND	20	10	03/25/2017 04:16
n-Butyl benzene	20	5.0	10	03/25/2017 04:16
sec-Butyl benzene	8.5	5.0	10	03/25/2017 04:16
tert-Butyl benzene	ND	5.0	10	03/25/2017 04:16
Carbon Disulfide	ND	5.0	10	03/25/2017 04:16
Carbon Tetrachloride	ND	5.0	10	03/25/2017 04:16
Chlorobenzene	ND	5.0	10	03/25/2017 04:16
Chloroethane	ND	5.0	10	03/25/2017 04:16
Chloroform	ND	5.0	10	03/25/2017 04:16
Chloromethane	ND	5.0	10	03/25/2017 04:16
2-Chlorotoluene	ND	5.0	10	03/25/2017 04:16
4-Chlorotoluene	ND	5.0	10	03/25/2017 04:16
Dibromochloromethane	ND	5.0	10	03/25/2017 04:16
1,2-Dibromo-3-chloropropane	ND	2.0	10	03/25/2017 04:16
1,2-Dibromoethane (EDB)	ND	5.0	10	03/25/2017 04:16
Dibromomethane	ND	5.0	10	03/25/2017 04:16
1,2-Dichlorobenzene	ND	5.0	10	03/25/2017 04:16
1,3-Dichlorobenzene	ND	5.0	10	03/25/2017 04:16
1,4-Dichlorobenzene	ND	5.0	10	03/25/2017 04:16
Dichlorodifluoromethane	ND	5.0	10	03/25/2017 04:16
1,1-Dichloroethane	ND	5.0	10	03/25/2017 04:16
1,2-Dichloroethane (1,2-DCA)	ND	5.0	10	03/25/2017 04:16
1,1-Dichloroethene	ND	5.0	10	03/25/2017 04:16
cis-1,2-Dichloroethene	ND	5.0	10	03/25/2017 04:16
trans-1,2-Dichloroethene	ND	5.0	10	03/25/2017 04:16
1,2-Dichloropropane	ND	5.0	10	03/25/2017 04:16
1,3-Dichloropropane	ND	5.0	10	03/25/2017 04:16
2,2-Dichloropropane	ND	5.0	10	03/25/2017 04:16

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-103	1703B82-063B	Water	03/22/2017 12:59	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	5.0	10	03/25/2017 04:16
cis-1,3-Dichloropropene	ND	5.0	10	03/25/2017 04:16
trans-1,3-Dichloropropene	ND	5.0	10	03/25/2017 04:16
Diisopropyl ether (DIPE)	ND	5.0	10	03/25/2017 04:16
Ethylbenzene	230	5.0	10	03/25/2017 04:16
Ethyl tert-butyl ether (ETBE)	ND	5.0	10	03/25/2017 04:16
Freon 113	ND	5.0	10	03/25/2017 04:16
Hexachlorobutadiene	ND	5.0	10	03/25/2017 04:16
Hexachloroethane	ND	5.0	10	03/25/2017 04:16
2-Hexanone	ND	5.0	10	03/25/2017 04:16
Isopropylbenzene	33	5.0	10	03/25/2017 04:16
4-Isopropyl toluene	ND	5.0	10	03/25/2017 04:16
Methyl-t-butyl ether (MTBE)	ND	5.0	10	03/25/2017 04:16
Methylene chloride	ND	5.0	10	03/25/2017 04:16
4-Methyl-2-pentanone (MIBK)	ND	5.0	10	03/25/2017 04:16
Naphthalene	54	5.0	10	03/25/2017 04:16
n-Propyl benzene	77	5.0	10	03/25/2017 04:16
Styrene	ND	5.0	10	03/25/2017 04:16
1,1,1,2-Tetrachloroethane	ND	5.0	10	03/25/2017 04:16
1,1,2,2-Tetrachloroethane	ND	5.0	10	03/25/2017 04:16
Tetrachloroethene	ND	5.0	10	03/25/2017 04:16
Toluene	12	5.0	10	03/25/2017 04:16
1,2,3-Trichlorobenzene	ND	5.0	10	03/25/2017 04:16
1,2,4-Trichlorobenzene	ND	5.0	10	03/25/2017 04:16
1,1,1-Trichloroethane	ND	5.0	10	03/25/2017 04:16
1,1,2-Trichloroethane	ND	5.0	10	03/25/2017 04:16
Trichloroethene	ND	5.0	10	03/25/2017 04:16
Trichlorofluoromethane	ND	5.0	10	03/25/2017 04:16
1,2,3-Trichloropropane	ND	5.0	10	03/25/2017 04:16
1,2,4-Trimethylbenzene	230	5.0	10	03/25/2017 04:16
1,3,5-Trimethylbenzene	35	5.0	10	03/25/2017 04:16
Vinyl Chloride	ND	5.0	10	03/25/2017 04:16
Xylenes, Total	270	5.0	10	03/25/2017 04:16

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17-3/30/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L

Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-103	1703B82-063B	Water	03/22/2017 12:59	GC18	136218

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	101		70-130	03/25/2017 04:16
Toluene-d8	99		70-130	03/25/2017 04:16
4-BFB	93		70-130	03/25/2017 04:16

Analyst(s): KF



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-5	1703B82-001A	Soil	03/21/2017 09:05	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 17:48
Acenaphthylene	ND	0.010	1	03/24/2017 17:48
Anthracene	ND	0.010	1	03/24/2017 17:48
Benzo (a) anthracene	ND	0.010	1	03/24/2017 17:48
Benzo (a) pyrene	ND	0.010	1	03/24/2017 17:48
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 17:48
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 17:48
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 17:48
Chrysene	ND	0.010	1	03/24/2017 17:48
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 17:48
Fluoranthene	ND	0.010	1	03/24/2017 17:48
Fluorene	ND	0.010	1	03/24/2017 17:48
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 17:48
1-Methylnaphthalene	ND	0.010	1	03/24/2017 17:48
2-Methylnaphthalene	ND	0.010	1	03/24/2017 17:48
Naphthalene	ND	0.010	1	03/24/2017 17:48
Phenanthrene	ND	0.010	1	03/24/2017 17:48
Pyrene	ND	0.010	1	03/24/2017 17:48

Surrogates	REC (%)	Limits	Date Analyzed
1-Fluoronaphthalene	87	30-130	03/24/2017 17:48
2-Fluorobiphenyl	85	30-130	03/24/2017 17:48

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
BB-10	1703B82-002A	Soil	03/21/2017 09:09	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 18:17
Acenaphthylene	ND	0.010	1	03/24/2017 18:17
Anthracene	ND	0.010	1	03/24/2017 18:17
Benzo (a) anthracene	ND	0.010	1	03/24/2017 18:17
Benzo (a) pyrene	ND	0.010	1	03/24/2017 18:17
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 18:17
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 18:17
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 18:17
Chrysene	ND	0.010	1	03/24/2017 18:17
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 18:17
Fluoranthene	ND	0.010	1	03/24/2017 18:17
Fluorene	ND	0.010	1	03/24/2017 18:17
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 18:17
1-Methylnaphthalene	ND	0.010	1	03/24/2017 18:17
2-Methylnaphthalene	ND	0.010	1	03/24/2017 18:17
Naphthalene	ND	0.010	1	03/24/2017 18:17
Phenanthrene	ND	0.010	1	03/24/2017 18:17
Pyrene	ND	0.010	1	03/24/2017 18:17
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	106	30-130		03/24/2017 18:17
2-Fluorobiphenyl	102	30-130		03/24/2017 18:17

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-5	1703B82-005A	Soil	03/21/2017 09:25	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 18:45
Acenaphthylene	ND	0.010	1	03/24/2017 18:45
Anthracene	ND	0.010	1	03/24/2017 18:45
Benzo (a) anthracene	ND	0.010	1	03/24/2017 18:45
Benzo (a) pyrene	ND	0.010	1	03/24/2017 18:45
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 18:45
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 18:45
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 18:45
Chrysene	ND	0.010	1	03/24/2017 18:45
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 18:45
Fluoranthene	ND	0.010	1	03/24/2017 18:45
Fluorene	ND	0.010	1	03/24/2017 18:45
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 18:45
1-Methylnaphthalene	ND	0.010	1	03/24/2017 18:45
2-Methylnaphthalene	ND	0.010	1	03/24/2017 18:45
Naphthalene	ND	0.010	1	03/24/2017 18:45
Phenanthrene	ND	0.010	1	03/24/2017 18:45
Pyrene	ND	0.010	1	03/24/2017 18:45
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	107	30-130		03/24/2017 18:45
2-Fluorobiphenyl	106	30-130		03/24/2017 18:45

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-10	1703B82-006A	Soil	03/21/2017 09:27	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 19:14
Acenaphthylene	ND	0.010	1	03/24/2017 19:14
Anthracene	ND	0.010	1	03/24/2017 19:14
Benzo (a) anthracene	ND	0.010	1	03/24/2017 19:14
Benzo (a) pyrene	ND	0.010	1	03/24/2017 19:14
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 19:14
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 19:14
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 19:14
Chrysene	ND	0.010	1	03/24/2017 19:14
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 19:14
Fluoranthene	ND	0.010	1	03/24/2017 19:14
Fluorene	ND	0.010	1	03/24/2017 19:14
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 19:14
1-Methylnaphthalene	ND	0.010	1	03/24/2017 19:14
2-Methylnaphthalene	ND	0.010	1	03/24/2017 19:14
Naphthalene	ND	0.010	1	03/24/2017 19:14
Phenanthrene	ND	0.010	1	03/24/2017 19:14
Pyrene	ND	0.010	1	03/24/2017 19:14
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	108	30-130		03/24/2017 19:14
2-Fluorobiphenyl	103	30-130		03/24/2017 19:14

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-5	1703B82-009A	Soil	03/21/2017 09:52	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 19:42
Acenaphthylene	ND	0.010	1	03/24/2017 19:42
Anthracene	ND	0.010	1	03/24/2017 19:42
Benzo (a) anthracene	0.012	0.010	1	03/24/2017 19:42
Benzo (a) pyrene	ND	0.010	1	03/24/2017 19:42
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 19:42
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 19:42
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 19:42
Chrysene	ND	0.010	1	03/24/2017 19:42
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 19:42
Fluoranthene	0.016	0.010	1	03/24/2017 19:42
Fluorene	ND	0.010	1	03/24/2017 19:42
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 19:42
1-Methylnaphthalene	ND	0.010	1	03/24/2017 19:42
2-Methylnaphthalene	ND	0.010	1	03/24/2017 19:42
Naphthalene	ND	0.010	1	03/24/2017 19:42
Phenanthrene	0.010	0.010	1	03/24/2017 19:42
Pyrene	0.020	0.010	1	03/24/2017 19:42
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	110	30-130		03/24/2017 19:42
2-Fluorobiphenyl	111	30-130		03/24/2017 19:42

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-9	1703B82-010A	Soil	03/21/2017 09:55	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	0.020	0.010	1	03/24/2017 20:11
Acenaphthylene	0.015	0.010	1	03/24/2017 20:11
Anthracene	0.027	0.010	1	03/24/2017 20:11
Benzo (a) anthracene	0.012	0.010	1	03/24/2017 20:11
Benzo (a) pyrene	ND	0.010	1	03/24/2017 20:11
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 20:11
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 20:11
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 20:11
Chrysene	ND	0.010	1	03/24/2017 20:11
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 20:11
Fluoranthene	0.010	0.010	1	03/24/2017 20:11
Fluorene	ND	0.010	1	03/24/2017 20:11
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 20:11
1-Methylnaphthalene	0.32	0.010	1	03/24/2017 20:11
2-Methylnaphthalene	ND	0.010	1	03/24/2017 20:11
Naphthalene	ND	0.010	1	03/24/2017 20:11
Phenanthrene	0.036	0.010	1	03/24/2017 20:11
Pyrene	0.012	0.010	1	03/24/2017 20:11

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
1-Fluoronaphthalene	139	S	30-130	03/24/2017 20:11
2-Fluorobiphenyl	103		30-130	03/24/2017 20:11

Analyst(s): REB

Analytical Comments: c4

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-5	1703B82-013A	Soil	03/21/2017 10:12	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 20:39
Acenaphthylene	ND	0.010	1	03/24/2017 20:39
Anthracene	ND	0.010	1	03/24/2017 20:39
Benzo (a) anthracene	ND	0.010	1	03/24/2017 20:39
Benzo (a) pyrene	ND	0.010	1	03/24/2017 20:39
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 20:39
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 20:39
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 20:39
Chrysene	ND	0.010	1	03/24/2017 20:39
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 20:39
Fluoranthene	ND	0.010	1	03/24/2017 20:39
Fluorene	ND	0.010	1	03/24/2017 20:39
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 20:39
1-Methylnaphthalene	ND	0.010	1	03/24/2017 20:39
2-Methylnaphthalene	ND	0.010	1	03/24/2017 20:39
Naphthalene	ND	0.010	1	03/24/2017 20:39
Phenanthrene	ND	0.010	1	03/24/2017 20:39
Pyrene	ND	0.010	1	03/24/2017 20:39
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	110	30-130		03/24/2017 20:39
2-Fluorobiphenyl	108	30-130		03/24/2017 20:39

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-10	1703B82-014A	Soil	03/21/2017 10:14	GC35	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.20	20	03/27/2017 13:46
Acenaphthylene	ND	0.20	20	03/27/2017 13:46
Anthracene	ND	0.20	20	03/27/2017 13:46
Benzo (a) anthracene	ND	0.20	20	03/27/2017 13:46
Benzo (a) pyrene	ND	0.20	20	03/27/2017 13:46
Benzo (b) fluoranthene	ND	0.20	20	03/27/2017 13:46
Benzo (g,h,i) perylene	ND	0.20	20	03/27/2017 13:46
Benzo (k) fluoranthene	ND	0.20	20	03/27/2017 13:46
Chrysene	ND	0.20	20	03/27/2017 13:46
Dibenzo (a,h) anthracene	ND	0.20	20	03/27/2017 13:46
Fluoranthene	ND	0.20	20	03/27/2017 13:46
Fluorene	ND	0.20	20	03/27/2017 13:46
Indeno (1,2,3-cd) pyrene	ND	0.20	20	03/27/2017 13:46
1-Methylnaphthalene	2.0	0.20	20	03/27/2017 13:46
2-Methylnaphthalene	3.7	0.20	20	03/27/2017 13:46
Naphthalene	7.0	0.20	20	03/27/2017 13:46
Phenanthrene	ND	0.20	20	03/27/2017 13:46
Pyrene	ND	0.20	20	03/27/2017 13:46

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
1-Fluoronaphthalene	173	S	30-130	03/27/2017 13:46
2-Fluorobiphenyl	94		30-130	03/27/2017 13:46

Analyst(s): REB

Analytical Comments: c4



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-5	1703B82-017A	Soil	03/21/2017 10:26	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 21:36
Acenaphthylene	ND	0.010	1	03/24/2017 21:36
Anthracene	ND	0.010	1	03/24/2017 21:36
Benzo (a) anthracene	ND	0.010	1	03/24/2017 21:36
Benzo (a) pyrene	ND	0.010	1	03/24/2017 21:36
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 21:36
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 21:36
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 21:36
Chrysene	ND	0.010	1	03/24/2017 21:36
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 21:36
Fluoranthene	ND	0.010	1	03/24/2017 21:36
Fluorene	ND	0.010	1	03/24/2017 21:36
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 21:36
1-Methylnaphthalene	ND	0.010	1	03/24/2017 21:36
2-Methylnaphthalene	ND	0.010	1	03/24/2017 21:36
Naphthalene	ND	0.010	1	03/24/2017 21:36
Phenanthrene	ND	0.010	1	03/24/2017 21:36
Pyrene	ND	0.010	1	03/24/2017 21:36
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	110	30-130		03/24/2017 21:36
2-Fluorobiphenyl	108	30-130		03/24/2017 21:36

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-10	1703B82-018A	Soil	03/21/2017 10:29	GC35	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.10	10	03/27/2017 14:11
Acenaphthylene	ND	0.10	10	03/27/2017 14:11
Anthracene	ND	0.10	10	03/27/2017 14:11
Benzo (a) anthracene	ND	0.10	10	03/27/2017 14:11
Benzo (a) pyrene	ND	0.10	10	03/27/2017 14:11
Benzo (b) fluoranthene	ND	0.10	10	03/27/2017 14:11
Benzo (g,h,i) perylene	ND	0.10	10	03/27/2017 14:11
Benzo (k) fluoranthene	ND	0.10	10	03/27/2017 14:11
Chrysene	ND	0.10	10	03/27/2017 14:11
Dibenzo (a,h) anthracene	ND	0.10	10	03/27/2017 14:11
Fluoranthene	ND	0.10	10	03/27/2017 14:11
Fluorene	ND	0.10	10	03/27/2017 14:11
Indeno (1,2,3-cd) pyrene	ND	0.10	10	03/27/2017 14:11
1-Methylnaphthalene	1.6	0.10	10	03/27/2017 14:11
2-Methylnaphthalene	3.0	0.10	10	03/27/2017 14:11
Naphthalene	5.0	0.10	10	03/27/2017 14:11
Phenanthrene	ND	0.10	10	03/27/2017 14:11
Pyrene	ND	0.10	10	03/27/2017 14:11

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
1-Fluoronaphthalene	188	S	30-130	03/27/2017 14:11
2-Fluorobiphenyl	106		30-130	03/27/2017 14:11

Analyst(s): REB

Analytical Comments: c4

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-5	1703B82-021A	Soil	03/21/2017 10:45	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 22:33
Acenaphthylene	ND	0.010	1	03/24/2017 22:33
Anthracene	ND	0.010	1	03/24/2017 22:33
Benzo (a) anthracene	ND	0.010	1	03/24/2017 22:33
Benzo (a) pyrene	ND	0.010	1	03/24/2017 22:33
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 22:33
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 22:33
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 22:33
Chrysene	ND	0.010	1	03/24/2017 22:33
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 22:33
Fluoranthene	ND	0.010	1	03/24/2017 22:33
Fluorene	ND	0.010	1	03/24/2017 22:33
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 22:33
1-Methylnaphthalene	ND	0.010	1	03/24/2017 22:33
2-Methylnaphthalene	ND	0.010	1	03/24/2017 22:33
Naphthalene	ND	0.010	1	03/24/2017 22:33
Phenanthrene	ND	0.010	1	03/24/2017 22:33
Pyrene	ND	0.010	1	03/24/2017 22:33
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	105	30-130		03/24/2017 22:33
2-Fluorobiphenyl	108	30-130		03/24/2017 22:33

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-10	1703B82-022A	Soil	03/21/2017 10:48	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 23:02
Acenaphthylene	ND	0.010	1	03/24/2017 23:02
Anthracene	ND	0.010	1	03/24/2017 23:02
Benzo (a) anthracene	ND	0.010	1	03/24/2017 23:02
Benzo (a) pyrene	ND	0.010	1	03/24/2017 23:02
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 23:02
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 23:02
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 23:02
Chrysene	ND	0.010	1	03/24/2017 23:02
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 23:02
Fluoranthene	ND	0.010	1	03/24/2017 23:02
Fluorene	ND	0.010	1	03/24/2017 23:02
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 23:02
1-Methylnaphthalene	ND	0.010	1	03/24/2017 23:02
2-Methylnaphthalene	ND	0.010	1	03/24/2017 23:02
Naphthalene	ND	0.010	1	03/24/2017 23:02
Phenanthrene	ND	0.010	1	03/24/2017 23:02
Pyrene	ND	0.010	1	03/24/2017 23:02
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	100	30-130		03/24/2017 23:02
2-Fluorobiphenyl	101	30-130		03/24/2017 23:02

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-5	1703B82-025A	Soil	03/21/2017 11:02	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 23:30
Acenaphthylene	ND	0.010	1	03/24/2017 23:30
Anthracene	ND	0.010	1	03/24/2017 23:30
Benzo (a) anthracene	0.024	0.010	1	03/24/2017 23:30
Benzo (a) pyrene	0.021	0.010	1	03/24/2017 23:30
Benzo (b) fluoranthene	0.025	0.010	1	03/24/2017 23:30
Benzo (g,h,i) perylene	0.013	0.010	1	03/24/2017 23:30
Benzo (k) fluoranthene	0.010	0.010	1	03/24/2017 23:30
Chrysene	0.017	0.010	1	03/24/2017 23:30
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 23:30
Fluoranthene	0.015	0.010	1	03/24/2017 23:30
Fluorene	ND	0.010	1	03/24/2017 23:30
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 23:30
1-Methylnaphthalene	ND	0.010	1	03/24/2017 23:30
2-Methylnaphthalene	ND	0.010	1	03/24/2017 23:30
Naphthalene	ND	0.010	1	03/24/2017 23:30
Phenanthrene	ND	0.010	1	03/24/2017 23:30
Pyrene	0.017	0.010	1	03/24/2017 23:30
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	114	30-130		03/24/2017 23:30
2-Fluorobiphenyl	107	30-130		03/24/2017 23:30

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-10	1703B82-026A	Soil	03/21/2017 11:05	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 23:59
Acenaphthylene	ND	0.010	1	03/24/2017 23:59
Anthracene	ND	0.010	1	03/24/2017 23:59
Benzo (a) anthracene	ND	0.010	1	03/24/2017 23:59
Benzo (a) pyrene	ND	0.010	1	03/24/2017 23:59
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 23:59
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 23:59
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 23:59
Chrysene	ND	0.010	1	03/24/2017 23:59
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 23:59
Fluoranthene	ND	0.010	1	03/24/2017 23:59
Fluorene	ND	0.010	1	03/24/2017 23:59
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 23:59
1-Methylnaphthalene	0.020	0.010	1	03/24/2017 23:59
2-Methylnaphthalene	0.028	0.010	1	03/24/2017 23:59
Naphthalene	0.041	0.010	1	03/24/2017 23:59
Phenanthrene	ND	0.010	1	03/24/2017 23:59
Pyrene	ND	0.010	1	03/24/2017 23:59
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	113	30-130		03/24/2017 23:59
2-Fluorobiphenyl	106	30-130		03/24/2017 23:59

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-5	1703B82-029A	Soil	03/21/2017 11:21	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/25/2017 00:27
Acenaphthylene	ND	0.010	1	03/25/2017 00:27
Anthracene	ND	0.010	1	03/25/2017 00:27
Benzo (a) anthracene	ND	0.010	1	03/25/2017 00:27
Benzo (a) pyrene	ND	0.010	1	03/25/2017 00:27
Benzo (b) fluoranthene	ND	0.010	1	03/25/2017 00:27
Benzo (g,h,i) perylene	ND	0.010	1	03/25/2017 00:27
Benzo (k) fluoranthene	ND	0.010	1	03/25/2017 00:27
Chrysene	ND	0.010	1	03/25/2017 00:27
Dibenzo (a,h) anthracene	ND	0.010	1	03/25/2017 00:27
Fluoranthene	ND	0.010	1	03/25/2017 00:27
Fluorene	ND	0.010	1	03/25/2017 00:27
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/25/2017 00:27
1-Methylnaphthalene	ND	0.010	1	03/25/2017 00:27
2-Methylnaphthalene	ND	0.010	1	03/25/2017 00:27
Naphthalene	ND	0.010	1	03/25/2017 00:27
Phenanthrene	ND	0.010	1	03/25/2017 00:27
Pyrene	ND	0.010	1	03/25/2017 00:27
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	109	30-130		03/25/2017 00:27
2-Fluorobiphenyl	104	30-130		03/25/2017 00:27

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-10	1703B82-030A	Soil	03/21/2017 11:23	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/25/2017 00:55
Acenaphthylene	ND	0.010	1	03/25/2017 00:55
Anthracene	ND	0.010	1	03/25/2017 00:55
Benzo (a) anthracene	ND	0.010	1	03/25/2017 00:55
Benzo (a) pyrene	ND	0.010	1	03/25/2017 00:55
Benzo (b) fluoranthene	ND	0.010	1	03/25/2017 00:55
Benzo (g,h,i) perylene	ND	0.010	1	03/25/2017 00:55
Benzo (k) fluoranthene	ND	0.010	1	03/25/2017 00:55
Chrysene	ND	0.010	1	03/25/2017 00:55
Dibenzo (a,h) anthracene	ND	0.010	1	03/25/2017 00:55
Fluoranthene	ND	0.010	1	03/25/2017 00:55
Fluorene	ND	0.010	1	03/25/2017 00:55
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/25/2017 00:55
1-Methylnaphthalene	ND	0.010	1	03/25/2017 00:55
2-Methylnaphthalene	ND	0.010	1	03/25/2017 00:55
Naphthalene	ND	0.010	1	03/25/2017 00:55
Phenanthrene	ND	0.010	1	03/25/2017 00:55
Pyrene	ND	0.010	1	03/25/2017 00:55
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	106	30-130		03/25/2017 00:55
2-Fluorobiphenyl	104	30-130		03/25/2017 00:55

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-5	1703B82-033A	Soil	03/21/2017 11:39	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/25/2017 01:24
Acenaphthylene	ND	0.010	1	03/25/2017 01:24
Anthracene	ND	0.010	1	03/25/2017 01:24
Benzo (a) anthracene	ND	0.010	1	03/25/2017 01:24
Benzo (a) pyrene	ND	0.010	1	03/25/2017 01:24
Benzo (b) fluoranthene	ND	0.010	1	03/25/2017 01:24
Benzo (g,h,i) perylene	ND	0.010	1	03/25/2017 01:24
Benzo (k) fluoranthene	ND	0.010	1	03/25/2017 01:24
Chrysene	ND	0.010	1	03/25/2017 01:24
Dibenzo (a,h) anthracene	ND	0.010	1	03/25/2017 01:24
Fluoranthene	ND	0.010	1	03/25/2017 01:24
Fluorene	ND	0.010	1	03/25/2017 01:24
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/25/2017 01:24
1-Methylnaphthalene	ND	0.010	1	03/25/2017 01:24
2-Methylnaphthalene	ND	0.010	1	03/25/2017 01:24
Naphthalene	ND	0.010	1	03/25/2017 01:24
Phenanthrene	ND	0.010	1	03/25/2017 01:24
Pyrene	ND	0.010	1	03/25/2017 01:24
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	108	30-130		03/25/2017 01:24
2-Fluorobiphenyl	108	30-130		03/25/2017 01:24

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10	1703B82-034A	Soil	03/21/2017 11:41	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/25/2017 01:52
Acenaphthylene	ND	0.010	1	03/25/2017 01:52
Anthracene	ND	0.010	1	03/25/2017 01:52
Benzo (a) anthracene	ND	0.010	1	03/25/2017 01:52
Benzo (a) pyrene	ND	0.010	1	03/25/2017 01:52
Benzo (b) fluoranthene	ND	0.010	1	03/25/2017 01:52
Benzo (g,h,i) perylene	ND	0.010	1	03/25/2017 01:52
Benzo (k) fluoranthene	ND	0.010	1	03/25/2017 01:52
Chrysene	ND	0.010	1	03/25/2017 01:52
Dibenzo (a,h) anthracene	ND	0.010	1	03/25/2017 01:52
Fluoranthene	ND	0.010	1	03/25/2017 01:52
Fluorene	ND	0.010	1	03/25/2017 01:52
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/25/2017 01:52
1-Methylnaphthalene	ND	0.010	1	03/25/2017 01:52
2-Methylnaphthalene	ND	0.010	1	03/25/2017 01:52
Naphthalene	ND	0.010	1	03/25/2017 01:52
Phenanthrene	ND	0.010	1	03/25/2017 01:52
Pyrene	ND	0.010	1	03/25/2017 01:52
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	99	30-130		03/25/2017 01:52
2-Fluorobiphenyl	99	30-130		03/25/2017 01:52

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB1-3	1703B82-037A	Soil	03/21/2017 12:02	GC17	136185

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/25/2017 02:20
Acenaphthylene	ND	0.010	1	03/25/2017 02:20
Anthracene	ND	0.010	1	03/25/2017 02:20
Benzo (a) anthracene	ND	0.010	1	03/25/2017 02:20
Benzo (a) pyrene	ND	0.010	1	03/25/2017 02:20
Benzo (b) fluoranthene	ND	0.010	1	03/25/2017 02:20
Benzo (g,h,i) perylene	ND	0.010	1	03/25/2017 02:20
Benzo (k) fluoranthene	ND	0.010	1	03/25/2017 02:20
Chrysene	ND	0.010	1	03/25/2017 02:20
Dibenzo (a,h) anthracene	ND	0.010	1	03/25/2017 02:20
Fluoranthene	ND	0.010	1	03/25/2017 02:20
Fluorene	ND	0.010	1	03/25/2017 02:20
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/25/2017 02:20
1-Methylnaphthalene	ND	0.010	1	03/25/2017 02:20
2-Methylnaphthalene	ND	0.010	1	03/25/2017 02:20
Naphthalene	ND	0.010	1	03/25/2017 02:20
Phenanthrene	ND	0.010	1	03/25/2017 02:20
Pyrene	ND	0.010	1	03/25/2017 02:20
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
1-Fluoronaphthalene	104	30-130		03/25/2017 02:20
2-Fluorobiphenyl	105	30-130		03/25/2017 02:20

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB1-10	1703B82-038A	Soil	03/21/2017 12:06	GC35	136186

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 20:18
Acenaphthylene	ND	0.010	1	03/24/2017 20:18
Anthracene	ND	0.010	1	03/24/2017 20:18
Benzo (a) anthracene	ND	0.010	1	03/24/2017 20:18
Benzo (a) pyrene	ND	0.010	1	03/24/2017 20:18
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 20:18
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 20:18
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 20:18
Chrysene	ND	0.010	1	03/24/2017 20:18
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 20:18
Fluoranthene	ND	0.010	1	03/24/2017 20:18
Fluorene	ND	0.010	1	03/24/2017 20:18
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 20:18
1-Methylnaphthalene	ND	0.010	1	03/24/2017 20:18
2-Methylnaphthalene	ND	0.010	1	03/24/2017 20:18
Naphthalene	ND	0.010	1	03/24/2017 20:18
Phenanthrene	ND	0.010	1	03/24/2017 20:18
Pyrene	ND	0.010	1	03/24/2017 20:18
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	103	30-130		03/24/2017 20:18
2-Fluorobiphenyl	98	30-130		03/24/2017 20:18

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB2-3	1703B82-039A	Soil	03/21/2017 12:11	GC35	136186

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 20:43
Acenaphthylene	ND	0.010	1	03/24/2017 20:43
Anthracene	ND	0.010	1	03/24/2017 20:43
Benzo (a) anthracene	ND	0.010	1	03/24/2017 20:43
Benzo (a) pyrene	ND	0.010	1	03/24/2017 20:43
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 20:43
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 20:43
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 20:43
Chrysene	ND	0.010	1	03/24/2017 20:43
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 20:43
Fluoranthene	ND	0.010	1	03/24/2017 20:43
Fluorene	ND	0.010	1	03/24/2017 20:43
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 20:43
1-Methylnaphthalene	ND	0.010	1	03/24/2017 20:43
2-Methylnaphthalene	ND	0.010	1	03/24/2017 20:43
Naphthalene	ND	0.010	1	03/24/2017 20:43
Phenanthrene	ND	0.010	1	03/24/2017 20:43
Pyrene	ND	0.010	1	03/24/2017 20:43
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	108	30-130		03/24/2017 20:43
2-Fluorobiphenyl	105	30-130		03/24/2017 20:43

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB2-10	1703B82-040A	Soil	03/21/2017 12:13	GC35	136186

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 21:08
Acenaphthylene	ND	0.010	1	03/24/2017 21:08
Anthracene	ND	0.010	1	03/24/2017 21:08
Benzo (a) anthracene	ND	0.010	1	03/24/2017 21:08
Benzo (a) pyrene	ND	0.010	1	03/24/2017 21:08
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 21:08
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 21:08
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 21:08
Chrysene	ND	0.010	1	03/24/2017 21:08
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 21:08
Fluoranthene	ND	0.010	1	03/24/2017 21:08
Fluorene	ND	0.010	1	03/24/2017 21:08
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 21:08
1-Methylnaphthalene	ND	0.010	1	03/24/2017 21:08
2-Methylnaphthalene	ND	0.010	1	03/24/2017 21:08
Naphthalene	ND	0.010	1	03/24/2017 21:08
Phenanthrene	ND	0.010	1	03/24/2017 21:08
Pyrene	ND	0.010	1	03/24/2017 21:08
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	105	30-130		03/24/2017 21:08
2-Fluorobiphenyl	104	30-130		03/24/2017 21:08

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-8	1703B82-041A	Soil	03/21/2017 14:35	GC35	136186

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/24/2017 21:33
Acenaphthylene	ND	0.010	1	03/24/2017 21:33
Anthracene	ND	0.010	1	03/24/2017 21:33
Benzo (a) anthracene	ND	0.010	1	03/24/2017 21:33
Benzo (a) pyrene	ND	0.010	1	03/24/2017 21:33
Benzo (b) fluoranthene	ND	0.010	1	03/24/2017 21:33
Benzo (g,h,i) perylene	ND	0.010	1	03/24/2017 21:33
Benzo (k) fluoranthene	ND	0.010	1	03/24/2017 21:33
Chrysene	ND	0.010	1	03/24/2017 21:33
Dibenzo (a,h) anthracene	ND	0.010	1	03/24/2017 21:33
Fluoranthene	ND	0.010	1	03/24/2017 21:33
Fluorene	ND	0.010	1	03/24/2017 21:33
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/24/2017 21:33
1-Methylnaphthalene	ND	0.010	1	03/24/2017 21:33
2-Methylnaphthalene	ND	0.010	1	03/24/2017 21:33
Naphthalene	ND	0.010	1	03/24/2017 21:33
Phenanthrene	ND	0.010	1	03/24/2017 21:33
Pyrene	ND	0.010	1	03/24/2017 21:33
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	108	30-130		03/24/2017 21:33
2-Fluorobiphenyl	107	30-130		03/24/2017 21:33

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-4	1703B82-043A	Soil	03/21/2017 15:29	GC35	136186

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/27/2017 10:33
Acenaphthylene	ND	0.010	1	03/27/2017 10:33
Anthracene	ND	0.010	1	03/27/2017 10:33
Benzo (a) anthracene	ND	0.010	1	03/27/2017 10:33
Benzo (a) pyrene	ND	0.010	1	03/27/2017 10:33
Benzo (b) fluoranthene	ND	0.010	1	03/27/2017 10:33
Benzo (g,h,i) perylene	ND	0.010	1	03/27/2017 10:33
Benzo (k) fluoranthene	ND	0.010	1	03/27/2017 10:33
Chrysene	ND	0.010	1	03/27/2017 10:33
Dibenzo (a,h) anthracene	ND	0.010	1	03/27/2017 10:33
Fluoranthene	ND	0.010	1	03/27/2017 10:33
Fluorene	ND	0.010	1	03/27/2017 10:33
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/27/2017 10:33
1-Methylnaphthalene	ND	0.010	1	03/27/2017 10:33
2-Methylnaphthalene	ND	0.010	1	03/27/2017 10:33
Naphthalene	ND	0.010	1	03/27/2017 10:33
Phenanthrene	ND	0.010	1	03/27/2017 10:33
Pyrene	ND	0.010	1	03/27/2017 10:33
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	109	30-130		03/27/2017 10:33
2-Fluorobiphenyl	107	30-130		03/27/2017 10:33

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-8	1703B82-044A	Soil	03/21/2017 15:31	GC35	136186

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/27/2017 10:57
Acenaphthylene	ND	0.010	1	03/27/2017 10:57
Anthracene	ND	0.010	1	03/27/2017 10:57
Benzo (a) anthracene	ND	0.010	1	03/27/2017 10:57
Benzo (a) pyrene	ND	0.010	1	03/27/2017 10:57
Benzo (b) fluoranthene	ND	0.010	1	03/27/2017 10:57
Benzo (g,h,i) perylene	ND	0.010	1	03/27/2017 10:57
Benzo (k) fluoranthene	ND	0.010	1	03/27/2017 10:57
Chrysene	ND	0.010	1	03/27/2017 10:57
Dibenzo (a,h) anthracene	ND	0.010	1	03/27/2017 10:57
Fluoranthene	ND	0.010	1	03/27/2017 10:57
Fluorene	ND	0.010	1	03/27/2017 10:57
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/27/2017 10:57
1-Methylnaphthalene	ND	0.010	1	03/27/2017 10:57
2-Methylnaphthalene	ND	0.010	1	03/27/2017 10:57
Naphthalene	ND	0.010	1	03/27/2017 10:57
Phenanthrene	ND	0.010	1	03/27/2017 10:57
Pyrene	ND	0.010	1	03/27/2017 10:57
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	110	30-130		03/27/2017 10:57
2-Fluorobiphenyl	108	30-130		03/27/2017 10:57

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB4-3	1703B82-045A	Soil	03/21/2017 16:03	GC35	136186

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/27/2017 11:22
Acenaphthylene	ND	0.010	1	03/27/2017 11:22
Anthracene	ND	0.010	1	03/27/2017 11:22
Benzo (a) anthracene	ND	0.010	1	03/27/2017 11:22
Benzo (a) pyrene	ND	0.010	1	03/27/2017 11:22
Benzo (b) fluoranthene	ND	0.010	1	03/27/2017 11:22
Benzo (g,h,i) perylene	ND	0.010	1	03/27/2017 11:22
Benzo (k) fluoranthene	ND	0.010	1	03/27/2017 11:22
Chrysene	ND	0.010	1	03/27/2017 11:22
Dibenzo (a,h) anthracene	ND	0.010	1	03/27/2017 11:22
Fluoranthene	ND	0.010	1	03/27/2017 11:22
Fluorene	ND	0.010	1	03/27/2017 11:22
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/27/2017 11:22
1-Methylnaphthalene	ND	0.010	1	03/27/2017 11:22
2-Methylnaphthalene	ND	0.010	1	03/27/2017 11:22
Naphthalene	ND	0.010	1	03/27/2017 11:22
Phenanthrene	ND	0.010	1	03/27/2017 11:22
Pyrene	ND	0.010	1	03/27/2017 11:22
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	113	30-130		03/27/2017 11:22
2-Fluorobiphenyl	111	30-130		03/27/2017 11:22

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB4-10	1703B82-046A	Soil	03/21/2017 16:05	GC35	136186

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/27/2017 11:47
Acenaphthylene	ND	0.010	1	03/27/2017 11:47
Anthracene	ND	0.010	1	03/27/2017 11:47
Benzo (a) anthracene	ND	0.010	1	03/27/2017 11:47
Benzo (a) pyrene	ND	0.010	1	03/27/2017 11:47
Benzo (b) fluoranthene	ND	0.010	1	03/27/2017 11:47
Benzo (g,h,i) perylene	ND	0.010	1	03/27/2017 11:47
Benzo (k) fluoranthene	ND	0.010	1	03/27/2017 11:47
Chrysene	ND	0.010	1	03/27/2017 11:47
Dibenzo (a,h) anthracene	ND	0.010	1	03/27/2017 11:47
Fluoranthene	ND	0.010	1	03/27/2017 11:47
Fluorene	ND	0.010	1	03/27/2017 11:47
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/27/2017 11:47
1-Methylnaphthalene	ND	0.010	1	03/27/2017 11:47
2-Methylnaphthalene	ND	0.010	1	03/27/2017 11:47
Naphthalene	ND	0.010	1	03/27/2017 11:47
Phenanthrene	ND	0.010	1	03/27/2017 11:47
Pyrene	ND	0.010	1	03/27/2017 11:47
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	103	30-130		03/27/2017 11:47
2-Fluorobiphenyl	103	30-130		03/27/2017 11:47

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/24/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB3-3	1703B82-047A	Soil	03/22/2017 14:39	GC35	136186

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	03/27/2017 12:12
Acenaphthylene	ND	0.010	1	03/27/2017 12:12
Anthracene	ND	0.010	1	03/27/2017 12:12
Benzo (a) anthracene	ND	0.010	1	03/27/2017 12:12
Benzo (a) pyrene	ND	0.010	1	03/27/2017 12:12
Benzo (b) fluoranthene	ND	0.010	1	03/27/2017 12:12
Benzo (g,h,i) perylene	ND	0.010	1	03/27/2017 12:12
Benzo (k) fluoranthene	ND	0.010	1	03/27/2017 12:12
Chrysene	ND	0.010	1	03/27/2017 12:12
Dibenzo (a,h) anthracene	ND	0.010	1	03/27/2017 12:12
Fluoranthene	ND	0.010	1	03/27/2017 12:12
Fluorene	ND	0.010	1	03/27/2017 12:12
Indeno (1,2,3-cd) pyrene	ND	0.010	1	03/27/2017 12:12
1-Methylnaphthalene	ND	0.010	1	03/27/2017 12:12
2-Methylnaphthalene	ND	0.010	1	03/27/2017 12:12
Naphthalene	ND	0.010	1	03/27/2017 12:12
Phenanthrene	ND	0.010	1	03/27/2017 12:12
Pyrene	ND	0.010	1	03/27/2017 12:12
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	112	30-130		03/27/2017 12:12
2-Fluorobiphenyl	111	30-130		03/27/2017 12:12

Analyst(s): REB



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-5	1703B82-001A	Soil	03/21/2017 09:05	GC19	136046

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/24/2017 06:59
MTBE	---	0.050	1	03/24/2017 06:59
Benzene	---	0.0050	1	03/24/2017 06:59
Toluene	---	0.0050	1	03/24/2017 06:59
Ethylbenzene	---	0.0050	1	03/24/2017 06:59
Xylenes	---	0.015	1	03/24/2017 06:59

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	92	62-126	03/24/2017 06:59

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-10	1703B82-002A	Soil	03/21/2017 09:09	GC19	136046

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/24/2017 07:30
MTBE	---	0.050	1	03/24/2017 07:30
Benzene	---	0.0050	1	03/24/2017 07:30
Toluene	---	0.0050	1	03/24/2017 07:30
Ethylbenzene	---	0.0050	1	03/24/2017 07:30
Xylenes	---	0.015	1	03/24/2017 07:30

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	89	62-126	03/24/2017 07:30

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-15	1703B82-003A	Soil	03/21/2017 09:13	GC19	136046

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/24/2017 08:31
MTBE	---	0.050	1	03/24/2017 08:31
Benzene	---	0.0050	1	03/24/2017 08:31
Toluene	---	0.0050	1	03/24/2017 08:31
Ethylbenzene	---	0.0050	1	03/24/2017 08:31
Xylenes	---	0.015	1	03/24/2017 08:31

Surrogates	REC (%)	Limits
2-Fluorotoluene	90	62-126

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-20	1703B82-004A	Soil	03/21/2017 09:16	GC19	136046

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/24/2017 09:33
MTBE	---	0.050	1	03/24/2017 09:33
Benzene	---	0.0050	1	03/24/2017 09:33
Toluene	---	0.0050	1	03/24/2017 09:33
Ethylbenzene	---	0.0050	1	03/24/2017 09:33
Xylenes	---	0.015	1	03/24/2017 09:33

Surrogates	REC (%)	Limits
2-Fluorotoluene	90	62-126

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-5	1703B82-005A	Soil	03/21/2017 09:25	GC19	136046

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/24/2017 09:02
MTBE	---	0.050	1	03/24/2017 09:02
Benzene	---	0.0050	1	03/24/2017 09:02
Toluene	---	0.0050	1	03/24/2017 09:02
Ethylbenzene	---	0.0050	1	03/24/2017 09:02
Xylenes	---	0.015	1	03/24/2017 09:02

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	89	62-126	03/24/2017 09:02

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-10	1703B82-006A	Soil	03/21/2017 09:27	GC19	136046

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	2.7	1.0	1	03/27/2017 16:31
MTBE	---	0.050	1	03/27/2017 16:31
Benzene	---	0.0050	1	03/27/2017 16:31
Toluene	---	0.0050	1	03/27/2017 16:31
Ethylbenzene	---	0.0050	1	03/27/2017 16:31
Xylenes	---	0.015	1	03/27/2017 16:31

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	87	62-126	03/27/2017 16:31

Analyst(s): IA

Analytical Comments: d7



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-15	1703B82-007A	Soil	03/21/2017 09:30	GC19	136237

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/27/2017 20:06
MTBE	---	0.050	1	03/27/2017 20:06
Benzene	---	0.0050	1	03/27/2017 20:06
Toluene	---	0.0050	1	03/27/2017 20:06
Ethylbenzene	---	0.0050	1	03/27/2017 20:06
Xylenes	---	0.015	1	03/27/2017 20:06
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	85	62-126		03/27/2017 20:06

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-20	1703B82-008A	Soil	03/21/2017 09:32	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/24/2017 10:05
MTBE	---	0.050	1	03/24/2017 10:05
Benzene	---	0.0050	1	03/24/2017 10:05
Toluene	---	0.0050	1	03/24/2017 10:05
Ethylbenzene	---	0.0050	1	03/24/2017 10:05
Xylenes	---	0.015	1	03/24/2017 10:05
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	91	62-126		03/24/2017 10:05

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-5	1703B82-009A	Soil	03/21/2017 09:52	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/24/2017 10:36
MTBE	---	0.050	1	03/24/2017 10:36
Benzene	---	0.0050	1	03/24/2017 10:36
Toluene	---	0.0050	1	03/24/2017 10:36
Ethylbenzene	---	0.0050	1	03/24/2017 10:36
Xylenes	---	0.015	1	03/24/2017 10:36

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	70	62-126	03/24/2017 10:36

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-9	1703B82-010A	Soil	03/21/2017 09:55	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	760	200	200	03/24/2017 14:36
MTBE	---	10	200	03/24/2017 14:36
Benzene	---	1.0	200	03/24/2017 14:36
Toluene	---	1.0	200	03/24/2017 14:36
Ethylbenzene	---	1.0	200	03/24/2017 14:36
Xylenes	---	3.0	200	03/24/2017 14:36

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
2-Fluorotoluene	405	S	62-126	03/24/2017 14:36

Analyst(s): IA

Analytical Comments: d9,c4



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-15	1703B82-011A	Soil	03/21/2017 09:57	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	4.2	1.0	1	03/24/2017 20:53
MTBE	---	0.050	1	03/24/2017 20:53
Benzene	---	0.0050	1	03/24/2017 20:53
Toluene	---	0.0050	1	03/24/2017 20:53
Ethylbenzene	---	0.0050	1	03/24/2017 20:53
Xylenes	---	0.015	1	03/24/2017 20:53

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	84	62-126	03/24/2017 20:53

Analyst(s): IA

Analytical Comments: d9

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-19	1703B82-012A	Soil	03/21/2017 10:01	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/24/2017 21:24
MTBE	---	0.050	1	03/24/2017 21:24
Benzene	---	0.0050	1	03/24/2017 21:24
Toluene	---	0.0050	1	03/24/2017 21:24
Ethylbenzene	---	0.0050	1	03/24/2017 21:24
Xylenes	---	0.015	1	03/24/2017 21:24

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	83	62-126	03/24/2017 21:24

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-5	1703B82-013A	Soil	03/21/2017 10:12	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/25/2017 01:01
MTBE	---	0.050	1	03/25/2017 01:01
Benzene	---	0.0050	1	03/25/2017 01:01
Toluene	---	0.0050	1	03/25/2017 01:01
Ethylbenzene	---	0.0050	1	03/25/2017 01:01
Xylenes	---	0.015	1	03/25/2017 01:01

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	88	62-126	03/25/2017 01:01

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-10	1703B82-014A	Soil	03/21/2017 10:14	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	2000	100	100	03/26/2017 14:43
MTBE	---	5.0	100	03/26/2017 14:43
Benzene	---	0.50	100	03/26/2017 14:43
Toluene	---	0.50	100	03/26/2017 14:43
Ethylbenzene	---	0.50	100	03/26/2017 14:43
Xylenes	---	1.5	100	03/26/2017 14:43

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	105	62-126	03/26/2017 14:43

Analyst(s): IA

Analytical Comments: d2,d9



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-15	1703B82-015A	Soil	03/21/2017 10:17	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/25/2017 02:02
MTBE	---	0.050	1	03/25/2017 02:02
Benzene	---	0.0050	1	03/25/2017 02:02
Toluene	---	0.0050	1	03/25/2017 02:02
Ethylbenzene	---	0.0050	1	03/25/2017 02:02
Xylenes	---	0.015	1	03/25/2017 02:02
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	85	62-126		03/25/2017 02:02

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-20	1703B82-016A	Soil	03/21/2017 10:20	GC19	136237

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/27/2017 15:29
MTBE	---	0.050	1	03/27/2017 15:29
Benzene	---	0.0050	1	03/27/2017 15:29
Toluene	---	0.0050	1	03/27/2017 15:29
Ethylbenzene	---	0.0050	1	03/27/2017 15:29
Xylenes	---	0.015	1	03/27/2017 15:29
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	85	62-126		03/27/2017 15:29

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-5	1703B82-017A	Soil	03/21/2017 10:26	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	27	3.3	3.3	03/27/2017 18:03
MTBE	---	0.17	3.3	03/27/2017 18:03
Benzene	---	0.017	3.3	03/27/2017 18:03
Toluene	---	0.017	3.3	03/27/2017 18:03
Ethylbenzene	---	0.017	3.3	03/27/2017 18:03
Xylenes	---	0.050	3.3	03/27/2017 18:03

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	97	62-126	03/27/2017 18:03

Analyst(s): IA

Analytical Comments: d7,d9

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-10	1703B82-018A	Soil	03/21/2017 10:29	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	1800	50	50	03/26/2017 15:45
MTBE	---	2.5	50	03/26/2017 15:45
Benzene	---	0.25	50	03/26/2017 15:45
Toluene	---	0.25	50	03/26/2017 15:45
Ethylbenzene	---	0.25	50	03/26/2017 15:45
Xylenes	---	0.75	50	03/26/2017 15:45

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	125	62-126	03/26/2017 15:45

Analyst(s): IA

Analytical Comments: d2,d9,c4



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-15	1703B82-019A	Soil	03/21/2017 10:31	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	4.2	1.0	1	03/25/2017 03:04
MTBE	---	0.050	1	03/25/2017 03:04
Benzene	---	0.0050	1	03/25/2017 03:04
Toluene	---	0.0050	1	03/25/2017 03:04
Ethylbenzene	---	0.0050	1	03/25/2017 03:04
Xylenes	---	0.015	1	03/25/2017 03:04

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	87	62-126	03/25/2017 03:04

Analyst(s): IA

Analytical Comments: d1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-20	1703B82-020A	Soil	03/21/2017 10:33	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/25/2017 04:36
MTBE	---	0.050	1	03/25/2017 04:36
Benzene	---	0.0050	1	03/25/2017 04:36
Toluene	---	0.0050	1	03/25/2017 04:36
Ethylbenzene	---	0.0050	1	03/25/2017 04:36
Xylenes	---	0.015	1	03/25/2017 04:36

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	84	62-126	03/25/2017 04:36

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-5	1703B82-021A	Soil	03/21/2017 10:45	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	42	3.3	3.3	03/27/2017 13:56
MTBE	---	0.17	3.3	03/27/2017 13:56
Benzene	---	0.017	3.3	03/27/2017 13:56
Toluene	---	0.017	3.3	03/27/2017 13:56
Ethylbenzene	---	0.017	3.3	03/27/2017 13:56
Xylenes	---	0.050	3.3	03/27/2017 13:56

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	102	62-126	03/27/2017 13:56

Analyst(s): IA

Analytical Comments: d7,d9

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-10	1703B82-022A	Soil	03/21/2017 10:48	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	8.4	1.0	1	03/27/2017 14:27
MTBE	---	0.050	1	03/27/2017 14:27
Benzene	---	0.0050	1	03/27/2017 14:27
Toluene	---	0.0050	1	03/27/2017 14:27
Ethylbenzene	---	0.0050	1	03/27/2017 14:27
Xylenes	---	0.015	1	03/27/2017 14:27

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	87	62-126	03/27/2017 14:27

Analyst(s): IA

Analytical Comments: d7,d1



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-15	1703B82-023A	Soil	03/21/2017 10:51	GC19	136237

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/27/2017 21:08
MTBE	---	0.050	1	03/27/2017 21:08
Benzene	---	0.0050	1	03/27/2017 21:08
Toluene	---	0.0050	1	03/27/2017 21:08
Ethylbenzene	---	0.0050	1	03/27/2017 21:08
Xylenes	---	0.015	1	03/27/2017 21:08

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	88	62-126	03/27/2017 21:08

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-20	1703B82-024A	Soil	03/21/2017 10:53	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/25/2017 06:40
MTBE	---	0.050	1	03/25/2017 06:40
Benzene	---	0.0050	1	03/25/2017 06:40
Toluene	---	0.0050	1	03/25/2017 06:40
Ethylbenzene	---	0.0050	1	03/25/2017 06:40
Xylenes	---	0.015	1	03/25/2017 06:40

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	90	62-126	03/25/2017 06:40

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-5	1703B82-025A	Soil	03/21/2017 11:02	GC19	136237

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/27/2017 21:38
MTBE	---	0.050	1	03/27/2017 21:38
Benzene	---	0.0050	1	03/27/2017 21:38
Toluene	---	0.0050	1	03/27/2017 21:38
Ethylbenzene	---	0.0050	1	03/27/2017 21:38
Xylenes	---	0.015	1	03/27/2017 21:38
Surrogates	REC (%)	Limits		
2-Fluorotoluene	89	62-126		03/27/2017 21:38

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-10	1703B82-026A	Soil	03/21/2017 11:05	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	4.7	1.0	1	03/25/2017 08:12
MTBE	---	0.050	1	03/25/2017 08:12
Benzene	---	0.0050	1	03/25/2017 08:12
Toluene	---	0.0050	1	03/25/2017 08:12
Ethylbenzene	---	0.0050	1	03/25/2017 08:12
Xylenes	---	0.015	1	03/25/2017 08:12
Surrogates	REC (%)	Limits		
2-Fluorotoluene	92	62-126		03/25/2017 08:12

Analyst(s): IA

Analytical Comments: d1



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-15	1703B82-027A	Soil	03/21/2017 11:07	GC19	136115

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	78	5.0	5	03/27/2017 18:34
MTBE	---	0.25	5	03/27/2017 18:34
Benzene	---	0.025	5	03/27/2017 18:34
Toluene	---	0.025	5	03/27/2017 18:34
Ethylbenzene	---	0.025	5	03/27/2017 18:34
Xylenes	---	0.075	5	03/27/2017 18:34

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
2-Fluorotoluene	139	S	62-126	03/27/2017 18:34

Analyst(s): IA

Analytical Comments: d1,c4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-19	1703B82-028A	Soil	03/21/2017 11:11	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/26/2017 17:49
MTBE	---	0.050	1	03/26/2017 17:49
Benzene	---	0.0050	1	03/26/2017 17:49
Toluene	---	0.0050	1	03/26/2017 17:49
Ethylbenzene	---	0.0050	1	03/26/2017 17:49
Xylenes	---	0.015	1	03/26/2017 17:49

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	84	62-126	03/26/2017 17:49

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-5	1703B82-029A	Soil	03/21/2017 11:21	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/26/2017 22:54
MTBE	---	0.050	1	03/26/2017 22:54
Benzene	---	0.0050	1	03/26/2017 22:54
Toluene	---	0.0050	1	03/26/2017 22:54
Ethylbenzene	---	0.0050	1	03/26/2017 22:54
Xylenes	---	0.015	1	03/26/2017 22:54

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	84	62-126	03/26/2017 22:54

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-10	1703B82-030A	Soil	03/21/2017 11:23	GC19	136237

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/28/2017 00:11
MTBE	---	0.050	1	03/28/2017 00:11
Benzene	---	0.0050	1	03/28/2017 00:11
Toluene	---	0.0050	1	03/28/2017 00:11
Ethylbenzene	---	0.0050	1	03/28/2017 00:11
Xylenes	---	0.015	1	03/28/2017 00:11

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	88	62-126	03/28/2017 00:11

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-15	1703B82-031A	Soil	03/21/2017 11:25	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/26/2017 23:55
MTBE	---	0.050	1	03/26/2017 23:55
Benzene	---	0.0050	1	03/26/2017 23:55
Toluene	---	0.0050	1	03/26/2017 23:55
Ethylbenzene	---	0.0050	1	03/26/2017 23:55
Xylenes	---	0.015	1	03/26/2017 23:55
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	85	62-126		03/26/2017 23:55

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-20	1703B82-032A	Soil	03/21/2017 11:30	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/27/2017 00:25
MTBE	---	0.050	1	03/27/2017 00:25
Benzene	---	0.0050	1	03/27/2017 00:25
Toluene	---	0.0050	1	03/27/2017 00:25
Ethylbenzene	---	0.0050	1	03/27/2017 00:25
Xylenes	---	0.015	1	03/27/2017 00:25
<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>		
2-Fluorotoluene	83	62-126		03/27/2017 00:25

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-5	1703B82-033A	Soil	03/21/2017 11:39	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/27/2017 00:55
MTBE	---	0.050	1	03/27/2017 00:55
Benzene	---	0.0050	1	03/27/2017 00:55
Toluene	---	0.0050	1	03/27/2017 00:55
Ethylbenzene	---	0.0050	1	03/27/2017 00:55
Xylenes	---	0.015	1	03/27/2017 00:55

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	82	62-126	03/27/2017 00:55

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10	1703B82-034A	Soil	03/21/2017 11:41	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/27/2017 01:55
MTBE	---	0.050	1	03/27/2017 01:55
Benzene	---	0.0050	1	03/27/2017 01:55
Toluene	---	0.0050	1	03/27/2017 01:55
Ethylbenzene	---	0.0050	1	03/27/2017 01:55
Xylenes	---	0.015	1	03/27/2017 01:55

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	90	62-126	03/27/2017 01:55

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-15	1703B82-035A	Soil	03/21/2017 11:43	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/26/2017 20:22
MTBE	---	0.050	1	03/26/2017 20:22
Benzene	---	0.0050	1	03/26/2017 20:22
Toluene	---	0.0050	1	03/26/2017 20:22
Ethylbenzene	---	0.0050	1	03/26/2017 20:22
Xylenes	---	0.015	1	03/26/2017 20:22

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	88	62-126	03/26/2017 20:22

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-20	1703B82-036A	Soil	03/21/2017 11:47	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/27/2017 02:56
MTBE	---	0.050	1	03/27/2017 02:56
Benzene	---	0.0050	1	03/27/2017 02:56
Toluene	---	0.0050	1	03/27/2017 02:56
Ethylbenzene	---	0.0050	1	03/27/2017 02:56
Xylenes	---	0.015	1	03/27/2017 02:56

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	91	62-126	03/27/2017 02:56

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-8	1703B82-041A	Soil	03/21/2017 14:35	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	17	1.0	1	03/28/2017 01:11
MTBE	---	0.050	1	03/28/2017 01:11
Benzene	---	0.0050	1	03/28/2017 01:11
Toluene	---	0.0050	1	03/28/2017 01:11
Ethylbenzene	---	0.0050	1	03/28/2017 01:11
Xylenes	---	0.015	1	03/28/2017 01:11

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	92	62-126	03/28/2017 01:11

Analyst(s): IA

Analytical Comments: d7,d9

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-13	1703B82-042A	Soil	03/21/2017 15:11	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	7.7	1.0	1	03/28/2017 19:51
MTBE	---	0.050	1	03/28/2017 19:51
Benzene	---	0.0050	1	03/28/2017 19:51
Toluene	---	0.0050	1	03/28/2017 19:51
Ethylbenzene	---	0.0050	1	03/28/2017 19:51
Xylenes	---	0.015	1	03/28/2017 19:51

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	87	62-126	03/28/2017 19:51

Analyst(s): IA

Analytical Comments: d7,d9



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17-3/27/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-4	1703B82-043A	Soil	03/21/2017 15:29	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/27/2017 03:56
MTBE	---	0.050	1	03/27/2017 03:56
Benzene	---	0.0050	1	03/27/2017 03:56
Toluene	---	0.0050	1	03/27/2017 03:56
Ethylbenzene	---	0.0050	1	03/27/2017 03:56
Xylenes	---	0.015	1	03/27/2017 03:56

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	86	62-126	03/27/2017 03:56

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-8	1703B82-044A	Soil	03/21/2017 15:31	GC19	136116

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	1.0	1	03/27/2017 04:26
MTBE	---	0.050	1	03/27/2017 04:26
Benzene	---	0.0050	1	03/27/2017 04:26
Toluene	---	0.0050	1	03/27/2017 04:26
Ethylbenzene	---	0.0050	1	03/27/2017 04:26
Xylenes	---	0.015	1	03/27/2017 04:26

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	91	62-126	03/27/2017 04:26

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/25/17-3/29/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-W	1703B82-048A	Water	03/22/2017 08:24	GC12	136175

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	910	50	1	03/25/2017 00:39
MTBE	---	5.0	1	03/25/2017 00:39
Benzene	---	0.50	1	03/25/2017 00:39
Toluene	---	0.50	1	03/25/2017 00:39
Ethylbenzene	---	0.50	1	03/25/2017 00:39
Xylenes	---	1.5	1	03/25/2017 00:39

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
aaa-TFT	213	S	89-115	03/25/2017 00:39

Analyst(s): IA

Analytical Comments: d1,c4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-W	1703B82-049A	Water	03/22/2017 08:28	GC12	136175

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/25/2017 01:11
MTBE	---	5.0	1	03/25/2017 01:11
Benzene	---	0.50	1	03/25/2017 01:11
Toluene	---	0.50	1	03/25/2017 01:11
Ethylbenzene	---	0.50	1	03/25/2017 01:11
Xylenes	---	1.5	1	03/25/2017 01:11

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	110	89-115	03/25/2017 01:11

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/25/17-3/29/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-W	1703B82-050A	Water	03/22/2017 08:35	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	3700	500	10	03/26/2017 23:25
MTBE	---	50	10	03/26/2017 23:25
Benzene	---	5.0	10	03/26/2017 23:25
Toluene	---	5.0	10	03/26/2017 23:25
Ethylbenzene	---	5.0	10	03/26/2017 23:25
Xylenes	---	15	10	03/26/2017 23:25

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
aaa-TFT	148	S	89-115	03/26/2017 23:25

Analyst(s): IA

Analytical Comments: d1,c4,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-W	1703B82-051A	Water	03/22/2017 08:42	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	11,000	500	10	03/26/2017 23:54
MTBE	---	50	10	03/26/2017 23:54
Benzene	---	5.0	10	03/26/2017 23:54
Toluene	---	5.0	10	03/26/2017 23:54
Ethylbenzene	---	5.0	10	03/26/2017 23:54
Xylenes	---	15	10	03/26/2017 23:54

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
aaa-TFT	131	S	89-115	03/26/2017 23:54

Analyst(s): IA

Analytical Comments: d1,c4



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/25/17-3/29/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-W	1703B82-052A	Water	03/22/2017 08:46	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	660	170	3.3	03/27/2017 00:54
MTBE	---	17	3.3	03/27/2017 00:54
Benzene	---	1.7	3.3	03/27/2017 00:54
Toluene	---	1.7	3.3	03/27/2017 00:54
Ethylbenzene	---	1.7	3.3	03/27/2017 00:54
Xylenes	---	5.0	3.3	03/27/2017 00:54

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
aaa-TFT	128	S	89-115	03/27/2017 00:54

Analyst(s): IA

Analytical Comments: d1,c4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-W	1703B82-053A	Water	03/22/2017 08:50	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	11,000	250	5	03/27/2017 01:24
MTBE	---	25	5	03/27/2017 01:24
Benzene	---	2.5	5	03/27/2017 01:24
Toluene	---	2.5	5	03/27/2017 01:24
Ethylbenzene	---	2.5	5	03/27/2017 01:24
Xylenes	---	7.5	5	03/27/2017 01:24

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
aaa-TFT	135	S	89-115	03/27/2017 01:24

Analyst(s): IA

Analytical Comments: d1,c4



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/25/17-3/29/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-W	1703B82-054A	Water	03/22/2017 08:55	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	53	50	1	03/26/2017 14:49
MTBE	---	5.0	1	03/26/2017 14:49
Benzene	---	0.50	1	03/26/2017 14:49
Toluene	---	0.50	1	03/26/2017 14:49
Ethylbenzene	---	0.50	1	03/26/2017 14:49
Xylenes	---	1.5	1	03/26/2017 14:49

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	99	89-115	03/26/2017 14:49

Analyst(s): IA

Analytical Comments: d1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-W	1703B82-055A	Water	03/22/2017 09:00	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/26/2017 15:50
MTBE	---	5.0	1	03/26/2017 15:50
Benzene	---	0.50	1	03/26/2017 15:50
Toluene	---	0.50	1	03/26/2017 15:50
Ethylbenzene	---	0.50	1	03/26/2017 15:50
Xylenes	---	1.5	1	03/26/2017 15:50

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	100	89-115	03/26/2017 15:50

Analyst(s): IA



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/25/17-3/29/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-W	1703B82-056A	Water	03/22/2017 09:09	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/29/2017 08:00
MTBE	---	5.0	1	03/29/2017 08:00
Benzene	---	0.50	1	03/29/2017 08:00
Toluene	---	0.50	1	03/29/2017 08:00
Ethylbenzene	---	0.50	1	03/29/2017 08:00
Xylenes	---	1.5	1	03/29/2017 08:00

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	101	89-115	03/29/2017 08:00

Analyst(s): IA

Analytical Comments: b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-W	1703B82-057A	Water	03/22/2017 09:14	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/29/2017 08:31
MTBE	---	5.0	1	03/29/2017 08:31
Benzene	---	0.50	1	03/29/2017 08:31
Toluene	---	0.50	1	03/29/2017 08:31
Ethylbenzene	---	0.50	1	03/29/2017 08:31
Xylenes	---	1.5	1	03/29/2017 08:31

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	102	89-115	03/29/2017 08:31

Analyst(s): IA

Analytical Comments: b1



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/25/17-3/29/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-W	1703B82-058A	Water	03/22/2017 09:18	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/26/2017 17:22
MTBE	---	5.0	1	03/26/2017 17:22
Benzene	---	0.50	1	03/26/2017 17:22
Toluene	---	0.50	1	03/26/2017 17:22
Ethylbenzene	---	0.50	1	03/26/2017 17:22
Xylenes	---	1.5	1	03/26/2017 17:22

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	103	89-115	03/26/2017 17:22

Analyst(s): IA

Analytical Comments: b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-W	1703B82-059A	Water	03/22/2017 09:25	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	1100	100	2	03/27/2017 01:53
MTBE	---	45	2	03/27/2017 01:53
Benzene	---	1.0	2	03/27/2017 01:53
Toluene	---	1.0	2	03/27/2017 01:53
Ethylbenzene	---	1.0	2	03/27/2017 01:53
Xylenes	---	3.0	2	03/27/2017 01:53

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
aaa-TFT	250	S	89-115	03/27/2017 01:53

Analyst(s): IA

Analytical Comments: d1,d17,c4



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/25/17-3/29/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-W	1703B82-060A	Water	03/22/2017 09:32	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	1200	250	5	03/27/2017 02:23
MTBE	---	25	5	03/27/2017 02:23
Benzene	---	2.5	5	03/27/2017 02:23
Toluene	---	2.5	5	03/27/2017 02:23
Ethylbenzene	---	2.5	5	03/27/2017 02:23
Xylenes	---	7.5	5	03/27/2017 02:23

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	115	89-115	03/27/2017 02:23

Analyst(s): IA

Analytical Comments: d1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-101	1703B82-061A	Water	03/22/2017	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	17,000	500	10	03/27/2017 02:53
MTBE	---	50	10	03/27/2017 02:53
Benzene	---	5.0	10	03/27/2017 02:53
Toluene	---	5.0	10	03/27/2017 02:53
Ethylbenzene	---	5.0	10	03/27/2017 02:53
Xylenes	---	15	10	03/27/2017 02:53

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
aaa-TFT	183	S	89-115	03/27/2017 02:53

Analyst(s): IA

Analytical Comments: d1,d17,c4



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/25/17-3/29/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-102	1703B82-062A	Water	03/22/2017 12:42	GC12	136175

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	ND	50	1	03/25/2017 00:07
MTBE	---	5.0	1	03/25/2017 00:07
Benzene	---	0.50	1	03/25/2017 00:07
Toluene	---	0.50	1	03/25/2017 00:07
Ethylbenzene	---	0.50	1	03/25/2017 00:07
Xylenes	---	1.5	1	03/25/2017 00:07

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	109	89-115	03/25/2017 00:07

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-103	1703B82-063A	Water	03/22/2017 12:59	GC3	136224

Analytes	Result	RL	DF	Date Analyzed
TPH(g) (C6-C12)	3600	500	10	03/27/2017 04:51
MTBE	---	50	10	03/27/2017 04:51
Benzene	---	5.0	10	03/27/2017 04:51
Toluene	---	5.0	10	03/27/2017 04:51
Ethylbenzene	---	5.0	10	03/27/2017 04:51
Xylenes	---	15	10	03/27/2017 04:51

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
aaa-TFT	148	S	89-115	03/27/2017 04:51

Analyst(s): IA

Analytical Comments: d1,c4



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB1-3	1703B82-037A	Soil	03/21/2017 12:02	ICP-MS1	136093

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	03/27/2017 16:29
Chromium	47	0.50	1	03/27/2017 16:29
Lead	7.6	0.50	1	03/27/2017 16:29
Nickel	97	0.50	1	03/27/2017 16:29
Zinc	69	5.0	1	03/27/2017 16:29

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	111	70-130	03/27/2017 16:29

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB1-10	1703B82-038A	Soil	03/21/2017 12:06	ICP-MS3	136093

Analytes	Result	RL	DF	Date Analyzed
Cadmium	0.31	0.25	1	03/27/2017 19:27
Chromium	42	0.50	1	03/27/2017 19:27
Lead	6.5	0.50	1	03/27/2017 19:27
Nickel	43	0.50	1	03/27/2017 19:27
Zinc	59	5.0	1	03/27/2017 19:27

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	104	70-130	03/27/2017 19:27

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB2-3	1703B82-039A	Soil	03/21/2017 12:11	ICP-MS3	136093

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	03/27/2017 19:33
Chromium	52	0.50	1	03/27/2017 19:33
Lead	5.9	0.50	1	03/27/2017 19:33
Nickel	45	0.50	1	03/27/2017 19:33
Zinc	45	5.0	1	03/27/2017 19:33

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	107	70-130	03/27/2017 19:33

Analyst(s): DVH

(Cont.)



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB2-10	1703B82-040A	Soil	03/21/2017 12:13	ICP-MS3	136093

Analytes	Result	RL	DF	Date Analyzed
Cadmium	0.25	0.25	1	03/27/2017 19:40
Chromium	38	0.50	1	03/27/2017 19:40
Lead	5.9	0.50	1	03/27/2017 19:40
Nickel	55	0.50	1	03/27/2017 19:40
Zinc	60	5.0	1	03/27/2017 19:40

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	103	70-130	03/27/2017 19:40

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB4-3	1703B82-045A	Soil	03/21/2017 16:03	ICP-MS1	136093

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	03/27/2017 19:07
Chromium	48	0.50	1	03/27/2017 19:07
Lead	6.5	0.50	1	03/27/2017 19:07
Nickel	92	0.50	1	03/27/2017 19:07
Zinc	52	5.0	1	03/27/2017 19:07

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	106	70-130	03/27/2017 19:07

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB4-10	1703B82-046A	Soil	03/21/2017 16:05	ICP-MS1	136093

Analytes	Result	RL	DF	Date Analyzed
Cadmium	0.30	0.25	1	03/27/2017 19:13
Chromium	53	0.50	1	03/27/2017 19:13
Lead	6.6	0.50	1	03/27/2017 19:13
Nickel	48	0.50	1	03/27/2017 19:13
Zinc	68	5.0	1	03/27/2017 19:13

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	106	70-130	03/27/2017 19:13

Analyst(s): DVH

(Cont.)



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
WB3-3	1703B82-047A	Soil	03/22/2017 14:39	ICP-MS1	136093

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	03/27/2017 15:45
Chromium	45	0.50	1	03/27/2017 15:45
Lead	8.3	0.50	1	03/27/2017 15:45
Nickel	31	0.50	1	03/27/2017 15:45
Zinc	46	5.0	1	03/27/2017 15:45

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	111	70-130	03/27/2017 15:45

Analyst(s): DVH



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-5	1703B82-001A	Soil	03/21/2017 09:05	GC9b	136085

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/24/2017 21:33
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/24/2017 21:33

Surrogates	REC (%)	Limits	Date Analyzed
C9	99	78-109	03/24/2017 21:33

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-10	1703B82-002A	Soil	03/21/2017 09:09	GC9b	136085

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/24/2017 22:51
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/24/2017 22:51

Surrogates	REC (%)	Limits	Date Analyzed
C9	99	78-109	03/24/2017 22:51

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-15	1703B82-003A	Soil	03/21/2017 09:13	GC9b	136085

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 00:08
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 00:08

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/25/2017 00:08

Analyst(s): TK

(Cont.)



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-20	1703B82-004A	Soil	03/21/2017 09:16	GC9b	136085

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 01:26
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 01:26
Surrogates	REC (%)	Limits		
C9	99	78-109		03/25/2017 01:26

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-5	1703B82-005A	Soil	03/21/2017 09:25	GC9b	136085

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 02:44
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 02:44
Surrogates	REC (%)	Limits		
C9	100	78-109		03/25/2017 02:44

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-10	1703B82-006A	Soil	03/21/2017 09:27	GC9b	136085

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/27/2017 14:17
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/27/2017 14:17
Surrogates	REC (%)	Limits		
C9	100	78-109		03/27/2017 14:17

Analyst(s): TK

(Cont.)



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-15	1703B82-007A	Soil	03/21/2017 09:30	GC9b	136085

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 04:01
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 04:01

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/25/2017 04:01

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-20	1703B82-008A	Soil	03/21/2017 09:32	GC9b	136085

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 05:19
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 05:19

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/25/2017 05:19

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-5	1703B82-009A	Soil	03/21/2017 09:52	GC9b	136085

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1.1	1.0	1	03/25/2017 06:37
TPH-Motor Oil (C18-C36)	6.9	5.0	1	03/25/2017 06:37

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/25/2017 06:37

Analyst(s): TK

Analytical Comments: e7,e2



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-9	1703B82-010A	Soil	03/21/2017 09:55	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	54	1.0	1	03/27/2017 12:59
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/27/2017 12:59

Surrogates	REC (%)	Limits	Date Analyzed
C9	101	78-109	03/27/2017 12:59

Analyst(s): TK **Analytical Comments:** e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-15	1703B82-011A	Soil	03/21/2017 09:57	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2.0	1.0	1	03/25/2017 09:12
TPH-Motor Oil (C18-C36)	6.3	5.0	1	03/25/2017 09:12

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/25/2017 09:12

Analyst(s): TK **Analytical Comments:** e7,e2,e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-19	1703B82-012A	Soil	03/21/2017 10:01	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 10:29
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 10:29

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/25/2017 10:29

Analyst(s): TK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-5	1703B82-013A	Soil	03/21/2017 10:12	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 11:47
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 11:47

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/25/2017 11:47

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-10	1703B82-014A	Soil	03/21/2017 10:14	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	450	1.0	1	03/25/2017 13:05
TPH-Motor Oil (C18-C36)	9.8	5.0	1	03/25/2017 13:05

Surrogates	REC (%)	Limits	Date Analyzed
C26	97	70-130	03/25/2017 13:05

Analyst(s): TK

Analytical Comments: e4,e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-15	1703B82-015A	Soil	03/21/2017 10:17	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 14:23
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 14:23

Surrogates	REC (%)	Limits	Date Analyzed
C9	101	78-109	03/25/2017 14:23

Analyst(s): TK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-20	1703B82-016A	Soil	03/21/2017 10:20	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 15:40
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 15:40

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/25/2017 15:40

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-5	1703B82-017A	Soil	03/21/2017 10:26	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2.2	1.0	1	03/25/2017 16:58
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 16:58

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/25/2017 16:58

Analyst(s): TK

Analytical Comments: e11/e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-10	1703B82-018A	Soil	03/21/2017 10:29	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	220	1.0	1	03/27/2017 13:38
TPH-Motor Oil (C18-C36)	7.3	5.0	1	03/27/2017 13:38

Surrogates	REC (%)	Limits	Date Analyzed
C26	102	70-130	03/27/2017 13:38

Analyst(s): TK

Analytical Comments: e4,e2



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-15	1703B82-019A	Soil	03/21/2017 10:31	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 18:16
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 18:16

Surrogates	REC (%)	Limits	Date Analyzed
C9	102	78-109	03/25/2017 18:16

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-20	1703B82-020A	Soil	03/21/2017 10:33	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 20:51
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 20:51

Surrogates	REC (%)	Limits	Date Analyzed
C9	101	78-109	03/25/2017 20:51

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-5	1703B82-021A	Soil	03/21/2017 10:45	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	3.8	1.0	1	03/25/2017 22:09
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 22:09

Surrogates	REC (%)	Limits	Date Analyzed
C9	102	78-109	03/25/2017 22:09

Analyst(s): TK

Analytical Comments: e11/e4



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-10	1703B82-022A	Soil	03/21/2017 10:48	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 23:26
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 23:26

Surrogates	REC (%)	Limits	Date Analyzed
C9	101	78-109	03/25/2017 23:26

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-15	1703B82-023A	Soil	03/21/2017 10:51	GC9b	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/26/2017 00:44
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/26/2017 00:44

Surrogates	REC (%)	Limits	Date Analyzed
C9	101	78-109	03/26/2017 00:44

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-20	1703B82-024A	Soil	03/21/2017 10:53	GC9a	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/26/2017 16:16
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/26/2017 16:16

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/26/2017 16:16

Analyst(s): TK

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-5	1703B82-025A	Soil	03/21/2017 11:02	GC9a	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	4.3	1.0	1	03/26/2017 17:34
TPH-Motor Oil (C18-C36)	36	5.0	1	03/26/2017 17:34

Surrogates	REC (%)	Limits	Date Analyzed
C9	101	78-109	03/26/2017 17:34

Analyst(s): TK Analytical Comments: e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-10	1703B82-026A	Soil	03/21/2017 11:05	GC9a	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/26/2017 19:30
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/26/2017 19:30

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/26/2017 19:30

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-15	1703B82-027A	Soil	03/21/2017 11:07	GC9a	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	3.0	1.0	1	03/26/2017 20:48
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/26/2017 20:48

Surrogates	REC (%)	Limits	Date Analyzed
C9	103	78-109	03/26/2017 20:48

Analyst(s): TK Analytical Comments: e4/e11



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-19	1703B82-028A	Soil	03/21/2017 11:11	GC6A	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 07:38
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 07:38

Surrogates	REC (%)	Limits	Date Analyzed
C9	94	78-109	03/25/2017 07:38

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-5	1703B82-029A	Soil	03/21/2017 11:21	GC9a	136113

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/26/2017 22:06
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/26/2017 22:06

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/26/2017 22:06

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-10	1703B82-030A	Soil	03/21/2017 11:23	GC11A	136114

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 15:30
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 15:30

Surrogates	REC (%)	Limits	Date Analyzed
C9	104	78-109	03/25/2017 15:30

Analyst(s): TK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-15	1703B82-031A	Soil	03/21/2017 11:25	GC6B	136114

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 19:56
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 19:56

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	87	78-109	03/25/2017 19:56

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-20	1703B82-032A	Soil	03/21/2017 11:30	GC6B	136114

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 20:34
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 20:34

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	85	78-109	03/25/2017 20:34

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-5	1703B82-033A	Soil	03/21/2017 11:39	GC6A	136114

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 21:13
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 21:13

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
C9	95	78-109	03/25/2017 21:13

Analyst(s): TK

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-10	1703B82-034A	Soil	03/21/2017 11:41	GC6A	136114

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 22:31
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 22:31

Surrogates	REC (%)	Limits	Date Analyzed
C9	94	78-109	03/25/2017 22:31

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-15	1703B82-035A	Soil	03/21/2017 11:43	GC11A	136114

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 14:11
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 14:11

Surrogates	REC (%)	Limits	Date Analyzed
C9	101	78-109	03/25/2017 14:11

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-20	1703B82-036A	Soil	03/21/2017 11:47	GC9b	136114

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/27/2017 12:20
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/27/2017 12:20

Surrogates	REC (%)	Limits	Date Analyzed
C9	100	78-109	03/27/2017 12:20

Analyst(s): TK

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-8	1703B82-041A	Soil	03/21/2017 14:35	GC9b	136114

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1.5	1.0	1	03/27/2017 14:56
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/27/2017 14:56

Surrogates	REC (%)	Limits	Date Analyzed
C9	101	78-109	03/27/2017 14:56

Analyst(s): TK **Analytical Comments:** e11/e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-13	1703B82-042A	Soil	03/21/2017 15:11	GC6A	136114

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1.8	1.0	1	03/25/2017 10:52
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 10:52

Surrogates	REC (%)	Limits	Date Analyzed
C9	98	78-109	03/25/2017 10:52

Analyst(s): TK **Analytical Comments:** e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-4	1703B82-043A	Soil	03/21/2017 15:29	GC6A	136114

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/25/2017 19:56
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/25/2017 19:56

Surrogates	REC (%)	Limits	Date Analyzed
C9	97	78-109	03/25/2017 19:56

Analyst(s): TK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-8	1703B82-044A	Soil	03/21/2017 15:31	GC9a	136114

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	03/26/2017 14:58
TPH-Motor Oil (C18-C36)	ND	5.0	1	03/26/2017 14:58

Surrogates	REC (%)	Limits	Date Analyzed
C9	102	78-109	03/26/2017 14:58

Analyst(s): TK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B13-W	1703B82-048A	Water	03/22/2017 08:24	GC11A	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	320	50	1	03/24/2017 15:25
TPH-Motor Oil (C18-C36)	ND	250	1	03/24/2017 15:25

Surrogates	REC (%)	Limits	Date Analyzed
C9	99	66-138	03/24/2017 15:25

Analyst(s): TK **Analytical Comments:** e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B8-W	1703B82-049A	Water	03/22/2017 08:28	GC11B	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	03/24/2017 23:14
TPH-Motor Oil (C18-C36)	ND	250	1	03/24/2017 23:14

Surrogates	REC (%)	Limits	Date Analyzed
C9	88	66-138	03/24/2017 23:14

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B9-W	1703B82-050A	Water	03/22/2017 08:35	GC11B	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	4000	50	1	03/24/2017 23:53
TPH-Motor Oil (C18-C36)	310	250	1	03/24/2017 23:53

Surrogates	REC (%)	Limits	Date Analyzed
C9	99	66-138	03/24/2017 23:53

Analyst(s): TK **Analytical Comments:** e4/e11,e7,e2,b1

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Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B12-W	1703B82-051A	Water	03/22/2017 08:42	GC11B	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2700	50	1	03/25/2017 00:32
TPH-Motor Oil (C18-C36)	ND	250	1	03/25/2017 00:32

Surrogates	REC (%)	Limits	Date Analyzed
C9	96	66-138	03/25/2017 00:32

Analyst(s): TK **Analytical Comments:** e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B16-W	1703B82-052A	Water	03/22/2017 08:46	GC11B	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	330	50	1	03/25/2017 01:11
TPH-Motor Oil (C18-C36)	ND	250	1	03/25/2017 01:11

Surrogates	REC (%)	Limits	Date Analyzed
C9	92	66-138	03/25/2017 01:11

Analyst(s): TK **Analytical Comments:** e4,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B15-W	1703B82-053A	Water	03/22/2017 08:50	GC11B	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2400	50	1	03/24/2017 11:32
TPH-Motor Oil (C18-C36)	ND	250	1	03/24/2017 11:32

Surrogates	REC (%)	Limits	Date Analyzed
C9	93	66-138	03/24/2017 11:32

Analyst(s): TK **Analytical Comments:** e4



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B11-W	1703B82-054A	Water	03/22/2017 08:55	GC11B	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	69	50	1	03/25/2017 01:50
TPH-Motor Oil (C18-C36)	ND	250	1	03/25/2017 01:50

Surrogates	REC (%)	Limits	Date Analyzed
C9	92	66-138	03/25/2017 01:50

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B10-W	1703B82-055A	Water	03/22/2017 09:00	GC11B	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	03/25/2017 02:29
TPH-Motor Oil (C18-C36)	ND	250	1	03/25/2017 02:29

Surrogates	REC (%)	Limits	Date Analyzed
C9	90	66-138	03/25/2017 02:29

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B17-W	1703B82-056A	Water	03/22/2017 09:09	GC11B	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	150	1	03/24/2017 15:25
TPH-Motor Oil (C18-C36)	1100	750	1	03/24/2017 15:25

Surrogates	REC (%)	Limits	Date Analyzed
C9	92	66-138	03/24/2017 15:25

Analyst(s): TK

Analytical Comments: e7,a3,b1



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B18-W	1703B82-057A	Water	03/22/2017 09:14	GC11B	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	150	1	03/24/2017 16:43
TPH-Motor Oil (C18-C36)	ND	750	1	03/24/2017 16:43

Surrogates	REC (%)	Limits	Date Analyzed
C9	93	66-138	03/24/2017 16:43

Analyst(s): TK **Analytical Comments:** a3,b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B19-W	1703B82-058A	Water	03/22/2017 09:18	GC11B	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	03/25/2017 03:08
TPH-Motor Oil (C18-C36)	ND	250	1	03/25/2017 03:08

Surrogates	REC (%)	Limits	Date Analyzed
C9	91	66-138	03/25/2017 03:08

Analyst(s): TK **Analytical Comments:** b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B20-W	1703B82-059A	Water	03/22/2017 09:25	GC11B	136045

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	610	50	1	03/25/2017 03:47
TPH-Motor Oil (C18-C36)	ND	250	1	03/25/2017 03:47

Surrogates	REC (%)	Limits	Date Analyzed
C9	85	66-138	03/25/2017 03:47

Analyst(s): TK **Analytical Comments:** e4



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B14-W	1703B82-060A	Water	03/22/2017 09:32	GC11B	136117

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	470	50	1	03/25/2017 04:26
TPH-Motor Oil (C18-C36)	ND	250	1	03/25/2017 04:26

Surrogates	REC (%)	Limits	Date Analyzed
C9	106	66-138	03/25/2017 04:26

Analyst(s): TK **Analytical Comments:** e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-101	1703B82-061A	Water	03/22/2017	GC11B	136117

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	3300	50	1	03/24/2017 19:20
TPH-Motor Oil (C18-C36)	ND	250	1	03/24/2017 19:20

Surrogates	REC (%)	Limits	Date Analyzed
C9	101	66-138	03/24/2017 19:20

Analyst(s): TK **Analytical Comments:** e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-102	1703B82-062A	Water	03/22/2017 12:42	GC11B	136117

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	50	1	03/24/2017 19:59
TPH-Motor Oil (C18-C36)	ND	250	1	03/24/2017 19:59

Surrogates	REC (%)	Limits	Date Analyzed
C9	90	66-138	03/24/2017 19:59

Analyst(s): TK



Analytical Report

Client: West & Associates
Date Received: 3/23/17 15:15
Date Prepared: 3/23/17
Project: Automasters

WorkOrder: 1703B82
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
MW-103	1703B82-063A	Water	03/22/2017 12:59	GC11B	136117

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	840	50	1	03/24/2017 20:38
TPH-Motor Oil (C18-C36)	ND	250	1	03/24/2017 20:38

Surrogates	REC (%)	Limits	Date Analyzed
C9	90	66-138	03/24/2017 20:38

Analyst(s): TK **Analytical Comments:** e4



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/24/17
Instrument: GC10, GC18
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136105
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136105
 1703B90-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0375	0.0050	0.050	-	75	53-116
Benzene	ND	0.0476	0.0050	0.050	-	95	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.132	0.050	0.20	-	66	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0476	0.0050	0.050	-	95	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0420	0.0040	0.050	-	84	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0434	0.0040	0.050	-	87	58-135
1,1-Dichloroethene	ND	0.0457	0.0050	0.050	-	91	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/24/17
Instrument: GC10, GC18
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136105
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136105
 1703B90-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0435	0.0050	0.050	-	87	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0422	0.0050	0.050	-	84	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0407	0.0050	0.050	-	81	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0497	0.0050	0.050	-	99	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0486	0.0050	0.050	-	97	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/24/17
Instrument: GC10, GC18
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136105
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136105
 1703B90-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.105	0.123		0.12	84	99	70-130
Toluene-d8	0.1439	0.135		0.12	115	108	70-130
4-BFB	0.01153	0.0132		0.012	92	106	70-130
Benzene-d6	0.08135	0.0864		0.10	81	86	60-140
Ethylbenzene-d10	0.1081	0.102		0.10	108	102	60-140
1,2-DCB-d4	0.0796	0.0821		0.10	80	82	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0417	0.0400	0.050	ND	83	80	53-116	4.20	20
Benzene	0.0467	0.0450	0.050	ND	93	90	63-137	3.62	20
t-Butyl alcohol (TBA)	0.173	0.167	0.20	ND	87	83	41-135	3.93	20
Chlorobenzene	0.0459	0.0445	0.050	ND	92	89	77-121	3.08	20
1,2-Dibromoethane (EDB)	0.0432	0.0409	0.050	ND	86	82	67-119	5.26	20
1,2-Dichloroethane (1,2-DCA)	0.0476	0.0454	0.050	ND	95	91	58-135	4.66	20
1,1-Dichloroethene	0.0438	0.0433	0.050	ND	88	87	42-145	1.26	20
Diisopropyl ether (DIPE)	0.0462	0.0446	0.050	ND	92	89	52-129	3.69	20
Ethyl tert-butyl ether (ETBE)	0.0461	0.0443	0.050	ND	92	89	53-125	3.96	20
Methyl-t-butyl ether (MTBE)	0.0448	0.0430	0.050	ND	90	86	58-122	4.30	20
Toluene	0.0527	0.0515	0.050	ND	105	103	76-130	2.25	20
Trichloroethene	0.0462	0.0457	0.050	ND	92	91	72-132	1.05	20

Surrogate Recovery									
Dibromofluoromethane	0.117	0.118	0.12		93	94	70-130	0.625	20
Toluene-d8	0.138	0.139	0.12		110	111	70-130	0.996	20
4-BFB	0.0136	0.0135	0.012		109	108	70-130	1.01	20
Benzene-d6	0.0839	0.0820	0.10		84	82	60-140	2.30	20
Ethylbenzene-d10	0.107	0.106	0.10		107	106	60-140	1.22	20
1,2-DCB-d4	0.0795	0.0774	0.10		79	77	60-140	2.62	20



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/25/17
Instrument: GC18, GC28
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136111
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136111
 1703B82-043AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0359	0.0050	0.050	-	72	53-116
Benzene	ND	0.0440	0.0050	0.050	-	88	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.152	0.050	0.20	-	76	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0431	0.0050	0.050	-	86	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0385	0.0040	0.050	-	77	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0366	0.0040	0.050	-	73	58-135
1,1-Dichloroethene	ND	0.0444	0.0050	0.050	-	89	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/25/17
Instrument: GC18, GC28
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136111
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136111
 1703B82-043AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0424	0.0050	0.050	-	85	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0368	0.0050	0.050	-	74	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0417	0.0050	0.050	-	83	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0454	0.0050	0.050	-	91	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0403	0.0050	0.050	-	81	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/25/17
Instrument: GC18, GC28
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136111
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136111
 1703B82-043AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.1199	0.122		0.12	96	97	70-130
Toluene-d8	0.142	0.138		0.12	114	110	70-130
4-BFB	0.01073	0.0117		0.012	86	94	70-130
Benzene-d6	0.09966	0.0952		0.10	100	95	60-140
Ethylbenzene-d10	0.1256	0.118		0.10	126	118	60-140
1,2-DCB-d4	0.08564	0.0855		0.10	86	85	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0378	0.0386	0.050	ND	76	77	53-116	2.07	20
Benzene	0.0466	0.0472	0.050	ND	93	94	63-137	1.21	20
t-Butyl alcohol (TBA)	0.137	0.133	0.20	ND	69	67	41-135	2.85	20
Chlorobenzene	0.0480	0.0486	0.050	ND	96	97	77-121	1.34	20
1,2-Dibromoethane (EDB)	0.0433	0.0442	0.050	ND	87	88	67-119	1.89	20
1,2-Dichloroethane (1,2-DCA)	0.0427	0.0431	0.050	ND	85	86	58-135	0.854	20
1,1-Dichloroethene	0.0449	0.0452	0.050	ND	90	90	42-145	0	20
Diisopropyl ether (DIPE)	0.0424	0.0430	0.050	ND	85	86	52-129	1.57	20
Ethyl tert-butyl ether (ETBE)	0.0417	0.0424	0.050	ND	83	85	53-125	1.70	20
Methyl-t-butyl ether (MTBE)	0.0402	0.0410	0.050	ND	80	82	58-122	1.84	20
Toluene	0.0487	0.0500	0.050	ND	97	100	76-130	2.59	20
Trichloroethene	0.0501	0.0511	0.050	ND	100	102	72-132	1.95	20
Surrogate Recovery									
Dibromofluoromethane	0.123	0.123	0.12		99	98	70-130	0.569	20
Toluene-d8	0.133	0.135	0.12		106	108	70-130	2.03	20
4-BFB	0.0131	0.0128	0.012		105	102	70-130	2.69	20
Benzene-d6	0.0871	0.0883	0.10		87	88	60-140	1.41	20
Ethylbenzene-d10	0.101	0.103	0.10		101	103	60-140	2.10	20
1,2-DCB-d4	0.0831	0.0855	0.10		83	86	60-140	2.80	20



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/24/17 - 3/27/17
Instrument: GC18
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136112
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136112
 1703B82-044AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0388	0.0050	0.050	-	78	53-116
Benzene	ND	0.0474	0.0050	0.050	-	95	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.138	0.050	0.20	-	69	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0487	0.0050	0.050	-	97	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0442	0.0040	0.050	-	88	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0442	0.0040	0.050	-	88	58-135
1,1-Dichloroethene	ND	0.0449	0.0050	0.050	-	90	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/24/17 - 3/27/17
Instrument: GC18
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136112
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136112
 1703B82-044AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0447	0.0050	0.050	-	89	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0434	0.0050	0.050	-	87	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0420	0.0050	0.050	-	84	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0497	0.0050	0.050	-	99	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0480	0.0050	0.050	-	96	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/24/17 - 3/27/17
Instrument: GC18
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136112
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136112
 1703B82-044AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.1211	0.122		0.12	97	98	70-130
Toluene-d8	0.1343	0.135		0.12	107	108	70-130
4-BFB	0.0129	0.0130		0.012	103	104	70-130
Benzene-d6	0.09304	0.0899		0.10	93	90	60-140
Ethylbenzene-d10	0.1085	0.105		0.10	108	105	60-140
1,2-DCB-d4	0.07876	0.0859		0.10	79	86	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0407	0.0415	0.050	ND	81	83	53-116	2.03	20
Benzene	0.0495	0.0498	0.050	ND	99	100	63-137	0.496	20
t-Butyl alcohol (TBA)	0.151	0.164	0.20	ND	76	82	41-135	7.76	20
Chlorobenzene	0.0490	0.0498	0.050	ND	98	100	77-121	1.61	20
1,2-Dibromoethane (EDB)	0.0444	0.0451	0.050	ND	89	90	67-119	1.50	20
1,2-Dichloroethane (1,2-DCA)	0.0451	0.0454	0.050	ND	90	91	58-135	0.513	20
1,1-Dichloroethene	0.0479	0.0480	0.050	ND	96	96	42-145	0	20
Diisopropyl ether (DIPE)	0.0451	0.0454	0.050	ND	90	91	52-129	0.760	20
Ethyl tert-butyl ether (ETBE)	0.0445	0.0451	0.050	ND	89	90	53-125	1.43	20
Methyl-t-butyl ether (MTBE)	0.0437	0.0443	0.050	ND	87	89	58-122	1.24	20
Toluene	0.0502	0.0510	0.050	ND	100	102	76-130	1.49	20
Trichloroethene	0.0524	0.0538	0.050	ND	105	108	72-132	2.79	20

Surrogate Recovery									
Dibromofluoromethane	0.126	0.126	0.12		101	101	70-130	0	20
Toluene-d8	0.131	0.133	0.12		105	106	70-130	1.20	20
4-BFB	0.0129	0.0128	0.012		103	103	70-130	0	20
Benzene-d6	0.0917	0.0892	0.10		92	89	60-140	2.79	20
Ethylbenzene-d10	0.102	0.101	0.10		102	101	60-140	0.465	20
1,2-DCB-d4	0.0837	0.0828	0.10		84	83	60-140	1.09	20



Quality Control Report

Client: West & Associates
Date Prepared: 3/30/17
Date Analyzed: 3/30/17 - 3/31/17
Instrument: GC10, GC18
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136485
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136485
 1703F72-019AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0341	0.0050	0.050	-	68	53-116
Benzene	ND	0.0428	0.0050	0.050	-	86	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.133	0.050	0.20	-	66	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0423	0.0050	0.050	-	85	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0388	0.0040	0.050	-	78	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0403	0.0040	0.050	-	81	58-135
1,1-Dichloroethene	ND	0.0442	0.0050	0.050	-	88	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-



Quality Control Report

Client: West & Associates
Date Prepared: 3/30/17
Date Analyzed: 3/30/17 - 3/31/17
Instrument: GC10, GC18
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136485
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136485
 1703F72-019AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0407	0.0050	0.050	-	81	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0395	0.0050	0.050	-	79	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0381	0.0050	0.050	-	76	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0461	0.0050	0.050	-	92	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0436	0.0050	0.050	-	87	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-



Quality Control Report

Client: West & Associates
Date Prepared: 3/30/17
Date Analyzed: 3/30/17 - 3/31/17
Instrument: GC10, GC18
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136485
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: mg/kg
Sample ID: MB/LCS-136485
 1703F72-019AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.104	0.109		0.12	83	87	70-130
Toluene-d8	0.1335	0.134		0.12	107	107	70-130
4-BFB	0.01012	0.0102		0.012	81	82	70-130
Benzene-d6	0.07858	0.0856		0.10	79	86	60-140
Ethylbenzene-d10	0.107	0.111		0.10	107	111	60-140
1,2-DCB-d4	0.07664	0.0785		0.10	77	79	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0344	0.0346	0.050	ND	69	69	53-116	0	20
Benzene	0.0408	0.0415	0.050	ND	82	83	63-137	1.86	20
t-Butyl alcohol (TBA)	0.126	0.130	0.20	ND	63	65	41-135	2.60	20
Chlorobenzene	0.0401	0.0406	0.050	ND	80	81	77-121	1.20	20
1,2-Dibromoethane (EDB)	0.0380	0.0381	0.050	ND	76	76	67-119	0	20
1,2-Dichloroethane (1,2-DCA)	0.0374	0.0384	0.050	ND	75	77	58-135	2.52	20
1,1-Dichloroethene	0.0419	0.0430	0.050	ND	84	86	42-145	2.51	20
Diisopropyl ether (DIPE)	0.0394	0.0401	0.050	ND	79	80	52-129	1.61	20
Ethyl tert-butyl ether (ETBE)	0.0378	0.0383	0.050	ND	76	77	53-125	1.42	20
Methyl-t-butyl ether (MTBE)	0.0360	0.0365	0.050	ND	72	73	58-122	1.37	20
Toluene	0.0429	0.0436	0.050	ND	86	87	76-130	1.75	20
Trichloroethene	0.0420	0.0430	0.050	ND	84	86	72-132	2.36	20

Surrogate Recovery									
Dibromofluoromethane	0.108	0.108	0.12		87	86	70-130	0.491	20
Toluene-d8	0.133	0.133	0.12		107	106	70-130	0.252	20
4-BFB	0.00990	0.00980	0.012		79	78	70-130	0.992	20
Benzene-d6	0.0832	0.0847	0.10		83	85	60-140	1.68	20
Ethylbenzene-d10	0.112	0.112	0.10		112	112	60-140	0	20
1,2-DCB-d4	0.0772	0.0766	0.10		77	77	60-140	0	20



Quality Control Report

Client: West & Associates
Date Prepared: 3/24/17
Date Analyzed: 3/24/17
Instrument: GC16
Matrix: Water
Project: Automasters

WorkOrder: 1703B82
BatchID: 136217
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS/LCSD-136217

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Acetone	ND	10	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.50	-	-	-
Benzene	ND	0.50	-	-	-
Bromobenzene	ND	0.50	-	-	-
Bromochloromethane	ND	0.50	-	-	-
Bromodichloromethane	ND	0.50	-	-	-
Bromoform	ND	0.50	-	-	-
Bromomethane	ND	0.50	-	-	-
2-Butanone (MEK)	ND	2.0	-	-	-
t-Butyl alcohol (TBA)	ND	2.0	-	-	-
n-Butyl benzene	ND	0.50	-	-	-
sec-Butyl benzene	ND	0.50	-	-	-
tert-Butyl benzene	ND	0.50	-	-	-
Carbon Disulfide	ND	0.50	-	-	-
Carbon Tetrachloride	ND	0.50	-	-	-
Chlorobenzene	ND	0.50	-	-	-
Chloroethane	ND	0.50	-	-	-
Chloroform	ND	0.50	-	-	-
Chloromethane	ND	0.50	-	-	-
2-Chlorotoluene	ND	0.50	-	-	-
4-Chlorotoluene	ND	0.50	-	-	-
Dibromochloromethane	ND	0.50	-	-	-
1,2-Dibromo-3-chloropropane	ND	0.20	-	-	-
1,2-Dibromoethane (EDB)	ND	0.50	-	-	-
Dibromomethane	ND	0.50	-	-	-
1,2-Dichlorobenzene	ND	0.50	-	-	-
1,3-Dichlorobenzene	ND	0.50	-	-	-
1,4-Dichlorobenzene	ND	0.50	-	-	-
Dichlorodifluoromethane	ND	0.50	-	-	-
1,1-Dichloroethane	ND	0.50	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.50	-	-	-
1,1-Dichloroethene	ND	0.50	-	-	-
cis-1,2-Dichloroethene	ND	0.50	-	-	-
trans-1,2-Dichloroethene	ND	0.50	-	-	-
1,2-Dichloropropane	ND	0.50	-	-	-
1,3-Dichloropropane	ND	0.50	-	-	-
2,2-Dichloropropane	ND	0.50	-	-	-
1,1-Dichloropropene	ND	0.50	-	-	-
cis-1,3-Dichloropropene	ND	0.50	-	-	-

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NELAP 4033ORELAP

QA/QC Officer



Quality Control Report

Client: West & Associates
Date Prepared: 3/24/17
Date Analyzed: 3/24/17
Instrument: GC16
Matrix: Water
Project: Automasters

WorkOrder: 1703B82
BatchID: 136217
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS/LCSD-136217

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
trans-1,3-Dichloropropene	ND	0.50	-	-	-
Diisopropyl ether (DIPE)	ND	0.50	-	-	-
Ethylbenzene	ND	0.50	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.50	-	-	-
Freon 113	ND	0.50	-	-	-
Hexachlorobutadiene	ND	0.50	-	-	-
Hexachloroethane	ND	0.50	-	-	-
2-Hexanone	ND	0.50	-	-	-
Isopropylbenzene	ND	0.50	-	-	-
4-Isopropyl toluene	ND	0.50	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.50	-	-	-
Methylene chloride	ND	0.50	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	0.50	-	-	-
Naphthalene	ND	0.50	-	-	-
n-Propyl benzene	ND	0.50	-	-	-
Styrene	ND	0.50	-	-	-
1,1,1,2-Tetrachloroethane	ND	0.50	-	-	-
1,1,2,2-Tetrachloroethane	ND	0.50	-	-	-
Tetrachloroethene	ND	0.50	-	-	-
Toluene	ND	0.50	-	-	-
1,2,3-Trichlorobenzene	ND	0.50	-	-	-
1,2,4-Trichlorobenzene	ND	0.50	-	-	-
1,1,1-Trichloroethane	ND	0.50	-	-	-
1,1,2-Trichloroethane	ND	0.50	-	-	-
Trichloroethene	ND	0.50	-	-	-
Trichlorofluoromethane	ND	0.50	-	-	-
1,2,3-Trichloropropane	ND	0.50	-	-	-
1,2,4-Trimethylbenzene	ND	0.50	-	-	-
1,3,5-Trimethylbenzene	ND	0.50	-	-	-
Vinyl Chloride	ND	0.50	-	-	-
Xylenes, Total	ND	0.50	-	-	-

Surrogate Recovery

Dibromofluoromethane	22.52		25	90	70-130
Toluene-d8	23.91		25	96	70-130
4-BFB	2.714		2.5	109	70-130



Quality Control Report

Client: West & Associates
Date Prepared: 3/24/17
Date Analyzed: 3/24/17
Instrument: GC16
Matrix: Water
Project: Automasters

WorkOrder: 1703B82
BatchID: 136217
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS/LCSD-136217

QC Summary Report for SW8260B

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	8.91	9.87	10	89	99	54-140	10.3	20
Benzene	9.25	9.83	10	92	98	47-158	6.05	20
t-Butyl alcohol (TBA)	32.8	38.3	40	82	96	42-140	15.4	20
Chlorobenzene	8.69	9.33	10	87	93	43-157	7.14	20
1,2-Dibromoethane (EDB)	9.10	9.84	10	91	98	44-155	7.90	20
1,2-Dichloroethane (1,2-DCA)	8.73	9.46	10	87	95	66-125	8.09	20
1,1-Dichloroethene	9.00	9.62	10	90	96	47-149	6.68	20
Diisopropyl ether (DIPE)	9.46	10.2	10	95	102	57-136	7.19	20
Ethyl tert-butyl ether (ETBE)	9.23	10.1	10	92	101	55-137	8.78	20
Methyl-t-butyl ether (MTBE)	8.78	9.70	10	88	97	53-139	9.96	20
Toluene	9.00	9.47	10	90	95	52-137	5.03	20
Trichloroethene	8.69	9.41	10	87	94	43-157	7.89	20
Surrogate Recovery								
Dibromofluoromethane	22.5	22.2	25	90	89	70-130	1.63	20
Toluene-d8	24.4	24.2	25	97	97	70-130	0	20
4-BFB	2.59	2.44	2.5	104	98	70-130	5.82	20



Quality Control Report

Client: West & Associates
Date Prepared: 3/24/17
Date Analyzed: 3/24/17
Instrument: GC18
Matrix: Water
Project: Automasters

WorkOrder: 1703B82
BatchID: 136218
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-136218
 1703B82-062BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
Acetone	ND	10	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.50	-	-	-
Benzene	ND	0.50	-	-	-
Bromobenzene	ND	0.50	-	-	-
Bromochloromethane	ND	0.50	-	-	-
Bromodichloromethane	ND	0.50	-	-	-
Bromoform	ND	0.50	-	-	-
Bromomethane	ND	0.50	-	-	-
2-Butanone (MEK)	ND	2.0	-	-	-
t-Butyl alcohol (TBA)	ND	2.0	-	-	-
n-Butyl benzene	ND	0.50	-	-	-
sec-Butyl benzene	ND	0.50	-	-	-
tert-Butyl benzene	ND	0.50	-	-	-
Carbon Disulfide	ND	0.50	-	-	-
Carbon Tetrachloride	ND	0.50	-	-	-
Chlorobenzene	ND	0.50	-	-	-
Chloroethane	ND	0.50	-	-	-
Chloroform	ND	0.50	-	-	-
Chloromethane	ND	0.50	-	-	-
2-Chlorotoluene	ND	0.50	-	-	-
4-Chlorotoluene	ND	0.50	-	-	-
Dibromochloromethane	ND	0.50	-	-	-
1,2-Dibromo-3-chloropropane	ND	0.20	-	-	-
1,2-Dibromoethane (EDB)	ND	0.50	-	-	-
Dibromomethane	ND	0.50	-	-	-
1,2-Dichlorobenzene	ND	0.50	-	-	-
1,3-Dichlorobenzene	ND	0.50	-	-	-
1,4-Dichlorobenzene	ND	0.50	-	-	-
Dichlorodifluoromethane	ND	0.50	-	-	-
1,1-Dichloroethane	ND	0.50	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.50	-	-	-
1,1-Dichloroethene	ND	0.50	-	-	-
cis-1,2-Dichloroethene	ND	0.50	-	-	-
trans-1,2-Dichloroethene	ND	0.50	-	-	-
1,2-Dichloropropane	ND	0.50	-	-	-
1,3-Dichloropropane	ND	0.50	-	-	-
2,2-Dichloropropane	ND	0.50	-	-	-
1,1-Dichloropropene	ND	0.50	-	-	-
cis-1,3-Dichloropropene	ND	0.50	-	-	-

(Cont.)

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 QA/QC Officer



Quality Control Report

Client: West & Associates
Date Prepared: 3/24/17
Date Analyzed: 3/24/17
Instrument: GC18
Matrix: Water
Project: Automasters

WorkOrder: 1703B82
BatchID: 136218
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-136218
 1703B82-062BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
trans-1,3-Dichloropropene	ND	0.50	-	-	-
Diisopropyl ether (DIPE)	ND	0.50	-	-	-
Ethylbenzene	ND	0.50	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.50	-	-	-
Freon 113	ND	0.50	-	-	-
Hexachlorobutadiene	ND	0.50	-	-	-
Hexachloroethane	ND	0.50	-	-	-
2-Hexanone	ND	0.50	-	-	-
Isopropylbenzene	ND	0.50	-	-	-
4-Isopropyl toluene	ND	0.50	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.50	-	-	-
Methylene chloride	ND	0.50	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	0.50	-	-	-
Naphthalene	ND	0.50	-	-	-
n-Propyl benzene	ND	0.50	-	-	-
Styrene	ND	0.50	-	-	-
1,1,1,2-Tetrachloroethane	ND	0.50	-	-	-
1,1,2,2-Tetrachloroethane	ND	0.50	-	-	-
Tetrachloroethene	ND	0.50	-	-	-
Toluene	ND	0.50	-	-	-
1,2,3-Trichlorobenzene	ND	0.50	-	-	-
1,2,4-Trichlorobenzene	ND	0.50	-	-	-
1,1,1-Trichloroethane	ND	0.50	-	-	-
1,1,2-Trichloroethane	ND	0.50	-	-	-
Trichloroethene	ND	0.50	-	-	-
Trichlorofluoromethane	ND	0.50	-	-	-
1,2,3-Trichloropropane	ND	0.50	-	-	-
1,2,4-Trimethylbenzene	ND	0.50	-	-	-
1,3,5-Trimethylbenzene	ND	0.50	-	-	-
Vinyl Chloride	ND	0.50	-	-	-
Xylenes, Total	ND	0.50	-	-	-

Surrogate Recovery

Dibromofluoromethane	25.12		25	100	70-130
Toluene-d8	24.62		25	98	70-130
4-BFB	2.201		2.5	88	70-130



Quality Control Report

Client: West & Associates
Date Prepared: 3/24/17
Date Analyzed: 3/24/17
Instrument: GC18
Matrix: Water
Project: Automasters

WorkOrder: 1703B82
BatchID: 136218
Extraction Method: SW5030B
Analytical Method: SW8260B
Unit: µg/L
Sample ID: MB/LCS-136218
 1703B82-062BMS/MSD

QC Summary Report for SW8260B

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	9.50	-	10	95	-	54-140	-	-
Benzene	10.3	-	10	103	-	47-158	-	-
t-Butyl alcohol (TBA)	30.7	-	40	77	-	42-140	-	-
Chlorobenzene	10.2	-	10	102	-	43-157	-	-
1,2-Dibromoethane (EDB)	9.86	-	10	99	-	44-155	-	-
1,2-Dichloroethane (1,2-DCA)	10.0	-	10	100	-	66-125	-	-
1,1-Dichloroethene	9.81	-	10	98	-	47-149	-	-
Diisopropyl ether (DIPE)	10.3	-	10	103	-	57-136	-	-
Ethyl tert-butyl ether (ETBE)	10.2	-	10	101	-	55-137	-	-
Methyl-t-butyl ether (MTBE)	9.72	-	10	97	-	53-139	-	-
Toluene	9.64	-	10	96	-	52-137	-	-
Trichloroethene	10.3	-	10	103	-	43-157	-	-

Surrogate Recovery

Dibromofluoromethane	25.7	-	25	103	-	70-130	-	-
Toluene-d8	24.4	-	25	98	-	70-130	-	-
4-BFB	2.24	-	2.5	90	-	70-130	-	-

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	9.66	10.2	10	ND	97	102	69-139	5.20	20
Benzene	10.2	10.8	10	ND	102	108	69-141	4.97	20
t-Butyl alcohol (TBA)	30.8	33.0	40	ND	77	83	41-152	7.15	20
Chlorobenzene	10.2	10.8	10	ND	102	108	77-120	5.45	20
1,2-Dibromoethane (EDB)	9.88	10.5	10	ND	99	105	76-135	5.64	20
1,2-Dichloroethane (1,2-DCA)	10.1	10.5	10	ND	101	105	73-139	3.63	20
1,1-Dichloroethene	9.67	10.3	10	ND	97	103	59-140	6.39	20
Diisopropyl ether (DIPE)	10.5	10.9	10	ND	105	109	72-140	3.73	20
Ethyl tert-butyl ether (ETBE)	10.3	10.7	10	ND	103	107	71-140	4.13	20
Methyl-t-butyl ether (MTBE)	9.88	10.3	10	ND	99	103	73-139	3.83	20
Toluene	9.58	10.2	10	ND	96	102	71-128	6.45	20
Trichloroethene	10.2	10.8	10	ND	102	108	64-132	5.65	20

Surrogate Recovery

Dibromofluoromethane	25.7	25.8	25		103	103	73-131	0	20
Toluene-d8	24.2	24.4	25		97	98	72-117	0.914	20
4-BFB	2.32	2.28	2.5		93	91	74-116	1.43	20



Quality Control Report

Client: West & Associates
Date Prepared: 3/24/17
Date Analyzed: 3/24/17
Instrument: GC35
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136185
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg
Sample ID: MB/LCS-136185
 1703C10-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	-	0.010	-	-	-	-
Acenaphthylene	ND	-	0.010	-	-	-	-
Anthracene	ND	-	0.010	-	-	-	-
Benzo (a) anthracene	ND	-	0.010	-	-	-	-
Benzo (a) pyrene	ND	0.181	0.010	0.20	-	90	23-129
Benzo (b) fluoranthene	ND	-	0.010	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.010	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.010	-	-	-	-
Chrysene	ND	0.188	0.010	0.20	-	94	38-104
Dibenzo (a,h) anthracene	ND	-	0.010	-	-	-	-
Fluoranthene	ND	-	0.010	-	-	-	-
Fluorene	ND	-	0.010	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.010	-	-	-	-
1-Methylnaphthalene	ND	0.215	0.010	0.20	-	107, F2	59-106
2-Methylnaphthalene	ND	0.195	0.010	0.20	-	98	54-108
Naphthalene	ND	-	0.010	-	-	-	-
Phenanthrene	ND	0.197	0.010	0.20	-	98	48-107
Pyrene	ND	0.203	0.010	0.20	-	102	40-104
Surrogate Recovery							
1-Fluoronaphthalene	0.4916	0.459		0.50	98	92	63-123
2-Fluorobiphenyl	0.4848	0.431		0.50	97	86	55-127

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Benzo (a) pyrene	NR	NR		ND<0.5	NR	NR	-	NR	-
Chrysene	NR	NR		ND<0.5	NR	NR	-	NR	-
1-Methylnaphthalene	NR	NR		ND<0.5	NR	NR	-	NR	-
2-Methylnaphthalene	NR	NR		ND<0.5	NR	NR	-	NR	-
Phenanthrene	NR	NR		ND<0.5	NR	NR	-	NR	-
Pyrene	NR	NR		ND<0.5	NR	NR	-	NR	-
Surrogate Recovery									
1-Fluoronaphthalene	NR	NR			NR	NR	-	NR	-
2-Fluorobiphenyl	NR	NR			NR	NR	-	NR	-



Quality Control Report

Client: West & Associates
Date Prepared: 3/24/17
Date Analyzed: 3/24/17 - 3/27/17
Instrument: GC35
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136186
Extraction Method: SW3550B
Analytical Method: SW8270C-SIM
Unit: mg/kg
Sample ID: MB/LCS-136186
 1703C09-001AMS/MSD

QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	-	0.010	-	-	-	-
Acenaphthylene	ND	-	0.010	-	-	-	-
Anthracene	ND	-	0.010	-	-	-	-
Benzo (a) anthracene	ND	-	0.010	-	-	-	-
Benzo (a) pyrene	ND	0.182	0.010	0.20	-	91	23-129
Benzo (b) fluoranthene	ND	-	0.010	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.010	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.010	-	-	-	-
Chrysene	ND	0.201	0.010	0.20	-	101	38-104
Dibenzo (a,h) anthracene	ND	-	0.010	-	-	-	-
Fluoranthene	ND	-	0.010	-	-	-	-
Fluorene	ND	-	0.010	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.010	-	-	-	-
1-Methylnaphthalene	ND	0.232	0.010	0.20	-	116, F2	59-106
2-Methylnaphthalene	ND	0.211	0.010	0.20	-	105	54-108
Naphthalene	ND	-	0.010	-	-	-	-
Phenanthrene	ND	0.210	0.010	0.20	-	105	48-107
Pyrene	ND	0.210	0.010	0.20	-	105, F2	40-104

Surrogate Recovery

1-Fluoronaphthalene	0.4581	0.496		0.50	92	99	63-123
2-Fluorobiphenyl	0.4433	0.468		0.50	89	94	55-127

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Benzo (a) pyrene	NR	NR		ND<0.02	NR	NR	-	NR	-
Chrysene	NR	NR		ND<0.02	NR	NR	-	NR	-
1-Methylnaphthalene	NR	NR		ND<0.02	NR	NR	-	NR	-
2-Methylnaphthalene	NR	NR		ND<0.02	NR	NR	-	NR	-
Phenanthrene	NR	NR		ND<0.02	NR	NR	-	NR	-
Pyrene	NR	NR		ND<0.02	NR	NR	-	NR	-

Surrogate Recovery

1-Fluoronaphthalene	NR	NR			NR	NR	-	NR	-
2-Fluorobiphenyl	NR	NR			NR	NR	-	NR	-



Quality Control Report

Client: West & Associates
Date Prepared: 3/22/17
Date Analyzed: 3/23/17
Instrument: GC19
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136046
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-136046
 1703B25-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.574	0.40	0.60	-	96	82-118
MTBE	ND	0.0892	0.050	0.10	-	89	61-119
Benzene	ND	0.111	0.0050	0.10	-	111	77-128
Toluene	ND	0.114	0.0050	0.10	-	114	74-132
Ethylbenzene	ND	0.113	0.0050	0.10	-	113	84-127
Xylenes	ND	0.327	0.015	0.30	-	109	86-129
Surrogate Recovery							
2-Fluorotoluene	0.09462	0.0996		0.10	95	100	75-134

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.480	0.490	0.60	ND	80	82	58-129	2.13	20
MTBE	0.0729	0.0773	0.10	ND	73	77	47-118	5.80	20
Benzene	0.0737	0.0830	0.10	ND	74	83	55-129	11.8	20
Toluene	0.0886	0.0942	0.10	ND	87	93	56-130	6.13	20
Ethylbenzene	0.0926	0.0962	0.10	ND	93	96	63-129	3.88	20
Xylenes	0.274	0.282	0.30	ND	91	94	64-131	2.83	20
Surrogate Recovery									
2-Fluorotoluene	0.0809	0.0840	0.10		81	84	62-126	3.74	20



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/26/17
Instrument: GC19
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136115
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-136115
 1703B82-010AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.641	0.40	0.60	-	107	82-118
MTBE	ND	0.114	0.050	0.10	-	114	61-119
Benzene	ND	0.118	0.0050	0.10	-	118	77-128
Toluene	ND	0.122	0.0050	0.10	-	122	74-132
Ethylbenzene	ND	0.119	0.0050	0.10	-	119	84-127
Xylenes	ND	0.338	0.015	0.30	-	113	86-129
Surrogate Recovery							
2-Fluorotoluene	0.09344	0.0999		0.10	93	100	75-134

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR		240	NR	NR	-	NR	-
MTBE	NR	NR		ND<10	NR	NR	-	NR	-
Benzene	NR	NR		ND<1	NR	NR	-	NR	-
Toluene	NR	NR		19	NR	NR	-	NR	-
Ethylbenzene	NR	NR		ND<1	NR	NR	-	NR	-
Xylenes	NR	NR		ND<3	NR	NR	-	NR	-
Surrogate Recovery									
2-Fluorotoluene	NR	NR			NR	NR	-	NR	-



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/24/17
Instrument: GC19
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136116
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-136116
 1703B82-041AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.601	0.40	0.60	-	100	82-118
MTBE	ND	0.0897	0.050	0.10	-	90	61-119
Benzene	ND	0.111	0.0050	0.10	-	111	77-128
Toluene	ND	0.114	0.0050	0.10	-	114	74-132
Ethylbenzene	ND	0.112	0.0050	0.10	-	112	84-127
Xylenes	ND	0.323	0.015	0.30	-	108	86-129
Surrogate Recovery							
2-Fluorotoluene	0.09711	0.0993		0.10	97	99	75-134

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR		4	NR	NR	-	NR	-
MTBE	NR	NR		ND	NR	NR	-	NR	-
Benzene	NR	NR		0.0095	NR	NR	-	NR	-
Toluene	NR	NR		0.21	NR	NR	-	NR	-
Ethylbenzene	NR	NR		0.018	NR	NR	-	NR	-
Xylenes	NR	NR		0.068	NR	NR	-	NR	-
Surrogate Recovery									
2-Fluorotoluene	NR	NR			NR	NR	-	NR	-



Quality Control Report

Client: West & Associates
Date Prepared: 3/27/17
Date Analyzed: 3/27/17 - 3/28/17
Instrument: GC19
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136237
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: mg/Kg
Sample ID: MB/LCS-136237
 1703D55-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.563	0.40	0.60	-	94	82-118
MTBE	ND	0.101	0.050	0.10	-	101	61-119
Benzene	ND	0.110	0.0050	0.10	-	110	77-128
Toluene	ND	0.113	0.0050	0.10	-	113	74-132
Ethylbenzene	ND	0.113	0.0050	0.10	-	113	84-127
Xylenes	ND	0.319	0.015	0.30	-	106	86-129
Surrogate Recovery							
2-Fluorotoluene	0.1046	0.0948		0.10	105	95	75-134

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.568	0.546	0.60	ND	95	91	58-129	3.95	20
MTBE	0.0946	0.101	0.10	ND	95	101	47-118	6.46	20
Benzene	0.100	0.105	0.10	ND	100	105	55-129	5.23	20
Toluene	0.104	0.109	0.10	ND	104	109	56-130	4.86	20
Ethylbenzene	0.104	0.109	0.10	ND	104	109	63-129	5.19	20
Xylenes	0.292	0.309	0.30	ND	97	103	64-131	5.83	20
Surrogate Recovery									
2-Fluorotoluene	0.0894	0.0914	0.10		89	91	62-126	2.24	20



Quality Control Report

Client: West & Associates
Date Prepared: 3/24/17
Date Analyzed: 3/24/17
Instrument: GC12
Matrix: Water
Project: Automasters

WorkOrder: 1703B82
BatchID: 136175
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-136175
 1703C38-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	51.1	40	60	-	85	78-116
MTBE	ND	11.1	5.0	10	-	111	72-122
Benzene	ND	10.4	0.50	10	-	104	81-123
Toluene	ND	10.5	0.50	10	-	105	83-129
Ethylbenzene	ND	9.76	0.50	10	-	98	88-126
Xylenes	ND	27.2	1.5	30	-	91	87-131
Surrogate Recovery							
aaa-TFT	11.08	11.0		10	111	110	89-116

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	50.3	49.4	60	ND	84	82	63-133	1.89	20
MTBE	11.3	11.6	10	ND	101	103	69-122	2.50	20
Benzene	10.4	10.5	10	ND	105	105	84-125	0	20
Toluene	10.6	10.5	10	ND	106	105	87-131	0.476	20
Ethylbenzene	9.76	9.64	10	ND	98	96	92-126	1.22	20
Xylenes	27.0	26.5	30	ND	90	88	88-132	2.01	20
Surrogate Recovery									
aaa-TFT	11.1	11.2	10		111	112	90-117	0.177	20



Quality Control Report

Client: West & Associates
Date Prepared: 3/26/17
Date Analyzed: 3/26/17
Instrument: GC3
Matrix: Water
Project: Automasters

WorkOrder: 1703B82
BatchID: 136224
Extraction Method: SW5030B
Analytical Method: SW8021B/8015Bm
Unit: µg/L
Sample ID: MB/LCS-136224
 1703C15-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	55.4	40	60	-	92	78-116
MTBE	ND	8.97	5.0	10	-	90	72-122
Benzene	ND	9.48	0.50	10	-	95	81-123
Toluene	ND	9.97	0.50	10	-	100	83-129
Ethylbenzene	ND	10.4	0.50	10	-	104	88-126
Xylenes	ND	32.3	1.5	30	-	108	87-131
Surrogate Recovery							
aaa-TFT	10.18	10.2		10	102	102	89-116

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	NR	NR		4100	NR	NR	-	NR	-
MTBE	NR	NR		ND	NR	NR	-	NR	-
Benzene	NR	NR		2200	NR	NR	-	NR	-
Toluene	NR	NR		430	NR	NR	-	NR	-
Ethylbenzene	NR	NR		240	NR	NR	-	NR	-
Xylenes	NR	NR		210	NR	NR	-	NR	-
Surrogate Recovery									
aaa-TFT	NR	NR			NR	NR	-	NR	-



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/24/17 - 3/27/17
Instrument: ICP-MS1, ICP-MS3
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136093
Extraction Method: SW3050B
Analytical Method: SW6020
Unit: mg/Kg
Sample ID: MB/LCS-136093
 1703B82-047AMS/MSD

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	52.3	0.25	50	-	105	75-125
Chromium	ND	51.9	0.50	50	-	104	75-125
Lead	ND	51.7	0.50	50	-	103	75-125
Nickel	ND	52.5	0.50	50	-	105	75-125
Zinc	ND	521	5.0	500	-	104	75-125
Surrogate Recovery							
Terbium	521.7	540		500	104	108	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	52.6	50.5	50	ND	105	101	75-125	4.11	20
Chromium	98.5	95.7	50	45.09	107	101	75-125	2.89	20
Lead	66.2	60.4	50	8.327	116	104	75-125	9.21	20
Nickel	89.7	84.7	50	31.32	117	107	75-125	5.69	20
Zinc	589	572	500	45.68	109	105	75-125	3.03	20
Surrogate Recovery									
Terbium	560	545	500		112	109	70-130	2.70	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Cadmium	ND<1.2	ND	-	-
Chromium	47.6	45.09	5.57	-
Lead	8.45	8.327	1.48	-
Nickel	31.8	31.32	1.53	-
Zinc	51.4	45.68	12.5	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/23/17
Instrument: GC6A
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136085
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-136085
 1703B68-001EMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	40.5	1.0	40	-	101	79-133
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	24.18	24.3		25	97	97	77-109

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	NR	NR		38	NR	NR	-	NR	-
Surrogate Recovery									
C9	NR	NR			NR	NR	-	NR	-



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/24/17 - 3/25/17
Instrument: GC6A, GC9a
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136113
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-136113
 1703B82-028AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	37.5	1.0	40	-	94	79-133
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	24.71	24.8		25	99	99	77-109

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	38.8	40.1	40	ND	97	100	59-150	3.12	30
Surrogate Recovery									
C9	23.4	23.7	25		94	95	78-109	1.22	30



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/24/17 - 3/25/17
Instrument: GC6A, GC9a
Matrix: Soil
Project: Automasters

WorkOrder: 1703B82
BatchID: 136114
Extraction Method: SW3550B
Analytical Method: SW8015B
Unit: mg/Kg
Sample ID: MB/LCS-136114
 1703B82-042AMS/MSD

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	37.7	1.0	40	-	94	79-133
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	24.57	24.5		25	98	98	77-109

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	40.8	41.3	40	1.843	97	99	59-150	1.19	30
Surrogate Recovery									
C9	24.2	24.3	25		97	97	78-109	0	30



Quality Control Report

Client: West & Associates
Date Prepared: 3/22/17
Date Analyzed: 3/23/17
Instrument: GC9a
Matrix: Water
Project: Automasters

WorkOrder: 1703B82
BatchID: 136045
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L
Sample ID: MB/LCS/LCSD-136045

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	50	-	-	-
TPH-Motor Oil (C18-C36)	ND	250	-	-	-
Surrogate Recovery					
C9	598.6		625	96	79-111

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	961	1150	1000	96	115	88-134	18.0	30
Surrogate Recovery								
C9	602	622	625	96	99	79-111	3.17	30



Quality Control Report

Client: West & Associates
Date Prepared: 3/23/17
Date Analyzed: 3/24/17
Instrument: GC11A
Matrix: Water
Project: Automasters

WorkOrder: 1703B82
BatchID: 136117
Extraction Method: SW3510C
Analytical Method: SW8015B
Unit: µg/L
Sample ID: MB/LCS/LCSD-136117

QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	50	-	-	-
TPH-Motor Oil (C18-C36)	ND	250	-	-	-
Surrogate Recovery					
C9	623.7		625	100	79-111

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	1100	1070	1000	110	107	88-134	2.75	30
Surrogate Recovery								
C9	633	636	625	101	102	79-111	0.456	30

1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1703B82

ClientCode: WAA

QuoteID: 7088

WaterTrax WriteOn EDF Excel EQUIS Email HardCopy ThirdParty J-flag

Report to:

Bruce Jacobsen
West & Associates
630 Eubanks Ct, Unit #G
Vacaville, CA 95688
(707) 451-1360 FAX: (707) 447-0631

Email: bjacobsen@astound.net; dganzer@westen
cc/3rd Party:
PO:
ProjectNo: Automasters

Bill to:

Accounts Payable
West & Associates
630 Eubanks Ct, Unit #G
Vacaville, CA 95688

Requested TAT: 5 days;

Date Received: 03/23/2017

Date Logged: 03/23/2017

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1703B82-001	B8-5	Soil	3/21/2017 09:05	<input type="checkbox"/>	A		A	A			A					
1703B82-002	B8-10	Soil	3/21/2017 09:09	<input type="checkbox"/>	A		A	A			A					
1703B82-003	B8-15	Soil	3/21/2017 09:13	<input type="checkbox"/>	A			A			A					
1703B82-004	B8-20	Soil	3/21/2017 09:16	<input type="checkbox"/>	A			A			A					
1703B82-005	B13-5	Soil	3/21/2017 09:25	<input type="checkbox"/>	A		A	A			A					
1703B82-006	B13-10	Soil	3/21/2017 09:27	<input type="checkbox"/>	A		A	A			A					
1703B82-007	B13-15	Soil	3/21/2017 09:30	<input type="checkbox"/>	A			A			A					
1703B82-008	B13-20	Soil	3/21/2017 09:32	<input type="checkbox"/>	A			A			A					
1703B82-009	B9-5	Soil	3/21/2017 09:52	<input type="checkbox"/>	A		A	A			A					
1703B82-010	B9-9	Soil	3/21/2017 09:55	<input type="checkbox"/>	A		A	A			A					
1703B82-011	B9-15	Soil	3/21/2017 09:57	<input type="checkbox"/>	A			A			A					
1703B82-012	B9-19	Soil	3/21/2017 10:01	<input type="checkbox"/>	A			A			A					
1703B82-013	B14-5	Soil	3/21/2017 10:12	<input type="checkbox"/>	A		A	A			A					
1703B82-014	B14-10	Soil	3/21/2017 10:14	<input type="checkbox"/>	A		A	A			A					
1703B82-015	B14-15	Soil	3/21/2017 10:17	<input type="checkbox"/>	A			A			A					

Test Legend:

1	8260B_S	2	8260B_W	3	8270_PNA_S	4	G-MBTEX_S
5	G-MBTEX_W	6	LUFTMS_6020_TTLC_S	7	TPH(DMO)_S	8	TPH(DMO)_W
9		10		11		12	

Project Manager: Jennifer Lagerbom

Prepared by: Maria Venegas

The following SamplIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A, 027A, 028A, 029A, 030A, 031A, 032A, 033A, 034A, 035A, 036A, 041A, 042A, 043A, 044A contain testgroup Multi Range_S.; The following SamplIDs: 048A, 049A, 050A, 051A, 052A, 053A, 054A, 055A, 056A,

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1703B82

ClientCode: WAA

QuoteID: 7088

WaterTrax WriteOn EDF Excel EQUIS Email HardCopy ThirdParty J-flag

Report to:

Bruce Jacobsen
West & Associates
630 Eubanks Ct, Unit #G
Vacaville, CA 95688
(707) 451-1360 FAX: (707) 447-0631

Email: bjacobsen@astound.net; dganzer@westen
cc/3rd Party:
PO:
ProjectNo: Automasters

Bill to:

Accounts Payable
West & Associates
630 Eubanks Ct, Unit #G
Vacaville, CA 95688

Requested TAT: 5 days;

Date Received: 03/23/2017

Date Logged: 03/23/2017

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1703B82-016	B14-20	Soil	3/21/2017 10:20	<input type="checkbox"/>	A			A				A				
1703B82-017	B12-5	Soil	3/21/2017 10:26	<input type="checkbox"/>	A		A	A				A				
1703B82-018	B12-10	Soil	3/21/2017 10:29	<input type="checkbox"/>	A		A	A				A				
1703B82-019	B12-15	Soil	3/21/2017 10:31	<input type="checkbox"/>	A			A				A				
1703B82-020	B12-20	Soil	3/21/2017 10:33	<input type="checkbox"/>	A			A				A				
1703B82-021	B15-5	Soil	3/21/2017 10:45	<input type="checkbox"/>	A		A	A				A				
1703B82-022	B15-10	Soil	3/21/2017 10:48	<input type="checkbox"/>	A		A	A				A				
1703B82-023	B15-15	Soil	3/21/2017 10:51	<input type="checkbox"/>	A			A				A				
1703B82-024	B15-20	Soil	3/21/2017 10:53	<input type="checkbox"/>	A			A				A				
1703B82-025	B16-5	Soil	3/21/2017 11:02	<input type="checkbox"/>	A		A	A				A				
1703B82-026	B16-10	Soil	3/21/2017 11:05	<input type="checkbox"/>	A		A	A				A				
1703B82-027	B16-15	Soil	3/21/2017 11:07	<input type="checkbox"/>	A			A				A				
1703B82-028	B16-19	Soil	3/21/2017 11:11	<input type="checkbox"/>	A			A				A				
1703B82-029	B11-5	Soil	3/21/2017 11:21	<input type="checkbox"/>	A		A	A				A				
1703B82-030	B11-10	Soil	3/21/2017 11:23	<input type="checkbox"/>	A		A	A				A				

Test Legend:

1	8260B_S	2	8260B_W	3	8270_PNA_S	4	G-MBTEX_S
5	G-MBTEX_W	6	LUFTMS_6020_TTLC_S	7	TPH(DMO)_S	8	TPH(DMO)_W
9		10		11		12	

Project Manager: Jennifer Lagerbom

Prepared by: Maria Venegas

The following SamplIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A, 027A, 028A, 029A, 030A, 031A, 032A, 033A, 034A, 035A, 036A, 041A, 042A, 043A, 044A contain testgroup Multi Range_S.; The following SamplIDs: 048A, 049A, 050A, 051A, 052A, 053A, 054A, 055A, 056A,

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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1703B82

ClientCode: WAA

QuoteID: 7088

WaterTrax WriteOn EDF Excel EQUIS Email HardCopy ThirdParty J-flag

Report to:

Bruce Jacobsen
West & Associates
630 Eubanks Ct, Unit #G
Vacaville, CA 95688
(707) 451-1360 FAX: (707) 447-0631

Email: bjacobsen@astound.net; dganzer@westen
cc/3rd Party:
PO:
ProjectNo: Automasters

Bill to:

Accounts Payable
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630 Eubanks Ct, Unit #G
Vacaville, CA 95688

Requested TAT: 5 days;

Date Received: 03/23/2017

Date Logged: 03/23/2017

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1703B82-031	B11-15	Soil	3/21/2017 11:25	<input type="checkbox"/>	A			A			A					
1703B82-032	B11-20	Soil	3/21/2017 11:30	<input type="checkbox"/>	A			A			A					
1703B82-033	B10-5	Soil	3/21/2017 11:39	<input type="checkbox"/>	A		A	A			A					
1703B82-034	B10-10	Soil	3/21/2017 11:41	<input type="checkbox"/>	A		A	A			A					
1703B82-035	B10-15	Soil	3/21/2017 11:43	<input type="checkbox"/>	A			A			A					
1703B82-036	B10-20	Soil	3/21/2017 11:47	<input type="checkbox"/>	A			A			A					
1703B82-037	WB1-3	Soil	3/21/2017 12:02	<input type="checkbox"/>			A			A						
1703B82-038	WB1-10	Soil	3/21/2017 12:06	<input type="checkbox"/>			A			A						
1703B82-039	WB2-3	Soil	3/21/2017 12:11	<input type="checkbox"/>			A			A						
1703B82-040	WB2-10	Soil	3/21/2017 12:13	<input type="checkbox"/>			A			A						
1703B82-041	B20-8	Soil	3/21/2017 14:35	<input type="checkbox"/>	A		A	A			A					
1703B82-042	B18-13	Soil	3/21/2017 15:11	<input type="checkbox"/>	A			A			A					
1703B82-043	B17-4	Soil	3/21/2017 15:29	<input type="checkbox"/>	A		A	A			A					
1703B82-044	B17-8	Soil	3/21/2017 15:31	<input type="checkbox"/>	A		A	A			A					
1703B82-045	WB4-3	Soil	3/21/2017 16:03	<input type="checkbox"/>			A			A						

Test Legend:

1	8260B_S	2	8260B_W	3	8270_PNA_S	4	G-MBTEX_S
5	G-MBTEX_W	6	LUFTMS_6020_TTLC_S	7	TPH(DMO)_S	8	TPH(DMO)_W
9		10		11		12	

Project Manager: Jennifer Lagerbom

Prepared by: Maria Venegas

The following SamplIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A, 027A, 028A, 029A, 030A, 031A, 032A, 033A, 034A, 035A, 036A, 041A, 042A, 043A, 044A contain testgroup Multi Range_S.; The following SamplIDs: 048A, 049A, 050A, 051A, 052A, 053A, 054A, 055A, 056A,

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



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Pittsburg, CA 94565-1701
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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1703B82

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Email: bjacobsen@astound.net; dganzer@westen
cc/3rd Party:
PO:
ProjectNo: Automasters

Bill to:

Accounts Payable
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630 Eubanks Ct, Unit #G
Vacaville, CA 95688

Requested TAT: 5 days;

Date Received: 03/23/2017

Date Logged: 03/23/2017

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1703B82-046	WB4-10	Soil	3/21/2017 16:05	<input type="checkbox"/>			A			A						
1703B82-047	WB3-3	Soil	3/22/2017 14:39	<input type="checkbox"/>			A			A						
1703B82-048	B13-W	Water	3/22/2017 08:24	<input type="checkbox"/>		B			A			A				
1703B82-049	B8-W	Water	3/22/2017 08:28	<input type="checkbox"/>		B			A			A				
1703B82-050	B9-W	Water	3/22/2017 08:35	<input type="checkbox"/>		B			A			A				
1703B82-051	B12-W	Water	3/22/2017 08:42	<input type="checkbox"/>		B			A			A				
1703B82-052	B16-W	Water	3/22/2017 08:46	<input type="checkbox"/>		B			A			A				
1703B82-053	B15-W	Water	3/22/2017 08:50	<input type="checkbox"/>		B			A			A				
1703B82-054	B11-W	Water	3/22/2017 08:55	<input type="checkbox"/>		B			A			A				
1703B82-055	B10-W	Water	3/22/2017 09:00	<input type="checkbox"/>		B			A			A				
1703B82-056	B17-W	Water	3/22/2017 09:09	<input type="checkbox"/>		B			A			A				
1703B82-057	B18-W	Water	3/22/2017 09:14	<input type="checkbox"/>		B			A			A				
1703B82-058	B19-W	Water	3/22/2017 09:18	<input type="checkbox"/>		B			A			A				
1703B82-059	B20-W	Water	3/22/2017 09:25	<input type="checkbox"/>		B			A			A				
1703B82-060	B14-W	Water	3/22/2017 09:32	<input type="checkbox"/>		B			A			A				

Test Legend:

1	8260B_S	2	8260B_W	3	8270_PNA_S	4	G-MBTEX_S
5	G-MBTEX_W	6	LUFTMS_6020_TTLC_S	7	TPH(DMO)_S	8	TPH(DMO)_W
9		10		11		12	

Project Manager: Jennifer Lagerbom

Prepared by: Maria Venegas

The following SamplIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A, 027A, 028A, 029A, 030A, 031A, 032A, 033A, 034A, 035A, 036A, 041A, 042A, 043A, 044A contain testgroup Multi Range_S.; The following SamplIDs: 048A, 049A, 050A, 051A, 052A, 053A, 054A, 055A, 056A,

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1703B82

ClientCode: WAA

QuoteID: 7088

WaterTrax
 WriteOn
 EDF
 Excel
 EQulS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:

Bruce Jacobsen
West & Associates
630 Eubanks Ct, Unit #G
Vacaville, CA 95688
(707) 451-1360 FAX: (707) 447-0631

Email: bjacobsen@astound.net; dganzer@westen
cc/3rd Party:
PO:
ProjectNo: Automasters

Bill to:

Accounts Payable
West & Associates
630 Eubanks Ct, Unit #G
Vacaville, CA 95688

Requested TAT: 5 days;

Date Received: 03/23/2017

Date Logged: 03/23/2017

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1703B82-061	MW-101	Water	3/22/2017 00:00	<input type="checkbox"/>		B			A				A			
1703B82-062	MW-102	Water	3/22/2017 12:42	<input type="checkbox"/>		B			A				A			
1703B82-063	MW-103	Water	3/22/2017 12:59	<input type="checkbox"/>		B			A				A			

Test Legend:

1	8260B_S	2	8260B_W	3	8270_PNA_S	4	G-MBTEX_S
5	G-MBTEX_W	6	LUFTMS_6020_TTLC_S	7	TPH(DMO)_S	8	TPH(DMO)_W
9		10		11		12	

Project Manager: Jennifer Lagerbom

Prepared by: Maria Venegas

The following SamplIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 009A, 010A, 011A, 012A, 013A, 014A, 015A, 016A, 017A, 018A, 019A, 020A, 021A, 022A, 023A, 024A, 025A, 026A, 027A, 028A, 029A, 030A, 031A, 032A, 033A, 034A, 035A, 036A, 041A, 042A, 043A, 044A contain testgroup Multi Range_S.; The following SamplIDs: 048A, 049A, 050A, 051A, 052A, 053A, 054A, 055A, 056A,

Comments:

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WORK ORDER SUMMARY

Client Name: WEST & ASSOCIATES

Project: Automasters

Work Order: 1703B82

Client Contact: Bruce Jacobsen

QC Level:

Contact's Email: bjacobsen@astound.net; dganzer@westengineers.com

Comments:

Date Logged: 3/23/2017

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703B82-001A	B8-5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:05	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-002A	B8-10	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:09	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-003A	B8-15	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:13	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-004A	B8-20	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:16	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-005A	B13-5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:25	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-006A	B13-10	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:27	5 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

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Project: Automasters

Work Order: 1703B82

Client Contact: Bruce Jacobsen

QC Level:

Contact's Email: bjacobsen@astound.net; dganzer@westengineers.com

Comments:

Date Logged: 3/23/2017

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703B82-006A	B13-10	Soil	SW8270C (PAHs/PNAs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:27	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-007A	B13-15	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:30	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-008A	B13-20	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:32	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-009A	B9-5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:52	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-010A	B9-9	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:55	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-011A	B9-15	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 9:57	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			

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Work Order: 1703B82

Client Contact: Bruce Jacobsen

QC Level:

Contact's Email: bjacobsen@astound.net; dganzer@westengineers.com

Comments:

Date Logged: 3/23/2017

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703B82-012A	B9-19	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 10:01	5 days		<input type="checkbox"/>	
1703B82-013A	B14-5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8270C (PAHs/PNAs) SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 10:12	5 days		<input type="checkbox"/>	
1703B82-014A	B14-10	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8270C (PAHs/PNAs) SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 10:14	5 days		<input type="checkbox"/>	
1703B82-015A	B14-15	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 10:17	5 days		<input type="checkbox"/>	
1703B82-016A	B14-20	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 10:20	5 days		<input type="checkbox"/>	
1703B82-017A	B12-5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8270C (PAHs/PNAs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 10:26	5 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

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Project: Automasters

Work Order: 1703B82

Client Contact: Bruce Jacobsen

QC Level:

Contact's Email: bjacobsen@astound.net; dganzer@westengineers.com

Comments:

Date Logged: 3/23/2017

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703B82-017A	B12-5	Soil	SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 10:26	5 days		<input type="checkbox"/>	
1703B82-018A	B12-10	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8270C (PAHs/PNAs) SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3/21/2017 10:29	5 days 5 days 5 days		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
1703B82-019A	B12-15	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/>	3/21/2017 10:31	5 days 5 days		<input type="checkbox"/> <input type="checkbox"/>	
1703B82-020A	B12-20	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/>	3/21/2017 10:33	5 days 5 days		<input type="checkbox"/> <input type="checkbox"/>	
1703B82-021A	B15-5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8270C (PAHs/PNAs) SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3/21/2017 10:45	5 days 5 days 5 days		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
1703B82-022A	B15-10	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8270C (PAHs/PNAs) SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	3/21/2017 10:48	5 days 5 days 5 days		<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

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Work Order: 1703B82

Client Contact: Bruce Jacobsen

QC Level:

Contact's Email: bjacobsen@astound.net; dganzer@westengineers.com

Comments:

Date Logged: 3/23/2017

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703B82-023A	B15-15	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 10:51	5 days		<input type="checkbox"/>	
1703B82-024A	B15-20	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 10:53	5 days		<input type="checkbox"/>	
1703B82-025A	B16-5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8270C (PAHs/PNAs) SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:02	5 days		<input type="checkbox"/>	
1703B82-026A	B16-10	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8270C (PAHs/PNAs) SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:05	5 days		<input type="checkbox"/>	
1703B82-027A	B16-15	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:07	5 days		<input type="checkbox"/>	
1703B82-028A	B16-19	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm SW8260B (VOCs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:11	5 days		<input type="checkbox"/>	

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Comments:

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WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703B82-029A	B11-5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:21	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-030A	B11-10	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:23	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-031A	B11-15	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:25	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-032A	B11-20	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:30	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-033A	B10-5	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:39	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-034A	B10-10	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:41	5 days		<input type="checkbox"/>	

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Comments:

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WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold SubOut
1703B82-034A	B10-10	Soil	SW8270C (PAHs/PNAs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:41	5 days		<input type="checkbox"/>
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>
1703B82-035A	B10-15	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:43	5 days		<input type="checkbox"/>
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>
1703B82-036A	B10-20	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 11:47	5 days		<input type="checkbox"/>
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>
1703B82-037A	WB1-3	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 12:02	5 days		<input type="checkbox"/>
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>
1703B82-038A	WB1-10	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 12:06	5 days		<input type="checkbox"/>
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>
1703B82-039A	WB2-3	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 12:11	5 days		<input type="checkbox"/>
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>
1703B82-040A	WB2-10	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 12:13	5 days		<input type="checkbox"/>
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>
1703B82-041A	B20-8	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 14:35	5 days		<input type="checkbox"/>

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Comments:

Date Logged: 3/23/2017

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703B82-041A	B20-8	Soil	SW8270C (PAHs/PNAs)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 14:35	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-042A	B18-13	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 15:11	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-043A	B17-4	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	3/21/2017 15:29	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-044A	B17-8	Soil	Multi-Range TPH(g,d,mo) by EPA 8015Bm	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 15:31	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
			SW8260B (VOCs)			<input type="checkbox"/>		5 days			
1703B82-045A	WB4-3	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 16:03	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
1703B82-046A	WB4-10	Soil	SW6020 (LUFT)	1	Acetate Liner	<input type="checkbox"/>	3/21/2017 16:05	5 days		<input type="checkbox"/>	
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>		5 days			
1703B82-047A	WB3-3	Soil	SW6020 (LUFT)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	3/22/2017 14:39	5 days		<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



WORK ORDER SUMMARY

Client Name: WEST & ASSOCIATES

Project: Automasters

Work Order: 1703B82

Client Contact: Bruce Jacobsen

QC Level:

Contact's Email: bjacobsen@astound.net; dganzer@westengineers.com

Comments:

Date Logged: 3/23/2017

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703B82-047A	WB3-3	Soil	SW8270C (PAHs/PNAs)	1	Stainless Steel tube 2"x3"	<input type="checkbox"/>	3/22/2017 14:39	5 days		<input type="checkbox"/>	
1703B82-048A	B13-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 8:24	5 days	Present	<input type="checkbox"/>	
1703B82-048B	B13-W	Water	SW8260B (VOCs)	1	VOA w/ HCL	<input type="checkbox"/>	3/22/2017 8:24	5 days	Present	<input type="checkbox"/>	
1703B82-049A	B8-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 8:28	5 days	Present	<input type="checkbox"/>	
1703B82-049B	B8-W	Water	SW8260B (VOCs)	1	VOA w/ HCL	<input type="checkbox"/>	3/22/2017 8:28	5 days	Present	<input type="checkbox"/>	
1703B82-050A	B9-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 8:35	5 days	5%+	<input type="checkbox"/>	
1703B82-050B	B9-W	Water	SW8260B (VOCs)	1	VOA w/ HCL	<input type="checkbox"/>	3/22/2017 8:35	5 days	5%+	<input type="checkbox"/>	
1703B82-051A	B12-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 8:42	5 days	Present	<input type="checkbox"/>	
1703B82-051B	B12-W	Water	SW8260B (VOCs)	1	VOA w/ HCL	<input type="checkbox"/>	3/22/2017 8:42	5 days	Present	<input type="checkbox"/>	
1703B82-052A	B16-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 8:46	5 days	Present	<input type="checkbox"/>	
1703B82-052B	B16-W	Water	SW8260B (VOCs)	1	VOA w/ HCL	<input type="checkbox"/>	3/22/2017 8:46	5 days	Present	<input type="checkbox"/>	
1703B82-053A	B15-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 8:50	5 days	Present	<input type="checkbox"/>	
1703B82-053B	B15-W	Water	SW8260B (VOCs)	1	VOA w/ HCL	<input type="checkbox"/>	3/22/2017 8:50	5 days	Present	<input type="checkbox"/>	
1703B82-054A	B11-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 8:55	5 days	Present	<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

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WORK ORDER SUMMARY

Client Name: WEST & ASSOCIATES

Project: Automasters

Work Order: 1703B82

Client Contact: Bruce Jacobsen

QC Level:

Contact's Email: bjacobsen@astound.net; dganzer@westengineers.com

Comments:

Date Logged: 3/23/2017

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1703B82-054B	B11-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/22/2017 8:55	5 days	Present	<input type="checkbox"/>	
1703B82-055A	B10-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 9:00	5 days	Present	<input type="checkbox"/>	
1703B82-055B	B10-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/22/2017 9:00	5 days	Present	<input type="checkbox"/>	
1703B82-056A	B17-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 9:09	5 days	10%+	<input type="checkbox"/>	
1703B82-056B	B17-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/22/2017 9:09	5 days	10%+	<input type="checkbox"/>	
1703B82-057A	B18-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 9:14	5 days	10%+	<input type="checkbox"/>	
1703B82-057B	B18-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/22/2017 9:14	5 days	10%+	<input type="checkbox"/>	
1703B82-058A	B19-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 9:18	5 days	1%+	<input type="checkbox"/>	
1703B82-058B	B19-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/22/2017 9:18	5 days	1%+	<input type="checkbox"/>	
1703B82-059A	B20-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 9:25	5 days	Present	<input type="checkbox"/>	
1703B82-059B	B20-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/22/2017 9:25	5 days	Present	<input type="checkbox"/>	
1703B82-060A	B14-W	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 9:32	5 days	Present	<input type="checkbox"/>	
1703B82-060B	B14-W	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/22/2017 9:32	5 days	Present	<input type="checkbox"/>	
1703B82-061A	MW-101	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017	5 days	Present	<input type="checkbox"/>	

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



WORK ORDER SUMMARY

Client Name: WEST & ASSOCIATES

Project: Automasters

Work Order: 1703B82

Client Contact: Bruce Jacobsen

QC Level:

Contact's Email: bjacobsen@astound.net; dganzer@westengineers.com

Comments:

Date Logged: 3/23/2017

WaterTrax WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold SubOut
1703B82-061B	MW-101	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/22/2017	5 days	Present	<input type="checkbox"/>
1703B82-062A	MW-102	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 12:42	5 days	Present	<input type="checkbox"/>
1703B82-062B	MW-102	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/22/2017 12:42	5 days	Present	<input type="checkbox"/>
1703B82-063A	MW-103	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	3	VOA w/ HCL+ 2-aVOA	<input type="checkbox"/>	3/22/2017 12:59	5 days	Present	<input type="checkbox"/>
1703B82-063B	MW-103	Water	SW8260B (VOCs)	1	VOA w/ HCl	<input type="checkbox"/>	3/22/2017 12:59	5 days	Present	<input type="checkbox"/>

NOTES: - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

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1703B82

T0619748201



McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701

Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME:
 RUSH 24 HR 48 HR 72 HR 5 DAY
 GeoTracker EDF PDF Excel Write On (DW)
 Check if sample is effluent and "J" flag is required

Report To: Bruce Jacobsen Bill To: W&A
 Company: West & Associates Engineers
 630 Eubanks Ct, #G, Vacaville, CA bjacobsen@astound.net
 E-Mail: deborah@westengineers.com
 Tele: (707) 451-1360 Fax: (707) 447-0631
 Project #: Project Name: Automasters
 Project Location: 6200 Shattuck Ave, Oakland, CA
 Sampler Signature: Bruce Jacobsen

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED		Analysis Request														Other	Comments													
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other	BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE	TPH as Diesel (8015) + TPH _g + TPH _m	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MTBE / BTEX ONLY (EPA 602 / 8021)	EPA 505 / 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic CI Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNA's)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	Filter Samples for Metals analysis: Yes / No										
B8-5	B8	3-21	905	1	A	✓					✓		✓																												
B8-10	"	"	909	1	"	✓					✓		✓																												
B8-15	"	"	913	1	"	✓					✓		✓																												
B8-20	"	"	916	1	"	✓					✓		✓																												
B13-5	B13	3-21	925	1	A	✓					✓		✓																												
B13-10	"	"	927	1	"	✓					✓		✓																												
B13-15	"	"	930	1	"	✓					✓		✓																												
B13-20	"	"	932	1	"	✓					✓		✓																												
B9-5	B9	3-21	952	1	A	✓					✓		✓																												
B9-9	"	"	955	1	"	✓					✓		✓																												
B9-15	"	"	957	1	"	✓					✓		✓																												
B9-19	"	"	1001	1	"	✓					✓		✓																												

Relinquished By: <u>Bruce Jacobsen</u>	Date: <u>3/23/17</u>	Time: <u>1515</u>	Received By: <u>Memo 2-0</u>
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/# _____
 GOOD CONDITION _____
 HEAD SPACE ABSENT _____
 DECHLORINATED IN LAB _____
 APPROPRIATE CONTAINERS _____
 PRESERVED IN LAB _____

VOAS O&G METALS OTHER
 PRESERVATION pH<2

COMMENTS:
Quote # 7088
SVOCs cancelled, PNA's
added 3/24/17



McCAMPBELL ANALYTICAL, INC.
 1534 WILLOW PASS ROAD
 PITTSBURG, CA 94565-1701
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CHAIN OF CUSTODY RECORD

TURN AROUND TIME
 RUSH 24 HR 48 HR 72 HR 5 DAY

GeoTracker EDF **PDF** **Excel** **Write On (DW)**
 Check if sample is effluent and "J" flag is required

Report To: Bruce Jacobsen **Bill To:** W&A
Company: West & Associates Engineers
 630 Eubanks Ct, #G, Vacaville, CA **E-Mail:** bjacobsen@astound.net
Tele: (707) 451-1360 **E-Mail:** deborah@westengineers.com
Project #: **Project Name:** Automasters
Project Location: 6200 Shattuck Ave., Oakland, CA
Sampler Signature: Bruce Jacobsen

Analysis Request

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Other	Comments	
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other			
B14-5	B14	3-21	10 ¹²	1	A	✓					✓						Filter Samples for Metals analysis: Yes / No
B14-10	"	"	10 ¹⁴	1	"	✓					✓						
B14-15	"	"	10 ¹⁷	1	"	✓					✓						
B14-20	"	"	10 ²⁰	1	"	✓					✓						
B12-5	B12	3-21	10 ²⁶	1	A	✓					✓						
B12-10	"	"	10 ²⁹	1	"	✓					✓						
B12-15	"	"	10 ³¹	1	"	✓					✓						
B12-20	"	"	10 ³³	1	"	✓					✓						
B15-5	B15	3-21	10 ⁴⁵	1	A	✓					✓						
B15-10	"	"	10 ⁴⁸	1	"	✓					✓						
B15-15	"	"	10 ⁵¹	1	"	✓					✓						
B15-20	"	"	10 ⁵³	1	"	✓					✓						

Analysis Request																Other	Comments		
BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE																			Filter Samples for Metals analysis: Yes / No
TPH as Diesel (8015) + TPHg + TPH-WO	✓																		
Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	✓																		
Total Petroleum Hydrocarbons (418.1)																			
EPA 502.2 / 601 / 8010 / 8021 (HYOCs)																			
MTBE / BTEX ONLY (EPA 602 / 8021)																			
EPA 505/ 608 / 8081 (CI Pesticides)																			
EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners																			
EPA 507 / 8141 (NP Pesticides)																			
EPA 515 / 8151 (Acidic CI Herbicides)																			
EPA 524.2 / 624 / 8260 (VOCs)											✓								
EPA 525.2 / 625 / 8270 (SVOCs) PNA's											✓								
EPA 8270 SIM / 8310 (PAHs / PNA's)											✓								
CAM17 Metals (200.7 / 200.8 / 6010 / 6020)																			
LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)																			
Lead (200.7 / 200.8 / 6010 / 6020)																			

Relinquished By: Bruce Jacobsen **Date:** 3/23/17 **Time:** 15:15 **Received By:** [Signature]
Relinquished By: **Date:** **Time:** **Received By:**
Relinquished By: **Date:** **Time:** **Received By:**

ICE/° _____ **COMMENTS:**
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
APPROPRIATE CONTAINERS _____
PRESERVED IN LAB _____

VOAS O&G METALS OTHER
 PRESERVATION pH<2

T0619748201



McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701

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Telephone: (877) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH 24 HR 48 HR 72 HR 5 DAY

GeoTracker EDF PDF Excel Write On (DW)
 Check if sample is effluent and "J" flag is required

Report To: Bruce Jacobsen Bill To: W&A
Company: West & Associates Engineers
630 Eubanks Ct, #G, Vacaville, CA bjacobsen@astound.net
E-Mail: deborah@westengineers.com
Tele: (707) 451-1360 Fax: (707) 447-0631
Project #: _____ Project Name: Automastere
Project Location: 6200 Shattuck Ave, Oakland, CA
Sampler Signature: Bruce Jacobsen

Analysis Request

Other **Comments**

BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE	
TPH as Diesel (8015) + TPH _{ig} + TPH _{no}	
Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	
Total Petroleum Hydrocarbons (418.1)	
EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	
MTBE / BTEX ONLY (EPA 602 / 8021)	
EPA 505 / 608 / 8081 (CI Pesticides)	
EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	
EPA 507 / 8141 (NP Pesticides)	
EPA 515 / 8151 (Acidic CI Herbicides)	
EPA 524.2 / 624 / 8260 (VOCs)	
EPA 525.2 / 625 / 8270 (SVOCs)	
EPA 8270 SIM / 8310 (PAHs / PNAs)	
CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	
LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	
Lead (200.7 / 200.8 / 6010 / 6020)	

Filter Samples for Metals analysis: Yes / No

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED						
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other			
WB1-3	WB1	3-21	1202	1	A	✓					✓						
WB1-10	"	"	1206	1	"	✓					✓						
WB2-3	WB2	"	1211	1	"	✓					✓						
WB2-10	"	"	1213	1	"	✓					✓						
B20-8	B20	3-21	235	1	A	✓					✓						
B18-13	B18	"	311	1	A	✓					✓						
B17-4	B17	"	329	1	S	✓					✓						
B17-8	"	"	331	1		✓					✓						
WB4-3	WB4	3-21	403	1	A	✓					✓						
WB4-10	"	"	405	1	"	✓					✓						
WB3-3	WB3	3-22	239	1	S	✓					✓						

Relinquished By: Bruce Jacobsen Date: 3/23/17 Time: 1515 Received By: Maria V-S
Relinquished By: _____ Date: _____ Time: _____ Received By: _____
Relinquished By: _____ Date: _____ Time: _____ Received By: _____

ICE/A° _____ COMMENTS: _____
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
APPROPRIATE CONTAINERS _____
PRESERVED IN LAB _____
VOAS O&G METALS OTHER
PRESERVATION pH<2

T0619748201



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CHAIN OF CUSTODY RECORD
TURN AROUND TIME
 RUSH 24 HR 48 HR 72 HR 5 DAY
 GeoTracker EDF PDF Excel Write On (DW)
 Check if sample is effluent and "J" flag is required

Report To: Bruce Jacobsen Bill To: W&A
 Company: West & Associates Engineers
 630 Eubanks Ct, #G, Vacaville, CA bjacobsen@astound.net
 E-Mail: deborah@westengineers.com
 Tele: (707) 451-1360 Fax: (707) 447-0631
 Project #: _____ Project Name: Automasters
 Project Location: 6200 Shattuck Ave., Oakland, CA
 Sampler Signature: Bruce Jacobsen

Analysis Request												Other	Comments					
BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE	TPH as Diesel (8015) + TPH _{1.9} + TPH _{1.0}	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MTBE / BTEX ONLY (EPA 602 / 8021)	EPA 505/ 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic CI Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFF 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)		Filter Samples for Metals analysis: Yes / No	
B13-W	B13	3-22	824	4	WA	✓												
B8-W	B8	"	828	4	"	✓												
B9-W	B9	"	835	4	"	✓												
B12-W	B12	"	842	4	"	✓												
B16-W	B16	"	846	4	"	✓												
B15-W	B15	"	850	4	"	✓												
B11-W	B11	"	855	4	"	✓												
B10-W	B10	"	900	4	"	✓												
B17-W	B17	"	909	4	"	✓												
B18-W	B18	"	914	4	"	✓												
B19-W	B19	"	918	4	"	✓												
B20-W	B20	"	925	4	"	✓												
B14-W	B14	"	932	4	"	✓												

Relinquished By: Bruce Jacobsen Date: 3/23/11 Time: 1515 Received By: Muna
 Relinquished By: _____ Date: _____ Time: _____ Received By: _____
 Relinquished By: _____ Date: _____ Time: _____ Received By: _____

ICE/t° _____ COMMENTS:
 GOOD CONDITION _____
 HEAD SPACE ABSENT _____
 DECHLORINATED IN LAB _____
 APPROPRIATE CONTAINERS _____
 PRESERVED IN LAB _____
 VOAS O&G METALS OTHER
 PRESERVATION pH-2

T0619748201



McCAMPBELL ANALYTICAL, INC.
 1534 WILLOW PASS ROAD
 PITTSBURG, CA 94565-1701
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CHAIN OF CUSTODY RECORD
TURN AROUND TIME RUSH 24 HR 48 HR 72 HR 5 DAY
GeoTracker EDF **PDF** **Excel** **Write On (DW)**
 Check if sample is effluent and "J" flag is required

Report To: Bruce Jacobsen **Bill To:** W&A
Company: West & Associates Engineers
 630 Eubanks Ct, #G, Vacaville, CA bjacobsen@astound.net
E-Mail: deborah@westengineers.com
Tele: (707) 451-1360 **Fax:** (707) 447-0631
Project #: **Project Name:** Automasters
Project Location: 6200 Shattuck Ave., Oakland, CA
Sampler Signature: Bruce Jacobsen

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other			
MW-101	MW-101	3-22		4	WA	✓					✓	✓					Filter Samples for Metals analysis: Yes / No
MW-102	MW-102	"	1242	4	"	✓					✓	"					
MW-103	MW-103	"	1259	4	"	✓					✓	"					

Relinquished By: Bruce Jacobsen **Date:** 3/27/17 **Time:** 1515 **Received By:** [Signature]
Relinquished By: **Date:** **Time:** **Received By:**
Relinquished By: **Date:** **Time:** **Received By:**

ICE/A° _____ **COMMENTS:**
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
APPROPRIATE CONTAINERS _____
PRESERVED IN LAB _____
 VOAS O&G METALS OTHER
 PRESERVATION pH<2



Sample Receipt Checklist

Client Name: West & Associates
Project Name: Automasters

Date and Time Received: 3/23/2017 15:15
Date Logged: 3/23/2017
Received by: Maria Venegas
Logged by: Maria Venegas

WorkOrder No: 1703B82 Matrix: Soil/Water
Carrier:

Chain of Custody (COC) Information

- Chain of custody present? Yes [checked] No []
Chain of custody signed when relinquished and received? Yes [checked] No []
Chain of custody agrees with sample labels? Yes [checked] No []
Sample IDs noted by Client on COC? Yes [checked] No []
Date and Time of collection noted by Client on COC? Yes [checked] No []
Sampler's name noted on COC? Yes [checked] No []

Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes [] No [] NA [checked]
Shipping container/cooler in good condition? Yes [checked] No []
Samples in proper containers/bottles? Yes [checked] No []
Sample containers intact? Yes [checked] No []
Sufficient sample volume for indicated test? Yes [checked] No []

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes [checked] No [] NA []
Sample/Temp Blank temperature Temp: NA [checked]
Water - VOA vials have zero headspace / no bubbles? Yes [] No [checked] NA []
Sample labels checked for correct preservation? Yes [] No [checked]
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)? Yes [] No [] NA [checked]
Samples Received on Ice? Yes [checked] No []
(Ice Type: WET ICE)

UCMR3 Samples:

- Total Chlorine tested and acceptable upon receipt for EPA 522? Yes [] No [] NA [checked]
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539? Yes [] No [] NA [checked]

Comments:



APPENDIX G

**Site Conceptual Model
&
Data Gap Summary**

SITE CONCEPTUAL MODEL – REVISED JULY 2017
Automasters
6200 Shattuck Ave, Oakland

SCM Element	SCM Sub-Element	Description	Data Gap Item #	Resolution
Geology and Hydrogeology	Regional	<p>The Site is located within the San Francisco Bay structural depression of the Coast Ranges Physiographic Province, within the Oakland Sub-Area of the East Bay Plain. The Site is situated in a relatively flat area between the San Francisco Bay and the Oakland Hills. Bedrock in the area consists of sedimentary, metasedimentary, volcanic, and intrusive rocks from the Jurassic through Paleocene geologic periods. Quaternary-age marine and alluvial sediments ranging in thickness from 300 to 700 feet cover the bedrock. Near the surface this Site is underlain by Holocene alluvium and marsh deposits comprised of silts and clay.</p> <p>The Site lies within the Berkeley Alluvial Plain sub-area of the East Bay Plain groundwater basin. The primary water-bearing unit in this area is comprised of unconsolidated alluvial deposits from the Late Quaternary period. There is also a secondary, older, semi-consolidated deposit from the Neogene-Quaternary period. Groundwater within these deposits is primarily confined although some of the aquifers are unconfined.</p> <p>Throughout most of the Alameda County portion of the East Bay Plain the general direction of groundwater flow follows the surface topography and runs from east to west, i.e. from the Hayward Fault to the San Francisco Bay. Flow direction and velocity are occasionally influenced by buried stream channels that typically are oriented in an east to west direction.</p>	None	N/A
	Site	<p>Soil types encountered during the 2006 site investigation activities consisted predominantly of silty clay to clayey silt with some sands and gravels to 36 feet below ground surface (bgs) and stiff clay from 36 feet to 48 feet bgs. The two borings advanced by Pangea closest to the former USTs and dispenser islands had a distinct sand and gravel lens at 10 to 12 feet bgs.</p> <p>The 2015 and 2017 remedial investigations confirmed that shallow soils are predominately silty clay to clayey silt with a sand and gravel lens at 7 to 12 feet bgs. The depth to first groundwater ranges from approximately 3 to 6 feet bgs.</p>	None	N/A
Surface Water Bodies		The nearest surface water body is Claremont Creek, located approximately 0.8 miles northwest of the Site. Claremont Creek flows generally east to west near the Site vicinity. The San Francisco Bay is located approximately 2 miles west of the Site.	None	N/A

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Automasters
6200 Shattuck Ave, Oakland

SCM Element	SCM Sub-Element	Description	Data Gap Item #	Resolution
Nearby Wells		<p>A well survey of the area performed by Woodward Clyde Consultants (WCC) in 1986 found five wells within a one mile radius of the Site. Two of these wells are (or were) used for industrial purposes, two for irrigation, and one for domestic purposes. No municipal wells were identified anywhere near the Site.</p> <p>The closest well is the irrigation well at 3215 Adeline Street in Berkeley, approximately 1,340 feet west-northwest of the Site. The only other well within a 2000-foot radius of the Site is the domestic well, which is located 1,800 feet south-southeast (cross-gradient) from the Site.</p> <p>A well survey was also performed by evaluating the Alameda County Public Works Agency (ACPWA) database in 2016. The only wells identified by ACPWA within the 2,000-foot search radius were groundwater monitoring wells and cathodic protection wells.</p>	None	N/A

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Automasters
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SCM Element	SCM Sub-Element	Description	Data Gap Item #	Resolution
Release Source and Volume		<p>The two USTs removed in 1986 comprise the only known release mechanism impacting soil and groundwater underlying this Site. There is no UST removal report or other definitive documentation that no other USTs or underground piping remain at the Site. The surrounding area is primarily residential and there are no current or former UST cases within 1,000 feet of the Site listed on GeoTracker. It is not known whether the UST release was from the piping, dispensers, and/or USTs themselves.</p> <p>There is no known history of leaks or spills from the aboveground waste oil storage vessels (former or current) or other aspects of the automotive repair operation. Seven shallow soil samples collected near the current and former waste oil storage areas in 2015 were all clean, indicating that there has been no environmental impact from waste oil handling operations at the site. Additional soil samples were collected from four locations adjacent to the waste oil storage areas in March 2017 and analyzed for poly-nuclear aromatics (PNAs) by EPA Method 8270 and CAM 5 metals. All of these results provided additional confirmation that there are no impacts resulting from waste oil storage and handling at this site.</p> <p>The volume of this release is very difficult to ascertain.</p> <p>Based on the lack of definitive documentation regarding removal of the USTs, a geophysical survey was performed to determine whether any USTs or underground piping remain at the Site. The survey used horizontal magnetic gradient (HMG), ground penetrating radar (GPR) and metal detection (MD) methods to evaluate a 2000-square foot area in which the USTs, piping and dispensers were known to have been located. No evidence of any USTs or fuel distribution piping was detected by any of these geophysical methods, so it is concluded that the primary source (all USTs and associated piping) has been removed.</p>	None	N/A

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Automasters
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SCM Element	SCM Sub-Element	Description	Data Gap Item #	Resolution
LNAPL		<p>Light non-aqueous phase liquids (LNAPL) have not been encountered in any of the three groundwater monitoring wells installed in December 2015, either during the well development or subsequent sampling activities. There was no evidence of LNAPL in the groundwater “grab” samples collected from borings B-8 through B-20 on March 22, 2017.</p> <p>Although elevated soil and groundwater concentrations of TPH-g on the south side and southwest corner of the Site indicate the possible presence of LNAPL, there has been no evidence of LNAPL to date. Therefore, it is concluded that LNAPL is not present at this site.</p>	None	N/A
Source Removal Activities		<p>It is reported that contaminated soil between the USTs was excavated and transported off-site for disposal. No records are available regarding the quantity or final destination of this soil.</p>	None	N/A
Contaminants of Concern		<p>Based on the information available from the Site owner and the 2006 and 2015 remedial investigation reports, contaminants of concern (COCs) are TPH-g, TPH-d, TPH-mo, and VOCs by EPA Method 8260B (including naphthalene). MtBE and other fuel oxygenates/additives were all reported as N.D. at the standard method detection limits in the 2006 and 2015 laboratory reports, so they are not COCs at this Site.</p> <p>Waste oil has been stored above grade at the Site and there is no evidence or documentation of spills from these containers. Shallow soil samples collected from several areas adjacent to where waste oil has been stored in aboveground containers over the years were analyzed for all the COCs listed above as well as semi-volatile organic compounds (PNAs) and LUFT 5 metals. All results confirm that there is no subsurface contamination related to waste oil storage at the Automasters facility.</p>	None	N/A

SITE CONCEPTUAL MODEL – REVISED JULY 2017
Automasters
6200 Shattuck Ave, Oakland

SCM Element	SCM Sub-Element	Description	Data Gap Item #	Resolution
<p style="text-align: center;">Petroleum Hydrocarbons in Soil</p>		<p>Significant concentrations of COCs were reported in five of the seven 20-foot deep borings installed in December 2015 (three of which were completed as monitoring wells). The highest concentrations were reported in the soil sample from MW-101 at 10 feet bgs, which had 3,100 mg/kg TPH-g, 2.5 mg/kg benzene, and 33 mg/kg naphthalene.</p> <p>Additional site investigation was performed in March 2017 to further characterize the lateral extent of soil contamination, both on-site and off-site. The scope of work for this site investigation is presented in Section 6 of the <i>Data Gap Investigation Work Plan</i> and associated <i>Addendum</i>. A brief description of the work performed is as follows:</p> <p>The geophysical survey did not reveal the presence of additional USTs or underground piping, so nine additional soil borings were advanced to 20 feet bgs in the vicinity of the former USTs, piping and dispensers to determine whether a secondary source remains at the Site. The locations of these borings are shown on <i>Figure 2</i>. These borings were sampled at 5-foot intervals and wherever there was physical evidence of contamination. Significant concentrations of TPH-g (1,800 to 2,000 mg/kg) and TPH-d (220 to 450 mg/kg) were reported at 10 feet bgs in borings B-12 and B-14, both located directly south of the former UST and dispenser island area.</p> <p>In order to further define the lateral extent of soil contamination, samples were collected from the off-site groundwater grab sample boreholes B-17 to B-20 (also shown on <i>Figure 2</i>). No significant concentrations of any COCs were reported in these soil samples, so it is concluded that off-site soil contamination is not a concern at this facility.</p> <p>All soil sample results for COCs from the 2006, 2015 and 2017 remedial investigation events are included on <i>Table B-1</i> found in <i>Appendix B</i>.</p>	<p style="text-align: center;">None</p>	<p style="text-align: center;">N/A</p>

SITE CONCEPTUAL MODEL – REVISED JULY 2017
Automasters
6200 Shattuck Ave, Oakland

SCM Element	SCM Sub-Element	Description	Data Gap Item #	Resolution
<p>Petroleum Hydrocarbons in Groundwater</p>		<p>Three groundwater monitoring wells were installed in December 2015. The initial samples from MW-101 and MW-103 had significant concentrations of COCs, while upgradient well MW-102 was clean. TPH-g and benzene concentrations in MW-101 were 18,000 µg/L and 1,000 µg/L, respectively.</p> <p>Additional groundwater samples were collected in March 2017 from Geoprobe borings B-8 to B-20. All 13 of these borings were left open overnight to allow collection of a groundwater “grab” sample. The highest concentrations of COCs were found in samples from B-12 (11,000 µg/L TPH-g, 900 µg/L benzene, and 2,700 µg/L TPH-d), B-15 (11,000 µg/L TPH-g, 1,100 µg/L benzene, and 2,400 µg/L TPH-d) and B-9 (3,700 µg/L TPH-g and 4,000 µg/L TPH-d). Borings B-12 and B-15 are located between the former dispenser island and MW-101, so these results are consistent with the predominant groundwater gradient being to the south (MW-101 is directly south of the source area).</p> <p>Of the four off-site borings, COC concentrations for these groundwater “grab” samples were only significant in B-20, located 20 feet west of MW-101. This sample had 1,100 µg/L TPH-g, 14 µg/L benzene, and 610 µg/L TPH-d, indicating that off-site migration is an issue that requires further investigation.</p> <p>The TPH-g and TPH-d concentrations in groundwater from the March 2017 remedial investigation and quarterly monitoring event are shown on <i>Figure 7</i> and <i>Figure 8</i>, respectively.</p> <p>A utility survey performed in February 2016 determined that there are several utility corridors running along 62nd Street directly south of the Site and along Shattuck Avenue directly west of the Site. Based on the data gathered during the 2017 remedial investigation, these utilities do not appear to be acting as preferential pathways for contaminant migration</p>	<p>1. Lateral extent of off-site groundwater migration</p>	<p>Install a groundwater monitoring well on the west side of Shattuck Avenue and collect groundwater samples to determine whether the contamination has migrated that far</p>

SITE CONCEPTUAL MODEL – REVISED JULY 2017
Automasters
6200 Shattuck Ave, Oakland

SCM Element	SCM Sub-Element	Description	Data Gap Item #	Resolution
Risk Evaluation		<p>The Site is currently used as an independent automotive repair facility. 6200 Shattuck Partners, LLC would like to proceed with development of the Site, involving mixed-use commercial and residential facilities. The Site and surrounding properties are zoned RM-4, Mixed Housing Residential Zone 4 as defined in Section 17.17.010 of the Municipal Code. The objective of this zoning classification is to maintain an enhanced residential area “characterized by a mix of single family homes, townhouses, small multi-unit buildings... and neighborhood businesses where appropriate”.</p> <p>Identified potential human receptors include residents at the Site and nearby homes and apartments, workers and patrons of nearby commercial establishments, and construction workers involved with Site development. The homes and small commercial establishments located downgradient from the Site are considered the only likely off-site receptors. Homes across Shattuck Avenue (west and southwest of the Site) have basements, so it is possible that contaminant migration may have caused vapor intrusion into these residences.</p> <p>A soil vapor survey has not been performed at the Site. Based on the soil data from 2015 and 2017 along with the potential for residential land use, the exposure scenarios listed in the LTCP have been evaluated using residential standards for shallow soils (< 5 feet bgs). The concentrations of benzene, ethylbenzene and naphthalene in shallow soil samples from all 30 locations were mostly non-detect and in all cases significantly below the thresholds listed in the residential column on <i>Table 1</i> in the Direct Contact and Outdoor Air Exposure section of the LTCP. However, shallow soil samples have not been analyzed for PAHs by EPA Method 8270 or CAM 5 metals, which could have been released during spills from the aboveground waste oil storage vessels.</p> <p>In order to evaluate the potential for vapor intrusion to indoor air, the concentrations of TPH-g and TPH-d in soils <10 feet bgs and the benzene concentration in groundwater must be compared with the scenarios depicted in the appendices of the LTCP. The sum of TPH-g & TPH-d concentrations in shallow soil samples from MW-101, MW-103 and DP-2 exceed 100 ppm and the benzene concentration in MW-101 is 1,000 µg/L. Consequently, the potential for vapor intrusion to indoor air cannot be dismissed without performing a soil vapor survey.</p>	2. Potential for soil vapor intrusion to indoor air, particularly in residential basements on the west side of Shattuck Avenue	Perform a soil vapor survey to determine whether any of the residences to the west or southwest of the Site (across Shattuck Avenue) have been impacted by this release

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6200 Shattuck Ave, Oakland

SCM Element	SCM Sub-Element	Description	Data Gap Item #	Resolution
Risk Evaluation		<p>A limited sensitive receptor evaluation has been performed based on Sensitive Receptor Surveys performed at nearby sites. Other potential receptors within 2,000 feet of the Site include the Sankofa Academy Elementary School, whose property begins 400 feet south of the Site, and Colby Park, located 1,800 feet east of the Site. A limited sensitive receptor evaluation has been performed based on Sensitive Receptor Surveys performed at nearby sites. The other potential receptor within 2,000 feet of the Site is the Sankofa Academy Elementary School, whose property begins 400 feet south of the Site. Colby Park, located 2,300 feet east of the Site is just outside the 2,000 foot radius. Based on the known direction of groundwater flow in the area these receptors are cross-gradient and upgradient of the Site, so it is highly unlikely that they would be impacted by this release.</p> <p>Identified potential human receptors include residents at the Site and nearby homes and apartments, workers and patrons of nearby commercial establishments, and construction workers involved with Site development. Once the soil vapor survey has been completed it will be possible to perform a thorough evaluation of whether Site conditions might impact any of the off-site receptors.</p> <p>If there are complete pathways that require mitigation, a Remedial Action Plan will be prepared and submitted to ACDEH for approval.</p>		



APPENDIX H

**Electronic Data Submittal Confirmation
(GeoTracker)**

Your GEO_REPORT file has been successfully submitted!

<u>Submittal Type:</u>	GEO_REPORT
<u>Report Title:</u>	Remed Investigation Rpt
<u>Report Type:</u>	Remedial Investigation Report
<u>Report Date:</u>	7/28/2017
<u>Facility Global ID:</u>	T0619748201
<u>Facility Name:</u>	AUTOMASTERS
<u>File Name:</u>	Automasters - Remedial Investigation Rpt - July 2017 REDUCED 2.pdf
<u>Organization Name:</u>	West & Associates Environmental Engineers, Inc.
<u>Username:</u>	WESTENGINEERS
<u>IP Address:</u>	38.102.44.215
<u>Submittal Date/Time:</u>	8/22/2017 1:23:48 PM
<u>Confirmation Number:</u>	3793972909