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February 17, 2015

Mr. Ed Ralston
Program Manager – Remediation Management
Phillips 66 Company
76 Broadway
Sacramento, CA 95818

RE: Soil and Groundwater Conditions Assessment Report
Phillips 66 Facility No. 255353 (AOC #1396)
600 Westlake Avenue North
Seattle, Washington
Cardno ATC Project No. 76.75118.1396
Washington Department of Ecology VCP Project No. NW1714

Dear Mr. Ralston:

Cardno ATC is pleased to submit this report documenting current soil and groundwater conditions surrounding the former Phillips 66 (P66) Facility No. 255353 (AOC 1396). The former facility address is 600 Westlake Avenue North, Seattle, Washington. P66 is conducting investigation, cleanup, and monitoring of the former P66 facility (formerly located on the southwest portion of City Block #77) and those properties on or around Block #77 bounded by Westlake Avenue North, Valley Street, Terry Avenue North, and Mercer Street (herein referenced as the Site). P66 is conducting the investigation, cleanup, and monitoring pursuant to a Settlement and Remedial Action Agreement (Settlement Agreement) among ConocoPhillips (now P66), Union Oil Company of California, City Investors XI, LLC (City Investors), and the City of Seattle (City) that was executed in April 2007.

This report briefly describes the Site and the Site's pertinent environmental history. The report then documents Cardno ATC's field observations and activities, soil and groundwater exploration and sample collection methods, and presents the soil and groundwater analytical results.

The layout of the Site and immediate area is shown in **Figure 1**.

SITE DESCRIPTION

P66 formerly owned the property that comprises the south half of the city block that is bounded on the north by Valley Street, to the east by Terry Avenue North, to the south by Mercer Street, and to the west by Westlake Avenue North. It is possible this city block is known as City Block #77 (and will be referred to as City Block #77 herein). City Investors XI, LLC (City Investors) currently owns all the properties comprising City Block #77. The eastern portion of the north half of City Block #77 was formerly occupied by the Brace Lumber Mill and subsequently by a Denny's restaurant. A former Union 76-branded gasoline service station (previously owned by Union Oil Company of California [Unocal]) previously occupied the southwest portion of City Block #77. The City currently holds easements for public rights-of-way on the streets and avenues surrounding the block.

All previous facilities on City Block #77 have been removed and/or demolished, and the north half of the block is currently used as a parking lot. As part of the Mercer Corridor Project (MCP), the City acquired a 70-foot wide strip of land (then owned by P66, now by City Investors) located along on the north side of Mercer Street between Terry Avenue North and Westlake Avenue North in the MCP area. The approximate western two-thirds of the south half of City Block #77 was previously occupied by numerous above ground storage/treatment tanks utilized as part of a construction dewatering system associated with the development of the city block west of City Block #77, across Westlake Avenue North. This portion of the site is currently used as a construction staging area. The approximate eastern one-third of the south half of City Block #77 is occupied by the above ground AS/SVE system compound that is currently operating.

SITE ENVIRONMENTAL HISTORY

In 1980, Unocal discovered that approximately 80,000 gallons of supreme leaded gasoline was released from a product line south of the western pump islands at the Westlake 76 Station to the subsurface over a four-month period. In response to the release approximately 41,900 gallons of liquid phase hydrocarbons (LPH) was recovered between June 1980 and October 1982.

In 1988, an initial SVE system was installed utilizing the then existing recovery wells and trenches. Approximately 4,262 pounds of gasoline was recovered by the SVE system between June 1988 and August 1990, when the system was shut down due to decreasing extracted vapor concentrations. Between January 1991 and July 1993, approximately 465 gallons of LPH was recovered during periodic manual/passive LPH removal efforts. The initial SVE system continued to operate through May 1995.

In 2003, P66 installed a new AS/SVE system at the Westlake 76 Station that included an AS/SVE trench, SVE wells, and several deep AS wells. Approximately 1,410 tons of petroleum impacted soil was removed and transported for treatment during the installation of the remediation system trenches and wells.

Between July 2006 and April 2007, pursuant to the April 2007 Settlement Agreement between P66 and the City, a total of approximately 16,172 tons of soil was excavated from the Westlake and Terry Avenue North ROWs, between Mercer and Valley Streets. Influent vapor samples indicated that the petroleum hydrocarbon impact was highest in those SVE wells completed in Terry Avenue North. Between

November 2007 and August 2008, a total of 28,142 gallons of impacted groundwater was removed from the recovery wells along Terry Avenue.

In September 2008, the Westlake 76 Station was demolished, all above-ground structures were removed, and all of the existing conveyance piping for the remediation wells were cut and capped in their respective ROWs.

During the MCP, numerous SVE and AS wells were installed in Terry Avenue North, Mercer Street, Valley Street, and Westlake Avenue North. Between August and November 2013, all of the remediation wells/conveyance piping located in the Mercer and Valley Street ROWs and the Westlake and Terry Avenue ROWs were connected to the new above ground AS/SVE treatment system currently located on the southeastern portion of City Block #77. The treatment system was started in December 2013. As of December 31, 2014, approximately 3,115 pounds of total petroleum hydrocarbons have been removed from portions of the Mercer and Valley Street ROWs and the Westlake and Terry Avenue ROWs.

Groundwater monitoring has been conducted at the Site since 1988. The previous monitor well network consisted of 14 wells, including MWR-1 through MWR-6, MW-41, MW-45, MW-50, MW-54, MW-209 through MW-211, and SMW-3. All other wells were either destroyed or decommissioned due to construction or remedial activities. Documentation for the former well network can be found in previous reports. Depth to groundwater typically fluctuates between 9 and 12 feet below ground surface (bgs) over much of the area. Based on depth to groundwater measurements, it is apparent that groundwater flow is not consistent beneath City Block #77, but generally appears to flow towards the north. Groundwater flow direction is likely impacted by subsurface hydro-geologic barriers installed during remedial excavation activities completed in 2008 and/or the current dewatering activities taking place west of the Site. A baseline monitoring event was conducted in November 2013 prior to starting the currently operating remediation system. Baseline analytical results were similar to historic results since 2011.

SOIL AND GROUNDWATER ASSESSMENT ACTIVITIES

The site assessment activities described in this report consisted of monitor well installation activities (adding eight additional monitor wells to the network, bringing the total monitor well network to 22 wells). Soil and grab- groundwater sampling activities were conducted during the well installation activities. The well installation activities were completed between September 29, 2014 and October 6, 2014 and the grab-groundwater sampling activities were conducted following the monitoring well installation.

The monitor well installation activities were completed using air-knife or water-jet/vacuum truck and hollow-stem auger drilling equipment owned and operated by Cascade Drilling L.P. (Cascade Drilling) of Woodinville, WA. A Cardno ATC representative observed all well installation activities and collected soil samples from the monitor well borings and grab-groundwater samples from the newly installed wells.

Pre-Field Activities

Prior to conducting the field activities, a site-and-project-specific health and safety plan (HASP) was prepared identifying potential physical and chemical hazards associated with the proposed field activities,

specified personal protective equipment and safety monitoring requirements. A copy of the HASP was made available onsite during the field activities.

Prior to any subsurface exploration work, Cardno ATC marked the location of the proposed explorations. The underground utilities were identified by requesting underground locating by the Public Utility Notification Service and by contracting a private utility locator.

Cardno ATC secured a utility permit (Street Use Permit No. 244362) from the Seattle Department of Transportation in August 2014 for the assessment activities. Additionally, the licensed drilling contractor filed the necessary Start Cards with Washington State.

In order to safely conduct the field work within the City's ROWs, it was necessary to coordinate and implement traffic control with a traffic control subcontractor. The traffic control plans were reviewed and approved by the Seattle Department of Transportation and were incorporated under Permit No. 244362.

Monitor Well Boring and Soil Sampling Activities

On September 29, 2014, Cardno ATC observed Cascade Drilling clear the upper five feet of monitor well boring MW-212 using an air-knife/vacuum truck. This boring is located along the north side of Mercer Street between Westlake Avenue North and Terry Avenue North. Shallow soil samples were not collected between the surface and 5 feet bgs.

On September 30, 2014, Cardno ATC observed Cascade Drilling clear the upper six to 6.5 feet of monitor well borings MW-213, MW-214 and MW-215 (located along the south side of Valley Street, between Westlake Avenue North and Terry Avenue North) using a water-jet/vacuum truck. On the same day, Cardno ATC also observed Cascade Drilling complete monitor well boring MW-212. Monitor well boring MW-212 was advanced using a full size truck-mounted hollow-stem auger drill rig to a total depth of 25 feet bgs.

On October 1, 2014, Cardno ATC observed Cascade Drilling complete monitor well borings MW-213, MW-214, and MW-215. These borings were advanced to depths between 17 and 20 feet bgs using a limited access hollow-stem auger drill rig.

On October 2, 2014, Cardno ATC observed Cascade Drilling clear the upper five to six feet of monitor well borings MW-216 and MW-217 using a water-jet/vacuum truck. These borings are located along the north side of the median within Mercer Street between Westlake Avenue North and Terry Avenue North. On this same day, Cardno ATC also observed Cascade Drilling complete monitor well boring MW-216 to a total depth of 25 feet. This boring was completed using a limited access hollow-stem auger drill rig.

On October 3, 2014, Cardno ATC observed Cascade Drilling clear the upper eight feet of monitor well borings MW-218 (located along the north side of the median within Mercer Street between Westlake Avenue North and Terry Avenue North) and MW-219 (located on the east side of Terry Avenue between Mercer Street and Valley Street). On this same day, Cardno ATC also observed Cascade Drilling complete monitor well borings MW-217, MW-218, and MW-219. Monitor well borings MW-217 and MW-218 were advanced to 25 feet BGS; MW-219 was advanced to 20 feet BGS. These borings were completed using a limited access hollow-stem auger drill rig.

The locations of boreholes MW-212 through MW-219 are shown on **Figures 1, 2 and 3.**

The lithology encountered in the borings generally consisted of silty sand with varying amounts of gravel to the total depths explored. Groundwater was encountered during drilling in borings MW-212, MW-216, MW-217, MW-218, and MW-219 at depths between approximately 15 to 20 feet BGS. Groundwater was encountered during drilling in borings MW-213, MW-214, and MW-215 at depths of approximately 10 feet BGS.

Soil samples were collected from the monitor well borings at approximate five-foot intervals using standard split-spoon sampling equipment for lithologic profiling, field screening and chemical analysis. Soil sampling equipment was cleaned with a Liquinox wash, tap water rinse, and a distilled water rinse between each sampling attempt. Samples were field-screened for the presence of volatile organic constituents (VOCs) using a portable photoionization detector (PID). Field screening was conducted by placing a portion of the collected soil into a sealable plastic bag and then monitoring headspace vapor concentrations using a PID. Soil lithology was described using the Unified Soil Classification System. A description of the lithology encountered and PID measurements obtained are presented on the boring logs presented in **Attachment A**.

Soil samples from collected from each soil boring were submitted for chemical analysis. Soil samples from each boring were analyzed for the following constituents of concern (COCs) by the following methods (as described on Table 830-1 of WAC 173-340-900):

- Total petroleum hydrocarbons as gasoline (TPH-G) by Ecology Method NWTPH-Gx;
- Benzene, Toluene, Ethylbenzene, and total Xylenes (BTEX), Ethylene Dibromide (EDB), Ethylene Dichloride (EDC), and Methyl Tertiary Butyl Ether (MTBE), by Environmental Protection Agency (EPA) Method 5035A/8260B.
- Total Lead by EPA Method 6000/7000.

Following Ecology requirements, soil samples collected by Method 5035A were obtained from the split-spoon sampler using a hand-held plunger set to collect the appropriate volume of soil for subsequent VOC analysis by EPA Method 8260B. Soil collected in the plunger was transferred to laboratory-prepared VOA vials equipped with septum lids. Samples for remaining analysis were transferred to laboratory-prepared jars equipped with Teflon lids. All samples were immediately placed in an ice chest, and kept cool until delivery to the laboratory. Standard chain-of-custody procedures were observed during transport of the samples to the laboratory.

Analytical results for the soil samples collected from monitor well borings MW-212 through MW-219 are summarized in **Table 1 and are shown on Figure 2**. Laboratory analytical reports and COC documentation are provided in **Attachment B**.

Monitor Well Installation and Development Activities

Following completion of drilling and soil sampling activities between September 29 and October 6, 2014, a monitor well was constructed in each borehole using two-inch diameter, schedule 40 polyvinyl chloride

(PVC) casing and 0.010-inch machine slotted PVC screen. The tops of the well screens were placed between five and 10 feet bgs such that they will extend above the water table as historically measured in the existing monitor well network. The annular space surrounding the well screens were filled with clean 8-12 silica sand from the bottom of the boring to between 0.5-foot and 1.5-feet above the top of the screens. The upper portions of the annular space were filled with hydrated bentonite chips to a depth of approximately two feet bgs. The upper two feet were sealed with concrete and finished with flush mount, traffic-rated well monuments.

Each newly installed well was developed using a combination of surging (with a surge block) and groundwater extraction using a peristaltic pump. The wells were developed until the groundwater turbidity was significantly reduced or until the following water quality parameters stabilize for two consecutive readings as follows:

- pH +/- 0.1 standard units
- temperature +/ 0.1 degree Celsius
- specific conductance +/- 10.0 ohm-cm
- dissolved oxygen +/- 0.2 mg/L
- oxidation reduction potential (ORP) +/- 10 millivolts

Monitor Well Surveying Activities

The top-of-casing (TOC) elevations of the existing and newly installed monitor wells were surveyed to the nearest 0.01-foot by Cardno, a licensed surveyor, on December 9, 2014. The horizontal locations and elevations were completed in State Plane Coordinates and NAVD 88 Vertical Datum. A permanent mark wasplaced on the north side of the well casings to be used as a reference point for measuring depth to water in the wells. The survey data is provided in Attachment C.

Monitor Well Gauging Activities

Between September 30 and October 6, 2014, prior to collecting groundwater samples, depth-to-water measurements from each newly installed well were recorded to the nearest 0.01-foot using an electronic water level indicator. The depths to groundwater are summarized in **Table 1**. Groundwater was measured in monitor wells MW-212 through MW-219 at depths ranging between 11.63 feet (MW-213) and 23.64feet (MW-217). Free product was not observed in any of the monitor wells during the gauging activities.

Groundwater Sampling Activities

On October 1, 2014, Cardno ATC collected a grab-groundwater sample from monitor well MW-212. On October 3, 2014, Cardno ATC collected grab-groundwater samples from monitor wells MW-216, MW-217, and MW-218. On October 6, 2014, Cardno ATC collected grab groundwater samples from monitor wells MW-219, MW-213, MW-214, and MW-215.

Grab groundwater samples were collected from the newly installed wells using a peristaltic pump and disposable polyethylene tubing, following well development. The groundwater samples were immediately transferred to laboratory-supplied containers, labeled, and placed in an iced cooler until received by the analytical laboratory.

The groundwater samples were analyzed for the following COCs by the following methods:

- BTEX, EDB, EDC, and MTBE, by EPA Method 8260B;
- Total petroleum hydrocarbons as gasoline (TPHg) by Northwest Method NWTPH-Gx; and
- Total and dissolved lead by EPA Method 6000/7000.

Analytical results for the grab groundwater samples collected from monitor wells MW-212 through MW-219 are summarized in **Table 2 and are shown on Figure 3**. Laboratory analytical reports and COC documentation are provided in **Attachment B**.

Waste Disposal

Investigation derived waste (IDW) generated during the field operations was placed into labeled 55-gallon drums pending characterization and disposal. IDW included soil cuttings and liquid in the form of purge and decontamination water as well as water/soil mixtures from the water-jet/vacuum truck activities. All of the IDW generated during the field operations was transported from the Site by DH Environmental on December 29, 2014. DH Environmental transported the IDW to Chemical Waste Management Incorporated for disposal at their facility in Arlington, Oregon. The non-hazardous waste manifests are provided in Attachment D.

ANALYTICAL RESULTS

As shown on **Table 1**, laboratory analytical results for the soil samples selected for analysis indicate the following:

- Gasoline-range hydrocarbons were detected at concentrations ranging between 7.3 mg/Kg to 635 mg/Kg in soil samples B-213-10', B-213-15', B-216-10', B-217-15', B-218-10', B-218-15', B-218-20', and B-219-10'. Only the gasoline-range hydrocarbons detected in samples B-213-10' (130 mg/Kg), B-218-10' (635 mg/Kg), B-218-15' (55.5 mg/Kg), and B-218-20' (272 mg/Kg) exceeded the most-stringent MTCA Method A cleanup level of 30 mg/Kg. Gasoline-range hydrocarbons were not detected above the laboratory's method reporting limits in the remaining samples submitted for analysis.
- Benzene was detected at concentrations ranging between 5.1 µg/Kg to 274 µg/Kg in soil samples B-212-10', B-214-6', B-215-6', B-215-10', B-216-10', B-217-15', B-218-15', and B-218-20'. Only the benzene concentration detected in B-215-10' (274 µg/Kg) exceeded the MTCA Method A cleanup level of 30 µg/Kg. Benzene was not detected above the laboratory's method reporting limits in the remaining samples submitted for analysis.
- Toluene was detected at concentrations ranging between 7.3 µg/Kg to 41.8 µg/Kg in soil samples B-212-10', B-216-15', B-218-15', and B-218-20'. None of the detected concentrations exceeded the MTCA Method A cleanup level of 7,000 µg/Kg. Toluene was not detected above the laboratory's method reporting limits in the remaining samples submitted for analysis.
- Ethylbenzene was detected at concentrations ranging between 5.6 µg/Kg to 10.6 µg/Kg in soil samples B-212-10' and B-219-10', respectively. None of the detected concentrations exceeded the MTCA Method A cleanup level of 6,000 µg/Kg. Ethylbenzene was not detected above the laboratory's method reporting limits in the remaining samples submitted for analysis.

- Total Xylenes were detected at concentrations ranging between 19.1 µg/Kg to 973 µg/Kg in soil samples B-212-10', B-217-15', B-218-20', and B-219-10'. None of the detected concentrations exceeded the MTCA Method A cleanup level of 9,000 µg/Kg. Toluene was not detected above the laboratory's method reporting limits in the remaining samples submitted for analysis.
- EDB, EDC, and MTBE were not detected above the laboratory's method reporting limits in any of the soil samples submitted for analysis.
- Total lead was detected in each of the soil samples at concentrations ranging between 1.6 mg/Kg to 54.2 mg/Kg. None of the detected concentrations exceeded the MTCA Method A cleanup level of 250 mg/Kg.

It should be noted that in instances where the laboratory's method reporting limits for "non-detect" analytes exceeded the MTCA Method A cleanup levels, the laboratory's method detection limits (MDLs) were requested, and are also presented on **Table 1**. With the exception of EDB for samples B-213-10', B-215-10', and B-218-10', all of the MDLs are less than the MTCA Method A cleanup levels, and none of the analytes were detected above the MDLs (**Table 1**). The MDLs for EDB in samples B-213-10', B-215-10', and B-218-10' were 6.7 µg/Kg, 11.9 µg/Kg, and 7.1 µg/Kg, respectively. These MDLs only slightly exceed the MTCA Method A cleanup level for EDB of 5.0 µg/Kg. Given the fact that EDB was not detected above the laboratory's MRLs or MDLs in other samples with detected concentrations of gasoline-range hydrocarbons, it is unlikely EDB is present in any of the samples at concentrations greater than the MTCA Method A cleanup levels.

As shown on **Table 2**, laboratory analytical results for the grab-groundwater samples submitted for analysis indicate the following:

- Gasoline-range hydrocarbons were detected at concentrations ranging between 105 µg/L and 492 µg/L in grab-groundwater samples collected from MW-213, MW-218, and MW-219. None of the detected concentrations exceed the MTCA Method A cleanup levels. Gasoline-range hydrocarbons were not detected above the laboratory's method reporting limits in the remaining samples submitted for analysis.
- BTEX compounds were detected at concentrations ranging between 1.8 µg/L and 9.1 µg/L in grab-groundwater samples collected from MW-217, MW-218, and MW-219. None of the detected concentrations exceeded the corresponding MTCA Method A cleanup levels. BTEX compounds were not detected above the laboratory's method reporting limit in the remaining samples submitted for analysis.
- EDB, EDC, and MTBE were not detected above the laboratory's method reporting limits in any of the grab-groundwater samples submitted for analysis.
- Total lead was detected at a concentration of 11 µg/L in the grab-groundwater sample collected from MW-213. This concentration is less than the MTCA Method A cleanup level of 15 µg/L . Total lead was not detected above the laboratory's method reporting limit in the remaining samples submitted for analysis.
- Dissolved lead was not detected above the laboratory's method reporting limits in any of the grab-groundwater samples submitted for analysis.

CONCLUSIONS

Constituents of concern (COCs) were either not detected, or were detected at concentrations less than the MTCA Method A cleanup levels in all of the soil samples collected from the monitor well borings (with the exception of samples collected from B-213, B-215 and B-218). COCs were either not detected, or were detected at concentrations less than the MTCA Method A cleanup levels in all of the grab-groundwater samples collected from the monitor wells.

The highest concentrations of gasoline-range hydrocarbons were detected in the soil samples collected from boring B-218, located at the west end of the median in Mercer Street. The soil data collected from this boring indicates that fuel-related contamination ranges from 10 to 20 feet bgs. The vertical thickness of contamination at this location maybe associated with a "smear zone" created by the fluctuating groundwater table. Gasoline-range hydrocarbons and benzene also were detected at concentrations above the MTCA Method A cleanup levels in the soil samples collected from borings B-213 and B-215, respectively, at depths of 10 feet bgs. The vertical thicknesses of impact at these boring locations are less than that at boring B-218.

RECOMMENDATIONS

Cardno ATC recommends that gauging and groundwater sampling of all monitoring wells continue to be conducted on a periodic basis to further assess and confirm the performance of the AS/SVRE treatment system installed at the Site. The last groundwater monitoring and sampling event was completed on December 8 and 9, 2014. The results of the December 2014 monitoring and sampling event will be provided in a forthcoming report.

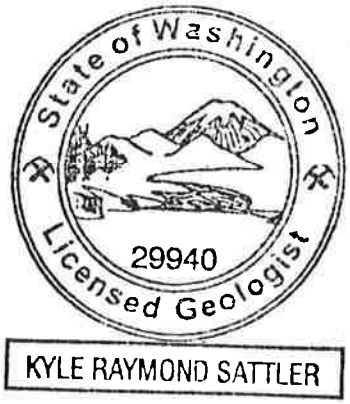
Cardno ATC also recommends that the remediation system continue to be adjusted to maximize treatment of the impacted soil, particularly in the vicinities of monitor wells MW-213, MW-215 and MW-218.

We appreciate the opportunity to be of service on this project. If you have questions regarding this report, please contact Kyle Sattler at (503) 684-0525.

Sincerely,

Cardno ATC

Kyle Sattler, L.G.
Senior Project Manager



Enc: Figure 1 – Site Plan

Figure 2 – Soil Conditions Map

Figure 3 - Groundwater Conditions Map

Table 1 – Summary of Soil Analytical Results – Hollow Stem Auger Borings

Table 2 – Summary of Groundwater Gauging and Laboratory Analytical Results (MW-212 through MW-219)

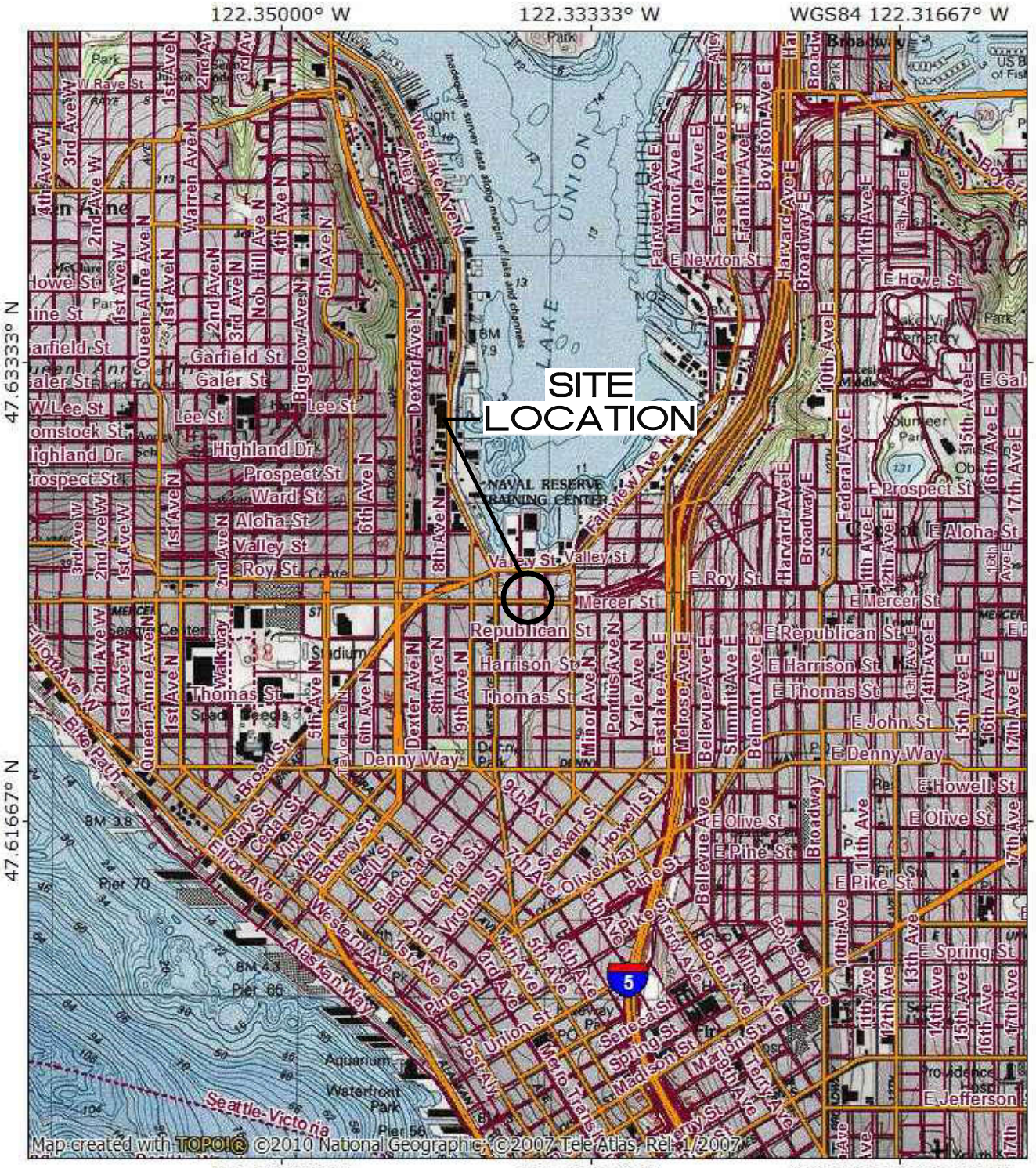
Attachment A – Boring Logs

Attachment B – Laboratory Analytical Reports

Attachment C – Monitor Well Survey Data

Attachment D – Non-hazardous Waste Manifests

FIGURES



SOURCE: USGS TOPO MAP, SEATTLE SOUTH E, WA QUAD, 1983

SITE VICINITY MAP

PHILLIPS 66 FACILITY NO. 255353 (AOC 1396)
600 WESTLAKE AVENUE N
SEATTLE, WA

PROJECT NUMBER: 76.75118.1396		DATE: 6/20/14	FIGURE 1
APPROVED BY: KS		DRAWN BY: BK	

Cardno ATC
Shaping the Future
6347 Seaview Avenue NW
Seattle, Washington 98107
Ph: (206) 781-1449 *** Fax: (206) 781-1543

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SOIL CONDITIONS MAP
(09/30/14 - 10/06/14)

PHILLIPS 66 FACILITY NO. 255353 (AOC 1396)
600 WESTLAKE AVENUE N
SEATTLE, WA

PROJECT NUMBER: Z076000040	DATE: 2/16/15	FIGURE 2
APPROVED BY: KS	DRAWN BY: BK	

Cardno Shaping the Future
6347 Seaview Avenue NW
Seattle, Washington 98107
Ph: (206) 781-1449 *** Fax: (206) 781-1543

5.0'	10.0'	15.0'
<6.2	<9.3	<9.6
15.1	**274**	<7.8
<3.3	<93.3	<7.8
<3.3	<96.3	<7.8
<10	<289	<23.4
6.9	6.9	10.7
<3.3	<96.3/<11.9	<7.8/<4.1
<3.3	<96.3	<7.8
<3.3	<96.3	<7.8

6.5'	10.0'	15.0'	20.0'
<6.0	**130**	7.3	<7.8
<3.3	<54.7/<10.9	<3.7	<4.9
<3.3	<54.7	<3.7	<4.9
<3.3	<54.7	<3.7	<4.9
<10	<164	<11.1	<14.7
7.1	35.9	44	215
<3.3	<54.7/<6.7	<3.7	<4.9
<3.3	<54.7	<3.7	<4.9
<3.3	<54.7	<3.7	<4.9

5.0'	10.0'	15.0'
<6.1	<6.3	<6.3
8.7	<3.6	<3.2
<3.7	<3.6	<3.2
<3.7	<3.6	<3.2
<11.1	<10.7	<9.5
6.5	5.3	3.7
<3.7	<3.6	<3.2
<3.7	<3.6	<3.2
<3.7	<3.6	<3.2

MW-219

10.0'
18.6
<9.9
<9.9
10.6
48
26
<9.9/<1.8
<9.9
10.6

6.0'	10.0'	15.0'	20.0'	25.0'
<6.2	<6.0	25.1	<7.2	<6.8
<5.8	<4.5	19	<5.5	<4.3
<5.8	<4.5	<7.7	<5.5	<4.3
<5.8	<4.5	<7.7	<5.5	<4.3
<17.5	<13.423.2	<16.4	<12.9	
9.2	12.1	15.1	2.2	11.2
<5.8/<1.0	<4.5	<7.7/<1.4	<5.5/<0.98	<4.3
<5.8	<4.5	<7.7	<5.5	<4.3
<5.8	<4.5	<7.7	<5.5	<4.3

6.0'	10.0'	15.0'	20.0'	25.0'
<5.6	<5.5	<9.7	<6.1	<8.7
<3.5	6.7	<5.1	<11.4	<6.5
<3.5	7.3	<5.1	<11.4	<6.5
<3.5	5.6	<5.1	<11.4	<6.5
<10.6	19.1	<15.3	<34.1	1.6
38.3	18.1	15.3	1.6	12.2
<3.5	<5.1/<0.91	<5.1/<0.91	<11.4/<2.0	<6.5/<1.2
<3.5	<5.1	<5.1	<11.4	<6.5
<3.5	<5.1	<5.1	<11.4	<6.5

10.0'	15.0'	20.0'	25.0'
635	**55.5**	**272**	<5.8
<57.8/<11.6	9.2	12.9	<4.2
<57.8	<4.8	<6.4	<4.2
<57.8	9.3	41.8	<4.2
<173	<14.5	973	<12.5
11.2	54.2	74	2.6
<57.8/<7.1	<4.8	<6.4/<7.1	<4.2
<57.8	<4.8	<6.4	<4.2
<57.8	<4.8	<6.4	<4.2

6.0'	10.0'	15.0'	25.0'
<5.7	12.5	<32.4	<7.0
<4.1	5.1	<26.5	<5.1
<4.1	<3.6	35.6	<5.1
<4.1	<3.6	<26.5	<5.1
<12.2	<79.6	<79.6	<15.3
2.7	47.9	4.5	10.2
<4.1	<3.6	<26.5/<4.7	<5.1/<0.91
<4.1	<3.6	<26.5	<5.1
<4.1	<3.6	<26.5	<5.1

LEGEND:

- LAMP POST
- WATER LINE
- PROPERTY LINES
- TRENCH ROUTES
- AS-1 AIR SPARGE WELL ON WESTLAKE AVENUE
- HORIZONTAL SVE WELL
- TSVE-1 SVE WELLS ON TERRY AVENUE
- MW-71 GROUNDWATER MONITORING WELL
- EFR-1 ENHANCED FLUID RECOVERY WELL
- MAS-1 AS WELL ON MERCER
- MSVE-7 SVE WELLS ON MERCER
- VAS-13 VALLEY STREET AS WELL
- VSVE-7 VALLEY STREET HORIZONTAL SVE WELL
- ELECTRICAL LINE FOR STREET LIGHTS
- SANITARY/ STORM SEWER
- STORM SEWER MANHOLE/CATCH BASIN
- ELECTRICAL LINE (SCL)
- COMMUNICATION LINE
- GAS LINE
- STREET CAR LINE
- SHEET PILE LOCATION
- GRAVITY WALL LOCATION

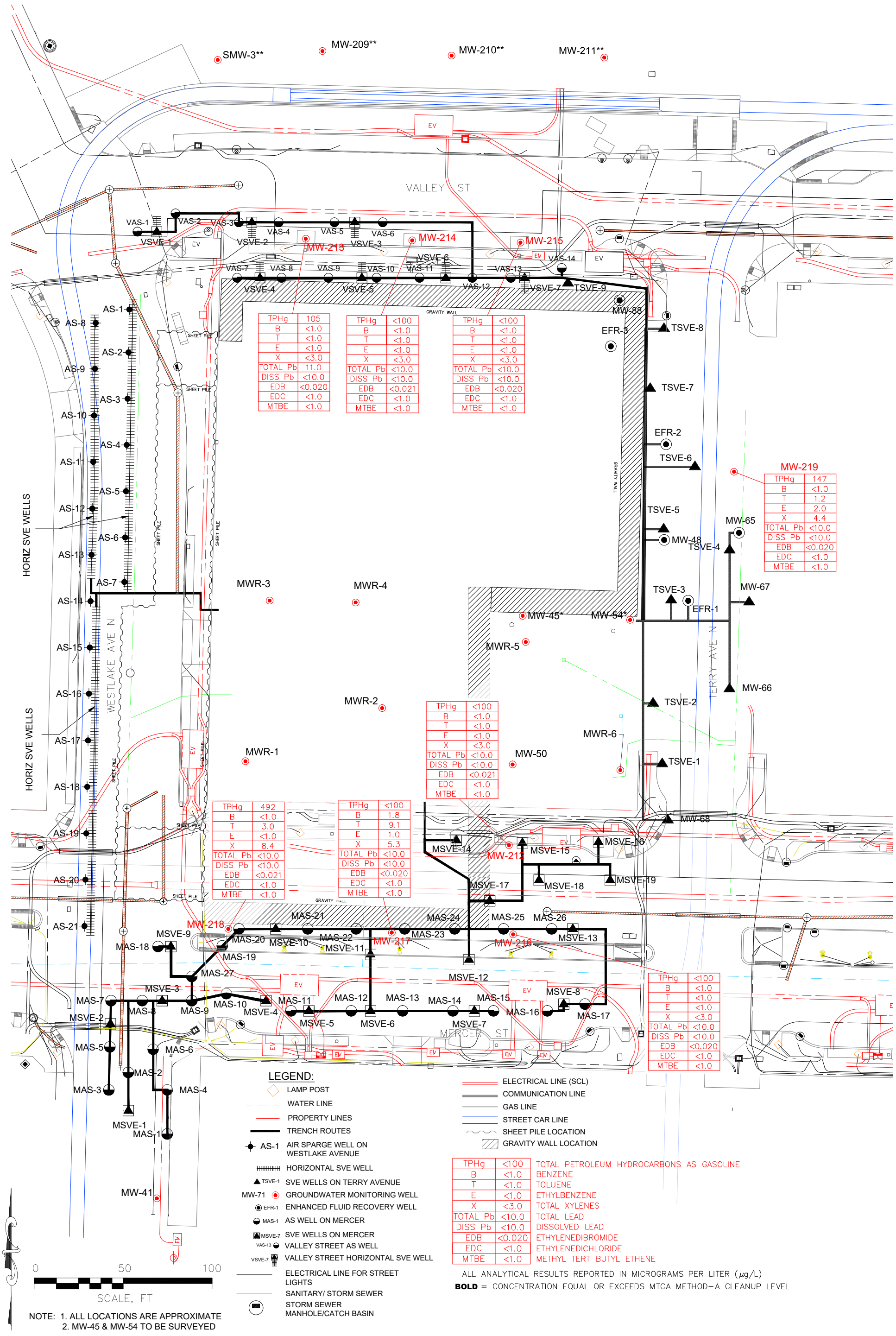
5.0'	DEPTH, FT
<5.7	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
<4.1	BENZENE
<4.1	TOLUENE
<4.1	ETHYLBENZENE
<12.2	TOTAL XYLENES
2.7	TOTAL LEAD
<4.1	ETHYLENEDIBROMIDE
<4.1	ETHYLENEDICHLORIDE
<4.1	METHYL TERT BUTYL ETHENE

ALL ANALYTICAL RESULTS REPORTED IN MICROGRAMS PER LITER (µg/L)
BOLD = CONCENTRATION EQUAL OR EXCEEDS MTCA METHOD–A CLEANUP LEVEL

0 50 100
SCALE, FT

NOTE: 1. ALL LOCATIONS ARE APPROXIMATE
2. MW-45 & MW-54 TO BE SURVEYED

S:\Projects\76\75000 COP\1396 SEATTLE\G-4 G-5 - Standard\SCM_093014.dwg



GROUNDWATER CONDITIONS MAP
(09/30/14 - 10/06/14)

PHILLIPS 66 FACILITY NO. 255353 (AOC 1396)
600 WESTLAKE AVENUE N
SEATTLE, WA

PROJECT NUMBER: 76.75118.1396		DATE: 2/16/15	FIGURE 3
APPROVED BY: KS		DRAWN BY: BK	

Cardno Shaping the Future
6347 Seaview Avenue NW
Seattle, Washington 98107
Ph: (206) 781-1449 *** Fax: (206) 781-1543

TABLES

Table 1
Summary of Soil Analytical Results - Hollow Stem Auger Borings
Phillips 66 Facility No. 255353 (AOC 1396)
600 Westlake Avenue North
Seattle, Washington

Boring ID	Sample ID	Sample Depth (feet)	Sample Date	TPH-G[1] (mg/kg)	VOCs[2] (µg/kg)							Lead[3] (mg/Kg)
					Benzene	1,2-Dibromoethane (EDB)	1,2-Dichloroethane (EDC)	Toluene	Ethylbenzene	Methyl-tert-butyl ether	Total Xylenes	
B-212	B-212-5'	5.0	09/30/14	<5.6	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<10.6	38.3
	B-212-10'	10.0	09/30/14	<5.5	6.7	<5.1 / <0.91	<5.1	7.3	5.6	<5.1	19.1	18.1
	B-212-15'	15.0	09/30/14	<9.7	<5.1	<5.1 / <0.91	<5.1	<5.1	<5.1	<5.1	<15.3	15.3
	B-212-20'	20.0	09/30/14	<6.1	<11.4	<11.4 / <2.0	<11.4	<11.4	<11.4	<11.4	<34.1	1.6
	B-212-25'	25.0	09/30/14	<8.7	<6.5	<6.5 / <1.2	<6.5	<6.5	<6.5	<6.5	<19.6	12.2
B-213	B-213-6.5'	6.5	10/01/14	<6.0	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<10	7.1
	B-213-10'	10.0	10/01/14	**130**	<54.7 / <10.9	<54.7 / <6.7	<54.7	<54.7	<54.7	<54.7	<164	35.9
	B-213-15'	15.0	10/01/14	7.3	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<11.1	44.0
	B-213-20'	20.0	10/01/14	<7.8	<4.9	<4.9	<4.9	<4.9	<4.9	<4.9	<14.7	215
B-214	B-214-6.5'	6.5	10/01/14	<6.1	8.7	<3.7	<3.7	<3.7	<3.7	<3.7	<11.1	6.5
	B-214-10'	10.0	10/01/14	<6.3	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<10.7	5.3
	B-214-15'	15.0	10/01/14	<6.3	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<9.5	3.7
B-215	B-215-6'	6.0	10/01/14	<6.2	15.1	<3.3	<3.3	<3.3	<3.3	<3.3	<10.0	6.9
	B-215-10'	10.0	10/01/14	<9.3	**274**	<96.3 / <11.9	<96.3	<96.3	<96.3	<96.3	<289	6.9
	B-215-15'	15.0	10/01/14	<9.6	<7.8	<7.8 / <1.4	<7.8	<7.8	<7.8	<7.8	<23.4	10.7
B-216	B-216-6'	6.0	10/02/14	<5.7	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<12.2	2.7
	B-216-10'	10.0	10/02/14	12.5	5.1	<3.6	<3.6	<3.6	<3.6	<3.6	<79.6	47.9
	B-216-15'	15.0	10/02/14	<32.4	<26.5	<26.5 / <4.7	<26.5	35.6	<26.5	<26.5	<79.6	4.5
	B-216-25'	25.0	10/02/14	<7.0	<5.1	<5.1 / <0.91	<5.1	<5.1	<5.1	<5.1	<15.3	10.2
	B-216-6'	6.0	10/02/14	<5.7	<4.1	<4.1	<4.1	<4.1	<4.1	<4.1	<12.2	2.7
B-217	B-217-5'	5.0	10/03/14	<6.2	<5.8	<5.8 / <1.0	<5.8	<5.8	<5.8	<5.8	<17.5	9.2
	B-217-10'	10.0	10/03/14	<6.0	<4.5	<4.5	<4.5	<4.5	<4.5	<4.5	<13.4	12.1
	B-217-15'	15.0	10/03/14	25.1	19	<7.7 / <1.4	<7.7	<7.7	<7.7	<7.7	23.2	15.1
	B-217-20'	20.0	10/03/14	<7.2	<5.5	<5.5 / <0.98	<5.5	<5.5	<5.5	<5.5	<16.4	2.2
	B-217-25'	25.0	10/03/14	<6.8	<4.3	<4.3	<4.3	<4.3	<4.3	<4.3	<12.9	11.2
B-218	B-218-10'	10.0	10/03/14	**635**	<57.8 / <11.6	<57.8 / <7.1	<57.8	<57.8	<57.8	<57.8	<173	11.2
	B-218-15'	15.0	10/03/14	**55.5**	9.2	<4.8	<4.8	9.3	<4.8	<4.8	<14.5	54.2
	B-218-20'	20.0	10/03/14	**272.0**	12.9	<6.4 / <1.1	<6.4	41.8	<6.4	67.2	973	74
	B-218-25'	25.0	10/03/14	<5.8	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2	<12.5	2.6
B-219	B-219-10'	10.0	10/03/14	18.6	<9.9	<9.9 / <1.8	<9.9	<9.9	10.6	<9.9	48	26
MTCA Method A Cleanup Level				100[4]/30[5]	30	5	NE	7,000	6,000	100	9,000	250

Notes:

1. Total Petroleum Hydrocarbons as gasoline range hydrocarbons (TPH-G) by NWTPH-Gx/8021.
2. Volatile Organic Compounds (VOCs) by EPA Method 8260, prepared by EPA Method 5035/5030B.
3. Total lead analyzed by EPA Method 6010, prepared by EPA Method 3050.
4. MTCA Method A Cleanup Level for gasoline mixtures without benzene and the total of ethylbenzene, toluene and xylene are less than 1% of the gasoline mixture.
5. MTCA Method A Cleanup Level for all other mixtures of gasoline.

Gasoline-range hydrocarbon and total lead results reported in milligrams per kilogram (mg/kg). VOCs reported in micrograms per kilogram (µg/kg).

< = less than stated laboratory method reporting limit (MRL) or method detection limit (MDL). Where two values are presented, the first value is the MRL, the second value is the MDL.

NE = Not established.

Bold values indicate the reported concentration exceeds the corresponding MTCA Method A Cleanup Level.

Table 2
Summary of Groundwater Gauging and Laboratory Analytical Data
Phillips 66 Site No. 255353 (AOC 1396)
600 Westlake Avenue North
Seattle, Washington

Well I.D.	Sample Date	TPH-Gasoline[1] (µg/L)	VOCs[2] (µg/L)							Total Lead [3] (µg/L)	Dissolved Lead[3] (µg/L)	DTW (feet)	Well Screen Interval (feet below surface)	Top of Casing Elevation (feet)	GWE (feet)
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	1,2-Dibromoethane (EDB)	1,2-Dichloroethane (EDC)						
MW-212	09/30/14	<100	<1.0	<1.0	<1.0	<3.0	<1.0	<0.021	<1.0	<10.0	<10.0	14.23	10.0 - 25.0	TBD	TBD
MW-213	10/06/14	105	<1.0	<1.0	<1.0	<3.0	<1.0	<0.020	<1.0	11.0	<10.0	11.63	5.0 - 20.0	TBD	TBD
MW-214	10/06/14	<100	<1.0	<1.0	<1.0	<3.0	<1.0	<0.021	<1.0	<10.0	<10.0	12.14	7.0 - 17.0	TBD	TBD
MW-215	10/06/14	<100	<1.0	<1.0	<1.0	<3.0	<1.0	<0.020	<1.0	<10.0	<10.0	12.25	7.0 - 17.0	TBD	TBD
MW-216	10/03/14	<100	<1.0	<1.0	<1.0	<3.0	<1.0	<0.020	<1.0	<10.0	<10.0	21.94	10.0 - 25.0	TBD	TBD
MW-217	10/03/14	<100	1.8	9.1	1.0	5.3	<1.0	<0.020	<1.0	<10.0	<10.0	23.64	10.0 - 25.0	TBD	TBD
MW-218	10/03/14	492	<1.0	3.0	<1.0	8.4	<1.0	<0.021	<1.0	<10.0	<10.0	20.62	10.0 - 25.0	TBD	TBD
MW-219	10/06/14	147	<1.0	1.2	2.0	4.4	<1.0	<0.020	<1.0	<10.0	<10.0	14.18	5.0 - 20.0	TBD	TBD
MTCA Method A Cleanup Level for Groundwater		**800/1,000[4]**	**5**	**1,000**	**700**	**1,000**	**20**	**0.01**	**5**	**15**	**15**	**--**	**--**	**--**	**--**

NOTES:
µg/L - micrograms per liter (parts per billion)
TBD - To Be Determined
1. TPH-Gasoline analysis by Northwest Method NWTPH-Gx/8021.
2. VOC analysis by EPA method 8260.
3. Total and dissolved lead analysis by EPA Method 6010.
4. MTCA Method A Cleanup Level for Gasoline-Range Hydrocarbons is 800 µg/L if benzene is present in groundwater, 1,000 µg/L if benzene is not detectable in groundwater.

ATTACHMENT A

BORING LOGS

BORING LOG #: MW-212 ; Page 1 of 2

Cardno ATC Project Name:	P66-1396	**Drilling Information**	
Cardno ATC Project Number:	76.75118.1396	Drilling Contractor:	CDI
Location:	600 Westlake Avenue	Drilling Method:	HS Auger
	Seattle, WA	Borehole Diameter:	8-inch
		Sampler Type:	2.5-inch OD Split Spoon

Event Information

Logged by:	Mark Newman	Well/Boring Designation:	MW-212
Boring Depth:	25 ft bgs	Surface Elevation:	
GW Encountered	20 ft bgs	Start Date:	9/30/14
Static GW Level:	15 ft bgs	End Date:	9/30/14
Notes:			

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
						Surface: 16" Concrete Core	
1						Air knife to 5 ft below ground surface (bgs).	Concrete
2							
3							Bentonite
4							
5			9	0.3	SM	SILTY SAND; dark brown; 60% fine sand, 15% silt, 15% medium sand, 10% small gravel; slight induration; moderately cohesive; moist; no pretroleum-like odor (NPO).	
6			9				
7			9				
8							
9							Sand
10			4	2.6	SM	As above; low recovery; moist; NPO.	
11			16				
12			13				
13							
14							
15	▽						
16			5	15.4	SM	SILTY SAND; Dark Brown with organics; 60% fine sand, 20% ciarse sand; 20% silt; weak induration; moderately cohesive; moist; NPO.	
17			5				
18			7				
19							
20							

2" diameter Sch 40 PVC

2" diameter Sch 40 PVC with 0.001" slots

BORING LOG #: MW-212 ; Page 2 of 2

Cardno ATC Project Name: P66-1396

Cardno ATC Project Number: 76.75118.1396

Location: 600 Westlake Avenue, Seattle, WA

Date: 9/30/2014

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
			14	3.1	SW	MEDIUM SAND; grey/brown; 70% medium sand, 20% fine sand, 10% silt; weak induration; slightly cohesive; wet; NPO.	2" diameter Sch 40 PVC with 0.001" slots
21			15				
			16				
22							
23							
24							
25							
			4	0.4	ML	SILT with FINE SAND; greenish grey; 60% silts, 30% fine sand, 10% clay; very cohesive; slight induration; saturated; NPO.	
26			3				
			3				
27						Boring terminated at 25 feet bgs.	
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

BORING LOG #: MW-213 ; Page 1 of 1

Cardno ATC

Shaping the Future

Cardno ATC Project Name: P66-1396
Cardno ATC Project Number: 76.75118.1396
Location: 600 Westlake Avenue, Seattle, WA

Drilling Information

Drilling Contractor:	CDI
Drilling Method:	HS Auger
Borehole Diameter:	8-inch
Sampler Type:	2.5-inch OD Split Spoon

Event Information

Logged by:	Mark Newman	Well/Boring Designation:	MW-213
Boring Depth:	20 ft bgs	Surface Elevation:	
GW Encountered	10 ft bgs	Start Date:	10/1/14
Static GW Level:	12 ft bgs	End Date:	10/1/14
Notes:			

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
						Surface: landscaped soil.	
1						Air knife to 6.0 ft below ground surface (bgs).	Concrete; 2" diameter Sch 40 PVC
2							Bentonite
3							
4							Sand
5							
6							2" diameter Sch 40 PVC with 0.001" slots
			14	1.7	SM	SILTY SAND; dark grey; 60% fine sand, 10% coarse sand, 20% gravel, 10% silt; moderate induration; slightly cohesive; moist; NPO.	
7			11				
			15				
8							
9							
			8	816	SM	SILTY SAND; light grey; 70% medium sand, 10% fine sand, 20% silt; moderate induration; slightly cohesive; moist; moderate petroleum-like odor (MPO).	
10	▽		10				
			13				
11							
12							
13							
14							
15							
			10	14.4	SM	SILTY SAND; dark grey and light brown; 80% fine sand, 10% medium sand, 10% silt; moderate induration; moderately cohesive; wet; MPO.	
16			10				
			10				
17							
18							
			4			SILTY SAND; dark grey; 60% fine sand, 10% medium sand, 30% silt; alight induration; very cohesive; saturated; MPO	
19			4	4.2	SM		
			5				
20						Boring terminated at 20 feet bgs.	

BORING LOG #: MW-214 ; Page 1 of 1

Cardno ATC

Shaping the Future

Cardno ATC Project Name:	P66-1396	**Drilling Information**	
Cardno ATC Project Number:	76.75118.1396	Drilling Contractor:	CDI
Location:	600 Westlake Avenue	Drilling Method:	HS Auger
	Seattle, WA	Borehole Diameter:	8-inch
		Sampler Type:	2.5-inch OD Split Spoon

Event Information

Logged by:	Mark Newman	Well/Boring Designation:	MW-214
Boring Depth:	17 ft bgs	Surface Elevation:	
GW Encountered	10 ft bgs	Start Date:	10/1/14
Static GW Level:	12 ft bgs	End Date:	10/1/14
Notes:			

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
						Sureface: landscaped soil.	
1						Air knife to 6.0 ft below ground surface (bgs).	Concrete
2							Bentonite; 2" diameter Sch 40 PVC
3							
4							
5							
6							
			5	10.8	SM	SILTY SAND; olive grey; 60% fine sand, 10% medium sand,	Sand
7			5			30% silt; moderate induration; moderately cohesive; moist; NPO.	
			5				2" diameter Sch 40 PVC with 0.001" slots
8							
9							
			6	2.0	SM	As above; wet; MPO.	
10	▽		6				
			7				
11							
12							
13							
14							
15			3	0.4	SM	SILTY SAND; olive grey; 60% fine sand, 15% medium sand,	
			3			25% silt; moderate induration; moderately cohesive; saturated;	
16			4			NPO.	
17							
						Boring terminated at 17 feet bgs.	
18							
19							
20							

BORING LOG #: MW-215 ; Page 1 of 1

Cardno ATC

Shaping the Future

Cardno ATC Project Name:	P66-1396	**Drilling Information**	
Cardno ATC Project Number:	76.75118.1396	Drilling Contractor:	CDI
Location:	600 Westlake Avenue	Drilling Method:	HS Auger
	Seattle, WA	Borehole Diameter:	8-inch
		Sampler Type:	2.5-inch OD Split Spoon

Event Information

Logged by:	Mark Newman	Well/Boring Designation:	MW-215
Boring Depth:	17 ft bgs	Surface Elevation:	
GW Encountered	10 ft bgs	Start Date:	10/1/14
Static GW Level:	12 ft bgs	End Date:	10/1/14
Notes:			

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
						Sureface: landscaped soil.	
1						Air knife to 6.0 ft below ground surface (bgs).	Concrete; Bentonite; 2" diameter Sch 40 PVC
2							
3							
4							
5							
6							
6			3	0.5	SM	SILTY SAND; dark grey; 60% fine sand, 10% medium sand, 25% silt, 5% gravel; moderate induration; moderately cohesive; moist; NPO.	Sand; 2" diameter Sch 40 PVC with 0.001" slots
7			5				
			6				
8							
9							
10			5	2.1	SM	As above; wet; strong petroleum-like odor (SPO).	
	S		5				
11			5				
12							
13							
14							
15							
15			5	0.1	SM	SILTY SAND with ORGANICS (wood chips); dark brown; 50% fine sand, 15% medium sand, 15% silt, 20% pulvarized wood chips; no induration; not cohesive; saturated; NPO.	
16			5				
			5				
17							
17						Boring terminated at 17 feet bgs.	
18							
19							
20							

Cardno ATC
Shaping the Future

BORING LOG #: MW-216; Page 1 of 2

Cardno ATC Project Name:	P66-1396	**Drilling Information**	
Cardno ATC Project Number:	76.75118.1396	Drilling Contractor:	CDI
Location:	600 Westlake Avenue	Drilling Method:	HS Auger
	Seattle, WA	Borehole Diameter:	8-inch
		Sampler Type:	2.5-inch OD Split Spoon

Event Information

Logged by:	Mark Newman	Well/Boring Designation:	MW-216
Boring Depth:	25 ft bgs	Surface Elevation:	
GW Encountered	20 ft bgs	Start Date:	10/2/14
Static GW Level:	15 ft bgs	End Date:	10/2/14
Notes:			

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
						Surface: 16" Concrete Core	
1						Air knife to 6 ft below ground surface (bgs).	Concrete
2							
3							Bentonite
4							
5							
6							
7	■	■	7 7 7	0.3	SW	MEDIUM SAND with FINES; brown medium sand with 20% fine sand, 10% silt, 10% gravel; moderate induration; moderately cohesive; moist; NPO	2" diameter Sch 40 PVC
8							
9							Sand
10	■	■	4 4	0.4	SW	As above; slightly cohesive; dry; NPO.	
11		■	5				
12							
13							
14							
15	▽						
	■	■	50/5	2.0	SM	SILTY SAND; silty sand with pulverized wood chips; wet; NPO.	
16		■					2" diameter Sch 40 PVC with 0.001" slots
17							
18							
19							
20							

Cardno ATC
Shaping the Future

Cardno ATC Project Name: P66-1396
Cardno ATC Project Number: 76.75118.1396
Location: 600 Westlake Avenue, Seattle, WA
Date: 10/2/2014

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
			50/6	--		Wood debris, very low recovery.	2" diameter Sch 40 PVC with 0.001" slots
21							
22							
23							
24							
25			4	0.2	ML	SANDY SILT; olive grey; 60% silt, 20% fine sand, 20% medium sand; very cohesive; slight induration; saturated, NPO	
26			5				
			7				
27						Boring terminated at 25 feet bgs.	
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

BORING LOG #: MW-217; Page 1 of 2

Cardno ATC

Shaping the Future

Cardno ATC Project Name:	P66-1396	**Drilling Information**	
Cardno ATC Project Number:	76.75118.1396	Drilling Contractor:	CDI
Location:	600 Westlake Avenue	Drilling Method:	HS Auger
	Seattle, WA	Borehole Diameter:	8-inch
		Sampler Type:	2.5-inch OD Split Spoon

Event Information

Logged by:	Nasrin Bastami	Well/Boring Designation:	MW-217
Boring Depth:	25 ft bgs	Surface Elevation:	
GW Encountered	20 ft bgs	Start Date:	10/3/14
Static GW Level:	15 ft bgs	End Date:	10/3/14
Notes:			

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
						Surface: 16" Concrete Core	
1						Air knife to 5 ft below ground surface (bgs).	Concrete
2							
3							Bentonite
4							
5	■	■	8	0.1	ML	WELL GRADED SANDY SILT; olive grey; 60% silt, 35% fine sand, 5% gravel; low plasticity; moist; NPO.	2" diameter Sch 40 PVC
	■	■	12				
6	■	■	10				
7							
8							
9							Sand
10	■	■	6	0.4	SM	SILTY SAND; greyish brown; 80% fine sand, 20% silt; no plasticity; moist; NPO.	
	■	■	8				
11		■	10				2" diameter Sch 40 PVC with 0.001" slots
12							
13							
14							
15 ▽	■	■	9	8.2	SM	SILTY SAND; silty sand with pulverized wood chips; wet; NPO. Low recovery.	
16		■	40				
		■	7				
17							
18							
19							
20							

Cardno ATC Shaping the Future

Cardno ATC Project Name: P66-1396

Cardno ATC Project Number: 76.75118.1396

Location: 600 Westlake Avenue, Seattle, WA

Date: 10/3/2014

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
			14	6.8	SM	SILTY SAND; brown; 40% silt, 20% silt, 40% organics (wood	2" diameter Sch 40 PVC with 0.001" slots
21			17				
			10				
22							
23							
24							
25			14	1.1	ML	SANDY SILT; olive grey; 45% silt, 50% fine sand, 5% organics; low plasticity; saturated, NPO	
26			17				
			7				
27						Boring terminated at 25 feet bgs.	
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

BORING LOG #: MW-218; Page 1 of 2

Cardno ATC Project Name:	P66-1396	**Drilling Information**	
Cardno ATC Project Number:	76.75118.1396	Drilling Contractor:	CDI
Location:	600 Westlake Avenue	Drilling Method:	HS Auger
	Seattle, WA	Borehole Diameter:	8-inch
		Sampler Type:	2.5-inch OD Split Spoon

Event Information

Logged by:	Nasrin Bastami	Well/Boring Designation:	MW-218
Boring Depth:	25 ft bgs	Surface Elevation:	
GW Encountered	20 ft bgs	Start Date:	10/3/14
Static GW Level:	15 ft bgs	End Date:	10/3/14
Notes:			

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
						Surface: 16" Concrete Core	
1						Air knife to 8 ft below ground surface (bgs).	Concrete
2							
3							Bentonite
4							
5							
6							
7							
8							
9			11	1221	SM	SILTY SAND; olive grey; 60% fine sand, 35% siltm 5% gravel;	Sand
			18			no plasticity; moist; SPO.	
10			18				
11							
12							
13							
14	▽						
15			50/5"	31.0	SM	SILTY SAND; olive grey; 35% fine sand, 15% silt, 45% organics	
						(wood chips); no plasticity; wet; SPO.	
16							
17							
18							
19							
20							

2" diameter Sch 40 PVC

2" diameter Sch 40 PVC with 0.001" slots

Cardno ATC
Shaping the Future

Cardno ATC Project Name: P66-1396
Cardno ATC Project Number: 76.75118.1396
Location: 600 Westlake Avenue, Seattle, WA
Date: 10/3/2014

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
			5/3"	86.0	SM	SILTY SAND; dark brown; 80% organics, 20% silt, 10% sand; NPO; moist; low recovery.	2" diameter Sch 40 PVC with 0.001" slots
21							
22							
23							
24							
25			5/4"	1.1	ML	Wood chips, very low recovery.	
26							
27						Boring terminated at 25 feet bgs.	
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

BORING LOG #: MW-219 ; Page 1 of 1

Cardno ATC

Shaping the Future

Cardno ATC Project Name:	P66-1396	**Drilling Information**	
Cardno ATC Project Number:	76.75118.1396	Drilling Contractor:	CDI
Location:	600 Westlake Avenue	Drilling Method:	HS Auger
	Seattle, WA	Borehole Diameter:	8-inch
		Sampler Type:	2.5-inch OD Split Spoon

Event Information

Logged by:	Felicity Wood	Well/Boring Designation:	MW-219
Boring Depth:	20 ft bgs	Surface Elevation:	
GW Encountered	15 ft bgs	Start Date:	10/3/14
Static GW Level:	14 ft bgs	End Date:	10/3/14
Notes:			

Depth (ft)	Recovery	Sample Interval	Blow Counts	PID/FID Readings	USCS Classification	Soil Classification/ Description	Well Construction
						Surface 16" Concrete Core.	
1						Water jet/vac truck to 8 ft below ground surface (bgs).	Concrete; Bentonite; Sand; 2" diameter Sch 40 PVC; 2" diameter Sch 40 PVC with 0.001" slots
2							
3							
4							
5							
6							
7							
8							
9			5 6 7	26.2	ML	SANDY SILT; dark grey; 60% silt, 40% fine sand, wood chips present; low plasticity; moist; NPO.	
10							
11							
12							
13							
14	▽						
15			50/6			No recovery; NPO; moist. Encountered solid wood.	
16							
17							
18							
19							
20			50/4			No recovery; NPO; wet.	
						Boring terminated at 20 feet bgs.	

ATTACHMENT B

LABORATORY ANALYTICAL REPORTS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

December 05, 2014

Kyle Sattler
Cardno ATC
7070 SW Fir Loop
Suite 100
Portland, OR 97223

RE: Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Dear Kyle Sattler:
Enclosed are the analytical results for sample(s) received by the laboratory on October 03, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

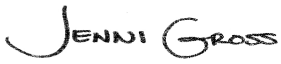
Revised Report, REV-1 12/05/14. 8260 Volatiles: Sample 10284165-007 has been updated to report the low level results for 8260. Sample 10284165-014 was reported by medium level, due to matrix interference the low level results are not reportable.

The NWTPHGx water system was offline due to an IT issue. During that time, all samples were analyzed in hold on the TPH soil system, which are un-reportable. The samples were re-analyzed outside of the holding time for confirmation once the system was back online.

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

Sincerely,

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700



Jennifer Gross
jennifer.gross@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Pace Analytical Services, Inc.
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SAMPLE SUMMARY

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10284165001	**B-212-5'**	Solid	09/30/14 12:20	10/03/14 10:30
10284165002	**B-212-10'**	Solid	09/30/14 12:30	10/03/14 10:30
10284165003	**B-212-15'**	Solid	09/30/14 12:40	10/03/14 10:30
10284165004	**B-212-20'**	Solid	09/30/14 12:50	10/03/14 10:30
10284165005	**B-212-25'**	Solid	09/30/14 13:00	10/03/14 10:30
10284165006	**B-213-6.5'**	Solid	10/01/14 12:00	10/03/14 10:30
10284165007	**B-213-10'**	Solid	10/01/14 12:10	10/03/14 10:30
10284165008	**B-213-15'**	Solid	10/01/14 12:20	10/03/14 10:30
10284165009	**B-213-20'**	Solid	10/01/14 12:30	10/03/14 10:30
10284165010	**B-214-6.5'**	Solid	10/01/14 13:45	10/03/14 10:30
10284165011	**B-214-10'**	Solid	10/01/14 13:55	10/03/14 10:30
10284165012	**B-214-15'**	Solid	10/01/14 14:05	10/03/14 10:30
10284165013	**B-215-6'**	Solid	10/01/14 15:15	10/03/14 10:30
10284165014	**B-215-10'**	Solid	10/01/14 15:25	10/03/14 10:30
10284165015	**B-215-15'**	Solid	10/01/14 15:35	10/03/14 10:30
10284165016	**B-216-6'**	Solid	10/02/14 12:20	10/03/14 10:30
10284165017	**B-216-10'**	Solid	10/02/14 12:30	10/03/14 10:30
10284165018	**B-216-15'**	Solid	10/02/14 12:40	10/03/14 10:30
10284165019	**B-216-25'**	Solid	10/02/14 12:50	10/03/14 10:30
10284165020	**MW-212**	Water	09/30/14 11:00	10/03/14 10:30
10284165021	**Trip Blank**	Solid	09/30/14 00:00	10/03/14 10:30

Pace Analytical Services, Inc.
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SAMPLE ANALYTE COUNT

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10284165001	**B-212-5'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165002	**B-212-10'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165003	**B-212-15'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165004	**B-212-20'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165005	**B-212-25'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165006	**B-213-6.5'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165007	**B-213-10'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165008	**B-213-15'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165009	**B-213-20'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165010	**B-214-6.5'**	NWTPH-Gx/8021	LLC	2	PASI-M

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165011	**B-214-10'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165012	**B-214-15'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165013	**B-215-6'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165014	**B-215-10'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	AAN1	10	PASI-M
10284165015	**B-215-15'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165016	**B-216-6'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165017	**B-216-10'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165018	**B-216-15'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165019	**B-216-25'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M

Pace Analytical Services, Inc.
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SAMPLE ANALYTE COUNT

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284165020	**MW-212**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		6010C Met	IP	1	PASI-M
		EPA 8260	AJC	9	PASI-M

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-212-5' **Lab ID: 10284165001** Collected: 09/30/14 12:20 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<2.8**	mg/kg	5.6	2.8	1	10/10/14 08:46	10/18/14 05:59		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	86	%.	75-125		1	10/10/14 08:46	10/18/14 05:59	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**38.3**	mg/kg	1.1	0.085	1	10/15/14 11:32	10/18/14 18:23	7439-92-1	M1
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**12.9**	%	0.10	0.10	1		10/14/14 12:33		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**<0.55**	ug/kg	3.5	0.55	1	10/08/14 07:19	10/14/14 18:17	71-43-2	
1,2-Dibromoethane (EDB)	**<0.64**	ug/kg	3.5	0.64	1	10/08/14 07:19	10/14/14 18:17	106-93-4	
1,2-Dichloroethane	**<0.51**	ug/kg	3.5	0.51	1	10/08/14 07:19	10/14/14 18:17	107-06-2	
Ethylbenzene	**0.65J**	ug/kg	3.5	0.44	1	10/08/14 07:19	10/14/14 18:17	100-41-4	
Methyl-tert-butyl ether	**<0.89**	ug/kg	3.5	0.89	1	10/08/14 07:19	10/14/14 18:17	1634-04-4	
Toluene	**<1.8**	ug/kg	3.5	1.8	1	10/08/14 07:19	10/14/14 18:17	108-88-3	
Xylene (Total)	**<5.3**	ug/kg	10.6	5.3	1	10/08/14 07:19	10/14/14 18:17	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%.	30-150		1	10/08/14 07:19	10/14/14 18:17	17060-07-0	
Toluene-d8 (S)	97	%.	30-150		1	10/08/14 07:19	10/14/14 18:17	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	30-150		1	10/08/14 07:19	10/14/14 18:17	460-00-4	

Sample: B-212-10' **Lab ID: 10284165002** Collected: 09/30/14 12:30 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<2.8**	mg/kg	5.5	2.8	1	10/10/14 08:46	10/18/14 06:44		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	87	%.	75-125		1	10/10/14 08:46	10/18/14 06:44	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**18.1**	mg/kg	0.77	0.057	1	10/15/14 11:32	10/20/14 09:53	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**12.5**	%	0.10	0.10	1		10/14/14 12:34		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**6.7**	ug/kg	5.1	0.78	1	10/08/14 07:19	10/14/14 18:39	71-43-2	
1,2-Dibromoethane (EDB)	**<0.91**	ug/kg	5.1	0.91	1	10/08/14 07:19	10/14/14 18:39	106-93-4	
1,2-Dichloroethane	**<0.73**	ug/kg	5.1	0.73	1	10/08/14 07:19	10/14/14 18:39	107-06-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-212-10' **Lab ID: 10284165002** Collected: 09/30/14 12:30 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Ethylbenzene	**5.6**	ug/kg	5.1	0.64	1	10/08/14 07:19	10/14/14 18:39	100-41-4	
Methyl-tert-butyl ether	**<1.3**	ug/kg	5.1	1.3	1	10/08/14 07:19	10/14/14 18:39	1634-04-4	
Toluene	**7.3**	ug/kg	5.1	2.5	1	10/08/14 07:19	10/14/14 18:39	108-88-3	
Xylene (Total)	**19.1**	ug/kg	15.3	7.6	1	10/08/14 07:19	10/14/14 18:39	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	117	%.	30-150		1	10/08/14 07:19	10/14/14 18:39	17060-07-0	
Toluene-d8 (S)	98	%.	30-150		1	10/08/14 07:19	10/14/14 18:39	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	30-150		1	10/08/14 07:19	10/14/14 18:39	460-00-4	

Sample: B-212-15' **Lab ID: 10284165003** Collected: 09/30/14 12:40 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<4.8**	mg/kg	9.7	4.8	1	10/10/14 08:46	10/18/14 07:06		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	88	%.	75-125		1	10/10/14 08:46	10/18/14 07:06	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**15.3**	mg/kg	1.1	0.078	1	10/15/14 11:32	10/20/14 09:59	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**24.1**	%	0.10	0.10	1		10/14/14 12:34		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**1.5J**	ug/kg	5.1	0.79	1	10/08/14 07:19	10/14/14 19:01	71-43-2	
1,2-Dibromoethane (EDB)	**<0.91**	ug/kg	5.1	0.91	1	10/08/14 07:19	10/14/14 19:01	106-93-4	
1,2-Dichloroethane	**<0.74**	ug/kg	5.1	0.74	1	10/08/14 07:19	10/14/14 19:01	107-06-2	
Ethylbenzene	**1.3J**	ug/kg	5.1	0.64	1	10/08/14 07:19	10/14/14 19:01	100-41-4	
Methyl-tert-butyl ether	**1.8J**	ug/kg	5.1	1.3	1	10/08/14 07:19	10/14/14 19:01	1634-04-4	
Toluene	**3.5J**	ug/kg	5.1	2.6	1	10/08/14 07:19	10/14/14 19:01	108-88-3	
Xylene (Total)	**<7.7**	ug/kg	15.3	7.7	1	10/08/14 07:19	10/14/14 19:01	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	30-150		1	10/08/14 07:19	10/14/14 19:01	17060-07-0	
Toluene-d8 (S)	107	%.	30-150		1	10/08/14 07:19	10/14/14 19:01	2037-26-5	
4-Bromofluorobenzene (S)	115	%.	30-150		1	10/08/14 07:19	10/14/14 19:01	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-212-20' **Lab ID: 10284165004** Collected: 09/30/14 12:50 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<3.1**	mg/kg	6.1	3.1	1	10/10/14 08:46	10/18/14 06:21		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	87	%.	75-125		1	10/10/14 08:46	10/18/14 06:21	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**1.9**	mg/kg	0.88	0.065	1	10/15/14 11:32	10/20/14 10:05	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**18.5**	%	0.10	0.10	1		10/14/14 12:34		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**<1.7**	ug/kg	11.4	1.7	1	10/08/14 07:19	10/14/14 19:22	71-43-2	
1,2-Dibromoethane (EDB)	**<2.0**	ug/kg	11.4	2.0	1	10/08/14 07:19	10/14/14 19:22	106-93-4	
1,2-Dichloroethane	**<1.6**	ug/kg	11.4	1.6	1	10/08/14 07:19	10/14/14 19:22	107-06-2	
Ethylbenzene	**2.1J**	ug/kg	11.4	1.4	1	10/08/14 07:19	10/14/14 19:22	100-41-4	
Methyl-tert-butyl ether	**<2.8**	ug/kg	11.4	2.8	1	10/08/14 07:19	10/14/14 19:22	1634-04-4	
Toluene	**<5.7**	ug/kg	11.4	5.7	1	10/08/14 07:19	10/14/14 19:22	108-88-3	
Xylene (Total)	**<17.0**	ug/kg	34.1	17.0	1	10/08/14 07:19	10/14/14 19:22	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	30-150		1	10/08/14 07:19	10/14/14 19:22	17060-07-0	
Toluene-d8 (S)	100	%.	30-150		1	10/08/14 07:19	10/14/14 19:22	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	30-150		1	10/08/14 07:19	10/14/14 19:22	460-00-4	

Sample: B-212-25' **Lab ID: 10284165005** Collected: 09/30/14 13:00 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<4.4**	mg/kg	8.7	4.4	1	10/10/14 08:46	10/18/14 07:29		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	87	%.	75-125		1	10/10/14 08:46	10/18/14 07:29	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**12.2**	mg/kg	1.2	0.090	1	10/15/14 11:32	10/20/14 10:11	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**38.9**	%	0.10	0.10	1		10/14/14 12:35		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**<1.0**	ug/kg	6.5	1.0	1	10/08/14 07:19	10/14/14 19:44	71-43-2	
1,2-Dibromoethane (EDB)	**<1.2**	ug/kg	6.5	1.2	1	10/08/14 07:19	10/14/14 19:44	106-93-4	
1,2-Dichloroethane	**<0.94**	ug/kg	6.5	0.94	1	10/08/14 07:19	10/14/14 19:44	107-06-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-212-25' **Lab ID: 10284165005** Collected: 09/30/14 13:00 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Ethylbenzene	**0.85J**	ug/kg	6.5	0.82	1	10/08/14 07:19	10/14/14 19:44	100-41-4	
Methyl-tert-butyl ether	**<1.6**	ug/kg	6.5	1.6	1	10/08/14 07:19	10/14/14 19:44	1634-04-4	
Toluene	**<3.3**	ug/kg	6.5	3.3	1	10/08/14 07:19	10/14/14 19:44	108-88-3	
Xylene (Total)	**<9.8**	ug/kg	19.6	9.8	1	10/08/14 07:19	10/14/14 19:44	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%.	30-150		1	10/08/14 07:19	10/14/14 19:44	17060-07-0	
Toluene-d8 (S)	98	%.	30-150		1	10/08/14 07:19	10/14/14 19:44	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	30-150		1	10/08/14 07:19	10/14/14 19:44	460-00-4	

Sample: B-213-6.5' **Lab ID: 10284165006** Collected: 10/01/14 12:00 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**5.6J**	mg/kg	6.0	3.0	1	10/10/14 08:46	10/17/14 22:30		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	90	%.	75-125		1	10/10/14 08:46	10/17/14 22:30	98-08-8	2M
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**7.1**	mg/kg	1.2	0.090	1	10/15/14 11:32	10/20/14 10:16	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**19.0**	%	0.10	0.10	1		10/14/14 12:35		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**3.2J**	ug/kg	3.3	0.51	1	10/08/14 07:18	10/14/14 20:05	71-43-2	
1,2-Dibromoethane (EDB)	**<0.60**	ug/kg	3.3	0.60	1	10/08/14 07:18	10/14/14 20:05	106-93-4	
1,2-Dichloroethane	**<0.48**	ug/kg	3.3	0.48	1	10/08/14 07:18	10/14/14 20:05	107-06-2	
Ethylbenzene	**3.0J**	ug/kg	3.3	0.42	1	10/08/14 07:18	10/14/14 20:05	100-41-4	
Methyl-tert-butyl ether	**<0.83**	ug/kg	3.3	0.83	1	10/08/14 07:18	10/14/14 20:05	1634-04-4	
Toluene	**2.3J**	ug/kg	3.3	1.7	1	10/08/14 07:18	10/14/14 20:05	108-88-3	
Xylene (Total)	**<5.0**	ug/kg	10	5.0	1	10/08/14 07:18	10/14/14 20:05	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%.	30-150		1	10/08/14 07:18	10/14/14 20:05	17060-07-0	
Toluene-d8 (S)	99	%.	30-150		1	10/08/14 07:18	10/14/14 20:05	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	30-150		1	10/08/14 07:18	10/14/14 20:05	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-213-10' **Lab ID: 10284165007** Collected: 10/01/14 12:10 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**130**	mg/kg	12.4	6.2	2	10/10/14 08:46	10/18/14 08:13		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	89	%.	75-125		2	10/10/14 08:46	10/18/14 08:13	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**35.9**	mg/kg	1.1	0.082	1	10/15/14 11:32	10/20/14 10:22	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**15.2**	%	0.10	0.10	1		10/14/14 12:35		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**4.2**	ug/kg	3.4	0.53	1	10/08/14 07:18	10/14/14 20:27	71-43-2	
1,2-Dibromoethane (EDB)	**<0.62**	ug/kg	3.4	0.62	1	10/08/14 07:18	10/14/14 20:27	106-93-4	
1,2-Dichloroethane	**<0.49**	ug/kg	3.4	0.49	1	10/08/14 07:18	10/14/14 20:27	107-06-2	
Ethylbenzene	**5.5**	ug/kg	3.4	0.43	1	10/08/14 07:18	10/14/14 20:27	100-41-4	
Methyl-tert-butyl ether	**<0.86**	ug/kg	3.4	0.86	1	10/08/14 07:18	10/14/14 20:27	1634-04-4	
Toluene	**<1.7**	ug/kg	3.4	1.7	1	10/08/14 07:18	10/14/14 20:27	108-88-3	
Xylene (Total)	**7.4J**	ug/kg	10.3	5.2	1	10/08/14 07:18	10/14/14 20:27	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	109	%.	30-150		1	10/08/14 07:18	10/14/14 20:27	17060-07-0	
Toluene-d8 (S)	103	%.	30-150		1	10/08/14 07:18	10/14/14 20:27	2037-26-5	
4-Bromofluorobenzene (S)	194	%.	30-150		1	10/08/14 07:18	10/14/14 20:27	460-00-4	S5

Sample: B-213-15' **Lab ID: 10284165008** Collected: 10/01/14 12:20 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**7.3**	mg/kg	5.7	2.9	1	10/10/14 08:46	10/17/14 23:15		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	91	%.	75-125		1	10/10/14 08:46	10/17/14 23:15	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**44.0**	mg/kg	0.97	0.072	1	10/15/14 11:32	10/20/14 10:26	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**17.4**	%	0.10	0.10	1		10/14/14 12:35		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**2.2J**	ug/kg	3.7	0.57	1	10/08/14 07:18	10/14/14 20:49	71-43-2	
1,2-Dibromoethane (EDB)	**<0.66**	ug/kg	3.7	0.66	1	10/08/14 07:18	10/14/14 20:49	106-93-4	
1,2-Dichloroethane	**<0.53**	ug/kg	3.7	0.53	1	10/08/14 07:18	10/14/14 20:49	107-06-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-213-15' **Lab ID: 10284165008** Collected: 10/01/14 12:20 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Ethylbenzene	**2.2J**	ug/kg	3.7	0.46	1	10/08/14 07:18	10/14/14 20:49	100-41-4	
Methyl-tert-butyl ether	**<0.92**	ug/kg	3.7	0.92	1	10/08/14 07:18	10/14/14 20:49	1634-04-4	
Toluene	**<1.8**	ug/kg	3.7	1.8	1	10/08/14 07:18	10/14/14 20:49	108-88-3	
Xylene (Total)	**<5.5**	ug/kg	11.1	5.5	1	10/08/14 07:18	10/14/14 20:49	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	111	%.	30-150		1	10/08/14 07:18	10/14/14 20:49	17060-07-0	
Toluene-d8 (S)	95	%.	30-150		1	10/08/14 07:18	10/14/14 20:49	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	30-150		1	10/08/14 07:18	10/14/14 20:49	460-00-4	

Sample: B-213-20' **Lab ID: 10284165009** Collected: 10/01/14 12:30 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<3.9**	mg/kg	7.8	3.9	1	10/10/14 08:46	10/17/14 23:37		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	90	%.	75-125		1	10/10/14 08:46	10/17/14 23:37	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**215**	mg/kg	1.2	0.087	1	10/15/14 11:32	10/20/14 10:32	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**32.3**	%	0.10	0.10	1		10/14/14 12:36		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**2.1J**	ug/kg	4.9	0.75	1	10/08/14 07:18	10/14/14 21:11	71-43-2	
1,2-Dibromoethane (EDB)	**<0.88**	ug/kg	4.9	0.88	1	10/08/14 07:18	10/14/14 21:11	106-93-4	
1,2-Dichloroethane	**<0.71**	ug/kg	4.9	0.71	1	10/08/14 07:18	10/14/14 21:11	107-06-2	
Ethylbenzene	**0.91J**	ug/kg	4.9	0.61	1	10/08/14 07:18	10/14/14 21:11	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/kg	4.9	1.2	1	10/08/14 07:18	10/14/14 21:11	1634-04-4	
Toluene	**<2.5**	ug/kg	4.9	2.5	1	10/08/14 07:18	10/14/14 21:11	108-88-3	
Xylene (Total)	**<7.4**	ug/kg	14.7	7.4	1	10/08/14 07:18	10/14/14 21:11	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	116	%.	30-150		1	10/08/14 07:18	10/14/14 21:11	17060-07-0	
Toluene-d8 (S)	96	%.	30-150		1	10/08/14 07:18	10/14/14 21:11	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	30-150		1	10/08/14 07:18	10/14/14 21:11	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-214-6.5' **Lab ID: 10284165010** Collected: 10/01/14 13:45 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<3.1**	mg/kg	6.1	3.1	1	10/10/14 08:46	10/17/14 23:59		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	90	%.	75-125		1	10/10/14 08:46	10/17/14 23:59	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**6.5**	mg/kg	1.2	0.086	1	10/15/14 11:32	10/20/14 10:37	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**13.5**	%	0.10	0.10	1		10/14/14 12:36		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**8.7**	ug/kg	3.7	0.57	1	10/08/14 07:18	10/14/14 21:32	71-43-2	
1,2-Dibromoethane (EDB)	**<0.66**	ug/kg	3.7	0.66	1	10/08/14 07:18	10/14/14 21:32	106-93-4	
1,2-Dichloroethane	**<0.53**	ug/kg	3.7	0.53	1	10/08/14 07:18	10/14/14 21:32	107-06-2	
Ethylbenzene	**1.2J**	ug/kg	3.7	0.46	1	10/08/14 07:18	10/14/14 21:32	100-41-4	
Methyl-tert-butyl ether	**<0.93**	ug/kg	3.7	0.93	1	10/08/14 07:18	10/14/14 21:32	1634-04-4	
Toluene	**<1.9**	ug/kg	3.7	1.9	1	10/08/14 07:18	10/14/14 21:32	108-88-3	
Xylene (Total)	**<5.6**	ug/kg	11.1	5.6	1	10/08/14 07:18	10/14/14 21:32	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	109	%.	30-150		1	10/08/14 07:18	10/14/14 21:32	17060-07-0	
Toluene-d8 (S)	97	%.	30-150		1	10/08/14 07:18	10/14/14 21:32	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	30-150		1	10/08/14 07:18	10/14/14 21:32	460-00-4	

Sample: B-214-10' **Lab ID: 10284165011** Collected: 10/01/14 13:55 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<3.2**	mg/kg	6.3	3.2	1	10/10/14 08:46	10/18/14 00:22		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	89	%.	75-125		1	10/10/14 08:46	10/18/14 00:22	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**5.3**	mg/kg	0.87	0.064	1	10/15/14 11:32	10/20/14 10:44	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**15.0**	%	0.10	0.10	1		10/14/14 12:36		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**1.7J**	ug/kg	3.6	0.55	1	10/08/14 07:18	10/14/14 21:54	71-43-2	
1,2-Dibromoethane (EDB)	**<0.64**	ug/kg	3.6	0.64	1	10/08/14 07:18	10/14/14 21:54	106-93-4	
1,2-Dichloroethane	**<0.51**	ug/kg	3.6	0.51	1	10/08/14 07:18	10/14/14 21:54	107-06-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-214-10' **Lab ID: 10284165011** Collected: 10/01/14 13:55 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Ethylbenzene	**0.69J**	ug/kg	3.6	0.44	1	10/08/14 07:18	10/14/14 21:54	100-41-4	
Methyl-tert-butyl ether	**<0.89**	ug/kg	3.6	0.89	1	10/08/14 07:18	10/14/14 21:54	1634-04-4	
Toluene	**<1.8**	ug/kg	3.6	1.8	1	10/08/14 07:18	10/14/14 21:54	108-88-3	
Xylene (Total)	**<5.3**	ug/kg	10.7	5.3	1	10/08/14 07:18	10/14/14 21:54	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	116	%.	30-150		1	10/08/14 07:18	10/14/14 21:54	17060-07-0	
Toluene-d8 (S)	96	%.	30-150		1	10/08/14 07:18	10/14/14 21:54	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	30-150		1	10/08/14 07:18	10/14/14 21:54	460-00-4	

Sample: B-214-15' **Lab ID: 10284165012** Collected: 10/01/14 14:05 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<3.1**	mg/kg	6.3	3.1	1	10/10/14 08:46	10/18/14 02:14		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	88	%.	75-125		1	10/10/14 08:46	10/18/14 02:14	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**3.7**	mg/kg	1.2	0.091	1	10/15/14 11:32	10/20/14 10:59	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**18.3**	%	0.10	0.10	1		10/14/14 12:37		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**1.9J**	ug/kg	3.2	0.48	1	10/08/14 07:18	10/14/14 22:16	71-43-2	
1,2-Dibromoethane (EDB)	**<0.56**	ug/kg	3.2	0.56	1	10/08/14 07:18	10/14/14 22:16	106-93-4	
1,2-Dichloroethane	**<0.45**	ug/kg	3.2	0.45	1	10/08/14 07:18	10/14/14 22:16	107-06-2	
Ethylbenzene	**1.2J**	ug/kg	3.2	0.39	1	10/08/14 07:18	10/14/14 22:16	100-41-4	
Methyl-tert-butyl ether	**<0.79**	ug/kg	3.2	0.79	1	10/08/14 07:18	10/14/14 22:16	1634-04-4	
Toluene	**<1.6**	ug/kg	3.2	1.6	1	10/08/14 07:18	10/14/14 22:16	108-88-3	
Xylene (Total)	**<4.7**	ug/kg	9.5	4.7	1	10/08/14 07:18	10/14/14 22:16	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	109	%.	30-150		1	10/08/14 07:18	10/14/14 22:16	17060-07-0	G2
Toluene-d8 (S)	98	%.	30-150		1	10/08/14 07:18	10/14/14 22:16	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	30-150		1	10/08/14 07:18	10/14/14 22:16	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-215-6' **Lab ID: 10284165013** Collected: 10/01/14 15:15 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<3.1**	mg/kg	6.2	3.1	1	10/10/14 08:46	10/18/14 02:36		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	89	%.	75-125		1	10/10/14 08:46	10/18/14 02:36	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**6.9**	mg/kg	0.96	0.071	1	10/15/14 11:32	10/20/14 11:05	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**13.8**	%	0.10	0.10	1		10/14/14 12:37		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**15.1**	ug/kg	3.3	0.51	1	10/08/14 07:18	10/14/14 22:37	71-43-2	
1,2-Dibromoethane (EDB)	**<0.59**	ug/kg	3.3	0.59	1	10/08/14 07:18	10/14/14 22:37	106-93-4	
1,2-Dichloroethane	**<0.48**	ug/kg	3.3	0.48	1	10/08/14 07:18	10/14/14 22:37	107-06-2	
Ethylbenzene	**0.43J**	ug/kg	3.3	0.42	1	10/08/14 07:18	10/14/14 22:37	100-41-4	
Methyl-tert-butyl ether	**<0.83**	ug/kg	3.3	0.83	1	10/08/14 07:18	10/14/14 22:37	1634-04-4	
Toluene	**<1.7**	ug/kg	3.3	1.7	1	10/08/14 07:18	10/14/14 22:37	108-88-3	
Xylene (Total)	**<5.0**	ug/kg	10	5.0	1	10/08/14 07:18	10/14/14 22:37	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	110	%.	30-150		1	10/08/14 07:18	10/14/14 22:37	17060-07-0	
Toluene-d8 (S)	96	%.	30-150		1	10/08/14 07:18	10/14/14 22:37	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	30-150		1	10/08/14 07:18	10/14/14 22:37	460-00-4	

Sample: B-215-10' **Lab ID: 10284165014** Collected: 10/01/14 15:25 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<4.6**	mg/kg	9.3	4.6	1	10/10/14 08:46	10/18/14 02:59		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	88	%.	75-125		1	10/10/14 08:46	10/18/14 02:59	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**6.9**	mg/kg	1.5	0.11	1	10/15/14 11:32	10/20/14 11:10	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**48.4**	%	0.10	0.10	1		10/14/14 12:37		
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
1,2-Dibromoethane (EDB)	**<11.9**	ug/kg	96.3	11.9	1	10/20/14 00:00	10/21/14 13:49	106-93-4	H1,H2
1,2-Dichloroethane	**<22.7**	ug/kg	96.3	22.7	1	10/20/14 00:00	10/21/14 13:49	107-06-2	H1,H2
Benzene	**274**	ug/kg	96.3	19.3	1	10/20/14 00:00	10/21/14 13:49	71-43-2	H1,H2

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-215-10' **Lab ID: 10284165014** Collected: 10/01/14 15:25 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5030 Med Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
Ethylbenzene	**<12.1**	ug/kg	96.3	12.1	1	10/20/14 00:00	10/21/14 13:49	100-41-4	H1,H2
Methyl-tert-butyl ether	**<48.1**	ug/kg	96.3	48.1	1	10/20/14 00:00	10/21/14 13:49	1634-04-4	H1,H2
Toluene	**<13.1**	ug/kg	96.3	13.1	1	10/20/14 00:00	10/21/14 13:49	108-88-3	H1,H2
Xylene (Total)	**<37.8**	ug/kg	289	37.8	1	10/20/14 00:00	10/21/14 13:49	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	89	%.	74-125		1	10/20/14 00:00	10/21/14 13:49	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1	10/20/14 00:00	10/21/14 13:49	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1	10/20/14 00:00	10/21/14 13:49	460-00-4	

Sample: B-215-15' **Lab ID: 10284165015** Collected: 10/01/14 15:35 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<4.8**	mg/kg	9.6	4.8	1	10/14/14 07:10	10/19/14 21:27		H5
Surrogates									
a,a,a-Trifluorotoluene (S)	86	%.	75-125		1	10/14/14 07:10	10/19/14 21:27	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**10.7**	mg/kg	0.99	0.073	1	10/15/14 11:32	10/20/14 11:17	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**13.7**	%	0.10	0.10	1		10/14/14 12:37		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**2.3J**	ug/kg	7.8	1.2	1	10/08/14 07:18	10/14/14 23:20	71-43-2	
1,2-Dibromoethane (EDB)	**<1.4**	ug/kg	7.8	1.4	1	10/08/14 07:18	10/14/14 23:20	106-93-4	
1,2-Dichloroethane	**<1.1**	ug/kg	7.8	1.1	1	10/08/14 07:18	10/14/14 23:20	107-06-2	
Ethylbenzene	**1.0J**	ug/kg	7.8	0.98	1	10/08/14 07:18	10/14/14 23:20	100-41-4	
Methyl-tert-butyl ether	**<2.0**	ug/kg	7.8	2.0	1	10/08/14 07:18	10/14/14 23:20	1634-04-4	
Toluene	**<3.9**	ug/kg	7.8	3.9	1	10/08/14 07:18	10/14/14 23:20	108-88-3	
Xylene (Total)	**<11.7**	ug/kg	23.4	11.7	1	10/08/14 07:18	10/14/14 23:20	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	30-150		1	10/08/14 07:18	10/14/14 23:20	17060-07-0	
Toluene-d8 (S)	103	%.	30-150		1	10/08/14 07:18	10/14/14 23:20	2037-26-5	
4-Bromofluorobenzene (S)	110	%.	30-150		1	10/08/14 07:18	10/14/14 23:20	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-216-6' **Lab ID: 10284165016** Collected: 10/02/14 12:20 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<2.9**	mg/kg	5.7	2.9	1	10/14/14 07:10	10/16/14 11:29		
Surrogates									
a,a,a-Trifluorotoluene (S)	92	%.	75-125		1	10/14/14 07:10	10/16/14 11:29	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**2.7**	mg/kg	0.87	0.065	1	10/15/14 11:32	10/20/14 11:23	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**14.0**	%	0.10	0.10	1		10/14/14 12:38		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**1.2J**	ug/kg	4.1	0.63	1	10/08/14 07:16	10/15/14 04:45	71-43-2	
1,2-Dibromoethane (EDB)	**<0.73**	ug/kg	4.1	0.73	1	10/08/14 07:16	10/15/14 04:45	106-93-4	
1,2-Dichloroethane	**<0.59**	ug/kg	4.1	0.59	1	10/08/14 07:16	10/15/14 04:45	107-06-2	
Ethylbenzene	**1.6J**	ug/kg	4.1	0.51	1	10/08/14 07:16	10/15/14 04:45	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/kg	4.1	1.0	1	10/08/14 07:16	10/15/14 04:45	1634-04-4	
Toluene	**<2.0**	ug/kg	4.1	2.0	1	10/08/14 07:16	10/15/14 04:45	108-88-3	
Xylene (Total)	**<6.1**	ug/kg	12.2	6.1	1	10/08/14 07:16	10/15/14 04:45	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	30-150		1	10/08/14 07:16	10/15/14 04:45	17060-07-0	
Toluene-d8 (S)	97	%.	30-150		1	10/08/14 07:16	10/15/14 04:45	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	30-150		1	10/08/14 07:16	10/15/14 04:45	460-00-4	

Sample: B-216-10' **Lab ID: 10284165017** Collected: 10/02/14 12:30 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**12.5**	mg/kg	7.5	3.8	1	10/14/14 07:10	10/16/14 11:52		
Surrogates									
a,a,a-Trifluorotoluene (S)	92	%.	75-125		1	10/14/14 07:10	10/16/14 11:52	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**3.4**	mg/kg	1.1	0.082	1	10/15/14 11:32	10/20/14 11:29	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**10.2**	%	0.10	0.10	1		10/14/14 12:38		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**5.1**	ug/kg	3.6	0.55	1	10/08/14 07:16	10/15/14 05:07	71-43-2	
1,2-Dibromoethane (EDB)	**<0.64**	ug/kg	3.6	0.64	1	10/08/14 07:16	10/15/14 05:07	106-93-4	
1,2-Dichloroethane	**<0.51**	ug/kg	3.6	0.51	1	10/08/14 07:16	10/15/14 05:07	107-06-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-216-10' **Lab ID: 10284165017** Collected: 10/02/14 12:30 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Ethylbenzene	**2.0J**	ug/kg	3.6	0.45	1	10/08/14 07:16	10/15/14 05:07	100-41-4	
Methyl-tert-butyl ether	**<0.89**	ug/kg	3.6	0.89	1	10/08/14 07:16	10/15/14 05:07	1634-04-4	
Toluene	**<1.8**	ug/kg	3.6	1.8	1	10/08/14 07:16	10/15/14 05:07	108-88-3	
Xylene (Total)	**<5.4**	ug/kg	10.7	5.4	1	10/08/14 07:16	10/15/14 05:07	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%.	30-150		1	10/08/14 07:16	10/15/14 05:07	17060-07-0	
Toluene-d8 (S)	98	%.	30-150		1	10/08/14 07:16	10/15/14 05:07	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	30-150		1	10/08/14 07:16	10/15/14 05:07	460-00-4	

Sample: B-216-15' **Lab ID: 10284165018** Collected: 10/02/14 12:40 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<16.2**	mg/kg	32.4	16.2	1	10/14/14 07:10	10/16/14 12:14		
Surrogates									
a,a,a-Trifluorotoluene (S)	91	%.	75-125		1	10/14/14 07:10	10/16/14 12:14	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**47.9**	mg/kg	3.4	0.25	1	10/15/14 11:32	10/20/14 11:34	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**71.3**	%	0.10	0.10	1		10/14/14 12:38		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**12.2J**	ug/kg	26.5	4.1	1	10/08/14 07:16	10/15/14 05:28	71-43-2	
1,2-Dibromoethane (EDB)	**<4.7**	ug/kg	26.5	4.7	1	10/08/14 07:16	10/15/14 05:28	106-93-4	
1,2-Dichloroethane	**<3.8**	ug/kg	26.5	3.8	1	10/08/14 07:16	10/15/14 05:28	107-06-2	
Ethylbenzene	**5.4J**	ug/kg	26.5	3.3	1	10/08/14 07:16	10/15/14 05:28	100-41-4	
Methyl-tert-butyl ether	**<6.6**	ug/kg	26.5	6.6	1	10/08/14 07:16	10/15/14 05:28	1634-04-4	
Toluene	**36.5**	ug/kg	26.5	13.3	1	10/08/14 07:16	10/15/14 05:28	108-88-3	
Xylene (Total)	**<39.8**	ug/kg	79.6	39.8	1	10/08/14 07:16	10/15/14 05:28	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	30-150		1	10/08/14 07:16	10/15/14 05:28	17060-07-0	
Toluene-d8 (S)	109	%.	30-150		1	10/08/14 07:16	10/15/14 05:28	2037-26-5	
4-Bromofluorobenzene (S)	109	%.	30-150		1	10/08/14 07:16	10/15/14 05:28	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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(612)607-1700

ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: B-216-25' **Lab ID: 10284165019** Collected: 10/02/14 12:50 Received: 10/03/14 10:30 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<3.5**	mg/kg	7.0	3.5	1	10/14/14 07:10	10/16/14 12:37		
Surrogates									
a,a,a-Trifluorotoluene (S)	92	%.	75-125		1	10/14/14 07:10	10/16/14 12:37	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**10.2**	mg/kg	1.1	0.078	1	10/15/14 11:32	10/20/14 11:39	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**28.4**	%	0.10	0.10	1		10/14/14 15:38		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**<0.78**	ug/kg	5.1	0.78	1	10/08/14 07:16	10/15/14 05:50	71-43-2	
1,2-Dibromoethane (EDB)	**<0.91**	ug/kg	5.1	0.91	1	10/08/14 07:16	10/15/14 05:50	106-93-4	
1,2-Dichloroethane	**<0.73**	ug/kg	5.1	0.73	1	10/08/14 07:16	10/15/14 05:50	107-06-2	
Ethylbenzene	**<0.64**	ug/kg	5.1	0.64	1	10/08/14 07:16	10/15/14 05:50	100-41-4	
Methyl-tert-butyl ether	**<1.3**	ug/kg	5.1	1.3	1	10/08/14 07:16	10/15/14 05:50	1634-04-4	
Toluene	**<2.6**	ug/kg	5.1	2.6	1	10/08/14 07:16	10/15/14 05:50	108-88-3	
Xylene (Total)	**<7.7**	ug/kg	15.3	7.7	1	10/08/14 07:16	10/15/14 05:50	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%.	30-150		1	10/08/14 07:16	10/15/14 05:50	17060-07-0	
Toluene-d8 (S)	99	%.	30-150		1	10/08/14 07:16	10/15/14 05:50	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	30-150		1	10/08/14 07:16	10/15/14 05:50	460-00-4	

Sample: MW-212 **Lab ID: 10284165020** Collected: 09/30/14 11:00 Received: 10/03/14 10:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021								
TPH as Gas	**94.8J**	ug/L	100	50.0	1		10/14/14 11:44		
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%.	70-125		1		10/14/14 11:44	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3010								
Lead	**5.7J**	ug/L	10.0	1.8	1	10/13/14 11:45	10/15/14 15:49	7439-92-1	
6010C MET ICP, Lab Filtered	Analytical Method: 6010C Met Preparation Method: EPA 3010								
Lead, Dissolved	**5.7J**	ug/L	10.0	1.8	1	10/14/14 09:52	10/14/14 20:27	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260								
1,2-Dichloroethane	**<0.13**	ug/L	1.0	0.13	1		10/14/14 22:09	107-06-2	
Benzene	**0.28J**	ug/L	1.0	0.15	1		10/14/14 22:09	71-43-2	
Ethylbenzene	**<0.16**	ug/L	1.0	0.16	1		10/14/14 22:09	100-41-4	
Methyl-tert-butyl ether	**0.87J**	ug/L	1.0	0.17	1		10/14/14 22:09	1634-04-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Sample: MW-212 **Lab ID: 10284165020** Collected: 09/30/14 11:00 Received: 10/03/14 10:30 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260								
Toluene	**0.17J**	ug/L	1.0	0.11	1		10/14/14 22:09	108-88-3	
Xylene (Total)	**<0.40**	ug/L	3.0	0.40	1		10/14/14 22:09	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%.	75-125		1		10/14/14 22:09	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		10/14/14 22:09	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		10/14/14 22:09	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: GCV/12744 Analysis Method: NWTPH-Gx/8021
QC Batch Method: NWTPH-Gx/8021 Analysis Description: NWTPH-Gx Solid GCV
Associated Lab Samples: 10284165001, 10284165002, 10284165003, 10284165004, 10284165005, 10284165006, 10284165007, 10284165008, 10284165009, 10284165010, 10284165011, 10284165012, 10284165013, 10284165014

METHOD BLANK: 1813233 Matrix: Solid
Associated Lab Samples: 10284165001, 10284165002, 10284165003, 10284165004, 10284165005, 10284165006, 10284165007, 10284165008, 10284165009, 10284165010, 10284165011, 10284165012, 10284165013, 10284165014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	mg/kg	<2.5	5.0	10/19/14 16:36	
a,a,a-Trifluorotoluene (S)	%.	89	75-125	10/19/14 16:36	

METHOD BLANK: 1813239 Matrix: Solid
Associated Lab Samples: 10284165001, 10284165002, 10284165003, 10284165004, 10284165005, 10284165006, 10284165007, 10284165008, 10284165009, 10284165010, 10284165011, 10284165012, 10284165013, 10284165014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	mg/kg	<2.5	5.0	10/18/14 01:51	
a,a,a-Trifluorotoluene (S)	%.	90	75-125	10/18/14 01:51	

LABORATORY CONTROL SAMPLE & LCSD: 1813234 1813235

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	50	49.3	45.9	99	92	66-125	7	20	
a,a,a-Trifluorotoluene (S)	%.				99	98	75-125			

MATRIX SPIKE SAMPLE: 1813236

Parameter	Units	10283892006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
TPH as Gas	mg/kg	5240	56.7	4710	-942	30-150	H5,M1
a,a,a-Trifluorotoluene (S)	%.				100	75-125	1M

SAMPLE DUPLICATE: 1813237

Parameter	Units	10283892007 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	236	180	27	30	H5
a,a,a-Trifluorotoluene (S)	%.	108	103	3		2M

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

SAMPLE DUPLICATE: 1813238

Parameter	Units	10284165006 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	5.6J	3.0J		30	H5
a,a,a-Trifluorotoluene (S)	%.	90	91	0		2M

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: GCV/12758 Analysis Method: NWTPH-Gx/8021
QC Batch Method: NWTPH-Gx/8021 Analysis Description: NWTPH-Gx Solid GCV
Associated Lab Samples: 10284165015, 10284165016, 10284165017, 10284165018, 10284165019

METHOD BLANK: 1816020 Matrix: Solid
Associated Lab Samples: 10284165015, 10284165016, 10284165017, 10284165018, 10284165019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	mg/kg	<2.5	5.0	10/16/14 21:53	
a,a,a-Trifluorotoluene (S)	%.	92	75-125	10/16/14 21:53	

METHOD BLANK: 1820109 Matrix: Solid
Associated Lab Samples: 10284165015, 10284165016, 10284165017, 10284165018, 10284165019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	mg/kg	<2.5	5.0	10/16/14 22:16	
a,a,a-Trifluorotoluene (S)	%.	91	75-125	10/16/14 22:16	

LABORATORY CONTROL SAMPLE & LCSD: 1816021 1816022

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	50	39.4	40.2	79	80	66-125	2	20	
a,a,a-Trifluorotoluene (S)	%.				96	96	75-125			

MATRIX SPIKE SAMPLE: 1816023

Parameter	Units	10284172003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
TPH as Gas	mg/kg	ND	57.8	43.9	74	30-150	H5
a,a,a-Trifluorotoluene (S)	%.				93	75-125	2M

SAMPLE DUPLICATE: 1816024

Parameter	Units	10284172006 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	ND	<2.9		30	H5
a,a,a-Trifluorotoluene (S)	%.	90	89	2		2M

SAMPLE DUPLICATE: 1816025

Parameter	Units	10284172011 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	ND	<2.9		30	
a,a,a-Trifluorotoluene (S)	%.	93	91	3		2M

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: GCV/12754
QC Batch Method: NWTPH-Gx/8021
Analysis Method: NWTPH-Gx/8021
Analysis Description: NWTPH-Gx/8021B Water
Associated Lab Samples: 10284165020

METHOD BLANK: 1815525 Matrix: Water
Associated Lab Samples: 10284165020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	<50.0	100	10/14/14 10:59	
a,a,a-Trifluorotoluene (S)	%.	100	70-125	10/14/14 10:59	

LABORATORY CONTROL SAMPLE & LCSD: 1815526 1815527

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1080	980	108	98	75-125	10	20	
a,a,a-Trifluorotoluene (S)	%.				104	105	70-125			

MATRIX SPIKE SAMPLE: 1817064

Parameter	Units	10284494002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
TPH as Gas	ug/L	105	1000	1190	109	52-150	
a,a,a-Trifluorotoluene (S)	%.				112	70-125	

SAMPLE DUPLICATE: 1817065

Parameter	Units	10284494003 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	ND	<50.0		30	
a,a,a-Trifluorotoluene (S)	%.	101	103	2		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: MPRP/49662 Analysis Method: EPA 6010C
QC Batch Method: EPA 3050 Analysis Description: 6010C Solids
Associated Lab Samples: 10284165001, 10284165002, 10284165003, 10284165004, 10284165005, 10284165006, 10284165007, 10284165008, 10284165009, 10284165010, 10284165011, 10284165012, 10284165013, 10284165014, 10284165015, 10284165016, 10284165017, 10284165018, 10284165019

METHOD BLANK: 1812516 Matrix: Solid
Associated Lab Samples: 10284165001, 10284165002, 10284165003, 10284165004, 10284165005, 10284165006, 10284165007, 10284165008, 10284165009, 10284165010, 10284165011, 10284165012, 10284165013, 10284165014, 10284165015, 10284165016, 10284165017, 10284165018, 10284165019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.054	0.73	10/18/14 18:14	

LABORATORY CONTROL SAMPLE: 1812517

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	37.9	41.8	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1812518 1812519

Parameter	Units	10284165001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/kg	38.3	51.2	44.9	64.5	59.0	51	46	75-125	9	20	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: MPRP/49756
QC Batch Method: EPA 3010
Analysis Method: EPA 6010C
Analysis Description: 6010C Water
Associated Lab Samples: 10284165020

METHOD BLANK: 1814756 Matrix: Water
Associated Lab Samples: 10284165020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	<1.8	10.0	10/15/14 15:40	

LABORATORY CONTROL SAMPLE: 1814757

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	1000	924	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1814758 1814759

Parameter	Units	10284165020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	ug/L	5.7J	1000	1000	864	887	86	88	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: MPRP/49758
QC Batch Method: EPA 3010
Analysis Method: 6010C Met
Analysis Description: 6010C Water Dissolved
Associated Lab Samples: 10284165020

METHOD BLANK: 1814764 Matrix: Water
Associated Lab Samples: 10284165020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	<1.8	10.0	10/14/14 20:18	

LABORATORY CONTROL SAMPLE: 1814765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	1000	978	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1814766 1814767

Parameter	Units	10284165020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead, Dissolved	ug/L	5.7J	1000	1000	917	966	91	96	75-125	5	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: MPRP/49788 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 10284165001, 10284165002, 10284165003, 10284165004, 10284165005, 10284165006, 10284165007, 10284165008, 10284165009, 10284165010, 10284165011, 10284165012, 10284165013, 10284165014, 10284165015, 10284165016, 10284165017, 10284165018

SAMPLE DUPLICATE: 1816310

Parameter	Units	10284067021 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	21.8	22.6	4	30	

SAMPLE DUPLICATE: 1816311

Parameter	Units	10284165018 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	71.3	73.8	3	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: MPRP/49795
QC Batch Method: ASTM D2974
Analysis Method: ASTM D2974
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 10284165019

SAMPLE DUPLICATE: 1816610

Parameter	Units	10284165019 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	28.4	27.3	4	30	

SAMPLE DUPLICATE: 1816611

Parameter	Units	10284884005 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	16.2	16.5	1	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: MSV/28926 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035 Low Level
Associated Lab Samples: 10284165001, 10284165002, 10284165003, 10284165004, 10284165005, 10284165006, 10284165007, 10284165008, 10284165009, 10284165010, 10284165011, 10284165012, 10284165013, 10284165015

METHOD BLANK: 1816503 Matrix: Solid
Associated Lab Samples: 10284165001, 10284165002, 10284165003, 10284165004, 10284165005, 10284165006, 10284165007, 10284165008, 10284165009, 10284165010, 10284165011, 10284165012, 10284165013, 10284165015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	<0.72	4.0	10/14/14 17:22	
1,2-Dichloroethane	ug/kg	<0.58	4.0	10/14/14 17:22	
Benzene	ug/kg	<0.62	4.0	10/14/14 17:22	
Ethylbenzene	ug/kg	<0.50	4.0	10/14/14 17:22	
Methyl-tert-butyl ether	ug/kg	<1.0	4.0	10/14/14 17:22	
Toluene	ug/kg	<2.0	4.0	10/14/14 17:22	
Xylene (Total)	ug/kg	<6.0	12.0	10/14/14 17:22	
1,2-Dichloroethane-d4 (S)	%.	103	30-150	10/14/14 17:22	
4-Bromofluorobenzene (S)	%.	98	30-150	10/14/14 17:22	
Toluene-d8 (S)	%.	98	30-150	10/14/14 17:22	

LABORATORY CONTROL SAMPLE & LCSD: 1816504 1816505

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	20	19.4	20.0	97	100	75-125	3	20	
1,2-Dichloroethane	ug/kg	20	18.0	18.7	90	94	70-129	4	20	
Benzene	ug/kg	20	18.9	19.6	95	98	67-125	3	20	
Ethylbenzene	ug/kg	20	19.4	20.1	97	101	72-125	4	20	
Methyl-tert-butyl ether	ug/kg	20	19.5	20.5	97	102	71-125	5	20	
Toluene	ug/kg	20	20.7	20.9	103	105	71-125	1	20	
Xylene (Total)	ug/kg	60	56.8	59.0	95	98	74-125	4	20	
1,2-Dichloroethane-d4 (S)	%.				102	100	30-150			
4-Bromofluorobenzene (S)	%.				103	102	30-150			
Toluene-d8 (S)	%.				100	100	30-150			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: MSV/28930 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035 Low Level
Associated Lab Samples: 10284165016, 10284165017, 10284165018, 10284165019

METHOD BLANK: 1816560 Matrix: Solid
Associated Lab Samples: 10284165016, 10284165017, 10284165018, 10284165019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	<0.72	4.0	10/15/14 04:02	
1,2-Dichloroethane	ug/kg	<0.58	4.0	10/15/14 04:02	
Benzene	ug/kg	<0.62	4.0	10/15/14 04:02	
Ethylbenzene	ug/kg	<0.50	4.0	10/15/14 04:02	
Methyl-tert-butyl ether	ug/kg	<1.0	4.0	10/15/14 04:02	
Toluene	ug/kg	<2.0	4.0	10/15/14 04:02	
Xylene (Total)	ug/kg	<6.0	12.0	10/15/14 04:02	
1,2-Dichloroethane-d4 (S)	%.	103	30-150	10/15/14 04:02	
4-Bromofluorobenzene (S)	%.	97	30-150	10/15/14 04:02	
Toluene-d8 (S)	%.	97	30-150	10/15/14 04:02	

LABORATORY CONTROL SAMPLE & LCSD: 1816561 1816562

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	20	19.9	17.5	99	87	75-125	13	20	
1,2-Dichloroethane	ug/kg	20	18.9	18.2	94	91	70-129	4	20	
Benzene	ug/kg	20	19.6	18.2	98	91	67-125	7	20	
Ethylbenzene	ug/kg	20	18.8	16.8	94	84	72-125	12	20	
Methyl-tert-butyl ether	ug/kg	20	19.8	18.7	99	94	71-125	6	20	
Toluene	ug/kg	20	19.6	17.4	98	87	71-125	12	20	
Xylene (Total)	ug/kg	60	54.5	47.5	91	79	74-125	14	20	
1,2-Dichloroethane-d4 (S)	%.				103	105	30-150			
4-Bromofluorobenzene (S)	%.				98	96	30-150			
Toluene-d8 (S)	%.				100	99	30-150			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: MSV/28990
QC Batch Method: EPA 5035/5030B
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 5030 Med Level
Associated Lab Samples: 10284165014

METHOD BLANK: 1822107 Matrix: Solid
Associated Lab Samples: 10284165014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	<6.2	50.0	10/21/14 11:36	
1,2-Dichloroethane	ug/kg	<11.8	50.0	10/21/14 11:36	
Benzene	ug/kg	<10.0	50.0	10/21/14 11:36	
Ethylbenzene	ug/kg	<6.3	50.0	10/21/14 11:36	
Methyl-tert-butyl ether	ug/kg	<25.0	50.0	10/21/14 11:36	
Toluene	ug/kg	<6.8	50.0	10/21/14 11:36	
Xylene (Total)	ug/kg	<19.6	150	10/21/14 11:36	
1,2-Dichloroethane-d4 (S)	%.	90	74-125	10/21/14 11:36	
4-Bromofluorobenzene (S)	%.	102	75-125	10/21/14 11:36	
Toluene-d8 (S)	%.	98	75-125	10/21/14 11:36	

LABORATORY CONTROL SAMPLE: 1822108

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	1000	1000	100	72-125	
1,2-Dichloroethane	ug/kg	1000	909	91	69-125	
Benzene	ug/kg	1000	935	94	71-125	
Ethylbenzene	ug/kg	1000	1000	100	69-125	
Methyl-tert-butyl ether	ug/kg	1000	940	94	69-125	
Toluene	ug/kg	1000	994	99	70-125	
Xylene (Total)	ug/kg	3000	3070	102	74-125	
1,2-Dichloroethane-d4 (S)	%.			86	74-125	
4-Bromofluorobenzene (S)	%.			100	75-125	
Toluene-d8 (S)	%.			97	75-125	

MATRIX SPIKE SAMPLE: 1822109

Parameter	Units	10284945001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	ND	1370	1360	100	66-135	
1,2-Dichloroethane	ug/kg	ND	1370	1150	84	57-145	
Benzene	ug/kg	ND	1370	1260	92	61-134	
Ethylbenzene	ug/kg	ND	1370	1320	96	63-135	
Methyl-tert-butyl ether	ug/kg	ND	1370	1270	93	56-143	
Toluene	ug/kg	ND	1370	1340	98	67-132	
Xylene (Total)	ug/kg	ND	4090	4190	103	66-136	
1,2-Dichloroethane-d4 (S)	%.				86	74-125	
4-Bromofluorobenzene (S)	%.				99	75-125	
Toluene-d8 (S)	%.				99	75-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

SAMPLE DUPLICATE: 1822110

Parameter	Units	10284945002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	ND	<7.7		30	
1,2-Dichloroethane	ug/kg	ND	<14.8		30	
Benzene	ug/kg	ND	<12.5		30	
Ethylbenzene	ug/kg	ND	<7.9		30	
Methyl-tert-butyl ether	ug/kg	ND	<31.3		30	
Toluene	ug/kg	ND	<8.5		30	
Xylene (Total)	ug/kg	ND	<24.6		30	
1,2-Dichloroethane-d4 (S)	%.	88	88	0		
4-Bromofluorobenzene (S)	%.	100	103	2		
Toluene-d8 (S)	%.	98	97	3		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

QC Batch: MSV/28931
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10284165020

METHOD BLANK: 1816568 Matrix: Water
Associated Lab Samples: 10284165020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	<0.13	1.0	10/14/14 17:18	
Benzene	ug/L	<0.15	1.0	10/14/14 17:18	
Ethylbenzene	ug/L	<0.16	1.0	10/14/14 17:18	
Methyl-tert-butyl ether	ug/L	<0.17	1.0	10/14/14 17:18	
Toluene	ug/L	<0.11	1.0	10/14/14 17:18	
Xylene (Total)	ug/L	<0.40	3.0	10/14/14 17:18	
1,2-Dichloroethane-d4 (S)	%.	93	75-125	10/14/14 17:18	
4-Bromofluorobenzene (S)	%.	103	75-125	10/14/14 17:18	
Toluene-d8 (S)	%.	98	75-125	10/14/14 17:18	

LABORATORY CONTROL SAMPLE: 1816569

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	20	17.8	89	75-125	
Benzene	ug/L	20	17.9	90	75-125	
Ethylbenzene	ug/L	20	18.3	92	75-125	
Methyl-tert-butyl ether	ug/L	20	17.1	86	75-125	
Toluene	ug/L	20	18.9	94	75-125	
Xylene (Total)	ug/L	60	54.8	91	75-125	
1,2-Dichloroethane-d4 (S)	%.			97	75-125	
4-Bromofluorobenzene (S)	%.			100	75-125	
Toluene-d8 (S)	%.			101	75-125	

MATRIX SPIKE SAMPLE: 1817692

Parameter	Units	10285230001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	<1.0	20	26.3	131	68-128	M1
Benzene	ug/L	5.4	20	32.6	136	75-129	M1
Ethylbenzene	ug/L	1.1	20	27.6	133	75-128	M1
Methyl-tert-butyl ether	ug/L	<1.0	20	23.4	114	74-128	
Toluene	ug/L	1.0	20	27.7	133	75-129	M1
Xylene (Total)	ug/L	4.9	60	87.1	137	75-129	MS
1,2-Dichloroethane-d4 (S)	%.				100	75-125	
4-Bromofluorobenzene (S)	%.				99	75-125	
Toluene-d8 (S)	%.				99	75-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

SAMPLE DUPLICATE: 1817217

Parameter	Units	10284293006 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	<0.13	<0.13		30	
Benzene	ug/L	<0.00015 mg/L	<0.15		30	
Ethylbenzene	ug/L	<0.00016 mg/L	<0.16		30	
Methyl-tert-butyl ether	ug/L	<0.00017 mg/L	<0.17		30	
Toluene	ug/L	<0.00011 mg/L	<0.11		30	
Xylene (Total)	ug/L	<0.00040 mg/L	<0.40		30	
1,2-Dichloroethane-d4 (S)	%.	95	93	2		
4-Bromofluorobenzene (S)	%.	101	100	1		
Toluene-d8 (S)	%.	98	98	0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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(612)607-1700

QUALIFIERS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: MSV/28926

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: MSV/28930

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1M	The results are from sample aliquot taken from a jar with headspace. This does not meet method sampling requirements and the data should be considered an estimation.
2M	The results are from sample aliquot taken from a packed jar. This does not meet method sampling requirements and the data should be considered an estimation.
G2	The sample weight in the container did not meet method specifications.
H1	Analysis conducted outside the recognized method holding time.
H2	Extraction or preparation was conducted outside of the recognized method holding time.
H5	Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
S5	Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

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METHOD CROSS REFERENCE TABLE

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Parameter	Matrix	Analytical Method	Preparation Method
8260 MSV 5030 Med Level	Solid	SW-846 8260B	SW-846 5030B
8260 MSV 5035 Low Level	Solid	SW-846 8260B	SW-846 5035A/5030B
8260 MSV UST	Water	SW-846 8260B/5030B	N/A

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10284165001	**B-212-5'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165002	**B-212-10'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165003	**B-212-15'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165004	**B-212-20'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165005	**B-212-25'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165006	**B-213-6.5'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165007	**B-213-10'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165008	**B-213-15'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165009	**B-213-20'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165010	**B-214-6.5'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165011	**B-214-10'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165012	**B-214-15'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165013	**B-215-6'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165014	**B-215-10'**	NWTPH-Gx/8021	GCV/12744	NWTPH-Gx/8021	GCV/12745
10284165015	**B-215-15'**	NWTPH-Gx/8021	GCV/12758	NWTPH-Gx/8021	GCV/12759
10284165016	**B-216-6'**	NWTPH-Gx/8021	GCV/12758	NWTPH-Gx/8021	GCV/12759
10284165017	**B-216-10'**	NWTPH-Gx/8021	GCV/12758	NWTPH-Gx/8021	GCV/12759
10284165018	**B-216-15'**	NWTPH-Gx/8021	GCV/12758	NWTPH-Gx/8021	GCV/12759
10284165019	**B-216-25'**	NWTPH-Gx/8021	GCV/12758	NWTPH-Gx/8021	GCV/12759
10284165020	**MW-212**	NWTPH-Gx/8021	GCV/12754		
10284165001	**B-212-5'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165002	**B-212-10'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165003	**B-212-15'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165004	**B-212-20'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165005	**B-212-25'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165006	**B-213-6.5'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165007	**B-213-10'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165008	**B-213-15'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165009	**B-213-20'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165010	**B-214-6.5'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165011	**B-214-10'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165012	**B-214-15'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165013	**B-215-6'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165014	**B-215-10'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165015	**B-215-15'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165016	**B-216-6'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165017	**B-216-10'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165018	**B-216-15'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165019	**B-216-25'**	EPA 3050	MPRP/49662	EPA 6010C	ICP/21274
10284165020	**MW-212**	EPA 3010	MPRP/49756	EPA 6010C	ICP/21229
10284165020	**MW-212**	EPA 3010	MPRP/49758	6010C Met	ICP/21245
10284165001	**B-212-5'**	ASTM D2974	MPRP/49788		
10284165002	**B-212-10'**	ASTM D2974	MPRP/49788		
10284165003	**B-212-15'**	ASTM D2974	MPRP/49788		
10284165004	**B-212-20'**	ASTM D2974	MPRP/49788		
10284165005	**B-212-25'**	ASTM D2974	MPRP/49788		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284165

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10284165006	**B-213-6.5'**	ASTM D2974	MPRP/49788		
10284165007	**B-213-10'**	ASTM D2974	MPRP/49788		
10284165008	**B-213-15'**	ASTM D2974	MPRP/49788		
10284165009	**B-213-20'**	ASTM D2974	MPRP/49788		
10284165010	**B-214-6.5'**	ASTM D2974	MPRP/49788		
10284165011	**B-214-10'**	ASTM D2974	MPRP/49788		
10284165012	**B-214-15'**	ASTM D2974	MPRP/49788		
10284165013	**B-215-6'**	ASTM D2974	MPRP/49788		
10284165014	**B-215-10'**	ASTM D2974	MPRP/49788		
10284165015	**B-215-15'**	ASTM D2974	MPRP/49788		
10284165016	**B-216-6'**	ASTM D2974	MPRP/49788		
10284165017	**B-216-10'**	ASTM D2974	MPRP/49788		
10284165018	**B-216-15'**	ASTM D2974	MPRP/49788		
10284165019	**B-216-25'**	ASTM D2974	MPRP/49795		
10284165001	**B-212-5'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165002	**B-212-10'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165003	**B-212-15'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165004	**B-212-20'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165005	**B-212-25'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165006	**B-213-6.5'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165007	**B-213-10'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165008	**B-213-15'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165009	**B-213-20'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165010	**B-214-6.5'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165011	**B-214-10'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165012	**B-214-15'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165013	**B-215-6'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165015	**B-215-15'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28926
10284165016	**B-216-6'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28930
10284165017	**B-216-10'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28930
10284165018	**B-216-15'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28930
10284165019	**B-216-25'**	EPA 5035A	MSV/28838	EPA 8260	MSV/28930
10284165014	**B-215-10'**	EPA 5035/5030B	MSV/28990	EPA 8260	MSV/29002
10284165020	**MW-212**	EPA 8260	MSV/28931		

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10284165

Page: 1 of 2

1742866

Section A Required Client Information:
- Company: Cardno ATC
- Address: 6347 Seaview Ave
- Email To: Kyle.Sattler@cardno.com
- Phone:
- Fax:
- Requested Due Date/TAT: Standard

Section B Required Project Information:
- Report To: Kyle Sattler
- Copy To: Mark Newman
- Purchase Order No.:
- Project Name: P66 - 1396
- Project Number: 76.7518.1396

Section C Invoice Information:
- Attention:
- Company Name:
- Address:
- Pace Quote Reference:
- Pace Project Manager: J. Gross
- Pace Profile #: SL 3195S#4 / WT #5

REGULATORY AGENCY
- ☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
- ☐ UST ☐ RCRA ☐ OTHER ____

Site Location STATE: ____

Section D Required Client Information

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collected Composite Start DATE	Collected Composite Start TIME	Composite End/Grab DATE	Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	~~Gx/BTEX, MTBE, EDC,~~	Gx/BTEX, MTBE, EDC	EDB	Pb	Total Pb	Dissolved Pb	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	B-212-5'	SL	G	9/30/14	12:20															X	X	X				001
2	B-212-10'	↓	↓	↓	12:30															↓	↓	↓				002
3	B-212-15	↓	↓	↓	12:40															↓	↓	↓				003
4	B-212-20	↓	↓	↓	12:50															↓	↓	↓				004
5	B-212-25	↓	↓	↓	13:00															↓	↓	↓				005
6	B-213-6.5'	↓	↓	10/1/14	12:00															↓	↓	↓				006
7	B-213-10'	↓	↓	↓	12:10															↓	↓	↓				007
8	B-213-15'	↓	↓	↓	12:20															↓	↓	↓				008
9	B-213-20'	↓	↓	↓	12:30															↓	↓	↓				009
10	B-214-6.5'	↓	↓	↓	13:45															↓	↓	↓				010
11	B-214-10'	↓	↓	↓	13:55															↓	↓	↓				011
12	B-214-15'	↓	↓	↓	14:05															↓	↓	↓				012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	ME Cardno ATC	10/2/14	15:50	[signature] PACE	10/2/14	1550	4.3/4.0	Y	N	Y
	Jean Gross / Pace	10-2-14	16:40	[signature] PACE	10-3-14	1030	2.3	Y	N	Y
							5.6	Y	/	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE
- PRINT Name of SAMPLER: Mark Newman
- SIGNATURE of SAMPLER: ME
- DATE Signed (MM/DD/YY): 10/1/14

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev.07, 15-May-2007

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10284165

Page: 2 of 2

1742900

Section A Required Client Information:

Company: Cardno ATC
Address:
Email To:
Phone: Fax:
Requested Due Date/TAT:

Section B Required Project Information:

Report To: K S
Copy To:
Purchase Order No.:
Project Name: 866.1396
Project Number:

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager: J. Gross
Pace Profile #: SL 3455 #4/WT #5

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE:

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes — MATRIX / CODE: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (use valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	6x BTEX, MBE EDC	EDB	Pb	Total Pb	Diss. Pb (Lab Filter)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	B-215-8'	SL	G	10/1/14	15:15														X	X	X				013
2	B-215-10'				15:25																				014
3	B-215-15'				15:35																				015
4	B-216-6'			10/2/14	12:20																				016
5	B-216-10'				12:30																				017
6	B-216-15'				12:40																				018
7	B-216-25'				12:50																				019
8	MW-212	WT	G	10/2/14	11:00														XX			XX			020
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Cardno ATC	10/2/14	15:50	PACE	10/3/14	1550	4.4	Y	N	Y
	Jenn Gross / Pace	10-2-14	16:40	PACE	10-3-14	1030	2.3	Y	Y	Y
							5.6	Y	Y	Y

ORIGINAL

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark Newman

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/2/14

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical®	Document Name: Sample Condition Upon Receipt Form	Document Revised: 28Feb2014 Page 1 of 1
	Document No.: F-MN-L-213-rev.09	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Cardno ATC

Project #: WO#: 10284165

10284165

Courier: ☒Fed Ex ☐UPS ☐USPS ☐Client ☐Commercial ☐Pace ☐SpeeDee ☐Other:_____

Tracking Number: 5779 5332 2966 /2977

Custody Seal on Cooler/Box Present? ☒Yes ☐No **Seals Intact?** ☒Yes ☐No **Optional:** Proj. Due Date: Proj. Name:

Packing Material: ☒Bubble Wrap ☒Bubble Bags ☐None ☐Other:_____ **Temp Blank?** ☒Yes ☐No

Thermom. Used: ☐B88A9130516413 ☒B88A912167504 ☒B88A9132521491 **Type of Ice:** ☒Wet ☐Blue ☐None ☐Samples on ice, cooling process has begun

Cooler Temp Read (°C): 1.9, 5.4 **Cooler Temp Corrected (°C):** 2.3, 5.6 **Biological Tissue Frozen?** ☐Yes ☐No ☒N/A

Temp should be above freezing to 6°C **Correction Factor:** +0.4, +0.2 **Date and Initials of Person Examining Contents:** 10-3-14 AA

				Comments:
Chain of Custody Present?	☒Yes	☐No	☐	1.
Chain of Custody Filled Out?	☒Yes	☐No	☐	2.
Chain of Custody Relinquished?	☒Yes	☐No	☐	3.
Sampler Name and/or Signature on COC?	☒Yes	☐No	☐	4.
Samples Arrived within Hold Time?	☒Yes	☐No	☐	5.
Short Hold Time Analysis (<72 hr)?	☐Yes	☒No	☐	6.
Rush Turn Around Time Requested?	☐Yes	☒No	☐	7.
Sufficient Volume?	☒Yes	☐No	☐	8.
Correct Containers Used?	☒Yes	☐No	☐	9.
-Pace Containers Used?	☒Yes	☐No	☐	
Containers Intact?	☒Yes	☐No	☐	10.
Filtered Volume Received for Dissolved Tests?	☐Yes	☒No	☐	11.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT & SL	☐Yes	☒No	☐	12. All containers for sample 13 are labeled w/ the ID "B-215-6.5"
All containers needing acid/base preservation have been checked?	☒Yes	☐No	☐	13. ☒HNO_3 ☐H_2SO_4 ☐NaOH ☐HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☒Yes	☐No	☐	Sample # 20 1/1
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	☐Yes	☒No		Initial when completed:_____ Lot # of added preservative:_____
Headspace in VOA Vials (>6mm)?	☐Yes	☒No	☐	14.
Trip Blank Present?	☒Yes	☐No	☐	15.
Trip Blank Custody Seals Present?	☐Yes	☒No	☐	
Pace Trip Blank Lot # (if purchased):_____				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐Yes ☒No

Person Contacted:_____ Date/Time:_____

Comments/Resolution:_____

Project Manager Review: _____ **Date:** 10/8/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-61076-1
Client Project/Site: Washington

For:
Pace Analytical Services, Inc.
Seattle Service Center
596 Industry Drive, Suite 602
Tukwila, Washington 98188

Attn: Jennifer Gross

Authorized for release by:
10/17/2014 10:23:09 AM

Kae Yoder, Senior Project Manager
(303)736-0190
kae.yoder@testamericainc.com

Table of Contents

Job ID: 280-61076-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Pace Analytical Services, Inc.

Job Number: 280-61076-1

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

Please note that Non-Detect (ND) results have been evaluated down to the Method Detection Limit (MDL).

Results between the method detection limit (MDL) and reporting limit (RL) are flagged with a "J" qualifier to indicate an estimated value. These results are statistically less reliable than results greater than or equal to the RL and should be considered a qualitative value.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The sample was received on 10/10/2014 9:50 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.0º C.

EDB - EPA 8011

The method required MS and MSD analysis could not be performed for prep batch 247418, due to insufficient sample volume. A duplicate LCS (LCSD) was analyzed to provide some evidence of batch precision.

No other analytical or quality issues were noted.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61076-1

Method	Method Description	Protocol	Laboratory
8011	EDB	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61076-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-61076-1	MW-212	Water	09/30/14 11:00	10/10/14 09:50

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61076-1

Method: 8011 - EDB

Client Sample ID: MW-212
Date Collected: 09/30/14 11:00
Date Received: 10/10/14 09:50

Lab Sample ID: 280-61076-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.021	0.0038	ug/L		10/10/14 19:02	10/11/14 04:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*104*		*70 - 130*	*10/10/14 19:02*	*10/11/14 04:14*	*1*

Method: 8011 - EDB

Lab Sample ID: MB 280-247418/4-A
Matrix: Water
Analysis Batch: 247390

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247418

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	0.0037	ug/L		10/10/14 19:02	10/11/14 03:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*106*		*70 - 130*	*10/10/14 19:02*	*10/11/14 03:55*	*1*

Lab Sample ID: LCS 280-247418/2-A
Matrix: Water
Analysis Batch: 247390

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247418

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dibromoethane (EDB)			0.250	0.269		ug/L		108	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dibromopropane	*105*		*70 - 130*

Lab Sample ID: LCSD 280-247418/3-A
Matrix: Water
Analysis Batch: 247390

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 247418

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)			0.250	0.268		ug/L		107	70 - 130	0	10

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dibromopropane	*103*		*70 - 130*

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61076-1

GC Semi VOA

Analysis Batch: 247390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-61076-1	MW-212	Total/NA	Water	8011	247418
LCS 280-247418/2-A	Lab Control Sample	Total/NA	Water	8011	247418
LCSD 280-247418/3-A	Lab Control Sample Dup	Total/NA	Water	8011	247418
MB 280-247418/4-A	Method Blank	Total/NA	Water	8011	247418

Prep Batch: 247418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-61076-1	MW-212	Total/NA	Water	8011	
LCS 280-247418/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 280-247418/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
MB 280-247418/4-A	Method Blank	Total/NA	Water	8011	

Lab Chronicle

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61076-1

Client Sample ID: MW-212
Date Collected: 09/30/14 11:00
Date Received: 10/10/14 09:50

Lab Sample ID: 280-61076-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			33.7 mL	35 mL	247418	10/10/14 19:02	MPS	TAL DEN
Total/NA	Analysis	8011		1	33.7 mL	35 mL	247390	10/11/14 04:14	MPS	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61076-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15 *
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-15
Arizona	State Program	9	AZ0713	12-19-14
Arkansas DEQ	State Program	6	88-0687	06-01-15
California	State Program	9	2513	08-31-16
Florida	NELAP	4	E87667	06-30-15
Georgia	State Program	4	N/A	01-09-15
Illinois	NELAP	5	200017	04-30-15
Iowa	State Program	7	370	12-01-14 *
Kansas	NELAP	7	E-10166	04-30-15
Louisiana	NELAP	6	02096	06-30-15
Maine	State Program	1	CO0002	03-03-15
Minnesota	NELAP	5	8-999-405	12-31-14
Nevada	State Program	9	CO0026	07-31-15
New Hampshire	NELAP	1	205310	04-28-15
New Jersey	NELAP	2	CO004	06-30-15
New Mexico	State Program	6	CO00026	01-09-15
New York	NELAP	2	11964	03-31-15
North Carolina (WW/SW)	State Program	4	358	12-31-14
North Dakota	State Program	8	R-034	06-30-14 *
Oklahoma	State Program	6	8614	08-31-15
Oregon	NELAP	10	4025	01-09-15
Pennsylvania	NELAP	3	68-00664	07-30-15
South Carolina	State Program	4	72002001	06-30-15
Texas	NELAP	6	T104704183-13-8	10-01-15
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO00026	07-31-15
Virginia	NELAP	3	460232	06-14-15
Washington	State Program	10	C583	08-03-15
West Virginia DEP	State Program	3	354	11-30-14
Wisconsin	State Program	5	999615430	08-31-15
Wyoming (UST)	A2LA	8	2907.01	10-31-15

* Certification renewal pending - certification considered valid.

0.6 [illegible] 10-9-14
Transferred by [illegible]

Chain of Custody

280-61076 Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 10284165 **Workorder Name:** P66-1396 76.75118.1396 **Results Requested** 10/17/2014

Report / Invoice To	Subcontract To	
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)767-5060 Email: jennifer.gross@pacelabs.com	Kae Yoder TA-Denver 4955 Yarrow, St Arvada, CO 8002	P.O. 10284165

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HCL	Requested Analysis: EDB by 8011	LAB USE ONLY
1	MW-212	9/30/2014 11 00	10284165020	Water	3	X	
2							
3							
4							
5							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace MN	10-9-14 0745	[signature]	0950 10Oct14
2				
3				

Comments
State of collection: WA
TA Denver Project # 28009403

Cooler Temperature on Receipt °C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Login Sample Receipt Checklist

Client: Pace Analytical Services, Inc.

Job Number: 280-61076-1

Login Number: 61076

List Source: TestAmerica Denver

List Number: 1

Creator: Muniz, Ashley T

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

November 25, 2014

Kyle Sattler
Cardno ATC
7070 SW Fir Loop
Suite 100
Portland, OR 97223

RE: Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Dear Kyle Sattler:
Enclosed are the analytical results for sample(s) received by the laboratory on October 08, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Revised Report, REV-1 11/25/14. Samples 10284488006-009 and 1818401 DUP were analyzed outside recommended holding time due to sample dilutions and carry over from previous samples. Samples were re-analyzed and data has been flagged and reported.

Sample 10284488-006 has been updated to report the low level results for 8260. Medium level results were originally reported due to matrix interference.

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

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
Project Manager

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

Enclosures

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10284488001	**B-217-5'**	Solid	10/03/14 09:40	10/08/14 10:00
10284488002	**B-217-10'**	Solid	10/03/14 09:50	10/08/14 10:00
10284488003	**B-217-15'**	Solid	10/03/14 09:53	10/08/14 10:00
10284488004	**B-217-20'**	Solid	10/03/14 09:57	10/08/14 10:00
10284488005	**B-217-25'**	Solid	10/03/14 10:05	10/08/14 10:00
10284488006	**B-218-10'**	Solid	10/03/14 12:00	10/08/14 10:00
10284488007	**B-218-15'**	Solid	10/03/14 12:10	10/08/14 10:00
10284488008	**B-218-20'**	Solid	10/03/14 12:25	10/08/14 10:00
10284488009	**B-218-25'**	Solid	10/03/14 12:45	10/08/14 10:00
10284488010	**B-219-10'**	Solid	10/03/14 15:30	10/08/14 10:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10284488001	**B-217-5'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284488002	**B-217-10'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284488003	**B-217-15'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284488004	**B-217-20'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284488005	**B-217-25'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284488006	**B-218-10'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284488007	**B-218-15'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284488008	**B-218-20'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284488009	**B-218-25'**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M
10284488010	**B-219-10'**	NWTPH-Gx/8021	LLC	2	PASI-M

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SAMPLE ANALYTE COUNT

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010C	IP	1	PASI-M
		ASTM D2974	JDL	1	PASI-M
		EPA 8260	SH2	10	PASI-M

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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Sample: B-217-5' **Lab ID: 10284488001** Collected: 10/03/14 09:40 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<3.1**	mg/kg	6.2	3.1	1	10/16/14 09:24	10/17/14 16:08		
Surrogates									
a,a,a-Trifluorotoluene (S)	92	%.	75-125		1	10/16/14 09:24	10/17/14 16:08	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**9.2**	mg/kg	1.2	0.089	1	10/15/14 12:07	10/22/14 16:32	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**18.1**	%	0.10	0.10	1		10/17/14 13:56		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**0.92J**	ug/kg	5.8	0.90	1	10/14/14 13:52	10/15/14 11:37	71-43-2	
1,2-Dibromoethane (EDB)	**<1.0**	ug/kg	5.8	1.0	1	10/14/14 13:52	10/15/14 11:37	106-93-4	
1,2-Dichloroethane	**<0.84**	ug/kg	5.8	0.84	1	10/14/14 13:52	10/15/14 11:37	107-06-2	
Ethylbenzene	**0.95J**	ug/kg	5.8	0.73	1	10/14/14 13:52	10/15/14 11:37	100-41-4	
Methyl-tert-butyl ether	**<1.5**	ug/kg	5.8	1.5	1	10/14/14 13:52	10/15/14 11:37	1634-04-4	
Toluene	**<2.9**	ug/kg	5.8	2.9	1	10/14/14 13:52	10/15/14 11:37	108-88-3	
Xylene (Total)	**<8.7**	ug/kg	17.5	8.7	1	10/14/14 13:52	10/15/14 11:37	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%.	30-150		1	10/14/14 13:52	10/15/14 11:37	17060-07-0	
Toluene-d8 (S)	101	%.	30-150		1	10/14/14 13:52	10/15/14 11:37	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	30-150		1	10/14/14 13:52	10/15/14 11:37	460-00-4	

Sample: B-217-10' **Lab ID: 10284488002** Collected: 10/03/14 09:50 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<3.0**	mg/kg	6.0	3.0	1	10/16/14 09:24	10/17/14 17:38		
Surrogates									
a,a,a-Trifluorotoluene (S)	91	%.	75-125		1	10/16/14 09:24	10/17/14 17:38	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**12.1**	mg/kg	0.89	0.066	1	10/15/14 12:07	10/22/14 16:37	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**8.6**	%	0.10	0.10	1		10/17/14 13:56		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**1.5J**	ug/kg	4.5	0.69	1	10/14/14 13:52	10/15/14 11:58	71-43-2	
1,2-Dibromoethane (EDB)	**<0.80**	ug/kg	4.5	0.80	1	10/14/14 13:52	10/15/14 11:58	106-93-4	
1,2-Dichloroethane	**<0.64**	ug/kg	4.5	0.64	1	10/14/14 13:52	10/15/14 11:58	107-06-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Sample: B-217-10' **Lab ID: 10284488002** Collected: 10/03/14 09:50 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Ethylbenzene	**3.0J**	ug/kg	4.5	0.56	1	10/14/14 13:52	10/15/14 11:58	100-41-4	
Methyl-tert-butyl ether	**<1.1**	ug/kg	4.5	1.1	1	10/14/14 13:52	10/15/14 11:58	1634-04-4	
Toluene	**4.1J**	ug/kg	4.5	2.2	1	10/14/14 13:52	10/15/14 11:58	108-88-3	
Xylene (Total)	**<6.7**	ug/kg	13.4	6.7	1	10/14/14 13:52	10/15/14 11:58	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	99	%.	30-150		1	10/14/14 13:52	10/15/14 11:58	17060-07-0	
Toluene-d8 (S)	98	%.	30-150		1	10/14/14 13:52	10/15/14 11:58	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	30-150		1	10/14/14 13:52	10/15/14 11:58	460-00-4	

Sample: B-217-15' **Lab ID: 10284488003** Collected: 10/03/14 09:53 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**25.1**	mg/kg	11.1	5.5	1	10/16/14 09:24	10/17/14 15:45		M1
Surrogates									
a,a,a-Trifluorotoluene (S)	93	%.	75-125		1	10/16/14 09:24	10/17/14 15:45	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**15.1**	mg/kg	1.2	0.088	1	10/15/14 12:07	10/22/14 16:42	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**37.7**	%	0.10	0.10	1		10/17/14 13:57		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**19.0**	ug/kg	7.7	1.2	1	10/14/14 13:52	10/15/14 12:20	71-43-2	
1,2-Dibromoethane (EDB)	**<1.4**	ug/kg	7.7	1.4	1	10/14/14 13:52	10/15/14 12:20	106-93-4	
1,2-Dichloroethane	**<1.1**	ug/kg	7.7	1.1	1	10/14/14 13:52	10/15/14 12:20	107-06-2	
Ethylbenzene	**6.9J**	ug/kg	7.7	0.96	1	10/14/14 13:52	10/15/14 12:20	100-41-4	
Methyl-tert-butyl ether	**<1.9**	ug/kg	7.7	1.9	1	10/14/14 13:52	10/15/14 12:20	1634-04-4	
Toluene	**7.1J**	ug/kg	7.7	3.9	1	10/14/14 13:52	10/15/14 12:20	108-88-3	
Xylene (Total)	**23.2**	ug/kg	23.1	11.6	1	10/14/14 13:52	10/15/14 12:20	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	96	%.	30-150		1	10/14/14 13:52	10/15/14 12:20	17060-07-0	
Toluene-d8 (S)	103	%.	30-150		1	10/14/14 13:52	10/15/14 12:20	2037-26-5	
4-Bromofluorobenzene (S)	109	%.	30-150		1	10/14/14 13:52	10/15/14 12:20	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Sample: B-217-20' **Lab ID: 10284488004** Collected: 10/03/14 09:57 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<3.6**	mg/kg	7.2	3.6	1	10/16/14 09:24	10/17/14 18:00		
Surrogates									
a,a,a-Trifluorotoluene (S)	91	%.	75-125		1	10/16/14 09:24	10/17/14 18:00	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**2.2**	mg/kg	1.1	0.082	1	10/15/14 12:07	10/22/14 16:55	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**20.4**	%	0.10	0.10	1		10/17/14 13:57		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**3.0J**	ug/kg	5.5	0.84	1	10/14/14 13:52	10/15/14 10:10	71-43-2	
1,2-Dibromoethane (EDB)	**<0.98**	ug/kg	5.5	0.98	1	10/14/14 13:52	10/15/14 10:10	106-93-4	
1,2-Dichloroethane	**<0.78**	ug/kg	5.5	0.78	1	10/14/14 13:52	10/15/14 10:10	107-06-2	
Ethylbenzene	**2.9J**	ug/kg	5.5	0.68	1	10/14/14 13:52	10/15/14 10:10	100-41-4	
Methyl-tert-butyl ether	**<1.4**	ug/kg	5.5	1.4	1	10/14/14 13:52	10/15/14 10:10	1634-04-4	
Toluene	**<2.7**	ug/kg	5.5	2.7	1	10/14/14 13:52	10/15/14 10:10	108-88-3	
Xylene (Total)	**<8.2**	ug/kg	16.4	8.2	1	10/14/14 13:52	10/15/14 10:10	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	30-150		1	10/14/14 13:52	10/15/14 10:10	17060-07-0	
Toluene-d8 (S)	98	%.	30-150		1	10/14/14 13:52	10/15/14 10:10	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	30-150		1	10/14/14 13:52	10/15/14 10:10	460-00-4	

Sample: B-217-25' **Lab ID: 10284488005** Collected: 10/03/14 10:05 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<3.4**	mg/kg	6.8	3.4	1	10/16/14 09:24	10/17/14 18:23		
Surrogates									
a,a,a-Trifluorotoluene (S)	90	%.	75-125		1	10/16/14 09:24	10/17/14 18:23	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**3.4**	mg/kg	1.2	0.085	1	10/15/14 12:07	10/22/14 17:00	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**21.0**	%	0.10	0.10	1		10/17/14 13:57		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**<0.66**	ug/kg	4.3	0.66	1	10/14/14 13:52	10/15/14 10:31	71-43-2	
1,2-Dibromoethane (EDB)	**<0.77**	ug/kg	4.3	0.77	1	10/14/14 13:52	10/15/14 10:31	106-93-4	
1,2-Dichloroethane	**<0.62**	ug/kg	4.3	0.62	1	10/14/14 13:52	10/15/14 10:31	107-06-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Sample: B-217-25' **Lab ID: 10284488005** Collected: 10/03/14 10:05 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Ethylbenzene	**1.5J**	ug/kg	4.3	0.54	1	10/14/14 13:52	10/15/14 10:31	100-41-4	
Methyl-tert-butyl ether	**<1.1**	ug/kg	4.3	1.1	1	10/14/14 13:52	10/15/14 10:31	1634-04-4	
Toluene	**<2.1**	ug/kg	4.3	2.1	1	10/14/14 13:52	10/15/14 10:31	108-88-3	
Xylene (Total)	**<6.4**	ug/kg	12.9	6.4	1	10/14/14 13:52	10/15/14 10:31	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	30-150		1	10/14/14 13:52	10/15/14 10:31	17060-07-0	
Toluene-d8 (S)	98	%.	30-150		1	10/14/14 13:52	10/15/14 10:31	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	30-150		1	10/14/14 13:52	10/15/14 10:31	460-00-4	

Sample: B-218-10' **Lab ID: 10284488006** Collected: 10/03/14 12:00 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**635**	mg/kg	125	62.7	20	10/16/14 09:24	10/20/14 19:53		H1
Surrogates									
a,a,a-Trifluorotoluene (S)	87	%.	75-125		20	10/16/14 09:24	10/20/14 19:53	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**11.2**	mg/kg	1.1	0.078	1	10/15/14 12:07	10/22/14 17:05	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**13.8**	%	0.10	0.10	1		10/17/14 13:58		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**5.0**	ug/kg	4.8	0.74	1	10/14/14 13:52	10/15/14 23:42	71-43-2	
1,2-Dibromoethane (EDB)	**<0.87**	ug/kg	4.8	0.87	1	10/14/14 13:52	10/15/14 23:42	106-93-4	
1,2-Dichloroethane	**<0.70**	ug/kg	4.8	0.70	1	10/14/14 13:52	10/15/14 23:42	107-06-2	
Ethylbenzene	**4.7J**	ug/kg	4.8	0.60	1	10/14/14 13:52	10/15/14 23:42	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/kg	4.8	1.2	1	10/14/14 13:52	10/15/14 23:42	1634-04-4	
Toluene	**7.5**	ug/kg	4.8	2.4	1	10/14/14 13:52	10/15/14 23:42	108-88-3	
Xylene (Total)	**1130**	ug/kg	14.5	7.3	1	10/14/14 13:52	10/15/14 23:42	1330-20-7	ES
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	30-150		1	10/14/14 13:52	10/15/14 23:42	17060-07-0	
Toluene-d8 (S)	96	%.	30-150		1	10/14/14 13:52	10/15/14 23:42	2037-26-5	
4-Bromofluorobenzene (S)	128	%.	30-150		1	10/14/14 13:52	10/15/14 23:42	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Sample: B-218-15' **Lab ID: 10284488007** Collected: 10/03/14 12:10 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**55.5**	mg/kg	6.7	3.3	1	10/16/14 09:24	10/20/14 16:53		H1
Surrogates									
a,a,a-Trifluorotoluene (S)	90	%.	75-125		1	10/16/14 09:24	10/20/14 16:53	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**54.2**	mg/kg	1.1	0.084	1	10/15/14 12:07	10/22/14 17:10	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**28.8**	%	0.10	0.10	1		10/17/14 13:58		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**9.2**	ug/kg	4.8	0.74	1	10/14/14 13:52	10/16/14 00:04	71-43-2	
1,2-Dibromoethane (EDB)	**<0.86**	ug/kg	4.8	0.86	1	10/14/14 13:52	10/16/14 00:04	106-93-4	
1,2-Dichloroethane	**<0.69**	ug/kg	4.8	0.69	1	10/14/14 13:52	10/16/14 00:04	107-06-2	
Ethylbenzene	**9.3**	ug/kg	4.8	0.60	1	10/14/14 13:52	10/16/14 00:04	100-41-4	
Methyl-tert-butyl ether	**<1.2**	ug/kg	4.8	1.2	1	10/14/14 13:52	10/16/14 00:04	1634-04-4	
Toluene	**<2.4**	ug/kg	4.8	2.4	1	10/14/14 13:52	10/16/14 00:04	108-88-3	
Xylene (Total)	**253**	ug/kg	14.5	7.2	1	10/14/14 13:52	10/16/14 00:04	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	30-150		1	10/14/14 13:52	10/16/14 00:04	17060-07-0	
Toluene-d8 (S)	98	%.	30-150		1	10/14/14 13:52	10/16/14 00:04	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	30-150		1	10/14/14 13:52	10/16/14 00:04	460-00-4	

Sample: B-218-20' **Lab ID: 10284488008** Collected: 10/03/14 12:25 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**272**	mg/kg	45.2	22.6	5	10/16/14 09:24	10/21/14 19:58		H1
Surrogates									
a,a,a-Trifluorotoluene (S)	87	%.	75-125		5	10/16/14 09:24	10/21/14 19:58	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**74.0**	mg/kg	1.4	0.10	1	10/15/14 12:07	10/22/14 17:15	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**46.4**	%	0.10	0.10	1		10/17/14 13:58		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**12.9**	ug/kg	6.4	0.99	1	10/14/14 13:53	10/16/14 00:26	71-43-2	
1,2-Dibromoethane (EDB)	**<1.1**	ug/kg	6.4	1.1	1	10/14/14 13:53	10/16/14 00:26	106-93-4	
1,2-Dichloroethane	**<0.92**	ug/kg	6.4	0.92	1	10/14/14 13:53	10/16/14 00:26	107-06-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Sample: B-218-20' **Lab ID: 10284488008** Collected: 10/03/14 12:25 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Ethylbenzene	**41.8**	ug/kg	6.4	0.80	1	10/14/14 13:53	10/16/14 00:26	100-41-4	
Methyl-tert-butyl ether	**<1.6**	ug/kg	6.4	1.6	1	10/14/14 13:53	10/16/14 00:26	1634-04-4	
Toluene	**67.2**	ug/kg	6.4	3.2	1	10/14/14 13:53	10/16/14 00:26	108-88-3	
Xylene (Total)	**973**	ug/kg	19.2	9.6	1	10/14/14 13:53	10/16/14 00:26	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	30-150		1	10/14/14 13:53	10/16/14 00:26	17060-07-0	
Toluene-d8 (S)	103	%.	30-150		1	10/14/14 13:53	10/16/14 00:26	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	30-150		1	10/14/14 13:53	10/16/14 00:26	460-00-4	

Sample: B-218-25' **Lab ID: 10284488009** Collected: 10/03/14 12:45 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**<2.9**	mg/kg	5.8	2.9	1	10/16/14 09:24	10/20/14 15:23		H1
Surrogates									
a,a,a-Trifluorotoluene (S)	91	%.	75-125		1	10/16/14 09:24	10/20/14 15:23	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**2.6**	mg/kg	1.1	0.079	1	10/15/14 12:07	10/22/14 17:20	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**17.3**	%	0.10	0.10	1		10/17/14 13:59		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**<0.64**	ug/kg	4.2	0.64	1	10/14/14 13:53	10/16/14 00:47	71-43-2	
1,2-Dibromoethane (EDB)	**<0.74**	ug/kg	4.2	0.74	1	10/14/14 13:53	10/16/14 00:47	106-93-4	
1,2-Dichloroethane	**<0.60**	ug/kg	4.2	0.60	1	10/14/14 13:53	10/16/14 00:47	107-06-2	
Ethylbenzene	**0.93J**	ug/kg	4.2	0.52	1	10/14/14 13:53	10/16/14 00:47	100-41-4	
Methyl-tert-butyl ether	**<1.0**	ug/kg	4.2	1.0	1	10/14/14 13:53	10/16/14 00:47	1634-04-4	
Toluene	**<2.1**	ug/kg	4.2	2.1	1	10/14/14 13:53	10/16/14 00:47	108-88-3	
Xylene (Total)	**<6.2**	ug/kg	12.5	6.2	1	10/14/14 13:53	10/16/14 00:47	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	30-150		1	10/14/14 13:53	10/16/14 00:47	17060-07-0	
Toluene-d8 (S)	98	%.	30-150		1	10/14/14 13:53	10/16/14 00:47	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	30-150		1	10/14/14 13:53	10/16/14 00:47	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Sample: B-219-10' **Lab ID: 10284488010** Collected: 10/03/14 15:30 Received: 10/08/14 10:00 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021 Preparation Method: NWTPH-Gx/8021								
TPH as Gas	**18.6**	mg/kg	10.8	5.4	1	10/16/14 09:24	10/17/14 22:07		
Surrogates									
a,a,a-Trifluorotoluene (S)	91	%.	75-125		1	10/16/14 09:24	10/17/14 22:07	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3050								
Lead	**26.0**	mg/kg	1.5	0.11	1	10/15/14 12:07	10/22/14 17:25	7439-92-1	
Dry Weight	Analytical Method: ASTM D2974								
Percent Moisture	**41.1**	%	0.10	0.10	1		10/17/14 13:59		
8260 MSV 5035 Low Level	Analytical Method: EPA 8260 Preparation Method: EPA 5035A								
Benzene	**7.8J**	ug/kg	9.9	1.5	1	10/14/14 13:53	10/16/14 01:09	71-43-2	
1,2-Dibromoethane (EDB)	**<1.8**	ug/kg	9.9	1.8	1	10/14/14 13:53	10/16/14 01:09	106-93-4	
1,2-Dichloroethane	**<1.4**	ug/kg	9.9	1.4	1	10/14/14 13:53	10/16/14 01:09	107-06-2	
Ethylbenzene	**10.6**	ug/kg	9.9	1.2	1	10/14/14 13:53	10/16/14 01:09	100-41-4	
Methyl-tert-butyl ether	**<2.5**	ug/kg	9.9	2.5	1	10/14/14 13:53	10/16/14 01:09	1634-04-4	
Toluene	**<4.9**	ug/kg	9.9	4.9	1	10/14/14 13:53	10/16/14 01:09	108-88-3	
Xylene (Total)	**47.7**	ug/kg	29.6	14.8	1	10/14/14 13:53	10/16/14 01:09	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	30-150		1	10/14/14 13:53	10/16/14 01:09	17060-07-0	
Toluene-d8 (S)	104	%.	30-150		1	10/14/14 13:53	10/16/14 01:09	2037-26-5	
4-Bromofluorobenzene (S)	117	%.	30-150		1	10/14/14 13:53	10/16/14 01:09	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

QC Batch: GCV/12779 Analysis Method: NWTPH-Gx/8021
QC Batch Method: NWTPH-Gx/8021 Analysis Description: NWTPH-Gx Solid GCV
Associated Lab Samples: 10284488001, 10284488002, 10284488003, 10284488004, 10284488005, 10284488006, 10284488007, 10284488008, 10284488009, 10284488010

METHOD BLANK: 1818397 Matrix: Solid
Associated Lab Samples: 10284488001, 10284488002, 10284488003, 10284488004, 10284488005, 10284488006, 10284488007, 10284488008, 10284488009, 10284488010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	mg/kg	<2.5	5.0	10/17/14 15:23	
a,a,a-Trifluorotoluene (S)	%.	90	75-125	10/17/14 15:23	

METHOD BLANK: 1818403 Matrix: Solid
Associated Lab Samples: 10284488001, 10284488002, 10284488003, 10284488004, 10284488005, 10284488006, 10284488007, 10284488008, 10284488009, 10284488010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	mg/kg	<2.5	5.0	10/17/14 21:45	
a,a,a-Trifluorotoluene (S)	%.	91	75-125	10/17/14 21:45	

LABORATORY CONTROL SAMPLE & LCSD: 1818398 1818399

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	50	44.2	45.7	88	91	66-125	3	20	
a,a,a-Trifluorotoluene (S)	%.				97	100	75-125			

MATRIX SPIKE SAMPLE: 1818400

Parameter	Units	10284488003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
TPH as Gas	mg/kg	25.1	303	85.5	20	30-150	M1
a,a,a-Trifluorotoluene (S)	%.				108	75-125	

SAMPLE DUPLICATE: 1818401

Parameter	Units	10284488006 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	635	652	3	30	H1
a,a,a-Trifluorotoluene (S)	%.	87	87	2		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

SAMPLE DUPLICATE: 1818402

Parameter	Units	10285126001 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	mg/kg	860	904	5	30	
a,a,a-Trifluorotoluene (S)	%.	90	89	2		2M

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

QC Batch: MPRP/49671 Analysis Method: EPA 6010C
QC Batch Method: EPA 3050 Analysis Description: 6010C Solids
Associated Lab Samples: 10284488001, 10284488002, 10284488003, 10284488004, 10284488005, 10284488006, 10284488007, 10284488008, 10284488009, 10284488010

METHOD BLANK: 1813072 Matrix: Solid
Associated Lab Samples: 10284488001, 10284488002, 10284488003, 10284488004, 10284488005, 10284488006, 10284488007, 10284488008, 10284488009, 10284488010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/kg	<0.069	0.93	10/22/14 15:26	

LABORATORY CONTROL SAMPLE: 1813073

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/kg	41.3	39.9	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1813074 1813075

Parameter	Units	10284472001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/kg	18.4	56.6	47.5	73.0	63.9	96	96	75-125	13	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

QC Batch: MPRP/49901 Analysis Method: ASTM D2974
QC Batch Method: ASTM D2974 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 10284488001, 10284488002, 10284488003, 10284488004, 10284488005, 10284488006, 10284488007, 10284488008, 10284488009, 10284488010

SAMPLE DUPLICATE: 1820451

Parameter	Units	10284440004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	9.9	9.8	1	30	

SAMPLE DUPLICATE: 1820452

Parameter	Units	10284488010 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	41.1	42.8	4	30	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

QC Batch: MSV/28930 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035 Low Level
Associated Lab Samples: 10284488001, 10284488002, 10284488003, 10284488004, 10284488005

METHOD BLANK: 1816560 Matrix: Solid
Associated Lab Samples: 10284488001, 10284488002, 10284488003, 10284488004, 10284488005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	<0.72	4.0	10/15/14 04:02	
1,2-Dichloroethane	ug/kg	<0.58	4.0	10/15/14 04:02	
Benzene	ug/kg	<0.62	4.0	10/15/14 04:02	
Ethylbenzene	ug/kg	<0.50	4.0	10/15/14 04:02	
Methyl-tert-butyl ether	ug/kg	<1.0	4.0	10/15/14 04:02	
Toluene	ug/kg	<2.0	4.0	10/15/14 04:02	
Xylene (Total)	ug/kg	<6.0	12.0	10/15/14 04:02	
1,2-Dichloroethane-d4 (S)	%.	103	30-150	10/15/14 04:02	
4-Bromofluorobenzene (S)	%.	97	30-150	10/15/14 04:02	
Toluene-d8 (S)	%.	97	30-150	10/15/14 04:02	

LABORATORY CONTROL SAMPLE & LCSD: 1816561 1816562

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	20	19.9	17.5	99	87	75-125	13	20	
1,2-Dichloroethane	ug/kg	20	18.9	18.2	94	91	70-129	4	20	
Benzene	ug/kg	20	19.6	18.2	98	91	67-125	7	20	
Ethylbenzene	ug/kg	20	18.8	16.8	94	84	72-125	12	20	
Methyl-tert-butyl ether	ug/kg	20	19.8	18.7	99	94	71-125	6	20	
Toluene	ug/kg	20	19.6	17.4	98	87	71-125	12	20	
Xylene (Total)	ug/kg	60	54.5	47.5	91	79	74-125	14	20	
1,2-Dichloroethane-d4 (S)	%.				103	105	30-150			
4-Bromofluorobenzene (S)	%.				98	96	30-150			
Toluene-d8 (S)	%.				100	99	30-150			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

QC Batch: MSV/28938 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 5035 Low Level
Associated Lab Samples: 10284488006, 10284488007, 10284488008, 10284488009, 10284488010

METHOD BLANK: 1816891 Matrix: Solid
Associated Lab Samples: 10284488006, 10284488007, 10284488008, 10284488009, 10284488010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	<0.72	4.0	10/15/14 22:16	
1,2-Dichloroethane	ug/kg	<0.58	4.0	10/15/14 22:16	
Benzene	ug/kg	<0.62	4.0	10/15/14 22:16	
Ethylbenzene	ug/kg	<0.50	4.0	10/15/14 22:16	
Methyl-tert-butyl ether	ug/kg	<1.0	4.0	10/15/14 22:16	
Toluene	ug/kg	<2.0	4.0	10/15/14 22:16	
Xylene (Total)	ug/kg	<6.0	12.0	10/15/14 22:16	
1,2-Dichloroethane-d4 (S)	%.	102	30-150	10/15/14 22:16	
4-Bromofluorobenzene (S)	%.	97	30-150	10/15/14 22:16	
Toluene-d8 (S)	%.	97	30-150	10/15/14 22:16	

LABORATORY CONTROL SAMPLE: 1816892

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dibromoethane (EDB)	ug/kg	50	54.3	109	75-125	
1,2-Dichloroethane	ug/kg	50	53.7	107	70-129	
Benzene	ug/kg	50	48.7	97	67-125	
Ethylbenzene	ug/kg	50	46.4	93	72-125	
Methyl-tert-butyl ether	ug/kg	50	58.4	117	71-125	
Toluene	ug/kg	50	46.0	92	71-125	
Xylene (Total)	ug/kg	150	140	93	74-125	
1,2-Dichloroethane-d4 (S)	%.			103	30-150	
4-Bromofluorobenzene (S)	%.			98	30-150	
Toluene-d8 (S)	%.			100	30-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1816894 1816895

Parameter	Units	10284978011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dibromoethane (EDB)	ug/kg	ND	21.7	21.7	21.7	20.5	100	94	55-145	6	30	
1,2-Dichloroethane	ug/kg	ND	21.7	21.7	21.8	20.1	101	92	49-150	8	30	
Benzene	ug/kg	ND	21.7	21.7	25.8	22.4	119	103	49-145	14	30	
Ethylbenzene	ug/kg	ND	21.7	21.7	28.3	23.2	130	107	42-148	20	30	
Methyl-tert-butyl ether	ug/kg	ND	21.7	21.7	24.8	21.7	114	100	58-147	13	30	
Toluene	ug/kg	ND	21.7	21.7	27.0	22.8	123	104	44-150	17	30	
Xylene (Total)	ug/kg	ND	65.1	65.2	81.3	69.4	125	106	42-150	16	30	
1,2-Dichloroethane-d4 (S)	%.						94	91	30-150			1M
4-Bromofluorobenzene (S)	%.						101	100	30-150			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1816894 1816895

Parameter	Units	10284978011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Toluene-d8 (S)	%.						100	101	30-150			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALIFIERS

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: MSV/28930

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1M	The internal standard recovery associated with these result exceeds the lower control limit. The reported results should be considered an estimation.
2M	The results are from sample aliquot taken from a packed jar. This does not meet method sampling requirements and the data should be considered an estimation.
ES	The reported result is estimated because one or more of the constituent results are qualified as such.
H1	Analysis conducted outside the recognized method holding time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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METHOD CROSS REFERENCE TABLE

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Parameter	Matrix	Analytical Method	Preparation Method
8260 MSV 5035 Low Level	Solid	SW-846 8260B	SW-846 5035A/5030B

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P66-1396 76.75118.1396 REV-1
Pace Project No.: 10284488

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10284488001	**B-217-5'**	NWTPH-Gx/8021	GCV/12779	NWTPH-Gx/8021	GCV/12780
10284488002	**B-217-10'**	NWTPH-Gx/8021	GCV/12779	NWTPH-Gx/8021	GCV/12780
10284488003	**B-217-15'**	NWTPH-Gx/8021	GCV/12779	NWTPH-Gx/8021	GCV/12780
10284488004	**B-217-20'**	NWTPH-Gx/8021	GCV/12779	NWTPH-Gx/8021	GCV/12780
10284488005	**B-217-25'**	NWTPH-Gx/8021	GCV/12779	NWTPH-Gx/8021	GCV/12780
10284488006	**B-218-10'**	NWTPH-Gx/8021	GCV/12779	NWTPH-Gx/8021	GCV/12780
10284488007	**B-218-15'**	NWTPH-Gx/8021	GCV/12779	NWTPH-Gx/8021	GCV/12780
10284488008	**B-218-20'**	NWTPH-Gx/8021	GCV/12779	NWTPH-Gx/8021	GCV/12780
10284488009	**B-218-25'**	NWTPH-Gx/8021	GCV/12779	NWTPH-Gx/8021	GCV/12780
10284488010	**B-219-10'**	NWTPH-Gx/8021	GCV/12779	NWTPH-Gx/8021	GCV/12780
10284488001	**B-217-5'**	EPA 3050	MPRP/49671	EPA 6010C	ICP/21279
10284488002	**B-217-10'**	EPA 3050	MPRP/49671	EPA 6010C	ICP/21279
10284488003	**B-217-15'**	EPA 3050	MPRP/49671	EPA 6010C	ICP/21279
10284488004	**B-217-20'**	EPA 3050	MPRP/49671	EPA 6010C	ICP/21279
10284488005	**B-217-25'**	EPA 3050	MPRP/49671	EPA 6010C	ICP/21279
10284488006	**B-218-10'**	EPA 3050	MPRP/49671	EPA 6010C	ICP/21279
10284488007	**B-218-15'**	EPA 3050	MPRP/49671	EPA 6010C	ICP/21279
10284488008	**B-218-20'**	EPA 3050	MPRP/49671	EPA 6010C	ICP/21279
10284488009	**B-218-25'**	EPA 3050	MPRP/49671	EPA 6010C	ICP/21279
10284488010	**B-219-10'**	EPA 3050	MPRP/49671	EPA 6010C	ICP/21279
10284488001	**B-217-5'**	ASTM D2974	MPRP/49901		
10284488002	**B-217-10'**	ASTM D2974	MPRP/49901		
10284488003	**B-217-15'**	ASTM D2974	MPRP/49901		
10284488004	**B-217-20'**	ASTM D2974	MPRP/49901		
10284488005	**B-217-25'**	ASTM D2974	MPRP/49901		
10284488006	**B-218-10'**	ASTM D2974	MPRP/49901		
10284488007	**B-218-15'**	ASTM D2974	MPRP/49901		
10284488008	**B-218-20'**	ASTM D2974	MPRP/49901		
10284488009	**B-218-25'**	ASTM D2974	MPRP/49901		
10284488010	**B-219-10'**	ASTM D2974	MPRP/49901		
10284488001	**B-217-5'**	EPA 5035A	MSV/28924	EPA 8260	MSV/28930
10284488002	**B-217-10'**	EPA 5035A	MSV/28924	EPA 8260	MSV/28930
10284488003	**B-217-15'**	EPA 5035A	MSV/28924	EPA 8260	MSV/28930
10284488004	**B-217-20'**	EPA 5035A	MSV/28924	EPA 8260	MSV/28930
10284488005	**B-217-25'**	EPA 5035A	MSV/28924	EPA 8260	MSV/28930
10284488006	**B-218-10'**	EPA 5035A	MSV/28924	EPA 8260	MSV/28938
10284488007	**B-218-15'**	EPA 5035A	MSV/28924	EPA 8260	MSV/28938
10284488008	**B-218-20'**	EPA 5035A	MSV/28924	EPA 8260	MSV/28938
10284488009	**B-218-25'**	EPA 5035A	MSV/28924	EPA 8260	MSV/28938
10284488010	**B-219-10'**	EPA 5035A	MSV/28924	EPA 8260	MSV/28938

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

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1118
10284498

Page: 1 of 1

1742867

Section A Required Client Information:

Company: Cardno ATC
Address: 6347 Seaview AVE N
Seattle, WA 98103
Email To: KyleSattler@cardno.com
Phone: Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Kyle Sattler
Copy To: NASRIN BASTAMI
MARK Newman
Purchase Order No.:
Project Name: PGE - 1396
Project Number: 76.75115.1396

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE:

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis Filtered (Y/N) Y/N	Analysis Test: BTEX (8260)	EDC (8260)	MTBE (8260)	GX (NWTPH/EX)	Total Lead (6010)	EDB (8011)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	B-217-5'	SL	G	10/3	940																					10284498 001
2	B-217-10'				950																					002
3	B-217-15'				953																					003
4	B-217-20'				957																					004
5	B-217-25'				1005																					005
6	~~B-218-5'~~																									void
7	B-218-10'				1200																					006
8	B-218-15'				1210																					007
9	B-218-20'				1225																					008
10	B-218-25'				1245																					009
11	B-219-10'				1530																					010
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	NASRIN BASTAMI/Cardno ATC	10/3	400	PACE	10/3/14	1600	2.2-3.3	Y	N	Y
				PACE	10-3-14	1000	1.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER:

SIGNATURE of SAMPLER: DATE Signed (MM/DD/YY):

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 28Feb2014 Page 1 of 1
	Document No.: **F-MN-L-213-rev.09**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Cardno ATC

Project #: **WO# : 10284488**

10284488

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client
☐ Commercial ☐ Pace ☐ SpeeDee ☐ Other:

Tracking Number: 5779 5332 3068

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Optional:** Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: **Temp Blank?** ☑ Yes ☐ No

Thermom. Used: ☐ B88A9130516413 ☑ B88A912167504 ☐ B88A9132521491 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 0.8 **Cooler Temp Corrected (°C):** 1.2 **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A
Temp should be above freezing to 6°C **Correction Factor:** +0.4 **Date and Initials of Person Examining Contents:** 10-8-14/JT

Comments:

Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11.
Sample Labels Match COC? -includes Date/Time/ID/Analysis Matrix: SL	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☑ N/A	Sample #
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	☐ Yes	☑ No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	14.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☑ No	☐ N/A	
Pace Trip Blank Lot # (if purchased): None				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☒ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Jennifer Gross **Date:** 10/09/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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October 21, 2014

Kyle Sattler
Cardno ATC
7070 SW Fir Loop
Suite 100
Portland, OR 97223

RE: Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

Dear Kyle Sattler:
Enclosed are the analytical results for sample(s) received by the laboratory on October 08, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Jenni Gross

Jennifer Gross
jennifer.gross@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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(612)607-1700

CERTIFICATIONS

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10284494001	**MW-219**	Water	10/06/14 10:15	10/08/14 10:00
10284494002	**MW-213**	Water	10/06/14 12:00	10/08/14 10:00
10284494003	**MW-214**	Water	10/06/14 13:30	10/08/14 10:00
10284494004	**MW-215**	Water	10/06/14 14:30	10/08/14 10:00

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SAMPLE ANALYTE COUNT

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10284494001	**MW-219**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		6010C Met	IP	1	PASI-M
		EPA 8260	AJC	9	PASI-M
10284494002	**MW-213**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		6010C Met	IP	1	PASI-M
		EPA 8260	AJC	9	PASI-M
10284494003	**MW-214**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		6010C Met	IP	1	PASI-M
		EPA 8260	AJC	9	PASI-M
10284494004	**MW-215**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		6010C Met	IP	1	PASI-M
		EPA 8260	AJC	9	PASI-M

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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

Sample: MW-219 **Lab ID: 10284494001** Collected: 10/06/14 10:15 Received: 10/08/14 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	**147**	ug/L	100	1		10/14/14 15:46		
Surrogates								
a,a,a-Trifluorotoluene (S)	100	%.	70-125	1		10/14/14 15:46	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	10/13/14 11:45	10/15/14 16:50	7439-92-1	
6010C MET ICP, Lab Filtered	Analytical Method: 6010C Met Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	10/14/14 09:52	10/14/14 21:28	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
1,2-Dichloroethane	ND	ug/L	1.0	1		10/15/14 18:05	107-06-2	
Benzene	ND	ug/L	1.0	1		10/15/14 18:05	71-43-2	
Ethylbenzene	**1.2**	ug/L	1.0	1		10/15/14 18:05	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/15/14 18:05	1634-04-4	
Toluene	**2.0**	ug/L	1.0	1		10/15/14 18:05	108-88-3	
Xylene (Total)	**4.4**	ug/L	3.0	1		10/15/14 18:05	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	89	%.	75-125	1		10/15/14 18:05	17060-07-0	
Toluene-d8 (S)	98	%.	75-125	1		10/15/14 18:05	2037-26-5	
4-Bromofluorobenzene (S)	95	%.	75-125	1		10/15/14 18:05	460-00-4	

Sample: MW-213 **Lab ID: 10284494002** Collected: 10/06/14 12:00 Received: 10/08/14 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	**105**	ug/L	100	1		10/14/14 14:06		
Surrogates								
a,a,a-Trifluorotoluene (S)	105	%.	70-125	1		10/14/14 14:06	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3010							
Lead	**11.0**	ug/L	10.0	1	10/13/14 11:45	10/15/14 16:55	7439-92-1	
6010C MET ICP, Lab Filtered	Analytical Method: 6010C Met Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	10/14/14 09:52	10/14/14 21:32	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
1,2-Dichloroethane	ND	ug/L	1.0	1		10/15/14 18:21	107-06-2	
Benzene	ND	ug/L	1.0	1		10/15/14 18:21	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/15/14 18:21	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/15/14 18:21	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/15/14 18:21	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/15/14 18:21	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

Sample: MW-213 **Lab ID: 10284494002** Collected: 10/06/14 12:00 Received: 10/08/14 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Surrogates								
1,2-Dichloroethane-d4 (S)	92	%.	75-125	1		10/15/14 18:21	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		10/15/14 18:21	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1		10/15/14 18:21	460-00-4	

Sample: MW-214 **Lab ID: 10284494003** Collected: 10/06/14 13:30 Received: 10/08/14 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		10/14/14 13:26		
Surrogates								
a,a,a-Trifluorotoluene (S)	101	%.	70-125	1		10/14/14 13:26	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	10/13/14 11:45	10/15/14 17:01	7439-92-1	
6010C MET ICP, Lab Filtered	Analytical Method: 6010C Met Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	10/14/14 09:52	10/14/14 21:39	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
1,2-Dichloroethane	ND	ug/L	1.0	1		10/15/14 18:37	107-06-2	
Benzene	ND	ug/L	1.0	1		10/15/14 18:37	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/15/14 18:37	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/15/14 18:37	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/15/14 18:37	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/15/14 18:37	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	97	%.	75-125	1		10/15/14 18:37	17060-07-0	
Toluene-d8 (S)	99	%.	75-125	1		10/15/14 18:37	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125	1		10/15/14 18:37	460-00-4	

Sample: MW-215 **Lab ID: 10284494004** Collected: 10/06/14 14:30 Received: 10/08/14 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		10/14/14 12:44		
Surrogates								
a,a,a-Trifluorotoluene (S)	102	%.	70-125	1		10/14/14 12:44	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	10/13/14 11:45	10/15/14 17:08	7439-92-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

Sample: MW-215 **Lab ID: 10284494004** Collected: 10/06/14 14:30 Received: 10/08/14 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010C MET ICP, Lab Filtered	Analytical Method: 6010C Met		Preparation Method: EPA 3010					
Lead, Dissolved	ND	ug/L	10.0	1	10/14/14 09:52	10/14/14 21:46	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
1,2-Dichloroethane	ND	ug/L	1.0	1		10/15/14 18:54	107-06-2	
Benzene	ND	ug/L	1.0	1		10/15/14 18:54	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/15/14 18:54	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/15/14 18:54	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/15/14 18:54	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/15/14 18:54	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	92	%.	75-125	1		10/15/14 18:54	17060-07-0	
Toluene-d8 (S)	98	%.	75-125	1		10/15/14 18:54	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1		10/15/14 18:54	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

QC Batch: GCV/12754 Analysis Method: NWTPH-Gx/8021
QC Batch Method: NWTPH-Gx/8021 Analysis Description: NWTPH-Gx/8021B Water
Associated Lab Samples: 10284494001, 10284494002, 10284494003, 10284494004

METHOD BLANK: 1815525 Matrix: Water
Associated Lab Samples: 10284494001, 10284494002, 10284494003, 10284494004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	10/14/14 10:59	
a,a,a-Trifluorotoluene (S)	%.	100	70-125	10/14/14 10:59	

LABORATORY CONTROL SAMPLE & LCSD: 1815526 1815527

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1080	980	108	98	75-125	10	20	
a,a,a-Trifluorotoluene (S)	%.				104	105	70-125			

MATRIX SPIKE SAMPLE: 1817064

Parameter	Units	10284494002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
TPH as Gas	ug/L	105	1000	1190	109	52-150	
a,a,a-Trifluorotoluene (S)	%.				112	70-125	

SAMPLE DUPLICATE: 1817065

Parameter	Units	10284494003 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	ND	ND		30	
a,a,a-Trifluorotoluene (S)	%.	101	103	2		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

QC Batch: MPRP/49756 Analysis Method: EPA 6010C
QC Batch Method: EPA 3010 Analysis Description: 6010C Water
Associated Lab Samples: 10284494001, 10284494002, 10284494003, 10284494004

METHOD BLANK: 1814756 Matrix: Water
Associated Lab Samples: 10284494001, 10284494002, 10284494003, 10284494004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	10.0	10/15/14 15:40	

LABORATORY CONTROL SAMPLE: 1814757

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	1000	924	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1814758 1814759

Parameter	Units	10284165020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	ug/L	ND	1000	1000	864	887	86	88	75-125	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

QC Batch: MPRP/49758 Analysis Method: 6010C Met
QC Batch Method: EPA 3010 Analysis Description: 6010C Water Dissolved
Associated Lab Samples: 10284494001, 10284494002, 10284494003, 10284494004

METHOD BLANK: 1814764 Matrix: Water
Associated Lab Samples: 10284494001, 10284494002, 10284494003, 10284494004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	ND	10.0	10/14/14 20:18	

LABORATORY CONTROL SAMPLE: 1814765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	1000	978	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1814766 1814767

Parameter	Units	10284165020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead, Dissolved	ug/L	ND	1000	1000	917	966	91	96	75-125	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

QC Batch: MSV/28943 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10284494001, 10284494002, 10284494003, 10284494004

METHOD BLANK: 1817238 Matrix: Water
Associated Lab Samples: 10284494001, 10284494002, 10284494003, 10284494004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	10/15/14 10:14	
Benzene	ug/L	ND	1.0	10/15/14 10:14	
Ethylbenzene	ug/L	ND	1.0	10/15/14 10:14	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/15/14 10:14	
Toluene	ug/L	ND	1.0	10/15/14 10:14	
Xylene (Total)	ug/L	ND	3.0	10/15/14 10:14	
1,2-Dichloroethane-d4 (S)	%.	91	75-125	10/15/14 10:14	
4-Bromofluorobenzene (S)	%.	99	75-125	10/15/14 10:14	
Toluene-d8 (S)	%.	98	75-125	10/15/14 10:14	

LABORATORY CONTROL SAMPLE: 1817239

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	20	20.1	100	75-125	
Benzene	ug/L	20	20.0	100	75-125	
Ethylbenzene	ug/L	20	19.5	98	75-125	
Methyl-tert-butyl ether	ug/L	20	18.2	91	75-125	
Toluene	ug/L	20	20.1	100	75-125	
Xylene (Total)	ug/L	60	58.3	97	75-125	
1,2-Dichloroethane-d4 (S)	%.			98	75-125	
4-Bromofluorobenzene (S)	%.			97	75-125	
Toluene-d8 (S)	%.			99	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1817371 1817372

Parameter	Units	10284293002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane	ug/L	<0.66	100	100	99.0	100	99	100	68-128	1	30	
Benzene	ug/L	0.14 mg/L	100	100	252	245	112	105	75-129	3	30	
Ethylbenzene	ug/L	0.21 mg/L	100	100	318	317	112	111	75-128	0	30	
Methyl-tert-butyl ether	ug/L	0.0044J mg/L	100	100	97.5	98.5	93	94	74-128	1	30	
Toluene	ug/L	0.69 mg/L	100	100	818	823	127	133	75-129	1	30	M1
Xylene (Total)	ug/L	1.2 mg/L	300	300	1620	1640	127	134	75-129	1	30	MS
1,2-Dichloroethane-d4 (S)	%.						100	99	75-125			
4-Bromofluorobenzene (S)	%.						101	100	75-125			
Toluene-d8 (S)	%.						100	101	75-125			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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(612)607-1700

QUALIFIERS

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

Parameter	Matrix	Analytical Method	Preparation Method
8260 MSV UST	Water	SW-846 8260B/5030B	N/A

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P66-1396 76.75118.1396
Pace Project No.: 10284494

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10284494001	**MW-219**	NWTPH-Gx/8021	GCV/12754		
10284494002	**MW-213**	NWTPH-Gx/8021	GCV/12754		
10284494003	**MW-214**	NWTPH-Gx/8021	GCV/12754		
10284494004	**MW-215**	NWTPH-Gx/8021	GCV/12754		
10284494001	**MW-219**	EPA 3010	MPRP/49756	EPA 6010C	ICP/21229
10284494002	**MW-213**	EPA 3010	MPRP/49756	EPA 6010C	ICP/21229
10284494003	**MW-214**	EPA 3010	MPRP/49756	EPA 6010C	ICP/21229
10284494004	**MW-215**	EPA 3010	MPRP/49756	EPA 6010C	ICP/21229
10284494001	**MW-219**	EPA 3010	MPRP/49758	6010C Met	ICP/21245
10284494002	**MW-213**	EPA 3010	MPRP/49758	6010C Met	ICP/21245
10284494003	**MW-214**	EPA 3010	MPRP/49758	6010C Met	ICP/21245
10284494004	**MW-215**	EPA 3010	MPRP/49758	6010C Met	ICP/21245
10284494001	**MW-219**	EPA 8260	MSV/28943		
10284494002	**MW-213**	EPA 8260	MSV/28943		
10284494003	**MW-214**	EPA 8260	MSV/28943		
10284494004	**MW-215**	EPA 8260	MSV/28943		

Pace Analytical®
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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

11/9/15D 10284494

Page: 1 of 1

1742857

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: Cardno ATC	Report To: Kyle Scuffler	Attention:
Address: 6347 Seaview Seattle, WA	Copy To: Mark Newman	Company Name:
		Address:
Email To:	Purchase Order No.:	Pace Quote Reference:
Phone: Fax:	Project Name: TCC-1396	Pace Project Manager:
Requested Due Date/TAT: Standard	Project Number: 76.75118.1396	Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER

☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: _____

Section D Required Client Information

SAMPLE ID
(A-Z, 0-9 / ,-)
Sample IDs MUST BE UNIQUE

Matrix Codes MATRIX / CODE

Drinking Water	DW
Water	WT
Waste Water	WW
Product	P
Soil/Solid	SL
Oil	OL
Wipe	WP
Air	AR
Tissue	TS
Other	OT

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: Gx/BTEX/MTBE, EDC	EDB	Pb - Total	Pb - Diss Lab Filter	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-219	WT		10/6/14	10:15				11									X	X	X	X		10284494 001
2	MW-213				12:00				11														002
3	MW-214				13:30				11														003
4	MW-215				14:30				11														004
5	Trip Blank																						005
6																							
7																							
8																							
9																							
10																							
11																							
12																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	MKL Cardno ATC	10/6/14	16:00	PACE	10/8/14	16:00	4.1	Y	W	Y
				PACE	10-8-14	1000	3.6	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark Newman

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 10/6/14

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 28Feb2014 Page 1 of 1
	Document No.: **F-MN-L-213-rev.09**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Cerdno ATC

Project #: WO#: 10284494

10284494

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ SpeeDee ☐ Other:

Tracking Number: 5779 5372 3079

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other:

Temp Blank? ☑ Yes ☐ No

Thermom. Used: ☐ B88A9130516413 ☑ B88A912167504 ☐ B88A9132521491

Type of Ice: ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 3.2 **Cooler Temp Corrected (°C):** 3.6 **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C **Correction Factor:** ~~+0.0~~ 0.4 (WB 8/14) **Date and Initials of Person Examining Contents:** 10-8-14/[initials]

	Yes	No	N/A	Comments:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☑ No	☐ N/A	11. Lab Filter
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked?	☑ Yes	☐ No	☐ N/A	13. ☑ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☑ Yes	☐ No	☐ N/A	Sample # 1-4 [initials]
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	☑ Yes	☐ No		Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☑ No	☐ N/A	14.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present? Pace Trip Blank Lot # (if purchased): PACE-WA	☑ Yes	☐ No	☐ N/A	

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☒ No

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Jennifer Gross **Date:** 10/09/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-61078-1
Client Project/Site: Washington

For:
Pace Analytical Services, Inc.
Seattle Service Center
596 Industry Drive, Suite 602
Tukwila, Washington 98188

Attn: Jennifer Gross

Authorized for release by:
10/20/2014 9:53:05 AM

Kae Yoder, Senior Project Manager
(303)736-0190
kae.yoder@testamericainc.com

Table of Contents

Job ID: 280-61078-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Pace Analytical Services, Inc.

Job Number: 280-61078-1

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

Please note that Non-Detect (ND) results have been evaluated down to the Method Detection Limit (MDL).

Results between the method detection limit (MDL) and reporting limit (RL) are flagged with a "J" qualifier to indicate an estimated value. These results are statistically less reliable than results greater than or equal to the RL and should be considered a qualitative value.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/10/2014 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.0º C.

EDB - EPA 8011

The method required MS and MSD analysis could not be performed for prep batch 248120, due to insufficient sample volume. A duplicate LCS (LCSD) was analyzed to provide some evidence of batch precision.

No other analytical or quality issues were noted.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61078-1

Method	Method Description	Protocol	Laboratory
8011	EDB	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61078-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-61078-1	MW-219	Water	10/06/14 10:15	10/10/14 09:50
280-61078-2	MW-213	Water	10/06/14 12:00	10/10/14 09:50
280-61078-3	MW-214	Water	10/06/14 13:30	10/10/14 09:50
280-61078-4	MW-215	Water	10/06/14 14:30	10/10/14 09:50
280-61078-5	TRIP BLANK	Water	10/06/14 00:00	10/10/14 09:50

Method: 8011 - EDB

Client Sample ID: MW-219
Date Collected: 10/06/14 10:15
Date Received: 10/10/14 09:50

Lab Sample ID: 280-61078-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	0.0038	ug/L		10/15/14 18:36	10/15/14 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*111*		*70 - 130*	*10/15/14 18:36*	*10/15/14 23:13*	*1*

Client Sample ID: MW-213
Date Collected: 10/06/14 12:00
Date Received: 10/10/14 09:50

Lab Sample ID: 280-61078-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	0.0038	ug/L		10/15/14 18:36	10/15/14 23:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*104*		*70 - 130*	*10/15/14 18:36*	*10/15/14 23:32*	*1*

Client Sample ID: MW-214
Date Collected: 10/06/14 13:30
Date Received: 10/10/14 09:50

Lab Sample ID: 280-61078-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.021	0.0038	ug/L		10/15/14 18:36	10/15/14 23:51	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*113*		*70 - 130*	*10/15/14 18:36*	*10/15/14 23:51*	*1*

Client Sample ID: MW-215
Date Collected: 10/06/14 14:30
Date Received: 10/10/14 09:50

Lab Sample ID: 280-61078-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	0.0037	ug/L		10/15/14 18:36	10/16/14 00:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*115*		*70 - 130*	*10/15/14 18:36*	*10/16/14 00:10*	*1*

Client Sample ID: TRIP BLANK
Date Collected: 10/06/14 00:00
Date Received: 10/10/14 09:50

Lab Sample ID: 280-61078-5
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	0.0037	ug/L		10/15/14 18:36	10/16/14 00:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*102*		*70 - 130*	*10/15/14 18:36*	*10/16/14 00:29*	*1*

Method: 8011 - EDB

Lab Sample ID: MB 280-248120/4-A
Matrix: Water
Analysis Batch: 248068

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 248120

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	0.0037	ug/L		10/15/14 18:36	10/15/14 22:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*104*		*70 - 130*	*10/15/14 18:36*	*10/15/14 22:54*	*1*

Lab Sample ID: LCS 280-248120/2-A
Matrix: Water
Analysis Batch: 248068

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 248120

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dibromoethane (EDB)	0.250	0.264		ug/L		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dibromopropane	*104*		*70 - 130*

Lab Sample ID: LCSD 280-248120/3-A
Matrix: Water
Analysis Batch: 248068

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 248120

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	0.250	0.260		ug/L		104	70 - 130	2	10

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dibromopropane	*103*		*70 - 130*

QC Association Summary

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61078-1

GC Semi VOA

Analysis Batch: 248068

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-61078-1	MW-219	Total/NA	Water	8011	248120
280-61078-2	MW-213	Total/NA	Water	8011	248120
280-61078-3	MW-214	Total/NA	Water	8011	248120
280-61078-4	MW-215	Total/NA	Water	8011	248120
280-61078-5	TRIP BLANK	Total/NA	Water	8011	248120
LCS 280-248120/2-A	Lab Control Sample	Total/NA	Water	8011	248120
LCSD 280-248120/3-A	Lab Control Sample Dup	Total/NA	Water	8011	248120
MB 280-248120/4-A	Method Blank	Total/NA	Water	8011	248120

Prep Batch: 248120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-61078-1	MW-219	Total/NA	Water	8011	
280-61078-2	MW-213	Total/NA	Water	8011	
280-61078-3	MW-214	Total/NA	Water	8011	
280-61078-4	MW-215	Total/NA	Water	8011	
280-61078-5	TRIP BLANK	Total/NA	Water	8011	
LCS 280-248120/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 280-248120/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
MB 280-248120/4-A	Method Blank	Total/NA	Water	8011	

Lab Chronicle

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61078-1

Client Sample ID: MW-219

Lab Sample ID: 280-61078-1

Date Collected: 10/06/14 10:15

Matrix: Water

Date Received: 10/10/14 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.4 mL	35 mL	248120	10/15/14 18:36	MPS	TAL DEN
Total/NA	Analysis	8011		1	34.4 mL	35 mL	248068	10/15/14 23:13	MPS	TAL DEN

Client Sample ID: MW-213

Lab Sample ID: 280-61078-2

Date Collected: 10/06/14 12:00

Matrix: Water

Date Received: 10/10/14 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.4 mL	35 mL	248120	10/15/14 18:36	MPS	TAL DEN
Total/NA	Analysis	8011		1	34.4 mL	35 mL	248068	10/15/14 23:32	MPS	TAL DEN

Client Sample ID: MW-214

Lab Sample ID: 280-61078-3

Date Collected: 10/06/14 13:30

Matrix: Water

Date Received: 10/10/14 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34 mL	35 mL	248120	10/15/14 18:36	MPS	TAL DEN
Total/NA	Analysis	8011		1	34 mL	35 mL	248068	10/15/14 23:51	MPS	TAL DEN

Client Sample ID: MW-215

Lab Sample ID: 280-61078-4

Date Collected: 10/06/14 14:30

Matrix: Water

Date Received: 10/10/14 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.6 mL	35 mL	248120	10/15/14 18:36	MPS	TAL DEN
Total/NA	Analysis	8011		1	34.6 mL	35 mL	248068	10/16/14 00:10	MPS	TAL DEN

Client Sample ID: TRIP BLANK

Lab Sample ID: 280-61078-5

Date Collected: 10/06/14 00:00

Matrix: Water

Date Received: 10/10/14 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.6 mL	35 mL	248120	10/15/14 18:36	MPS	TAL DEN
Total/NA	Analysis	8011		1	34.6 mL	35 mL	248068	10/16/14 00:29	MPS	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61078-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15 *
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-15
Arizona	State Program	9	AZ0713	12-19-14
Arkansas DEQ	State Program	6	88-0687	06-01-15
California	State Program	9	2513	08-31-16
Florida	NELAP	4	E87667	06-30-15
Georgia	State Program	4	N/A	01-09-15
Illinois	NELAP	5	200017	04-30-15
Iowa	State Program	7	370	12-01-14 *
Kansas	NELAP	7	E-10166	04-30-15
Louisiana	NELAP	6	02096	06-30-15
Maine	State Program	1	CO0002	03-03-15
Minnesota	NELAP	5	8-999-405	12-31-14
Nevada	State Program	9	CO0026	07-31-15
New Hampshire	NELAP	1	205310	04-28-15
New Jersey	NELAP	2	CO004	06-30-15
New Mexico	State Program	6	CO00026	01-09-15
New York	NELAP	2	11964	03-31-15
North Carolina (WW/SW)	State Program	4	358	12-31-14
North Dakota	State Program	8	R-034	06-30-14 *
Oklahoma	State Program	6	8614	08-31-15
Oregon	NELAP	10	4025	01-09-15
Pennsylvania	NELAP	3	68-00664	07-30-15
South Carolina	State Program	4	72002001	06-30-15
Texas	NELAP	6	T104704183-13-8	10-01-15
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO00026	07-31-15
Virginia	NELAP	3	460232	06-14-15
Washington	State Program	10	C583	08-03-15
West Virginia DEP	State Program	3	354	11-30-14
Wisconsin	State Program	5	999615430	08-31-15
Wyoming (UST)	A2LA	8	2907.01	10-31-15

* Certification renewal pending - certification considered valid.

O.D Rec'd 10Oct14
Transferred by [illegible]

280-61078 Chain of Custody

Chain of Custody

Pace Analytical®
www.pacelabs.com

Workorder: 10284494 **Workorder Name:** P66-1396 76.75118.1396 **Results Requested** 10/22/2014

Report / Invoice To	Subcontract To	Requested Analysis
Jennifer Gross Pace Analytical Seattle 596 Industry Drive, Suite 602 Tukwila, WA 98188 Phone (206)767-5060 Email: jennifer.gross@pacelabs.com	Kae Yoder TA - Denver P.O. 10284494	

Item*	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HCL	8011 EDB	LAB USE ONLY
1	MW-219	10/6/2014 10:15	10284494001	Water	3	X	
2	MW-213	10/6/2014 12:00	10284494002	Water	3	X	
3	MW-214	10/6/2014 13.30	10284494003	Water	3	X	
4	MW-215	10/6/2014 14:30	10284494004	Water	3	X	
5	Trip Blank	10/6/2014 00 00	10284494005	Water	3	X	

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
1	Casey Sparks Pace MN	10-9-14 1440	[signature]	0950 10Oct14	
2					
3					

Cooler Temperature on Receipt °C	Custody Seal Y or N	Received on Ice Y or N	Samples Intact Y or N

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Login Sample Receipt Checklist

Client: Pace Analytical Services, Inc.

Job Number: 280-61078-1

Login Number: 61078

List Source: TestAmerica Denver

List Number: 1

Creator: Muniz, Ashley T

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

October 21, 2014

Kyle Sattler
Cardno ATC
7070 SW Fir Loop
Suite 100
Portland, OR 97223

RE: Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

Dear Kyle Sattler:
Enclosed are the analytical results for sample(s) received by the laboratory on October 08, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

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

Sincerely,

Jennifer Gross
jennifer.gross@pacelabs.com
Project Manager

Enclosures

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10284491001	**MW-216**	Water	10/03/14 11:40	10/08/14 10:00
10284491002	**MW-217**	Water	10/03/14 13:45	10/08/14 10:00
10284491003	**MW-218**	Water	10/03/14 14:20	10/08/14 10:00
10284491004	**Trip Blank**	Water	10/03/14 00:00	10/08/14 10:00

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10284491001	**MW-216**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		6010C Met	IP	1	PASI-M
		EPA 8260	DR1	9	PASI-M
10284491002	**MW-217**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		6010C Met	IP	1	PASI-M
		EPA 8260	DR1	9	PASI-M
10284491003	**MW-218**	NWTPH-Gx/8021	LLC	2	PASI-M
		EPA 6010C	IP	1	PASI-M
		6010C Met	IP	1	PASI-M
		EPA 8260	DR1	9	PASI-M

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

Sample: MW-216 **Lab ID: 10284491001** Collected: 10/03/14 11:40 Received: 10/08/14 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		10/14/14 15:26		
Surrogates								
a,a,a-Trifluorotoluene (S)	102	%.	70-125	1		10/14/14 15:26	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	10/13/14 11:45	10/15/14 16:21	7439-92-1	
6010C MET ICP, Lab Filtered	Analytical Method: 6010C Met Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	10/14/14 09:52	10/14/14 20:58	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
1,2-Dichloroethane	ND	ug/L	1.0	1		10/14/14 05:39	107-06-2	
Benzene	ND	ug/L	1.0	1		10/14/14 05:39	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/14/14 05:39	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/14/14 05:39	1634-04-4	
Toluene	ND	ug/L	1.0	1		10/14/14 05:39	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		10/14/14 05:39	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	109	%.	75-125	1		10/14/14 05:39	17060-07-0	
Toluene-d8 (S)	102	%.	75-125	1		10/14/14 05:39	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	75-125	1		10/14/14 05:39	460-00-4	

Sample: MW-217 **Lab ID: 10284491002** Collected: 10/03/14 13:45 Received: 10/08/14 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	ND	ug/L	100	1		10/14/14 12:24		
Surrogates								
a,a,a-Trifluorotoluene (S)	102	%.	70-125	1		10/14/14 12:24	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	10/13/14 11:45	10/15/14 16:37	7439-92-1	
6010C MET ICP, Lab Filtered	Analytical Method: 6010C Met Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	10/14/14 09:52	10/14/14 21:14	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
1,2-Dichloroethane	ND	ug/L	1.0	1		10/14/14 06:02	107-06-2	
Benzene	**1.8**	ug/L	1.0	1		10/14/14 06:02	71-43-2	
Ethylbenzene	**1.0**	ug/L	1.0	1		10/14/14 06:02	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/14/14 06:02	1634-04-4	
Toluene	**9.1**	ug/L	1.0	1		10/14/14 06:02	108-88-3	
Xylene (Total)	**5.3**	ug/L	3.0	1		10/14/14 06:02	1330-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

Sample: MW-217 **Lab ID: 10284491002** Collected: 10/03/14 13:45 Received: 10/08/14 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical Method: EPA 8260							
Surrogates								
1,2-Dichloroethane-d4 (S)	108	%.	75-125	1		10/14/14 06:02	17060-07-0	
Toluene-d8 (S)	102	%.	75-125	1		10/14/14 06:02	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1		10/14/14 06:02	460-00-4	

Sample: MW-218 **Lab ID: 10284491003** Collected: 10/03/14 14:20 Received: 10/08/14 10:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Method: NWTPH-Gx/8021							
TPH as Gas	**492**	ug/L	100	1		10/14/14 16:06		
Surrogates								
a,a,a-Trifluorotoluene (S)	98	%.	70-125	1		10/14/14 16:06	98-08-8	
6010C MET ICP	Analytical Method: EPA 6010C Preparation Method: EPA 3010							
Lead	ND	ug/L	10.0	1	10/13/14 11:45	10/15/14 16:43	7439-92-1	
6010C MET ICP, Lab Filtered	Analytical Method: 6010C Met Preparation Method: EPA 3010							
Lead, Dissolved	ND	ug/L	10.0	1	10/14/14 09:52	10/14/14 21:21	7439-92-1	
8260 MSV UST	Analytical Method: EPA 8260							
1,2-Dichloroethane	ND	ug/L	1.0	1		10/14/14 06:25	107-06-2	
Benzene	ND	ug/L	1.0	1		10/14/14 06:25	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		10/14/14 06:25	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	1		10/14/14 06:25	1634-04-4	
Toluene	**3.0**	ug/L	1.0	1		10/14/14 06:25	108-88-3	
Xylene (Total)	**8.4**	ug/L	3.0	1		10/14/14 06:25	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	107	%.	75-125	1		10/14/14 06:25	17060-07-0	
Toluene-d8 (S)	103	%.	75-125	1		10/14/14 06:25	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125	1		10/14/14 06:25	460-00-4	

Pace Analytical Services, Inc.
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

QC Batch: GCV/12754 Analysis Method: NWTPH-Gx/8021
QC Batch Method: NWTPH-Gx/8021 Analysis Description: NWTPH-Gx/8021B Water
Associated Lab Samples: 10284491001, 10284491002, 10284491003

METHOD BLANK: 1815525 Matrix: Water
Associated Lab Samples: 10284491001, 10284491002, 10284491003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
TPH as Gas	ug/L	ND	100	10/14/14 10:59	
a,a,a-Trifluorotoluene (S)	%.	100	70-125	10/14/14 10:59	

LABORATORY CONTROL SAMPLE & LCSD: 1815526 1815527

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	1000	1080	980	108	98	75-125	10	20	
a,a,a-Trifluorotoluene (S)	%.				104	105	70-125			

MATRIX SPIKE SAMPLE: 1817064

Parameter	Units	10284494002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
TPH as Gas	ug/L	105	1000	1190	109	52-150	
a,a,a-Trifluorotoluene (S)	%.				112	70-125	

SAMPLE DUPLICATE: 1817065

Parameter	Units	10284494003 Result	Dup Result	RPD	Max RPD	Qualifiers
TPH as Gas	ug/L	ND	ND		30	
a,a,a-Trifluorotoluene (S)	%.	101	103	2		

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

QC Batch: MPRP/49756 Analysis Method: EPA 6010C
QC Batch Method: EPA 3010 Analysis Description: 6010C Water
Associated Lab Samples: 10284491001, 10284491002, 10284491003

METHOD BLANK: 1814756 Matrix: Water
Associated Lab Samples: 10284491001, 10284491002, 10284491003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	ug/L	ND	10.0	10/15/14 15:40	

LABORATORY CONTROL SAMPLE: 1814757

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	ug/L	1000	924	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1814758 1814759

Parameter	Units	10284165020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	ug/L	ND	1000	1000	864	887	86	88	75-125	3	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

QC Batch: MPRP/49758 Analysis Method: 6010C Met
QC Batch Method: EPA 3010 Analysis Description: 6010C Water Dissolved
Associated Lab Samples: 10284491001, 10284491002, 10284491003

METHOD BLANK: 1814764 Matrix: Water
Associated Lab Samples: 10284491001, 10284491002, 10284491003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead, Dissolved	ug/L	ND	10.0	10/14/14 20:18	

LABORATORY CONTROL SAMPLE: 1814765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead, Dissolved	ug/L	1000	978	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1814766 1814767

Parameter	Units	10284165020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead, Dissolved	ug/L	ND	1000	1000	917	966	91	96	75-125	5	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

QC Batch: MSV/28905 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10284491001, 10284491002, 10284491003

METHOD BLANK: 1815610 Matrix: Water
Associated Lab Samples: 10284491001, 10284491002, 10284491003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2-Dichloroethane	ug/L	ND	1.0	10/13/14 23:34	
Benzene	ug/L	ND	1.0	10/13/14 23:34	
Ethylbenzene	ug/L	ND	1.0	10/13/14 23:34	
Methyl-tert-butyl ether	ug/L	ND	1.0	10/13/14 23:34	
Toluene	ug/L	ND	1.0	10/13/14 23:34	
Xylene (Total)	ug/L	ND	3.0	10/13/14 23:34	
1,2-Dichloroethane-d4 (S)	%.	107	75-125	10/13/14 23:34	
4-Bromofluorobenzene (S)	%.	101	75-125	10/13/14 23:34	
Toluene-d8 (S)	%.	101	75-125	10/13/14 23:34	

LABORATORY CONTROL SAMPLE: 1815611

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	20	23.5	117	75-125	
Benzene	ug/L	20	23.1	116	75-125	
Ethylbenzene	ug/L	20	21.3	107	75-125	
Methyl-tert-butyl ether	ug/L	20	22.1	110	75-125	
Toluene	ug/L	20	21.0	105	75-125	
Xylene (Total)	ug/L	60	61.6	103	75-125	
1,2-Dichloroethane-d4 (S)	%.			108	75-125	
4-Bromofluorobenzene (S)	%.			99	75-125	
Toluene-d8 (S)	%.			101	75-125	

MATRIX SPIKE SAMPLE: 1816494

Parameter	Units	10284288001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethane	ug/L	<0.13	40	44.9	112	68-128	
Benzene	ug/L	<0.00015 mg/L	40	46.2	115	75-129	
Ethylbenzene	ug/L	<0.00016 mg/L	40	41.0	102	75-128	
Methyl-tert-butyl ether	ug/L	<0.17	40	37.0	92	74-128	
Toluene	ug/L	<0.00011 mg/L	40	40.9	102	75-129	
Xylene (Total)	ug/L	<0.00040 mg/L	120	118	98	75-129	
1,2-Dichloroethane-d4 (S)	%.				108	75-125	
4-Bromofluorobenzene (S)	%.				97	75-125	
Toluene-d8 (S)	%.				102	75-125	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

SAMPLE DUPLICATE: 1816437

Parameter	Units	10284288002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,2-Dichloroethane	ug/L	<0.13	ND		30	
Benzene	ug/L	<0.00015 mg/L	ND		30	
Ethylbenzene	ug/L	<0.00016 mg/L	ND		30	
Methyl-tert-butyl ether	ug/L	<0.17	ND		30	
Toluene	ug/L	<0.00011 mg/L	ND		30	
Xylene (Total)	ug/L	<0.00040 mg/L	ND		30	
1,2-Dichloroethane-d4 (S)	%.	110	108	1		
4-Bromofluorobenzene (S)	%.	99	100	1		
Toluene-d8 (S)	%.	102	102	0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

Parameter	Matrix	Analytical Method	Preparation Method
8260 MSV UST	Water	SW-846 8260B/5030B	N/A

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P66-1396 76.75118.1396
Pace Project No.: 10284491

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10284491001	**MW-216**	NWTPH-Gx/8021	GCV/12754		
10284491002	**MW-217**	NWTPH-Gx/8021	GCV/12754		
10284491003	**MW-218**	NWTPH-Gx/8021	GCV/12754		
10284491001	**MW-216**	EPA 3010	MPRP/49756	EPA 6010C	ICP/21229
10284491002	**MW-217**	EPA 3010	MPRP/49756	EPA 6010C	ICP/21229
10284491003	**MW-218**	EPA 3010	MPRP/49756	EPA 6010C	ICP/21229
10284491001	**MW-216**	EPA 3010	MPRP/49758	6010C Met	ICP/21245
10284491002	**MW-217**	EPA 3010	MPRP/49758	6010C Met	ICP/21245
10284491003	**MW-218**	EPA 3010	MPRP/49758	6010C Met	ICP/21245
10284491001	**MW-216**	EPA 8260	MSV/28905		
10284491002	**MW-217**	EPA 8260	MSV/28905		
10284491003	**MW-218**	EPA 8260	MSV/28905		

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10284491

Page: of

1742868

Section A Required Client Information:

Company: Cardno ATC
Address: 6347 Seaview AVE
Seattle, WA 98103
Email To: Kyle.Sattler@Cardno.com
Phone: Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Kyle Sattler
Copy To: Nasrin Bushati
Purchase Order No.:
Project Name: P66 -1396
Project Number: 76.75115.1396

Section C Invoice Information:

Attention:
Company Name:
Address:
Pace Quote Reference:
Pace Project Manager:
Pace Profile #:

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER

Site Location STATE:

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Matrix Codes (MATRIX / CODE): Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Tissue TS; Other OT

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COMPOSITE START TIME	COMPOSITE END/GRAB DATE	COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N: Lead Total	Lead Dissolved	BTEX	MTBE	EDC 8260	EDB 8011	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	MW-216	WT	G	10/3		10-3	11:40		11			X						X	X	X	X	X	X		10284491 001
2	MW-219	WT	G	10/3		10-3	13:45		11			X						X	X	X	X	X	X		002
3	MW-218	WT	G	10/3		10-3	14:20		11			X						X	X	X	X	X	X		003
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
	Felicity D. Wood	10-3-14	16:00	PACE	10/3/14	1600	2.7/3.3	Y	N	Y
				PACE	10-8-14	1005	0.4	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Felicity D Wood
SIGNATURE of SAMPLER: F. D. W.
DATE Signed (MM/DD/YY):

ORIGINAL

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 28Feb2014 Page 1 of 1
	Document No.: **F-MN-L-213-rev.09**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Cardno ATC

Project #: WO# : 10284491

10284491

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ SpeeDee ☐ Other:_____

Tracking Number: 5774 5332 3057

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Optional:** Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other:_____ **Temp Blank?** ☒ Yes ☐ No

Thermom. Used: ☐ B88A9130516413 ☒ B88A912167504 ☐ B88A9132521491 **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 0.0 **Cooler Temp Corrected (°C):** 0.4 **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C **Correction Factor:** +0.4 **Date and Initials of Person Examining Contents:** 10-8-14 la

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☒ No	☐ N/A	11. LAB Filter
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation have been checked?	☒ Yes	☐ No	☐ N/A	13. ☒ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☒ Yes	☐ No	☐ N/A	Sample # 01-03
Exceptions (VOA) Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	☒ Yes	☐ No		Initial when completed:_____ Lot # of added preservative:_____
Headspace in VOA Vials (>6mm)?	☐ Yes	☒ No	☐ N/A	14.
Trip Blank Present?	☒ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☒ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if purchased):_____				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☒ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Jennifer Gross **Date:** 10/09/14

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

TestAmerica Job ID: 280-61079-1
Client Project/Site: Washington

For:
Pace Analytical Services, Inc.
Seattle Service Center
596 Industry Drive, Suite 602
Tukwila, Washington 98188

Attn: Jennifer Gross

Authorized for release by:
10/20/2014 9:53:36 AM

Kae Yoder, Senior Project Manager
(303)736-0190
kae.yoder@testamericainc.com

Table of Contents

Job ID: 280-61079-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Pace Analytical Services, Inc.

Job Number: 280-61079-1

With exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. All laboratory quality control samples analyzed in conjunction with the samples in this project were within established control limits, with any exceptions noted. Calculations are performed before rounding to avoid round-off errors in calculated results.

Please note that Non-Detect (ND) results have been evaluated down to the Method Detection Limit (MDL).

Results between the method detection limit (MDL) and reporting limit (RL) are flagged with a "J" qualifier to indicate an estimated value. These results are statistically less reliable than results greater than or equal to the RL and should be considered a qualitative value.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/10/2014 9:50 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.0º C.

EDB - EPA 8011

The method required MS and MSD analysis could not be performed for prep batch 247612, due to insufficient sample volume. A duplicate LCS (LCSD) was analyzed to provide some evidence of batch precision.

No other analytical or quality issues were noted.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61079-1

Method	Method Description	Protocol	Laboratory
8011	EDB	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61079-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-61079-1	MW-216	Water	10/03/14 11:40	10/10/14 09:50
280-61079-2	MW-217	Water	10/03/14 13:45	10/10/14 09:50
280-61079-3	MW-218	Water	10/03/14 14:20	10/10/14 09:50
280-61079-4	TRIP BLANK	Water	10/03/14 00:00	10/10/14 09:50

Method: 8011 - EDB

Client Sample ID: MW-216
Date Collected: 10/03/14 11:40
Date Received: 10/10/14 09:50

Lab Sample ID: 280-61079-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	0.0038	ug/L		10/13/14 15:21	10/13/14 23:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*106*		*70 - 130*	*10/13/14 15:21*	*10/13/14 23:37*	*1*

Client Sample ID: MW-217
Date Collected: 10/03/14 13:45
Date Received: 10/10/14 09:50

Lab Sample ID: 280-61079-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	0.0037	ug/L		10/13/14 15:21	10/13/14 23:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*104*		*70 - 130*	*10/13/14 15:21*	*10/13/14 23:56*	*1*

Client Sample ID: MW-218
Date Collected: 10/03/14 14:20
Date Received: 10/10/14 09:50

Lab Sample ID: 280-61079-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.021	0.0038	ug/L		10/13/14 15:21	10/14/14 00:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*106*		*70 - 130*	*10/13/14 15:21*	*10/14/14 00:15*	*1*

Client Sample ID: TRIP BLANK
Date Collected: 10/03/14 00:00
Date Received: 10/10/14 09:50

Lab Sample ID: 280-61079-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	0.0038	ug/L		10/13/14 15:21	10/14/14 00:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*99*		*70 - 130*	*10/13/14 15:21*	*10/14/14 00:34*	*1*

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61079-1

Method: 8011 - EDB

Lab Sample ID: MB 280-247612/4-A
Matrix: Water
Analysis Batch: 247623

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 247612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.020	0.0037	ug/L		10/13/14 15:21	10/13/14 18:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dibromopropane	*106*		*70 - 130*	*10/13/14 15:21*	*10/13/14 18:52*	*1*

Lab Sample ID: LCS 280-247612/2-A
Matrix: Water
Analysis Batch: 247623

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 247612

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dibromoethane (EDB)			0.250	0.264		ug/L		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dibromopropane	*101*		*70 - 130*

Lab Sample ID: LCSD 280-247612/3-A
Matrix: Water
Analysis Batch: 247623

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 247612

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)			0.250	0.267		ug/L		107	70 - 130	1	10

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dibromopropane	*104*		*70 - 130*

GC Semi VOA

Prep Batch: 247612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-61079-1	MW-216	Total/NA	Water	8011	
280-61079-2	MW-217	Total/NA	Water	8011	
280-61079-3	MW-218	Total/NA	Water	8011	
280-61079-4	TRIP BLANK	Total/NA	Water	8011	
LCS 280-247612/2-A	Lab Control Sample	Total/NA	Water	8011	
LCSD 280-247612/3-A	Lab Control Sample Dup	Total/NA	Water	8011	
MB 280-247612/4-A	Method Blank	Total/NA	Water	8011	

Analysis Batch: 247623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-61079-1	MW-216	Total/NA	Water	8011	247612
280-61079-2	MW-217	Total/NA	Water	8011	247612
280-61079-3	MW-218	Total/NA	Water	8011	247612
280-61079-4	TRIP BLANK	Total/NA	Water	8011	247612
LCS 280-247612/2-A	Lab Control Sample	Total/NA	Water	8011	247612
LCSD 280-247612/3-A	Lab Control Sample Dup	Total/NA	Water	8011	247612
MB 280-247612/4-A	Method Blank	Total/NA	Water	8011	247612

Lab Chronicle

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61079-1

Client Sample ID: MW-216

Lab Sample ID: 280-61079-1

Date Collected: 10/03/14 11:40

Matrix: Water

Date Received: 10/10/14 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.5 mL	35 mL	247612	10/13/14 15:21	MPS	TAL DEN
Total/NA	Analysis	8011		1	34.5 mL	35 mL	247623	10/13/14 23:37	MPS	TAL DEN

Client Sample ID: MW-217

Lab Sample ID: 280-61079-2

Date Collected: 10/03/14 13:45

Matrix: Water

Date Received: 10/10/14 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.8 mL	35 mL	247612	10/13/14 15:21	MPS	TAL DEN
Total/NA	Analysis	8011		1	34.8 mL	35 mL	247623	10/13/14 23:56	MPS	TAL DEN

Client Sample ID: MW-218

Lab Sample ID: 280-61079-3

Date Collected: 10/03/14 14:20

Matrix: Water

Date Received: 10/10/14 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34 mL	35 mL	247612	10/13/14 15:21	MPS	TAL DEN
Total/NA	Analysis	8011		1	34 mL	35 mL	247623	10/14/14 00:15	MPS	TAL DEN

Client Sample ID: TRIP BLANK

Lab Sample ID: 280-61079-4

Date Collected: 10/03/14 00:00

Matrix: Water

Date Received: 10/10/14 09:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	8011			34.3 mL	35 mL	247612	10/13/14 15:21	MPS	TAL DEN
Total/NA	Analysis	8011		1	34.3 mL	35 mL	247623	10/14/14 00:34	MPS	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Certification Summary

Client: Pace Analytical Services, Inc.
Project/Site: Washington

TestAmerica Job ID: 280-61079-1

Laboratory: TestAmerica Denver

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
A2LA	DoD ELAP		2907.01	10-31-15 *
A2LA	ISO/IEC 17025		2907.01	10-31-15
Alabama	State Program	4	40730	09-30-12 *
Alaska (UST)	State Program	10	UST-30	04-05-15
Arizona	State Program	9	AZ0713	12-19-14
Arkansas DEQ	State Program	6	88-0687	06-01-15
California	State Program	9	2513	08-31-16
Florida	NELAP	4	E87667	06-30-15
Georgia	State Program	4	N/A	01-09-15
Illinois	NELAP	5	200017	04-30-15
Iowa	State Program	7	370	12-01-14 *
Kansas	NELAP	7	E-10166	04-30-15
Louisiana	NELAP	6	02096	06-30-15
Maine	State Program	1	CO0002	03-03-15
Minnesota	NELAP	5	8-999-405	12-31-14
Nevada	State Program	9	CO0026	07-31-15
New Hampshire	NELAP	1	205310	04-28-15
New Jersey	NELAP	2	CO004	06-30-15
New Mexico	State Program	6	CO00026	01-09-15
New York	NELAP	2	11964	03-31-15
North Carolina (WW/SW)	State Program	4	358	12-31-14
North Dakota	State Program	8	R-034	06-30-14 *
Oklahoma	State Program	6	8614	08-31-15
Oregon	NELAP	10	4025	01-09-15
Pennsylvania	NELAP	3	68-00664	07-30-15
South Carolina	State Program	4	72002001	06-30-15
Texas	NELAP	6	T104704183-13-8	10-01-15
USDA	Federal		P330-13-00202	07-02-16
Utah	NELAP	8	CO00026	07-31-15
Virginia	NELAP	3	460232	06-14-15
Washington	State Program	10	C583	08-03-15
West Virginia DEP	State Program	3	354	11-30-14
Wisconsin	State Program	5	999615430	08-31-15
Wyoming (UST)	A2LA	8	2907.01	10-31-15

* Certification renewal pending - certification considered valid.

Chain of Custody

280-61079 Chain of Custody

0.0 IR6 10 10Oct14 Transferred by (initials)

Pace Analytical®
www.pacelabs.com

Workorder: 10284491 **Workorder Name:** P66-1396 76.75118.1396 **Results Requested** 10/22/2014

Report / Invoice To:
Jennifer Gross
Pace Analytical Seattle
596 Industry Drive,
Suite 602
Tukwila, WA 98188
Phone (206)767-5060
Email: jennifer.gross@pacelabs.com

Subcontract To:
Kae Yoder
TA- Denver

P.O. 10284491

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers: HCL	Requested Analysis: 8011 EDB	LAB USE ONLY
1	MW-216	10/3/2014 11:40	10284491001	Water	3		
2	MW-217	10/3/2014 13 45	10284491002	Water	3		
3	MW-218	10/3/2014 14:20	10284491003	Water	3		
4	TRIP BLANK	10/3/2014 00:00	10284491004	Water	3		
5							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace MN	10-9-14 1453	[signature]	0950 10Oct14
2				
3				

Comments:

Cooler Temperature on Receipt °C **Custody Seal** Y or N **Received on Ice** Y or N **Samples Intact** Y or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Login Sample Receipt Checklist

Client: Pace Analytical Services, Inc.

Job Number: 280-61079-1

Login Number: 61079

List Source: TestAmerica Denver

List Number: 1

Creator: Muniz, Ashley T

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT C

MONITOR WELL SURVEY DATA

HORIZONTAL DATUM:

WASHINGTON STATE PLANE NORTH ZONE, NAD 83, BASED ON WASHINGTON STATE DEPARTMENT OF TRANSPORTATION REPORT OF SURVEY MARK: SURVEY DESIGNATION EPB-001, MONUMENT ID 6182. A FOUND WSDOT ALUMINUM CAP SET IN CONCRETE IN THE SOUTHWEST SIDEWALK OF FAIRVIEW AVENUE:

NORTHING (US FT): 233275.367
EASTING (US FT): 1271432.277

VERTICAL DATUM:

NAVD 88 BASED ON CITY OF SEATTLE SURVEY DESIGNATION SNV-5009, MONUMENT DB ID 2939. A FOUND 2" DIA CITY OF SEATTLE SURVEY, BRASS CAP STAMPED "5009" IN BACK SEAM CW 12' WEST OF INTX BACK CW @ NW COR INTX WESTLAKE AVE N AND REPUBLICAN ST.

ELEVATION = 41.132'

SEE SHEET 2

SCALE: 1"=60'

60 30 0 60

LEGEND:

MW - MONITOR WELL

MONITOR WELLS				
NUMBER	LID ELEV.	PIPE ELEV.	NORTHING	EASTING
MWR 5	27.42'	27.12'	231623.01	1269508.37
MWR 6	29.41'	29.12'	231567.34	1269562.04
MW 45	28.60'	27.91'	231645.64	1269503.54
MW 50	29.32'	29.00'	231578.42	1269510.25
MW 54	28.28'	27.88'	231642.47	1269563.18
MW 209	27.33'	26.88'	231962.66	1269391.61
MW 210	27.16'	26.56'	231960.05	1269464.18
MW 211	26.89'	26.48'	231958.72	1269549.96
MW 212	29.63'	29.09'	231520.72	1269498.46
MW 214	27.96'	27.33'	231860.62	1269443.60
MW 215	27.59'	27.21'	231859.33	1269502.71
MW 213	27.92'	27.35'	231861.92	1269389.33
MW 216	30.17'	29.68'	231470.60	1269507.17
MW 217	30.55'	30.08'	231472.24	1269436.77
MW 218	30.20'	29.64'	231474.10	1269360.75
MW R1	30.18'	29.86'	231569.69	1269344.75
MW R2	28.40'	28.16'	231586.84	1269436.64
MW R3	30.01'	29.67'	231641.47	1269354.66
MW R4	29.10'	28.80'	231638.49	1269429.07
MW SMW3	27.95'	27.32'	231957.72	1269332.66
MW 219	27.95'	27.41'	231694.52	1269628.05

Cardno
Shaping the Future
PORTLAND
5415 SW WESTGATE DR, STE 100, PORTLAND, OR 97221
TEL: (503) 419 - 2500 FAX: (503) 419 - 2600
www.cardno.com

MONITOR WELL LOCATIONS
PHILLIPS 66 FACILITY NO. 255353 (AOC 1396)
600 WESTLAKE AVENUE N
SEATTLE, WASHINGTON

PROJECT NO. OR02500200
DATE: 12/11/2014
BY: TLB
SHEET NO. 1 OF 2

HORIZONTAL DATUM:

WASHINGTON STATE PLANE NORTH ZONE, NAD 83, BASED ON WASHINGTON STATE DEPARTMENT OF TRANSPORTATION REPORT OF SURVEY MARK: SURVEY DESIGNATION EPB-001, MONUMENT ID 6182. A FOUND WSDOT ALUMINUM CAP SET IN CONCRETE IN THE SOUTHWEST SIDEWALK OF FAIRVIEW AVENUE:

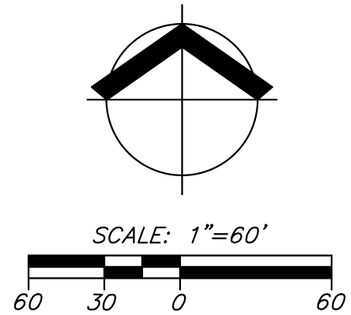
NORTHING (US FT): 233275.367
EASTING (US FT): 1271432.277

VERTICAL DATUM:

NAVD 88 BASED ON CITY OF SEATTLE SURVEY DESIGNATION SNV-5009, MONUMENT DB ID 2939. A FOUND 2" DIA CITY OF SEATTLE SURVEY, BRASS CAP STAMPED "5009" IN BACK SEAM CW 12' WEST OF INTX BACK CW @ NW COR INTX WESTLAKE AVE N AND REPUBLICAN ST.

ELEVATION = 41.132'

SEE SHEET 1



LEGEND:

MW - MONITOR WELL

MONITOR WELLS				
NUMBER	LID ELEV.	PIPE ELEV.	NORTHING	EASTING
MW 41	36.42'	36.09'	231153.70	1269297.11
MW 216	30.17'	29.68'	231470.60	1269507.17
MW 217	30.55'	30.08'	231472.24	1269436.77
MW 218	30.20'	29.64'	231474.10	1269360.75

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5415 SW WESTGATE DR, STE 100, PORTLAND, OR 97221
TEL: (503) 419 - 2500 FAX: (503) 419 - 2600
www.cardno.com

MONITOR WELL LOCATIONS
PHILLIPS 66 FACILITY NO. 255353 (AOC 1396)

600 WESTLAKE AVENUE N
SEATTLE, WASHINGTON

PROJECT NO. OR02500200
DATE: 12/11/2014
BY: TLB
SHEET NO. 2 OF 2

ATTACHMENT D

NON-HAZARDOUS WASTE MANIFESTS

438182

CWMI

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	EXEMPT	2	(800)424-9300	20141229-01

GENERATOR

5. Generator's Name and Mailing Address

PHILLIPS 66 CO - REMEDIATION
600 WESTLAKE AVENUE N
SEATTLE WA 98109
Generator's Phone: ~~(916)558-7633~~

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: DH ENVIRONMENTAL — U.S. EPA ID Number: WAH000047217

7. Transporter 2 Company Name: R TRANSPORT — U.S. EPA ID Number: WAH000028338

8. Designated Facility Name and Site Address

CHEMICAL WASTE MANAGEMENT, INC.
17629 CEDAR SPRINGS LANE
ARLINGTON OR 97812-9709

U.S. EPA ID Number: ORD089452353

Facility's Phone: (541) BV 1/23/15 ~~(503)454-2643~~

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	MATERIAL NOT REGULATED BY DOT SOILS WITH PETROLEUM	008 ~~016~~	DM	6,300 5600	P	X004
2.	MATERIAL NOT REGULATED BY DOT IDW WATER AND SOIL MIX	~~008~~ ~~016~~ 9	DM	3,200 3600	P	X004
3.						
4.						

dm 1-20-15.

13. Special Handling Instructions and Additional Information

1. OR324236- SOILS WITH PETROLEUM; NOT REGULATED BY DOT; ERG N/A
2. OR324237- IDW WATER AND SOIL MIX; NOT REGULATED BY DOT; ERG N/A

WMKU 920797

14. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: See Attached — Signature — Month / Day / Year

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:

Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Travis Forslund — Signature — Month 12 Day 29 Year 14

Transporter 2 Printed/Typed Name: Yemaya Shipp — Signature — Month 12 Day 29 Year 14

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

9.1 drum #7 is 100% free liquid, moved to 9b.2. Drums #1, 3, 4, 6, 8, 9 the free liquid is rinsewater or purge water, soil dry per Ed Ralston/Phillips 66 dm 1-20-15

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month / Day / Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: Tina Weiser — Signature — Month 1 Day 14 Year 15

769-BLC-O 6 10498 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

438182.

CWM

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	EXEMPT	2 1	(800)424-9300	20141229-01

GENERATOR

5. Generator's Name and Mailing Address

PHILLIPS 66 CO - REMEDIATION
600 WESTLAKE AVENUE N
SEATTLE WA 98109
Generator's Phone: (916)588-7033

Generator's Site Address (if different than mailing address)

6. Transporter 1 Company Name: DH ENVIRONMENTAL — U.S. EPA ID Number: WAH000047217

7. Transporter 2 Company Name: R TRANSPORT — U.S. EPA ID Number: WAH000028338

8. Designated Facility Name and Site Address

CHEMICAL WASTE MANAGEMENT, INC.
17629 CEDAR SPRINGS LANE
ARLINGTON OR 97812-9709

U.S. EPA ID Number: ORD089452353

Facility's Phone: (541)BV 1/23/15 (503)454-2643

	9. Waste Shipping Name and Description	10. Containers No	Type	11. Total Quantity	12. Unit Wt/Vol.	
1.	MATERIAL NOT REGULATED BY DOT SOILS WITH PETROLEUM	018	DM		P	X004
2.	MATERIAL NOT REGULATED BY DOT IDW WATER AND SOIL MIX	014	DM		P	X004
3.						
4.						

13. Special Handling Instructions and Additional Information
1. OR324236- SOILS WITH PETROLEUM; NOT REGULATED BY DOT; ERG N/A
2. OR324237- IDW WATER AND SOIL MIX; NOT REGULATED BY DOT; ERG N/A

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Kyla Smith — Signature — Month 12 Day 29 Year 14

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name — Signature — Month Day Year

Transporter 2 Printed/Typed Name — Signature — Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator) — U.S. EPA ID Number

Facility's Phone:

17c. Signature of Alternate Facility (or Generator) — Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name — Signature — Month Day Year

169-BLC-O 6 10498 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

438182

CWW

NON-HAZARDOUS WASTE MANIFEST (Continuation Sheet)	19. Generator ID Number	20. Page	21. Waste Tracking Number
	EXEMPT	of 2	20141229-01

22. Generator's Name: PHILLIPS 66

23. Transporter 3 Company Name: UNION PACIFIC RAILROAD — U.S. EPA ID Number: NED001792910

24. Transporter 4 Company Name: COLUMBIA RIDGE LANDFILL — U.S. EPA ID Number: ORD987173457

	25. Waste Shipping Name and Description	26. Containers No.	26. Containers Type	27. Total Quantity	28. Unit Wt./Vol.	

GENERATOR

29. Special Handling Instructions and Additional Information

CONTAINER # WMXU970747

TRANSPORTER

30. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name: JJ Thm — Signature: [signature] — Month: 1 — Day: 5 — Year: 15

31. Transporter 4 Acknowledgment of Receipt of Materials

Printed/Typed Name: Bonnie Shaw — Signature: B Shaw — Month: 1 — Day: 7 — Year: 15

DESIGNATED FACILITY

32. Discrepancy

170-BLC-O 6 10502 (Rev. 8/06)

DESIGNATED FACILITY TO GENERATOR