

REMEDIATION SYSTEM RESTART REPORT

Third and Fourth Quarter 2016 August 2016 through December 2016

Phillips 66 Facility No. 255353 (AOC 1396) 600 Westlake Avenue North Seattle, Washington 98107 Washington State Department of Ecology Facility ID: 46445373 Washington State Department of Ecology Voluntary Cleanup Program No. NW1714 ATC PROJECT NO. Z076000073

> Submitted to: Mr. Roger Nye Washington State Department of Ecology 3190 160th Avenue Southeast Bellevue, Washington 98008-5452

> > Submitted on behalf of: Mr. Ed Ralston Phillips 66 Company Remediation Management 76 Broadway Sacramento, California 95818

Prepared by: ATC Group Services, LLC 6347 Seaview Avenue NW Seattle, Washington 98107 (206) 781-1449

May 3, 2017

ATC Group Services LLC Prepared by: /

Kyle Sattler Senior Project Manager

Senior Project Manager

Kyle.Sattler@atcassoicates.com



ATC Group Services LLC Reviewed by:

Dawn E. Bockoras Director, Engineering & Remedial Operations Dawn.Bockoras@atcassociates.com



REMEDIATION SYSTEM RESTART REPORT

Third and Fourth Quarter 2016 August 2016 through December 2016

Phillips 66 Facility No. 255353 (AOC 1396) 600 Westlake Avenue North Seattle, Washington 98107 Washington State Department of Ecology Facility ID: 46445373 Washington State Department of Ecology Voluntary Cleanup Program No. NW1714 ATC PROJECT NO. Z076000073

1.0 INTRODUCTION AND REMEDIATION HISTORY

ATC Group Services LLC (ATC) has prepared this report on behalf of Phillips 66 Company (P66) to document the results of the soil vapor extraction (SVE) and air-sparge (AS) remediation system re-start activities, pulse operation (including operation and maintenance [O&M] activities), and winterization activities that occurred at former Phillips 66 Facility No. 255353 (AOC 1396) in the third and fourth quarters of 2016. The former facility address is 600 Westlake Avenue North, Seattle, Washington. P66 is conducting investigation, cleanup, and monitoring of the former P66 facility (located on the south half of City Block 37) and those properties on or around Block #37 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.

The SVE system consists of two blowers that are capable of extracting soil vapors from a total of 36 vertical wells (19 in Mercer Street, 17 in Terry Avenue) and 16 horizontal wells (7 in Valley Street, 9 in Westlake Avenue). The AS system is capable of supplying compressed air to a total of 62 air sparge wells (27 in Mercer Street, 14 in Valley Street, 21 in Westlake Avenue). The SVE blowers discharge vapors to an off-gas treatment system that uses granular activated carbon (GAC) to reduce air emissions to permitted levels (under Puget Sound Clean Air Agency [PSSCA] permit Registration No. 29548). Recovered water from the SVE moisture separators is also treated with GAC before discharging to the King County sewer system (under Discharge Authorization No. 4262-01, expiration: 6/30/2018). The SVE/AS system equipment summary and SVE/AS well identification are presented in **Table 1**.

The Site is shown relative to surrounding physical features in **Figure 1**. The current layout of the Site and locations of the SVE and AS wells are shown on **Figure 2**. The current layout of the SVE/AS system is shown on **Figure 3**.



2.0 SYSTEM RE-START AND SITE VISIT SUMMARY

Several site visits were conducted that included preparing the system for re-start, monitoring and optimizing its performance, and preparing it for shut-down and winterization. A summary of the site visits conducted between August 3, 2016 and December 30, 2016, is presented below:

System Repairs, A&OI Corrections and Re-Start Activities (August 3, 2016 through August 17, 2016)

Multiple visits were made to the site in order to perform the necessary repairs and maintenance to the SVE/AS system in preparation for system re-start and to ensure compliance with Phillips 66's internal asset and operating integrity program (A&OI). The following visits and tasks were completed during the period from August 3, 2016 through August 17, 2016.

<u>August 3, 2016</u> – ATC performed initial maintenance and un-mothballing of the SVE/AS system including:

- Un-seized both SVE blowers by hand
- Performed oil changes and lubrication on both SVE blowers
- Attempted to un-seize the AS compressor unsuccessful
- Uncoupled AS compressor motor and removed compressor
- Pre-start system electrical connections/voltages were checked
- Valve positions on all equipment checked
- Trouble-shoot startup controls with manufacturer (Newterra), discovered blown fuses

The SVE blowers were successfully started in manual mode on August 3, 2016. However, the system could not be started in auto-mode, due to blown electrical fuses. The AS compressor was also seized, and could not be un-seized during the site visit. The AS compressor was uncoupled from the motor for off-site repair. The SVE/AS system was left off upon departure pending repair of the AS compressor and A&OI corrections.

<u>August 4, 2016</u> – ATC completed additional Phillips 66 A&OI corrections and repairs on the SVE/AS system including the following activities:

- Installed lockable ball valve to isolate residual energy (compressed air pressure) in the sparge manifold and wells from the compressor.
- Labeled all monitoring points, cleaned up and cleared compound of weeds.
- Continued trouble-shooting auto-mode startup controls with manufacturer.

The SVE/AS was left off upon departure pending repair of the AS compressor.

<u>August 5, 2016</u> – ATC delivered the AS compressor to Beckwith & Kuffel, in Seattle, Washington, for repairs. The SVE/AS remained off pending repair of the AS compressor and additional A&OI corrections.

<u>August 15, 2016</u> – ATC picked up the repaired AS compressor from Beckwith & Kuffel and re-coupled the compressor to the motor. ATC successfully re-started the AS compressor in manual-mode. The SVE/AS was left off upon departure pending additional A&OI corrections.

<u>August 16, 2016</u> – ATC completed the following A&OI corrections:

- Installed bleed valve on sparge manifold to release residual energy in the sparge manifold and wells.
- Installed additional signage, including "Authorized Personnel Only and Low Overhead."



• Installed additional caution reflective tape where necessary.

The SVE/AS was re-started and operated for approximately 8 hours in the auto-mode. The SVE/AS system was turned off upon departure pending additional A&OI corrections and permanent re-start.

<u>August 17, 2016</u> – ATC re-started the SVE/AS system in auto-mode and completed the following A&OI corrections:

- Removed dried residuals in settling tank
- Installed double block valves on vapor-phase carbon influent, intermediate and effluent sampling ports.

O&M:

A partial O&M event was conducted during the August 17, 2016 site visit. The following activities were conducted during the initial partial O&M event: recorded the totalizer reading and SVE/AS system hour meter readings; collected stack temperature, velocity and flowrate vapor data from the SVE system; collected vacuum, temperature and pressure data from both SVE systems (B-701 and B-801); and collected temperature and pressure data from the AS system. The SVE/AS system remained operating upon departure.

Routine O&M, Continued A&OI Corrections and Repairs (August 17, 2016 through November 22, 2016)

<u>August 18, 2016</u> – Upon arrival, the system was operating. ATC completed the following A&OI corrections:

- Installed brass piping tees on inlet of liquid-phase carbon vessels for pressure gauges
- Closed drain valves and filled liquid-phase carbon vessels with potable water
- Installed double block valves on liquid sampling ports
- Checked operation of sump pump
- Post-start plumbing and piping connections were checked for leaks.
- The system's emergency stop safety shutdown relays were tested.

0&M:

An O&M event was also conducted during the August 18 site visit. The following activities were conducted during the O&M event: recorded the totalizer reading and SVE/AS system hour meter readings; collected stack temperature, velocity and flowrate vapor data from the SVE system; collected vacuum, temperature and pressure data from both SVE systems (B-701 and B-801); collected temperature and pressure data from the AS system. Collected influent, intermediate and effluent petroleum vapor readings from the vapor sampling ports SVE system using a photo-ionization detector (PID); Collected baseline PID readings from all SVE wells; Collected air flow measurements from select AS wells; Collected PSSCA compliance vapor samples from the influent, intermediate, and effluent vapor sampling ports utilizing Tedlar bags and submitted them to PACE Analytical of Minneapolis, MN for analysis of total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method TO-15; Insufficient groundwater was recovered during this O&M visit to collect compliance influent and effluent groundwater samples per DA-4262-01. The SVE/AS system remained operating upon departure.

<u>August 22, 2016</u> - Upon arrival, the system was operating.

0&M:

During the August 22, 2016 site visit, the following O&M activities were conducted: recorded the totalizer reading and SVE/AS system hour meter readings; collected stack temperature, velocity and flowrate vapor



data from the SVE system; collected vacuum, temperature and pressure data from both SVE systems (B-701 and B-801); collected temperature and pressure data from the AS system. Collected influent, intermediate and effluent petroleum vapor readings from the vapor sampling ports SVE system using a PID; Collected PID readings from select SVE wells; Collected air flow measurements from select AS wells; Collected vapor samples from the influent vapor sampling ports utilizing Tedlar bags and submitted them to PACE Analytical of Minneapolis, MN for analysis of total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method TO-15; Insufficient groundwater was recovered during this O&M visit to collect compliance influent and effluent groundwater samples per DA-4262-01. The SVE/AS system remained operating upon departure.

<u>August 23, 2016</u> – Upon arrival, the system was operating. However, the air compressor motor for the air sparge system sounded louder than it did during the visit on August 22, and the relief valve was operating intermittently. The air sparge system was shut down during diagnosis. It was determined during the site visit that the AS system was operating correctly, however, the AS system was inadvertently left off upon departure.

August 29, 2016 - Upon arrival, the VE system was operating. The AS system was re-started.

O&M:

During the August 29, 2016 site visit, the following O&M activities were conducted: recorded the totalizer reading and SVE/AS system hour meter readings; collected stack temperature, velocity and flowrate vapor data from the SVE system; collected vacuum, temperature and pressure data from both SVE systems (B-701 and B-801); collected temperature and pressure data from the AS system. Collected influent, intermediate and effluent petroleum vapor readings from the vapor sampling ports SVE system using a PID; Collected PID readings from select SVE wells; Collected air flow measurements from select AS wells; Collected vapor samples from the influent vapor sampling ports utilizing Tedlar bags and submitted them to PACE Analytical of Minneapolis, MN for analysis of total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method TO-15; Insufficient groundwater was recovered during this O&M visit to collect compliance influent and effluent groundwater samples per DA-4262-01. The SVE/AS system remained operating upon departure.

<u>September 19, 2016</u> – The SVE/AS system was not operating upon arrival. No notification was given by the system's remote Sensaphone® unit. The remote Sensaphone® unit was evaluated on-site and numerous attempts were made to re-start the system in auto-mode, but were unsuccessful. The system could only be re-started in manual mode. The system was not allowed to operate in manual-mode (as system fail safes and shutdowns would not function, potentially damaging system components) and the SVE/AS system remained off upon departure.

<u>September 26, 2016</u> – ATC reactivated the Sensaphone® telemetry unit service (by powering down and re-energizing the control panel). However, after reactivating the service, phone connection to the unit was still unavailable. ATC contacted Sensaphone® and determined that an upgrade from the existing Cell682 unit to a 3G cell modem was necessary. ATC ordered the upgrade unit for installation at a later date and left the SVE/AS system off upon departure.

October 5, 2016 - ATC completed the following repairs on the SVE/AS system:

- Energized control panel and trouble-shooted system re-start in auto-mode. ATC checked the solenoid fuses and breakers. It was determined sequence of pumps was not in automatic mode preventing the System to operate in auto mode.
- Replaced rotometer internals at the air sparge manifold for air sparge well AS-17 (W-17 located in Westlake Avenue) and installed a new rotometer for air sparge well V-2 (located in Valley Street).



During the October 5, 2016 site visit, it was determined that only the AS system would not continuously operate in auto-mode. Therefore, only the SVE system was re-started in auto-mode, and was operating upon departure. The AS system remained off upon departure for further repairs.

October 6, 2016 - Upon arrival, the SVE system was operating. ATC completed the following repairs on the AS system:

- Re-connected wires to solenoids for repaired rotameters and installed additional hose clamps to rotameter connections.
- Observed insufficient flow from settling tank to liquid-phase carbon units. Checked particle filters, verified filters in operable condition. Checked transfer pump determined transfer pump not operating per specification.
- Disconnected and removed transfer pump for off-site repair.

O&M:

An O&M event was also conducted during the October 6 site visit. The following activities were conducted during the O&M event: recorded the totalizer reading and SVE/AS system hour meter readings; collected stack temperature, velocity and flowrate vapor data from the SVE system; collected vacuum, temperature and pressure data from both SVE systems (B-701 and B-801). Collected influent, intermediate and effluent petroleum vapor readings from the vapor sampling ports SVE system using a photo-ionization detector (PID); Collected PID readings from select SVE wells; Collected PSSCA compliance vapor samples from the influent, intermediate, and effluent vapor sampling ports utilizing Tedlar bags and submitted them to PACE Analytical of Minneapolis, MN for analysis of total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method TO-15; Insufficient groundwater was recovered during this O&M visit to collect compliance influent and effluent groundwater samples per DA-4262-01. Based on the post-August 17 O&M data, only the SVE system remained operating upon departure. The AS system remained off to evaluate influence on vapor extraction (if any) via the SVE system.

October 7, 2016 - Upon arrival, the SVE system was operating.

0&M:

During the October 7, 2016 site visit, the vacuum for blower B-801 was increased as vacuum gauge reading was zero (0). However, after increasing the vacuum, water was observed in the sight glass of several SVE wells. Therefore, the vacuum was reduced until water was no longer observed in the sight glass of the SVE wells. The AS system remained off upon departure to evaluate influence to hydrocarbon removal during the next O&M event.

October 12, 2016 - Upon arrival, the SVE system was operating. During the October 12, 2016 site visit, ATC re-installed the repaired transfer pump and tested the system. Also, ATC replaced the existing 682CELL modem with the upgrade unit (3G modem), re-started the system, and tested all components. The SVE system remained operating upon departure. The AS system remained off upon departure to evaluate influence to hydrocarbon removal during the next O&M event.

October 21, 2016 - Upon arrival, the SVE system was operating.

O&M:

During the October 21, 2016 site visit, the following O&M activities were conducted: recorded the totalizer reading and SVE/AS system hour meter readings; collected stack temperature, velocity and flowrate vapor data from the SVE system; collected vacuum, temperature and pressure data from both SVE systems (B-701 and B-801). Collected influent, intermediate and effluent petroleum vapor readings from the vapor sampling ports SVE system using a PID; Collected PID readings from select SVE wells (adjusted valves to



45 degrees open); Collected vapor samples from the influent vapor sampling ports utilizing Tedlar bags and submitted them to PACE Analytical of Minneapolis, MN for analysis of total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method TO-15; Insufficient groundwater was recovered during this O&M visit to collect compliance influent and effluent groundwater samples per DA-4262-01. The SVE blower B-801 was shut down upon departure. The SVE blower B-701 remained operating upon departure. The AS system (only the AS wells on Mercer Street) was re-started and remained operating upon departure to concentrate efforts to promote vapor extraction in that region.

<u>November 2, 2016</u> - Upon arrival, the SVE blower B-701 and the AS system for AS wells on Mercer Street were operating.

O&M:

During the November 2, 2016 site visit, the following O&M activities were conducted: recorded the totalizer reading and SVE/AS system hour meter readings; collected stack temperature, velocity and flowrate vapor data from the SVE system; collected vacuum, temperature and pressure data from SVE system B-701; collected temperature and pressure data from the AS system. Collected influent, intermediate and effluent petroleum vapor readings from the vapor sampling ports SVE system using a PID; Collected PID readings from select SVE wells; Collected air flow measurements from select AS wells; Collected vapor samples from the influent vapor sampling ports utilizing Tedlar bags and submitted them to PACE Analytical of Minneapolis, MN for analysis of total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method TO-15; Insufficient groundwater was recovered during this O&M visit to collect compliance influent and effluent groundwater samples per DA-4262-01. SVE system B-701 remained operating upon departure. The AS system for the AS wells on Mercer Street remained operating upon departure.

<u>November 16, 2016</u> - Upon arrival, the SVE blower B-701 and the AS system for AS wells on Mercer Street were operating.

0&M:

During the November 16, 2016 site visit, the following O&M activities were conducted: recorded the totalizer reading and SVE/AS system hour meter readings; collected stack temperature, velocity and flowrate vapor data from the SVE system; collected vacuum, temperature and pressure data from SVE system B-701; collected temperature and pressure data from the AS system. Collected influent, intermediate and effluent petroleum vapor readings from the vapor sampling ports SVE system using a PID; Collected PID readings from select SVE wells; Collected air flow measurements from select AS wells; Collected vapor samples from the influent vapor sampling ports utilizing Tedlar bags and submitted them to PACE Analytical of Minneapolis, MN for analysis of total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method TO-15; Insufficient groundwater was recovered during this O&M visit to collect compliance influent and effluent groundwater samples per DA-4262-01. SVE system B-701 remained operating upon departure. The AS system for the AS wells on Mercer Street remained operating upon departure.

November 22, 2016 - Upon arrival, the SVE blower B-701 and the AS system for AS wells on Mercer Street were operating.

O&M:

During the November 22, 2016 site visit, the following O&M activities were conducted: recorded the totalizer reading and SVE/AS system hour meter readings; collected stack temperature, velocity and flowrate vapor data from the SVE system; collected vacuum, temperature and pressure data from SVE system B-701; collected temperature and pressure data from the AS system. Collected influent, intermediate and effluent petroleum vapor readings from the vapor sampling ports SVE system using a



PID; Collected PID readings from select SVE wells; Collected air flow measurements from select AS wells; Collected vapor samples from the influent vapor sampling ports utilizing Tedlar bags and submitted them to PACE Analytical of Minneapolis, MN for analysis of total petroleum hydrocarbons (TPH) and benzene, toluene, ethylbenzene and total xylenes (BTEX) by EPA Method TO-15; Collected DA 4262-01 compliance groundwater samples from the influent and effluent water sampling ports and submitted them to PACE Analytical of Minneapolis, MN for analysis of gasoline-range hydrocarbons by Northwest Method MWTPH-Gx, BTEX by EPA Method 8260B, and Oil & Grease by EPA Method 1664.

Based on a pending required electrical power outage on Block 37, scheduled for December 10, 2016, and the near asymptotic conditions of the system, ATC shut the system down on November 22, 2016. The SVE/AS system was locked and tagged out of service.

3.0 DATA SUMMARY AND EVALUATION

Historical system performance data collected prior to the August 2016 system re-start activities is summarized in the following reports:

- Cardno, *Remediation Progress Report, First Quarter 2014, Phillips 66 Facility 255353, 600 Westlake Avenue North, Seattle, Washington 98107, July 2, 2014.*
- Cardno, *Remediation Progress Report, Second Quarter 2014, Phillips 66 Facility 255353, 600 Westlake Avenue North, Seattle, Washington 98107, August 22, 2014.*
- Cardno, *Remediation Progress Report, Third Quarter 2014, Phillips 66 Facility 255353, 600 Westlake Avenue North, Seattle, Washington 98107, January 21, 2015.*
- Cardno, *Remediation Progress Report, Fourth Quarter 2014, Phillips 66 Facility 255353, 600 Westlake Avenue North, Seattle, Washington 98107, February 19, 2015.*
- Cardno, *Remediation Progress Report, First Quarter 2015, Phillips 66 Facility 255353, 600 Westlake Avenue North, Seattle, Washington 98107, May 22, 2015.*

Cumulative historical system operational and performance data collected prior to the August 2016 SVE/AS system re-start activities is provided in **Tables 1** through **5** of **Appendix A**.

<u>RUNTIME EVALUATION</u>: The cumulative runtimes for the AS and VE systems were 89% and 95%, respectively, during this period. System runtime summaries for the AS and the SVE system are provided in **Tables 2** and **3**, respectively. System downtime during this reporting period was attributed to PLC issues which prevented the AS system from running in "Auto" mode. The AS system was also turned off on August 23 to diagnose loud operation (and inadvertently not restarted) and in September to monitor the effectiveness of the VE system.

GROUNDWATER DEPTH TO WATER AND FLOW DIRECTION EVALUATION: Depths to groundwater measured on December 13, 14 and 16, 2016 (approximately 3 weeks after the system was shut down) ranged from 8.40 below ground surface (bgs) in monitor well MWR-5 to 15.25 feet bgs in monitor well MW-41. The inferred shallow groundwater flow direction is generally towards the north-northeast, at an average gradient of approximately 0.005 foot/foot. Historical groundwater data indicates that the predominant groundwater flow direction is toward the north-northeast (toward South Lake Union located approximately 500 feet north of the Site). The depths to water and groundwater flow direction are likely influenced by the presence of native soil and fill materials on and off-site and the presence of subsurface hydrogeologic barriers installed during the remedial excavation activities completed in 2008. The elevation of the water surface in south Lake Union may also influence the direction of the groundwater flow beneath the site. A summary of the groundwater conditions measured on December 13, 14 and 16, 2016 are summarized in ATC's *Groundwater Monitoring Report (Fourth Quarter 2016)*, dated February 23, 2017.



GROUNDWATER DISSOLVED CONCENTRATION EVALUATION: Laboratory analytical results for groundwater samples collected on December 13, 14 and 15, 2016 indicate that gasoline-range hydrocarbons, and benzene, toluene, ethylbenzene, and total xylenes (BTEX) were either not detected or were detected at concentrations less than the MTCA Method A cleanup levels in all of the samples submitted for analysis, with the exception of gasoline-range hydrocarbons detected in the sample collected from MWR-5, benzene detected in the samples collected from MWR-5. These analytical results are generally similar to historical analytical results. Monitor well MW-45 could not be located during the December sampling event, and well MW-54 was inaccessible due to sludge encountered within the wells casing. A summary of the groundwater analytical results collected from the wells on December 13, 14 and 16, 2016 are summarized in ATC's *Groundwater Monitoring Report (Fourth Quarter 2016)*, dated February 23, 2017.

INCIDENTAL GROUNDWATER RECOVERY: The SVE/AS system recovered approximately 329 gallons of water during operation between August 17 and November 22, 2016. Influent and effluent compliance samples per King County DA 4262-01 were collected on November 16, 2016. Sample port locations are shown on **Figure 3**. The samples were submitted to PACE Analytical of Minneapolis, MN for analysis of total petroleum hydrocarbons as gasoline by Northwest Method MWTPH-Gx, BTEX by EPA Method 8260B, and Oil & Grease by EPA Method 1664. Total petroleum hydrocarbons as gasoline, BTEX and oil & grease were not detected above the laboratory's method reporting limits in any of the samples submitted for analysis, and all samples demonstrated compliance with DA 4261-01 limits. The analytical results and established discharge limits per DA 4262-01 are presented in **Table 4**. A copy of the analytical report is presented in **Appendix B**.

VAPOR AND OFFGAS ANALYTICAL AND TREATMENT EVALUATION: PSSCA compliance vapor samples were collected from the influent, intermediate, and effluent vapor sampling ports utilizing Tedlar bags on August 18 and October 6, 2016. Vapor sample port locations are shown on **Figure 3**. The samples were submitted to PACE Analytical of Minneapolis, MN for analysis of gasoline-range hydrocarbons and BTEX by EPA Method TO-15. Copies of the laboratory analytical reports of the vapor samples are provided in **Appendix B**. (Note: The PSCAA permit specifies vapor concentrations as TPH, while the analytical laboratory reports Method TO-15 results as Total Hydrocarbon Concentration as gasoline [THCg]. For reporting purposes, TPH and THCg are assumed to be equivalent).

The vapor analytical results, the PID screening results, and the corresponding mass recovery and emissions rates for each of the three vapor trains are summarized in **Tables 5**, **6** and **7**, respectively. The PSCAA permit specifies that a control efficiency of 97% must be demonstrated when total petroleum hydrocarbon (TPH) concentrations at the inlets to the granular activated carbon vessels are 200 ppmv or greater. As shown on **Tables 5**, **6** and **7**, TPH concentrations have never exceeded this threshold; therefore control efficiency is not reported.

As presented in **Tables 5**, **6**, and **7**, the average mass recovery rate for Trains 1, 2, and 3 during this period was 0.20 pound (lb)/day, 0.15 lb/day, and 0.11 lb/day, respectively. The total mass of hydrocarbons recovered in the vapor phase during this period at Trains 1, 2, and 3 were 23.35 lb, 15.61 and 12.9 lbs, respectively. The total mass of hydrocarbons recovered by the VE system was 51.86 lbs for this reporting period. The total cumulative mass of hydrocarbons recovered by the SVE system to date is 3,091 lbs.

<u>SVE PID AND AS FLOW RATE DATA</u>: SVE PID measurements and AS flow rate data for this reporting period are provided in **Tables 8** and 9, respectively.



4.0 WINTERIZATION ACTIVITIES

On December 16, 2016, ATC visited the site to conduct winterization activities on the SVE/AS system. Upon arrival, the system remained off, and LO/TO was confirmed. During the visit, each SVE manifold valve was opened and the water from above the valve was allowed to drain back to the well and/or underground piping. All water conveyance piping and hoses were detached at the cam lock fittings. A portable leaf blower was used to blow any remaining water from each line. The three water transfer pumps were drained by removing the plug on both the top of the pump head and the bottom. The plugs were stored in the onsite construction box. The AS compressor was filled with vegetable oil to minimize moisture inside the compressor, thereby reducing the potential for the compressor lobes to rust and for the compressor and seize. The two liquid-phase carbon vessels were drained using the valve located on the bottom of each vessel. The sump pump was removed and transported back to the Seattle office for storage. On December 30, 2016, the two cartridge filter housings were removed with the aid of a strap wrench, and the filters were removed. The filters and housings were also stored in the onsite construction box. The remediation compound gate was secured and locked upon departure.

5.0 RECOMMENDATIONS

Groundwater analytical results do not indicate significant "improvement" during the 2016 pulse operation. However, the pulse event did appear to be semi-effective in recovering volatilized hydrocarbons from the subsurface, as evidenced by the TPH mass recovered by the VE system during this reporting period. The total TPH mass recovered during this reporting period (51.85 lbs) was over twice the total TPH mass recovered by the VE system during the previous operating period (21 lbs between January 1 through March 31, 2015). ATC recommends re-starting the SVE/AS system in the late second or early third quarter of 2017, with continued adjustments and balancing, in an effort to mitigate potential rebounding vapor concentrations. The SVE/AS system should be turned off at least one week prior to the following groundwater sampling event to allow groundwater to reach static conditions.



.....

TABLES

TABLE 1SVE/AS REMEDIATION SYSTEM SUMMARY

Startup Date: 8/17/2016 Permits Discharge of treated groundwater to King County sewer system under King County (e.g. NPDES, consumptive use) Disharge Authorization No. 4262-01, expires 6/30/2018. Discharge treated vapors to atmoshere under PSCCA permit Registration No. 29548. Soil Vapor Extraction 19 1-inch diameter vertical SVE wells to approximately 8 feet bgs, designated Mercer Street SVF Well ID's: MSVE-1 through MSVE-19 8 1-inch diameter horizontal SVE wells to approximately 8 feet bgs, designated Valley Street SVE Well ID's: VSVE-1 through VSVE-7, and VSVE-9 15 1-inch diameter vertical SVE wells (depths unknown), designated WA-1 through Terry Avenue North SVE Well ID's: WC-3, V-1 through V-9, TSVE-1 through TSVE-8, TSVE-10 through TSVE-12, TEFR-1 Air, TEFR-2 Air, TMW-48 Air, and TMW-65 Air 9 1-inch diameter horizontal SVE wells (depths unknown), designated Westlake Avenue North SVE Well ID's: WC1 through WC3, WB1 through WB3, and WA1 through WA3 Screen Interval Not specified **Design Flow Rate** Total =~ 200 CFM @ 22" Hg; Legs = 30 CFM @ 12" Hg Off Gas Treatment Vapor-Phase Granular Activated Carbon Other Water from SVE moisture separators treated with Liquid Phase Granular Activated Carbon. Air Sparging Mercer Street AS Well ID's: 27 1-inch diameter AS wells to approximately 21 feet bgs, designated MAS-1 through MAS-19 Valley Street AS Well ID's: 14 1-inch diameter AS wells to approximately 18 feet bgs, designated VAS-1 through VAS-14 Terry Avenue North AS Well ID's: No AS wells in Terry Avenue North Westlake Avenue North AS Well ID's: 21 1-inch diameter AS wells to approximately 25 feet bgs, designated AS-1 through AS-21 Not specified Screen Interval Design Flow Rate Not specified Equipment & Specifications (2) 10HP Sutorbuilt 5L-RHC Blower, Newterra Vapor Liquid Separator - VLW Series (i.e. tower, blower, flowmeter, With Goulds Transfer Pump pumps) Specify usage, type, mfg, (6) (2 in-Series) (3 Trains in Parallel)- 1000 lbs Siemens Vent-Scrub- Vaor Phase Adsorbers and design specifications. 220 Gallon Cylindrical Poly Tank with 1.5 HP Gould Transfer Pump 2) 1000 lbs. Siemens Aqua Scrub Liquid Phase Adsorbers (in Series) (1) Rietchle Rotary Claw Compressor 10 HP with American Industrial Heat Exchanger Custom - Newterra Control Panel Control panel Nema 4, 480 VAC, 3 phase 4 W, 100 amp service (Brand & List components) Surge Protection (MFG & Type) 600V Lightning Arrestor Square D Other 60"x 60"x 12" Double Door Encl with 3-Point Latch Telemetry (Mfg) Sensaphone Cell 682 Autodialer SYSTEM REPAIR HISTORY 8/3/2016 Restart of system, change oil and grease Blowers (B-701 & B-801), Sparge compressor shaft froze, remove for repair, blower operate in Manual Mode Install isolation valve from compressor to sparge manifold, troubleshoot startup issues 8/4/2016 8/15/2016 Install repaired sparge compressor (C-2201) startup ok. 10/6/2016 Remove Transfer pump (P-5501) for repair Install Transfer pump (P-5501) from repair. Pump startup ok. 10/12/2016 12/16/2016 Winterize pumps, blowers, compressor, carbon vessels, and associated piping.

TABLE 2: AIR SPARGING PERFORMANCE SUMMARY

Facility Name: Ecology Facility ID: Former Phillips 66 Facility No. 255353 (AOC 1396) 46445373

Startup Date: 8/17/2016

Process Status		
Code	Arrive	Depart
1	on	on
2	off	on
3	off	off
4	on	off

Ecology VCP No:

NW1714

			AS Con	npressor						
Site	Days	Days	Hour	Daily	Hours of	Total Hours	Approved	Percent	Percent	Process
Visit	Between	Since	Meter	Designed Run	Operation	of Operation	Down Time	Run Time	Run Time	Status
Date	Site Visits	Startup	Reading	Time (hours)	Period	Cumulative	(hours) ¹	(period)	(cumulative)	otatas
08/17/16	0	0	10,372	24	0.0	0	Start Up	Start Up	Start Up	2
08/18/16	1	1	10,393	24	21.0	21.0	0	88%	88%	1
08/22/16	4	5	10,489	24	96.0	117.0	0	100%	98%	1
08/23/16	1	6	10,514	24	25.0	142.0	0	104%	99%	4
08/29/16	6	12	10,514	24	25.0	142.0	0	17%	49%	2
09/19/16	21	33	10,919	24	405.0	547.0	0	80%	69%	3
09/26/16	7	40	10,919	24	0.0	547.0	168	100%	74%	3
10/05/16	9	49	10,919	24	0.0	547.0	216	100%	79%	3
10/06/16	1	50	10,919	24	0.0	547.0	24	100%	80%	3
10/07/16	1	51	NM	24			24			3
10/12/16	5	56	NM	24			120			3
10/21/16	9	65	10,919	24	0.0	547.0	216	100%	84%	2
11/02/16	12	77	11,204	24	285.0	832.0	0	99%	87%	1
11/16/16	14	91	11,544	24	340.0	1172.0	0	100%	89%	1
11/22/16	6	97	11,684	24	140.0	1312.0	0	97%	89%	4
Notes:										

1. AS system was turned off on August 23 due to noisy compressor and relief valve and in September to evaluate the influence of the SVE system.

TABLE 3: SOIL VAPOR EXTRACTION PERFORMANCE SUMMARY

Facility Name:	Former Phillips 66 Facility No. 255353 (AOC 1396)
Ecology Facility ID#:	46445373
Ecology VCP No:	NW1714

Ecology VCP No:

			Stand	ard Temp =	80	°F						Standa	ard Pressure =	14.7				L			
				System	System	System	Corrected			SV	E Blower B-7	01					S	VE Blower B-8	301		
Site	Days	Days		Vacuum	Velocity	Flow Rate	System	Hour	Hours of	Total Hrs	Approved	Percent	Percent	D	Hour	Hours of	Total Hrs	Approved	Percent	Percent	
Visit	Between	Since	Totalizer	(manifold)			Flow Rate	Meter	Operation	Operation	Down Time	Run Time	Run Time	Process	Meter	Operation	Operation	Down Time	Run Time	Run Time	Process
Date	Site Visits	Startup	(gallons)	″WC	(ft/min)	acfm	scfm	Reading	Period	Cumulative	(hours)	(period)	(cumulative)	Status	Reading	Period	Cumulative	(hours)	(period)	(cumulative)	Status
08/17/16	0	0	82,300	5	1,829	90	76	10,238	0	0		0%	0%	2	9380		0		0%	0%	3
08/18/16	1	1	82,300	5	3,708	182	153	10,258	20.0	20.0		83%	100%	1	9401	21.0	21.0		88%	100%	2
08/22/16	4	5	82,300	5	4,048	199	167	10,354	96.0	116.0		100%	97%	1	9497	96.0	117.0		100%	98%	1
08/29/16	7	12	82,300	5	4,056	199	167	10,522	168.0	284.0		100%	99%	1	9664	167.0	284.0		99%	99%	2
09/19/16	21	33	82,300	NM	NM	NM	NM	10,929	407.0	691.0		81%	87%	3	10071	407.0	691.0		81%	87%	2
09/26/16	7	40	82,300	NM	NM	NM	NM	10,929	0.0	691.0	168	100%	89%	3	10071	0.0	691.0	168	100%	89%	1
10/05/16	9	49	82,300	NM	NM	NM	NM	10,929	0.0	691.0	216	100%	91%	2	10071	0.0	691.0	216	100%	91%	1
10/06/16	1	50	82,300	18	4,501	221	180	10,949	20.0	711.0		83%	91%	1	10092	21.0	712.0		88%	91%	1
10/07/16	1	51	82,300	NM	NM	NM	NM	NM						1	NM						1
10/12/16	5	56	82,300	NM	NM	NM	NM	NM						1	NM						1
10/21/16	9	65	82,372	34	3,359	165	129	11,310	361.0	1,072.0		100%	93%	1	10453	361.0	1,073.0		100%	93%	4
11/02/16	12	77	82,422	20	2,045	100	81	11,597	287.0	1,359.0		100%	94%	1	10454	1.0	1,074.0	288	100%	94%	3
11/16/16	14	91	82,629	20	2,561	126	102	11,936	339.0	1,698.0		100%	95%	1	10454	0.0	1,074.0	336	100%	95%	3
11/22/16	6	97	82,629	22	NM	NM	NM	12,076	140.0	1,838.0		97%	95%	4	10454	0.0	1,074.0	144	100%	96%	3

NM = Not Measured

cfm = ft^3/min = velocity [ft/min] x pipe area $[\pi r^2]$; pipe size = 3 inch diameter

 $scfm = acfm X ((P^{st}-P^g)/Pst)x(T^{st}/(T^{st}+T^{act}))$

	Process Status Code	Arrive	Depart
L6	1	on	on
	2	off	on
	3	off	off
	4	on	off

TABLE 4: LIQUID PHASE ANALYTICAL SUMMARY

Facility Name:	Former Phillips 66 Facility No. 255353 (AOC 1396)
Facility Address:	600 Westlake Avenue North, Seattle, WA
Ecology Facility ID#:	46445373
Ecology VCP No:	NW1714

					Ethyl	Total		Oil &
Sample Location	Sample ID	Date	Benzene	Toluene	benzene	Xylenes	ТРН	Grease
W-INF-WS1	W-INF-WS1	11/16/16	< 1.0	< 1.0	< 1.0	< 3.0	< 100	NS
W-OUT-WC1	W-OUT-WS1	11/16/16	< 1.0	< 1.0	< 1.0	< 3.0	< 100	NS
W-DSCHG	W-DSCHG-1	11/16/16	< 1.0	< 1.0	< 1.0	< 3.0	< 100	< 5,100
W-DSCHG	W-DSCHG-2	11/16/16	NS	NS	NS	NS	NS	< 5,100
W-DSCHG	W-DSCHG-3	11/16/16	NS	NS	NS	NS	NS	< 5,100
KCIW Permit Limits			70	1,400	1,700	2,200	NE	100,000

Notes:

All results reported in micrograms per liter (μ g/L).

There are a total of two liquid phase carbon units plumbed in series to treat water. Sample W-INF-WS1 was collected from a sample port located prior to the first liquid phase carbon unit. Sample W-OUT-WC1 was collected from a sample port located between the first and second liquid phase carbon units. Samples W-DSCHG-1, W-DSCHG-2 and W-DSCHG-3 were collected in succession 5 minutes apart from the sample port located after the second (and final) liquid phase carbon unit . The sample port locations are shown on Figure 3.

Permit Limits Established in King County Industrial Waste (KCIW) Discharge Authorization No. 4262-01 (expires 6/30/2018). NS=Not Sampled NE=Not Established

TABLE 5: SVE ANALYTICAL SUMMARY

Vapor Train No. 1

Facility Name: Facility Address: Ecology Facility ID#: Ecology VCP No: Former Phillips 66 Facility No. 255353 (AOC 1396) 600 Westlake Avenue North, Seattle, WA 46445373 NW1714 If Non-Detect Use MDL "U" Not Sampled = NS Analytical Results = μg/m³

Sample	Sample ID	Date	Hour Meter	Flow Rate (scfm)	PID (ppm)	Benzene	Toluene	Ethyl benzene	Total Xylenes	Total VOCs	THCe (ug/n	n ³)	THCg ¹ (ppmv)	Recovery Rate (Influent)/ Emission Rate (Effluent) ² Rate (Ib/day)	Cumulative Mass Recovered / Discharged ³ (Ibs)
	Inf-1	08/17/16	10 238	75.5	NM					Not Sampled					•
	Inf-1	08/18/16	10,258	153.1	14.2	13.1 U	31.1 L	J 35.6 U	107.0 U	186.8	8.070		1.91	0.11	0.09
	Inf-1	08/22/16	10.354	167.1	NM	1.4 U	6.7	1.8 U	9.3	19.2	3.750		0.89	0.06	0.32
	Inf-1	08/29/16	10,522	167.4	NM	26.20 U	57.8	35.6 U	107.0 U	226.6	15,100		3.58	0.23	1.91
	Not Sampled	09/19/16	NM	NM	NM					Not Sampled					•
	Not Sampled	09/26/16	NM	NM	NM					Not Sampled					
VINE 1	Not Sampled	10/05/16	NM	NM	NM					Not Sampled					
V-INF-1	Inf-1	10/06/16	10,949	179.8	NM	51.90	130.00	34.1 U	220.00	436.0	68,600		16.24	1.11	21.63
	Not Sampled	10/07/16	NM	NM	NM	•				Not Sampled					•
	Not Sampled	10/12/16	NM	NM	NM					Not Sampled					
	Inf-1	10/21/16	11.310	128.7	NM	1.4	55.0	1.8 U	5.4 U	63.6	5.550		1.31	0.06	22.59
	Inf-1	11/02/16	11.597	81.3	NM	14.9 U	35.3 L	J 40.3 U	121.0 U	211.5	5,120		1.21	0.04	23.04
	Inf-1	11/16/16	11,936	101.8	NM	0.82 U	8.7	2.2 U	8.7	20.4	1,740		0.41	0.02	23.26
	Inf-1	11/22/16	12.076	NM	NM	3.4 U	16.7	9.2 U	31.3	60.6	1.670		0.40	0.02	23.35
	Not Sampled	08/17/16	10 238	75.5	NM					Not Sampled					
	Int -1	08/18/16	10,258	153.1	14.2	18.2 11	153.0	49.3 11	148.0 11	368 5	3 990	Tu l	0.94	0.05	NΔ
	Not Sampled	08/22/16	10,250	167.1	NM	10.2	155.0	15.5	110.0	Not Sampled	3,550	Ū	0.51	0.00	
	Not Sampled	08/29/16	10 522	167.4	NM					Not Sampled					
	Not Sampled	09/19/16	NM	NM	NM					Not Sampled					
	Not Sampled	09/26/16	NM	NM	NM					Not Sampled					
	Not Sampled	10/05/16	NM	NM	NM					Not Sampled					
V-INI-1	Int -1	10/06/16	10,949	179.8	NM	19.9	192.0	34.1 U	103.0 U	349.0	35,400		8.38	0.57	NA
	Not Sampled	10/07/16	NM	NM	NM					Not Sampled					•
	Not Sampled	10/12/16	NM	NM	NM					Not Sampled					
	Not Sampled	10/21/16	11,310	128.7	NM					Not Sampled					
	Not Sampled	11/02/16	11597	81.3	NM					Not Sampled					
	Not Sampled	11/16/16	11,936	101.8	NM					Not Sampled					
	Not Sampled	11/22/16	12,076	NM	NM					Not Sampled					
	Not Sampled	08/17/16	10,238	75.5	NM					Not Sampled					
	Eff-1	08/18/16	10,258	153.1	14.2	12.6 U	29.9	34.1 U	103.0 U	179.6	2,760	U	0.65	0.04	0.03
	Not Sampled	08/22/16	10,354	167.1	NM					Not Sampled					
	Not Sampled	08/29/16	10,522	167.4	NM					Not Sampled					
	Not Sampled	09/19/16	NM	NM	NM					Not Sampled					
	Not Sampled	09/26/16	NM	NM	NM					Not Sampled					
V-DSCHG-1	Not Sampled	10/05/16	NM	NM	NM					Not Sampled					-
	Eff-1	10/06/16	10,949	179.8	NM	16.2	133.0	35.6 U	107.0 U	291.8	17,700		4.19	0.29	8.26
	Not Sampled	10/07/16	NM	NM	NM					Not Sampled					
	Not Sampled	10/12/16	NM	NM	NM					Not Sampled					
	Not Sampled	10/21/16	11,310	128.7	NM					Not Sampled					
	Not Sampled	11/02/16	11597	81.3	NM					Not Sampled					
	Not Sampled	11/16/16	11,936	101.8	NM					Not Sampled					
	Not Sampled	11/22/16	12,076	NM	NM					Not Sampled					
PSCAA Threshold Concentrat	tion ¹												200		

Notes:

There are three sets (or trains) of two vapor phase carbon units (for a total of six) used to treat extracted vapors. The two carbon units associated with each train are plumbed in series. Samples inf-1, int-1 and Eff-1 were collected from sample ports associated with the first train of vapor phase carbon units. The influent sample ports for each train are located prior to the first carbon units. The intermediate sample ports for each train are located prior to the first carbon units. The intermediate sample ports for each train are located prior to the first carbon units. The second (and last) carbon units. The sample port locations are shown on Figure 3.

VOCs = Volatile Organic Compounds (Benzene, Toluene, Ethylbenzene and Total Xylenes)

U = Analyte not detected above the referenced laboratory method reporting limit.

1. THCg ppmv = THC (ug/m³)/42.23 (conversion factor for molar volume @ STP)/M (molucular weight of THC [100]). PSCAA Permit (Registration #29548) requires a minimum control efficiency of 97% when

the TPH (THC) influent concentration is greater than or equal to 200 ppmv. None of the THCg concentrations exceed 200 ppmv.

2. Recovery/Emission Rate [lb/day] = Conc [ug/m^3] x Flow Rate [sft^3/min] x (1m^3/35.3ft^3) x (1g/1,00000 ug) x (1lb/454 g) x (1440 min/day)

3. Cumulative Mass Recovered/Discharged [lb/day] = Recovery/Discharge Rate (Influent or Effluent, Ibs. per day) x Flow Rate [sft^3/min] - previous Flow Rate [sft^3/min] ÷ 24 hours + previous calculated Cumulative Mass

Recovered/Discharged. Influent measurements were used to determine the total mass of hydrocarbons recovered in the vapor phase from Train 1. Total Mass of hydrocarbons recovered by the System as reported in the

text of the report also includes the total mass of hydrocarbons recovered from Trains 2 and 3.

TABLE 6: SVE ANALYTICAL SUMMARY

Vapor Train No. 2

Facility Name: Facility Address: Ecology Facility ID#: Ecology VCP No: Former Phillips 66 Facility No. 255353 (AOC 1396) 600 Westlake Avenue North, Seattle, WA 46445373

NW1714

If Non-Detect Use MDL "U" Not Sampled = NS Analytical Results = $\mu g/m^3$

Sample Location	Sample ID	Date	Hour Meter	Flow Rate (scfm)	PID (ppm)	Benzene	Toluene	Ethyl	benzen	e Total Xyle	nes	Total VOCs	THCg (ug/n	1 ³)	THCg ¹ (ppmv)	Recovery Rate (Influent)/ Emission Rate (Effluent) ² Rate (Ib/day)	Cumulative Mass Recovered / Discharged ³ (Ibs)
	Inf-2	08/17/16	10,238	75.5	NM						1	Not Sampled					
	Inf-2	08/18/16	10,258	153.1	14.2	11.7 U	27.7	U 3	31.7	J 95.4	U	166.5	3,900		0.92	0.05	0.04
	Inf-2	08/22/16	10,354	167.1	NM	1.3	5.6	1	1.5	J 7.3		15.7	3,420		0.81	0.05	0.25
	Inf-2	08/29/16	10,522	167.4	NM	26.20 U	60.4	3	35.6	J 107.0	U	229.2	19,700		4.66	0.30	2.32
	Not Sampled	09/19/16	NM	NM	NM						1	Not Sampled					
	Not Sampled	09/26/16	NM	NM	NM						1	Not Sampled					
V-INF-2	Not Sampled	10/05/16	NM	NM	NM						1	Not Sampled					
	Inf-2	10/06/16	10,949	179.8	NM	48.70	185.00	3	32.9	J 181.00		447.6	42,100		9.97	0.68	14.43
	Not Sampled	10/07/16	NM	NM	NM						1	Not Sampled					
	Not Sampled	10/12/16	NM	NM	NM						I	Not Sampled					
	Inf-2	10/21/16	11,310	128.7	NM	1.3	146.0	7	7.2	34.6		189.1	2,510		0.59	0.03	14.86
	Inf-2	11/02/16	11,597	81.3	NM	14.9 U	35.3	U 4	40.3	J 121.0	U	211.5	4,750	U	1.12	0.03	15.28
	Inf-2	11/16/16	11,936	101.8	NM	0.89	10.2	2	2.2	J 12.1		25.4	1,930		0.46	0.02	15.53
	Inf-2	11/22/16	12,076	NM	NM	1.5	16.9	3	3.6	24.4		46.4	1,520		0.36	0.01	15.61
	Not Sampled	08/17/16	10,238	75.5	NM			-			1	Not Sampled		1			
	Int -2	08/18/16	10,258	153.1	14.2	13.6 U	32.3	3	37.0	J 111.0	U	193.9	2,990	U	0.71	0.04	NA
	Not Sampled	08/22/16	10,354	167.1	NM							Not Sampled					
	Not Sampled	08/29/16	10,522	167.4	NM							Not Sampled					
	Not Sampled	09/19/16	NM	NM	NM						1	Not Sampled					
	Not Sampled	09/26/16	NM	NM	NM							Not Sampled					
V-INT-2	Not Sampled	10/05/16	NM	NM	NM						1	Not Sampled					
	Int -2	10/06/16	10,949	179.8	NM	20.7	145.0	3	35.6	J 107.0	U	308.3	24,500		5.80	0.40	NA
	Not Sampled	10/07/16	NM	NM	NM						1	Not Sampled					
	Not Sampled	10/12/16	NM	NM	NM							Not Sampled					
	Not Sampled	10/21/16	11,310	128.7	NM							Not Sampled					
	Not Sampled	11/02/16	11597	81.3	NM						- 1	Not Sampled					
	Not Sampled	11/16/16	11,936	101.8	NM						1	Not Sampled					
	Not Sampled	11/22/16	12,076	NM	NM						1	Not Sampled					
	Not Sampled	08/17/16	10,238	75.5	NM						I	Not Sampled					
	Eff-2	08/18/16	10,258	153.1	14.2	12.2 U	28.8	3	32.9	J 99.1	U	173.0	2,660	U	0.63	0.04	0.03
	Not Sampled	08/22/16	10,354	167.1	NM							Not Sampled					
	Not Sampled	08/29/16	10,522	167.4	NM						1	Not Sampled					
	Not Sampled	09/19/16	NM	NM	NM						I	Not Sampled					
	Not Sampled	09/26/16	NM	NM	NM						1	Not Sampled					
	Not Sampled	10/05/16	NM	NM	NM						1	Not Sampled					
V-D3CHG-2	Eff-2	10/06/16	10,949	179.8	NM	21.6	155.0	3	38.5	J 116.0	U	331.1	20,900		4.95	0.34	9.75
	Not Sampled	10/07/16	NM	NM	NM						1	Not Sampled					
	Not Sampled	10/12/16	NM	NM	NM						I	Not Sampled					
	Not Sampled	10/21/16	11,310	128.7	NM						1	Not Sampled					
	Not Sampled	11/02/16	11597	81.3	NM							Not Sampled					
	Not Sampled	11/16/16	11,936	101.8	NM						1	Not Sampled					
	Not Sampled	11/22/16	12,076	NM	NM						I	Not Sampled					
PSCAA Threshold Concentration	on ¹														200		

Notes:

There are three sets (or trains) of two vapor phase carbon units (for a total of six) used to treat extracted vapors. The two carbon units associated with each train are plumbed in series. Samples Inf-2, Int-2 and Eff-2 were collected from sample ports associated with the second train of vapor phase carbon units. The influent sample ports for each train are located prior to the first carbon units. The influent sample and after the second carbon units. The influent sample ports for each train are located between the first and second carbon units. The sintermediate sample ports for each train are located between the first and second carbon units. The sintermediate sample ports for each train are located between the first and second carbon units. The sintermediate sample ports for each train are located between the first and second carbon units. The sintermediate sample ports for each train are located between the first and second carbon units. The sintermediate sample ports for each train are located between the first and second carbon units. The sintermediate sample port to carbon units. Th

VOCs = Volatile Organic Compounds (Benzene, Toluene, Ethylbenzene and Total Xylenes)

U = Analyte not detected above the referenced laboratory method reporting limit.

1. THCg ppmv = THC (ug/m³)/42.23 (conversion factor for molar volume @ STP)/M (molucular weight of THC [100]). PSCAA Permit (Registration #29548) requires a minimum control efficiency of 97% when

the TPH (THC) influent concentration is greater than or equal to 200 ppmv. None of the THCg concentrations exceed 200 ppmv.

2. Recovery/Emission Rate [lb/day] = Conc [ug/m^3] x Flow Rate [sft^3/min] x (1m^3/35.3ft^3) x (1g/1,00000 ug) x (1lb/454 g) x (1440 min/day)

3. Cumulative Mass Recovered/Discharged [lb/day] = Recovery/Discharge Rate (Influent or Effluent, lbs. per day) x Flow Rate [sft^3/min] - previous Flow Rate [sft^3/min] + 24 hours + previous calculated Cumulative Mass

Recovered/Discharged. Influent measurements were used to determine the total mass of hydrocarbons recovered in the vapor phase from Train 1. Total Mass of hydrocarbons recovered by the System as reported in the

text of the report also includes the total mass of hydrocarbons recovered from Trains 1 and 3.

TABLE 7: SVE ANALYTICAL SUMMARY

Vapor Train No. 3

Facility Name: Facility Address: Ecology Facility ID#: Ecology VCP No: Former Phillips 66 Facility No. 255353 (AOC 1396) 600 Westlake Avenue North, Seattle, WA 46445373 NW1714 If Non-Detect Use MDL "U" Not Sampled = NS Analytical Results = µg/m³

		-							_					-					
Sample	Sample	Date	Hour Meter	Flow Rate (scfm)	PID (ppm)	Renzene		Toluene		Fthyl henz	ene	Total Xvler	195	Total VOCs	THCs (us/	m ³)	THCg ¹ (ppmy)	Recovery Rate (Influent)/ Emission Rate (Effluent) ² Rate (Ib/day)	Cumulative Mass Recovered / Discharged ³ (lbs)
Location	Inf 2	08/17/16	10.329	75.5	(ppiii)	Denzene		Tolucile		Lary Denz	ene	Total Aylei	103	Not Compled	Incg (ug/	,	(ppine)	nate (ib/ ady)	(185)
	Inf 2	08/17/16	10,258	75.5	1/1.2	14.2		33.7	ш	38 5	Ш	116.0	Тп	202 A	3 120	1	0.74	0.04	0.04
	Inf-3	08/22/16	10,250	167.1	NM	1.1	U	5.2		1.5	U	7.0	ľ	14.8	3,170	+	0.75	0.05	0.23
	Inf-3	08/29/16	10,522	167.4	NM	26.20	U	80.6		35.6	U	148.0	1	290.4	2,880	U	0.68	0.04	0.53
	Not Sampled	09/19/16	NM	NM	NM									Not Sampled					
	Not Sampled	09/26/16	NM	NM	NM									Not Sampled					
111115 0	Not Sampled	10/05/16	NM	NM	NM									Not Sampled					
V-INF-3	Inf-3	10/06/16	10.949	179.8	NM	51.00		154.00		35.6	U	176.00	Т	416.6	39.600	Т	9.38	0.64	11.91
	Not Sampled	10/07/16	NM	NM	NM									Not Sampled					
	Not Sampled	10/12/16	NM	NM	NM									Not Sampled					
	Inf-3	10/21/16	11.310	128.7	NM	1.9	1	7.7		3.0		18.3	T	30.9	1.500	1	0.36	0.02	12.17
	Inf-3	11/02/16	11,597	81.3	NM	16.4	U	38.8	U	44.4	U	134.0	U	233.6	5,230	U	1.24	0.04	12.63
	Inf-3	11/16/16	11,936	101.8	NM	0.78	U	6.7		2.1	U	10.8		20.4	1,680		0.40	0.02	12.85
	Inf-3	11/22/16	12,076	NM	NM	1.4		11.1		3.1		20.7		36.3	943		0.22	0.01	12.90
	Not Sampled	08/17/16	10,238	75.5	NM									Not Sampled					
	Int -3	08/18/16	10,258	153.1	14.2	12.6	U	29.9		34.1	U	103.0	U	179.6	2,760	U	0.65	0.04	NA
	Not Sampled	08/22/16	10,354	167.1	NM									Not Sampled					
	Not Sampled	08/29/16	10,522	167.4	NM									Not Sampled					
	Not Sampled	09/19/16	NM	NM	NM									Not Sampled					
	Not Sampled	09/26/16	NM	NM	NM									Not Sampled					
	Not Sampled	10/05/16	NM	NM	NM									Not Sampled					
V-INT-3	Int -3	10/06/16	10,949	179.8	NM	68.8	1	304.0		44.2		215.0	1	632.0	33,400	1	7.91	0.54	NA
	Not Sampled	10/07/16	NM	NM	NM									Not Sampled					
	Not Sampled	10/12/16	NM	NM	NM									Not Sampled					
	Not Sampled	10/21/16	11 310	128.7	NM									Not Sampled					
	Not Sampled	11/02/16	11597	81.3	NM									Not Sampled					
	Not Sampled	11/02/10	11 026	101.9	NIM									Not Sampled					
	Not Sampled	11/10/10	12,076	101.8	NIM									Not Compled					
	Not Sampled	11/22/10	12,076		INIVI									NOT Sampled					
	Not Sampled	08/17/16	10,238	/5.5	NM 14.2	12.1		21.1		25.6	1.1	107.0	1	Not Sampled	2 990	1	0.69	0.04	0.02
	EII-5 Not Sampled	08/18/10	10,258	167.1	14.2	13.1	0	31.1		33.0	0	107.0	0	100.0	2,880	10	0.08	0.04	0.03
	Not Sampled	08/22/16	10,554	167.1	INIVI									Not Sampled					
	Not Sampled	08/29/16	10,522	167.4	NM									Not Sampled					
	Not Sampled	09/19/16	INIVI	INIVI	INIVI									Not Sampled					
	Not Sampled	09/26/16	NIVI	NIVI	INIVI									Not Sampled					
V-DSCHG-3	Not Sampled	10/05/16	NM	NM	NM									Not Sampled					
	Ett-3	10/06/16	10,949	179.8	NM					Not Analy	zed D	Due to Insuffi	cent	Sample Volun	e Upon Rece	eipt	at Laboratory	/	
	Not Sampled	10/07/16	NM	NM	NM									Not Sampled					
	Not Sampled	10/12/16	NM	NM	NM									Not Sampled					
	Not Sampled	10/21/16	11,310	128.7	NM									Not Sampled					
	Not Sampled	11/02/16	11597	81.3	NM									Not Sampled					
	Not Sampled	11/16/16	11,936	101.8	NM									Not Sampled					
	Not Sampled	11/22/16	12,076	NM	NM				_					Not Sampled					
PSCAA Threshold Concentrat	ion ¹																200		

Notes:

There are three sets (or trains) of two vapor phase carbon units (for a total of six) used to treat extracted vapors. The two carbon units associated with each train are plumbed in series. Samples inf-3, Int-3 and Eff-3 were collected from sample ports associated with the third train of vapor phase carbon units. The influent sample ports for each train are located prior to the first carbon units. The influent sample ports for each train are located between the first and second carbon units. The effluent sample ports for each train are located after the second (and last) carbon units. The sample port locations are shown on Figure 3.

VOCs = Volatile Organic Compounds (Benzene, Toluene, Ethylbenzene and Total Xylenes)

U = Analyte not detected above the referenced laboratory method reporting limit.

1. THCg ppmv = THCg (ug/m³)/42.23 (conversion factor for molar volume @ STP)/M (molucular weight of THC [100]). PSCAA Permit (Registration #29548) requires a minimum control efficiency of 97% when

the TPH (THC) influent concentration is greater than or equal to 200 ppmv. None of the THCg concentrations exceed 200 ppmv.

2. Recovery/Emission Rate [lb/day] = Conc [ug/m^3] x Flow Rate [sft^3/min] x (1m^3/35.3ft^3) x (1g/1,000000 ug) x (1lb/454 g) x (1440 min/day)

3. Cumulative Mass Recovered/Discharged [lb/day] = Recovery/Discharge Rate (Influent or Effluent, lbs. per day) x Flow Rate [sft^3/min] - previous Flow Rate [sft^3/min] + 24 hours + previous calculated Cumulative Mass

Recovered/Discharged. Influent measurements were used to determine the total mass of hydrocarbons recovered in the vapor phase from Train 1. Total Mass of hydrocarbons recovered by the System as reported in the

text of the report also includes the total mass of hydrocarbons recovered from Trains 1 and 2.

Table 8 SVE PID Data Summary Phillips 66 Facility #255353 (AOC 1396)

Data		Westlake Avenue SVE Wells - PID Readings (ppm)													
Dale	WC1	WC2	WC3	WB3	WB2	WB1	WA3	WA2	WA1						
08/18/16	6.4	0.0	0.1	0.0	10.6	0.0	0.3	0.0	0.0						
08/22/16	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed						
08/29/16	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed						
10/06/16	Closed	Closed	Closed	Closed	1.3	Closed	Closed	Closed	Closed						
10/21/2016 ¹	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1						
11/02/16	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed						
11/16/16	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed						
11/22/2016 ²	0	0	0	0.4	0	0.1	0.1	0	0						

Date	Valley Street SVE Wells - PID Readings (ppm)														
Dale	V1	V2	V3	V4	V5	V6	V7	V9							
08/18/16	0.6	0.2	1.7	0.2	1.3	0.5	0.4	0.9							
08/22/16	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed							
08/29/16	Closed	Closed	Closed	Closed	0.5	Closed	Closed	0.7							
10/06/16	1.1	0.1	0.1	0.1	0.1	1.4	0	0.5							
10/21/2016 ¹	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1							
11/02/16	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed							
11/16/16	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed							
11/22/2016 ²	0	0	0.1	0.2	0	0	0	0.1							

Data								Merc	er Street SV	E Wells - PI) Readings ((ppm)							
Dale	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19
08/18/16	44.6	45.3	10.3	1.4	21	29.2	7.3	8.7	32.9	42.6	29.2	67.9	4.3	3.5	6.8	8.4	22.1	57.2	6.1
08/22/16	0.1	3.1	3.1	Closed	0	15.4	Closed	Closed	0.6	0.2	2.1	7.3	Closed	Closed	Closed	Closed	0.6	0.6	Closed
08/29/16	Closed	Closed	Closed	Closed	Closed	3.3	Closed	0.8	Closed	Closed	0.5	5.5	Closed	Closed	Closed	Closed	0.1	0.1	Closed
10/06/16	0.7	1.7	0.5	3	0.2	0.5	1	0.5	0.9	0	1.7	2.8	1.6	0.6	0.8	0.1	0.2	0.4	0.1
10/21/2016 ¹	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.4	0.1	Closed	Closed	Closed	0.1	Closed	Closed
11/02/16	0	0	0	0	0	0.1	0.1	0	0.2	0.1	0	0	0	Closed	Closed	Closed	0	Closed	Closed
11/16/16	0	0	0	0	0	0.1	0	0	0	0.1	0	0	0	Closed	Closed	Closed	0	Closed	Closed
11/22/2016 ²	0	0	0	0	0.1	0	0	1.4	1.9	0	0	0	0	0	0.2	0.1	0	0.1	0

Data						Terry	Avenue SV	E Wells - PI	D Readings ((ppm)					
Dale	TSVE1	TSVE2	TSVE3	TSVE4	TSVE5	TSVE6	TSVE7	TSVE8	MW-65	MW-66	MW-67	MW-68	TEFR1-Air	TEFR2-Air	TMW48-Air
08/18/16	0.3	1.2	3.8	0.7	0.2	0.6	0.3	0.2	0.2	1.7	0.4	0.3	0.0	0.2	0.1
08/22/16	Closed	Closed	Closed	0	Closed	Closed	Closed	Closed	Closed						
08/29/16	Closed	Closed	Closed	0	Closed	Closed	Closed	Closed	Closed						
10/06/16	0.1	0	0	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0	0.1	0	0.1	0.1
10/21/2016 ¹	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1
11/02/16	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed						
11/16/16	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed	Closed						
11/22/2016 ²	0.1	0.1	0	0	0.1	0	0	0.2	0.1	0	0	0	0	0.3	0.1

Notes:

1. All SVE wells were adjusted to 45 degrees open

2. All SVE wells were re-opened 100 percent

SVE = Soil Vapor Extraction

PID = Photo Ionization Detector

ppm = parts per million

Table 9 AS Flow Data Summary Phillips 66 Facility #255353 (AOC 1396)

Dete									Westlake	Avenue AS	Wells - Flow	Rate Readin	ngs (scfm)							
Dale	W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8	W-9	W-10	W-11	W-12	W-13	W-14	W-15	W-16	W-17	W-18	W-19	W-2
08/18/16	+25 ¹	4	4	1	2	5	4	5	5	3	2	4	2	4	3	4	Damaged ²	4	4	6
08/22/16	+25 ¹	2	2	1	2	+25 ¹	3	3	3	2	1	2	NM	2	1	2	Damaged ²	2	2	2
08/29/16	+25 ¹	2	2	1	1	+25 ¹	4	2	1	1	2	2	NM	2	1	2	Damaged ²	3	2	2
10/06/16	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
10/21/16	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
11/02/16	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
11/16/16	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
11/22/16	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL

Data					V	alley Street	AS Wells - F	low Rate Re	adings (scfn	n)				
Date	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14
08/18/16	2	Damaged ²	6	12	5	3	8	5	4	2	8	2	6	6
08/22/16	2	Damaged ²	5	8	4	2	4	3	2	2	6	4	6	4
08/29/16	2	Damaged ²	3	+25 ¹	2	1	2	2	2	2	6	2	8	4
10/06/16	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
10/21/16	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
11/02/16	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
11/16/16	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
11/22/16	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL

Data												Mercer	Street AS W	ells - Flow R	ate Reading	is (scfm)											
Dale	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	M13	M14	M15	M16	M17	M18	M19	M20	M21	M22	M23	M24	M25	M26	M27
08/18/16	16	+25 ¹	6	10	8	10	8	10	+25 ¹	8	6	8	6	9	6	6	18	8	6	13	3	10	4	8	15	+25	4
08/22/16	14	+25 ¹	8	8	8	12	8	8	+25 ¹	6	4	11	6	8	8	4	18	6	8	+25 ¹	2	8	2	6	16	+25 ¹	2
08/29/16	12	+25 ¹	8	10	10	12	6	10	+25 ¹	6	4	10	8	8	6	4	16	6	6	+25 ¹	2	8	2	6	15	+25 ¹	2
10/06/16	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
10/21/16	14	+25 ¹	10	+25	10	15	7	15	+25 ¹	12	10	10	8	8	8	6	18	8	6	+25 ¹	4	10	2	8	15	+25 ¹	4
11/02/16	12	+25 ¹	12	10	12	14	12	12	+25 ¹	10	+25 ¹	8	8	10	6	6	12	4	4	+25 ¹	3	8	4	6	12	+25 ¹	2
11/16/16	14	+25 ¹	8	12	12	14	10	12	+25 ¹	8	6	6	6	8	6	4	16	6	4	+25 ¹	2	6	4	4	12	+25 ¹	4
11/22/16	12	+25 ¹	8	10	+25 ¹	12	15	11	+25 ¹	8	4	8	6	10	6	6	12	4	4	+25 ¹	2	8	2	4	12	+25 ¹	2

Notes:

AS = Air Sparge

SCFM = Standard Cubic Feet per Minute

NM - Not Measured OL = Off Line

1. Rotometer pegged at 25 scfm (not accurate reading - rotometer likely "stuck").

2. Rotometers were repaired/replaced on October 5, 2016.

N-20	W-21
6	6
2	3
2	2
OL	OL
OL	OL
OL	ÖL
OL	OL
OL	OL



.....

FIGURES





SEATTLE, WA





...

APPENDIX A

Cumulative historical system operational and performance data

Table 1. Vapor Phase Analytical Results Summary PHILLIPS 66 FACILITY #255353 (AOC 1396)

Sample Location	Sample Date		Ana	alytical Vapor R (EPA Method / (µa	tesults, Vapor Train ΓΟ-15 for VOCs) g/m3)	1		*THCg (ppmv)
Location	Date	THCg	Benzene	Toluene	Ethylbenzene	m&p Xylenes	o- Xylenes	
V1 Influent		77,100	ND<12.6	121	86	411	81.8	18.3
V1 Intermediate	01/27/14	54,100	ND<21.9	128	ND<59.3	ND<119	ND<59.3	12.8
V1 Effluent		30,500	ND<12.2	ND<12.3	ND<12.4	ND<12.5	ND<12.6	7.2
V1 Influent		158,000	84	598	1,370	9,450	2,150.0	37.4
V1 Intermediate	02/19/14	ND<2040	ND<10.9	ND<25.9	ND<29.6	ND<59.1	ND<29.6	NC
V1 Effluent		7,800	ND<10.9	38	ND<29.6	ND<59.1	ND<29.6	1.8
V1 Influent		181,000	227	2,380	3,110	21,000	9,420.0	42.9
V1 Intermediate	03/10/14	4,560	ND<11.3	27.6	ND<30.6	ND<61.2	ND<30.6	1.1
V1 Effluent		8,660	ND<13.6	40	ND<37.0	ND<73.9	ND<37.0	2.1
V1 Influent		156,000	119	2,050	1,430	9,170	3,630.0	36.9
V1 Intermediate	04/16/14	ND<1220	ND<6.5	32	ND<17.6	ND<35.2	ND<17.6	NC
V1 Effluent		ND<1220	ND<6.5	ND<15.4	ND<17.6	ND<35.2	ND<17.6	NC
V1 Influent		107,000	28	483	745	7,240	2,720.0	25.3
V1 Intermediate	05/08/14	4,120	ND<6.5	ND<15.4	ND<17.6	ND<35.2	ND<17.6	1.0
V1 Effluent		5,110	ND<6.5	ND<15.4	ND<17.6	ND<35.2	ND<17.6	1.2
V1 Influent		55,200	ND<76	309	277	5,840	2,280	13.1
V1 Intermediate	06/25/14	9,600	19.3	231	148	773	38	2.3
V1 Effluent		ND<2040	20.6	36.5	ND<29.6	ND<59.1	ND<29.6	NC
V1 Influent		131,000	ND<58.4	235.0	253	5,360	2,460	31.0
V1 Intermediate	07/09/14	ND<3520	ND<37.6	ND<44.6	ND<51.0	ND<102	ND<51.0	NC
V1 Effluent		9,860	17	29.7	ND<22.3	ND<44.5	ND<22.3	2.3
V1 Influent		33,900	ND<37.6	127	ND<102	1,560	701	8.0
V1 Intermediate	08/05/14	2,630	ND<11.7	ND<27.7	ND<31.7	ND<63.4	ND<79.5	0.6
V1 Effluent		ND<2190	ND<11.7	28.6	ND<31.7	ND<63.4	ND<79.5	NC
V1 Influent		20,500	ND<10.9	51.5	ND<78.6	3,730	1,720	4.9
V1 Intermediate	09/04/14	ND<2040	ND<10.9	88.1	ND<78.6	ND<59.1	ND<29.6	NC
V1 Effluent		ND<2040	ND<10.9	ND<25.9	ND<78.6	ND<59.1	ND<29.6	NC
V1 Influent		16,500	ND<13.1	ND<31.1	ND<35.6	372	246	3.9
V1 Intermediate	10/16/14	ND<2120	ND<11.3	ND<26.8	ND<30.6	ND<61.2	ND<30.6	NC
V1 Effluent		16,800	64.0	84.5	ND<25.5	ND<51.0	ND<25.5	4.0
V1 Influent		ND<1640	ND<8.7	ND<48.3	ND<55.6	ND<119	63.1	NC
V1 Intermediate	11/11/14	ND<1760	ND<9.4	ND<55.4	ND<63.9	ND<128	ND<63.9	NC
V1 Effluent		ND<1760	10.2	ND<55.4	ND<63.9	ND<128	ND<63.9	NC
V1 Influent		6,930	ND<6.0	14.8	ND<16.1	ND<32.3	ND<16.1	1.6
V1 Intermediate	12/10/14	7,240	ND<11.0	ND<26.0	ND<29.7	ND<59.5	ND<29.7	1.7
V1 Effluent		10,700	ND<11.0	ND<26.0	ND<29.7	ND<59.5	ND<29.7	2.5
V1 Influent		ND<2120	ND<11.3	ND<26.8	ND<30.6	ND<61.2	ND<30.6	NC
V1 Intermediate	01/20/15	2,100	ND<10.9	ND<129	ND<29.6	ND<59.1	ND<29.6	0.5
V1 Effluent		2,660	ND<12.6	ND<149	ND<34.2	ND<68.5	ND<34.2	0.6
V1 Influent		ND<1750	ND<9.4	ND<22.2	ND<25.3	ND<50.7	ND<25.3	NC
V1 Intermediate	02/25/15	ND<2060	ND<11.0	ND<26.0	ND<29.7	ND<59.5	ND<29.7	NC
V1 Effluent		ND<2060	ND<11.0	ND<26.0	ND<29.7	ND<59.5	ND<29.7	NC
V1 Influent		1,970	ND<6.1	23.1	ND<82.5	44.4	ND<82.5	0.5
V1 Intermediate	03/18/15	3,310	19.4	342	ND<74.2	ND<29.6	ND<74.2	0.8
V1 Effluent		2,720	ND<3.3	10.2	ND<44.7	ND<17.8	ND<44.7	0.6
		PSCAA	A Threshold Co	ncentration *				200

Table 1. Vapor Phase Analytical Results Summary PHILLIPS 66 FACILITY #255353 (AOC 1396)

Sample	Sample Date		Ana	lytical Vapor R (EPA Method ((µנ	esults, Vapor Train ΓΟ-15 for VOCs) g/m3)	2		*THCg (ppmv)
Location	Dutt	THCg	Benzene	Toluene	Ethylbenzene	m&p Xylenes	o- Xylenes	
V2 Influent		179,000	ND<13.1	750	1,110	5,390	1,530	42.4
V2 Intermediate	01/27/14	62,300	ND<11.3	34.5	ND<30.6	ND<61.2	ND<30.6	14.8
V2 Effluent		32,500	ND<12.6	39.5	ND<34.1	ND<68.3	ND<34.1	7.7
V2 Influent		153,000	88	432	1,030	4,540	1,600	36.2
V2 Intermediate	02/19/14	5,700	ND<10.9	30.7	ND<29.6	ND<59.1	ND<29.6	1.3
V2 Effluent		7,750	ND<10.9	31.4	ND<29.6	ND<59.1	ND<29.6	1.8
V2 Influent		219,000	214	2,230	2,910	19,000	5,800	51.9
V2 Intermediate	03/10/14	9,140	ND<10.9	ND<25.9	ND<29.6	ND<59.1	ND<29.6	2.2
V2 Effluent		6,320	ND<12.2	ND<28.8	ND<32.9	ND<65.8	ND<32.9	1.5
V2 Influent		162,000	85	1,420	988	5,510	2,530	38.4
V2 Intermediate	04/16/14	ND<1220	ND<6.5	22.9	ND<17.6	ND<35.2	ND<17.6	NC
V2 Effluent		ND<1220	ND<6.5	30.3	ND<17.6	ND<35.2	ND<17.6	NC
V2 Influent		103,000	ND<16.2	435	711	8,340	2,660.0	24.4
V2 Intermediate	05/08/14	3,310	ND<6.5	ND<15.4	ND<17.6	ND<35.2	ND<17.6	0.8
V2 Effluent		5,620	ND<6.5	ND<15.4	ND<17.6	ND<35.2	ND<17.6	1.3
V2 Influent		23,200	ND<73.4	ND<174	ND<199	2,820	1,070	5.5
V2 Intermediate	06/25/14	12,900	19.4	143	34	ND<61.2	ND<30.6	3.1
V2 Effluent		ND<2040	12	ND<25.9	ND<29.6	ND<59.1	ND<29.6	NC
V2 Influent		46,000	ND<56.5	154	146	3,040	1,290	10.9
V2 Intermediate	07/09/14	ND<3520	ND<37.6	ND<44.6	ND<51.0	ND<102	ND<51.0	NC
V2 Effluent		6,900	ND<18.8	28.0	ND<25.5	ND<51.0	ND<25.5	1.6
V2 Influent		39,300	ND<22.0	83.7	ND<59.5	1,230	571	9.3
V2 Intermediate	08/05/14	ND<2120	ND<11.3	ND<26.8	ND<30.6	ND<61.2	ND<76.8	NC
V2 Effluent		10,600	ND<11.7	ND<27.7	ND<31.7	ND<63.4	ND<79.5	2.5
V2 Influent		19,500	ND<10.9	39.3	ND<78.6	1,780	910	4.6
V2 Intermediate	09/04/14	ND<2040	ND<10.9	ND<25.9	ND<78.6	ND<59.1	ND<29.6	NC
V2 Effluent		ND<2040	ND<10.9	ND<25.9	ND<78.6	ND<59.1	ND<29.6	NC
V2 Influent		67,800	ND<13.1	ND<31.1	ND<35.6	238	171	16.1
V2 Intermediate	10/16/14	ND<2120	ND<11.3	ND<26.8	ND<30.6	ND<61.2	ND<30.6	NC
V2 Effluent		7,860	ND<9.4	ND<22.3	ND<25.5	ND<51.0	ND<25.5	1.9
V2 Influent		ND<1640	8.2	ND<48.3	ND<55.6	ND<111	58.0	NC
V2 Intermediate	11/11/14	ND<2060	ND<11.0	ND<64.7	ND<74.6	ND<149	ND<74.6	NC
V2 Effluent		ND<2060	ND<11.0	ND<64.7	ND<74.6	ND<149	ND<74.6	NC
V2 Influent		6,210	ND<7.3	ND<17.3	ND<19.8	ND<39.5	ND<19.8	1.5
V2 Intermediate	12/10/14	5,950	ND<11.0	ND<26.0	ND<29.7	ND<59.5	ND<29.7	1.4
V2 Effluent		3,140	ND<11.0	ND<26.0	ND<29.7	ND<59.5	ND<29.7	0.7
V2 Influent		ND<2190	ND<11.7	ND<27.7	ND<31.7	ND<63.4	ND<31.7	NC
V2 Intermediate	01/20/15	ND<1760	ND<9.4	37.4	ND<63.9	ND<51.0	ND<25.5	NC
V2 Effluent		2,360	ND<12.2	ND<143	ND<32.9	ND<65.8	ND<32.9	0.6
V2 Influent		2,940	ND<7.4	ND<17.6	ND<20.2	ND<40.3	32.3	0.7
V2 Intermediate	02/25/15	ND<1980	ND<10.6	ND<25.1	ND<28.7	115	46.7	NC
V2 Effluent		2,530	ND<11.0	ND<26.0	ND<29.7	ND<59.5	ND<29.7	0.6
V2 Influent		2,300	ND<5.8	ND<13.9	ND<79.5	39.7	ND<79.5	0.5
V2 Intermediate	03/18/15	1,500	ND<5.5	15.0	ND<74.2	ND<29.6	ND<74.2	0.4
V2 Effluent		3,470	ND<8.6	29.5	ND<117	ND<46.8	ND<117	0.8
		PSCAA	A Threshold Co	ncentration *				200

Table 1. Vapor Phase Analytical Results Summary PHILLIPS 66 FACILITY #255353 (AOC 1396)

Sample	Sample Date		Ana	lytical Vapor R (EPA Method ((µa	tesults, Vapor Train ΓΟ-15 for VOCs) g/m3)	3	-	*THCg (ppmv)
Location	Duit	THCg	Benzene	Toluene	Ethylbenzene	m&p Xylenes	o- Xylenes	
V3 Influent		261,000	184	1,680	2,440	9,530	3,590	61.8
V3 Intermediate	01/27/14	108,000	ND<13.6	39.5	ND<37.0	ND<73.9	ND<37.0	25.6
V3 Effluent		31,800	ND<10.9	ND<25.9	ND<29.6	ND<59.1	ND<29.6	7.5
V3 Influent		165,000	85	456	1,070	4,550	1,650	39.1
V3 Intermediate	02/19/14	2,640	ND<10.9	ND<25.9	ND<29.6	ND<59.1	ND<29.6	0.6
V3 Effluent		3,220	ND<10.9	34.1	ND<29.6	ND<59.1	ND<29.6	0.8
V3 Influent		209,000	204	2,110	2,830	18,400	5,550	49.5
V3 Intermediate	03/10/14	8,010	ND<10.8	27.3	ND<29.5	ND<59.0	ND<29.5	1.9
V3 Effluent		4,980	ND<10.9	ND<25.9	ND<29.6	ND<59.1	ND<29.6	1.2
V3 Influent		167,000	78	1,320	882	6,860	2,290	39.5
V3 Intermediate	04/16/14	ND<1220	ND<6.5	18	ND<17.6	ND<35.2	ND<17.6	NC
V3 Effluent		ND<1220	ND<6.5	30.8	ND<17.6	ND<35.2	ND<17.6	NC
V3 Influent		134,000	33	641	1,060	11,600	3,690.0	31.7
V3 Intermediate	05/08/14	9,300	ND<6.5	ND<15.4	ND<17.6	ND<35.2	ND<17.6	2.2
V3 Effluent		3,970	ND<6.5	ND<15.4	ND<17.6	ND<35.2	ND<17.6	0.9
V3 Influent		ND<28400	ND<152	ND<360	ND<412	3,140	1,130	NC
V3 Intermediate	06/25/14	19,100	24.5	188	130	944	207	4.5
V3 Effluent		ND<2120	ND<11.3	ND<26.8	ND<30.6	ND<61.2	ND<30.6	NC
V3 Influent		83,400	ND<56.5	172	180	3,440	1,540	19.7
V3 Intermediate	07/09/14	ND<2120	ND<22.6	27.9	ND<30.6	ND<61.2	ND<30.6	NC
V3 Effluent		3,540	ND<18.8	22.7	ND<25.5	ND<51.0	ND<25.5	0.8
V3 Influent		35,700	ND<22.0	85.3	ND<59.5	1,140	519	8.5
V3 Intermediate	08/05/14	ND<2460	ND<13.1	ND<31.1	ND<35.6	ND<71.1	ND<89.2	NC
V3 Effluent		5,840	ND<11.3	ND<26.8	ND<30.6	ND<61.2	ND<76.8	1.4
V3 Influent		4,850	ND<10.9	ND<25.9	ND<78.6	1,460	640	1.1
V3 Intermediate	09/04/14	ND<2040	ND<10.9	ND<25.9	ND<78.6	ND<59.1	ND<29.6	NC
V3 Effluent		ND<2040	ND<10.9	ND<25.9	ND<78.6	ND<59.1	ND<29.6	NC
V3 Influent		15,200	ND<13.1	ND<31.1	ND<35.6	241	170	3.7
V3 Intermediate	10/16/14	ND<2550	ND<13.6	ND<32.3	ND<37.0	ND<73.9	ND<37.0	NC
V3 Effluent		ND<1760	ND<9.4	ND<22.3	ND<25.5	ND<51.0	ND<25.5	NC
V3 Influent		ND<1750	ND<9.4	ND<55.2	ND<63.6	ND<127	65.6	NC
V3 Intermediate	11/11/14	ND<1760	ND<9.4	ND<55.4	ND<63.9	ND<128	ND<63.9	NC
V3 Effluent		ND<1540	ND<8.2	ND<48.4	ND<55.8	ND<112	ND<55.8	NC
V3 Influent		6,140	ND<9.4	ND<22.3	ND<25.5	ND<51.0	ND<25.5	1.5
V3 Intermediate	12/10/14	ND<2060	ND<11.0	ND<26.0	ND<29.7	ND<59.5	ND<29.7	NC
V3 Effluent		7,100	ND<11.0	ND<26.0	ND<29.7	ND<59.5	ND<29.7	1.7
V3 Influent		12,100	ND<11.7	ND<27.7	ND<31.7	ND<63.4	ND<31.7	2.9
V3 Intermediate	01/20/15	ND<2270	ND<12.2	ND<28.8	ND<32.9	ND<65.8	ND<32.9	NC
V3 Effluent		ND<2550	ND<13.6	ND<161	ND<37.0	ND<73.9	ND<37.0	NC
V3 Influent		3,340	ND<11.7	ND<27.7	ND<31.7	ND<63.4	ND<31.7	0.8
V3 Intermediate	02/25/15	ND<1980	ND<10.6	ND<25.1	ND<28.7	ND<57.3	ND<28.7	NC
V3 Effluent		ND<1980	ND<10.6	ND<25.1	ND<28.7	ND<57.3	ND<28.7	NC
V3 Influent		2,290	ND<5.7	14.8	ND<76.8	38.3	ND<76.8	0.5
V3 Intermediate	03/18/15	ND<1280	ND<6.8	28.4	ND<92.7	ND<37.0	ND<92.7	NC
V3 Effluent	1	2,240	ND<5.5	ND<12.9	ND<74.2	ND<29.6	ND<74.2	0.5
		PSCAA	A Threshold Co	ncentration *				200

Notes:

There are three sets (or trains) of two vapor phase carbon units (for a total of six) used to treat extracted vapors. The two carbon units associated with each train are plumbed in series. Samples V1 Influent, V1 Intermediate, and V1 Effluent were collected from sample ports associated with the first train of vapor phase carbon units. Samples V2 Influent, V2 Intermediate, and V2 Effluent were collected from sample ports associated with the second train of vapor phase carbon units. Samples V3 Influent, V3 Intermediate, and V3 Effluent were collected from sample ports associated with the second train of vapor phase carbon units. Samples V3 Influent, V3 Intermediate, and V3 Effluent were collected from sample ports associated with the third train of vapor phase carbon units. The influent sample ports for each train are located prior to the first carbon units. The intermediate sample ports for each train are located between the first and second carbon units. The effluent sample ports for each train are located after the second (and last) carbon units. The sample port locations are shown on Figure 2.

NC = Not Calculated due to concentration below laboratory MDL.

* THCg ppm = THCg (μg/m³) /42.23 (conversion factor for molar volume @ STP)/M (molecular weight of THC [100]). PSCAA Permit (Registration #29548) requires a minimum control efficiency of 97% when the TPH (THC) influent concentration is greater than or equal to 200 ppmv.

Table 2. Liquid Phase Analytical Results Summary PHILLIPS 66 FACILITY #255353 (AOC 1396)

Sample Location	Sample Date	Analytica	l Water Res EPA N	sults (NWTI Aethod 826((µg/L)	PH-Gx/8021 for for VOCs)	THCg and
		THCg	Benzene	Toluene	Ethylbenzene	Total Xylenes
W-DSCHG		2,250	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INT	01/27/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF		ND (<100)	ND (<1.0)	1.5	ND (<1.0)	8.6
W-DSCHG		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-OUT-WC1	02/20/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WS1		ND (<100)	ND (<1.0)	ND (<1.0)	1.3	11.4
W-DSCHG		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-OUT-WC1	03/10/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WS1		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-DSCHG		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-OUT-WC1	04/16/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WS1		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	5.5
W-DSCG		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-OUT-WC1	05/08/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WS1		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-DSCHG		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-OUT-WC1	06/25/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WS1		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-DSCHG		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-OUT-WC1	07/09/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WS1		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-DSCHG		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-OUT-WC1	08/13/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WS1		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-DSCHG		*	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-OUT-WC1	09/04/14	*	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WS1		*	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-DSCHG	10/1 / / /	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-OUT-WC1	10/16/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WS1		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-DSCHG	11/11/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-OUT-WC1	11/11/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WS1		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-DSCHG	10/10/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
w-out-wci	12/10/14	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WSI		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-DSCHG	01/01/15	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
w-out-wci	01/21/15	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WS1		827	10.2	82.1	11.4	86.2
W-DSCHG	02/25/15	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
w-out-wci	02/25/15	ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-INF-WSI		ND (<100)	ND (<1.0)	ND (<1.0)	ND (<1.0)	ND (<3.0)
W-DSCHG	02/10/15	ND (<100)	ND (<1.0)	ND (<1.0)	ND(<1.0)	ND (<3.0)
WINE WOL	05/18/15	ND (<100)	ND (<1.0)	ND (<1.0)	ND(<1.0)	ND (<3.0)
W-IINF-WSI KCIW B	ormit I imie	ND (<100)	ND (<1.0)	1 400	ND (<1.0)	2 200
KUW P	er nut Linfil	10	70	1,400	1,700	2,200

Notes:

There are a total of two liquid phase carbon units plumbed in series to treat water. Samples W-INF or W-INF-WS1 were collected from a sample port located prior to the first liquid phase carbon unit. Samples W-INT or W-OUT-WC1 were collected from a sample port located between the first and second liquid phase carbon units. Samples W-DSCHG or W-DSCG were collected from the sample port located after the second (and final) liquid phase carbon unit. The sample port locations are shown on Figure 2.

KCIW Permit Maximum Allowable Concentrations:

Benzene – 0.07 mg/L (70 µg/L); Ethylbenzene – 1.7 mg/L (1,700 µg/L); Toluene – 1.4 mg/L (1,400 µg/L); Total Xylenes – 2.2 mg/L (2,200 µg/L).

* THCg analysis was requested, but the laboratory inadvertently neglected to complete the THCg analysis.

Table 3. Remediation System Operational Data SummaryPHILLIPS 66 FACILITY #255353 (AOC 1396)

			SVE S	System								Off-gas	Treatment	System						
	Merc	cer-Westlak	e Wells	Va	alley-Terry W	ells	AS Sys	stem		VPC-1			VPC-2			VPC-3		S	System Tota	als
																			Estimated	
											Estimated			Estimated			Estimated	Estimated	TPHa	Cumulative
	Period	Wells On-	Applied	Period	Wells On-	Applied	Period	Applied		Influent	TPHa	Flow	Influent	TPHa	Flow	Influent	TPHa	TPHa	Removal	TPHa
	Operating	line	Vacaum	Operating	line	Vocum	Operating	Prossure	Flow Rate	Conc.	Removed	Rate	Conc.	Removed	Rate	Conc.	Removed	Removed	Rate	Removed
		(count)	vaccum	Operating	(count)	(in LLO)		(poi)	(oofm)	(ua/m^3)	(lbc)	(oofm)	(ma/m^3)	(lba)	(oofm)	(ma/m^3)	(lba)	(lbc)	(lba /br)	(lbc)
Date	Houis	(count)	(In. H ₂ O)	Hours	(count)	$(In. H_2O)$	Hours	(psi)	(sciiii)	(µg/m)	(IDS.)	(sciiii)	(μg/m)	(IDS.)	(sciiii)	(µg/m)	(IDS.)	(ibs.)	(III)	(ibs.)
1/2/14	114	20	26	111	22	26	111	6.5	NIM	05000	20.44	NIM	74050	15 52	NIM	E4000	10.90	46.94	0.41	154.04
1/5/14	2	20	20	2	23	20	2	0.5	NIM	95000	20.41	NIM	74950	0.41	NIM	54900	0.09	40.04	0.41	154.94
1/0/14	3	20	20	3	23	20	3	6		95000	0.34		74950	0.41		54900	0.29	7.04	0.41	100.17
1/7/14	19	28	18	19	23	25	19	6	503.07	95000	3.40	485.37	74950	2.59	464.73	54900	1.82	7.81	0.41	163.98
1/8/14	28	28	18	28	23	26	28	5		95000	0.00		74950	0.00		54900	0.00	0.00	0.00	163.98
1/9/14	24	28	22	24	23	26	24	8	515.92	95000	9.55	496.37	74950	7.25	496.38	54900	2.45	19.24	0.43	183.22
1/10/14	17	28	22	18	23	27	17	7.5	517.42	95000	3.13	502.21	74950	2.54	528.50	54900	1.96	7.62	0.43	190.84
1/13/14	79	28	22	79	23	26	80	6.5	508.97	95000	14.31	532.16	74950	11.80	548.73	54900	8.91	35.02	0.44	225.87
1/14/14	19	28	- 22	18	23	27	18	6.5	497.43	95000	3.36	523.97	74950	2.65	553.03	54900	2.05	8.06	0.44	233.92
1/15/14	28	28	23	28	23	27	26	/	512.50	95000	5.11	513.61	74950	4.04	537.68	54900	3.10	12.24	0.44	246.16
1/16/14	19	28	24	19	23	28	19	6	538.21	95000	3.64	533.57	74950	2.85	538.31	54900	2.10	8.59	0.45	254.75
1/17/14	25	28	34	26	23	44	25	6	441.06	95000	3.92	420.97	74950	3.07	464.49	54900	2.48	9.48	0.37	264.23
1/20/14	69	28	33	69	23	44	69	6.5	456.66	95000	11.21	452.21	74950	8.76	455.74	54900	6.47	26.44	0.38	290.67
1/21/14	29	28	46	29	23	53	29	5.5	429.86	95000	4.44	460.09	74950	3.75	466.58	54900	2.78	10.96	0.38	301.63
1/22/14	20	28	42	19	23	33	20	6.5	451.76	95000	3.22	462.40	74950	2.47	500.94	54900	1.96	7.64	0.39	309.27
1/23/14	30	28	40	30	23	32	30	8.5	418.24	95000	4.46	438.07	74950	3.69	471.91	54900	2.91	11.07	0.37	320.34
1/24/14	25	28	41	25	23	32	25	7	432.19	95000	3.84	439.34	74950	3.08	479.91	54900	2.47	9.40	0.38	329.73
1/27/14	66	28	41	66	23	31	66	6.5	431.90	77100	8.23	431.15	179000	19.08	475.41	261000	30.68	57.99	0.88	387.72
1/28/14	25	28	40	25	23	31	25	8	439.45	77100	3.17	441.02	179000	7.39	475.41	261000	11.62	22.18	0.89	409.91
1/29/14	23	28	44	23	23	59	23	8.5	450.89	77100	2.99	406.78	179000	6.27	454.55	261000	10.22	19.49	0.85	429.39
1/30/14	17	28	44	17	23	56	17	7	452.30	77100	2.22	433.34	179000	4.94	444.43	261000	7.39	14.55	0.86	443.94
1/31/14	3	28	46	3	23	47	3	8.5	429.59	77100	0.37	413.24	179000	0.83	414.10	261000	1.21	2.42	0.81	446.36
2/3/14	69	28	40	69	23	46	69	8.7	464.08	77100	9.25	430.25	179000	19.90	463.12	261000	31.24	60.39	0.88	506.75
2/4/14	28	28	46	28	23	48	28	8	399.93	77100	3.23	421.40	179000	7.91	448.73	261000	12.28	23.43	0.84	530.18
2/7/14	69	28	48	69	23	47	69	8	409.47	77100	8.16	424.23	179000	19.63	456.33	261000	30.78	58.57	0.85	588.75
2/11/14	97	28	50	97	23	51	98	6	449.75	77100	12.60	444.32	179000	28.90	451.16	261000	42.78	84.28	0.87	673.02
2/12/14	26	28	47	26	23	51	25	6	438.41	77100	3.29	482.88	179000	8.42	483.94	261000	12.30	24.01	0.92	697.03
2/13/14	19	28	48	19	23	51	20	6	422.95	77100	2.32	412.96	179000	5.26	458.18	261000	8.51	16.09	0.85	713.13
2/17/14	67	28	51	67	23	52	66	7	415.17	77100	8.03	427.60	179000	19.21	449.94	261000	29.47	56.71	0.85	769.84
2/19/14	25	28	49	25	23	49	26	7	432.53	158000	6.40	468.57	153000	6.71	487.13	165000	7.53	20.64	0.83	790.48
2/20/14	22	28	50	22	23	49	21	9	433.97	158000	5.65	458.83	153000	5.78	497.26	165000	6.76	18.20	0.83	808.68
2/25/14	122	28	48	122	23	46	122	10	438 82	158000	31.68	499 65	153000	34 93	493 41	165000	37 20	103 82	0.85	912 50
2/26/14	26	28	49	26	23	53	26	8.5	365 19	158000	5.62	395 49	153000	5.89	411.09	165000	6.61	18.12	0.70	930.62
2/27/14	23	28	50	23	23	63	23	.9	359.08	158000	4.89	390.85	153000	5.15	419 23	165000	5.96	16.00	0.70	946.61
3/3/14	97	28	50	97	23	62	97	8	343.96	158000	19 75	381 85	153000	21 23	388 82	165000	23.31	64 28	0.66	1010 90
3/5/14	38	28	50	38	23	67	38	12.2	339.24	158000	7,63	370.37	153000	8.07	374 87	165000	8,80	24 50	0.64	1035.39
3/7/14	48	28	52	48	23	67	48	11.9	417.00	158000	11.85	473 58	153000	13.03	493 58	165000	14 64	39.52	0.82	1074 91
3/10/14	74	28	65	74	23	71	74	11.8	376.48	181000	18.89	415 20	219000	25.20	430.89	209000	24.96	69.05	0.93	1143.96
3/14/14	91	28	70	90	23	73	91	13.4	400 74	181000	24 72	428.35	219000	31.62	463.82	209000	32.68	89.03	0.99	1232 99
3/18/14	ga	28	74	100	23	75	aa	12.6	410.20	181000	27.53	442 68	219000	36 31	462 90	200000	36.24	100.08	1.00	1333.07
3/20/14	45	28	71	44	23	74	45	12.0	416.64	181000	12 71	438 17	219000	15.81	468 67	200000	16 14	44 67	1.00	1377 74
3/24/14	95	28	75	96	23	77	95	13.4	423.51	181000	27.28	473.84	219000	37 31	495 55	200000	37.24	101.83	1.06	1479 58
A/1/14	10/	20	73	10/	23	74	10/	15.1	300.25	181000	52 51	428 02	210000	68.26	468 17	200000	71 10	101.00	0 00	1671 /5
4/11/14	71	28	73	70	23	73	71	15.4	434.40	181000	20.91	478 15	219000	27.46	503 76	200000	27.61	75 97	1.08	1747 42
4/16/14	118	20	72	110	20	74	118	12.5	406.84	156000	28.05	496 7/	162000	35.97	501.60	167000	37.34	101 27	0.85	1849 60
4/22/14	168	27	62	168	21	74	168	12.0	406.20	156000	20.00	464 02	162000	47 30	482 21	167000	50.67	137.05	0.00	1086.62
4/20/14	1/6	27	73	160	21	73	170	12.0	336 33	107000	45 20	351 75	102000	48 72	363.86	134000	65 56	150 58	0.02	2146 21
5/Q/14	100	21	73	100	21	75	100	12.0	310.99	107000	13.23	33/ 20	102000	13.16	3/5 69	134000	17 70	133.00	0.40	2100.21
5/12/14	102	27	73	102	21	70	102	12.4	219.00	107000	20.07	222.56	103000	20.11	343.00	124000	40.20	40.90	0.43	2130.14
5/12/14	102	21	74	102	21	74	102	13.4	310.10	107000	12.02	333.00	102000	12 11	343.00	124000	40.29	100.37	0.43	2234.04
5/22/14	235	21	/4	∠34	21	74	∠34	12.5	323.05	107000	13.03	JJ0.54	103000	13.11	300.27	134000	10.10	44.30	0.44	2334.81

Table 3. Remediation System Operational Data SummaryPHILLIPS 66 FACILITY #255353 (AOC 1396)

			SVE S	System								Off-gas	Treatment	System						
	Merc	cer-Westlake	e Wells	Va	alley-Terry W	ells	AS Sys	stem		VPC-1			VPC-2			VPC-3		5	System Tota	als
																			Estimated	
											Estimated			Estimated			Estimated	Estimated	TPHg	Cumulative
	Period	Wells On-	Applied	Period	Wells On-	Applied	Period	Applied		Influent	TPHg	Flow	Influent	TPHg	Flow	Influent	TPHg	TPHg	Removal	TPHg
	Operating	line	Vaccum	Operating	line	Vaccum	Operating	Pressure	Flow Rate	Conc.	Removed	Rate	Conc.	Removed	Rate	Conc.	Removed	Removed	Rate	Removed
Date	Hours	(count)	(in. H ₂ O)	Hours	(count)	(in. H ₂ O)	Hours	(psi)	(scfm)	(µg/m³)	(lbs.)	(scfm)	(µg/m³)	(lbs.)	(scfm)	(µg/m ³)	(lbs.)	(lbs.)	(lbs./hr)	(lbs.)
5/27/14	100	27	76	101	21	75	100	127	333 45	107000	22 45	376 74	103000	24 42	376 67	134000	31.76	78.63	0 47	2413 44
6/3/14	168	16	77	168	22	68	169	13.3	321.35	107000	21.38	371.88	103000	23.82	371.30	134000	30.94	76.00	0.46	2489.58
6/10/14	166	16	79	166	22	82	165	13.8	323.85	107000	18.69	339.19	103000	18.71	350.53	134000	25.16	62.56	0.44	2552.14
6/16/14	144	16	80	143	22	85	144	12.7	316.85	55200	13.95	348.40	23200	6.48	357.32	28400	8.13	28.57	0.13	2580.71
6/25/14	213	16	78	214	22	85	214	10.7	320.62	55200	0.13	337.27	23200	0.06	354.99	28400	0.08	0.27	0.13	2580.97
7/1/14	2	16	75	2	22	78	2	15.2	315.28	131000	30.17	343.08	46000	11.53	352.97	83400	21.50	63.20	0.32	2644.17
7/9/14	195	16	78	195	22	79	195	10.1	323.83	131000	11.60	376.45	46000	8.95	375.90	83400	16.21	36.76	0.34	2680.93
7/15/14	73	16	71	138	22	75	137	13.2	308.90	131000	22.28	343.61	46000	8.64	357.62	83400	16.31	47.24	0.32	2728.16
7/21/14	147	16	73	146	22	76	147	12	306.32	131000	12.78	343.95	46000	5.04	350.79	83400	9.31	27.13	0.32	2755.29
7/30/14	85	16	71	85	22	70	85	12.2	314.00	33900	5.50	338.85	39300	6.88	352.17	35700	6.50	18.88	0.14	2774.17
8/5/14	138	18	73	138	22	74	138	11.8	312.81	33900	7.31	328.88	39300	8.91	349.19	35700	8.59	24.81	0.13	2798.98
8/13/14	184	18	73	184	22	64	184	12.3	327.24	33900	7.65	343.02	39300	9.29	362.57	35700	8.92	25.86	0.14	2824.84
8/21/14	184	18	73	184	22	64	184	12	311.21	33900	4.82	388.48	39300	6.98	381.94	35700	6.23	18.03	0.15	2842.87
8/26/14	122	18	71	122	22	62	122	14.9	339.72	20500	5.50	439.51	19500	6.77	408.65	4850	1.57	13.84	0.07	2856.71
9/4/14	211	18	82	211	22	73	211	13	338.28	20500	3.79	473.59	19500	5.05	436.07	4850	1.16	10.00	0.07	2866.71
9/10/14	146	18	82	146	22	74	146	12.2	334.25	20500	4.26	462.21	19500	5.60	419.59	4850	1.27	11.13	0.07	2877.84
9/17/14	166	18	81	166	22	77	166	12.9	341.08	20500	3.30	454.77	19500	4.19	413.23	4850	0.95	8.43	0.07	2886.27
9/22/14	126	18	80	126	22	76	126	11.5	328.56	20500	5.63	452.80	19500	7.38	424.43	4850	1.72	14.72	0.07	2900.99
10/3/14	223	18	80	223	22	//	223	14	323.83	16500	6.16	416.06	67800	32.54	395.12	15200	6.93	45.64	0.15	2946.63
10/16/14	308	18	81	308	22	82	308	11	333.97	16500	6.94	426.08	67800	36.36	413.66	15200	7.91	51.21	0.15	2997.84
10/30/14	336	18	79	336	22	83	336	12.4	319.37	820	0.18	371.05	820	0.21	365.29	875	0.22	0.60	0.00	2998.44
11/11/14	181	18	79	181	22	75	181	13.1	310.64	820	0.34	401.50	820	0.44	3/1.78	8/5	0.44	1.23	0.00	2999.66
12/10/14	308	15	79	308	19	74 90	300	9.1	285.03	6030	2.10	357.10	6210	1.45	333.38	6140	2.25	4.24	0.02	3003.90
12/10/14	205	15	90	206	19	80	205	9 12.0	200.29	6030	2.13	330.27	6210	2.41	352 16	6140	2.33	7.65	0.02	3010.05
1/6/15	295	13	90	290	19	76	290	12.9	331.40	1060	0.44	405.42	1095	2.00	399.64	12100	6.05	7.03	0.02	3025 54
1/20/15	334	13	71	334	19	70	333	12.7	353 11	1060	0.47	301.76	1095	0.00	360.20	12100	5 44	6.32	0.02	3031.86
2/3/15	333	10	76	333	28	68	334	11.5	309 19	1060	0.09	333.62	1095	0.10	357.34	12100	1.23	1 43	0.02	3033.29
2/6/15	76	11	82	76	14	73	75	11.0	320 72	1060	0.00	343.69	1095	0.13	356.96	12100	1.54	1.10	0.02	3035.08
2/10/15	95	15	84	95	14	74	96	14.2	341.44	1060	0.09	351.01	1095	0.10	363.64	12100	1.12	1.31	0.02	3036.39
2/13/15	68	18	75	68	13	78	68	11.9	332.46	1060	0.03	323.87	1095	0.03	351.46	12100	0.32	0.37	0.02	3036.76
2/16/15	20	22	84	20	11	87	20	12.1	331.29	875	0.23	333.00	2940	0.79	341.66	3340	0.92	1.94	0.01	3038.70
2/25/15	214	22	84	215	21	87	214	11	135.72	875	0.08	158.62	2940	0.00	168.13	3340	0.00	0.08	0.00	3038.77
3/4/15	169	8	83	0	0	NM	169	10	144.32	875	0.09	162.42	2940	0.00	164.72	3340	0.00	0.09	0.00	3038.87
3/12/15	196	19	85	0	0	NM	196	9.3	134.97	1970	0.14	167.89	2300	0.00	169.75	2290	0.00	0.14	0.00	3039.01
3/18/15	140	9	100	0	0	NM	139	16.6	148.80	1970	0.13	154.76	2300	0.00	159.31	2290	0.00	0.13	0.00	3039.13
3/24/15	116	9	99	0	0	NM	117	8.5	142.43	1970	0.23	154.86	2300	0.00	159.26	2290	0.00	0.23	0.00	3039.36

Notes:

SVE	=	Soil Vapor Extraction	AS	=	Air Sparge	VPC	=	Vapor Phase Carbon
in. H ₂ O	=	inches of water	psi	=	pounds per square inch	scfm	=	standard cubic feet per minute
ppm	=	parts per million	(µg/m ³)	=	micrograms per cubic me	TPHg	=	Total Petroleum Hydrocarbons (Gasoline)

Table 4. SVE PID Data Summary PHILLIPS 66 FACILITY #255353 (AOC 1396)

Date	Westlake SVE Wells - PID Readings (ppm)												
	WC1	WC2	WC3	WB3	WB2	WB1	WA3	WA2	WA1				
1/17/2014	6	8.6	3.4	5	10.9	3	0.2	1.2	0.5				
1/20/2014	5.4	9	7.1	5.3	4.5	3.7	3.4	5.4	5.1				
1/21/2014	1.8	1.7	2.7	2.2	1.6	1.3	1.3	2.3	2				
1/27/2014	1	1.2	1.9	1.5	1.4	1.3	1.9	2.7	2.7				
1/29/2014	1.5	1.6	2	3.2	1.9	3.2	2.3	5.8	3.3				
2/3/2014	1.5	1.6	2	3.2	1.9	3.2	2.3	5.8	3.3				
2/12/2014	0.2	0.1	1.7	0.8	0.1	0.1	0	0.1	0				
2/19/2014	0.7	0.6	0.7	0.6	0.4	0.4	0.3	0.3	0.4				
2/27/2014	0.9	1.2	1.2	1.3	1.3	1.4	1.6	1.8	1.9				
3/7/2014	0.6	0.3	0.5	0.4	0.3	0.2	0.3	0.2	0.1				
3/20/2014	0.7	0.6	0.5	0.4	0.4	0.4	0.3	0.2	0.3				
4/16/2014	69	225	210	135	32	225	64	210	115				
6/3/2014	OL	OL	OL	OL	OL	OL	OL	OL	OL				
8/5/2014	OL	OL	OL	OL	OL	OL	OL	OL	OL				
11/26/2014	OL	OL	OL	OL	OL	OL	OL	OL	OL				
1/6/2015	OL	OL	OL	OL	OL	OL	OL	OL	OL				
1/28/2015	OL	OL	OL	OL	OL	OL	OL	OL	OL				
2/3/2015	OL	OL	OL	OL	OL	OL	OL	OL	OL				
2/6/2015	OL	OL	OL	OL	OL	OL	OL	OL	OL				
2/10/2015	OL	OL	OL	OL	OL	0	4	0.3	0.1				
2/13/2015	0	0.1	6.2	0	4	0	0	0	0				
2/16/2015	0	0	0	0	0	OL	OL	OL	OL				
3/4/2015	OL	OL	OL	OL	OL	OL	OL	OL	OL				
3/12/2015	OL	OL	OL	OL	OL	OL	OL	OL	OL				
3/18/2015	OL	OL	OL	OL	OL	OL	OL	OL	ÖL				

		Valley S	VE Wells -	PID Readin	gs (ppm)		
V9	V7	V1	V6	V2	V5	V3	V4
7.8	3.3	2.4	4.3	15.1	38.8	3.3	69.4
4	1.8	2.3	1.6	2.3	35.8	3	2.8
5.3	1.4	2.6	2.3	9	32	2.3	2.9
4.6	1	1.1	0.8	3	42.5	2.4	5.3
3.2	1.2	1.4	2	4.8	35.2	1.4	2.1
1.4	1.2	1.7	1.4	3.3	26.9	1	1.1
0.9	0.8	1.2	1.2	2.2	27.5	1.1	2
0.8	1	0.9	1	1.5	17.3	1.3	1.1
0.7	0.6	0.7	1	1.8	31.3	0.6	0.8
0.7	0.6	0.6	0.9	1.9	31	0.4	0.8
0.6	0.7	0.4	1.5	1.5	51.1	0.5	0.3
0.1	0.1	0.1	0.1	W	81.1	W	0.1
0	0	0.1	0	0	22.8	W	0.1
					22	W	
	0	W		W	0.1	0.3	0.7
0.2	0.4	OL	0.2	OL	0.2	OL	0.6
0.5	0.6	1	0.2	0.6	0.5	0.6	0.6
0.3	0.2	0.6	OL	0.1	0.2	OL	0.4
0	0	0.4	OL	0	0.2	OL	0.1
OL	0.1	0	OL	0.1	0	OL	0
OL	0.1	OL	OL	0	0	OL	0.1
OL	0	0.2	0	0.1	0	0	0
OL	OL	OL	OL	OL	OL	OL	OL
OL	OL	OL	OL	OL	OL	OL	OL
ÖL	OL	OL	OL	OL	ÖL	OL	OL

Date								Me	ercer SVE V	Vells - PID F	Readings (pp	om)							
	M6	M7	M10	M9	M8	M1	M2	M3	M4	M5	M14	M13	M15	M12	M11	M16	M17	M18	M19
1/17/2014	0.1	0.4	0.3	1.2	184	3.5	22.3	0	9.9	10.5	13	13.5	13.7	430	260	31	107	220	200
1/20/2014	5.6	7.2	10.1	16.8	171	2.2	3.5	3.7	1.1	1.2	3.2	3.3	4.3	281	235	29.7	150	184	222
1/21/2014	3.2	3	2.2	1.7	145	6.5	4.1	3.4	2.4	2	2.6	3.1	4.6	184	267	46.2	153	161	226
1/27/2014	3.5	4.8	7.5	16	236	0.9	1.2	1.1	0.7	0.5	1.5	0.6	2.9	100	355	33.8	216	183	240
1/29/2014	2.8	3.7	7.6	13.9	191	0.6	0.9	1.1	0.7	0.7	1.9	0.7	4	40	302	23	193	156	160
2/3/2014	2.8	3.7	7.6	13.9	191	0.6	0.9	1.1	0.7	0.7	1.9	0.7	4	40	302	23	193	156	160
2/12/2014	0	0.1	0	0	98.9	2	2.3	2.5	2.6	3.1	6.1	4.3	8.9	15.5	237	16.9	159	97.5	36.1
2/19/2014	0.4	0.7	0.3	0.3	78.1	1.9	2.1	2.4	2.2	2.6	4	4	7.8	18.1	192	13.5	121	65	25.9
2/27/2014	2.3	2.7	3.8	6	63.9	0.5	0.4	0.3	0.1	0.2	1.6	0.4	1.6	0.2	179	8	139	70	21.5
3/7/2014	0.1	0.3	0.1	0.1	60.5	1.8	1.4	1.1	0.8	0.8	2	0.7	1.4	0.6	178	9.5	134	71.2	21.5
3/20/2014	0.3	0.7	0.2	0.2	58	3.1	1.8	1.4	0.8	0.8	1.6	0.7	1.3	0.6	156	16.1	146	101	14.2
4/16/2014	W	0.4	0.1	2.6	49.3	1.6	0.3	0.2	0.1	0.1	1.1	0.1	0.1	0.1	183	8.3	154	118	8.5
6/3/2014	0.1	0	0.2	0.8	8	0	OL	0.1	0.1	W	1.1	0	OL	0.1	124	12.5	74.5	31	0.8
8/5/2014					7.3					W					74.1	5.1	63.7	13.1	
11/26/2014			0.4	0.3	10.4		W			W				W					W
1/6/2015	1.9	1	OL	0.7	9	0.8	OL	0.7	1	OL	11	w	0.6	OL	7.4	4.6	9.6	4.5	OL
1/28/2015	2.9	1.4	1.5	2.5	8.9	2.5	0.1	1.3	0.2	0.2	0.4	0.8	0.2	20.5	9.5	2.6	12	3	0.8
2/3/2015	2.5	OL	0.8	2.1	9.3	2.3	OL	OL	OL	OL	OL	1.2	OL	14.9	11.5	4.8	10.7	3.8	OL
2/6/2015	1.9	OL	2.5	2.7	4.8	3	OL	OL	OL	OL	OL	4.5	OL	19.3	3.5	2.3	5.2	2	OL
2/10/2015	2	OL	0.1	0.1	2.1	0	OL	OL	OL	OL	OL	0.1	OL	11.1	4.6	0.1	6.8	0.1	OL
2/13/2015	0.1	OL	0.1	0.1	1	OL	OL	OL	OL	OL	OL	0	OL	10.6	3.8	OL	4	0	OL
2/16/2015	OL	OL	0.1	0	0.1	0	0	0	1	0	0	0	0	7.5	0.1	0	0.1	0	13.2
3/4/2015	OL	OL	0.3	0.2	1.8	OL	OL	OL	0	OL	OL	OL	OL	8.4	3.3	OL	2.1	OL	3.7
3/12/2015	0	0.3	0	0.1	1.6	10.1	0	0	0	0	0	0	0.1	8.2	1.8	1.2	1.1	1	2.4
3/18/2015	OL	OL	OL	0	0.3	0.1	OL	OL	0.5	OL	OL	OL	OL	4.9	0.9	0.1	0	OL	0.8

Date	Terry SVE Wells - PID Readings (ppm)														
		TEFR1	TMW65		TSVE11-	TSVE10 -				TSVE12-			TEFR2		TMW48
	TSVE3	AIR	AIR	TSVE4	MW67	MW66	TSVE2	TSVE1	TSVE7	MW68	TSVE5	TSVE6	AIR	TSVE8	AIR
1/17/2014	19.2	9.5	11.8	2.6	4.6	107	4.1	1.7	1.5	1.3	20.1	6.4	0.4	0.3	131
1/20/2014	26.6	10.3	8.5	8.4	11.1	125	10	5.5	3.5	4.7	6.3	5.4	4.5	2	115
1/21/2014	17.1	3.1	4.1	3.4	5.8	115	1.7	1	1.2	1.4	6.5	4.9	3.8	4.5	100
1/27/2014	15.5	5.1	3.1	1.9	3.5	116	4.2	2.2	1.1	1.2	4.7	3.7	1.3	1	113
1/29/2014	14.3	1.1	1.7	2.3	7.2	138	0.5	0.5	0.6	0.7	7.3	3.6	2.9	5.7	97.1
2/3/2014	14.3	1.1	1.7	2.3	7.2	138	0.5	0.5	0.6	0.7	2.4	2.9	2.9	6.2	69.7
2/12/2014	3.6	1	1.1	1.9	7.2	120	0.4	0.5	0.6	0.4	3.4	3.2	2.5	6.2	77.3
2/19/2014	5.6	1	1.2	1.6	3.5	71.3	0.6	0.6	0.6	0.6	2.9	2.2	2.1	2.4	47
2/27/2014	3.4	1	0.9	1.2	4.1	58.7	0.3	0.3	0.3	0.4	0.7	1.2	0.9	1.6	29.8
3/7/2014	3.5	0.9	1	1	4	52.7	0.1	0.1	0.1	0.3	0.6	1.1	0.9	1.7	26.3
3/20/2014	2.8	2.2	1.5	0.9	2.6	44.9	0.9	4.4	0.7	0.7	0.3	0.4	0.2	0.5	18.4
4/16/2014	3.2	1.5	0.8	0.2	2.5	45	1.8	1	0.2	0.3	0.2	0.1	0	0.1	16.1
6/3/2014	0.8	0.5	0.3	0.2	0.6	30.7	1.3	0.4	0.1	0.1	0	0	0.1	0	0.3
8/5/2014						16.3									
11/26/2014			OL										OL		
1/6/2015	1.9	1.4	1.9	0.3	1	0.5	0	0.5	0.4	1.4	0.3	0.4	OL	0.1	0.1
1/28/2015	1	0.9	1.9	1.8	0.6	0.6	0.7	0.7	0.7	1	0.5	0.8	0.7	0.7	0.3
2/3/2015	OL	0.1	OL	0.2	OL	OL	0.3	0.5	0.3	OL	0.2	0.4	OL	0.7	OL
2/6/2015	OL	0.4	OL	0.3	OL	OL	0.2	0.3	0.4	OL	0	0.1	OL	0.1	OL
2/10/2015	OL	0	OL	0.1	OL	OL	0.1	0	0.1	OL	0.1	0.1	OL	0.1	OL
2/13/2015	OL	OL	OL	0	OL	OL	0	0	0.1	OL	0	0.1	OL	0	OL
2/16/2015	0	0	0	0	0	0	0	0	0.1	OL	0.1	0	0	0	0
3/4/2015	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
3/12/2015	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL
3/18/2015	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL

SVE	=	Soil Vapor Extraction
PID	=	Photo Ionization Detector
ppm	=	parts per million
	=	Not Measured
OL	=	Offline
W	=	Water in Well

Table 5. AS Flow Data Summary PHILLIPS 66 FACILITY #255353 (AOC 1396)

Date									Westla	ke AS Wells	s - Flow Ra	te Readings	s (scfm)]					
	W-1	W-2	W-3	W-4	W-5	W-6	W-7	W-8	W-9	W-10	W-11	W-12	W-13	W-14	W-15	W-16	W-17	W-21	W-20	W-19	W-18						
1/23/2014	0	3	0	0	3	0	0	0	0	0	0	0	0	5	0	0	0	0	0	3	0						
1/31/2014	2	4	>25	2	3.5	5	<2	<2	4.5	<2	<2	3.5	14.5	6	4	3	7	7.5	7	3	8.5						
2/4/2014	2	3	>25	3	3	7	<2	5	4	2	<2	4	11	7	3	3	7	7	7	4	8.5						
2/12/2014	<2	5	>25	4	<2	11	6	9	7	<2	2	6	12	7	8	4	7.5	7	8	4	9						
2/17/2014	2	6	9	3	2	9	4	8	5	3	3	6	16	8	6	4	8	10	13	4	10						
2/26/2014	2	10	9	6	<2	12	7	9.5	9	3	3	6	13	9	6	3	11	14	7.5	4	11						
3/3/2014	2	10	10	5	3	12	8	9	4	5	4	7	13.5	10	6	6	10	8	9.5	5	11						
3/18/2014	2	11	<2	6	2	16	11	14	9	4	4	<2	15	11	17	8	9	15	10	5	11						
5/27/2014	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL						
7/9/2014	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL						
11/26/2014	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL						
2/13/2015	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL						
3/4/2015	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL	OL						
Date												Merce	r AS Wells	- Flow Rate	Readings	(scfm)						-					
Date	M-8	M-20	M-26	M-2	M-27	M-16	M-3	M-9	M-17	M-5	M-19	Merce M-15	r AS Wells M-7	- Flow Rate M-10	Readings M-14	(scfm) M-18	M-6	M-13	M-4	M-22	M-12	 M-1	M-23	M-11	M-25	M-24	M-21
Date 1/23/2014	M-8 9	M-20 0	M-26 0	M-2 0	M-27 0	M-16 0	M-3 0	M-9 0	M-17 7.5	M-5 0	M-19 0	Merce M-15 0	r AS Wells M-7 6	- Flow Rate M-10 0	Readings M-14 0	(scfm) M-18 1	M-6 0	M-13 0	M-4 5	M-22 0	M-12 0	M-1 0	M-23 0	M-11 0	M-25 0	M-24 0	M-21 0
Date 1/23/2014 1/31/2014	M-8 9 9	M-20 0 3.5	M-26 0 <2	M-2 0 <2	M-27 0 <2	M-16 0 4.5	M-3 0 3	M-9 0 5	M-17 7.5 7.5	M-5 0 7.5	M-19 0 3.5	Merce M-15 0 6	r AS Wells M-7 6 5	- Flow Rate M-10 0 6	Readings M-14 0 >25	(scfm) M-18 1 <2	M-6 0 <2	M-13 0 <2	M-4 5 5.5	M-22 0 5	M-12 0 <2	M-1 0 11.5	M-23 0 <2	M-11 0 <2	M-25 0 7.5	M-24 0 4	M-21 0 <2
Date 1/23/2014 1/31/2014 2/4/2014	M-8 9 9 10	M-20 0 3.5 <2	M-26 0 <2 <2	M-2 0 <2 <2	M-27 0 <2 <2	M-16 0 4.5 3.5	M-3 0 3 4	M-9 0 5 5	M-17 7.5 7.5 7.5	M-5 0 7.5 7	M-19 0 3.5 3	Merce M-15 0 6 6	r AS Wells M-7 6 5 6	- Flow Rate M-10 0 6 7	Readings M-14 0 >25 >25	(scfm) M-18 1 <2 2	M-6 0 <2 <2	M-13 0 <2 <2	M-4 5 5.5 6.5	M-22 0 5 5	M-12 0 <2 <2	M-1 0 11.5 11.5	M-23 0 <2 <2	M-11 0 <2 <2	M-25 0 7.5 5.5	M-24 0 4 >25	M-21 0 <2 7
Date 1/23/2014 1/31/2014 2/4/2014 2/12/2014	M-8 9 9 10 10	M-20 0 3.5 <2 6	M-26 0 <2 <2 3	M-2 0 <2 <2 <2 <2	M-27 0 <2 <2 <2 <2	M-16 0 4.5 3.5 4	M-3 0 3 4 3.5	M-9 0 5 5 5	M-17 7.5 7.5 7.5 7	M-5 0 7.5 7 9	M-19 0 3.5 3 4	Merce M-15 0 6 6 5.5	r AS Wells M-7 6 5 6 7	- Flow Rate M-10 0 6 7 8	Readings M-14 0 >25 >25 >25 >25	(scfm) M-18 1 <2 2 3	M-6 0 <2 <2 <2 <2	M-13 0 <2 <2 <2 <2	M-4 5 5.5 6.5 8	M-22 0 5 5 6	M-12 0 <2 <2 <2 <2	M-1 0 11.5 11.5 13	M-23 0 <2 <2 <2 <2	M-11 0 <2 <2 <2 <2	M-25 0 7.5 5.5 8.5	M-24 0 4 >25 >25	M-21 0 <2 7 7 7
Date 1/23/2014 1/31/2014 2/4/2014 2/12/2014 2/17/2014	M-8 9 9 10 10 11	M-20 0 3.5 <2 6 12	M-26 0 <2 <2 3 2	M-2 0 <2 <2 <2 <2 <2 <2	M-27 0 <2 <2 <2 <2 <2 <2	M-16 0 4.5 3.5 4 6	M-3 0 3 4 3.5 3.5	M-9 0 5 5 5 6	M-17 7.5 7.5 7.5 7 8	M-5 0 7.5 7 9 10	M-19 0 3.5 3 4 5	Merce M-15 0 6 6 5.5 7	r AS Wells M-7 6 5 6 7 5	- Flow Rate M-10 0 6 7 8 9	Readings M-14 0 >25 >25 >25 >25 8	(scfm) M-18 1 <2 2 3 <2	M-6 0 <2 <2 <2 <2 <2 <2	M-13 0 <2 <2 <2 <2 2	M-4 5 5.5 6.5 8 7	M-22 0 5 5 6 8	M-12 0 <2 <2 <2 <2 <2 <2	M-1 0 11.5 11.5 13 14	M-23 0 <2 <2 <2 <2 2	M-11 0 <2 <2 <2 <2 <2 <2	M-25 0 7.5 5.5 8.5 5.5	M-24 0 4 >25 >25 4	M-21 0 <2 7 7 <2
Date 1/23/2014 1/31/2014 2/4/2014 2/12/2014 2/17/2014 2/26/2014	M-8 9 9 10 10 11 12	M-20 0 3.5 <2 6 12 12	M-26 0 <2 <2 3 2 <2	M-2 0 <2 <2 <2 <2 <2 <2 <2 <2	M-27 0 <2 <2 <2 <2 <2 <2 <2 <2	M-16 0 4.5 3.5 4 6 5	M-3 0 3 4 3.5 3.5 4	M-9 0 5 5 5 6 8	M-17 7.5 7.5 7.5 7 8 8.5	M-5 0 7.5 7 9 10 11	M-19 0 3.5 3 4 5 6	Merce M-15 0 6 5.5 7 6.5	r AS Wells M-7 6 5 6 7 5 6	- Flow Rate M-10 0 6 7 8 9 10	Readings M-14 0 >25 >25 >25 >25 8 9	(scfm) M-18 1 <2 2 3 <2 3 <2 3	M-6 0 <2 <2 <2 <2 <2 <2 2	M-13 0 <2 <2 <2 2 2 3	M-4 5 5.5 6.5 8 7 8	M-22 0 5 5 6 8 9	M-12 0 <2 <2 <2 <2 <2 <2 <2 3	M-1 0 11.5 11.5 13 14 12	M-23 0 <2 <2 <2 2 2 2	M-11 0 <2 <2 <2 <2 <2 <2 <2	M-25 0 7.5 5.5 8.5 5.5 9	M-24 0 4 >25 >25 4 4	M-21 0 <2 7 7 <2 <2 <2
Date 1/23/2014 1/31/2014 2/4/2014 2/12/2014 2/17/2014 2/26/2014 3/3/2014	M-8 9 9 10 10 11 11 12 13	M-20 0 3.5 <2 6 12 12 12 10	M-26 0 <2 <2 3 2 <2 <2 <2 <2	M-2 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-27 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-16 0 4.5 3.5 4 6 5 5	M-3 0 3 4 3.5 3.5 4 4.5	M-9 0 5 5 5 6 8 7	M-17 7.5 7.5 7.5 7 8 8.5 9	M-5 0 7.5 7 9 10 11 12	M-19 0 3.5 3 4 5 6 5	Merce M-15 0 6 5.5 7 6.5 6.5	M-7 6 5 6 7 5 6 7 7	- Flow Rate M-10 0 6 7 8 9 10 11	Readings M-14 0 >25 >25 >25 8 9 10	(scfm) M-18 1 <2 2 3 <2 3 4	M-6 0 <2 <2 <2 <2 <2 <2 2 2	M-13 0 <2 <2 <2 2 3 3	M-4 5 5.5 6.5 8 7 8 11	M-22 0 5 6 8 9 9	M-12 0 <2 <2 <2 <2 <2 <2 3 3 3	M-1 0 11.5 11.5 13 14 12 13	M-23 0 <2 <2 <2 2 2 2 <2	M-11 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-25 0 7.5 5.5 8.5 5.5 9 8	M-24 0 4 >25 >25 4 4 4	M-21 0 <2 7 7 ~ 7 ~ 2 ~ 2
Date 1/23/2014 1/31/2014 2/4/2014 2/12/2014 2/17/2014 2/26/2014 3/3/2014 3/18/2014	M-8 9 9 10 10 11 12 13 13	M-20 0 3.5 <2 6 12 12 12 10 11	M-26 0 <2 <2 3 2 <2 <2 <2 <2 <2	M-2 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-27 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-16 0 4.5 3.5 4 6 5 5 7	M-3 0 3 4 3.5 3.5 4 4.5 5	M-9 0 5 5 6 8 7 9	M-17 7.5 7.5 7 8 8.5 9 10	M-5 0 7.5 7 9 10 11 12 13	M-19 0 3.5 3 4 5 6 5 8	Merce M-15 0 6 5.5 7 6.5 6.5 9	M-7 6 5 6 7 5 6 7 8	- Flow Rate M-10 0 6 7 8 9 10 11 11	Readings M-14 0 >25 >25 >25 8 9 10 11	(scfm) M-18 1 <2 2 3 <2 3 4 7	M-6 0 <2 <2 <2 <2 <2 2 2 2 2 2 2	M-13 0 <2 <2 <2 2 3 3 8	M-4 5 5.5 6.5 8 7 8 11 10	M-22 0 5 6 8 9 9 12	M-12 0 <2 <2 <2 <2 <2 3 3 4	M-1 0 11.5 13 14 12 13 16	M-23 0 <2 <2 <2 2 2 2 2 2 3	M-11 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-25 0 7.5 5.5 8.5 5.5 9 8 11	M-24 0 4 >25 >25 4 4 4 6	M-21 0 <2 7 7 ~7 <2 <2 2 8
Date 1/23/2014 1/31/2014 2/4/2014 2/12/2014 2/17/2014 2/26/2014 3/3/8/2014 3/38/2014 5/27/2014	M-8 9 10 10 11 12 13 13 14	M-20 0 3.5 <2 6 12 12 10 10 11 25	M-26 0 <2 <2 3 2 <2 <2 <2 <2 <2 <2 0	M-2 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-27 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-16 0 4.5 3.5 4 6 5 5 7 6.5	M-3 0 3 4 3.5 3.5 4 4.5 5 7	M-9 0 5 5 6 8 7 9 7	M-17 7.5 7.5 7 8 8.5 9 10 10	M-5 0 7.5 7 9 10 11 12 13 15	M-19 0 3.5 3 4 5 6 5 8 8 6.5	Merce M-15 0 6 5.5 7 6.5 6.5 9 8	M-7 6 5 6 7 5 6 7 6 7 8 7	- Flow Rate M-10 0 6 7 8 9 10 11 11 25	Readings M-14 0 >25 >25 >25 8 9 10 11 25	(scfm) M-18 1 <2 2 3 <2 3 4 7 0	M-6 0 <2 <2 <2 <2 <2 2 2 2 2 2 2 16	M-13 0 <2 <2 <2 2 3 3 8 5	M-4 5 5.5 6.5 8 7 8 11 10 11	M-22 0 5 6 8 9 9 12 11.5	M-12 0 <2 <2 <2 <2 <2 3 3 4 6	M-1 0 11.5 13 14 12 13 16 16	M-23 0 <2 <2 <2 2 2 2 2 3 1	M-11 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-25 0 7.5 5.5 8.5 5.5 9 8 11 25	M-24 0 4 >25 >25 4 4 4 4 6 9	M-21 0 <2 7 7 <2 <2 2 2 8 0
Date 1/23/2014 1/31/2014 2/12/2014 2/12/2014 2/17/2014 2/26/2014 3/3/2014 3/3/2014 3/3/2014 7/9/2014	M-8 9 10 10 11 12 13 13 14 12	M-20 0 3.5 <2 6 12 12 12 10 11 25 25	M-26 0 <2 <2 3 2 <2 <2 <2 <2 <2 <2 <2 <2 0 0	M-2 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-27 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-16 0 4.5 3.5 4 6 5 5 7 6.5 5 5	M-3 0 3 4 3.5 3.5 4 4.5 5 7 6	M-9 0 5 5 6 8 7 9 7 7	M-17 7.5 7.5 7 8 8.5 9 10 10 9	M-5 0 7.5 7 9 10 11 12 13 15 12	M-19 0 3.5 3 4 5 6 5 8 6.5 7	Merce M-15 0 6 5.5 7 6.5 6.5 9 8 6	r AS Wells M-7 6 5 6 7 5 6 7 8 7 7 7 7	- Flow Rate M-10 0 6 7 8 9 10 11 11 25 20	Readings M-14 0 >25 >25 >25 8 9 10 11 25 25	(scfm) M-18 1 <2 2 3 <2 3 4 7 0 0	M-6 0 <2 <2 <2 <2 2 2 2 2 2 2 2 16 13	M-13 0 <2 <2 2 2 3 3 8 5 5 5	M-4 5 5.5 6.5 8 7 8 11 10 11 12	M-22 0 5 6 8 9 9 12 11.5 10	M-12 0 <2 <2 <2 <2 3 3 4 6 6 4	M-1 0 11.5 13 14 12 13 16 16 16	M-23 0 <2 <2 2 2 2 2 2 2 3 1 1	M-11 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-25 0 7.5 5.5 8.5 5.5 9 8 11 25 25	M-24 0 4 >25 >25 4 4 4 6 9 7	M-21 0 <2 7 7 <2 <2 2 2 8 0 0
Date 1/23/2014 1/31/2014 2/4/2014 2/17/2014 2/26/2014 3/3/2014 3/3/2014 3/3/2014 5/27/2014 11/26/2014	M-8 9 10 10 11 12 13 13 14 12 	M-20 0 3.5 <2 6 12 12 12 10 11 25 25 20	M-26 0 <2 <2 3 2 <2 <2 <2 <2 <2 <2 0 0 0	M-2 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-27 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-16 0 4.5 3.5 4 6 5 5 7 6.5 5 	M-3 0 3 4 3.5 3.5 4 4.5 5 7 6	M-9 0 5 5 6 8 7 9 7 7 7	M-17 7.5 7.5 7 8 8.5 9 10 10 9	M-5 0 7.5 7 9 10 11 12 13 15 12 	M-19 0 3.5 3 4 5 6 5 8 6.5 7 7 7	Merce M-15 0 6 5.5 7 6.5 9 8 6 6 5 5 7	r AS Wells M-7 6 5 6 7 5 6 7 8 7 7 7 7	- Flow Rate M-10 0 6 7 8 9 10 11 11 25 20 	Readings M-14 0 >25 >25 >25 8 9 10 11 25 25 	(scfm) M-18 1 <2 2 3 <2 3 <2 3 4 7 0 0 1	M-6 0 <2 <2 <2 2 2 2 2 2 2 2 2 2 16 13 14	M-13 0 <2 <2 2 2 3 3 8 5 5 5 	M-4 5 5.5 6.5 8 7 8 11 10 11 12 	M-22 0 5 6 8 9 9 12 11.5 10 	M-12 0 <2 <2 <2 <2 3 3 4 6 6 4 	M-1 0 11.5 13 14 12 13 16 16 16	M-23 0 <2 <2 2 2 2 2 2 3 1 1 0	M-11 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-25 0 7.5 5.5 8.5 5.5 9 8 11 25 25 	M-24 0 4 >25 >25 4 4 4 6 9 7 7	M-21 0 <2 7 7 <2 2 2 8 0 0 0 1
Date 1/23/2014 1/31/2014 2/12/2014 2/12/2014 2/12/2014 3/3/2014 3/3/2014 3/3/2014 5/27/2014 1/1/26/2014 1/1/26/2014 2/13/2015	M-8 9 9 10 10 11 12 13 13 13 14 12 11	M-20 0 3.5 <2 6 12 12 12 10 11 11 25 25 20 20	M-26 0 <2 <2 3 2 <2 <2 <2 <2 <2 0 0 0 0 0	M-2 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-27 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-16 0 4.5 3.5 4 6 5 5 7 6.5 5 7 6.5 5 0	M-3 0 3 4 3.5 3.5 4 4.5 5 7 6 4	M-9 0 5 5 6 8 7 9 7 7 7 7 7 11	M-17 7.5 7.5 7.5 7 8 8.5 9 10 10 10 9 15	M-5 0 7.5 7 9 10 11 12 13 15 12 3	M-19 0 3.5 3 4 5 6 5 8 6.5 7 7 7 OL	Merce M-15 0 6 5.5 7 6.5 6.5 9 8 6 6 5 5 9 8 6 6	M-7 6 5 6 7 5 6 7 5 6 7 8 7 7 7 7	- Flow Rate M-10 0 6 7 8 9 10 11 11 11 25 20 0	Readings M-14 0 >25 >25 >25 >25 8 9 10 11 25 25 8	(scfm) M-18 1 <2 2 3 <2 3 <2 3 4 7 0 0 1 OL	M-6 0 <2 <2 <2 2 2 2 2 2 2 16 13 14 14	M-13 0 <2 <2 2 3 3 8 5 5 5 6	M-4 5 5.5 6.5 8 7 8 11 10 11 12 11	M-22 0 5 6 8 9 9 12 11.5 10 0	M-12 0 <2 <2 <2 2 3 3 4 6 6 4 3 3	M-1 0 11.5 13 14 12 13 16 16 16 16 11	M-23 0 <2 <2 2 2 2 2 2 3 1 1 0 0	M-11 0 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2 <2	M-25 0 7.5 5.5 8.5 5.5 9 8 11 25 25 25	M-24 0 4 >25 >25 4 4 4 6 9 7 7 7	M-21 0 <2 7 7 <2 2 2 8 0 0 1 0

Date	Valley AS Wells - Flow Rate Readings (scfm)													
	V-6	V-7	V-8	V-9	V-10	V-5	V-11	V-4	V-12	V-3	V-13	V-2	V-14	V-1
1/23/2014	0	6	0	0	0	0	0	0	0	0	6	0	0	0
1/31/2014	4	8	6	<2	3	5	7.5	3	4	3.5	7.5	10	8.5	2
2/4/2014	3.5	8	5	<2	4	4	7.5	4	4	4	7	9.5	5	5
2/12/2014	4	8	8	<2	5	6	11	4	5	6	8	10	7	7
2/17/2014	4	6	7	2	6	5	9	5	5	6	8	12	2	4
2/26/2014	8	9	7	3	8	8	13.5	3.5	4	6	9	11	8	10
3/3/2014	10	10	8	2	10	<2	16.5	5	5	9	8	12	9	9
3/18/2014	4	12	7	4	7	<2	21	4	4	12	14	13	<2	7
5/27/2014	1	18	5	3	8	0	17	2	3	8	8	12	0	6
7/9/2014	1	13	4	5	6	0	16	2	2	2	6	12	0	5
11/26/2014	3	7	6	0	5	1		3		8	4	4	3	
2/13/2015	3	7	5	0	4	1	0	2	0	7	5	4	5	0
3/4/2015	0	0	0	0	0	0	0	OI.	0	O	0	O	0	O

Notes: AS

= SCFM

Air Sparge Standard Cubic Feet per Minute Not Measured =

= = Offline

OL



.....

APPENDIX B Laboratory Analytical Reports



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

August 31, 2016

Kyle Sattler ATC Group Services LLC 7070 SW Fir Loop Suite 100 Portland, OR 97223

RE: Project: P66 Westlake/ Mercer Pace Project No.: 10359624

Dear Kyle Sattler:

Enclosed are the analytical results for sample(s) received by the laboratory on August 19, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

JENNI GROSS

Jennifer Gross jennifer.gross@pacelabs.com Project Manager

Enclosures

cc: Cody Bishop, ATC Group Services LLC



REPORT OF LABORATORY ANALYSIS



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

CERTIFICATIONS

Project: P66 Westlake/ Mercer Pace Project No.: 10359624

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414 525 N 8th Street, Salina, KS 67401 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

REPORT OF LABORATORY ANALYSIS


SAMPLE SUMMARY

Project: P66 Westlake/ Mercer Pace Project No.: 10359624

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10359624001	Inf-1	Air	08/18/16 12:35	08/19/16 09:30
10359624002	Int-1	Air	08/18/16 12:40	08/19/16 09:30
10359624003	Eff-1	Air	08/18/16 12:45	08/19/16 09:30
10359624004	Inf-2	Air	08/18/16 12:55	08/19/16 09:30
10359624005	Int-2	Air	08/18/16 12:50	08/19/16 09:30
10359624006	Eff-2	Air	08/18/16 12:55	08/19/16 09:30
10359624007	Inf-3	Air	08/18/16 13:15	08/19/16 09:30
10359624008	Int-3	Air	08/18/16 13:10	08/19/16 09:30
10359624009	Eff-3	Air	08/18/16 13:00	08/19/16 09:30
10359624010	B701-Inf	Air	08/18/16 14:20	08/19/16 09:30
10359624011	B801-Inf	Air	08/18/16 14:30	08/19/16 09:30



SAMPLE ANALYTE COUNT

Project: P66 Westlake/ Mercer Pace Project No.: 10359624

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10359624001	Inf-1	TO-15	NCK	7	PASI-M
10359624002	Int-1	TO-15	NCK	7	PASI-M
10359624003	Eff-1	TO-15	NCK	7	PASI-M
10359624004	Inf-2	TO-15	NCK	7	PASI-M
10359624005	Int-2	TO-15	NCK	7	PASI-M
10359624006	Eff-2	TO-15	NCK	7	PASI-M
10359624007	Inf-3	TO-15	NCK	7	PASI-M
10359624008	Int-3	TO-15	NCK	7	PASI-M
10359624009	Eff-3	TO-15	NCK	7	PASI-M



Project: P66 Westlake/ Mercer

Pace Project No.: 10359624

Sample: Inf-1	Lab ID: 103	59624001	Collected: 08/18/	16 12:35	Received: 0	8/19/16 09:30 N	Atrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	13.1	40.4		08/23/16 19:25	71-43-2	A4
Ethylbenzene	ND	ug/m3	35.6	40.4		08/23/16 19:25	100-41-4	
THC as Gas	8070	ug/m3	2880	40.4		08/23/16 19:25		
Toluene	ND	ug/m3	31.1	40.4		08/23/16 19:25	108-88-3	
Xylene (Total)	ND	ug/m3	107	40.4		08/23/16 19:25	1330-20-7	
m&p-Xylene	ND	ug/m3	71.5	40.4		08/23/16 19:25	179601-23-2	1
o-Xylene	ND	ug/m3	35.6	40.4		08/23/16 19:25	95-47-6	
Sample: Int-1	Lab ID: 103	59624002	Collected: 08/18/	16 12:40	Received: 0	8/19/16 09:30 N	latrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ua/m3	18.2	56		08/23/16 19:53	71-43-2	A4
Ethylbenzene	ND	ug/m3	49.3	56		08/23/16 19:53	100-41-4	
THC as Gas	ND	ua/m3	3990	56		08/23/16 19:53		
Toluene	153	ua/m3	43.1	56		08/23/16 19:53	108-88-3	
Xvlene (Total)	ND	ua/m3	148	56		08/23/16 19:53	1330-20-7	
m&p-Xvlene	ND	ua/m3	99.1	56		08/23/16 19:53	179601-23-2	1
o-Xylene	ND	ug/m3	49.3	56		08/23/16 19:53	95-47-6	
Sample: Eff-1	Lab ID: 103	59624003	Collected: 08/18/	16 12:45	Received: 0	8/19/16 09:30 N	fatrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15					_	-
Benzene	ND	ua/m3	12.6	38.8		08/23/16 20:21	71-43-2	Α4
Ethylbenzene	ND	ug/m3	34.1	38.8		08/23/16 20:21	100-41-4	
THC as Gas	ND	ua/m3	2760	38.8		08/23/16 20:21		
Toluene	ND	ug/m3	29.9	38.8		08/23/16 20:21	108-88-3	
Xvlene (Total)	ND	ua/m3	103	38.8		08/23/16 20:21	1330-20-7	
m&p-Xvlene	ND	ua/m3	68.7	38.8		08/23/16 20:21	179601-23-2	1
o-Xylene	ND	ug/m3	34.1	38.8		08/23/16 20:21	95-47-6	
Sample: Inf-2	Lab ID: 103	59624004	Collected: 08/18/	16 12:55	Received: 0	8/19/16 09:30 N	latrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ua/m3	11 7	36		08/23/16 20:48	71-43-2	A4
Ethylbenzene	ND	ug/m3	31.7	36		08/23/16 20:48	100-41-4	,
THC as Gas	3900	ua/m3	2560	36		08/23/16 20:48		
Toluene	ND	ua/m3	27.7	36		08/23/16 20:48	108-88-3	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc..



Project: P66 Westlake/ Mercer

Pace Project No.: 10359624

Sample: Inf-2	Lab ID: 103	59624004	Collected: 08/18/2	6 12:55	Received: 0	8/19/16 09:30 M	latrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15						
Xylene (Total)	ND	ug/m3	95.4	36		08/23/16 20:48	1330-20-7	
m&p-Xylene	ND	ug/m3	63.7	36		08/23/16 20:48	179601-23-1	
o-Xylene	ND	ug/m3	31.7	36		08/23/16 20:48	95-47-6	
Sample: Int-2	Lab ID: 103	59624005	Collected: 08/18/	16 12:50	Received: 0	8/19/16 09:30 M	latrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15						
Benzene	ND	ug/m3	13.6	42		08/23/16 21:16	71-43-2	A4
Ethylbenzene	ND	ug/m3	37.0	42		08/23/16 21:16	100-41-4	
THC as Gas	ND	ug/m3	2990	42		08/23/16 21:16		
Toluene	ND	ug/m3	32.3	42		08/23/16 21:16	108-88-3	
Xylene (Total)	ND	ug/m3	111	42		08/23/16 21:16	1330-20-7	
m&p-Xylene	ND	ug/m3	74.3	42		08/23/16 21:16	179601-23-1	
o-Xylene	ND	ug/m3	37.0	42		08/23/16 21:16	95-47-6	
Sample: Eff-2	Lab ID: 103	59624006	Collected: 08/18/	6 12:55	Received: 0	8/19/16 09:30 M	latrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15						
Benzene	ND	ug/m3	12.2	37.4		08/23/16 21:43	71-43-2	A4
Ethylbenzene	ND	ug/m3	32.9	37.4		08/23/16 21:43	100-41-4	
THC as Gas	ND	ug/m3	2660	37.4		08/23/16 21:43		
Toluene	ND	ug/m3	28.8	37.4		08/23/16 21:43	108-88-3	
Xylene (Total)	ND	ug/m3	99.1	37.4		08/23/16 21:43	1330-20-7	
m&p-Xylene	ND	ug/m3	66.2	37.4		08/23/16 21:43	179601-23-1	
o-Xylene	ND	ug/m3	32.9	37.4		08/23/16 21:43	95-47-6	
Sample: Inf-3	Lab ID: 103	59624007	Collected: 08/18/	16 13:15	Received: 0	8/19/16 09:30 M	latrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15						
Benzene	ND	ug/m3	14.2	43.8		08/23/16 22:11	71-43-2	A4
Ethylbenzene	ND	ug/m3	38.5	43.8		08/23/16 22:11	100-41-4	
THC as Gas	ND	ug/m3	3120	43.8		08/23/16 22:11		
Toluene	ND	ug/m3	33.7	43.8		08/23/16 22:11	108-88-3	
Xylene (Total)	ND	ug/m3	116	43.8		08/23/16 22:11	1330-20-7	
m&p-Xylene	ND	ug/m3	77.5	43.8		08/23/16 22:11	179601-23-1	
o-Xylene	ND	ug/m3	38.5	43.8		08/23/16 22:11	95-47-6	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc..



Project: P66 Westlake/ Mercer

Pace Project No.: 10359624

Sample: Int-3	Lab ID: 103	59624008	Collected: 08/18/	16 13:10	Received: 08	3/19/16 09:30 N	latrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	12.6	38.8		08/23/16 22:39	71-43-2	A4
Ethylbenzene	ND	ug/m3	34.1	38.8		08/23/16 22:39	100-41-4	
THC as Gas	ND	ug/m3	2760	38.8		08/23/16 22:39		
Toluene	ND	ug/m3	29.9	38.8		08/23/16 22:39	108-88-3	
Xylene (Total)	ND	ug/m3	103	38.8		08/23/16 22:39	1330-20-7	
m&p-Xylene	ND	ug/m3	68.7	38.8		08/23/16 22:39	179601-23-1	
o-Xylene	ND	ug/m3	34.1	38.8		08/23/16 22:39	95-47-6	
Sample: Eff-3	Lab ID: 103	59624009	Collected: 08/18/	16 13:00	Received: 08	3/19/16 09:30 N	Aatrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	13.1	40.4		08/23/16 23:06	71-43-2	A4
Ethylbenzene	ND	ug/m3	35.6	40.4		08/23/16 23:06	100-41-4	
THC as Gas	ND	ug/m3	2880	40.4		08/23/16 23:06		
Toluene	ND	ug/m3	31.1	40.4		08/23/16 23:06	108-88-3	
Xylene (Total)	ND	ug/m3	107	40.4		08/23/16 23:06	1330-20-7	
m&p-Xylene	ND	ug/m3	71.5	40.4		08/23/16 23:06	179601-23-1	
o-Xvlene	ND	ug/m3	35.6	40.4		08/23/16 23:06	95-47-6	



QUALITY CONTROL DATA

Project:	P66 W	estlake/ Merc	er						
Pace Project No.:	10359	624							
QC Batch:	4320	66		Analysis M	ethod:	ГО-15			
QC Batch Method:	TO-1	5		Analysis De	escription:	TO15 MSV AIF	R Low Level		
Associated Lab Sar	mples:	1035962400 1035962400	01, 10359624002, 08, 10359624009	10359624003,	10359624004,	10359624005	, 10359624006	, 10359624007,	
METHOD BLANK:	23498	10		Matrix	x: Air				
Associated Lab Sar	mples:	1035962400 1035962400	01, 10359624002, 08, 10359624009	10359624003,	10359624004,	10359624005	, 10359624006	, 10359624007,	
				Blank	Reporting				
Parar	meter		Units	Result	Limit	Analyze	ed Qual	ifiers	
Benzene			ug/m3	NE	0.3	2 08/23/16 1	1:20		
Ethylbenzene			ug/m3	NE	0.8	8 08/23/16 1	1:20		
m&p-Xylene			ug/m3	NE	D 1.8	8 08/23/16 1	1:20		
o-Xylene			ug/m3	NE	0.8	8 08/23/16 1	1:20		
THC as Gas			ug/m3	NE	0 71.	2 08/23/16 1	1:20		
Toluene			ug/m3	NE	0.7	7 08/23/16 1	1:20		
Xylene (Total)			ug/m3	NE) 2.0	6 08/23/16 1	1:20		
LABORATORY CO	NTROL	SAMPLE: 2	349811						
				Spike	LCS	LCS	% Rec		
Parar	meter		Units	Conc.	Result	% Rec	Limits	Qualifiers	
Benzene			ug/m3	32.5	34.3	106	62-141		
Ethylbenzene			ug/m3	44.2	48.9	111	59-149		
m&p-Xylene			ug/m3	88.3	96.9	110	59-146		
o-Xylene			ug/m3	44.2	45.4	103	54-149		
THC as Gas			ug/m3	5130	6200	121	68-145		
Toluene			ug/m3	38.3	40.3	105	61-138		
Xylene (Total)			ug/m3	132	142	107	66-146		
SAMPLE DUPLICA	TE: 23	350921							
				10359847002	Dup		Max		
Parar	meter		Units	Result	Result	RPD	RPD	Qualifiers	_
Benzene			ug/m3	4.0) 4.0	0	0	25	
Ethylbenzene			ug/m3	6.5	5 6.	5	0	25	
Linyibenzene			ug/m3	23.9	23.9	9	0	25	
m&p-Xylene							_	05	
m&p-Xylene o-Xylene			ug/m3	8.8	3 8.8	8	0	25	
m&p-Xylene o-Xylene THC as Gas			ug/m3 ug/m3	8.8 2810	3 8.8) 302(8 0	0 7	25 25	
m&p-Xylene o-Xylene THC as Gas Toluene			ug/m3 ug/m3 ug/m3	8.8 2810 23.5	3 8.8) 3020 5 23.8	8 0 5	0 7 0	25 25 25	

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

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc..



QUALIFIERS

Project: P66 Westlake/ Mercer

Pace Project No.: 10359624

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above 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 decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

A4 Sample was transferred from a sampling bag into a Summa Canister within 48 hours of collection.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P66 Westlake/ Mercer Pace Project No.: 10359624

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10359624001	Inf-1	 TO-15	432066		
10359624002	Int-1	TO-15	432066		
10359624003	Eff-1	TO-15	432066		
10359624004	Inf-2	TO-15	432066		
10359624005	Int-2	TO-15	432066		
10359624006	Eff-2	TO-15	432066		
10359624007	Inf-3	TO-15	432066		
10359624008	Int-3	TO-15	432066		
10359624009	Eff-3	TO-15	432066		

ISTODY / Analytical Request Document ic 35% b.4% in the sent fields must be completed accurately. If a LEGAL DOCUMENT, All relevant fields must be completed accurately. If a LEGAL DOCUMENT, All relevant fields must be completed accurately. The interview of the	(N/X) Samr	tes Intac			>_		IONS		Drif	0 9														100 CD-2010					
ISTODY / Analytical Request Document is a LEGAL DOCUMENT. All relevant fields must be completed accurately at a LEGAL DOCUMENT. All relevant fields must be completed accurately at a LEGAL DOCUMENT. All relevant fields must be completed accurately at a LEGAL DOCUMENT. All relevant fields must be completed accurately at a LEGAL DOCUMENT. All relevant fields must be completed accurately at a LEGAL DOCUMENT. All relevant fields must be at a LEGAL DOCUMENT. All relevant be at a LEGAL DOCUMENT. All relevant be at a LEGAL BALAR ALL RELEVANT. ALL RELE	itsu) itsu)	dy Sealt (V/Y)	p		>	2	CONDITT	-	9	20	50	ين Q	62	90	50	64	3	X	-					100000000000000000000000000000000000000				ح	t
ISTODY / Analytical Request Document Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT. All relevant fields must be completed accurately. Is a LEAL DOCUMENT.	Recei (V/V)	il no bev	. 8		N	2	SAMPLE		ł	Ho	~	U		۵	Ø	0	5	20	8					vercer	un in	ency		~	162
ISTODY / Analytical Request Document the a LEGAL DOCUMENT. All relevant fields must be completed accurately. The a LEGAL DOCUMENT. All relevant fields must be completed accurately. Tetor of the north of the nor	темғ	О и ,			ang	200														(V/Y) entrothO leubiseR				stlake, I	A Deat	itory.Ag		:	25
ISTODY I Analytical Request Document is a LEGAL DOCUMENT. Al relevant felds must be completed accur- tion c action c actio	Π				02	R	AE S																	NA / We	State	Regula		Pa	Í ately.
ISTODY / Analytical Request Document Is a LEGAL DOCUMENT. All relevant fields must be completed teto t teto t teto t one information: one information:					ġ.	7																	(N/X) F	ACCESSION OF	新教師主任				laccur
ISTODY / Analytical Request DocumENT. All relevant fields must be contributed in the contraction of the contrest of the contrac	8/18		14 H - F		9-16	2	DATE																Eiltere						ent Ipleted
ISTOPY / Analytical Request Do Is a LEGAL DOCUMENT. All relevant fields must lice at EGAL DOCUMENT. All relevant fields must lice at the must like at the must	8/1			_	vo	9																	Analysis		時間に				cum be con
ISTODY / Analytical Requests Is a LEGAL DOCUMENT. All relevant fields tetor C tetor C tet	igned:					B						_								·			uested /	12	54	1994. 			
STODY / Analytical Red teton c teton c oice information: efform c oice information: efform c oice information: efform c oice information: efform c oice information: efform c of homation: efform c efform c	DATES		加速にないた		lice		ATION									_							Req						uest t fields
ISTODY / Analytical clocument. All rection cloud	$\left - \right $		100 - 100 - 10			у.	AFEIL				7))	\	7)	3	3	7	Analyses Test BTEX and THC as Gas I	by TO-15	N/A		(sldu					Req
STODY / Analyti stal LEGAL DOCUMENT teton c oice Information: ention: Phillips 66 mpany Name: Philips 66 mpany Name: Philops 66 mpany Name: Philops 66			STATES STATES	`	; {[A	10 [.] 10 [.]								1					Other		<u>e 1.500,500</u> ,	34368	Ce Mi	Gross				cal Alle
ISTODY / Ana tetion c tetion c oice Information: Phillips 66 mpany Name: Phillips 66 mpany Name: Philips 66 mpany Name: Philops		۶					CEPTI									/				lonsrtieM 20262587		ş		2 (Pa	enni (99		K
STODY / Is a LEGAL DO / Information: mpany Name: Phillippe mpany Name: Philippe mpany Name: Ph	N	<u>کر</u> ح		,	AR	N.	AC													HOBN		<i>l</i> ative		3213	-		5 66 line		Ana
S 100 HN03 Photosented Photo	9	Ø			4	N.														HCI		esen		333	rence: lager:		ilips bilips	ü	
S S S S S S S S S S S S S S S S S S S		× ×				_														20NH		P.		#	e Refe		Hd. ame	ormati	Q ₽9
	[]	N			080	ų D	IME	_											┢	npreserved			1	Profil	Quote	SS:	tion: Samy h	on C Ce Infé	STC all
	R				12	Ż														# OF CONTAINERS				Pace	Pace	Addr	Atten	Secti Invoi	С Э́с Э́с
	PLER	PLER	the second second		216	20	TE													SAMPLE TEMP AT COLLECTION									Cust C
	of SAM	of SAM			R	2/12	νđ													W E	웃				Merce		=		IN-C ain-of
CHA The ChA CHA DATE In Name	IATURE	K NAME			SHOP.		ION													DATE		CTED			stiake/		ates.com		CHA The ch
	SIG	PRIN			هير		FFILIAT		1430	₹ }	1300	1310	135	12551	0.SM	252	Sic	040	256	L M M	RT .	COLLE			Kyle 96 We		associa		
			24			02	D BY //A											-	18161	ATE	STAF			2	DC 13		ir@atc	tion:	
						V	JISHEI											\$ 	Ø		<u> </u>				TE PR A		sattle hich	lforma	
					Å	$ \rangle$	LINQI													(fiel of seboo bilev ees) 3000 XIRTAM	(ler Nu	D No.		<u>kyle.</u>	ject Ir	
ion B nt To: To: To: To: To: To: To: To:					Wint	1~	Sec. RE													2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	CODE DW WT			ainer Oro	hase Ord It Project		ort To: To:	ion B uired Pro	
																					Vater			Cort	Purc		Rep	Sect	
MATRIX Waster Waster Waster Waster Arbeiter Arbeiter Arbeiter Arbeiter																				utinity Waste W Product SoutSolid Mipe Air Cther	MATRIX Drinking \								
ciates Vvenue NV IOT associates.com Comments comments							COMMENTS		4	4										er box. .) se unique	0			Day (Standard)	associates.com	07	ciates		
							IONAL		5	1 1										acter F , 0-9 / , must I	PLE			101	FOF	4, 98	Asso		
							ADDIT			(,	~	m	\sim	5	50	3		-	_	Char, (A-Z, ile Ids	AM			EAT:	attler	le W/	ATC	mation	
									5	2	\$	÷	\mathcal{I}	4	+ +	4	¥.	14	9	Samp	S (Date	Kyle.s	Seatt	996	t Infor	tical
									\mathbb{Z}	2	M I	Ĥ	エ	\widetilde{D}	1	H	ţ	ĮF	C.					d Due				Client	(Junal)
Bade 11 ot 1	13	e 11 o	Pag					12	11	10	6	8	े 7	9	5	1	3	2		#MƏTI				Requested	Email To: ^{Shone}		Company.	Section A Required	Pace

Page Applytical"	Document Name: Cooler Transfer Check List	Revised Date: 23Apr2013 Page 1 of 1
Araue Milaiyucai	Document Number: F-MN-C-120-rev.01	Issuing Authority: Pace Minnesota Quality Offic
Cod	oler Transfer Check	List
Client:	P66-ATC Associa	tes
Project Manager:	Jenni Gross	
Profile/Line #:	33732/2	-
Received with Custod	y Seal: Yes No	
Custody Seal Intact:	Yes No ÑA	
Temperature C: IR Gun # 181 IR2 Samples on ic	Temp Read Corrected Tem 29,2 29,2 e, cooling process has begun	$\frac{\text{Correction Factor}}{\frac{1}{6}} + \frac{1}{6} \frac{1}{6}$
Rush/Short Hold:	no	— .
Containers Intact:	Yès No	
Re-packed and Re-ic	red:	<u>·</u>
		•
Temp Blank Included	: Ŷes No	

Pa) ce Analytical	Document N Air Sample Condition Document I F-MN-A-106-r	ame: Upon Receipt No.: rev.11	Document Revised: 26A Page 1 of 1 Issuing Authority Pace Minnesota Quality	Office
ir Sample Condition Upon Receipt Courier:	ient Name: ATC-WA ed Ex UPS Commercial Pace	Pr	oject #: 00 nt 1035962	:103596 	24
Tracking Number:	7001 4575	<u> </u>	? Wes DNo	Optional: Proj. Due Date:	Proj. Name:
acking Material: 🖉 Bu	bble Wrap 🔲 Bubble I	Bags Foam None	Tin Can Other	: Tem	Blank rec: Yes
emp. (T017 and T013 sam) Temp should be above freez ype of ice Received B	oles only) (°C):	Corrected Temp (°C):	Thermom. Used: Date & initials of Pr	B88A912167504 B88A0143310098 erson Examining Contents:	□151401163 □151401164 8-19-16 m L
				comments:	
Chain of Custody Present	<u>/</u>	YesNo	N/A 1.		·
Chain of Custody Filled O	ut?	YesNo[N/A 2.		
Chain of Custody Relinqu	ished?	Yes No	N/A 3.		<u> </u>
Sampler Name and/or Sig	nature on COC?	Yes No	N/A 4		· · · · · · · · · · · · · · · · · · ·
Samples Arrived within H	old Time?	Yes No	_IN/A 5.	1.	
Short Hold Time Analysis	(<72 hr)?	Ves No	_N/A 6. / - ∅#	+9	
Rush Turn Around Time I	Requested?	Yes No [<u>N/A</u> 7.	(2001 - 011	
Sufficient Volume?		Yes No [_N/A 8. Xanple "	0001-Int doc	s not have enough sam
Correct Containers Used?	I .	Pres No [$\mathbb{N}_{A} \mid 9.$ B701-Inf w	as received flat.	
-Pace Containers Used	?	Yes No	N/A	· · · · ·	
Containers Intact?		Yes No	<u>N/A</u> 10.		
Media: Air Can	Airbag Filter	TDT Passive	11.		
Sample Labels Match CO	0?	Yes No	N/A 12.		
Samples Received:					
	Canisters	· · · · · · · · · · · · · · · · · · ·		Canisters	
Sample Number	Can ID	Flow Controller ID	Sample Number	Can ID	Flow Controller ID
			· · · · · · · · · · · · · · · · · · ·		
				·····	
		··· ·· · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·		
LIENT NOTIFICATION/R				Field Data Required?	Yes XNo
Person Cont	acted: Kyle Sattler		Date/Time: 08/	19/16 13:00	
		the two complee listed to	he kent on hold (B7(1 and R801) were rec	aived with insufficient
Comments/Resol	ution: Notified Kyle, 1	the two samples listed to		Tand Boot) were rec	erved with insufficient

Project Manager Review:

ENNI (TROSS

Date: 08/19/16

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)

ı



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

August 29, 2016

Kyle Sattler ATC Group Services LLC 7070 SW Fir Loop Suite 100 Portland, OR 97223

RE: Project: P66 AOC 1396 Pace Project No.: 10359949

Dear Kyle Sattler:

Enclosed are the analytical results for sample(s) received by the laboratory on August 23, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

JENNI GROSS

Jennifer Gross jennifer.gross@pacelabs.com Project Manager

Enclosures

cc: Cody Bishop, ATC Group Services LLC





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

CERTIFICATIONS

 Project:
 P66 AOC 1396

 Pace Project No.:
 10359949

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414 525 N 8th Street, Salina, KS 67401 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



SAMPLE SUMMARY

 Project:
 P66 AOC 1396

 Pace Project No.:
 10359949

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10359949001	Inf-1	Air	08/22/16 12:00	08/23/16 10:15
10359949002	Inf-2	Air	08/22/16 12:00	08/23/16 10:15
10359949003	Inf-3	Air	08/22/16 12:00	08/23/16 10:15



SAMPLE ANALYTE COUNT

 Project:
 P66 AOC 1396

 Pace Project No.:
 10359949

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10359949001	Inf-1	TO-15	DR1	7	PASI-M
10359949002	Inf-2	TO-15	DR1	7	PASI-M
10359949003	Inf-3	TO-15	DR1	7	PASI-M



Project:	P66 AOC 1396
----------	--------------

Pace Project No.: 10359949

Sample: Inf-1	Lab ID: 103	59949001	Collected: 08/22/	16 12:00	Received: 0	8/23/16 10:15	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	1.4	2.1		08/25/16 19:18	3 71-43-2	
Ethylbenzene	ND	ug/m3	1.8	2.1		08/25/16 19:18	3 100-41-4	
THC as Gas	3750	ug/m3	150	2.1		08/25/16 19:18	3	A4
Toluene	6.7	ug/m3	1.6	2.1		08/25/16 19:18	3 108-88-3	
Xylene (Total)	9.3	ug/m3	5.6	2.1		08/25/16 19:18	3 1330-20-7	
m&p-Xylene	ND	ug/m3	9.3	2.1		08/25/16 19:18	3 179601-23-1	
o-Xylene	2.3	ug/m3	1.8	2.1		08/25/16 19:18	3 95-47-6	
Sample: Inf-2	Lab ID: 103	59949002	Collected: 08/22/	16 12:00	Received: 0	8/23/16 10:15	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	1.3	ug/m3	1.1	1.74		08/25/16 19:50) 71-43-2	
Ethylbenzene	ND	ug/m3	1.5	1.74		08/25/16 19:50) 100-41-4	
THC as Gas	3420	ug/m3	124	1.74		08/25/16 19:50)	A4
Toluene	5.6	ug/m3	1.3	1.74		08/25/16 19:50) 108-88-3	
Xylene (Total)	7.3	ug/m3	4.6	1.74		08/25/16 19:50	1330-20-7	
m&p-Xylene	ND	ug/m3	7.7	1.74		08/25/16 19:50) 179601-23-1	
o-Xylene	1.7	ug/m3	1.5	1.74		08/25/16 19:50) 95-47-6	
Sample: Inf-3	Lab ID: 103	59949003	Collected: 08/22/	16 12:00	Received: 0	8/23/16 10:15	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	1.1	1.68		08/25/16 20:34	71-43-2	
Ethylbenzene	ND	ug/m3	1.5	1.68		08/25/16 20:34	100-41-4	
THC as Gas	3170	ug/m3	120	1.68		08/25/16 20:34	Ļ	A4
Toluene	5.2	ug/m3	1.3	1.68		08/25/16 20:34	108-88-3	
Xylene (Total)	7.0	ug/m3	4.5	1.68		08/25/16 20:34	1330-20-7	
m&p-Xylene	ND	ug/m3	7.4	1.68		08/25/16 20:34	179601-23-1	
o-Xylene	1.6	ug/m3	1.5	1.68		08/25/16 20:34	95-47-6	



QUALITY CONTROL DATA

Project: P66 AOC 1396 10359949

Pace Project No.:

QC Batch:	432557	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	TO15 MSV AIR Low Level
Associated Lab Samp	bles: 10359949001, 10359949002, 10	359949003	

METHOD BLANK: 2352113

Matrix: Air

Associated Lab Samples: 10359949001, 10359949002, 10359949003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/m3	ND	0.65	08/25/16 09:59	
Ethylbenzene	ug/m3	ND	0.88	08/25/16 09:59	
m&p-Xylene	ug/m3	ND	4.4	08/25/16 09:59	
o-Xylene	ug/m3	ND	0.88	08/25/16 09:59	
THC as Gas	ug/m3	ND	71.2	08/25/16 09:59	
Toluene	ug/m3	ND	0.77	08/25/16 09:59	
Xylene (Total)	ug/m3	ND	2.6	08/25/16 09:59	

LABORATORY CONTROL SAMPLE: 2352114

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/m3	32.5	38.1	117	62-141	
Ethylbenzene	ug/m3	44.2	52.2	118	59-149	
m&p-Xylene	ug/m3	88.3	98.9	112	59-146	
o-Xylene	ug/m3	44.2	53.8	122	54-149	
THC as Gas	ug/m3	5130	6540	127	68-145	
Toluene	ug/m3	38.3	45.9	120	61-138	
Xylene (Total)	ug/m3	132	153	115	66-146	

SAMPLE DUPLICATE: 2352784

		10359990001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Benzene	ug/m3	2.4	2.5	5	25	
Ethylbenzene	ug/m3	ND	1.3J		25	
m&p-Xylene	ug/m3	ND	5.9J		25	
o-Xylene	ug/m3	1.8	1.8	1	25	
THC as Gas	ug/m3	960	1690	55	25 F	1
Toluene	ug/m3	5.1	5.1	1	25	
Xylene (Total)	ug/m3	7.6	7.6	0		

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

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc..



QUALIFIERS

 Project:
 P66 AOC 1396

 Pace Project No.:
 10359949

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above 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 decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

- A4 Sample was transferred from a sampling bag into a Summa Canister within 48 hours of collection.
- R1 RPD value was outside control limits.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P66 AOC 1396 Pace Project No.: 10359949

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10359949001	Inf-1	TO-15	432557		
10359949002	Inf-2	TO-15	432557		
10359949003	Inf-3	TO-15	432557		

<u> </u>	
777	1
23	1
	2
	-
- 57	1
5	1
- 5	1
~	1
50	
A 8	
() 8	
1 16	
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
· ~ '	5
<ul> <li></li> </ul>	\$
~	•

# CHAIN-OF-CUSTODY / Analytical Request Document

In359949

| ge: /1 Of /1                      |                                                         | tery Agency - A - A - A - A - A - A - A - A - A -                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                       | //Location//www.www.www.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | (N/X) en                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Residual Chion                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 002                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                     | SAMPLECONDITIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | me v v v                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | ><br>>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | lbele<br>(                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | (YVN)<br>Semplea Int<br>Coolar (YVN)<br>Received on<br>Received on<br>Received on                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      
                                                                         |
|-----------------------------------|---------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------
--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pa                                |                                                         | A STATE OF A                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                       | States of the states of the states                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | dinativersifiction of NNI were                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 1 (2), 71 = 11 (C4)8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 82316 1215 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | : 8/27/16                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Section C<br>Invoice Information: | Attention: Philips66<br>Company Name:                   | Address:                                                                                                                                                                                                                                                                                                                                                               | Pace Quote Reference:                                                                                                                                                                                                                                                                                                                                                                 | Pace Project Manager.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Pace Profile #:                                                                                                                                                                                                                                                                                                                                                                                   | Dresennatives                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | BHJJ-+<br>HJJ-+<br>1981<br>1981<br>1981<br>1981<br>1981<br>1981<br>1981<br>198                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | CLLCX<br>Weitienci<br>Meitienci<br>Metascive<br>HCG<br>HS2O4<br>HAO3<br>HS2O4<br>HS2O4<br>Robioseciveq<br>Sewbre LEWby                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                     | TIME STATES BY ACCEPTED BY ACC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Ill rest build and Bur                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 6/15:55 Nantonie                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | L I I<br>Artore                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ER LOUG DISVOR<br>ER LOU JUN DATE Signed                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| n B<br>red Project Information:   | tTo: Kvle Sattler<br>To: Codv Bishop                    |                                                                                                                                                                                                                                                                                                                                                                        | ase Order No.                                                                                                                                                                                                                                                                                                                                                                         | Project ID: P66 AOC 1396                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | ner Order Number:                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                    | START                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | (feadra to be a feadra to be a feadr | MATRIX CODE<br>SAMPLE TYPE<br>DATE<br>DATE<br>DATE<br>DATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 822/2016 12 OC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                      
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1 112.0 - 2111                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | ELLIPARY Reve 8/22/                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | SAMPLERNAMEANDSIGN                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | SIGNATURE of SAMPLI                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Section<br>Information: Require   | ATC Group Services Report<br>3347 Seaview Ave NW Copy 1 | 98107                                                                                                                                                                                                                                                                                                                                                                  | cyle.sattler@atcassociates.com Purcha                                                                                                                                                                                                                                                                                                                                                 | 206-781-1449 Fax   Client I                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Date/TAT: 10 Day (Standard)   Contait                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | One Character per box. Were were were were were were were were                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               
                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        
                                                                         |
|                                   | Section B Section C Section C Section C Page : 7 1 Of 7 | Section B         Section C           formation:         Required Project Information:         Invoice Information:           C Group Services         Report To:         Kyle Sattler         Attention:         Page : 7 1 Of 7           C Scoup Services         Report To:         Conv Nice         Concourt Name:         Concourt Name:         Concourt Name: | Section B         Section B         Section C           formation:         Required Project Information:         Invoice Information:         Invoice Information:           C Group Services         Report To:         Kyle Sattler         Attention:         Phillips66           17         Copy To:         Cody Bishop         Company Name:         Address:         Address: | Section B         Section B         Section C           formation:         Required Project Information:         Invoice Information:         Invoice Information:           C Group Services         Report To:         Kvie Sattler         Attention:         Phillips66           17         Copy To:         Cody Bishop         Company Name:         Address:         Examined on the interface of the interface | formation:     Section B     Section C       formation:     Required Project Information:     Invoice Information:       C Group Services     Report To:     Kvie Sattler       Aff Seaview Ave NW     Copy To:     Cody Bishop       107     Nurbase Order No.     Company Name:       - Sattler@atcassociates.com     Page to:     Page (atom reprint)       3-781-1449     Face     Commander: | Section B     Section C       formation:     Required Project Information:       C Group Services     Report To: Kvie Sattler       Y Seaview Ave NW     Report To: Cody Bishop       107     Attention:       assattler@atcassociates.com     Page in the sector Reference:       5-381-1449     Fax       6     Pace Project ID: P66 AOC 1396       5-381-1449     Fax       6     Pace Project ID: P66 AOC 1396 | Section B     Section C       formation:     Required Project Information:       C Group Services     Required Project Information:       Invoice Information:     Invoice Information:       Affection:     Attention:       Affection:     Attention:       Affection:     Attention:       Page:     1       Opy     Tex       Corrup Services     Report To:       Keedured Project In:     Attention:       Page:     1       Opy     Tex       Address:     Address:       S-311-1449     Fax       Fax:     Day (Standard)       Continer     Pace Quote Reference:       S-311-1449     Fax       Fax:     10 Day (Standard)       Continer Order Number:     Pace Profet Manager.       Attrass     Address:       S-311-1449     Fax       Fax:     Pace Auote Reference:       S-311-1449     Fax       Inf/XI:     10 Day (Standard)       Continer Order Number:     Pace Profet B:       Address     Pace Auote Reference:       Standardy     Pace Auote Reference:       Address     Pace Auote Reference:       Address     Pace Auote Reference:       Address     Pace Profet B:       Ad | Section B     Section B     Section C       formation:     Report for Null Settion     Invoice Information:       C Group Services     Report for KNB Sattler     Invoice Information:       C Service Null Services     C Service Information:     Invoice Information:       C Service Null Services     C Service Information:     Invoice Information:       107     C Service Null Service     C Company Name:       2:761-1449     Fex     C Company Name:       7:761-1449     Fex     C Company Name:       7:761-1449     Fex     Pare Quote Reference:       7:761-1449     Fex     Pare Project Manager:       7:761-1449     Fex     Pare Project Manager:       7:761-1449     Fex     Pare Project Manager:       7:71:10 Day (Standard)     Container Order Number:     Pare Profile #:       6     Pare Project Manager:     Pare Profile #:     Pare Profile #:       6     Pare Profile #:     Pare Profile #:     Pare Profile #:       6     MTRK     COLLECTED     Preservarives       7     FND     Stant Project Manager:     Preservarives                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Constant         Section E         Section C           Instant         Repeat Terr         Repeat Terr         Faller           CGroup Services         Repeat Terr         Repeat Terr         Page: 1         Or           T Searview Arve NW         Corpus Services         Repeat Terr         Page: 7         I           T Searview Arve NW         Corpus Services         Repeat Terr         Merides Information:         Merides Information:           T Searview Arve NW         Corpus Services         Repeat Terr         Merides         Merides           T Searview Arve NW         Corpus Services         Repeat Terr         Merides         Merides           T Searview Arve NW         Corpus Terr         Corpus Terr         Merides         Merides           T Searview Arve NW         Corpus Terr         Page Fright Manage:         Merides         Merides           T To Day (Standard)         Contacter Order Number:         Page Fright Manage:         Page Fright Manage:         Merides           Merides         Contacter Order Number:         Page Fright Manage:         Page Fright Manage:         Merides           Merides         Contacter Order Number:         Page Fright Manage:         Page Fright Manage:         Merides           Merides         Merides         Page Fr | Generation         Readular Chlorine (YNN)         Readular Chlorine (YNN) <threadular (ynn)<="" chlorine="" th=""></threadular> | Construction         Section C         Section C           Cound Strifters         Review Hermation:         Section C           Cound Strifters         Review Hermation:         Section C           Cound Strifters         Review Hermation:         Section C           Torrest Hermation:         Day Tor.         Colorub Strifters         Review Hermation:           Section C         Day Strifters         Day Strifters         Review Hermation:           Market Torrest Hermation:         Day Strifters         Review Hermation:         Review Hermation:           Market Torrest Hermation:         Day Strifters         Day Strifters         Review Hermation:           Market Torrest Hermation:         Review Hermation:         Review Hermation:         Review Hermation:           Market Torrest Hermation:         Review Hermation:         Review Hermation:         Review Hermation:           Revin the Hermation: <td>Member         Section C         Section C         Section C         Section C           CGOUD SErvices         Readination         Section C         Section C         Section C           CGOUD SErvices         Readination         Section C         Section C         Section C           CGOUD SErvices         Readination         Section C         Section C         Section C           CGOUD SErvices         Readination         Conv Ising C         Conv Ising C         Section C           CGOUD Services         Readination         Conv Ising C         Conv Ising C         Section C           CGOUD Services         Readination C         Conv Ising C         Conv Ising C         Section C           CGOUD Services         Readination C         Conv Ising C         Conv Ising C         Section C           CGOUD Services         Readination C         Conv Ising C         Readination C         Section C           CGUID Services         Readination C         Conv Ising C         Readination C         Readination C           CGUID Services         Readination C         Conv Ising C         Readination C         Readination C           CGUID Services         Readination C         Readination C         Readination C         Readination C           Readination Convine (YN</td> <td>Construction         Section Construction         Section Construct</td> <td>Control     Rection II       Immediation     Rection II       Control     Control       Control     Contered       Control     Co</td> <td>Control         Section C         Section C           Formation:         Restinct Project Information:         Logic Project Information:         Logic Project Information:           COUND Shrifters         Restinct Project Information:         Logic Project Information:         Logic Project Information:           COUND Shrifters         Restinct Project Information:         Logic Project Information:         Logic Project Information:           COUND Shrifters         Restinct Project Information:         Logic Project Information:         Logic Project Information:           COUND Shrifters         Restinct Project Information:         Logic Project Information:         Restinct Project Information:         Restinct Project Information:           Control Project Information:         Control Project Information:         Restinct Project Information:         Restinct Project Information:           Control Project Information:         Control Project Information:         Restinct Project Information:         Restinct Project Information:           Control Project Information:         Control Project Information:         Restinct Project Information:         Restinct Project Information:           Control Project Information:         Restinct Project Information:         Restinct Project Information:         Restinct Project Information:           Control Project Information:         Restinct Project Informo:         Restinderemotion:</td> <td>Contract         Sector C         Sector C</td> <td>Constant         Sector C           Montentin         Restor Data         Restor Data         Restor Data           Restor Data         Restor Data         Restor</td> <td>Monten         Rester Pla         Sector B           Rester Pla         Rester Pla         Sector B         Sector B         Sector B           Rester Pla         Rester Pla         Rester Pla         Sector B         Sector B         Sector B           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla<!--</td--><td>Control         Section 5         Section 5         Section 5         Section 5           Control Services         Control Services         Description         Section 5         Section 5           Control Services         Description         Description         Section 5         Section 5           Control Services         Description         Description         Description         Section 5           Control Services         Description         Description         Description         Description           Description         Description         Description         Description         Description           Description         Description         Description         Description         Description           Description         <t< td=""><td>Memory<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter</td><td>Видная         Видная         Budnaa         Budnaa         Budnaa</td><td>Полнование         Полнование         Полнов</td><td>Полити полити полити</td><td>Политики<br/>Полиции<br/>(содину Канисти<br/>(содину Канисти)         Политики<br/>(содину Канисти)         Политики         Политики         Политики        Политики         Пол</td></t<></td></td> | Member         Section C         Section C         Section C         Section C           CGOUD SErvices         Readination         Section C         Section C         Section C           CGOUD SErvices         Readination         Section C         Section C         Section C           CGOUD SErvices         Readination         Section C         Section C         Section C           CGOUD SErvices         Readination         Conv Ising C         Conv Ising C         Section C           CGOUD Services         Readination         Conv Ising C         Conv Ising C         Section C           CGOUD Services         Readination C         Conv Ising C         Conv Ising C         Section C           CGOUD Services         Readination C         Conv Ising C         Conv Ising C         Section C           CGOUD Services         Readination C         Conv Ising C         Readination C         Section C           CGUID Services         Readination C         Conv Ising C         Readination C         Readination C           CGUID Services         Readination C         Conv Ising C         Readination C         Readination C           CGUID Services         Readination C         Readination C         Readination C         Readination C           Readination Convine (YN | Construction         Section Construct | Control     Rection II       Immediation     Rection II       Control     Control       Control     Contered       Control     Co | Control         Section C         Section C           Formation:         Restinct Project Information:         Logic Project Information:         Logic Project Information:           COUND Shrifters         Restinct Project Information:         Logic Project Information:         Logic Project Information:           COUND Shrifters         Restinct Project Information:         Logic Project Information:         Logic Project Information:           COUND Shrifters         Restinct Project Information:         Logic Project Information:         Logic Project Information:           COUND Shrifters         Restinct Project Information:         Logic Project Information:         Restinct Project Information:         Restinct Project Information:           Control Project Information:         Control Project Information:         Restinct Project Information:         Restinct Project Information:           Control Project Information:         Control Project Information:         Restinct Project Information:         Restinct Project Information:           Control Project Information:         Control Project Information:         Restinct Project Information:         Restinct Project Information:           Control Project Information:         Restinct Project Information:         Restinct Project Information:         Restinct Project Information:           Control Project Information:         Restinct Project Informo:         Restinderemotion: | Contract         Sector C         Sector C | Constant         Sector C           Montentin         Restor Data         Restor Data         Restor Data           Restor Data         Restor Data         Restor | Monten         Rester Pla         Sector B           Rester Pla         Rester Pla         Sector B         Sector B         Sector B           Rester Pla         Rester Pla         Rester Pla         Sector B         Sector B         Sector B           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla         Rester Pla           Rester Pla         Rester Pla         Rester Pla         Rester Pla </td <td>Control         Section 5         Section 5         Section 5         Section 5           Control Services         Control Services         Description         Section 5         Section 5           Control Services         Description         Description         Section 5         Section 5           Control Services         Description         Description         Description         Section 5           Control Services         Description         Description         Description         Description           Description         Description         Description         Description         Description           Description         Description         Description         Description         Description           Description         <t< td=""><td>Memory<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter</td><td>Видная         Видная         Budnaa         Budnaa         Budnaa</td><td>Полнование         Полнование         Полнов</td><td>Полити полити полити</td><td>Политики<br/>Полиции<br/>(содину Канисти<br/>(содину Канисти)         Политики<br/>(содину Канисти)         Политики         Политики         Политики        Политики         Пол</td></t<></td> | Control         Section 5         Section 5         Section 5         Section 5           Control Services         Control Services         Description         Section 5         Section 5           Control Services         Description         Description         Section 5         Section 5           Control Services         Description         Description         Description         Section 5           Control Services         Description         Description         Description         Description           Description         Description         Description         Description         Description           Description         Description         Description         Description         Description           Description <t< td=""><td>Memory<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter<br/>(Counter</td><td>Видная         Видная         Budnaa         Budnaa         Budnaa</td><td>Полнование         Полнование         Полнов</td><td>Полити полити полити</td><td>Политики<br/>Полиции<br/>(содину Канисти<br/>(содину Канисти)         Политики<br/>(содину Канисти)         Политики         Политики         Политики        Политики         Пол</td></t<> | Memory<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter<br>(Counter | Видная         Budnaa         Budnaa         Budnaa | Полнование         Полнов | Полити | Политики<br>Полиции<br>(содину Канисти<br>(содину Канисти)         Политики<br>(содину Канисти)         Политики         Политики         Политики        Политики         Пол |

. . .

Pace Mnpis

# **Cooler Transfer Check List**

Client:	P66-	ATC	, ·	
Project Manager:	Jenni	6r	22	
Profile/Line #:	33336	a/a		
Received with Custod	ly Seal:	Yes	No	
Custody Seal Intact:	Yes	No	NA	
	Temp Read	Corre	cted Temp	Correction Factor
Temperature C: IR Gun # IR1 IR2 Samples on ic	<u>AmB</u> e, cooling proce	- ess has b	Am <u>B</u>	
Rush/Short Hold:	72 H	ours	, 	
Containers Intact:	Yes	No		
Re-packed and Re-to	slzzi ue ed:	<u> </u>		
Temp Blank Included	: Yes	No	ļ	
Shipped By/Date:	<u> </u>	122/10	<u> </u>	
			-	

Notes: Client to email Chain of Custody.

Careford Mar		Document N	ame:	Document Revised: 26Al	PR2016			
Pac	e Analvtical	Air Sample Condition Document I	No.:	Issuing Authority: Pace Minnesota Quality Office				
1		F-MN-A-105-r	rev.11					
ir Sample Condition Clie Upon Receipt Courier:	d Ex UVPS	Pr	oject #: <b>40#</b>	:103599 	<b>49</b>			
Tracking Number:	21 4575 025	4		9	reactive even bare of			
Custody Seal on Cooler/Bc	x Present? XYes	No Seals Intact	? 🔀 es 🗌 No	Optional: Proj. Due Date:	Proj. Name:			
acking Material: 🔲 Bub	ble Wrap 🔲 Bubble B	ags 🔊 Foam 🛄 None	e 🗌 Tin Can 🗌 Othe	er: Temj	<b>Blank rec</b> : Yes 🖵 🕅			
emp. (TO17 and TO13 sample Temp should be above freezir	es only) (°C): Ig to 6°C Correction Fact	Corrected Temp (°C):	Thermom. Used: Date & Initials of I	B88A912167504 B88A0143310098 Person Examining Contents:	151401163 151401164 <b>4823</b>			
pe of ice Received Blu	e 🗌 Wet 🎽 None							
				Comments:	<u> </u>			
Chain of Custody Present?		Yes No	N/A 1.					
Chain of Custody Filled Out	?	Yes No	N/A 2.					
Chain of Custody Relinquis	hed?	Yes No	<u>N/A</u> 3.					
Sampler Name and/or Sign	ature on COC?	YesNo	<u>N/A</u> 4.					
Samples Arrived within Hol	d Time?	Ves No		······				
Short Hold Time Analysis (	<72 hr)?	NvesNo						
Rush Turn Around Time Re	equested?	Yes No						
Sufficient Volume?		Yes No			•			
Correct Containers Used?		LNYes ∐No	N/A   9.					
-Pace Containers Used?		Yes No						
Containers Intact?		YesNo	N/A 10.					
Media: Air Can	Airbag Filter	TDT Passive						
Sample Labels Match COC	· · · · · · · · · · · · · · · · · · ·		N/A   12.					
Samples Received:			· · · · ·					
	Canisters			Canisters	1			
Sample Number	Can ID	Flow Controller ID	Sample Number	Can ID	Flow Controller ID			
					· · · · · · · · · · · · · · · · · · ·			
				ntioleto-to-to- 12				
	SOLUTION		Data /Tima:	Field Data Kequired?	[1162_[X]140			
Person Conta	ulea:		Date/ rime:					
	uon:							
Comments/Resolu								
Comments/Resolu								

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 C hold, incorrect preservative, out of temp, incorrect containers)

.....



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

September 07, 2016

Kyle Sattler ATC Group Services LLC 7070 SW Fir Loop Suite 100 Portland, OR 97223

RE: Project: AOC 1396 Pace Project No.: 10360829

Dear Kyle Sattler:

Enclosed are the analytical results for sample(s) received by the laboratory on August 30, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

JENNI GROSS

Jennifer Gross jennifer.gross@pacelabs.com Project Manager

Enclosures

cc: Cody Bishop, ATC Group Services LLC





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

#### CERTIFICATIONS

Project: AOC 1396 Pace Project No.: 10360829

#### **Minnesota Certification IDs**

1700 Elm Street SE Suite 200, Minneapolis, MN 55414 525 N 8th Street, Salina, KS 67401 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



# SAMPLE SUMMARY

Project: AOC 1396 Pace Project No.: 10360829

Lab ID Sample ID Matrix **Date Collected Date Received** 10360829001 08/29/16 13:00 08/30/16 10:00 inf-1 Air 10360829002 inf-2 Air 08/29/16 13:05 08/30/16 10:00 10360829003 inf-3 08/29/16 13:10 08/30/16 10:00 Air



# SAMPLE ANALYTE COUNT

Project:	AOC 1396	
Pace Project No .:	10360829	

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10360829001	inf-1	TO-15	NCK	7	PASI-M
10360829002	inf-2	TO-15	NCK	7	PASI-M
10360829003	inf-3	TO-15	NCK	7	PASI-M



Project:	AOC 1396
----------	----------

Pace Project No.: 10360829

Sample: inf-1	Lab ID: 103	60829001	Collected: 08/29/	16 13:00	Received: 08	3/30/16 10:00 N	latrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	26.2	40.4		09/06/16 23:26	71-43-2	
Ethylbenzene	ND	ug/m3	35.6	40.4		09/06/16 23:26	100-41-4	
THC as Gas	15100	ug/m3	2880	40.4		09/06/16 23:26		CH,L1
Toluene	57.8	ug/m3	31.1	40.4		09/06/16 23:26	108-88-3	
Xylene (Total)	ND	ug/m3	107	40.4		09/06/16 23:26	1330-20-7	
m&p-Xylene	ND	ug/m3	178	40.4		09/06/16 23:26	179601-23-1	
o-Xylene	ND	ug/m3	35.6	40.4		09/06/16 23:26	95-47-6	
Sample: inf-2	Lab ID: 103	60829002	Collected: 08/29/	16 13:05	Received: 08	3/30/16 10:00 N	1atrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	26.2	40.4		09/06/16 23:54	71-43-2	
Ethylbenzene	ND	ug/m3	35.6	40.4		09/06/16 23:54	100-41-4	
THC as Gas	19700	ug/m3	2880	40.4		09/06/16 23:54		CH,L1
Toluene	60.4	ug/m3	31.1	40.4		09/06/16 23:54	108-88-3	
Xylene (Total)	ND	ug/m3	107	40.4		09/06/16 23:54	1330-20-7	
m&p-Xylene	ND	ug/m3	178	40.4		09/06/16 23:54	179601-23-1	
o-Xylene	ND	ug/m3	35.6	40.4		09/06/16 23:54	95-47-6	
Sample: inf-3	Lab ID: 103	60829003	Collected: 08/29/	16 13:10	Received: 08	3/30/16 10:00 N	latrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	26.2	40.4		09/07/16 00:22	71-43-2	
Ethylbenzene	ND	ug/m3	35.6	40.4		09/07/16 00:22	100-41-4	
THC as Gas	ND	ug/m3	2880	40.4		09/07/16 00:22		
Toluene	80.6	ug/m3	31.1	40.4		09/07/16 00:22	108-88-3	
Xylene (Total)	148	ug/m3	107	40.4		09/07/16 00:22	1330-20-7	
m&p-Xylene	ND	ug/m3	178	40.4		09/07/16 00:22	179601-23-1	
o-Xylene	36.3	ug/m3	35.6	40.4		09/07/16 00:22	95-47-6	



# **QUALITY CONTROL DATA**

Project: AOC 1396 10360829

Pace Project No.:

QC Batch:	43420	2		Analysis Method:		TO-15	
QC Batch Method:	TO-15	i		Analysis Description:	:	TO15 MSV AIR Low Level	
Associated Lab Samp	oles:	10360829001,	10360829002,	10360829003			

METHOD BLANK: 2361005

# Matrix: Air

Associated Lab Samples:	10360829001. 1036082900	2.10360829003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/m3		0.65	09/06/16 12:10	
Ethylbenzene	ug/m3	ND	0.88	09/06/16 12:10	
m&p-Xylene	ug/m3	ND	4.4	09/06/16 12:10	
o-Xylene	ug/m3	ND	0.88	09/06/16 12:10	
THC as Gas	ug/m3	ND	71.2	09/06/16 12:10	
Toluene	ug/m3	ND	0.77	09/06/16 12:10	
Xylene (Total)	ug/m3	ND	2.6	09/06/16 12:10	

#### LABORATORY CONTROL SAMPLE: 2361006

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/m3	32.5	39.4	121	62-141	
Ethylbenzene	ug/m3	44.2	54.7	124	59-149	
m&p-Xylene	ug/m3	88.3	104	118	59-146	
o-Xylene	ug/m3	44.2	51.5	117	54-149	
THC as Gas	ug/m3	5130	7720	151	68-145	CH,L1
Toluene	ug/m3	38.3	43.4	113	61-138	
Xylene (Total)	ug/m3	132	156	118	66-146	

#### SAMPLE DUPLICATE: 2361551

		10360771002	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Benzene	ug/m3	5.2	5.0	3	25	
Ethylbenzene	ug/m3	16.5	16.9	2	25	
m&p-Xylene	ug/m3	59.6	60.1	1	25	
o-Xylene	ug/m3	24.0	24.4	2	25	
THC as Gas	ug/m3	27300	25800	6	25	CH,L1
Toluene	ug/m3	41.2	42.2	2	25	
Xylene (Total)	ug/m3	83.6	84.6	1		

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**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, Inc..



#### QUALIFIERS

Project:	AOC 1396
Pace Project No.:	10360829

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above 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 decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

**RPD** - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

- CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
- L1 Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.



# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:AOC 1396Pace Project No.:10360829

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10360829001	inf-1	 TO-15	434202		
10360829002	inf-2	TO-15	434202		
10360829003	inf-3	TO-15	434202		

Pace Analytical www.gaeelaks.com		CHAIN-OF- The Chain-of-Custod	CUSTOD) y is a LEGAL DO	( / Analytica DUMENT. All relevant	I Request Do	<b>cument</b> d accurately.		0	360	829	
Section A	Section B		Section C				Page		of		
company:	Report To: L		Invoice Inforr Attention:	mation:					7208	386	
Address:	COPY To: A COPY To: A COPY To: A	1	Company Na	me:		PECIU ATOP		[   .   .			
	1001	A.V.	Address:			I NPDES	GROUN	D WATER	DR DR	NKING WAT	ER
Email To: Kul Cuth Court	Purchase Order No.:		Pace Quote Reference			L UST	T RCRA		5 . L	<del>l</del> ER	
Phone: Fax:	Project Name: ATV 12	a/	Pace Project		222	Site Location	Wertlake/	Merch			
Requested Due Date/TAT: くわ んか	Project Number:	a	Pace Profile #:	33333/		STATE:	AN.			•	
				21-22-22	Requested	Analysis Filter	ed (Y/N)				
Section D Required Client Information	Matrix Codes MATRIX / CODE	COLLECTED		Preservatives	1 N /A					· .	-
	Diniking Water DW 25 0 Water WY 05 0 Waste Water WW 05 0 Product P 75 6 0 SolfSold SL 9	COMPOSITE			5 <i>128</i> 5*			(N/A)			
SAMPLE ID (A-Z, 0-97, -) Sample IDs MUST BE UNIQUE	Mipe Air Tissue Tissue CODE (se CODE (se CODE (se CODE (se		геме ат сс ИТАІИЕRS Ved	I	) ) ) ) ( ) ) ) ) ) ) ) ) ) ) ) ) ) ) )			) əniroldƏ			
# МЭТІ 1	о мартегт Замагет В М	TIME DATE TIME	H ³ SOF Cubresei Unpresei	Methano Methano NaOH HCI HNO3	ketter Ketter			IsubizəЯ	Pace Proj	ect No./ La	
1 INF-1	8/21/1/2	202	Ţ		-				100		
2 12-2		امر							200		
3 INF-3		4 P						_	00 3		
4			-								
5.						· · · · ·					
7						-					
8											
9 10											
11											
12 ADDITIONAL COMMENTS		PILIATION DATE	TIME	ACCEPT	ED BY / AFFILIATION	DATE			SAMPLE CO	NDITIONS	
	1 - Bu	N 8/241	11/15/52	- MAE	M.	8 greve	1515	24.11			
	( Buul / Trades /	Pare 8/29/1	6 16:05	AND	ממירב אווי	5 83ale	000	SW.	2	5 3	
	) ) )	- - - - - - - - - - - - - - - - - - -		~							
Pa									_		
age S	SA	MPLER NAME AND SIGNA	TURE					J° n	Αρι Αρι (N/.	()	()
9 of 11	ORIGINAL	PRINT Name of SAMP SIGNATURE of SAMP	LER: Co.	LICE Y	DATE Signed	116212		i qməT Receive	Y) eol Ousto	4/Y) 	
*Important Note: Bv signing this form	I vou are accepting Pace's NET 30 day payment terms and a	idreeing to late charges of 1.5% per	month for any invoice	is not paid within 30 days.	-			F-ALL-Q-02	20rev.07.15	-Mav-2007	]

Para	Anah <i>tical</i> [®]	Do Air Sample	cument Name: Condition Upon F	Receipt	Document Revised: 26 Page 1 of 1 Issuing Authori	5APR2016
. Tabor	inalytical	F-M	N-A-106-rev.11		Pace Minnesota Qual	ity Office
Sample Condition Clien Upon Receipt	t Name: ATC		Project	#: WO# :	103608	29
Courier: Com Com	Ex UPS mercial Pace	Speedee	Client	10360829		
ustody Seal on Cooler/Box	Present?	No Sea	 is intact?	∑es □No	Optional: Proj. Due Date:	Proj. Name:
cking Material: TRubble	e Wrap 🗍 Bubble	Bags Foam	None [	- ── ]Tin Can □Othe	r: Ter	mp Blank rec: 🗍Yes 🛛
mp. (TO17 and TO13 samples of emp should be above freezing to be of ice Received Blue	only) (°C):	Corrected Temp (°C	): _ <b>k</b> 2	Thermom. Used: Date & Initials of F	B88A912167504 B88A0143310098 Jerson Examining Contents:	151401163 151401164 <b>P-83</b>
					Comments:	
Chain of Custody Present?		Yes	No N/A	1.		
Chain of Custody Filled Out?		Yes	No N/A	2.		
Chain of Custody Relinquished	d?	ZYes	INO N/A	3.		
ampler Name and/or Signatu	ure on COC?	Yes	<u>INo ∐N/A</u>	4.		
amples Arrived within Hold	lime?	Yes	No NA	5.	Λ	
hort Hold Time Analysis (<7	2 hr)?	Yes	<u> No  _N/A</u>	-6.7 - 3.6	40	
Rush Turn Around Time Requ	lested?	Yes	JNo ∐N/A	7.		
Sufficient Volume?		Yes	JNo UN/A	8.		
Correct Containers Used?		L Pes	No NA	9.		
-Pace Containers Used?		Yes	No N/A			
Containers Intact?	$\rightarrow$	Yes	No N/A	10.		
Media: Air Can Air	bag Filter	TDT Pas	sive	11.		
ample Labels Match COC?		<b>⊆</b> ¥es	No N/A	12.		
Samples Received:					· ·	
	Canisters				Canisters	
Sample Number	Can ID	Flow Controlle	er ID S	ample Number	Can ID	Flow Controller
					-	
				• •		
	,					
					.  .	
		1	I			
IENT NOTIFICATION/RESO	UTION				Field Data Required	Yes 🕅 No
JENT NOTIFICATION/RESO	. <b>UTION</b> d:			Date/Time:	Field Data Required	I? Yes Mino
IENT NOTIFICATION/RESO Person Contacte Comments/Resolutio	. <b>UTION</b> d:			Date/Time:	Field Data Required	i? Ures Mino
JENT NOTIFICATION/RESO Person Contacte Comments/Resolutio	.UTION d:			Date/Time:	Field Data Required	1: Yes Aino

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"	Document Name: Cooler Transfer Check List	Revised Date: 23Apr2013 Page 1 of 1	
	Document Number: F-MN-C-120-rev.01	Issuing Authority: Pace Minnesota Quality Office	

# **Cooler Transfer Check List**

Client:	Plele- f	<u>. 574</u>	
Project Manager:	Jenni	Gross	-
Profile/Line #:	3333	32/2	
Received with Custod	y Seal:	Yes No	
Custody Seal Intact:	Yes	No NA	
	Temp Read	Corrected T	emp Correction Factor
Temperature C: IR Gun # IR1 IR2 ( Samples on Ice	281) 281) a, cooling proce	24. ess has begun	AMB AIR
Rush/Short Hold:	72 H	tour HOL	0
Containers Intact:	Yes	No	
Re-packed and Re-lea	™ 8/29/10 <b>€0:</b>		
Temp Blank Included	Yes	No	
Shipped By/Date:	<u> </u>	8/29/16	

Notes:

MIN - SHORT HOLD



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

October 18, 2016

Kyle Sattler ATC Group Services LLC 6347 Seaview Ave NW Seattle, WA 98107

RE: Project: AOC 1396 Pace Project No.: 10365243

Dear Kyle Sattler:

Enclosed are the analytical results for sample(s) received by the laboratory on October 07, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

ENNI (TROSS

Jennifer Gross jennifer.gross@pacelabs.com Project Manager

Enclosures





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

#### CERTIFICATIONS

Project: AOC 1396 Pace Project No.: 10365243

#### **Minnesota Certification IDs**

1700 Elm Street SE Suite 200, Minneapolis, MN 55414 Alaska Certification UST-107 525 N 8th Street, Salina, KS 67401 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



# SAMPLE SUMMARY

Project:AOC 1396Pace Project No.:10365243

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10365243001	Inf-1	Air	10/06/16 10:25	10/07/16 10:00
10365243002	Int-1	Air	10/06/16 10:26	10/07/16 10:00
10365243003	Eff-1	Air	10/06/16 10:28	10/07/16 10:00
10365243004	Inf-2	Air	10/06/16 10:30	10/07/16 10:00
10365243005	Int-2	Air	10/06/16 10:32	10/07/16 10:00
10365243006	Eff-2	Air	10/06/16 10:34	10/07/16 10:00
10365243007	Inf-3	Air	10/06/16 10:36	10/07/16 10:00
10365243008	Int-3	Air	10/06/16 10:38	10/07/16 10:00
10365243009	Eff-3	Air	10/06/16 10:40	10/07/16 10:00


## SAMPLE ANALYTE COUNT

Project:AOC 1396Pace Project No.:10365243

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10365243001	Inf-1	TO-15	MJL	7	PASI-M
10365243002	Int-1	TO-15	MJL	7	PASI-M
10365243003	Eff-1	TO-15	MJL	7	PASI-M
10365243004	Inf-2	TO-15	MJL	7	PASI-M
10365243005	Int-2	TO-15	MJL	7	PASI-M
10365243006	Eff-2	TO-15	MJL	7	PASI-M
10365243007	Inf-3	TO-15	MJL	7	PASI-M
10365243008	Int-3	TO-15	MJL	7	PASI-M



Pace Project No.: 10365243

Sample: Inf-1	Lab ID: 103	65243001	Collected: 10/06/	16 10:25	Received:	10/07/16 10:00 I	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15						
Benzene	51.9	ug/m3	12.6	38.8		10/15/16 16:28	3 71-43-2	A4
Ethylbenzene	ND	ug/m3	34.1	38.8		10/15/16 16:28	3 100-41-4	
THC as Gas	68600	ug/m3	4030	38.8		10/15/16 16:28	3	
Toluene	130	ug/m3	29.9	38.8		10/15/16 16:28	3 108-88-3	
Xylene (Total)	220	ug/m3	103	38.8		10/15/16 16:28	3 1330-20-7	
m&p-Xylene	142	ug/m3	68.7	38.8		10/15/16 16:28	3 179601-23-1	l
o-Xylene	77.5	ug/m3	34.1	38.8		10/15/16 16:28	3 95-47-6	
Sample: Int-1	Lab ID: 103	65243002	Collected: 10/06/	16 10:26	Received:	10/07/16 10:00 I	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15						
Benzene	19.9	ua/m3	12.6	38.8		10/15/16 16:56	71-43-2	Δ <i>Δ</i>
Ethylbenzene	ND	ug/m3	34.1	38.8		10/15/16 16:56	3 100-41-4	774
THC as Gas	35400	ug/m3	4030	38.8		10/15/16 16:56	3	
Toluene	192	ug/m3	29.9	38.8		10/15/16 16:56	, 3 108-88-3	
Xvlene (Total)	ND	ug/m3	103	38.8		10/15/16 16:56	6 1330-20-7	
m&p-Xvlene	ND	ug/m3	68.7	38.8		10/15/16 16:56	5 179601-23-1	
o-Xylene	ND	ug/m3	34.1	38.8		10/15/16 16:56	6 95-47-6	
Sample: Eff-1	Lab ID: 103	65243003	Collected: 10/06/	16 10:28	Received:	10/07/16 10:00 I	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15						
Benzene	16.2	ug/m3	13.1	40.4		10/15/16 17:23	3 71-43-2	A4
Ethylbenzene	ND	ug/m3	35.6	40.4		10/15/16 17:23	3 100-41-4	
THC as Gas	17700	ug/m3	4190	40.4		10/15/16 17:23	3	
Toluene	133	ug/m3	31.1	40.4		10/15/16 17:23	3 108-88-3	
Xylene (Total)	ND	ug/m3	107	40.4		10/15/16 17:23	3 1330-20-7	
m&p-Xylene	ND	ug/m3	71.5	40.4		10/15/16 17:23	3 <b>179601-23-</b> 1	
o-Xylene	ND	ug/m3	35.6	40.4		10/15/16 17:23	3 95-47-6	
Sample: Inf-2	Lab ID: 103	65243004	Collected: 10/06/	16 10:30	Received:	10/07/16 10:00 I	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15						
Benzene	48.7	ug/m3	12.2	37.4		10/15/16 17:51	71-43-2	A4
Ethvlbenzene	ND	ug/m3	32.9	37.4		10/15/16 17:51	100-41-4	
THC as Gas	42100	ug/m3	3880	37.4		10/15/16 17:51		
Toluene	185	ug/m3	28.8	37.4		10/15/16 17:51	108-88-3	

## **REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



## Project: AOC 1396

Pace Project No.: 10365243

Sample: Inf-2	Lab ID: 103	65243004	Collected: 10	0/06/1	6 10:30	Received: 1	10/07/16 10:00 N	latrix: Air	
Parameters	Results	Units	Report Li	mit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15							
Xylene (Total)	181	ug/m3		99.1	37.4		10/15/16 17:51	1330-20-7	
m&p-Xylene	119	ug/m3		66.2	37.4		10/15/16 17:51	179601-23-1	
o-Xylene	62.9	ug/m3	:	32.9	37.4		10/15/16 17:51	95-47-6	
Sample: Int-2	Lab ID: 103	65243005	Collected: 10	0/06/1	16 10:32	Received: 1	10/07/16 10:00 M	Atrix: Air	
Parameters	Results	Units	Report Li	mit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15							
Benzene	20.7	ug/m3		13.1	40.4		10/15/16 18:19	71-43-2	A4
Ethylbenzene	ND	ug/m3	:	35.6	40.4		10/15/16 18:19	100-41-4	
THC as Gas	24500	ug/m3	4	190	40.4		10/15/16 18:19		
Toluene	145	ug/m3	:	31.1	40.4		10/15/16 18:19	108-88-3	
Xylene (Total)	ND	ug/m3		107	40.4		10/15/16 18:19	1330-20-7	
m&p-Xylene	ND	ug/m3		71.5	40.4		10/15/16 18:19	179601-23-1	
o-Xylene	ND	ug/m3	:	35.6	40.4		10/15/16 18:19	95-47-6	
Sample: Eff-2	Lab ID: 103	65243006	Collected: 10	0/06/1	6 10:34	Received: 1	10/07/16 10:00 M	fatrix: Air	
Parameters	Results	Units	Report Li	mit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15							
Benzene	21.6	ug/m3		14.2	43.8		10/15/16 18:46	71-43-2	A4
Ethylbenzene	ND	ug/m3	:	38.5	43.8		10/15/16 18:46	100-41-4	
THC as Gas	20900	ug/m3	4	540	43.8		10/15/16 18:46		
Toluene	155	ug/m3	:	33.7	43.8		10/15/16 18:46	108-88-3	
Xylene (Total)	ND	ug/m3		116	43.8		10/15/16 18:46	1330-20-7	
m&p-Xylene	ND	ug/m3		77.5	43.8		10/15/16 18:46	179601-23-1	
o-Xylene	ND	ug/m3	:	38.5	43.8		10/15/16 18:46	95-47-6	
Sample: Inf-3	Lab ID: 103	65243007	Collected: 10	0/06/1	16 10:36	Received: 1	10/07/16 10:00 M	fatrix: Air	
Parameters	Results	Units	Report Li	mit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Meth	nod: TO-15							
Benzene	51.0	ug/m3		13.1	40.4		10/15/16 19:19	71-43-2	
Ethylbenzene	ND	ug/m3	;	35.6	40.4		10/15/16 19:19	100-41-4	
THC as Gas	39600	ug/m3	4	190	40.4		10/15/16 19:19		
Toluene	154	ug/m3	;	31.1	40.4		10/15/16 19:19	108-88-3	
Xylene (Total)	176	ug/m3		107	40.4		10/15/16 19:19	1330-20-7	
m&p-Xylene	115	ug/m3		71.5	40.4		10/15/16 19:19	179601-23-1	
o-Xylene	60.8	ug/m3	:	35.6	40.4		10/15/16 19:19	95-47-6	

## **REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



Project: AOC 1396

Pace Project No.: 10365243

Sample: Int-3	Lab ID: 10	0365243008	Collected: 10/06/1	6 10:38	Received: 10	0/07/16 10:00 M	atrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical M	ethod: TO-15						
Benzene	68.8	ug/m3	13.1	40.4		10/15/16 20:23	71-43-2	A4
Ethylbenzene	44.2	ug/m3	35.6	40.4		10/15/16 20:23	100-41-4	
THC as Gas	33400	ug/m3	4190	40.4		10/15/16 20:23		
Toluene	304	ug/m3	31.1	40.4		10/15/16 20:23	108-88-3	
Xylene (Total)	215	ug/m3	107	40.4		10/15/16 20:23	1330-20-7	
m&p-Xylene	159	ug/m3	71.5	40.4		10/15/16 20:23	179601-23-1	
o-Xylene	55.9	ug/m3	35.6	40.4		10/15/16 20:23	95-47-6	



#### **QUALITY CONTROL DATA**

Project:	AOC 13	96								
Pace Project No.:	1036524	43								
QC Batch:	44126	6		Analysis	Method:	то	)-15			
QC Batch Method:	TO-15			Analysis	Description:	то	15 MSV AIR	Low Level		
Associated Lab San	nples:	103652430 103652430	001, 10365243002 008	2, 1036524300	3, 1036524300	94, 10	365243005,	10365243006,	10365243007,	
METHOD BLANK:	240194	4		Ma	trix: Air					
Associated Lab San	nples:	103652430 103652430	)01, 10365243002 )08	, 1036524300	03, 1036524300	94, 10	365243005,	10365243006,	10365243007,	
				Blank	Reportin	g				
Paran	neter		Units	Result	Limit		Analyze	d Qualif	iers	
Benzene			ug/m3		ND	0.32	10/15/16 09	9:51		
Ethylbenzene			ug/m3	1	ND	0.88	10/15/16 09	9:51		
m&p-Xylene			ug/m3	1	ND	1.8	10/15/16 09	9:51		
o-Xylene			ug/m3	1	ND	0.88	10/15/16 09	9:51		
THC as Gas			ug/m3	1	ND	104	10/15/16 09	9:51		
Toluene			ug/m3	1	ND	0.77	10/15/16 09	9:51		
Xylene (Total)			ug/m3	1	ND	2.6	10/15/16 09	9:51		
LABORATORY COM	NTROL S	AMPLE:	2401945							
				Spike	LCS		LCS	% Rec		
Paran	neter		Units	Conc.	Result	%	% Rec	Limits	Qualifiers	
Benzene			ug/m3	32.5	35.7		110	62-141		
Ethylbenzene			ug/m3	44.2	46.2		105	59-149		
m&p-Xylene			ug/m3	88.3	92.7		105	59-146		
o-Xylene			ug/m3	44.2	46.0		104	54-149		
THC as Gas			ug/m3	5130	5370		105	68-145		
Toluene			ug/m3	38.3	38.7		101	61-138		
Xylene (Total)			ug/m3	132	139		105	66-146		

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.



#### QUALIFIERS

Project: AOC 1396 Pace Project No.: 10365243

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above 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 decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

**RPD** - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

A4 Sample was transferred from a sampling bag into a Summa Canister within 48 hours of collection.



## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:AOC 1396Pace Project No.:10365243

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10365243001	Inf-1	 TO-15	441266		
10365243002	Int-1	TO-15	441266		
10365243003	Eff-1	TO-15	441266		
10365243004	Inf-2	TO-15	441266		
10365243005	Int-2	TO-15	441266		
10365243006	Eff-2	TO-15	441266		
10365243007	Inf-3	TO-15	441266		
10365243008	Int-3	TO-15	441266		

CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Pace Analytical	The Chain-of-Custody is	אומו הקשמים הקשמים שומו אומו אומו אומו אומו אומו אומו אומו	d accurately.			
жич. расеlabs. сот Section A	Section B	Section C		Page:	oť	
Required Client Information:	Required Project Information:	Invoice Information:		4 4	50070	
Company: ATC	Report To: Kyle Sattler	Attention:			01000	
Address:	CONTO: CO/DY Dishon	Company Name:	REGULATORY AGE	NCY	•	
		Address:	F NPDES F GF	ROUND WATER	DRINKING W	ATER
Email TO: UVIT Sold Revendences it	Purchase Order No.:	Pace Quote Reference:	L UST T RC	CRA	- OTHER	
Phone: Fax:	Project Name: AN RGL	Pace Project CANN GINZS	Site Location			
Requested Due Date/TAT:	Project Number:	Pace Profile # 33333 / 2	STATE:	ΔA		
		Requested	Anatysis Filtered (Y/h	9		
Section D Matrix C Required Client Information MATRIX /	odes 을 돌 cobe: 호텔 출	Preservatives	-			
Drinking Wate Water Waste Water Product	MM ML COMPOSITE MM ML COMPOSITE COMPOSITE START RAB C=CO START COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COMPOSITE COM	sF QL P ⁿ		(N/A		
Sail/Solid SAMPLE ID Oi (A-2, 0-9 / -) Air Samole IDs MUST BE UNIQUE Tissue	1 3 유 은 전 ODE (see 아PE (G=GI	2я∃иіат be⁄ ∎ tзэТ з //з№і Ҳd		) eninoldC		
ITEM #		# OF CON Methanol MarSS203 MarSS203 Methanol Methanol Other Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methanol Methan		Residual (	ace Project No./ I	Lab 1.D.
1 - JUT 1	AC ICAIR					
2 Int-2						
3 ER- 2		<u>}</u>				
4 INP 3						
5 1111 d					,	
· + + + + + + + + + + + + + + + + + + +						
8 TA- 3						
8 FF 3		) ) ) )				
10						
12						
ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION DATE	TIME ACCEPTED BY / AFFILIATION	DATE	S	AMPLE CONDITIONS	10
	Lu 1210 10/2/14	1600 Meditor M	E 10616 160	5 AWB -	2	2
	- tenning / Page 10/10/14	16:15 Mothon Wa	1001 01-01-00	D Amb A	>	~
Ра						
ge 1	SAMPLER NAME AND SIGNATUF			UO PE	/) Cooler DqA	: Intact ()
<b>ō</b> 1 of 1	RIGINAL PRINT Name of SAMPLER	Cody Bishey Date Signed	- 1, 111	i qrn91	() eoi Dealea (Y/)	səlqmi 1/Y)
13	SIGNAL UKE OF DAMPTER		2/1/9/01	= - -	ă 	₹S

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 involces not paid within 30 days.

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

Programme Ample direct."	Document Name: Cooler Transfer Check List	Revised Date: 23Apr2013 Page 1 of 1
A ace Analytical	Document Number: F-MN-C-120-rev.01	issuing Authority: Pace Minnesota Quality Office

# Cooler Transfer Check List

Client:	Plele-	ATZ		
Project Manager:	Jenni	Gros	2	
Profile/Line #:	33332	2/2		
Received with Custody	y Seal:	Yes	No	
Custody Seal Intact:	Yes	No	NA	
	Temp Read	Corre	cted Temp	Correction Factor
Temperature C: IR Gun # IR1 IR2 Samples on ice	<u>AMB</u> , cooling proce	ess has b	egun AVR	
Rush/Short Hold:	72 H	our		
Containers Intact:	Yes	No	/	
Re-packed and Re-loc	ed: volume	$\sim$	<u>.</u>	
Temp Blank Included:	Yes	No	)	
Shipped By/Date:	a		0/16	

Notes:

Pace		Air Samale Condition	Name.	Page 1 of 1	K2016
L/	Analytical	Document	No.:	Issuing Authority: Pace Minnesota Quality	Office
Sample Condition Clies	nt Name: ATC/P	ace-WA	roject #: WO#	103652	43
Courier: 2Fed Cor Fracking Number: 702	I Ex []UPS mmercial []Pace 21 4575 20	Speedee []Clie []Other: 746	ent 1036524	43 43	
ustody Seal on Cooler/Bo>	Present?	No Seals Intac	t? 🛃 Yes 🗌 No	Optional: Proj. Due Date:	Proj. Name:
acking Material: 🛛 🖉 Bubb	le Wrap 🔲 Bubble	Bags 🗍 Foam 🛄 Nor	ne 🗌 Tin Can 🛄 Oth	er: Temp	Blank rec: Yes No
emp. (TO17 and TO13 samples Femp should be above freezing rpe of ice Received Blue	s only) (°C):	Corrected Temp (°C):	Thermom. Used: Date & Initials of	B88A912167504 B88A0143310098 Person Examining Contents:	□151401163 □151401164 10 - 7 - 16 MZ
Chain of Custody Present?	·	No	□N/A 1.		
Chain of Custody Filled Out?			□N/A 2.		
Chain of Custody Relinquish	ed?	Ves No	□N/A 3.		
Sampler Name and/or Signa	ture on COC?		□N/A 4.		
Samples Arrived within Hold	I Time?	Yes No	□N/A 5.	A	
Short Hold Time Analysis (<	72 hr)?	Yes No	$\square N/A = 6. 7 - B4$	465	
Rush Turn Around Time Red	quested?	Yes No	□N/A 7.	2 11 ( 1 )	
Sufficient Volume?		Yes No	<u>N/A</u> 8. EFF- 3	s will not be run	Que to insutticio
Correct Containers Used?		ØYes □No	□N/A 9.		V V
-Pace Containers Used?		Yes No			
Containers Intact?		Yes No	N/A 10.		
Media: Air Can	Airbag Filter	TDT Passive		11. Lan	100
Sample Labels Match COC?			N/A   12. /V j (0	111CI /on TIME an	
Samples Received:					
	Canisters	· · · · · · · · · · · · · · · · · · ·		Canisters	1
Sample Number	Can ID	Flow Controller ID	Sample Number	Can ID	Flow Controller ID
			· ·		
CLIENT NOTIFICATION/RES				Field Data Required?	Yes 🕅No
	ted: Kyle Sattler		Date/Time: <u>1(</u>	J/U//16	
Person Contac	NU CONTRACTO		ime to analyze for cal		
Person Contac Comments/Resolut	ion: Notified Kyle,	there is insufficient volu	ine to analyze for sai		
Person Contac Comments/Resolut	ion: Notified Kyle,	there is insufficient volu			

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	n Office ( i.e. out of
hold, incorrect preservative, out of temp, incorrect containers)	



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

November 02, 2016

Kyle Sattler ATC Group Services LLC 6347 Seaview Ave NW Seattle, WA 98107

RE: Project: P66 Westlake/ Mercer Pace Project No.: 10367246

Dear Kyle Sattler:

Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

ENNI (TROSS

Jennifer Gross jennifer.gross@pacelabs.com Project Manager

Enclosures





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

#### CERTIFICATIONS

Project: P66 Westlake/ Mercer Pace Project No.: 10367246

#### **Minnesota Certification IDs**

1700 Elm Street SE Suite 200, Minneapolis, MN 55414 Alaska Certification UST-107 525 N 8th Street, Salina, KS 67401 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



## SAMPLE SUMMARY

Project: P66 Westlake/ Mercer Pace Project No.: 10367246

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10367246001	Inf-1	Air	10/21/16 14:15	10/22/16 08:55
10367246002	Inf-2	Air	10/21/16 14:15	10/22/16 08:55
10367246003	Inf-3	Air	10/21/16 14:15	10/22/16 08:55



## SAMPLE ANALYTE COUNT

Project: P66 Westlake/ Mercer Pace Project No.: 10367246

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10367246001	Inf-1	TO-15	NCK	7	PASI-M
10367246002	Inf-2	TO-15	NCK	7	PASI-M
10367246003	Inf-3	TO-15	NCK	7	PASI-M



#### Project: P66 Westlake/ Mercer

Pace Project No.: 10367246

Sample: Inf-1	Lab ID: 103	67246001	Collected: 10/21/	16 14:15	Received: 1	0/22/16 08:55 N	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	1.4	ug/m3	0.66	2.02		10/27/16 18:59	71-43-2	A4
Ethylbenzene	ND	ug/m3	1.8	2.02		10/27/16 18:59	100-41-4	
THC as Gas	5550	ug/m3	210	2.02		10/27/16 18:59		
Toluene	55.0	ug/m3	52.3	67.87		10/28/16 12:48	108-88-3	
Xylene (Total)	ND	ug/m3	5.4	2.02		10/27/16 18:59	1330-20-7	
m&p-Xylene	ND	ug/m3	3.6	2.02		10/27/16 18:59	179601-23-	1
o-Xylene	ND	ug/m3	1.8	2.02		10/27/16 18:59	95-47-6	
Sample: Inf-2	Lab ID: 103	67246002	Collected: 10/21/	16 14:15	Received: 1	0/22/16 08:55 M	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	1.3	ug/m3	0.63	1.94		10/27/16 19:26	71-43-2	A4
Ethylbenzene	7.2	ug/m3	1.7	1.94		10/27/16 19:26	100-41-4	
THC as Gas	2510	ug/m3	201	1.94		10/27/16 19:26		
Toluene	146	ug/m3	1.5	1.94		10/27/16 19:26	108-88-3	
Xylene (Total)	34.6	ug/m3	5.1	1.94		10/27/16 19:26	1330-20-7	
m&p-Xylene	25.7	ug/m3	3.4	1.94		10/27/16 19:26	179601-23-	1
o-Xylene	8.9	ug/m3	1.7	1.94		10/27/16 19:26	95-47-6	
Sample: Inf-3	Lab ID: 103	67246003	Collected: 10/21/	16 14:15	Received: 1	0/22/16 08:55 N	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	1.9	ug/m3	0.63	1.94		10/27/16 19:54	71-43-2	A4
Ethylbenzene	3.0	ug/m3	1.7	1.94		10/27/16 19:54	100-41-4	
THC as Gas	1500	ug/m3	201	1.94		10/27/16 19:54		
Toluene	7.7	ug/m3	1.5	1.94		10/27/16 19:54	108-88-3	
Xylene (Total)	18.3	ug/m3	5.1	1.94		10/27/16 19:54	1330-20-7	
m&p-Xylene	14.1	ug/m3	3.4	1.94		10/27/16 19:54	179601-23-	1
o-Xvlene	4.2	ua/m3	1.7	1.94		10/27/16 19:54	95-47-6	



## **QUALITY CONTROL DATA**

Project: P66 Westlake/ Mercer

Pace Project No.: 10367246

QC Batch:	443699	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	TO15 MSV AIR Low Level
Associated Lab Samp	oles: 10367246001, 10367246002, 10	367246003	

#### METHOD BLANK: 2418912

METHOD BLANK:	241891	2		Matrix	:: Air
Associated Lab Sam	nples:	10367246001,	10367246002,	10367246003	

	Blank	Reporting		
Units	Result	Limit	Analyzed	Qualifiers
ug/m3	ND	0.32	10/27/16 10:21	
ug/m3	ND	0.88	10/27/16 10:21	
ug/m3	ND	1.8	10/27/16 10:21	
ug/m3	ND	0.88	10/27/16 10:21	
ug/m3	ND	104	10/27/16 10:21	
ug/m3	ND	0.77	10/27/16 10:21	
ug/m3	ND	2.6	10/27/16 10:21	
	Units ug/m3 ug/m3 ug/m3 ug/m3 ug/m3 ug/m3 ug/m3	Blank ResultUnitsResultug/m3ND ug/m3ug/m3ND ug/m3ug/m3ND ug/m3ug/m3ND ug/m3ug/m3ND ug/m3ug/m3ND ug/m3ug/m3ND ug/m3	Blank         Reporting           Units         Result         Limit           ug/m3         ND         0.32           ug/m3         ND         0.88           ug/m3         ND         1.8           ug/m3         ND         0.88           ug/m3         ND         0.88           ug/m3         ND         0.77           ug/m3         ND         0.777           ug/m3         ND         2.6	Blank         Reporting           Units         Result         Limit         Analyzed           ug/m3         ND         0.32         10/27/16 10:21           ug/m3         ND         0.88         10/27/16 10:21           ug/m3         ND         1.8         10/27/16 10:21           ug/m3         ND         0.88         10/27/16 10:21           ug/m3         ND         0.88         10/27/16 10:21           ug/m3         ND         104         10/27/16 10:21           ug/m3         ND         0.77         10/27/16 10:21           ug/m3         ND         0.77         10/27/16 10:21           ug/m3         ND         2.6         10/27/16 10:21

#### LABORATORY CONTROL SAMPLE: 2418913

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/m3	32.5	33.1	102	62-141	
Ethylbenzene	ug/m3	44.2	47.0	106	59-149	
m&p-Xylene	ug/m3	88.3	93.4	106	59-146	
o-Xylene	ug/m3	44.2	45.3	103	54-149	
THC as Gas	ug/m3	5130	5670	111	68-145	
Toluene	ug/m3	38.3	40.6	106	61-138	
Xylene (Total)	ug/m3	132	139	105	66-146	

#### SAMPLE DUPLICATE: 2420193

		60230663001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Benzene	ug/m3	9.7	9.9	2	25	
Ethylbenzene	ug/m3	6.5	6.8	5	25	
m&p-Xylene	ug/m3	26.5	27.9	5	25	
o-Xylene	ug/m3	9.9	10.1	2	25	
THC as Gas	ug/m3	908	861	5	25	
Toluene	ug/m3	31.3	32.5	4	25	
Xylene (Total)	ug/m3	36.4	38.0	4		

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**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



#### QUALIFIERS

#### Project: P66 Westlake/ Mercer

Pace Project No.: 10367246

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above 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 decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

**RPD** - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

A4 Sample was transferred from a sampling bag into a Summa Canister within 48 hours of collection.



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P66 Westlake/ Mercer Pace Project No.: 10367246

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10367246001	Inf-1	TO-15	443699		
10367246002	Inf-2	TO-15	443699		
10367246003	Inf-3	TO-15	443699		

Pace Analytical	<b>U</b>	HAIN-OF-CUSTODY / / e Chain-of-Custody is a LEGAL DOCUME	Analytical Request Doc ENT. All relevant fields must be completed	ument accurately.	9 526 95 0)	
Section A	Section B	Section C		Pag	e: of	
Required Client Information: Company:	Report To: 1/ // C. +/ .	Invoice Information.			1720607	
Address: 7347 Control &	2. Copy To:	Company Name:		EGULATORY AGENCY		
Suptre int		Address:		NPDES F GROU	ND WATER 🖵 DRINKING WATER	
Email To: 12 N/S Suffler	Purchase Order No.:	Pace Quote Reference:		- UST F RCRA	OTHER	
Phone: Fax:	Project Name:		and Carry	Site Location		
Requested Due Date/TAT:	Project Number:	Pace Profile #: 3	3333/2	STATE: WF		
			Requested A	nalysis Filtered (Y/N)		
Section D Required Client Information MAT	trix Codes € D. COLLECT	reD Pres	servatives			
Drinking Water Waster V Products Soul/Soul	J Water DW vater DW vater WT controls to the control of the contro	COMPOSITE COMPOSITE ENDIGRAB B ENDIGRAB B COLLECTION	<u></u> *		(N/Y) e	
SAMPLE ID OII (A-Z, 0-97,-) Air Sample IDs MUST BE UNIQUE Tissue Other	gaaa code (G	) TA 9MBT 3 ABNIATUC Devie	ہ ioi iceT zizv راجع		eninolri) Is	
# MƏTI	MATRIX MARTRIX SAMPLE DATR DATR	DATE TIME SAMPLU TIME SAMPLU TIME	HCI HCI HCI HCI HCI HCI		ਤੁੱ ਹੈ ਿ ਸੈਂ Pace Project No./ Lab I.D.	
1 Jul-1	11-6 (W21/17 1415				ĩco	
2 IN 8-2		<b>9</b>			200	
3 INFS			2		5 00	
4						
n (9						
7						
∞ σ						
10						
11						
12 ADDITIONAL COMMENTS		DATE TIME	ACCEPTED BY / AFFILIATION	DATE TIME	SAMPLE CONDITIONS	
NA N	1 1200	12/2/11 1420	matte PNI	JCHI MOUL	D. MIN J	
	Level Prost Race	(1)16 15:00	forthere.	102216 0855	KI K N Sund	
Illostiatio Imperar	)					
a a					et ct	
ge 9			Richan		p in °C ived or stody (Y/N) (V/N) (//N)	
of 15	SIG	SNATURE of SAMPLER:	DATE Signed (MMUDD/Y);	1/12/04	Tem Fece Seale ( ( ( )	
"Important Note: By signing this form you are	accepting Pace's NET 30 day payment terms and agreeing to lat	ie charges of 1.5% per month for any invoices not p	baid within 30 days.	-	F-ALL-Q-020rev.07, 15-May-2007	

Pace MN - Sat delivery/PO

Prove and street	Docur Cooler Tra	nent Name: nsfer Check	< List	Revised Date: 23Ap Page 1 of 1	r2013
	Docum F-MN-	ent Numbe C-120-rev.0	r. 1	Issuing Authorit Pace Minnesola Quali	y: ly Office
Coc	oler Trans	sfer C	heck Li	st	
Client:	ATC-P	66			
Project Manager:	Jenni	6105	2:		÷
Profile/Line #:	_3333	2/2	·		· .
Received with Custod	y Seal:	Yes	No		
Custody Seal Intact:	Yes	No	NA		
	Temp Read	Corre	cted Temp	Correction Factor	
Temperature C: IR Gun # IR1 IR2 A Samples on ice	MBIENT	AIR ass has b	egun		_
Rush/Short Hold:	-72 H	surs			
Containers Intact:	Yes	No			• .
Re-packed and Re-ic	ed: 10/21/16	~	/		
Temp Blank Included	: Yes	No	)		
Shipped By/Date:	10/21/	16 ST	<u>_P</u>		
,			· .	. •	

Notes: Transfer or analyze within 72 Hours.

	2	Documer Air Sample Condit	t Name: ion Upon Receipt	Document Revis Page 1	ed: 26APR2016 of 1
Pa	ce Analytical	Docume F-MN-A-10	nt No.: 06-rev.11	Issuing Au Pace Minnesota	ithority: Quality Office
Air Sample Condition Upon Receipt Courier:	lient Name: A+L - U [≠] ed Ex □UPS Commercial □Pace	JA Speedee CC	Project #:	WO# : 1036 	7246 ∭
Tracking Number:	7021 4575	2934			
Custody Seal on Cooler/#	Box Present? 🖉 🖉 es	No Seals Inta	act?	Optional: Proj. Due	Date: Proj. Name:
Packing Material: Bu	ibble Wrap 🛛 Bubble I	Bags Foam No	one Tin Can	Other:	Temp Blank rec: Yes
Temp. (TO17 and TO13 sam	ples only) (°C):	Corrected Temp (°C):	D Thermon	n. Used: B88A912167504 B88A0143310098	
Type of ice Received	lue Wet Mone		Date & I	utials of Person Examining cont	ents: 4 10 4 5 1
	- 7 ²			Comme	nts:
Chain of Custody Present	?	🗙 Yes 🗌 No	□N/A 1.		
Chain of Custody Filled O	ut?	Yes No	N/A 2.		
Chain of Custody Relingu	ished?	Yes No	N/A 3.		
Sampler Name and/or Sig	nature on COC?	Yes No	N/A   4.		
Samples Arrived within H	old Time?	Yes No	N/A 5	KAR DE	
Short Hold Time Analysis	; (<72 hr)?	Nes XNo	[™] N/A 6.	1-2016	
Rush Turn Around Time	Requested?	Yes No	N/A 7.		
Sufficient Volume?	<u> </u>	Ves No	<u>N/A</u> 8.		
Correct Containers Used?		Yes No	∐N/A 9.		
-Pace Containers Used	?	Yes No			
Containers Intact?		NesNo	N/A 10.	· · ·	
Viedia: Air Can	Airbag Filter	DI Passive	<u> </u>		
		A Wes No	<u> </u>		· · · · · · · · · · · · · · · · · · ·
Samples Received:					
	Canisters	1		Canisters	
Sample Number	Can ID	Flow Controller ID	Sample Nu	mber Can ID	Flow Controller ID
·					
					· · · · · · · · · · · · · · · · · · ·
-					
CLIENT NOTIFICATION/R	ESOLUTION	J	Date/Tim	Field Data Reque	uired? 🗍Yes 🗌No
Comments/Resol	ution:		······································		
	· · · · · · · · · · · · · · · · · · ·				
Project Manager Devi				Data: 10/24/46	
- oject manager Keview		TROSS			

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. **17 00 Elm Street – Suite 200 Minneapolis, MN 55414 Phone: 612.607.6444** Fax: 612.607.6444

#### ANALYTICAL RESULTS

Client: Phillips66_ATC Group Services LLC WA Phone: (503)684-0525 Lab Project Number: 10367246 Project Name: P66 Westlake/ Mercer

Lab Sample No:	10367246001		F	rojSampleNum: 1	0367246001	Date Collect	ted: 10/21/16	14:15	
Client Sample ID:	Inf-1			Matrix: A	vir	Date Receiv	red: 10/22/16	38:55	
Parameters		Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote	
<b>Air</b> TO-15									
Benzene		0.00043	ppmv	0.0002	0.000077	10/27/16 18:59 NCK	71-43-2	A4	
Ethylbenzene		ND	ppmv	0.00041	0.00019	10/27/16 18:59 NCK	100-41-4		
m&p-Xylene		ND	ppmv	0.00082	0.00036	10/27/16 18:59 NCK	179601-23-		
o-Xylene		ND	ppmv	0.00041	0.00016	10/27/16 18:59 NCK	95-47-6		
THC as Gas		1.3	ppmv	0.048	0.017	10/27/16 18:59 NCK			
Toluene		0.014	ppmv	0.014	0.0027	10/28/16 12:48 NCK	108-88-3		
Xylene (Total)		ND	ppmv	0.0012	0.00052	10/27/16 18:59 NCK	1330-20-7		

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

## SUPPLEMENTAL REPORT

Units Conversion Request



Pace Analytical Services, Inc. **17 00 Elm Street – Suite 200 Minneapolis, MN 55414 Phone: 612.607.6444** Fax: 612.607.6444

#### ANALYTICAL RESULTS

Client: Phillips66_ATC Group Services LLC WA Phone: (503)684-0525 Lab Project Number: 10367246 Project Name: P66 Westlake/ Mercer

Lab Sample No:	10367246002		F	rojSampleNum: 1	0367246002	Date Collect	ed: 10/21/16	1/16 14:15 2/16 8:55 lo. <u>Ftnote</u>	
Client Sample ID:	Int-2			Matrix: A	ır	Date Receiv	ed: 10/22/16	8:55	
Parameters		Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote	
<b>Air</b> TO-15									
Benzene		0.0004	ppmv	0.00019	0.000074	10/27/16 19:26 NCK	71-43-2	A4	
Ethylbenzene		0.0016	ppmv	0.00039	0.00019	10/27/16 19:26 NCK	100-41-4		
m&p-Xylene		0.0058	ppmv	0.00077	0.00034	10/27/16 19:26 NCK	179601-23-		
o-Xylene		0.002	ppmv	0.00039	0.00015	10/27/16 19:26 NCK	95-47-6		
THC as Gas		0.58	ppmv	0.046	0.016	10/27/16 19:26 NCK			
Toluene		0.038	ppmv	0.00039	0.000078	10/27/16 19:26 NCK	108-88-3		
Xylene (Total)		0.0078	ppmv	0.0012	0.0005	10/27/16 19:26 NCK	1330-20-7		

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

## SUPPLEMENTAL REPORT

Units Conversion Request



Pace Analytical Services, Inc. **17 00 Elm Street – Suite 200 Minneapolis, MN 55414 Phone: 612.607.6444** Fax: 612.607.6444

#### ANALYTICAL RESULTS

Client: Phillips66_ATC Group Services LLC WA Phone: (503)684-0525 Lab Project Number: 10367246 Project Name: P66 Westlake/ Mercer

Lab Sample No:	10367246003		F	rojSampleNum: 1	0367246003	Date Collect	ted: 10/21/16	14:15
Client Sample ID:	Inf-3			Matrix: A	Air	Date Receiv	red: 10/22/16	8:55
Parameters		Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
Air								
TO-15								
Benzene		0.00059	ppmv	0.00019	0.000074	10/27/16 19:54 NCK	71-43-2	A4
Ethylbenzene		0.00068	ppmv	0.00039	0.00019	10/27/16 19:54 NCK	100-41-4	
m&p-Xylene		0.0032	ppmv	0.00077	0.00034	10/27/16 19:54 NCK	179601-23-	
o-Xylene		0.00095	ppmv	0.00039	0.00015	10/27/16 19:54 NCK	95-47-6	
THC as Gas		0.35	ppmv	0.046	0.016	10/27/16 19:54 NCK		
Toluene		0.002	ppmv	0.00039	0.000078	10/27/16 19:54 NCK	108-88-3	
Xylene (Total)		0.0041	ppmv	0.0012	0.0005	10/27/16 19:54 NCK	1330-20-7	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

## SUPPLEMENTAL REPORT

Units Conversion Request



Pace Analytical Services, Inc. **17 00 Elm Street – Suite 200 Minneapolis, MN 55414 Phone: 612.607.1700** Fax: 612.607.6444

#### ANALYTICAL RESULTS

Client: Phillips66_ATC Group Services LLC WA Phone: (503)684-0525 Lab Project Number: 10367246 Project Name: P66 Westlake/ Mercer

## **PARAMETER FOOTNOTES**

ND Not detected at or above adjusted reporting limit

NC Not Calculable

- J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
- [A4] Sample was transferred from a sampling bag into a Summa Canister within 48 hours of collection.

## SUPPLEMENTAL REPORT

Units Conversion Request

Page 4



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

November 07, 2016

Kyle Sattler ATC Group Services LLC 6347 Seaview Ave NW Seattle, WA 98107

RE: Project: AOC 1396 Pace Project No.: 10368526

Dear Kyle Sattler:

Enclosed are the analytical results for sample(s) received by the laboratory on November 03, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

ENNI (TROSS

Jennifer Gross jennifer.gross@pacelabs.com Project Manager

Enclosures





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

#### CERTIFICATIONS

Project:	AOC 1396
Pace Project No.:	10368526

#### **Minnesota Certification IDs**

1700 Elm Street SE Suite 200, Minneapolis, MN 55414 Alaska Certification UST-107 525 N 8th Street, Salina, KS 67401 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



## SAMPLE SUMMARY

Project:AOC 1396Pace Project No.:10368526

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10368526001	INF-1	Air	11/02/16 13:15	11/03/16 09:45
10368526002	INF-2	Air	11/02/16 13:16	11/03/16 09:45
10368526003	INF-3	Air	11/02/16 13:17	11/03/16 09:45



## SAMPLE ANALYTE COUNT

Project:	AOC 1396
Pace Project No.:	10368526

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10368526001	INF-1	TO-15	MJL	7	PASI-M
10368526002	INF-2	TO-15	MJL	7	PASI-M
10368526003	INF-3	TO-15	MJL	7	PASI-M



Pace Project No.: 10368526

Sample: INF-1	Lab ID: 103	Lab ID: 10368526001		Collected: 11/02/16 13:15		Received: 11/03/16 09:45 Matrix: Air		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	14.9	45.8		11/04/16 16:12	71-43-2	A4
Ethylbenzene	ND	ug/m3	40.3	45.8		11/04/16 16:12	100-41-4	
THC as Gas	5120	ug/m3	4750	45.8		11/04/16 16:12		
Toluene	ND	ug/m3	35.3	45.8		11/04/16 16:12	108-88-3	
Xylene (Total)	ND	ug/m3	121	45.8		11/04/16 16:12	1330-20-7	
m&p-Xylene	ND	ug/m3	81.1	45.8		11/04/16 16:12	179601-23-1	
o-Xylene	ND	ug/m3	40.3	45.8		11/04/16 16:12	95-47-6	
Sample: INF-2	Lab ID: 103	68526002	Collected: 11/02/*	16 13:16	Received: 1	1/03/16 09:45 N	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	14.9	45.8		11/04/16 16:39	71-43-2	A4
Ethylbenzene	ND	ug/m3	40.3	45.8		11/04/16 16:39	100-41-4	
THC as Gas	ND	ug/m3	4750	45.8		11/04/16 16:39		
Toluene	ND	ug/m3	35.3	45.8		11/04/16 16:39	108-88-3	
Xylene (Total)	ND	ug/m3	121	45.8		11/04/16 16:39	1330-20-7	
m&p-Xylene	ND	ug/m3	81.1	45.8		11/04/16 16:39	179601-23-1	
o-Xylene	ND	ug/m3	40.3	45.8		11/04/16 16:39	95-47-6	
Sample: INF-3	Lab ID: 103	68526003	Collected: 11/02/2	16 13:17	Received: 1	1/03/16 09:45 M	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	16.4	50.4		11/04/16 17:07	71-43-2	A4
Ethylbenzene	ND	ug/m3	44.4	50.4		11/04/16 17:07	100-41-4	
THC as Gas	ND	ug/m3	5230	50.4		11/04/16 17:07		
Toluene	ND	ug/m3	38.8	50.4		11/04/16 17:07	108-88-3	
Xylene (Total)	ND	ug/m3	134	50.4		11/04/16 17:07	1330-20-7	
m&p-Xylene	ND	ug/m3	89.2	50.4		11/04/16 17:07	179601-23-1	
o-Xylene	ND	ug/m3	44.4	50.4		11/04/16 17:07	95-47-6	



## **QUALITY CONTROL DATA**

Project: AOC 1396

Pace Project No.: 10368526

QC Batch:	44525	2		Analysis Method:	TO-15	
QC Batch Method:	TO-15	;		Analysis Description:	TO15 MSV AIR Low Level	
Associated Lab Samp	oles:	10368526001,	10368526002,	10368526003		

METHOD BLANK: 2431698

## Matrix: Air

Associated Lab Samples: 10368526001, 10368526002, 10368526003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/m3	ND	0.32	11/04/16 14:40	
Ethylbenzene	ug/m3	ND	0.88	11/04/16 14:40	
m&p-Xylene	ug/m3	ND	1.8	11/04/16 14:40	
o-Xylene	ug/m3	ND	0.88	11/04/16 14:40	
THC as Gas	ug/m3	ND	104	11/04/16 14:40	
Toluene	ug/m3	ND	0.77	11/04/16 14:40	
Xylene (Total)	ug/m3	ND	2.6	11/04/16 14:40	

#### LABORATORY CONTROL SAMPLE: 2431699

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ua/m3		32.9	96	62-141	
Ethylbenzene	ug/m3	47.2	46.6	99	59-149	
m&p-Xylene	ug/m3	47.7	48.7	102	59-146	
o-Xylene	ug/m3	46.8	45.5	97	54-149	
THC as Gas	ug/m3	3940	4860	123	68-145	
Toluene	ug/m3	41	38.9	95	61-138	
Xylene (Total)	ug/m3	94.5	94.2	100	66-146	

#### SAMPLE DUPLICATE: 2433681

		10368360002	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Benzene	ug/m3		ND		25	
Ethylbenzene	ug/m3	ND	14.1J		25	
m&p-Xylene	ug/m3	ND	48.7J		25	
o-Xylene	ug/m3	ND	19.1J		25	
THC as Gas	ug/m3	ND	1830J		25	
Toluene	ug/m3	99.2	97.7	2	25	
Xylene (Total)	ug/m3	ND	ND			

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**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



#### QUALIFIERS

Project:	AOC 1396
Pace Project No.:	10368526

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above 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 decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

**RPD** - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

A4 Sample was transferred from a sampling bag into a Summa Canister within 48 hours of collection.



### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: AOC 1396
Pace Project No.: 10368526
Analytical

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Batch
10368526001	INF-1	TO-15	445252		
10368526002	INF-2	TO-15	445252		
10368526003	INF-3	TO-15	445252		

	1						1940 1			9										
			1		CHAI	N-OF-CI	JSTO	DY / 1	∖nalyti	cal R	edne	ist Doc	sumer	Ħ	<u>!</u> 	47	\$29	9		
Pace Analytical			÷		The Chail	1-of-Custody is	a LEGAL	DOCUME	ent. All rele	vant fields	s must be	e completed	l accuratel <u>)</u>	÷	ן כי 	с У	•			
www.pacetabs.com						T.	<b>.</b>	<u>k</u>						·	Page:		đ		- 1	
Section A Required Client Information:	-S-G	tion B uired Projec	t Informatior		 7		Sectio	n C		10						~	200	a C		 T
Company: Art	Rep	N TO: 1	0/0	P.HON			Attentic	Ë			ъ.			2	_	-				
Address:	<u><u></u><u></u></u>	y To:					Compa	ny Name:				_	REGULA	TORY AC	SENCY					
							Addres	145						ĒS	GROUND	WATER §	DRIN	KING WA	TER	
Email To:	- Dur	chase Order	No.:				Pace Qi Referent	ote e:	4			1	r UST	<b>.</b>	RCRA	h	HLO _	H.		
Phone: Fax:	- Bre	ect Name:	AOL	139(			Pace Pr Manage	oject t	Curr	JO R	5		Site Loc	ation	< 1					
Requested Due Date/TAT:		ject Number					Pace Pr	ofile #:	3333	J.	را		IS I	ATE: .						
												dnestea								
Section D Me	atrix Code:	ې ده ffe	(ଧ	2	H FCTFD			Pre	servatives		N /1									
Required Client Information MA	TRIX / COL		WOC	5											_					
Drinkin Water Water Produc	rg water Water	ن ہے کر جو میں اور codes	D=D 8496	COMPOSITE START	ENDA	OSITE SRAB					+					(N/Y) @				
SAMPLE ID OII WIP	0	APP. APP. APP.	) ===0) =		 		20 IA Si			·	1591					aninold(				
Sample IDs MUST BE UNIQUE Tissue		ыб Кар Кар Кар Кар Кар Кар Кар Кар Кар Кар				U Mi L		HNO ³ H ⁵ 2O ⁴ Nubreserve	N ^{gS} 2 ^S O ³ N ^g OH HCI	Other Other	ATA VJTA	× 9				) Isubite9Я	ace Proje	ct No./ L	ab I.D.	T
- The			e II e	1/10/31	(r												<u>0</u> 2 02 02			
3 1NF-2				1 1/31	و	-											200			-1
a [NF 73				1 131	~						、						,   ;			<b>-</b>
4				-+ -+			-				<u> </u>			+						T
5		-+			-															
ç		/									<u> </u>						1			
7							-													<u>-</u>
80 0																				
10																				-
11				_	+				,  ,  ,		Τ									
12 ADDITIONAL COMMENTS			IHSIJIONITE	ED BY / AFFI	IATION	DATE	[	IME	A	CEPTED	BY / AFF			ATE	TIME		SAMPLE CC		~	-1
									and the	R		M/	11 2	1912	3					/
	-			199000	Pare	11(2)11	° 15	28	No.	B	93		<u>}</u>	8	15		Ž Z		7	
		) 	D	1201	7						1						)			
				1		. 		-									- +	-+	1	
Page			i	SAN	IPLER NAMI	AND SIGNA	URE									sq ou ا °C	λρα (N/	() ()	i Intaci 1)	
÷90	~3	ത്			PRINT	lame of SAMP	ER:		· · · ·	C L					2	hi qm 	rY) ec oteuc	لم/N	۹/۲) selqr	
of 15	<u></u>	බ			SIGNA	URE OF SAMP	ĒR	-			23 	ATE Signed IM/DD/YY):		Х. -		I9T	) ગ		San	
J					to late rt.	when it 1,5% the	minth for a	w invoices n	ot paid within 2	30 days.						F-ALL-Q-02	20rev.07, 1	5-May-200		

"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

-

ŕ.

Pace	Analytical*	Document Air Sample Conditio Documer	Name: on Upon Receipt nt No.:	Document Revised: 26AP Page 1 of 1 Issuing Authority:	R2016
		F-MN-A-10	6-rev.11	Pace Minnesota Quality	Office
Sample Condition Clien Upon Receipt	t Name: ATC		Project #: WO	#: <b>10368</b> 5	26
Courier: AFed Com racking Number: 70'2	Ex 🗌 UPS mercial 🗍 Pace 14575 7431	Speedee Cl	ent 10368	526	
ustody Seal on Cooler/Box	Present? XYes	No Seals Inta	ct? 🖉 Yes 🛄 No	Optional: Proj. Due Date:	Proj. Name:
king Material: Bubble	• Wrap 🔲 Bubble B	ags 🛄 Foam 🔲 No	ne 🗌 Tin Can 🛄 Oth	ner: Temp	Blank rec: Yes 🕅 Yes
mp. (TO17 and TO13 samples emp should be above freezing t e of ice Received □Blue	only) (°C): <u> </u>	Corrected Temp (°C):	Thermom. Used Date & Initials o	B88A912167504 B88A0143310098 f Person Examining Contents:	151401163 151401164 42 [[3163
				Comments:	
Chain of Custody Present?		Yes No	<u>N/A</u> 1.		
Chain of Custody Filled Out?		Yes No	□N/A 2.	<u> </u>	·····
Chain of Custody Relinquishe	d?	Yes No	N/A 3.		· · · · · · · · · · · · · · · · · · ·
Sampler Name and/or Signati	ure on COC?		N/A 4.		
Samples Arrived within Hold	Fime?	Yes No	N/A 5.	2	
Short Hold Time Analysis (<7	2 hr)?	YesNo	N/A 6. ~ (*	)AU	
Rush Turn Around Time Requ	iested?	Yes No	N/A 7.		<u></u>
Sufficient Volume?		Yes No	N/A 8.		
Correct Containers Used?			□N/A   9.		
-Pace Containers Used?					
Containers Intact?	Filter		N/A 10.		
Sample Labels Match COC2	ritter				···
sample Labels Match COC:					······································
Samples Received:					
	Canisters		· · · ·	Canisters	
Sample Number	Can ID	Flow Controller ID	Sample Number	Can ID	Flow Controller ID
					· · · · ·
				·	
LIENT NOTIFICATION/RESO Person Contacte Comments/Resolutio	LUTION d:		Date/Time:	Field Data Required?	Yes No
comments/ Resolutio	····	·	· · · · ·		
	(	6			

. . . ....

Pace Analytical	Document Name: Cooler Transfer Check List	Revised Date: 23Apr2013 Page 1 of 1
	Document Number: F-MN-C-120-rev.01	issuing Authority: Pace Minnesota Quality Office

# Cooler Transfer Check List

Client:	ATE Group	0-P66		
Project Manager:	Jenni E	Stors		
Profile/Line #:	33332	1a		
Received with Custod	y Seal: Y	es No	•	
Custody Seal Intact:	Yes	No (NA)		
	Temp Read	Corrected Temp	Correction Factor	
Temperature C: IR Gun # IR1 - Q281   Samples on ic	A MUS R2 - 122065284 e, cooling process	has begun		
Rush/Short Hold:	72 HOU	R Had		
Containers Intact:	Yes	No		
Re-packed and Re-to	,1+12114 ed:			
Temp Blank Included	Yes (	No		
Shipped By/Date:	<u></u>	2/16		

Notes: Ship to: Pace MN Pace Davis


Client:	ATC Group Services LLC WA_Phillips66
Phone:	(503)684-0525

Lab Project Number: 10368526 Project Name: AOC 1396

Lab Sample No: Client Sample ID:	10368526001 INF-1		F	ProjSampleNum: 10368526001 Matrix: Air		Date Collec Date Recei	ted: 11/02/16 ved: 11/03/16	13:15 9:45
Parameters		Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
<b>Air</b> TO-15								
Benzene		ND	ppmv	0.0046	0.0017	11/04/16 16:12 MJL	71-43-2	A4
Ethylbenzene		ND	ppmv	0.0091	0.0044	11/04/16 16:12 MJL	100-41-4	
m&p-Xylene		ND	ppmv	0.018	0.0082	11/04/16 16:12 MJL	179601-23-	
o-Xylene		ND	ppmv	0.0091	0.0036	11/04/16 16:12 MJL	95-47-6	
THC as Gas		1.2	ppmv	1.1	0.38	11/04/16 16:12 MJL		
Toluene		ND	ppmv	0.0092	0.0019	11/04/16 16:12 MJL	108-88-3	
Xylene (Total)		ND	ppmv	0.027	0.012	11/04/16 16:12 MJL	1330-20-7	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

# SUPPLEMENTAL REPORT

Units Conversion Request



Client:	ATC Group Services LLC WA_Phillips66
Phone:	(503)684-0525

Lab Project Number: 10368526 Project Name: AOC 1396

Lab Sample No:	10368526002		F	rojSampleNum: 1	0368526002	Date Collec	ted: 11/02/16	13:16
Client Sample ID:	INF-2			Matrix: A	Nir	Date Receiv	ved: 11/03/16	9:45
Parameters		Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
<b>Air</b> TO-15								
Benzene		ND	ppmv	0.0046	0.0017	11/04/16 16:39 MJL	71-43-2	A4
Ethylbenzene		ND	ppmv	0.0091	0.0044	11/04/16 16:39 MJL	100-41-4	
m&p-Xylene		ND	ppmv	0.018	0.0082	11/04/16 16:39 MJL	179601-23-	
o-Xylene		ND	ppmv	0.0091	0.0036	11/04/16 16:39 MJL	95-47-6	
THC as Gas		ND	ppmv	1.1	0.38	11/04/16 16:39 MJL		
Toluene		ND	ppmv	0.0092	0.0019	11/04/16 16:39 MJL	108-88-3	
Xylene (Total)		ND	ppmv	0.027	0.012	11/04/16 16:39 MJL	1330-20-7	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

# SUPPLEMENTAL REPORT

Units Conversion Request



Client:	ATC Group Services LLC WA_Phillips66
Phone:	(503)684-0525

Lab Project Number: 10368526 Project Name: AOC 1396

Lab Sample No:	10368526003		F	rojSampleNum: 1	0368526003	Date Collec	ted: 11/02/16	13:17
Client Sample ID:	INF-3			Matrix: A	vir	Date Receiv	ved: 11/03/16	9:45
Parameters		Results	Units	Report Limit	MDL	Analyzed	CAS No.	Ftnote
Air								
Benzene		ND	ppmy	0.0051	0.0019	11/04/16 17:07 MJI	71-43-2	A4
Ethylbenzene		ND	ppmv	0.01	0.0048	11/04/16 17:07 MJL	100-41-4	
m&p-Xylene		ND	ppmv	0.02	0.009	11/04/16 17:07 MJL	179601-23-	
o-Xylene		ND	ppmv	0.01	0.004	11/04/16 17:07 MJL	95-47-6	
THC as Gas		ND	ppmv	1.2	0.41	11/04/16 17:07 MJL		
Toluene		ND	ppmv	0.01	0.002	11/04/16 17:07 MJL	108-88-3	
Xylene (Total)		ND	ppmv	0.03	0.013	11/04/16 17:07 MJL	1330-20-7	

DISCLAIMER: These results have been converted to the units shown from the original units of measurement assuming 20 degrees Celsius and 1 atmosphere pressure. Values were not rounded according to EPA rounding rules. THC is quantitated based on the average response factors of several compounds; the nominal molecular weight of THC used for units conversion is the average of the molecular weights of the compounds used for quantitation.

Date: 11/7/2016

Page 3



Pace Analytical Services, Inc. **17 00 Elm Street – Suite 200 Minneapolis, MN 55414 Phone: 612.607.1700** Fax: 612.607.6444

#### ANALYTICAL RESULTS

Client: ATC Group Services LLC WA_Phillips66 Phone: (503)684-0525 Lab Project Number: 10368526 Project Name: AOC 1396

# **PARAMETER FOOTNOTES**

ND Not detected at or above adjusted reporting limit

NC Not Calculable

- ${\tt J}$  Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
- [A4] Sample was transferred from a sampling bag into a Summa Canister within 48 hours of collection.

# SUPPLEMENTAL REPORT

Units Conversion Request

Page 4



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

December 01, 2016

Kyle Sattler ATC Group Services LLC 6347 Seaview Ave NW Seattle, WA 98107

RE: Project: P66 AOC 1396 Westlake/Mercer Pace Project No.: 10370295

Dear Kyle Sattler:

Enclosed are the analytical results for sample(s) received by the laboratory on November 17, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

ENNI (TROSS

Jennifer Gross jennifer.gross@pacelabs.com Project Manager

Enclosures





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

#### CERTIFICATIONS

Project: P66 AOC 1396 Westlake/Mercer Pace Project No.: 10370295

#### **Minnesota Certification IDs**

1700 Elm Street SE Suite 200, Minneapolis, MN 55414 Alaska Certification UST-107 525 N 8th Street, Salina, KS 67401 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



### SAMPLE SUMMARY

Project: P66 AOC 1396 Westlake/Mercer

Pace Project No.: 10370295

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10370295001	Inf-1	Air	11/16/16 12:15	11/17/16 09:30
10370295002	Inf-2	Air	11/16/16 12:15	11/17/16 09:30
10370295003	Inf-3	Air	11/16/16 12:15	11/17/16 09:30
10370295004	W-INF-WS1	Water	11/16/16 11:00	11/17/16 09:30
10370295005	W-OUT-WS1	Water	11/16/16 11:05	11/17/16 09:30
10370295006	W-DSCHG-1	Water	11/16/16 12:00	11/17/16 09:30
10370295007	W-DSCHG-2	Water	11/16/16 12:05	11/17/16 09:30
10370295008	W-DSCHG-3	Water	11/16/16 12:10	11/17/16 09:30



# SAMPLE ANALYTE COUNT

Project:P66 AOC 1396 Westlake/MercerPace Project No.:10370295

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10370295001	Inf-1	TO-15	DR1	7	PASI-M
10370295002	Inf-2	TO-15	DR1	7	PASI-M
10370295003	Inf-3	TO-15	DR1	7	PASI-M
10370295004	W-INF-WS1	NWTPH-Gx	KMZ	2	PASI-M
		EPA 8260B	EMC	7	PASI-M
10370295005	W-OUT-WS1	NWTPH-Gx	KMZ	2	PASI-M
		EPA 8260B	EMC	7	PASI-M
10370295006	W-DSCHG-1	NWTPH-Gx	KMZ	2	PASI-M
		EPA 8260B	EMC	7	PASI-M
		EPA 1664A OG	CJM	1	PASI-M
10370295007	W-DSCHG-2	EPA 1664A OG	CJM	1	PASI-M
10370295008	W-DSCHG-3	EPA 1664A OG	CJM	1	PASI-M



#### Project: P66 AOC 1396 Westlake/Mercer

Pace Project No.: 10370295

Lab ID: 10370295001 Collected: 11/16/16 12:15 Received: 11/17/16 09:30 Sample: Inf-1 Matrix: Air Parameters Results Units Report Limit DF Prepared Analyzed CAS No. Qual **TO15 MSV AIR** Analytical Method: TO-15 Benzene ND ug/m3 0.82 2.52 11/17/16 23:09 71-43-2 11/17/16 23:09 100-41-4 Ethylbenzene ND 2.2 2.52 ug/m3 2.52 THC as Gas 1740 261 ug/m3 11/17/16 23:09 ug/m3 Toluene 8.7 1.9 2.52 11/17/16 23:09 108-88-3 Xylene (Total) ug/m3 6.7 2.52 11/17/16 23:09 1330-20-7 8.7 m&p-Xylene 6.4 ug/m3 4.5 2.52 11/17/16 23:09 179601-23-1 o-Xylene 2.3 ug/m3 2.2 2.52 11/17/16 23:09 95-47-6 Lab ID: 10370295002 Collected: 11/16/16 12:15 Received: 11/17/16 09:30 Sample: Inf-2 Matrix: Air CAS No. DF Parameters Results Units Report Limit Prepared Analyzed Qual **TO15 MSV AIR** Analytical Method: TO-15 0.89 0.82 2.52 11/17/16 23:37 71-43-2 Benzene ug/m3 Ethylbenzene ND ug/m3 2.2 2.52 11/17/16 23:37 100-41-4 THC as Gas 1930 ug/m3 261 2.52 11/17/16 23:37 10.2 ug/m3 1.9 2.52 Toluene 11/17/16 23:37 108-88-3 11/17/16 23:37 1330-20-7 Xylene (Total) 12.1 ug/m3 6.7 2.52 m&p-Xylene 8.9 ug/m3 4.5 2.52 11/17/16 23:37 179601-23-1 o-Xylene 3.2 ug/m3 2.2 2.52 11/17/16 23:37 95-47-6 Lab ID: 10370295003 Collected: 11/16/16 12:15 Received: 11/17/16 09:30 Sample: Inf-3 Matrix: Air DF Parameters Results Units Report Limit Prepared Analyzed CAS No. Qual **TO15 MSV AIR** Analytical Method: TO-15 Benzene ND ug/m3 0.78 2.4 11/18/16 00:03 71-43-2 Ethylbenzene ND ug/m3 2.1 2.4 11/18/16 00:03 100-41-4 THC as Gas 1680 ug/m3 249 2.4 11/18/16 00:03 Toluene 6.7 ug/m3 1.8 2.4 11/18/16 00:03 108-88-3 Xylene (Total) 10.8 ug/m3 6.4 2.4 11/18/16 00:03 1330-20-7 m&p-Xylene 7.7 ug/m3 4.2 2.4 11/18/16 00:03 179601-23-1 2.1 11/18/16 00:03 95-47-6 o-Xylene 3.1 ug/m3 2.4 Sample: W-INF-WS1 Lab ID: 10370295004 Collected: 11/16/16 11:00 Received: 11/17/16 09:30 Matrix: Water Parameters Results Units Report Limit DF Prepared Analyzed CAS No. Qual **NWTPH-Gx GCV** Analytical Method: NWTPH-Gx TPH as Gas ND 100 1 11/24/16 00:33 ug/L Surrogates a,a,a-Trifluorotoluene (S) 90 % 50-150 1 11/24/16 00:33 98-08-8



#### Project: P66 AOC 1396 Westlake/Mercer

# Pace Project No.: 10370295

Sample: W-INF-WS1	Lab ID: 103	70295004	0295004 Collected: 11/16/16 11:00 Received: 11/17/16 09:30 Matrix: \		Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV UST	Analytical Meth	nod: EPA 82	260B					
Benzene	ND	ug/L	1.0	1		11/30/16 15:24	4 71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		11/30/16 15:24	100-41-4	
Toluene	ND	ug/L	1.0	1		11/30/16 15:24	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		11/30/16 15:24	1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	96	%.	75-125	1		11/30/16 15:24	17060-07-0	
Toluene-d8 (S)	104	%.	75-125	1		11/30/16 15:24	4 2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125	1		11/30/16 15:24	4 460-00-4	
Sample: W-OUT-WS1	Lab ID: 103	70295005	Collected: 11/16/1	6 11:05	Received: 1	1/17/16 09:30	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Meth	nod: NWTP	H-Gx					
TPH as Gas	ND	ug/L	100	1		11/24/16 03:53	3	
Surrogates		<i></i>						
a,a,a-Trifluorotoluene (S)	90	%.	50-150	1		11/24/16 03:53	3 98-08-8	
8260B MSV UST	Analytical Meth	nod: EPA 82	260B					
Benzene	ND	ug/L	1.0	1		11/30/16 15:40	) 71-43-2	
Ethylbenzene	ND	ug/L	1.0	1		11/30/16 15:40	0 100-41-4	
Toluene	ND	ug/L	1.0	1		11/30/16 15:40	0 108-88-3	
Xylene (Total)	ND	ug/L	3.0	1		11/30/16 15:40	) 1330-20-7	
Surrogates								
1,2-Dichloroethane-d4 (S)	95	%.	75-125	1		11/30/16 15:40	0 17060-07-0	
Toluene-d8 (S)	107	%.	75-125	1		11/30/16 15:40	) 2037-26-5	
4-Bromofluorobenzene (S)	106	%.	75-125	1		11/30/16 15:40	0 460-00-4	
Sample: W-DSCHG-1	Lab ID: 103	70295006	Collected: 11/16/1	6 12:00	Received: 1	1/17/16 09:30	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
NWTPH-Gx GCV	Analytical Meth	nod: NWTP	H-Gx					
TPH as Gas <i>Surrogates</i>	ND	ug/L	100	1		11/28/16 16:49	9	

a,a,a-Trifluorotoluene (S)	90	%.	50-150	1	11/28/16 16:49	98-08-8	
8260B MSV UST	Analytical Meth	od: EPA 8260B					
Benzene	ND	ug/L	1.0	1	11/30/16 15:55	71-43-2	
Ethylbenzene	ND	ug/L	1.0	1	11/30/16 15:55	100-41-4	
Toluene	ND	ug/L	1.0	1	11/30/16 15:55	108-88-3	
Xylene (Total)	ND	ug/L	3.0	1	11/30/16 15:55	1330-20-7	
Surrogates		-					
1,2-Dichloroethane-d4 (S)	98	%.	75-125	1	11/30/16 15:55	17060-07-0	
Toluene-d8 (S)	103	%.	75-125	1	11/30/16 15:55	2037-26-5	

### **REPORT OF LABORATORY ANALYSIS**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



#### Project: P66 AOC 1396 Westlake/Mercer

Pace Project No.: 10370295

Sample: W-DSCHG-1	Lab ID: 103	70295006	Collected: 11/16/1	16 12:00	Received: 11/	/17/16 09:30 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV UST	Analytical Mether	hod: EPA 82	260B					
<i>Surrogates</i> 4-Bromofluorobenzene (S)	98	%.	75-125	1		11/30/16 15:55	460-00-4	
1664 HEM, Oil and Grease	Analytical Mether	hod: EPA 16	664A OG					
Oil and Grease	ND	mg/L	5.1	1		11/23/16 10:00		
Sample: W-DSCHG-2	Lab ID: 103	70295007	Collected: 11/16/1	16 12:05	Received: 11/	/17/16 09:30 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 HEM, Oil and Grease	Analytical Mether	hod: EPA 16	664A OG					
Oil and Grease	ND	mg/L	5.1	1		11/23/16 10:00		
Sample: W-DSCHG-3	Lab ID: 103	70295008	Collected: 11/16/1	16 12:10	Received: 11/	/17/16 09:30 N	Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 HEM, Oil and Grease	Analytical Meth	hod: EPA 16	564A OG					
Oil and Grease	ND	mg/L	5.1	1		11/23/16 10:00		



Project: P66 AOC 1396 Westlake/Mercer

Pace Project No.: 10370295

QC Batch:	447819	Analysis Method:	TO-15	
QC Batch Method:	TO-15	Analysis Description:	TO15 MSV AIR Low Level	
Associated Lab Samp	les: 10370295001,	10370295002, 10370295003		

METHOD BLANK: 2451119

# Matrix: Air

Associated Lab Samples:	10370295001, 10370295002	. 10370295003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/m3	ND	0.32	11/17/16 11:47	
Ethylbenzene	ug/m3	ND	0.88	11/17/16 11:47	
m&p-Xylene	ug/m3	ND	1.8	11/17/16 11:47	
o-Xylene	ug/m3	ND	0.88	11/17/16 11:47	
THC as Gas	ug/m3	ND	104	11/17/16 11:47	
Toluene	ug/m3	ND	0.77	11/17/16 11:47	
Xylene (Total)	ug/m3	ND	2.6	11/17/16 11:47	

#### LABORATORY CONTROL SAMPLE: 2451120

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/m3	32.5	35.2	108	62-141	
Ethylbenzene	ug/m3	44.1	54.6	124	59-149	
m&p-Xylene	ug/m3	88.3	109	123	59-146	
o-Xylene	ug/m3	44.1	52.9	120	54-149	
THC as Gas	ug/m3	5170	5160	100	68-145	
Toluene	ug/m3	38.3	41.8	109	61-138	
Xylene (Total)	ug/m3	132	161	122	66-146	

#### SAMPLE DUPLICATE: 2451313

		10370157005	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Benzene	ug/m3	0.95	0.93	3	25	
Ethylbenzene	ug/m3	ND	ND		25	
m&p-Xylene	ug/m3	ND	1.9J		25	
o-Xylene	ug/m3	ND	ND		25	
THC as Gas	ug/m3	909	ND		25	
Toluene	ug/m3	2.9	2.8	3	25	
Xylene (Total)	ug/m3	ND	ND			

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**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



Project:	P66 AC	OC 1396 Westlake/Mercer									
Pace Project No.:	103702	295									
QC Batch:	44872	22	Analysi	is Method:	N۱	NTPH-G	x				
QC Batch Method:	NWT	PH-Gx	Analysi	is Descript	ion: N\	NTPH-G	x Water				
Associated Lab Sar	mples:	10370295004, 10370295005									
METHOD BLANK:	245652	22	M	latrix: Wa	er						
Associated Lab Sar	mples:	10370295004, 10370295005									
			Blank Reporting								
Parar	neter	Units	Result	: 	Limit	Ana	lyzed	Qualifi	ers		
TPH as Gas		ug/L		ND	100	11/23/ [,]	16 21:53				
a,a,a-Trifluorotoluer	ne (S)	%.		88	50-150	11/23/ [·]	16 21:53				
METHOD BLANK:	245652	23	M	latrix: Wa	er						
Associated Lab Sar	mples:	10370295004, 10370295005									
			Blank	R	eporting						
Parar	neter	Units	Result	t	Limit	Ana	lyzed	Qualifi	ers		
TPH as Gas		ug/L		ND	100	11/23/	16 22:13				
a,a,a-Trifluorotoluer	ne (S)	%.		87	50-150	11/23/ [,]	16 22:13				
LABORATORY COI	NTROLS	SAMPLE & LCSD: 2456524		2	456525						
			Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parar	neter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
TPH as Gas		ug/L	1000	927	934	93	93	70-125	1	20	
a.a.a-Trifluorotoluer	20 (5)	0/_				05	404	E0 1E0			

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.



Project:	P66 AC	DC 1396 West	lake/Mercer											
Pace Project No.:	103702	295												
QC Batch:	44900	06		Analys	is Method:	N\	NTPH-G	ix						
QC Batch Method:	NWT	PH-Gx		Analys	is Descript	ion: N\	NTPH-G	ix Water						
Associated Lab Sam	nples:	1037029500	6											
METHOD BLANK:	245857	'1		N	Aatrix: Wat	er								
Associated Lab Sam	nples:	1037029500	6											
				Blank	R	eporting								
Param	neter		Units	Resul	t	Limit	Ana	lyzed	Qua	lifiers	_			
TPH as Gas			ug/L		ND	100	11/28/	16 15:08						
a,a,a-Trifluorotoluen	e (S)		%.		92	50-150	11/28/	16 15:08						
METHOD BLANK:	245857	<b>7</b> 2		N	Atrix: Wat	er								
Associated Lab Sam	nples:	1037029500	6											
				Blank	R	eporting								
Param	neter		Units	Resul	t	Limit	Ana	lyzed	Qua	lifiers				
TPH as Gas			ug/L		ND	100	11/28/	16 16:29			_			
a,a,a-Trifluorotoluen	e (S)		%.		90	50-150	11/28/	16 16:29						
		SAMPLE & LO	CSD: 2458573		2	458574								
			2.000.0	Spike	LCS	LCSD	LCS	LCSD	% Rec			Max		
Param	neter		Units	Conc.	Result	Result	% Rec	% Rec	Limits	R	PD	RPD	Qua	alifiers
TPH as Gas			ug/L	1000	1130	969	113	97	70-125	5	15	20		
a,a,a-Trifluorotoluen	e (S)		%.				101	102	50-150	)				
MATRIX SPIKE & M	IATRIX		CATE: 245858	30		2458581								
				MS	MSD									
			10370950004	Spike	Spike	MS	MSD	MS	S M	SD	% Rec		Max	
Paramete	r	Units	Result	Conc.	Conc.	Result	Result	% R	ec %	Rec	Limits	RPD	RPD	Qual
TPH as Gas		ug/L	30300	50000	100000	82700	8410	00	105	54	46-14	9 2	30	
a,a,a-Trifluorotoluene	e (S)	%.							104	107	50-15	0		

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.



Project: P66 AOC 1396 Westlake/Mercer

EPA 8260B

Pace Project No.: 10370295

QC Batch: 449416

QC Batch Method:

Analysis Method:

EPA 8260B Analysis Description: 8260B MSV UST-WATER

Associated Lab Samples: 10370295004, 10370295005, 10370295006

METHOD BLANK: 2461446

Matrix: Water 10370295004, 10370295005, 10370295006

Associated Lab Samples: 10	0370295004, 10370295005, 10	370295006			
		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	11/30/16 14:23	
Ethylbenzene	ug/L	ND	1.0	11/30/16 14:23	
Toluene	ug/L	ND	1.0	11/30/16 14:23	
Xylene (Total)	ug/L	ND	3.0	11/30/16 14:23	
1,2-Dichloroethane-d4 (S)	%.	92	75-125	11/30/16 14:23	
4-Bromofluorobenzene (S)	%.	90	75-125	11/30/16 14:23	
Toluene-d8 (S)	%.	107	75-125	11/30/16 14:23	

#### LABORATORY CONTROL SAMPLE: 2461447

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzene	ug/L	20	18.0	90	75-125	
Ethylbenzene	ug/L	20	19.9	99	75-125	
Toluene	ug/L	20	19.5	97	75-125	
Xylene (Total)	ug/L	60	60.9	102	75-125	
1,2-Dichloroethane-d4 (S)	%.			94	75-125	
4-Bromofluorobenzene (S)	%.			104	75-125	
Toluene-d8 (S)	%.			108	75-125	

MATRIX SPIKE & MATRIX SPI	KE DUPLIC	CATE: 246176	65		2461766							
			MS	MSD								
		10370455004	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzene	ug/L	ND	20	20	16.1	17.0	81	85	52-147	5	30	
Ethylbenzene	ug/L	ND	20	20	17.9	17.3	90	86	67-149	4	30	
Toluene	ug/L	ND	20	20	17.1	17.1	86	85	69-139	0	30	
Xylene (Total)	ug/L	ND	60	60	54.0	52.2	90	87	70-147	3	30	
1,2-Dichloroethane-d4 (S)	%.						99	96	75-125			
4-Bromofluorobenzene (S)	%.						99	99	75-125			
Toluene-d8 (S)	%.						107	107	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**

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.



Project:	P66 AOC 1396 W	estlake/Mercer						
Pace Project No.:	10370295							
QC Batch:	448021		Analysis M	ethod:	EPA 1664A OG			
QC Batch Method:	EPA 1664A OG		Analysis De	escription:	1664 HEM, Oil a	ind Grease		
Associated Lab Sar	nples: 10370295	5006, 10370295007	, 10370295008					
METHOD BLANK:	2452267		Matrix	x: Water				
Associated Lab Sar	nples: 10370295	5006, 10370295007	, 10370295008					
			Blank	Reporting				
Parar	neter	Units	Result	Limit	ers			
Oil and Grease		mg/L	NE	5	5.0 11/23/16 10:	00		
LABORATORY CO	NTROL SAMPLE:	2452268						
			Spike	LCS	LCS	% Rec		
Parar	neter	Units	Conc.	Result	% Rec	Limits	Qualifiers	
Oil and Grease		mg/L	40	35.1	88	78-114		
MATRIX SPIKE SA	MPLE:	2452310	1037030500	C Coilco	MC	MC	0/ Dee	
Parar	neter	Units	Result	Conc	Result	MS % Rec	% Rec	Qualifiers
Oil and Grease		mg/l		ND 40.6	37.0	8	9 78-114	
		<u>,</u> -		10.0	0110			
SAMPLE DUPLICA	TE: 2452311							
			10370295007	Dup		Max		
Parar	neter	Units	Result	Result	RPD	RPD	Qualifiers	
Oil and Grease		mg/L	NE	) N	ND		18	-

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.



#### QUALIFIERS

#### Project: P66 AOC 1396 Westlake/Mercer

Pace Project No.: 10370295

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above 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 decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

**RPD** - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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: 448021

[BE] Batch extracted by solid phase extraction (SPE).



# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:P66 AOC 1396 Westlake/MercerPace Project No.:10370295

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10370295001	 Inf-1	 TO-15	447819		
10370295002	Inf-2	TO-15	447819		
10370295003	Inf-3	TO-15	447819		
10370295004	W-INF-WS1	NWTPH-Gx	448722		
10370295005	W-OUT-WS1	NWTPH-Gx	448722		
10370295006	W-DSCHG-1	NWTPH-Gx	449006		
10370295004	W-INF-WS1	EPA 8260B	449416		
10370295005	W-OUT-WS1	EPA 8260B	449416		
10370295006	W-DSCHG-1	EPA 8260B	449416		
10370295006	W-DSCHG-1	EPA 1664A OG	448021		
10370295007	W-DSCHG-2	EPA 1664A OG	448021		
10370295008	W-DSCHG-3	EPA 1664A OG	448021		

11 [3 270 Zas	sted accurately.	Page : 1 Of				Spiriture Spiriture and Spiritur	WA / Westlake, Morcer	ocoutonical data and a second data and a second				цис (У/У)	Polici Bubiza	0.0	200	r 8								W BODES & V V	ibouso Ams N y y		a Intect Sealed C	un) unplet istody MP in MP in	
al Request Documer	All relevant fields must be comple					SSO SSO	o Mnpis)	Service Requested Analysis (1)	C ·	Hull h	₩ <u>₩</u> 191 9 <i>28</i> 9 sec	222 pJ 222 pJ 22	0011 + 012 011 + 012 011 + 012 011 + 012 012 012 012 012 012 012 012 012 012			X	×:						IBVE AFFELLATION CONTRACTOR OF A	PHU WIL	cill on			LA INATE Signed: 11.	M WILL WILL WILL
CUSTODY / Analytic	ody is a LEGAL DOCUMENT. P	Section C	Attention: Phillips 66	Company Name: Phillips 66	Auutas. Dare Ourte Bafarantia	Pace Project Manader Jenni Gr	Pace Profile #: 33332 / Pace					SHE	* OF CONTAINE Unpreserved HCI Unpreserved HCI HCI HCI HCI HCI HCI HCI HCI HCI HCI				×			<b>,</b>	5 G			1'SOU MATCH	17a)			Condry 1315	
CHAIN-OF-	The Chain-of-Cust	ormation:	attler@atcassociates.com	<u> pishop@atcassociates.com</u>		i bu uy nyi <del>a</del> 36 AOC 1396 Wastlake/Merrer	ber:			START		AT COLECTION		1115	1 125	્રાય	0011	5011	0921		QTU		SHEDBYVANHUMANION - SALEANEZ		0 ALE 11/16/16	-	SAUPLER NAME AND SIGNA SAUPLER NAME AND SIGNA CONT NAME AN SAMELER		SIGNA I UNE UI DAWITLEN
		Section B Required Project infe	Report To: <u>kyle.S</u>	W Copy To: Cody t	C. The second seco	S.COIT Fullelase Older No.	Container Order Num			MATTRIX CODE	Dilnking Watter WT Watter WT Waste Watter PW	(GeGHAB C=C) (See Ashir codes (See Valid codes ) 12 3 4 2 3 13 4 2 3 14 5 4 10 1 15 10 11 10 10 10 10 10 10 10 10 10 10 10	AMPLE TYPE	9 24									L L L L L L L L L L L L L L L L L L L	2	11844		_		
Acced traditical		on A Ired Client Information:	Marry: P66_ATC Associates	ss: 6347 Seavlew Avenue N	Seattle WA, 98107		ested Due Date/TAT: 10 Dav (Stand			SAMPLE ID	One Character per box. (A-Z, 0-9 /, -)	Sample ids must be unique		「ハチーユ	Inf-2	Inf-3	W-INF-WS4	W-007-WC2	W-PSCHG-2		12. 10.14 - S		ABI						- - - -
	1	Sect	Com	Addi			Reg			<b></b>			#METI														ige 15 (	JT 19	<u>،</u> و

.

•

1 marine and the second s	Document N Air Sample Condition	lame: Upon Receipt	Document Revised: 26A Page 1 of 1	PR2016
Pace Analytical	Document F-MN-A-106-	No.: rev.11	Issuing Authority Pace Minnesota Quality	r: y Office
Air Sample Condition Client Name:		oject #:	ц. 4 00700	
P66- A	FTCWA		# 103702	.95
Courier:	Speedee Clie	nt		
Tracking Number: 7021 4575 4	 	1037	02 <b>9</b> 5	–
Custody Seal on Cooler/Box Present?	No Seals Intact	? 😰 s 🗋 No	Optional: Proj. Due Date:	Proj. Name:
Packing Material: Bubble Wrap Bubble	Bags Foam Non	e 🗌 Tin Can 🔲 Ot	her:	p Blank rec: 🗌 Yes 🚺 N
Temp. (TO17 and TO13 samples only) (°C):	Corrected Temp (°C):	Thermom. Used	B88A912167504	151401163
Temp should be above freezing to 6°C Correction Fa	ctor:	Date & Initials c	B88A0143310098 f Person Examining Contents:	<u>111716</u>
Type of ice Received Blue Wet None				
			Comments:	
Chain of Custody Present?	🖌 Yes 🗌 No	□N/A 1.		
Chain of Custody Filled Out?	Yes No	□N/A 2.		
Chain of Custody Relinquished?	Ves 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?	YesNo			
Containers Intact?	Ves No	N/A 10.		
Media: Air Can Airbag Filter				
		N/A   12.		
Samples Received:				
Canisters			Canisters	1
Sample Number Can ID	Flow Controlier ID	Sample Number	Can ID	Flow Controller ID
				-
CLIENT NOTIFICATION/RESOLUTION			Field Data Required?	Yes No
Person Contacted:		Date/Time:		
Comments/Resolution:				
	· · · · · · · · · · · · · · · · · · ·		· · · ·	
		Deta	11/17/16	

.

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)

	51,00/00	) of			jencý i statu		Mamo-									3	P (m	202	t w		ۍ و کړ	-013	rh 7	Vof			ADDECONDUCTION		Υ Υ	イイト		- t	d on to Sealer Y/V) = 5 Intact	VN) stody rstody voler ( VV)	RY 00 8X
	- <b>-</b>	age :			Ilatory A		liertsto						1)	V/Y) anhe	esidual Chle	1	ŀ	T		<u> </u> .									P	Q		-	ງເ	4 dWE	IT.
curately	Ĺ	<u> </u>			Regu											-			-		+					-			3	2			2° 4	<u> </u>	
nt eted acr								inv) bered								-			-		-			<b>—</b>					6	200	_	_		2	Ņ
umer comple						のないないの		ilysis Fil		-	· _								$\square$	-					_				100	Ē	l			111	1
Doci nust be			Π	_			N. W.	sted Ana	Q	2	W.		1-99 25-1	+-	9-178 <u>1</u>		F				×			4					j			- 10 C C C C C C C C C C C C C C C C C C		ed: 11	
<b>uest</b> fields r								Reque			h' 00	791 DZ8	ka ka	درد کر ا	19/x5	)	F				X V		*** *~	X					69					JTE Sign	
Req							(slar		× N/		، TO-15	d ssĐ	se J	HT b	attex ar	X	X					╞					AFEIN (A)			Ч				10	
<b>îcal</b> [[] . All re						Gross	cie Mr		8 <u>11 3</u> 7						Other												D.BY/I			14		調整に行い	Ĺ		
alyt Men				s 66		Jenni	1 (P;		ļ	si	- a .				Methanol Wa2S2O3	-		$\vdash$		$\vdash$		-					CEPTE			1					
<b>An</b>			105 66	ä		B L	3332		itor a c						HOBN							$\uparrow$					- AC			$\mathcal{L}$					
<u>ک</u> ام	,	nation	Phill	ë		Manage			0000			·			HCI HNO3	-	┢		$\times$	<u>~</u>	×	+	X	×						$\mathbf{i}$			لمر		
Ц Ц Ц Ц Ц	ې م	hfon	Ë	ny Nar	10	roject	rofile #								40SSH							t				+-	- 11	ſ.	5	ਰ					
이 S 이 관	section	nvoice	Attentio	Compa	vaares	ace P	ace P				<u> </u>			SHEN	Hipreserved	-		1.	700				J					2 Y	Σ Ν	M.					¥.
C the second sec	•.		Ì		Ť		Ī	11				N	oltoau	P AT COL	MBLE TEM					<u>د له</u>		╣		00	+	┿	<b>南</b> 谷 高大	ر رو		2			S H	i. Ki	
<b>IN-O</b>		ĺ	E	E	ĺ	Mercer					è				TIME												DATE		1/101	N/N			I SAMPL	I SAMPL	
CHA The Ct			ates.co	clates.c		stlake/			CTED.		<b></b>	- <b>1</b> -		·	DATE		-										NON S	たない	11.2			ALANE A	T Name o	ATURE o	
			cassoci	atcasso	, Kulo	1396 We			122	55	RT .				TIME	217	52	212	0011	Sall	100		502	210		;							PRIN	SIGN	
		mation:	tler@at	nop(a)		AOC 1					STA			-	Inult Date	柳									-		D BY //	2				29	80		1
		t Infor	le sat	<u>20</u>		P66	Numbe					(GMP)	=0_8AR	19 <u>=</u> 9) <u>3</u>		3					_						IHSING		-	3-	_	_			
		Projec	শ্র	81	Order	ectio	Order	╎┟				(Hel of B	elid code	3A 995) 3	DOD XIRTAM	R			3	-		╂┤		~						HAR I					
	Section B	Required	Report To		Durchace	Client Proj	Container				CODE DW	м Мар	MP OL	07 TS															1	M					
		ſ									MATRIX Drinking Wat	Water Waste Water Product	Soursolid Oil Air	other		1						И						1							
			ies And And	MN ANU	ociates com	ax	(Standard)					x. iaue	ŀ							1	7	4	2				MENTS	がはないが必要なななない。		i					
			ssociat	00107	batraser	<b>5</b>	10 Day (				LE IC	ler per bo 9 / , -) Ist be uni							ч S Y	WC.	5 T	, t	50 7 9	M			AL COM								
		nation:		AWA	ther 6	34-052	i F				<b>MP</b>	Characi (A-Z, 0- ) Ids mu				$\mathbf{H}$	-2	m	7	Ĕ	SC	R	5	Ł			DITION								
vtical		t Inform	2372			503-6	Date/T/				ts	One Sample				۲ ۲	י 4	4	Z	-01	<u>Р</u> 1	<b>F</b>	Ą	3			AD	調査の							
e Anal)	۷	d Clien		ľ			ed Due									2	2	2	Ş	Ż	3		3	کے											
A Star	Section	Require	Address		Email To	Phone:	Request								#MƏTI	$\mathbf{F}_{\mathbf{r}}$	2	100 S	7	5	9	7	8	6	10	12					P	age	17 of	f 19	

		Do	cument Name:	1	Document Revised: 02Aug2016
	Face Analytical*	Sample Conc	lition Upon Rece	eipt Form	Page 1 of 2
İ	and a second sec	F~N	No.: N-L-213-rev.17		Issuing Authority: Pace Minnesota Quality Office
imple Coi Upon Rei	ceipt Client Name:	- Associat	Project	** WO‡	: 10370295
Commerc racking N	cial Pace Spee lumber: <u>707, 4575</u>	Dee Other:_ 	Client	103702	295
istody Se	al on Cooler/Box Present?	No s	ieals intact?	Yes No	Optional: Proj. Due Date: Proj. Name:
acking Ma	aterial: 🛛 Bubble Wrap 🖉 Bubb	ble Bags 🗌 None	e Other:		Temp Blank? 🗌 Yes 💭 No
ermomel Used: oler Tem	ter 151401163 B88A 151401164 B88A p Read (°C): <b>j.O</b> Cooler T	912167504 Type 0143310098 Temp Corrected (°C)	e of Ice:	et Blue Bio	None Samples on ice, cooling process has b
DA Regula samples o , NC, NM,	ated Soil ( N/A, water sample) originate in a quarantine zone within the NY, OK, OR, SC, TN, TX or VA (check ma If Yes to either question, fill c	e United States: AL, A ps)? put a Regulated Soil	R, AZ, CA, FL, GA, Yes Checklist (F-MN	ID, LA. Did No incl -Q-338) and incl	samples originate from a foreign source (international uding Hawaii and Puerto Rico)?
					COMMENTS:
ain of Cu	stody Present?		No N/A	1.	
nain of Cu	stody Filled Out?	Yes	<u>No</u> N/A	2.	
ain of Cu	stody Relinquished?	Ves		3.	
mpler Na	me and/or Signature on COC?	Yes	□No □N/A	4.	
mples Arr	rived within Hold Time?	Yes		5.	
ort Hold	Time Analysis (<72 hr)?	Yes		6.	
sh Turn A	Around Time Requested?	Yes		7.	
fficient Vo	olume?	Yes	No N/A	8.	
rrect Con	tainers Used?	Yes	□No □N/A	9.	
-Pace Cor	ntainers Used?	Yes	□No □N/A		
ntainers l	ntact?	Yes		10.	· · · · · · · · · · · · · · · · · · ·
ered Volu	ume Received for Dissolved Tests?	Yes		11. Note if se	ediment is visible in the dissolved container
mple Labe	els Match COC? Date/Time/ID/Analysis Matrix: V	IT Pres	□No □N/A	12.	
containe ecked?	rs needing acid/base preservation have	been 		13.	
containe mpliance	rs needing preservation are found to be with EPA recommendation?	e in		Sample #	
NO ₃ , H ₂ S( ceptions: '	04, HCl<2; NaOH >9 Sulfide NaOH>12 C VOA, Coliform, TOC, Oil and Grease	Cyanide) □Yes		Initial when	Lot # of added
adsnace i	n VOA Vials ( >6mm)?	Yes		completed:	preservative:
p Blank P	resent?			15	······································
o Blank Ci	ustody Seals Present?				
ce Trip Bla	ank Lot # (if purchased):				
	CLIENT NOTIFICATION/RESOLUTION				Field Data Required?
				Date/Time:	
ہ rson Coni	tacted:				
ہ erson Cont omments/	tacted: /Resolution:				

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).

Γ	Program Amost Ations!"	Document Name: Cocier Transfer Check List	Revised Date: 23Apr2013 Page 1 of 1
	- Hace Analytical	Documant Number: F-MN-C-120-rev.01	Issuing Authority: Pace Minnesots Quality Office

# **Cooler Transfer Check List**

Client:	P66-AT	<u>C</u>	<u></u>		
Project Manager:	Jei	m' C	51055		
Profile/Line #:	333	321	\		
Received with Custoc	ly Seal:	Yes	Mo		
Custody Seal Intact:	Yes	No	NA		
Temperature C: IR Gun # (181- Q281 [] Samples on ic Rush/Short Hold:	Temp Read 5, 6 IR2 - 12206528 a, cooling proc MC	Corre 4 ess has b	cted Temp 5-8 egun	Correction Factor	•
Containers Intact:	Yes	No			
Re-packed and Re-lo	ed:	_/			
Temp Blank Included	l: Yes	No			
Shipped By/Date:		l	<u>1/16/1</u>	<i>b</i>	
Notes:					
Ship to: Pace MN F	ace Davis				



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

December 05, 2016

Kyle Sattler ATC Group Services LLC 6347 Seaview Ave NW Seattle, WA 98107

RE: Project: P66 Westlake/ Mercer Pace Project No.: 10371089

Dear Kyle Sattler:

Enclosed are the analytical results for sample(s) received by the laboratory on November 23, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

ENNI (TROSS

Jennifer Gross jennifer.gross@pacelabs.com Project Manager

Enclosures





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

#### CERTIFICATIONS

Project: P66 Westlake/ Mercer Pace Project No.: 10371089

#### **Minnesota Certification IDs**

1700 Elm Street SE Suite 200, Minneapolis, MN 55414 Alaska Certification UST-107 525 N 8th Street, Salina, KS 67401 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



# SAMPLE SUMMARY

Project: P66 Westlake/ Mercer Pace Project No.: 10371089

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10371089001	INF-1	Air	11/22/16 08:30	11/23/16 10:00
10371089002	INF-2	Air	11/22/16 08:30	11/23/16 10:00
10371089003	INF-3	Air	11/22/16 08:30	11/23/16 10:00



# SAMPLE ANALYTE COUNT

Project: P66 Westlake/ Mercer Pace Project No.: 10371089

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10371089001	INF-1	TO-15	MJL	7	PASI-M
10371089002	INF-2	TO-15	MJL	7	PASI-M
10371089003	INF-3	TO-15	MJL	7	PASI-M



#### Project: P66 Westlake/ Mercer

Pace Project No.: 10371089

Sample: INF-1	Lab ID: 103	71089001	Collected: 11/22/	16 08:30	Received: 1'	1/23/16 10:00 N	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	ND	ug/m3	3.4	10.5		12/02/16 21:22	71-43-2	A4
Ethylbenzene	ND	ug/m3	9.2	10.5		12/02/16 21:22	100-41-4	
THC as Gas	1670	ug/m3	1090	10.5		12/02/16 21:22		
Toluene	16.7	ug/m3	8.1	10.5		12/02/16 21:22	108-88-3	
Xylene (Total)	31.3	ug/m3	27.8	10.5		12/02/16 21:22	1330-20-7	
m&p-Xylene	20.9	ug/m3	18.6	10.5		12/02/16 21:22	179601-23-1	l
o-Xylene	10.4	ug/m3	9.2	10.5		12/02/16 21:22	95-47-6	
Sample: INF-2	Lab ID: 103	71089002	Collected: 11/22/	16 08:30	Received: 1	1/23/16 10:00 M	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	1.5	ug/m3	0.68	2.1		12/02/16 20:54	71-43-2	A4
Ethylbenzene	3.6	ug/m3	1.8	2.1		12/02/16 20:54	100-41-4	
THC as Gas	1520	ug/m3	218	2.1		12/02/16 20:54		
Toluene	16.9	ug/m3	1.6	2.1		12/02/16 20:54	108-88-3	
Xylene (Total)	24.4	ug/m3	5.6	2.1		12/02/16 20:54	1330-20-7	
m&p-Xylene	16.7	ug/m3	3.7	2.1		12/02/16 20:54	179601-23-1	l
o-Xylene	7.7	ug/m3	1.8	2.1		12/02/16 20:54	95-47-6	
Sample: INF-3	Lab ID: 103	71089003	Collected: 11/22/	16 08:30	Received: 1	1/23/16 10:00 M	Matrix: Air	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Met	hod: TO-15						
Benzene	1.4	ug/m3	0.66	2.02		12/02/16 20:23	71-43-2	A4
Ethylbenzene	3.1	ug/m3	1.8	2.02		12/02/16 20:23	100-41-4	
THC as Gas	943	ug/m3	210	2.02		12/02/16 20:23		
Toluene	11.1	ug/m3	1.6	2.02		12/02/16 20:23	108-88-3	
Xylene (Total)	20.7	ug/m3	5.4	2.02		12/02/16 20:23	1330-20-7	
m&p-Xylene	14.3	ug/m3	3.6	2.02		12/02/16 20:23	179601-23-1	l
o-Xvlene	6.4	ua/m3	1.8	2.02		12/02/16 20:23	95-47-6	



Project: P66 Westlake/ Mercer

Pace Project No.: 10371089

QC Batch:	449996	Analysis Method:	TO-15
QC Batch Method:	TO-15	Analysis Description:	TO15 MSV AIR Low Level
Associated Lab Samp	eles: 10371089001, 10371089002, 10	371089003	

METHOD BLANK: 2464341

# Matrix: Air

Associated Lab Samples:	10371089001. 10371089002.	10371089003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/m3	ND	0.32	12/02/16 14:28	
Ethylbenzene	ug/m3	ND	0.88	12/02/16 14:28	
m&p-Xylene	ug/m3	ND	1.8	12/02/16 14:28	
o-Xylene	ug/m3	ND	0.88	12/02/16 14:28	
THC as Gas	ug/m3	ND	104	12/02/16 14:28	
Toluene	ug/m3	ND	0.77	12/02/16 14:28	
Xylene (Total)	ug/m3	ND	2.6	12/02/16 14:28	

#### LABORATORY CONTROL SAMPLE: 2464342

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/m3	34.7	35.6	102	62-141	
Ethylbenzene	ug/m3	47.7	46.4	97	59-149	
m&p-Xylene	ug/m3	47.7	50.8	107	59-146	
o-Xylene	ug/m3	47.2	46.3	98	54-149	
THC as Gas	ug/m3	3740	4140	111	68-145	
Toluene	ug/m3	41.4	41.4	100	61-138	
Xylene (Total)	ug/m3	94.9	97.1	102	66-146	

#### SAMPLE DUPLICATE: 2464897

		10371299001	Dup		Max	
Parameter	Units	Result	Result	RPD	RPD	Qualifiers
Benzene	ug/m3	0.36	0.34	4	25	
Ethylbenzene	ug/m3	1.7	1.8	1	25	
m&p-Xylene	ug/m3	ND	ND		25	
o-Xylene	ug/m3	ND	ND		25	
THC as Gas	ug/m3	309	251	21	25	
Toluene	ug/m3	0.43J	.43J		25	
Xylene (Total)	ug/m3	ND	ND			

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.



#### QUALIFIERS

#### Project: P66 Westlake/ Mercer

Pace Project No.: 10371089

#### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above 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 decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

**DUP - Sample Duplicate** 

**RPD** - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

A4 Sample was transferred from a sampling bag into a Summa Canister within 48 hours of collection.



## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: P66 Westlake/ Mercer Pace Project No.: 10371089

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10371089001	INF-1	TO-15	449996		
10371089002	INF-2	TO-15	449996		
10371089003	INF-3	TO-15	449996		

	Pace Analytical	·			CHAIN The Chain-c	I-OF-CI	a LEGAL I	DY / A	nalytic T. All releva	tal Re	quest nust be corr	Docu	ment ^{urately} .		2	3	0	31
Sectiv	on A	Section B					Section	υ						Ľ	tge:		7	
Requi	red Client Information:	Required Project Ir	formation:				Invoice In	formation:						<b></b>				
Comp	ATC Star	Report To:	Sat	たう	_		Attention:				1				•	C / T	υσί.	
Addre:	······································	apy To:					Company	Name:				RE(	BULATOF	Y AGEN	۲.			
							Address:					L	NPDES	F GRC	UND WAT	ER F	DRINKING	WATER
Email	To:	Purchase Order No	2				Pace Quot Reference:						UST	F RCR	4	ł	OTHER _	
Phone	Eax:	Project Name:					Pace Proje Mananer	J J J	2 1 4 0	2 Mr		Sit	e Location					
Reque	sted Due Date/TAT: STD 10 DAY	Project Number:					Pace Profil	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	332	5			STATE:	3				
				:						-	Reques	sted Ana	ysis Filte	red (V/N)				
ι O Δ	ection D Matrix semical Client Information MATRIX	Codes	(ell/	Ö	ECTED			Prese	ruatives	<b>↑</b> N <i>1</i> /								
	Drinking W. Water Waste Waste		100=0 F	POSITE	COMPOSI		1				51				. (;			
•	Product Soil/Solid SAMPI FID OI	다 의 의		TART	END/GRA		58			<b>1</b> *	011				N/Y) ə		÷.	
	(A-Z, 0-9 / ,-) Wipe (A-Z, 0-9 / ,-) Air Sample IDs MUST BE UNIQUE Tissue	유 산 전 20DE				TA GM3	IZNIATI IBNIATI			səT si	hq Kq				Chlorin		·	
# W3.	Other	Р Лати С 7 юни					UDLEZEL	CI NO ³ ⁵ 2O ⁴	ethanol 825203 80H	<b>Analys</b> ther	XEX				) leubise		s.	
u 🗝	INF-1	N	ⁿ DATE	16 0830	DATE	TIME	n #	H H H	N N N	0		· ·			Ъ –	Pace	Project No	./ Lab I.D.
2	INF-2		11/22/1	16 0830							хX					o O	2	
т	1NF-3		122/19	16 0 8 50							XX					0 0	m	
4			-					_			-							
ů,										;				_				
ω I														-	· ·			
~ 8											-			_				
6										İ.								
9																		
=			_	_														÷
7	ADDITIONAL COMMENTS	RELIN	QUISHED B	Y / AFFILIAT	NO	DATE	TIME		ACCE	PTED BY	AFFILIATIC		DATE	TIME		SAMPL	E CONDITIO	NS
			10-	V /	141	(John	N N	0				N	100	1220			R	2
				N/la	66	(1/22/1)	1	0	R		ِٰل	2		Caal	- ANG	2.	2	>
		Ð	Ы	4											-		5	
Pa				SAMPLE	R NAME AN	D SIGNATU	E E					ан А			D.	(N uo p	) oolet QV	ntact
ge 9	0	RIGINAL			PRINT Name	of SAMPLE	ŝ								ui qm	ivevie: IV) e	(N/A) O Pe Dotsn:	l selq (N\Y)
of 1					SIGNATURE	of SAMPLEI	~				DATE Sign (MM/DD/Y	pa ;;			ıəT	 ୦୦ ୦୦ଧ	C Seal	Ime2
1	"Important Note: By signing this form you are acc	spting Pace's NET 30 day	r payment tern	ns and agreeing	to late charges	of 1.5% per mo	hth for any inv	pices not paid	d within 30 day	ź					F-ALL-O	2-020rev.0	7, 15-May-2	007

-----

-----

Product direct	Occument Name: Cocler Transfer Check List	Revised Date: 23Apr2013 Page 1 of 1
	Document Number: F-MN-C-120-rev.01	issuing Authority: Pace Minnesota Quality Office

# Cooler Transfer Check List

Client:	ATC			
Project Manager:	<u> </u>	1. ( <i>TV</i>	0 <del>55</del>	
Profile/Line #:	3333	32/.	2	
Received with Custod	y Seal:	Yes	No	
Custody Seal Intact:	Yes	No	NA	
Temperature C: IR Gun # IR1- Q281 II Samples on icc Bush/Short Hold:	Temp Read R2 - 12206528- e, cooling proce	Correc 4 — 255 has be	gun	Correction Factor
Containers Intact:	Yes	No		
Re-packed and Re-Ic	ed:			
Temp Blank Included	Yes	NO	N	
Shipped By/Date:		)	11-22-1	à
Notes: Ship to: Pace MN P	ace Davis			

P	) Dice Analytical	Document Air Sample Conditio Document	Name: n Upon Receipt	Document Revised: 26AP Page 1 of 1 Issuing Authority:	R2016		
1		F-MN-A-106	-rev.11	Pace Minnesota Quality	Office		
Air Sample Condition Upon Receipt Courier:	lient Name: ATC-N Eed Ex UPS Commercial Pace 70:21 4575	P Speedee Clie Other: 47-573	roject #:	: 103710 	89		
			······································	Optional: Proj. Due Date:	Proj. Name:		
Custody Seal on Cooler/I	Box Present? X	No Seals Intac	t? 🖉 es 🗌 No		·		
Packing Material: 🖄	ibble Wrap 🗌 Bubble E	Bags Foam Nor	ne 🗌 Tin Can 🗌 Othe	er: Temp	Blank rec: Yes XNo		
Temp. (TO17 and TO13 sam	ples only) (°C):	Corrected Temp (°C):	Thermom. Used:	B88A912167504	151401163 15140 <b>4</b> 464		
Temp should be above free:	zing to 6°C Correction Fac	tor:	Date & Initials of I	Person Examining Contents:	U1234		
ype of ice Received B	lue 🗌 Wet 🏹 None						
			·	Comments:			
Chain of Custody Present	?	Yes 🗌 No	□N/A 1.				
Chain of Custody Filled O	ut?	Yes No	□N/A 2.	· · · · · · · · · · · · · · · · · · ·			
Chain of Custody Relingu	ished?	Yes No	□N/A 3.	· · · · · · · · ·			
Sampler Name and/or Sig	gnature on COC?	Yes No	□N/A 4.	- · · · ·			
Samples Arrived within Hold Time? NYes No N/A 5.							
Short Hold Time Analysis (<72 hr)?							
Rush Turn Around Time Requested?     Yes     No     IN/A     7.							
Sufficient Volume?		Nes No	□N/A 8.				
Correct Containers Used	?	No 🗌 No	□N/A 9.				
-Pace Containers Used	?	Yes No					
Containers Intact?		Yes No	<u>N/A</u> 10.				
Media: Air Can 🔨	Airbag Filter	TDT Passive	11.	•			
Sample Labels Match COC?							
Samples Received:							
Canisters Canisters							
Sample Number	Can ID	Flow Controller ID	Sample Number	Can ID	Flow Controller ID		
• ·····							
CLIENT NOTIFICATION /PI	FSOLUTION			Field Data Required?	Yes DNo		
Person Cont	acted:		Date/Time:	ricia pata nequileur			
Comments/Resol	lution:						
					· · ·		
		$\mathcal{C}$		11/00/16			
Project Manager Review	JENN	)1 ( <u>gross</u>	Date:	11/23/10			

Note: Whenever there is a discrepancy affecting worth Caroline 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)