Minnesota Pollution Control Agency

Monitoring Report

Guidance Document 4-08

This form must be completed annually for Minnesota Pollution Control Agency (MPCA) review following the submittal of Guidance Document 4-06 *Investigation Report Form*. Under certain circumstances MPCA staff may request submittal of this form on an alternate schedule (e.g., quarterly, semi-annually).

All site monitoring results and additional work activities requested by the MPCA must be included and used to support the site management decision. Include any additional information that is important for making the site management decision. Refer to MPCA Guidance Document 1-01 *Petroleum Remediation Program General Policy* for the overall site investigation objectives and to other MPCA guidance documents for details on investigation methods. Do not revise or delete any text from this report form. Attach all applicable figures, tables, and appendices, and indicate those that have been updated during this reporting period. **All data provided must be cumulative.**

MPCA Site ID: Leak #17591 **Date:** March 2016

Responsible Party Information

Name: MPCA Fund Financed Site **Phone #:** N/A

Mailing Address: N/A

City: N/A **Zip Code:** N/A

Alternate Contact (if any) for Responsible Party: Ms. Laurie Kania

Phone #: (218) 302-6639

Leak Site Information

Leak Site Name: Holiday Station **Phone #**: (218) 624-5201

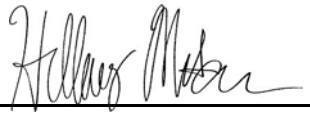
Leak Site Address: 5430 Grand Avenue

City: Duluth **Zip Code:** 55807 **County:** St. Louis

Environmental Professional Information

By signing this document, I/we acknowledge that we are submitting this document on behalf of and as agents of the responsible person or volunteer for this leak site. I/we acknowledge that if information in this document is inaccurate or incomplete, it will delay the completion of remediation and may harm the environment and may result in a reduction in Petrofund reimbursement. In addition, I/we acknowledge on behalf of the responsible person or volunteer for this leak site that if this document is determined to contain a false material statement, representation, or certification, or if it omits material information, the responsible person or volunteer may be found to be in violation of Minn. Stat. § 115.075 (2007) or Minn. R. 7000.0300 (Duty of Candor), and that the responsible person or volunteer may be liable for civil penalties.

MPCA staff is instructed to reject unsigned reports and reports that have been altered.

Name and Title of Report Author(s)	**Signature**	**Date Signed**
Hillary McGown Geologist		March 4, 2016

Name and Title of Report Reviewer(s)	**Signature**	**Date Signed**
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Preface

Leak #2085 was historically defined as the boundary of the redeveloped Holiday gas station; however, for the purpose of the investigation of Leak #17591 (Site), the Site now strictly refers to the multiple releases identified on the current Holiday and McDonald's properties and the related groundwater and light non-aqueous-phase liquids (LNAPL) plume to the south (**Figure 2A and 2B**).

1.1 Describe all site work completed since the investigation report form or the last monitoring report was submitted. This should include both field and non-field related activities.

Between February 2015 and January 2016, Bay West completed the following work associated with Leak #17591:

Mobile LNAPL Gauging

In November 2014, through correspondence with the MPCA, it was decided that monthly mobile LNAPL recovery should be discontinued to allow LNAPL to accumulate in the wells. It was thought that allowing LNAPL to accumulate would allow for the LNAPL recovery pilot test to be completed in the spring of 2015.

Bay West gauged selected Site monitoring wells (MW-9, MW-10, MW-26, MW-27, MW-28, RW-3 and RW-4) for mobile LNAPL on a monthly basis between February and December 2015, except for July and August. Monitoring wells MW-9, MW-10, RW-3 and RW-4 were selected for LNAPL gauging because mobile LNAPL had historically been observed in these monitoring wells. Monitoring wells MW-26, MW-27 and MW-28 were selected for LNAPL gauging because they were installed within the last two years and are downgradient from the Site, along the LNAPL plume. Bay West's field technician used an oil/water interface meter to measure the mobile LNAPL thickness in the selected wells. Mobile LNAPL results are discussed in **Section 2.4**.

LNAPL Drum Disposal

In December 2015, the drum containing recovered LNAPL from the Site monitoring wells was transported under a hazardous waste manifest to Veolia ES Technical Solutions in Menomonee Falls, Wisconsin. A copy of the manifest is included in **Appendix G**.

Monitoring Well Installation

In February 2015, a new monitoring well, MW-28, was installed. MW-28 was installed at the end of the LNAPL plume south of McDonald's, and near VMP-29, where the sanitary sewer begins in the alley. This location was selected to identify if mobile LNAPL has the potential to impact the sanitary sewer in the alley because mobile LNAPL was identified in test trench T-4 near the proposed monitoring well location. The new monitoring well location is shown on **Figure 2B**.

A Bay West geologist logged the construction of the well. The well was completed at-grade with a 4-inch diameter, 10-foot-long, schedule 20 polyvinyl chloride (PVC) well screen. Representative soil samples were collected continuously during monitoring well installation and screened for ionizable hydrocarbons using a photo-ionization detector (PID). Headspace analysis was performed in general accordance with MPCA Fact Sheet #4-04. Headspace analysis was conducted at approximately 2.5-foot sampling intervals. One soil sample was collected from the water table interface and analyzed for grain size by American Society for Testing and Materials (ASTM) method D422 to identify grain size distributions and estimate hydraulic conductivity. The monitoring well construction log is included in **Appendix C**. Grain size calculations are included in **Appendix F** and discussed in **Section 2.5**.

The monitoring well installation and development were performed by a driller licensed in the State of Minnesota and in accordance with all applicable Minnesota Department of Health (MDH) rules and regulations. Soil cuttings were containerized on-site in four 55-gallon drums. Well development and purge water associated with the monitoring well was containerized in one 55-gallon drum. Bay West used analytical data from other recently installed monitoring wells (MW-26 and MW-27) as a basis for soil and water disposal. Analytical results determined that the soil was non-hazardous and the water was hazardous. The five drums were transported under a hazardous waste manifest to Veolia ES Technical Solutions in Menomonee Falls, Wisconsin. A copy of the manifest is included in **Appendix G**.

The geographic location of the well was measured with a hand-held global positioning system (GPS). Bay West surveyed the top of casing and grade elevations for the new well. All locations and elevation measurements were referenced to an existing benchmark and existing monitoring wells associated with the Site. Spatial data is included in **Appendix E**.

Monitoring Well Abandonment

During the fall 2014 groundwater sampling event, Bay West noticed that the sidewalk around and the surface completion of monitoring well MW-24 had been removed during property redevelopment at 5405 Ramsey Street. Bay West contacted the property redevelopment company and their consultant, Braun Intertec. Braun Intertec agreed to properly abandon the well before new sidewalk was installed over the well. Bay West requested a copy of the monitoring well abandonment record from Braun Intertec and had not received a response prior to submission of the 2014 AMR report. In 2015, a copy of the well sealing record was obtained and is included in **Appendix C**. No other monitoring wells associated with the Site were abandoned during this reporting period.

Monitoring Well Maintenance

In June 2015, monitoring well pads and vaults associated with RW-2, MW-9 and MW-22 were replaced by Traut. The inner well casings for the wells listed above were cut down to allow for installation of new well vaults. Bay West surveyed the new top of casing and grade elevations for RW-2, MW-9 and MW-22. All locations and elevation measurements were referenced to an existing benchmark and existing monitoring wells in the vicinity of the Site. Updated well elevations are included in **Tables 9** and **10**.

Semi-Annual Groundwater Monitoring

Semi-annual groundwater sampling events were conducted in April 2015 and September 2015. The April 2015 sampling event consisted of sampling 16 monitoring wells. The September 2015 sampling event consisted of sampling 25 monitoring wells. **Table 1-1** shows the groundwater sampling and analysis schedule.

Table 1-1 Groundwater Sampling and Analysis Schedule

Well ID	April 2015				September 2015			
	MBTEX	VOCs	DRO	GRO	MBTEX	VOCs[1]	DRO	GRO
MW-8	Not Sampled				X		X	X
MW-9	Not Sampled				X		X	X
MW-10	Not Sampled				Not Sampled - Free Product			
MW-11	Not Sampled							
MW-12		X	X	X	X		X	X
MW-13		X	X	X	X		X	X
MW-14	Not Sampled							
MW-15	Not Sampled				X		X	X
MW-16		X	X	X	X		X	X
MW-17		X	X	X	X		X	X
MW-18		X	X	X	X		X	X
MW-19		X	X	X	X		X	X
MW-20		X	X	X	X		X	X
MW-21	Not Sampled				X		X	X
MW-22		X	X	X	X		X	X
MW-23		X	X	X	X		X	X
MW-24	Well Abandoned							
MW-25		X	X	X	X		X	X
MW-26		X	X	X	X		X	X
MW-27		X	X	X	X		X	X
MW-28		X	X	X		X	X	X
Sully's MW-1	X		X	X	X		X	X
Sully's MW-2	X		X	X	X		X	X
Sully's MW-3	X		X	X	X		X	X
RW-1	Not Sampled				X		X	X
RW-2	Not Sampled				X		X	X
RW-3	Not Sampled				X		X	X
RW-4	Not Sampled				Not Sampled - Free Product			
RW-5	Not Sampled				X		X	X
RW-6	Not Sampled				X		X	X

Notes:
MBTEX – methyl tertiary-butyl ether , benzene, toluene, ethylbenzene, and xylenes
[1]VOCs are collected because sampling event is first or second sampling event for this well

Groundwater and mobile LNAPL levels were gauged in each monitoring well prior to the collection of groundwater samples. Bay West purged and sampled the monitoring wells using a low-flow sampling pump. Once the well draw down stabilized (ideally less than 0.3 feet), a flow-through cell

(YSI water quality meter) was connected to the purge line and the following parameters were measured and recorded every 3 to 5 minutes until all had stabilized for three consecutive readings:

- Temperature (± 0.1 degree Celsius)
- pH (± 0.1 unit)
- Dissolved oxygen (DO; 10%)
- Oxidation/reduction potential (ORP; ± 10 millivolts)
- Specific conductivity (5%)
- Turbidity (10% for values greater than 10 NTU)

Purge water associated with sampling was discharged onto the ground surface near the wells; mobile LNAPL was not present in the discharged purge water for any of the sampled wells.

Quality assurance/quality control (QA/QC) samples were collected in accordance with MPCA Guidance Document 4-05. Groundwater monitoring results are discussed in **Section 2.1**.

LNAPL Recovery Pilot Test

In June 2014, a LNAPL Recovery Pilot Test (pilot test) was performed on monitoring well RW-4. The results of the pilot test were summarized in the letter report titled *LNAPL Pilot Recovery Test on RW-4*, dated September 19, 2014. The pilot test determined that although historical data shows that LNAPL thickness is greatest in RW-4 during times of high groundwater elevations (spring), LNAPL may not have the highest mobility during times of high groundwater elevations.

Another pilot test was proposed for the spring of 2015. In the spring of 2015, prior to completing a pilot test, Bay West conducted an LNAPL drawdown test in MW-10. Bay West bailed approximately 1.70 gallons of LNAPL out of MW-10 until the LNAPL thickness was unable to be bailed. Bay West monitored the LNAPL thickness in MW-10 for almost 2 hours after bailing the LNAPL. After approximately 2 hours, the LNAPL thickness was almost recovered to its initial thickness prior to LNAPL removal. Although the results of the drawdown test indicate LNAPL at MW-10 recovers quickly, LNAPL thickness at MW-10 and RW-4 has fluctuated significantly within a month.

Bay West monitored the LNAPL elevations in MW-9, MW-10, MW-26, MW-27, MW-28, RW-3, and RW-4. Sufficient LNAPL thickness was not been present long enough to implement another LNAPL recovery pilot test. A few weeks of planning are required to rent the skimmer and coordinate with the Holiday gas station. Another LNAPL recovery pilot test was not completed in the spring of 2015.

Tables for the LNAPL drawdown test in MW-10 are included in **Appendix D**.

1.2 If additional work requested in the most recent MPCA correspondence has not been completed, explain why.

In 2015, Site conditions were not conducive to conducting another LNAPL Recovery Pilot Test.

Section 2. Monitoring Results

2.1 Ground Water

Discuss the cumulative ground water monitoring results, water level measurements, and plume characteristics with respect to identified receptors.

The groundwater flow direction is predominantly to the south, as shown on the groundwater contour maps for April 2015 (**Figure 3A**) and September 2015 (**Figure 3B**). **Figure 5** is a hydrograph of monitoring wells at the Site. A majority of the Site monitoring wells had their highest historical groundwater elevations during the September 2015 sampling event.

The groundwater analytical results for the April 2015 and September 2015 sampling events are shown on **Figures 3A** and **3B**. **Figures 4A** and **4B** show benzene contours for April 2015 and September 2015. During the spring 2015 sampling event, 13 of the 16 sampled monitoring wells had benzene concentrations greater than the HRL of 2 µg/L. During the fall 2015 sampling event, 19 of the 25 sampled monitoring wells had benzene concentrations greater than the HRL of 2 µg/L. Other BTEX compounds also exceeded their respective HRLs in some of the monitoring wells where benzene exceeded the HRL. As depicted in **Figures 4A** and **4B**, benzene remains most concentrated near MW-8, MW-9 and MW-26. Benzene concentrations in the recently installed monitoring wells (MW-26, MW-27 and MW-28) are consistent with nearby monitoring well concentrations. **Figure 6** is a graph of benzene concentrations versus time. As shown on **Figure 6**, benzene concentrations fluctuate within a range for each individual well. In 2015, benzene concentrations were within historical concentrations.

Table 11 summarizes the monitoring well analytical results. Laboratory analytical reports are included in **Appendix A**. Field methods and procedures are included in **Appendix B**. Copies of the field notes are included in **Appendix D**.

Natural attenuation parameters (ORP, DO, temperature, and pH) were also collected during monitoring well sampling. This was completed by using a flow-through cell and recording the data upon stabilization as described in **Section 1.1**. Natural attenuation parameter results are tabulated in **Table 13.** Trends in natural attenuation parameters have not been evaluated for this Site.

2.2 Field-Detectable Vapors (photoionization detector, explosimeter, etc.)

Discuss the results of any additional follow-up field vapor monitoring. Include a description of each vapor monitoring location and an explanation of monitoring methods and instruments used. Interpret the cumulative results as related to the identified receptors.

Vapor monitoring points (VMPs) were last monitored in 2014; PID and LEL readings for all VMPs were zero. VMP monitoring was discontinued in 2015 and was not proposed in the 2016 fiscal year work plan. A summary of all historical results are included in **Table 19**.

2.3 Vapor Intrusion (soil gas, sub-slab, indoor, ambient)

Discuss the results of any follow-up vapor intrusion assessment (VIA) activities including a description of each VIA sampling location and an interpretation of the results with respect to receptors.

Petroleum compound concentrations in soil gas samples collected during the 2014 permanent soil vapor monitoring point (VMP) sampling event did not exceed 10-times their respective Intrusion Screening Value (ISVs). The collection of soil gas samples from permanent soil vapor monitoring points was discontinued in 2015 and was not proposed in the 2016 fiscal year work plan. A summary of all historical analytical results are tabulated in **Table 20**.

Solvent related compound concentrations in soil gas samples have been detected in the area of concern and are being investigated under a separate MPCA Site Assessment site SA#4563 Ramsey Street.

2.4 Mobile LNAPL

If mobile LNAPL is present, discuss what activities are being completed to measure and recover it. Describe the effectiveness of the recovery efforts and mobile LNAPL trends over the course of the investigation. Complete Table 14 and discuss the data compiled to date.

Bay West mobilized to the Site, at the frequency described in **Section 1.1**, to measure and remove mobile LNAPL the Site. Approximately 1.70 gallons of mobile LNAPL was recovered from MW-10 during the LNAPL drawdown test completed in April of 2015. Mobile LNAPL was not recovered in other monitoring wells during 2015. LNAPL elevations and free product recovery information is included in **Table 10** and **Table 14**, respectively.

2.5 Other (e.g., surface water, contaminated surface soil, etc.)

Discuss the results of any additional monitoring or subsurface investigation conducted during this reporting period. Identify all monitoring locations on an attached site map by labeling each location. A description of sampling methods, including the instruments used, must be included in Section 6.

A grain size sample was collected from MW-28 (14-17.5 feet bgs). The sample was collected from the interval of the water table interface. The hydraulic conductivity for MW-28 was calculated using the Hazen method. The hydraulic conductivity for MW-28 (14-17.5 feet bgs), which consisted of coarse sand, was calculated to be 0.135 feet/day. The aquifer thickness at MW-28 is 3.5 feet. The transmissivity at MW-28 is 0.47 $feet^2$/day, which is not considered an aquifer by the Petroleum Remediation Program. The grain size analytical report is included in **Appendix A**. Hydraulic conductivity calculations are included in **Appendix F**.

2.6 Site Conceptual Model

Discuss any changes to the overall site conceptual model that have altered the current site management decision based upon the information presented in this report.

Site Specific Geology and Hydrogeology

Based on the soil encountered during recent monitoring well installation and soil borings previously completed at the Site, soils are generally described as follows:

- Fill material starts at the surface with a thickness ranging from 1 to 7 feet bgs.
- The fill material is underlain by a clay unit, identified across the Site at depths ranging from less than 1 foot bgs to 10 feet bgs. This clay unit may not be natural, as metal debris has been observed below it in MW-22 and TP-2.
- The clay unit is underlain by a sand unit identified on the western portion of the Holiday Station property, as well as south of McDonalds and further south of the Site/McDonalds, as identified in monitoring wells MW-23 through MW-28. The sand unit is not present north of the Holiday Station property in monitoring well MW-14. The sand unit is present at a depth of approximately 10-14 feet bgs (top of sand unit) to 16-22 feet bgs (bottom of sand unit). This sand unit contains the sewer utilities, mobile LNAPL, and groundwater in the area; therefore, it is the primary focus of investigation and remediation.
- Underlying the sand unit is an additional clay unit that extends to an unknown depth.

Groundwater flow direction is toward the south and southeast. Groundwater in monitoring wells at the Site in the vicinity of the contamination source has been encountered at depths ranging from 6 to 18 feet bgs. The groundwater and mobile LNAPL appear to occupy the sand unit and is semi-confined by the overlying clay. Groundwater elevations fluctuate seasonally approximately one to five feet. Bay West compared the LNAPL thickness to the potentiometric groundwater surface over time in RW-3, RW-4, and MW-10. In RW-4, the LNAPL thickness increases as groundwater elevation rises. This suggests the mobile LNAPL is confined in RW-4. Contradictory, the LNAPL thickness in RW-3 and MW-10 decreases as groundwater elevation rises. This suggests the LNAPL is unconfined in RW-3 and MW-10.

Contaminant Distribution

The potential source areas are now defined as follows, as shown on **Figure 2B**:

- Source Area #1 – The mobile LNAPL plume extending from MW-10/T-5 area to the north, to RW-4, T-4, and the sewer backfill in the alley south of McDonald's. Shallow contamination directly south of the Holiday gas station, as shown in LIF-2, LIF-3 and MW-15. Monitoring wells south of the Holiday gas station (MW-12, MW-13, MW-16, MW-25, MW-27 and MW-28) indicate contamination south of the site with benzene concentrations ranging between 203 micrograms per liter (µg/L- MW-27) and 625 µg/L (MW-25), respectively in September 2015. Shallow contamination in the center of the Holiday gas station, as shown in RW-3, MW-9, MW-22, and RW-4, with a maximum benzene concentration of 6,360 µg/L (MW-9). North of the Holiday Station, near LIF-22, -23, -24, -61, -62, -63, and MW-10. East of the Holiday Station, as identified in LIF-35, LIF-34, and LIF-33.
- Source Area #2 – 2005/2006 release from the current Holiday UST system on the western property boundary, as shown by LIF-53 and LIF-55, as well as elevated groundwater concentrations in MW-8 and MW-26. Observed by soil probes SB-24 through SB-29, with benzene concentrations up to 22,100 µg/L (MW-8 in spring of 2013), which is indicative of

LNAPL presence. Benzene concentrations ranged between 1,570 µg/L (MW-8) and 2,320 µg/L (MW-26), respectively in September 2015.

Receptors and Exposure Pathways

Mobile and Residual LNAPL

A summary of the potential receptors and the exposure risks is presented in **Table 2-1**. The extent of mobile LNAPL and residual LNAPL contamination are shown in **Figure 2B**. Mobile LNAPL has been detected at the Site in monitoring wells (RW-3, RW-4, MW-9 and MW-10) and a test trench (T-4). Residual LNAPL at the Site is present at the two potential source areas discussed above. Residual LNAPL is also present in the backfill of the sanitary line in the alley south of manhole VMP-27.

The mobile and residual LNAPL in the source areas pose a composition and saturation risk due to the utilities and occupied structures that exist in the areas. There is a naturally occurring sand layer that ranges approximately 12 feet bgs (top of sand layer) to 20 feet bgs (bottom of sand layer). The mobile LNAPL follows the groundwater flow within the sand layer, and extends directly south from the Holiday gas station and connects to manholes VMP-27 and VMP-29. A sanitary sewer line continues to the south, where residual LNAPL was found around the sewer line. According to correspondence with the City of Duluth, the Duluth Engineering Department performed in-situ lining of a sanitary sewer along Grand Avenue, west of Central Avenue. The City of Duluth has not completed in-situ lining of the sanitary sewer within source area #1. This sanitary sewer line is considered at-risk for exposure to LNAPL.

Table 2-1 Summary of Receptors and Exposure Pathway Risk Analysis

Source Area	Mobile LNAPL (saturation risk)	Dissolved Contaminants (composition risk)	Vapor Intrusion (composition risk)
#1	**Yes** RW-3, MW-10, and RW-4	**Moderate** No identified receptors; plume extends over sewers with unknown condition.	**Low** Receptor-based soil gas samples below ISV; however, there are potential vapor intrusion pathways to receptors (See **Table 2-2**)
#2	**Likely**	**Moderate** No identified receptors; Benzene has migrated downgradient from the Site with highest concentrations near MW-8, MW-9 and MW-26 (Figs. 4A and 4B).	**Low** Historic receptor-based soil gas samples below ISV. There are potential vapor intrusion pathways to receptors. (See **Table 2-2**)

Vapor Intrusion Pathway

The vapor risk represented by these source areas is limited to one specific pathway. On one hand, soil gas sampling conducted between the plume and off-site receptors has not detected petroleum constituents at concentrations exceeding 10-times the property specific ISVs, indicating there is little risk for vapor intrusion at this Site via typical migration in the soil. Furthermore, the air samples collected from vapor monitoring points along the sanitary sewer line did not have concentrations of petroleum constituents greater than 10-times the residential ISVs. On the other hand, there have been historic petroleum vapor complaints from sewer drains downgradient of the Site and there is residual LNAPL in the sanitary sewer backfill in this area. Nearby buildings, with noted complaints of petroleum vapors, were constructed in the early 1900s and contain basements with unsealed foundations and floors. This LNAPL represents a vapor migration risk to the downgradient receptors connected to this sewer. In addition to the LNAPL plume in source area #1, the groundwater benzene from source area #2 is contributing to the vapor intrusion risk at the Site. In

January 2014, SG-14, which is downgradient from source area #2, did not have a benzene concentration greater than 10-times the residential ISV.

SA#4563, Ramsey Street Site, is located around the alley south of the Holiday Site. This site assessment was initiated when chlorinated volatile organic compounds (CVOCs) were detected in several soil-gas probes during investigation activities associated with the Holiday Gas Station Site. In February 2015, during discussions with the property owner during a pre-bid walk through of 408 N. Central Avenue, it was discovered that a dry cleaning facility formerly operated in the now vacant lot between 408 and 412 N. Central Avenue. The dry cleaning facility was in operation for approximately five years and may have relocated across Central Avenue. After a discussion with the property owner and review of the City Directories, it was confirmed that Fashion Dry Cleaners was present at 410 N. Central Avenue in 1951. **Table 2-2** below summarizes the vapor intrusion risk for properties associated with SA#4563. The SA#4563 report for fiscal year 2015 (FY15) is included in **Appendix H**.

An SSD system has been installed at 406 Central Avenue. . Installing SSD systems at 408 and 412 Central Avenue would reduce the risk of petroleum contaminant vapor intrusion associated with the Holiday Gas Station Site as well as CVOC contaminant vapor intrusion associated with the Ramsey Street site (SA#4563).

Table 2-2 Summary of Vapor Intrusion Risk for Properties Associated with SA#4563, Ramsey Street Site

Property Address	Property Use	Sub-Slab Results	Indoor Air Results	Mitigation Status
412 North Central Avenue	Basement = Storage/ Staff Break Room/ Partial Crawlspace First Floor = Dentist Second Floor = Residential	PCE > 100X residential ISV	1,2,4-TMB and 1,3,5-TMB > respective residential ISVs PCE > residential ISV	Mitigation Proposed
410 North Central Avenue	Vacant, no building. Fashion Dry Cleaners in 1951.	Not applicable	No applicable.	Source Investigation Proposed
408 North Central Avenue	Basement = Storage First Floor = Office	VOC concentrations were less than 10X the industrial ISVs, however based on the sub-slab, indoor air, and permanent soil-gas point results in the immediate vicinity of this building, vapor intrusion may represent a risk to this structure.	VOC concentrations were less than the industrial ISVs.	Mitigation Proposed
406 North Central Avenue	Basement = Storage First Floor = Offices/Nail Salon Second Floor = Offices	PCE > 100X industrial ISV	1,2,4-TMB > industrial ISV in post-mitigation confirmation sample collected in the basement. Source of 1,2,4-TMB is unknown. Pressure differential measurements indicate the SSD system is operating as designed.	SSD System Installed February of 2015
402 North Central Avenue	Basement = Bar/Lounge First Floor = Bar/Lounge Second Floor = Residential Units	VOC concentrations were less than 10X the industrial ISVs.	VOC concentrations were less than the industrial ISVs.	Mitigation not Proposed
5405 Ramsey Street[1]	Slab-on-Grade Residential Housing Units	Benzene > 10X industrial ISV in one sub-slab point, in one sample, collected in 5/1/2013. Results were not compared to residential ISVs.	Indoor air sampling not conducted prior to or following property re-development	Property has been redeveloped as residential housing. Braun is the consultant and stated that some of the buildings were built with vapor mitigation systems or vapor barriers.

[1] 5405 Ramsey Street vapor sampling was conducted prior to site redevelopment.

Site Management Decision

The site management decision should be based on the Program's objectives described in Guidance Document 1-01 *Petroleum Remediation Program General Policy*.

2.7 Recommendation for site:

- ☒ site closure
- ☐ additional ground water monitoring
- ☐ additional field-detectable vapor monitoring
- ☐ additional soil or ground water investigation
- ☐ additional soil gas/vapor intrusion investigation
- ☒ corrective action

2.8 If closure is recommended, summarize significant investigative events and describe how the site-specific exposure pathways identified in the site conceptual model (SCM) have been adequately addressed.

Bay West believes LNAPL has been recovered to the maximum extent practicable as outlined in MPCA Guidance Document 2-02 (Light Non-Aqueous Phase Liquid Management Strategy):

1. **The LNAPL body has been delineated and mobile LNAPL characterized**.

   The LNAPL body has not fluctuated, or appeared in additional wells other than those where it has historically been observed. Since 2010, LNAPL has only been observed in monitoring wells MW-10 and RW-4. New monitoring wells (MW-26, MW-27 and MW-28) were installed in locations within the residual and mobile LNAPL plumes; mobile LNAPL has not been observed in these wells.

2. **LNAPL recharge rates decrease to and stabilize at some minimal levels due to sustained LNAPL recovery efforts under MPCA-approved recovery method, schedule, and locations.**

   During the LNAPL recovery pilot test completed on RW-4, LNAPL did not recover following removal; after four days following removal, LNAPL had recovered to approximately 27% of what was initially observed prior to removal. The cumulative recharge rate observed at MW-10 during the LNAPL drawdown test was approximately 1.50 gallons/day. Although the observed recharge rate is considerable, LNAPL is only observed in MW-10 approximately a few months out of the year. Additionally, regardless of the amount of LNAPL removed from the well, varying amounts of LNAPL are observed in the well when present. Sufficient LNAPL thickness has not been present in MW-10 long enough to implement an additional LNAPL recovery pilot test. Bay West has been unable to implement the LNAPL recovery pilot test in MW-10 in the last 18 months. It would be difficult to implement full-scale, long-term LNAPL recovery plan in either well.

3. **One year of post-LNAPL recovery monitoring data confirms that mobile LNAPL is spatially stable and not migrating.**

   One year of post-LNAPL recovery monitoring has been completed and confirms that mobile LNAPL is spatially stable and not migrating to wells where it was not previously identified.

4. **One year of post-LNAPL recovery groundwater monitoring data confirm decreasing or stable trends in aqueous phase contaminant concentrations and extents.**

   One year of post-LNAPL recovery groundwater monitoring data confirms a stable trend in aqueous phase contaminant concentrations and extents in monitoring wells

5. **One year of post-LNAPL recovery vapor monitoring data confirm low risk to receptors.**

   Permanent vapor monitoring points and temporary vapor monitoring locations have not been monitored since 2014. Previous monitoring at these locations did not indicate a vapor intrusion risk. However, as discussed in **Section 2.6**, there is a potential petroleum and CVOC vapor intrusion risk to 408 and 412 North Central Avenue. Installing SSD systems could reduce the potential vapor intrusion risk to both of these properties.

Bay West recommends discontinuing LNAPL recovery and groundwater sampling, and abandoning the Site monitoring wells and permanent vapor monitoring points.

2.9 If additional monitoring or subsurface investigation is recommended, provide details of all proposed activities (e.g., monitoring locations, sampling frequency, target analytes, additional monitoring wells, soil borings).

Not Applicable.

2.10 If corrective action is recommended, provide a conceptual approach by completing Guidance Document 4-19 *Conceptual Corrective Action Design Worksheet* and include in Section 6. See Guidance Document 4-10 *Elements of the Corrective Action Design* for more information on the corrective action design process and other requirements. (Note: If a *Conceptual Corrective Action Design Worksheet* is submitted, MPCA staff will review this report at a higher-than-normal priority to determine if corrective action is required.)

Bay West recommends that SSD systems be installed at 408 and 412 North Central Avenue to reduce the potential petroleum and CVOC vapor intrusion risks to these properties. A CVOC source investigation and potential removal should also be conducted at 410 North Central Avenue.

Section 3. Figures

Attach the following figures in the order listed below. All figures must include a north arrow, scale, and legend. Approximate scales are not acceptable.

List of Figures

Section 4. Tables

Attach all tables from the *Investigation Report Form* and indicate those that have been updated during this reporting period by marking the check box below. **Tables must include all cumulative data.**

Updated	Included	Table Number and Name
☐	☒	Table 1. Tank Information
☒	☒	Table 2. Results of Soil Headspace Screening
☐	☒	Table 3. Analytical Results of Soil Samples
☐	☒	Table 4. Other Contaminants Detected in Soils (Petroleum or Non-petroleum Derived)
☒	☒	Table 5. Contaminated Surface Soil Results
☐	☒	Table 6. Water Level Measurements and Depths of Water Samples Collected from Borings
☐	☒	Table 7. Analytical Results of Water Samples Collected from Borings
☐	☒	Table 8. Other Contaminants Detected in Water Samples Collected from Borings (Petroleum or Non-petroleum Derived)
☒	☒	Table 9. Monitoring Well Completion Information
☒	☒	Table 10. Water Level Measurements in Wells
☒	☒	Table 11. Analytical Results of Water Samples Collected from Wells
☒	☒	Table 12. Other Contaminants Detected in Water Samples Collected from Wells (Petroleum or Non-petroleum Derived)
☒	☒	Table 13. Natural Attenuation Parameters
☒	☒	Table 14. Mobile LNAPL Recovery
☐	☒	Table 15. Properties Located within 500 feet of the Release Source
☐	☒	Table 16. Water Supply Wells Located within 500 feet of the Release Source and Municipal or Industrial Wells within ½ mile
☐	☒	Table 17. Surface Water Receptor Information
☐	☒	Table 18. Utility Receptor Information
☐	☒	Table 19. Vapor Survey Results
☐	☒	Table 20. Results of Soil Gas Sampling for Vapor Intrusion Screening

Section 5. Appendices

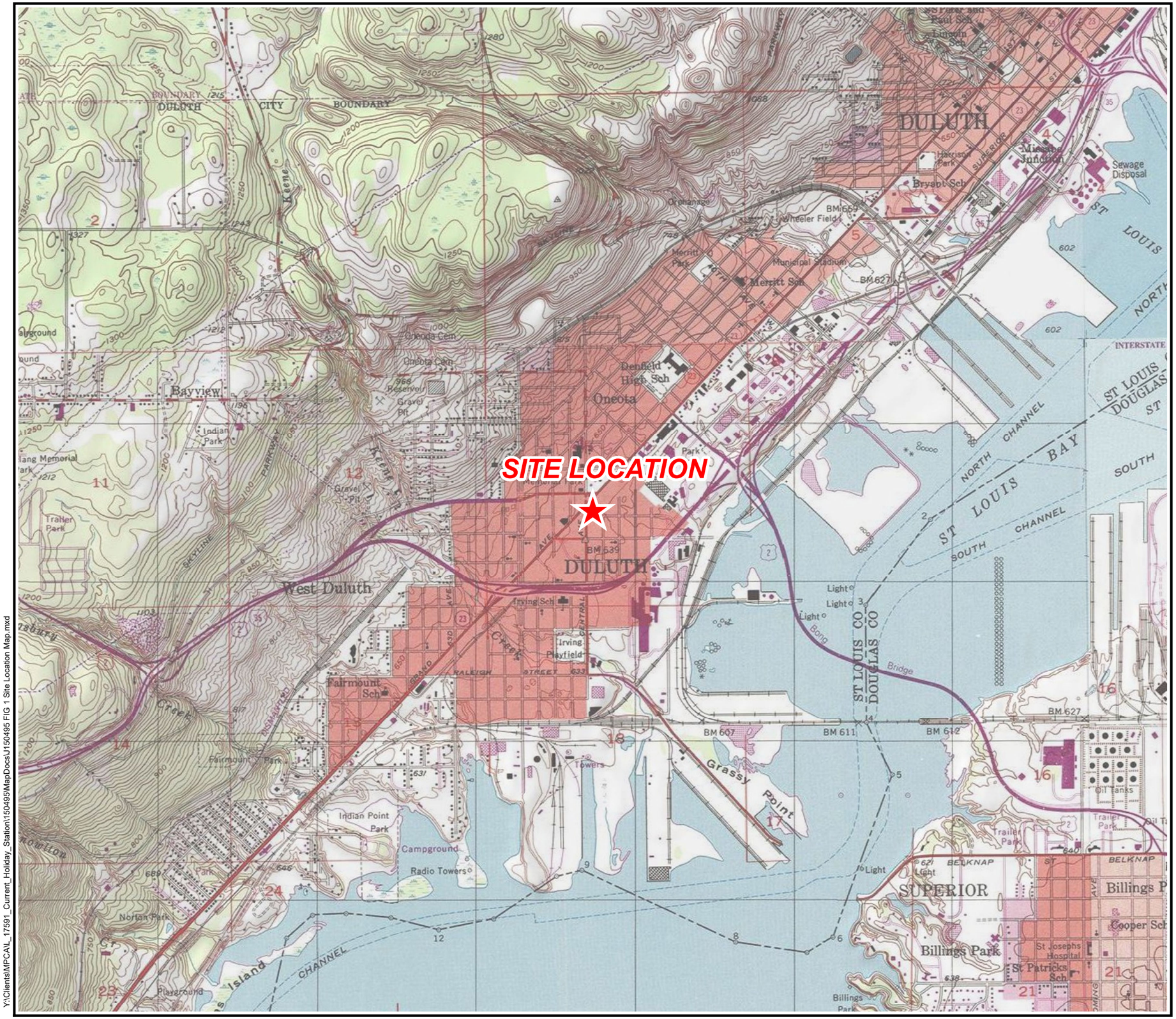
Attach all required or applicable appendices in the following order. Indicate those appendices that are included in this report by marking the check box. The appendix section of the report contains sufficient information to document all activities completed since the last report. All reproduced data must be legible. Reports missing required documentation are subject to rejection.

Included		
☒	*Appendix A*	Copies of most recent laboratory analytical reports for Soil, Soil Gas/Sub-slab Vapor/Indoor Air/Ambient Air, and Ground Water samples, including a copy of the Chain of Custody. Include laboratory QA/QC data, Chromatograms, and MDH laboratory certification number.
☒	*Appendix B*	Methodologies and Procedures, Including Field Screening of Soil, Other Field Analyses, Soil Boring, Soil Sampling, Soil Gas/Sub-Slab/Indoor air/Ambient Air Sampling, Well Installation, and Water Sampling.
☒	*Appendix C*	Geologic Logs of Additional Soil Borings and Wells Installed. Include Well Construction Diagrams and Copies of the Minnesota Department of Health Well Record for new wells.
☒	*Appendix D*	Field or sampling data sheets (sampling forms, field crew notes, etc.).
☒	*Appendix E*	Spatial Data Reporting Spreadsheet
☒	*Appendix F*	Hydraulic Conductivity Calculations
☒	*Appendix G*	Hazardous Waste Manifest for Drum Disposal
☒	*Appendix H*	FY15 5405 West Ramsey Street SA#4563 Letter Report

Web pages and phone numbers

MPCA staff	http://www.pca.state.mn.us/pca/staff/index.cfm
MPCA toll free	**1-800-657-3864**
Petroleum Remediation Program web page	http://www.pca.state.mn.us/programs/lust_p.html
MPCA Info. Request	http://www.pca.state.mn.us/about/inforequest.html
MPCA VIC program	http://www.pca.state.mn.us/cleanup/vic.html
MPCA Petroleum Brownfields Program	http://www.pca.state.mn.us/programs/vpic_p.html
MPCA SRS guidance documents	http://www.pca.state.mn.us/cleanup/riskbasedoc.html http://www.pca.state.mn.us/cleanup/riskbasedoc.html#surfacewaterpathway
MDH HRLs	http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html
MDH DW hotline	**1-800-818-9318**
Petrofund Web Page	http://www.state.mn.us/cgi-bin/portal/mn/jsp/content.do?id=-536881377&agency=Commerce
Petrofund Phone	**651-215-1775 or 1-800-638-0418**
State Duty Officer	**651-649-5451 or 1-800-422-0798**

Figures

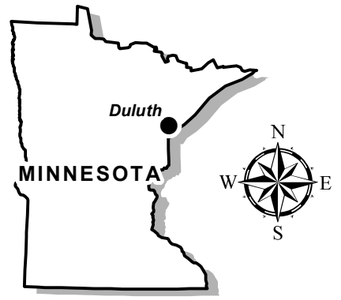


Y:\Clients\MPCAIL_17591_Current_Holiday_Station\150495\MapDocs\J150495 FIG 1 Site Location Map.mxd

FIGURE 1

Site Location Map

Holiday Gas Station
5430 Grand Ave
Duluth, MN 55807



Coordinate System: NAD 1983 UTM Zone 15N, Meters

Basemap: National Geographic Society, i-cubed 2013

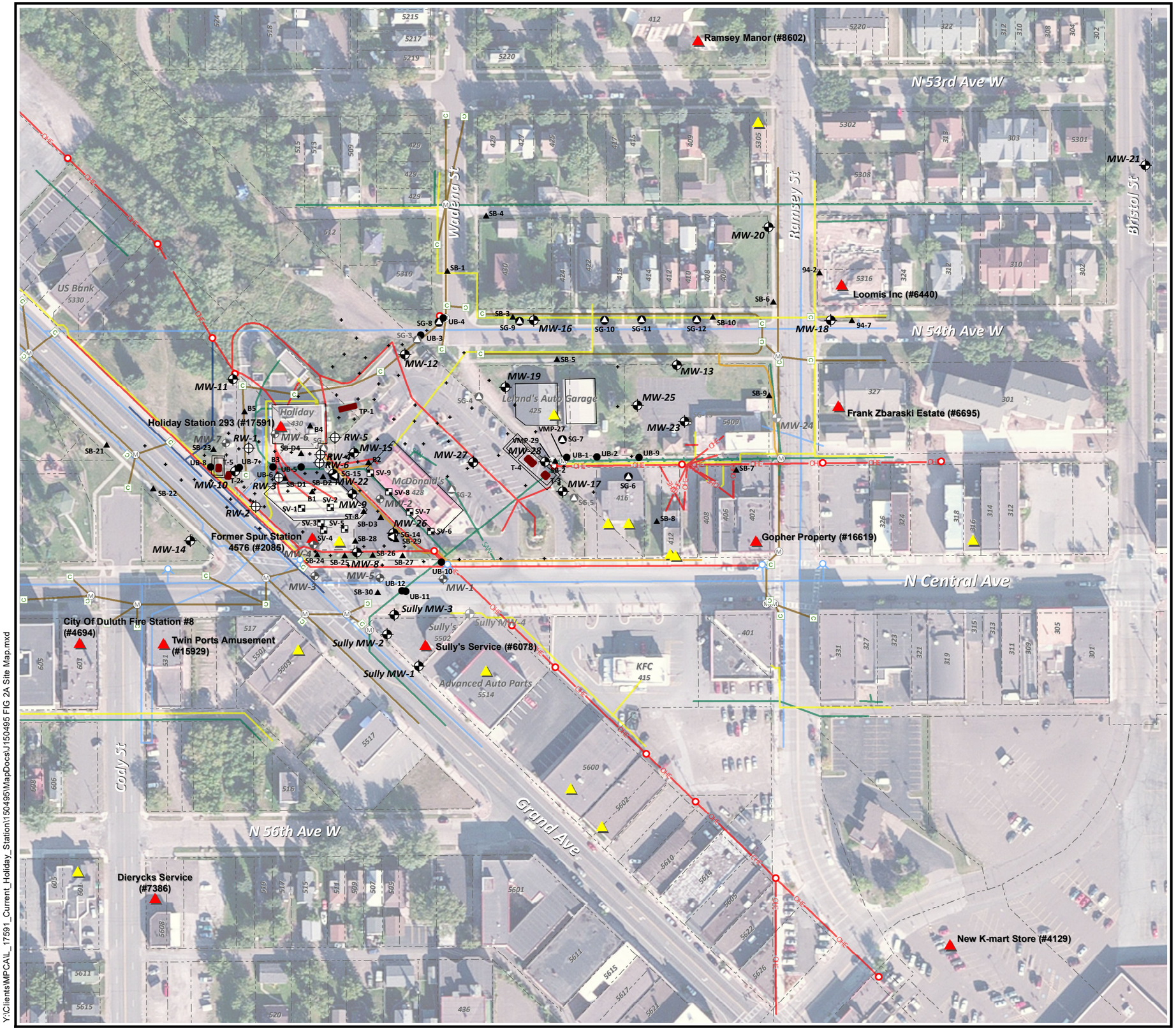
0 1,000 2,000 4,000 Feet

0 300 600 1,200 Meters

★ Site Location

Bay West
Customer-Focused Environmental & Industrial Solutions

Drawn By: S.G. Date Drawn/Revised: 11/9/2015 Project No. J150495



Y:\Clients\MPCA\L_17591_Current_Holiday_Station\150495\MapDocs\J150495 FIG 2A Site Map.mxd

FIGURE 2A

Site Map

Holiday Gas Station
5430 Grand Ave
Duluth, MN 55807

Map Units: Meters
Coordinate System: NAD 1983 UTM Zone 15N

0 100 200 Feet
0 30 60 Meters

N E S W

Sampling Features

- MW-1 Monitoring Well
- MW-1 Monitoring Well (Abandoned)
- RW-1 Recovery Well
- SG-6 Soil Gas (Permanent)
- SG-1 Soil Gas (Temporary/Abandoned)
- SV-1 Soil Vapor
- SB-1 Soil Boring
- UB-1 Utility Boring
- LIF Probe
- T-1 Test Pit

MPCA Sites

- Hazardous Waste
- Leak Site

Utility Features

- C Catch Basin
- M Manhole
- Hydrant
- Utility Pole
- Underground Electric Line
- OHE Overhead Electric Cable
- Gas Line
- Water Line
- Storm Sewer Line
- Sanitary Sewer Line
- Communication Line
- Fiber Optic Line
- Fiber Optic Line (Abandonded)

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FIGURE 2B

Detailed Site Map

Holiday Gas Station
5430 Grand Ave
Duluth, MN 55807

Map Units: Meters
Coordinate System: NAD 1983 UTM Zone 15N

0 50 100 Feet
0 15 30 Meters

N W E S

Sampling Features

- MW-1 Monitoring Well
- MW-1 Monitoring Well (Abandoned)
- RW-1 Recovery Well
- SG-6 Soil Gas (Permanent)
- SG-1 Soil Gas (Temporary)
- SV-1 Soil Vapor
- SB-1 Soil Boring
- UB-1 Utility Boring
- 1 LIF Probe
- T-1 Test Trench

MPCA Sites

- Hazardous Waste
- Leak Site

LNAPL Extent

- Mobile
- Residual
- 1 Source Area

Utility Features

- C Catch Basin
- M Manhole
- Hydrant
- Light
- Utility Pole
- SIGN Buisness Sign
- E Electical Box

- UE Underground Electric Line
- OHE Overhead Electric Cable
- G Gas Line
- W Water Line
- ST Storm Sewer Line
- SAN Sanitary Sewer Line
- COM Communication Line
- F Fiber Optic Line
- Fiber Optic Line (Abandonded)

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Y:\Clients\MPCA\L_17591_Current_Holiday_Station\150495\MapDocs\J150495 FIG 2B Detailed Site Map.mxd

FIGURE 2C

Vapor Monitoring Locations

Holiday Gas Station
5430 Grand Ave
Duluth, MN 55807

Map Units: Meters
Coordinate System: NAD 1983 UTM Zone 15N

0 100 200 Feet
0 30 60 Meters

N E S W

Vapor Monitoring Point

- (1) Field Verified Existing
- (2) Field Verified Non-existant

Sampling Features

- SG-1 Soil Gas

Utility Features

- C Catch Basin
- M Manhole
- Hydrant
- Utility Pole
- Underground Electric Line
- OHE Overhead Electric Cable
- Gas Line
- Water Line
- Storm Sewer Line
- Sanitary Sewer Line
- Communication Line
- Fiber Optic Line
- Fiber Optic Line (Abandonded)

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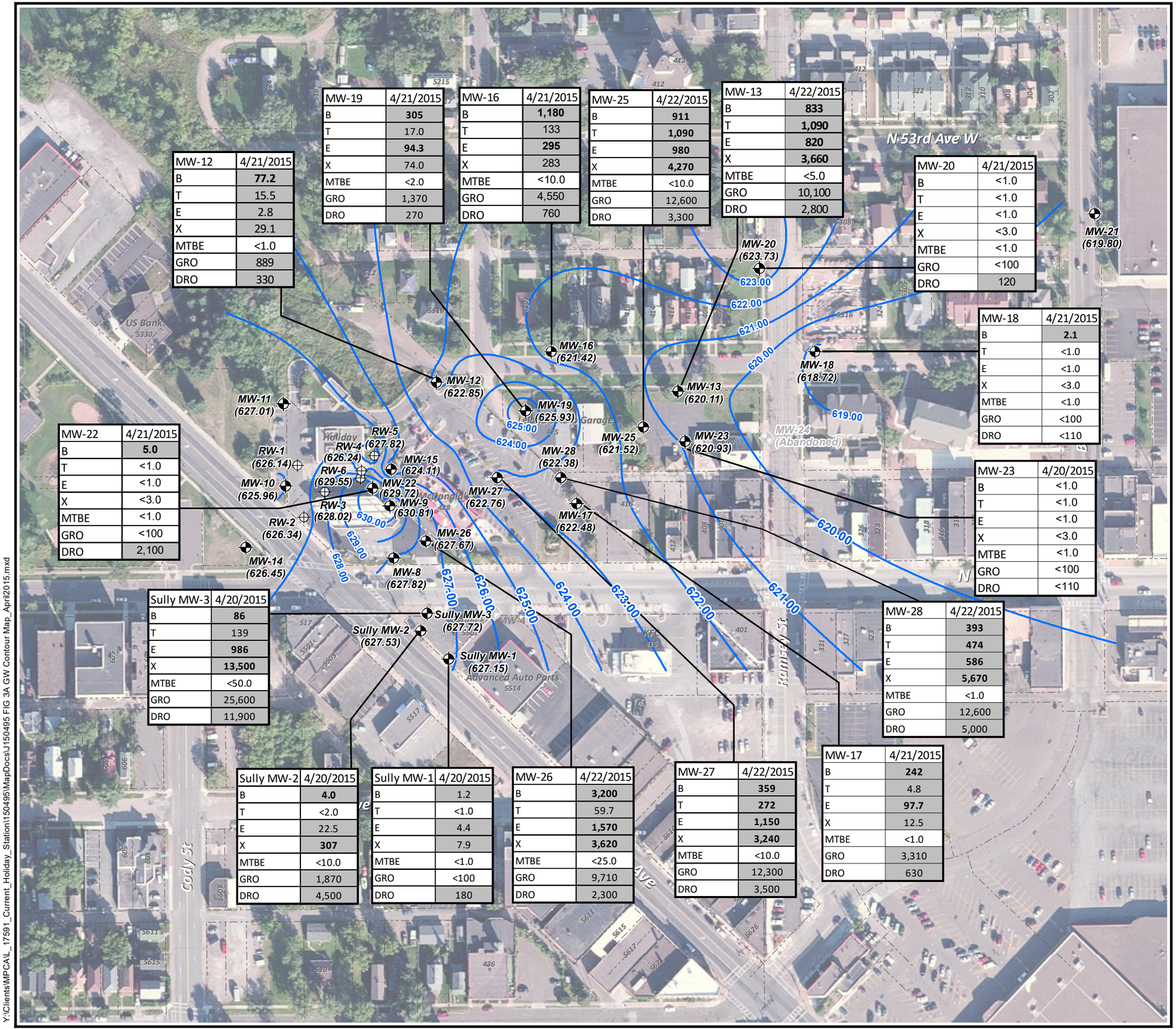
Y:\Clients\MPCA\L_17591_Current_Holiday_Station\150495\MapDocs\J150495 FIG 2C Vapor Monitoring Locations.mxd



MW-12	4/21/2015
B	**77.2**
T	15.5
E	2.8
X	29.1
MTBE	<1.0
GRO	889
DRO	330

MW-19	4/21/2015
B	**305**
T	17.0
E	**94.3**
X	74.0
MTBE	<2.0
GRO	1,370
DRO	270

MW-16	4/21/2015
B	**1,180**
T	133
E	**295**
X	283
MTBE	<10.0
GRO	4,550
DRO	760

MW-25	4/22/2015
B	**911**
T	**1,090**
E	**980**
X	**4,270**
MTBE	<10.0
GRO	12,600
DRO	3,300

MW-13	4/22/2015
B	**833**
T	**1,090**
E	**820**
X	**3,660**
MTBE	<5.0
GRO	10,100
DRO	2,800

MW-20	4/21/2015
B	<1.0
T	<1.0
E	<1.0
X	<3.0
MTBE	<1.0
GRO	<100
DRO	120

MW-18	4/21/2015
B	**2.1**
T	<1.0
E	<1.0
X	<3.0
MTBE	<1.0
GRO	<100
DRO	<110

MW-22	4/21/2015
B	**5.0**
T	<1.0
E	<1.0
X	<3.0
MTBE	<1.0
GRO	<100
DRO	2,100

MW-23	4/20/2015
B	<1.0
T	<1.0
E	<1.0
X	<3.0
MTBE	<1.0
GRO	<100
DRO	<110

Sully MW-3	4/20/2015
B	**86**
T	139
E	**986**
X	**13,500**
MTBE	<50.0
GRO	25,600
DRO	11,900

MW-28	4/22/2015
B	**393**
T	**474**
E	**586**
X	**5,670**
MTBE	<1.0
GRO	12,600
DRO	5,000

Sully MW-2	4/20/2015
B	**4.0**
T	<2.0
E	22.5
X	**307**
MTBE	<10.0
GRO	1,870
DRO	4,500

Sully MW-1	4/20/2015
B	1.2
T	<1.0
E	4.4
X	7.9
MTBE	<1.0
GRO	<100
DRO	180

MW-26	4/22/2015
B	**3,200**
T	59.7
E	**1,570**
X	**3,620**
MTBE	<25.0
GRO	9,710
DRO	2,300

MW-27	4/22/2015
B	**359**
T	**272**
E	**1,150**
X	**3,240**
MTBE	<10.0
GRO	12,300
DRO	3,500

MW-17	4/21/2015
B	**242**
T	4.8
E	**97.7**
X	12.5
MTBE	<1.0
GRO	3,310
DRO	630

FIGURE 3A

Groundwater Contour Map (April 2015)

Holiday Gas Station
5430 Grand Ave
Duluth, MN 55807

Coordinate System: NAD 1983 UTM Zone 15N, Meters
Basemap: ESRI World Imagery WMS

0 100 200 Feet
0 30 60 Meters

Site Features

- ***MW-1*** Monitoring Well
- ***RW-1*** Recovery Well
- ***MW-24*** Monitoring Well - Abandoned
- ***(618.72)*** Measured Depth of Groundwater
- Groundwater Contour, April 2015

Analysis

MW ID	Sample Date
B - *Benzene*	µg/L
T - *Toluene*	µg/L
E - *Ethyl-Benzene*	µg/L
X - *Total Xylenes*	µg/L
MTBE - *Methyl Tertiary Butyl Ether*	µg/L
GRO - *Gasoline Range Organics*	µg/L
DRO - *Diesel Range Organics*	µg/L

Notes:
µg/l - Micrograms per liter
HRL - Minnesota Department of Health (MDH) Health Risk Limit
NA - Not Analyzed
< - Less than Report Limit
Shaded - Result exceeds the laboratory reporting limit
Bold - Result exceeds the MDH HRL

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Y:\Clients\MPCA\L_17591_Current_Holiday_Station\150495\MapDocs\J150495 FIG 3A GW Contour Map_April2015.mxd

FIGURE 3B

Groundwater Contour Map (September 2015)

Holiday Gas Station
5430 Grand Ave
Duluth, MN 55807

Coordinate System: NAD 1983 UTM Zone 15N, Meters

Basemap: ESRI World Imagery WMS

0 100 200 Feet

0 30 60 Meters

N W E S

Site Features

- ***MW-1*** Monitoring Well
- ***RW-1*** Recovery Well
- ***MW-24*** Monitoring Well - Abandoned
- ***(622.61)*** Measured Depth of Groundwater
- Groundwater Contour, September 2015

Analysis

MW ID	Sample Date
B - *Benzene*	µg/L
T - *Toluene*	µg/L
E - *Ethyl-Benzene*	µg/L
X - *Total Xylenes*	µg/L
MTBE - *Methyl Tertiary Butyl Ether*	µg/L
GRO - *Gasoline Range Organics*	µg/L
DRO - *Diesel Range Organics*	µg/L

Notes:
µg/l - Micrograms per liter
HRL - Minnesota Department of Health (MDH) Health Risk Limit
NA - Not Analyzed
< - Less than Report Limit
Shaded - Result exceeds the laboratory reporting limit
Bold - Result exceeds the MDH HRL

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Drawn By: S.G. Date Drawn/Revised: 2/16/2016 Project No. J150495

Y:\Clients\MPCAIL_17591_Current_Holiday_Station\150495\MapDocs\J150495 FIG 3B GW Contour Map_Sept2015.mxd

FIGURE 4A

Benzene Contour Map (April 2015)

Holiday Gas Station
5430 Grand Ave
Duluth, MN 55807

Coordinate System: NAD 1983 UTM Zone 15N, Meters
Basemap: ESRI World Imagery WMS

0 100 200 Feet
0 30 60 Meters

N E S W

Site Features

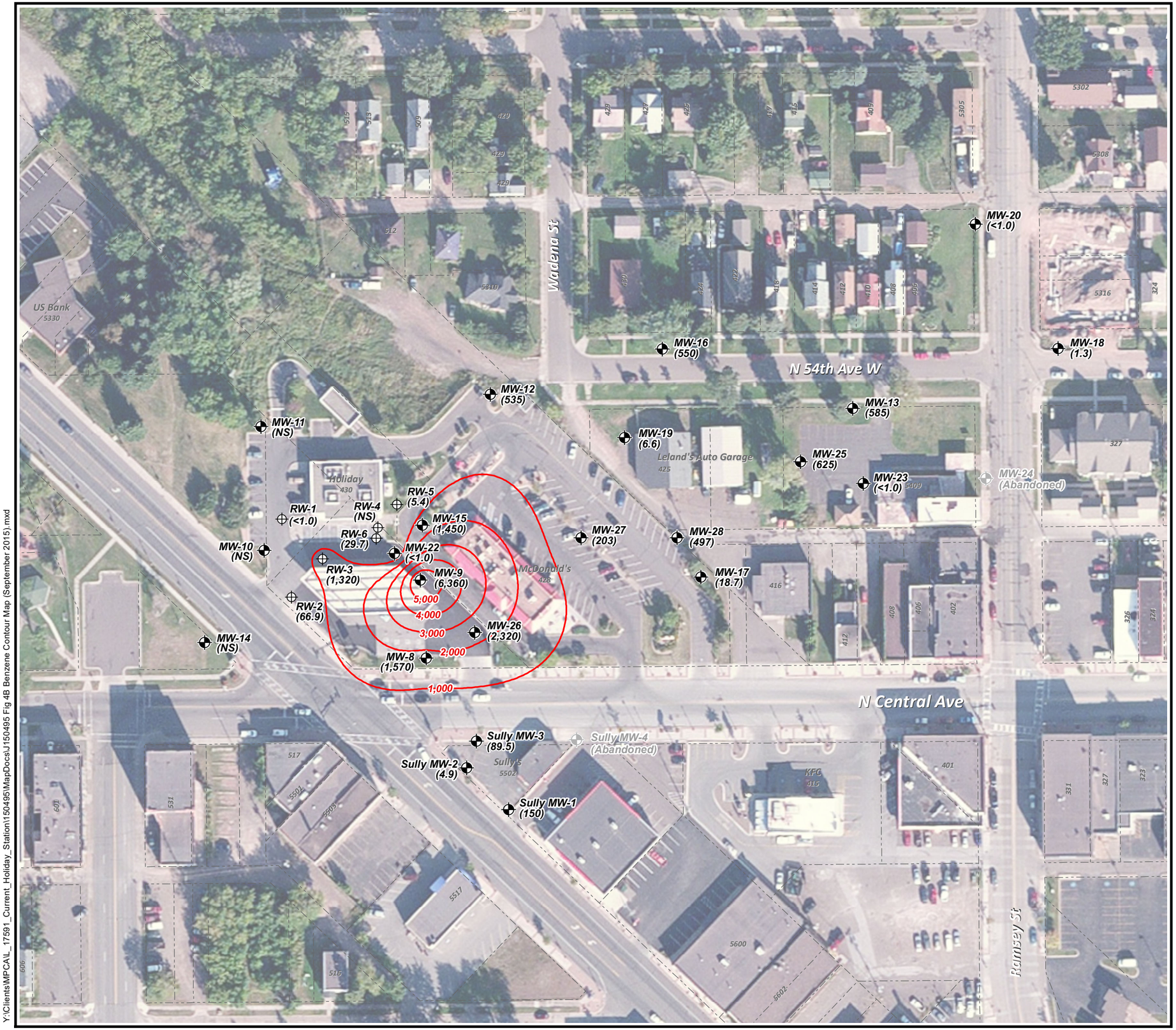
- MW-1 — Monitoring Well
- RW-1 — Recovery Well
- MW-4 — Monitoring Well - Abandoned
- (1,180) — Benzene Concentration (µg/l)
- Benzene Contour, April 2015

Notes:
NS - Not Sampled
< - Less than Report Limit
µg/l - micrograms per liter

Bay West
Customer-Focused Environmental & Industrial Solutions

Drawn By:	Date Drawn/Revised:	Project No.
S.G.	12/8/2015	J150495

Y:\Clients\MPCA\L_17591_Current_Holiday_Station\150495\MapDocs\J150495 Fig 4A Benzene Contour Map (April 2015).mxd



Y:\Clients\MPCA\L_17591_Current_Holiday_Station\150495\MapDocs\J150495 Fig 4B Benzene Contour Map (September 2015).mxd

FIGURE 4B

Benzene Contour Map (September 2015)

Holiday Gas Station
5430 Grand Ave
Duluth, MN 55807

Coordinate System: NAD 1983 UTM Zone 15N, Meters
Basemap: ESRI World Imagery WMS

0 100 200 Feet
0 30 60 Meters

N E S W

Site Features

- MW-1 — Monitoring Well
- RW-1 — Recovery Well
- MW-4 — Monitoring Well - Abandoned
- (4.9) — Benzene Concentration (µg/l)
- Benzene Contour, September 2015

Notes:
NS - Not Sampled
< - Less than Report Limit
µg/l - micrograms per liter

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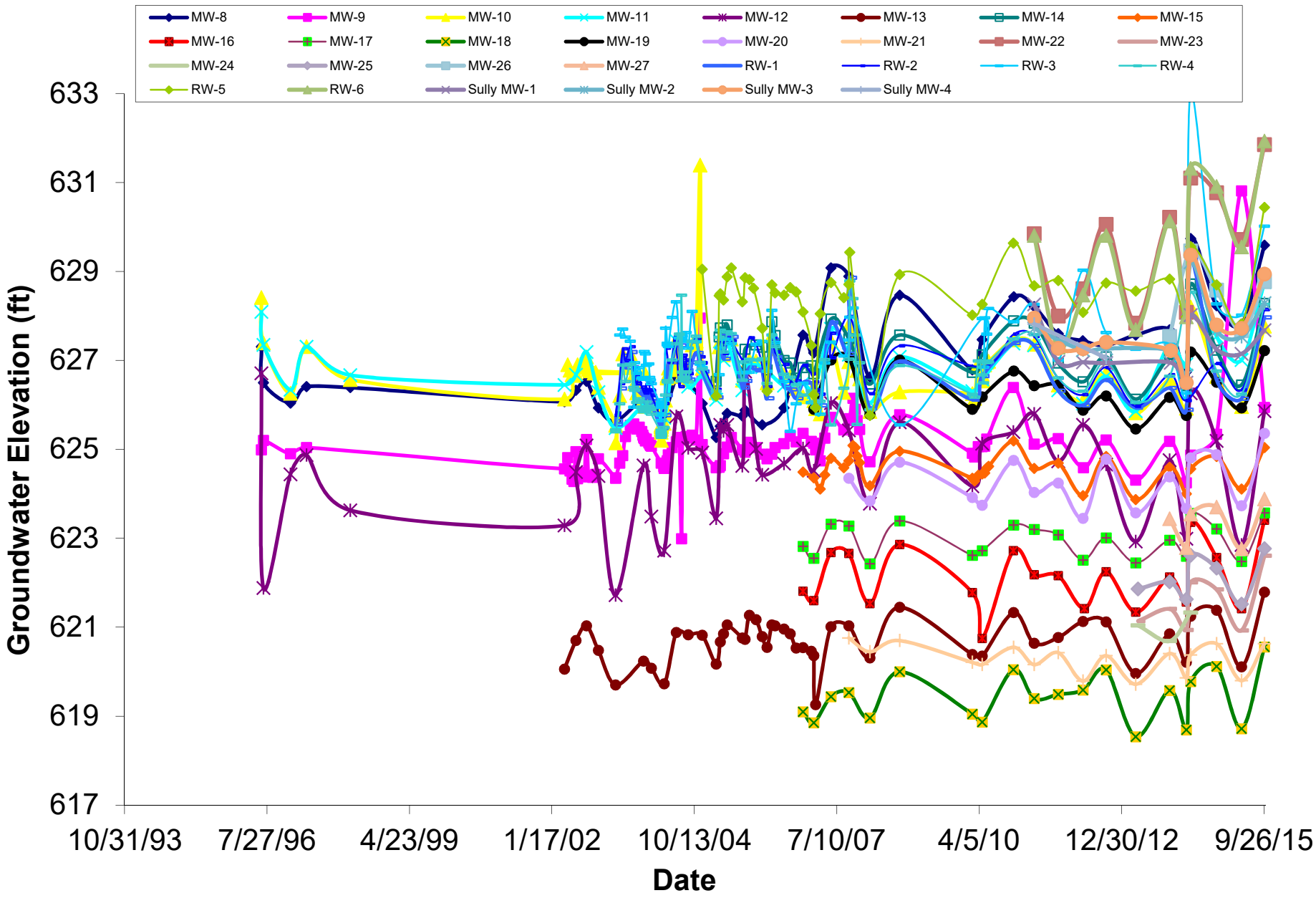
Drawn By: S.G. Date Drawn/Revised: 12/8/2015 Project No. J150495



Bay West

FIGURE 5
HYDROGRAPH

HOLIDAY GAS STATION
MPCA LEAK #17591
DULUTH, MN

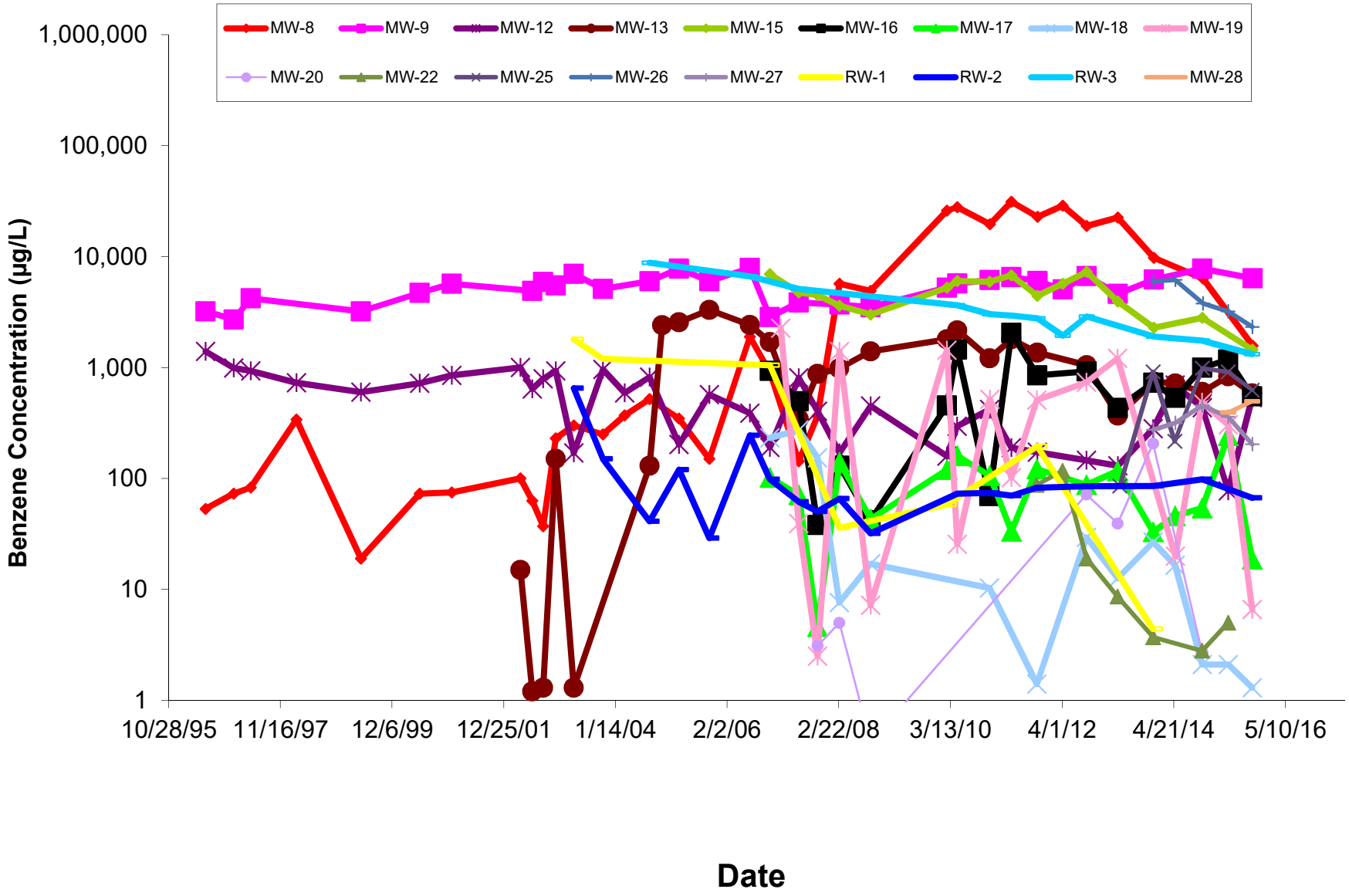


FIGURE 6
HISTORICAL BENZENE CONCENTRATION IN MONITORING WELLS

HOLIDAY GAS STATION
MPCA LEAK # 17591
DULUTH, MN

Distance Along Baseline (approximate)

A

A'

PROPERTY LINE

PROPERTY LINE

PROPERTY LINE

AREA OF INTEREST

CENTRAL AVE

Sully MW-1

Sully MW-3

SB-30

MW-8

SB-28

MW-9 LIF-10

MW-22

RW-6

RW-4

LIF-1

RW-5

TP-1

LIF-35

FILL

CLAY

SAND

Leak #6078

CURRENT UST BASIN

DEBRIS

FILL

DEBRIS

SAND

CLAY

Elevation (ft)

100

98

96

94

92

90

88

86

84

82

80

78

76

90

120

150

180

210

240

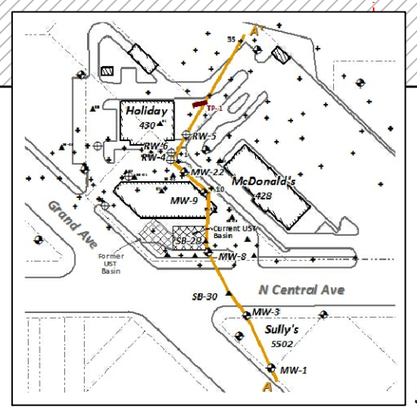
270

300

330

360

390



SITE LAYOUT

Groundwater Level (Low, High)

Screen Intervals

Fill (made ground)

Sand

Clay

Sanitary Sewer Line

Water Line

Underground Electric Line

Communication Line

Mobile LNAPL

Residual LNAPL

Florescence Detected From LIF

VERTICAL SCALE (FEET) 4

HORIZONTAL SCALE (FEET) 30

ENGR'G B.F.	DATE	Bay West	
DRAWN G.S.	9/10/11	Customer-Focused Environmental & Industrial Solutions	
REV. S.G.	12/08/14		
PROJECT NAME	HOLIDAY GAS STATION 5430 GRAND AVE. DULUTH, MN 55807		
TITLE	CROSS-SECTION A TO A'		
DWG. NO. J150495	SCALE 1"=20'	FIGURE # 7A	

B

B'

LELANDS AUTO GARAGE

MW-17

T-3

T-4

MW-19

MW-16

54th Avenue

FILL

CLAY

SAND

CLAY

Elevation (ft)

100 98 96 94 92 90 88 86 84 82 80 78 76

0 10 20 30 40 50 60 70 80

MW-17: 0 / 17.8 / 3.5 / 11.2 / 0.8 / 1.1 / 2.1 / 0.8 / 15.7 / 1.1

T-3: 0.0 / 0.0 / 0.0 / 0.0 / 2.5 / 27.9 / 8.5 / 7.3 / 3.3 / 1.5

T-4: 0.0 / 0.0 / 0.0 / 0.0 / 8.6 / 11.5 / 7.5 / 216.8 / 995.4 / 1,000 +

MW-19: 0 / 0 / 0 / 0 / 3.9 / 165 / 101 / 9.2

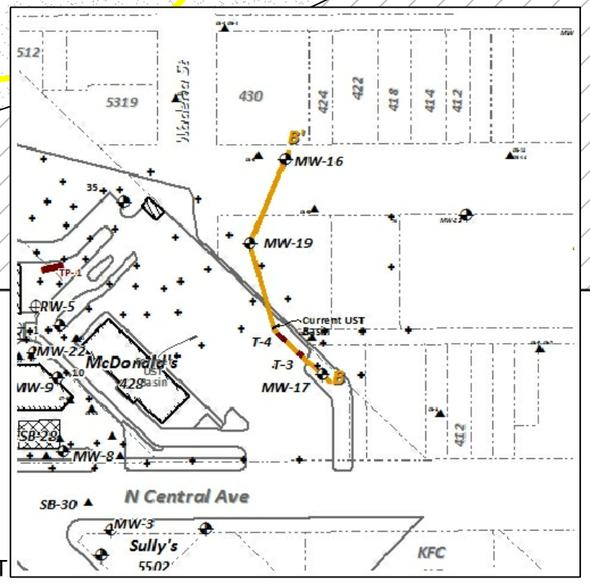
MW-16: 0 / 0 / 0 / 0 / 0 / 0 / 1.4 / 6.5 / 2.6

SS

ST

G

W



SITE LAYOUT

Groundwater Level

Screen Intervals

Fill (made ground)

Sand

Clay

Sanitary Sewer Line

Storm Sewer Line

Water Line

Gas Line

Mobile LNAPL

Residual LNAPL

VERTICAL SCALE (FEET) 4

HORIZONTAL SCALE (FEET) 10

ENGR'G	B.F.	DATE	
DRAWN	S.G.	12/13/12	
REV.	S.G.	12/08/14	

Bay West

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PROJECT NAME	HOLIDAY GAS STATION 5430 GRAND AVE. DULUTH, MN 55807
TITLE	CROSS–SECTION B TO B'
DWG. NO.	J150495
SCALE	1"=20'
	FIGURE # 7B

Tables

TABLE 1
TANK INFORMATION

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Tank #	Tank Material	Piping Material	UST or AST	Capacity (gal)	Contents	Installation Date	Status	Condition
1	Steel	Unknown	UST	4,000	Unleaded/regular gasoline/kerosine	1965	Removed 11-28-89	Fair to good
2	Steel	Unknown	UST	4,000	Unleaded/regular gasoline	1965	Removed 11-28-89	Not observed
3	Steel	Unknown	UST	4,000	Unleaded/regular gasoline and/or leaded gasoline	1965	Removed 11-28-89	Not observed
4	Steel	Unknown	UST	10,000	Regular Gasoline	1965	Removed 1986	Unknown
5	Steel	Unknown	UST	250	Used Oil	Unknown	Removed 11-11-93	Unknown
1*	Steel	Steel	UST	12,000	Gasoline	11/9/1993	Active	Active
2*	Steel	Steel	UST	12,000	Gasoline	11/9/1993	Active	Active
3*	Steel	Steel	UST	12,000	Gasoline	11/9/1993	Active	Active
4*	Steel	Steel	UST	8,000	Diesel	11/9/1993	Active	Active

Notes:
* Current tank ID according to the MPCA Storage Tank Database.

TABLE 2
RESULTS OF SOIL HEADSPACE SCREENING

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Monitoring Well	B-1	B-2	B-3	B-4	B-5	MW-1/ST-1	MW-2/ST-2	MW-3/ST-3	MW-4/ST-4	MW-5/ST-5	MW-6/ST-6	MW-7/ST-7	B-1/TB-1	B-2/TB-2	B-3/TB-3	B-4/TB-4
Consultant	TPT	TPT	TPT	TPT	TPT	Braun	Braun	Braun	Braun	Braun	Braun	Braun	Summit	Summit	Summit	Summit
Installation Date	12/9/1990	12/9/1990	12/17/1990	12/9/1990	12/17/1990	12/17/1990	8/24/1991	8/24/1991	8/24/1991	8/24/1991	8/24/1991	8/24/1991	4/7/1992	4/7/1992	4/7/1992	4/8/1992
Depth	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)
0-2	3.8	2	16	1.8	0.8	-	-	-	-	-	-	-	-	-	-	-
2-4	5.2	0	EIL	1.4	0.4	0	0	0	0	0	0	0	0	0	0	0
4-6	270	0	4	1.4	0.4	0	0	0	0	0	0	0	-	-	-	-
6-8	300	0.2	92	0.4	0.3	2	12	0	10	0	0	0	2	0	0	2
8-10	EIL	110	210	0.6	1.8	28	40	8	80	150	0	1	-	-	23	-
10-12	130	98	-	-	-	-	-	-	-	-	-	-	480	-	952	-
12-14	3.8	-	180	55	188	150	155	25	8	200	0	25	-	0	30	290
14-16	-	1.4	140	180	168	40	11	3	11	-	0	8	-	30	-	-
16-18	0.8	0.2	70	110	28	42	-	-	-	20	-	-	0	13	-	0
18-20	1	0	1.8	44	14	8	-	-	1	-	-	-	-	-	0	-
20-25	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-
25-30	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-

Monitoring Well	B-5/TB-5	MW-8	MW-9	MW-10	MW-11	MW-12	SB-1-99	SB-2-99	SB-3-99	SB-4-99	SB-5-99	SB-6-99	SB-7-99	SB-8-99	SB-9-99	SB-10-99
Consultant	Summit	Braun	Braun	Braun	Braun	Braun	Northern	Northern	Northern	Northern	Northern	Northern	Northern	Northern	Northern	Northern
Installation Date	8/24/1991	6/18/1996	6/18/1996	6/17/1996	6/17/1996	6/18/1996	5/13/1999	5/13/1999	5/13/1999	5/14/1999	5/14/1999	8/16/1999	8/16/1999	8/16/1999	8/16/1999	8/16/1999
Depth	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)
0-2	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-4	0	1.7	1.7	3.5	3.5	3.5	1.7	8.6	0	1.7	0	1.6	3.4	0.1	0.3	-
4-6	45	3.5	3.5	7	5.3	8.8	-	-	-	-	-	-	-	-	-	-
6-8	8	386	3.5	7	5.3	146	1.7	13	1.7	1.7	0	2.7	4.5	2.2	1.4	-
8-10	311	411	7	169	5.3	148	-	-	-	-	-	-	-	-	-	-
10-12	234	-	-	-	-	-	1.7	12	1.7	0	0	2.9	3.7	1.4	1.9	-
12-14	91	115	244	65	3.5	7	-	-	-	-	-	-	-	-	-	-
14-16	46	113	31	15	3.5	3.5	1.7	612	1.7	0	18	2.9	5.5	2.2	3.2	-
16-18	-	7	8	70	3.5	3.5	-	-	-	-	-	-	-	-	-	-
18-20	-	5.3	8	70	5.3	3.5	0	314	-	-	34	-	-	-	-	-

Monitoring Well	SB-21	SB-22	SB-23	SB-D1	SB-D2	SB-D3	SB-D4	MW-13	RW-1	RW-2	RW-3	RW-4	RW-5	RW-6	MW-14	MW-15
Sampling Consultant	Northern	Northern	Northern	DPRA	DPRA	DPRA	DPRA	DPRA	DPRA	DPRA	DPRA	DPRA	DPRA	Bay West	DPRA	DPRA
Installation Date	5/1/2000	5/1/2000	5/1/2000	4/15/2008	4/15/2008	4/15/2008	4/15/2008	4/16/2002	4/8/2003	4/8/2003	4/9/2003	4/9/2003	1/14/2005	4/5/2011	1/14/2005	11/1/2006
Depth	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)
0-2	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	1.0
2-4	0	0	0	1	0	0	0	0	-	-	-	-	0.3	0	0.9	0.0
4-6	-	-	-	200	7	0	0	-	1.5	0	250	0	-	0.1	-	0.0
6-8	0	0	0	1900	100	0	5	0	-	-	-	-	-	0	-	0.0
8-10	-	-	-	-	-	-	-	0	3	50	180	130	4.2	0.1	0.8	66.4
10-12	0	0	0	220	-	-	>2,000	0	-	-	-	-	-	284.7	-	71.3
12-14	-	-	-	>2,000	-	0	170	0	-	-	-	-	-	339	-	252.2
14-16	0	0	0	-	-	-	-	-	35	35	45	150	3.2	124.1	1.2	225.4
16-18	-	-	-	-	-	-	-	0	-	-	-	-	-	19.7	-	134.2
18-20	-	-	-	-	-	-	-	-	1	2	25	150	2	3.5	0.6	172

Monitoring Well	MW-16	MW-17	MW-18	MW-19	MW-20	MW-21	MW-22	UB-1	UB-2	UB-3	UB-4	UB-5	UB-6	UB-7	UB-8	UB-9
Sampling Consultant	DPRA	DPRA	DPRA	DPRA	DPRA	DPRA	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West
Installation Date	10/31/2006	11/1/2006	10/31/2006	1/29/2007	10/2/2007	10/2/2007	4/5/2011	5/4/2011	5/4/2011	5/4/2011	5/4/2011	5/4/2011	5/5/2011	5/5/2011	5/5/2011	5/5/2011
Depth	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)	PID Reading (ppm)
0-2	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.3	0.0	0.0	0.0	0.0	1.2	0.0	0.0
2-4	0.0	17.8	0.0	0.0	0.0	0.0	0.5	0.0	0.3	0.0	0.0	0.0	0.0	1.2	0.0	0.0
4-6	0.0	3.5	0.9	0.0	0.0	0.0	11.5	0.0	0	0	0.0	58.6	0.0	0.0	0.0	0.0
6-8	0.0	11.2	0.0	0.0	0.0	0.0	178.8	0.0	0.1	0.0	0.0	58.6	0.0	0.0	0.0	0.0
8-10	0.0	0.8	0.0	3.9	0.0	0.0	366.4	0.2	0.5	221.2	0.0	400+	612.3	7.8	0.0	0.0
10-12	1.4	1.1	0.2	165	0.0	0.0	55.7	0.2	1,489	221.2	0.0	400+	612.3	7.8	600+	0.0
12-14	6.5	2.1	68.7	101	0.0	0.0	172.3	1,050+	1,121	0	-	600+	800+	600+	800+	0.0
14-16	2.6	0.8	1.1	9.2	0.0	0.0	243.0	1,050+	1,121	0	-	600+	800+	600+	800+	0.0
16-18	-	15.7	1.8	-	0.0	0.0	55.9	1,000+	837.2	-	-	-	-	-	600+	0.0
18-20	-	1.1	-	-	0.0	0.0	6.7	862	185	-	-	-	-	-	-	-
20-22	-	-	-	-	-	-	-	85.1	-	-	-	-	-	-	-	-
22-24	-	-	-	-	-	-	-	0.6	-	-	-	-	-	-	-	-

TABLE 2
RESULTS OF SOIL HEADSPACE SCREENING

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Monitoring Well	SB-24-12	SB-25-12	SB-26-12	SB-27-12	SB-28-12	SB-29-12	SB-30-12	UB-10	UB-11	UB-12	T-1	T-2	T-3	T-4	T-5	SP-1[1]
Sampling Consultant	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West
Installation Date	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/11/2012	9/12/2012	9/12/2012	9/12/2012	9/12/2012	9/12/2012	6/2/2011	6/2/2011	10/29/2012	10/30/2012	10/30/2012	4/19/2013
Depth	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading
	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
0-2	0.7	1.9	12.6	NA	5.1	0.8	1.7	1.5	1.1	1.5	0	0	0	0	0	0
2-4	0.7	1.9	12.6	NA	5.1	0.8	1.7	1.5	1.1	1.5	0	3	0	0	0	0
4-6	0.8	2.3	16.8	7.0	7.2	1.4	2.0	1.6	1.4	1.9	0	5.2	0	0	0	0
6-8	1.2	2.8	22	8.7	5.7	1.1	2.0	1.6	1.4	1.9	0	15.9	0	0	0	0
8-10	1.1	3.1	41.6	8.1	7.5	1.1	2.0	1.3	1.2	1.4	0	123.7	2.5	11.5	5.5	0
10-12	0.8	378.4	968.4	9.5	490.7	14.1	2.1	1.1	1.4	-	1.1	500+	27.9	219.8	1,000+	0
12-14	5.5	680.7	1,740	1,572	251.4	500.7	3.8	1.2	2.1	-	-	-	8.5	1,000+	-	0
14-16	5.5	200.2	1,740	523	251.4	21.1	3.8	-	-	-	-	-	1.5		-	0
16-18	3	30.1	150.8.	40.1	8.4	2.8	-	-	-	-	-	-	-	-	-	0
18-20	-	30.1	150.8	-	8.4	1.6	-	-	-	-	-	-	-	-	-	0
20-22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22-24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Monitoring Well	SP-3/MW-23[1]	SP-4/MW-24[1]	SP-2/MW-25[1]	SP-5[1]	SP-6[1]	SP-7[1]	SP-8[1]	SP-9[1]	MW-26	MW-27
Sampling Consultant	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West	Bay West
Installation Date	4/22/2013	4/22/2013	4/19/2013	4/23/2013	4/23/2014	4/23/2013	4/24/2013	4/24/2013	11/19/2013	11/18/2013
Depth	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading	PID Reading
	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)	(ppm)
0-2	0	0	0	0	0	0.8	0	0	6.0	0
2-4	0	0	0	0	0	0	0	0.7	87.6	0
4-6	0	0	0	0	0	0	0	1.1	5.3	0
6-8	0	0	0	0	0	0	0	0.7	4.9	0
8-10	0	0	0	0	0	0	1.3	0	3.1	0
10-12	0	0	0	1.9	0	0	11.1	0.7	7.7	0
12-14	0	0	0	0.9	0.1	0	5.3	1.1	515.0	1,579
14-16	0	0	0.9	0	0.1	0	3.5	1.3	349.7	1,852
16-18	0	0	3.3	0	0	0	2.0	1.1	86.1	1,569
18-20	0	0	7.1	0	0	0	0.9	1.5	47.0	1,095
20-22	-	-	-	-	-	-	-	-	-	-
22-24	-	-	-	-	-	-	-	-	-	-

Monitoring Well	MW-28
Sampling Consultant	Bay West
Installation Date	2/10/2015
Depth	PID Reading
	(ppm)
0-2.5	2.0
2.5-5	3.1
5-7.5	2.4
7.5-10	4.0
10-12.5	15.8
12.5-14	116.0
14-15	2,458
15-17.5	1,220
17.5-20	169.8
20-20.5	NR

Notes
ppm = parts per million
PID = Photoionization Detector
EIL = Exceeded instrument level
(1) = Soil probes were completed for Ramsey Street Site. Some of the boreholes were converted to monitoring wells and the wells have been incorprated into this Site's monitoring well network.

TABLE 3
Analytical Results of Soil Samples

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Sample ID	Sample Depth (ft bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	Lab Type
South wall	10	11/29/1989	ND	ND	ND	ND	NA	0.03	ND	Fixed
North wall	10	11/29/1989	ND	ND	ND	ND	ND	ND	ND	Fixed
ST-1/MW-1	12.5	8/23/1991	120	40	23	140	---	2,300	---	Fixed
ST-2/MW-2	12.5	8/24/1991	<0.300	<0.300	<0.300	<0.300	---	0.0038	---	Fixed
ST-3/MW-3	12.5	8/24/1991	<0.300	<0.300	<0.300	<0.300	---	<0.0010	<0.0010	Fixed
ST-4/MW-4	10	4/24/1991	140	43	25	100	---	1.4	---	Fixed
ST-5/MW-5	12.5	4/23/1991	0.6	0.7	<0.300	1	---	0.01	---	Fixed
ST-6/MW-6	12.5	4/23/1991	<0.300	<0.300	<0.300	<0.300	---	<0.0010	<0.0010	Fixed
ST-7/MW-7	12.5	4/23/1991	<0.300	<0.300	<0.300	<0.300	---	0.001	---	Fixed
ST-8	20	4/25/1991	<0.300	<0.300	<0.300	<0.300	---	<0.0010	<0.0010	Fixed
TB-2	10	4/7/1992	<0.0002	<0.0005	<0.0002	<0.0008	---	<0.020	---	Fixed
TB-5	9	5/20/1992	0.076	0.042	0.11	0.3	---	7.8	<0.500	Fixed
GP-1/P-1	13	12/16/1992	ND	ND	ND	ND	NA	ND	NA	Fixed
GP-2/-P-2	13	12/16/1992	ND	ND	ND	ND	NA	ND	NA	Fixed
GP-3/P-3	13	12/16/1992	ND	ND	ND	ND	NA	ND	NA	Fixed
GP-1	14.2	10/24/1995	0.088	0.011	0.026	<0.0040	---	0.645	---	Fixed
GP-2	13.2	10/24/1995	0.407	0.567	0.320	1.04	---	9.15	---	Fixed
GP-3	14.4	10/24/1995	0.653	1.15	0.604	2.045	---	29.2	---	Fixed
GP-4	14.4	10/24/1995	<0.0040	<0.0040	<0.0040	<0.0040	---	<0.100	---	Fixed
GP-5	10	10/24/1995	<0.0040	<0.0040	<0.0040	<0.0040	---	<0.100	---	Fixed
GP-6	14	10/24/1995	2.03	0.73	1.29	3.95	---	50.6	---	Fixed
GP-7	13.5	10/24/1995	0.496	0.272	0.348	0.752	---	0.011	---	Fixed
SB-D1	13-15	04/15/02	12	48	14	76	<24	<0.600	---	Fixed
SB-D2	8-10	04/15/02	0.32	<0.06	0.21	0.78	0.26	0.0098	---	Fixed
SB-D3	3-5	04/15/02	<0.067	<0.067	<0.067	<0.200	<0.270	<0.0067	---	Fixed
SB-D4	10.5-12.5	04/15/02	73	220	64	360	400	160	---	Fixed
MW-15	12	11/1/2006	0.37	0.59	1.67	7.41	<0.275	54	3,420	Fixed
MW-16	12	11/1/2006	<0.0602	<0.0602	<0.0602	<0.903	<0.301	<5.7	<11.5	Fixed
MW-17	12	11/1/2006	<0.0579	<0.0579	<0.0579	<0.869	<0.290	12	<10.8	Fixed
MW-18	12	11/1/2006	<0.0605	<0.0605	<0.0605	<0.907	<0.302	<12.4	<6.5	Fixed
MW-19	12	1/29/2007	<0.0064	<0.0064	<0.0064	<0.0019	<0.025	<6.4	<10.5	Fixed
MW-20	12-14	10/2/2007	<0.0057	<0.0057	<0.0057	<0.017	<0.0023	<0.0057	---	Fixed
MW-21	12-14	10/2/2007	<0.0057	<0.0057	<0.0057	<0.0017	<0.0023	<0.0057	---	Fixed
SB-24-12	(12-14)	9/11/2012	<0.060	0.061	<0.060	<0.18	NA*	<6.0	<10.1	Fixed
SB-25-12	(10-12)	9/11/2012	<0.063	<0.063	<0.063	<0.19	NA*	9.1	<11.0	Fixed
SB-26-12	(12-16)	9/11/2012	0.51	0.53	4.1	24.5	NA*	571	145	Fixed
SB-27-12	(12-14)	9/11/2012	2.7	2.3	9.7	31.3	NA*	1020	140	Fixed
SB-28-12	(10-12)	9/11/2012	0.35	0.079	<0.060	0.2	NA*	<6.0	<10.8	Fixed
SB-29-12	(12-15)	9/12/2012	1.3	0.15	0.87	2.2	NA*	78	<9.6	Fixed
UB-10	(11-12)	9/12/2012	<0.070	<0.070	<0.070	<0.21	NA*	<7.0	<11.1	Fixed
SB-30-12	(12-16)	9/12/2012	<0.066	<0.066	<0.066	<0.20	NA*	<6.6	<10.3	Fixed
UB-11	(11-12)	9/12/2012	<0.095	<0.095	<0.095	<0.28	NA*	<9.5	<12.0	Fixed
UB-12	(8-9.5)	9/12/2012	<0.062	<0.062	<0.062	<0.18	NA*	<6.2	58.9	Fixed
Soil Duplicate (SB-28-12)	(10-12)	9/11/2012	0.61	<0.056	0.097	0.59	NA*	<5.6	<11.3	Fixed
Soil Trip Blank	-	9/11/2012	<0.050	<0.050	<0.050	<0.15	NA*	<5.0	NA*	Fixed
T-4	14.5	10/30/2012	<1.2	6.9	30.3	134	NA*	4200	837	Fixed
T-5	12	10/30/2012	46.6	238	79.9	458	NA*	10200	2820	Fixed
T-3	9-10	10/29/2012	<0.064	<0.064	<0.064	<0.19	NA*	<6.4	<11.2	Fixed
T-5	10-11	10/30/2012	19.2	118	41.4	250	NA*	4070	873	Fixed

TABLE 3
Analytical Results of Soil Samples

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Sample ID	Sample Depth (ft bgs)	Sample Date	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	GRO (mg/kg)	DRO (mg/kg)	Lab Type
SP-1	1-2	4/19/2013	<.0258	<.0644	<.0644	<.193	<.0644	NA	NA	Fixed
SP-1	12-14	4/19/2013	<.0207	<.0516	<.0516	<.155	<.0516	NA	NA	Fixed
SP-2/MW-25	1-2	4/19/2013	<.0245	<.0612	<.0612	<.184	<.0612	NA	NA	Fixed
SP-2/MW-25	12-14	4/19/2013	<.025	<.0624	<.0624	<.187	<.0624	NA	NA	Fixed
SP-3/MW-23	2-4	4/22/2013	<.0258	<.0645	<.0645	<.193	<.0645	NA	NA	Fixed
SP-3/MW-23	14-16	4/22/2013	<.0255	<.0637	<.0637	<.191	<.0637	NA	NA	Fixed
SP-4/MW-24	0-2	4/22/2013	<.0267	<.0669	<.0669	<.201	<.0669	NA	NA	Fixed
SP-4/MW-24	12-14	4/22/2013	<.0231	<.0578	<.0578	<.173	<.0578	NA	NA	Fixed
SP-5	2-4	4/23/2013	<.0255	<.0637	<.0637	<.191	<.0637	NA	NA	Fixed
SP-5	12-14	4/23/2013	<.0229	<.0572	<.0572	<.171	<.0572	NA	NA	Fixed
SP-6	1-2	4/23/2013	<.0262	<.0655	<.0655	<.196	<.0655	NA	NA	Fixed
SP-6	14-16	4/23/2013	<.0222	<.0556	<.0556	<.167	<.0556	NA	NA	Fixed
SP-7	2-4	4/23/2013	<.0268	<.0671	<.0671	<.201	<.0671	NA	NA	Fixed
SP-7	12-14	4/23/2013	<.0246	<.0615	<.0615	<.185	<.0615	NA	NA	Fixed
SP-8	2-4	4/24/2013	<.0264	<.0659	<.0659	<.198	<.0659	NA	NA	Fixed
SP-8	10-12	4/24/2013	<.0294	<.0735	<.0735	<.221	<.0735	NA	NA	Fixed
SP-9	2-4	4/24/2013	<.0264	<.0661	<.0661	<.198	<.0661	NA	NA	Fixed
SP-9	12-14	4/24/2013	<.0248	<.0619	<.0619	<.186	<.0619	NA	NA	Fixed
Soil Trip Blank	-	4/23/2013	<.02	<.05	<.05	<.15	<.05	NA	NA	Fixed
MW-26	2-4	11/19/2013	1.24	0.073	0.361	0.576	<.0639	7.6	<10.6	Fixed
MW-26	12-14	11/19/2013	0.366	0.0796	0.473	1.06	<.0644	15.7	<9.8	Fixed
MW-27	14-16	11/18/2013	0.0256	0.408	12.1	50.8	<.0531	1140	435	Fixed
Soil Trip Blank	-	11/20/2013	<.02	<.05	<.05	<.15	<.05	NA	NA	Fixed

Notes:
ft bgs - feet below ground surface
ppm - parts per million
mg/kg - milligrams per killogram
GRO - gasoline range organics
DRO - diesel range organics
< - Less than laboratory reporting limit
Shaded - Result exceeds the laboratory reporting limit
NA - Not Analyzed

TABLE 4
OTHER CONTAMINANTS DETECTED IN SOILS
(PETROLEUM OR NON-PETROLEUM)

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Sample ID	Sample Depth (feet bgs)	Sample Date	Lead (mg/kg)	Naphthalene (mg/kg)	1,2,4-TMB (mg/kg)	1,3,5-TMB (mg/kg)	n-Propylbenzene (mg/kg)	p-Isopropyltoluene (mg/kg)	n-Butylbenzene (mg/kg)	sec-Butylbenzene (mg/kg)	Isopropylbenzene (Cumene) (mg/kg)	2-Chlorotoluene (mg/kg)	Lab Type
MW-15	12	11/1/2006	NA	2.07	6.89	3.32	1.15	0.701	ND	0.496	ND	0.711	Fixed
MW-16	12	11/1/2006	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-17	16	11/1/2006	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-18	12	11/1/2006	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-26	2-4	11/19/2013	NA	<.256	0.327	0.2	0.128	<.0639	<.0639	<.0639	<.0639	ND	Fixed
MW-26	12-14	11/19/2013	NA	<.258	0.595	0.38	0.241	<.0644	0.0709	<.0644	<.0644	ND	Fixed
MW-27	14-16	11/18/2013	NA	8.02	77.8	24.1	8.5	0.685	4.07	1.22	2.12	ND	Fixed

Notes:
mg/kg - milligrams per kilogram
ND - not detected
Contaminants other than those listed above were detected in the soil probes advanced at the Ramsey Street Site and are not tabulated in this table (SP-1 through SP-9).

TABLE 5
SURFACE SOIL ASSESSMENT

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Boring ID, depth (ft bgs)	Headspace > 10 ppm (Y/N)	Petroleum Saturated (Y/N)
B-1	N	N
B-2	N	N
B-3	Y (16 ppm)	N
B-4	N	N
B-5	N	N
MW-1/ST-1	N	N
MW-2/ST-2	N	N
MW-3/ST-3	N	N
MW-4/ST-4	N	N
MW-5/ST-5	N	N
MW-6/ST-6	N	N
MW-7/ST-7	N	N
B-1/TB-1	N	N
B-2/TB-2	N	N
B-3/TB-3	N	N
B-4/TB-4	N	N
B-5/TB-5	N	N
MW-8	N	N
MW-9	N	N
MW-10	N	N
MW-11	N	N
MW-12	N	N
SB-1-99	N	N
SB-2-99	N	N
SB-3-99	N	N
SB-4-99	N	N
SB-5-99	N	N
SB-6-99	N	N
SB-7-99	N	N
SB-8-99	N	N
SB-9-99	N	N
SB-10-99	N	N
SB-21	N	N
SB-22	N	N
SB-23	N	N
SB-24-12	N	N
SB-25-12	N	N
SB-26-12	N	N
SB-27-12	N	N
SB-28-12	N	N
SB-29-12	N	N
SB-30-12	N	N
SB-D1	N	N
SB-D2	N	N
SB-D3	N	N
SB-D4	N	N
MW-13	N	N
RW-1	N	N

TABLE 5
SURFACE SOIL ASSESSMENT

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Boring ID, depth (ft bgs)	Headspace > 10 ppm (Y/N)	Petroleum Saturated (Y/N)
RW-2	N	N
RW-3	N	N
RW-4	N	N
RW-5	N	N
RW-6	N	N
MW-14	N	N
MW-15	N	N
MW-16	N	N
MW-17	N	N
MW-18	N	N
MW-19	N	N
MW-20	N	N
MW-21	N	N
MW-22	N	N
UB-1	N	N
UB-2	N	N
UB-3	N	N
UB-4	N	N
UB-5	N	N
UB-6	N	N
UB-7	N	N
UB-8	N	N
UB-9	N	N
UD-10	N	N
UD-11	N	N
UD-12	N	N
T-1	N	N
T-2	N	N
T-3	N	N
T-4	N	N
T-5	N	N
SP-1	N	N
SP-2/MW-25	N	N
SP-3MW-23	N	N
SP-4/MW-24	N	N
SP-5	N	N
SP-6	N	N
SP-7	N	N
SP-8	N	N
SP-9	N	N
MW-26	N	N
MW-27	N	N
MW-28	N	N

TABLE 6
WATER LEVEL MEASURMENTS AND DEPTHS OF WATER SAMPLES IN BORINGS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

		Depth to
	Sampled Depth	Groundwater
Soil Boring	(ft bgs)	(ft bgs)
SB-D1	Unknown	11.18
SB-D2	Unknown	7.28
SB-D3	Unknown	11.64
SB-D4	Unknown	11.1
SB-1-99	11	11
SB-2-99	12	12
SB-3-99	15	15
SB-4-99	12	12
SB-5-99	10	10
SB-6-99	12	12
SB-7-99	11	11
SB-8-99	12	12
SB-9-99	12	12
SB-10-99	12	12
SB-21	12.5	12.5
SB-22	10	10
SB-23	10	10
SB-24-12	12	12
SB-25-12	12	12
SB-26-12	12	12
SB-27-12	12	12
SB-28-12	10	10
SB-29-12	12	12
SB-30-12	12	12
GP-3/P3	13	Unknown
GP-4/P4	13	Unknown
GP-5/P5	13	Unknown
GP-6/P6	13	Unknown
GP-7/P7	13	Unknown

TABLE 6
WATER LEVEL MEASURMENTS AND DEPTHS OF WATER SAMPLES IN BORINGS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

		Depth to
	Sampled Depth	Groundwater
Soil Boring	(ft bgs)	(ft bgs)
GP-8/P8	13	Unknown
GP-9/P9	14	Unknown
GP-10	14	Unknown
GP-11	14	Unknown
GP-12	21	Unknown
GP-13	14	Unknown
GP-14	14	Unknown
GP-15	23	Unknown
GP-16	20.5	Unknown
GP-1	14.2	Unknown
GP-2	13.2	Unknown
GP-3	14.4	Unknown
GP-4	14.4	Unknown
GP-5	10	Unknown
GP-6	14	Unknown
GP-7	13.5	Unknown
SP-1W	18	14.35
SP-5	14	6.3
SP-6	14	13.9
SP-7	15	6.9
SP-8	14	11.1
SP-9	15	12

Notes:
ft bgs - approximate feet below ground
-see Appendix 4 for methodologies and procedures

TABLE 7
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM BORINGS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Consultant	Boring ID	Sample Date	Sampled Depth (ft	Benzene (µg/L)	Ethyl Benzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
Summit	GP-3/P3	12/16/92	13	ND	ND	ND	ND	---	ND	---	Fixed
Summit	GP-4/P4	12/16/92	13	**5,020**	60	50	ND	---	20,690	---	Fixed
Summit	GP-5/P5	12/16/92	13	ND	ND	ND	ND	---	90	---	Fixed
Summit	GP-6/P6	12/16/92	13	ND	ND	ND	ND	---	ND	---	Fixed
Summit	GP-7/P7	12/16/92	13	ND	ND	ND	ND	---	ND	---	Fixed
Summit	GP-8/P8	12/16/92	13	**5,200**	ND	30	ND	---	21,280	---	Fixed
Summit	GP-9/P9	06/14/93	14	**109**	ND	ND	ND	---	ND	---	Fixed
Summit	GP-10	06/14/93	14	ND	ND	ND	ND	---	ND	---	Fixed
Summit	GP-11	06/14/93	14	ND	ND	ND	ND	---	ND	---	Fixed
Summit	GP-12	06/14/93	21	ND	ND	ND	ND	---	ND	---	Fixed
Summit	GP-13	06/14/93	14	**1,800**	ND	ND	ND	---	ND	---	Fixed
Summit	GP-14	06/14/93	14	**2,690**	582	464	1,580	---	8,490	---	Fixed
Summit	GP-15	06/14/93	23	**524**	ND	ND	121	---	ND	---	Fixed
Summit	GP-16	06/14/93	20.5	**387**	324	801	1,580	---	6,000	---	Fixed
Braun	GP-1	10/24/1995	14.2	**88**	26	11	<4.0	---	645	---	Fixed
Braun	GP-2	10/24/1995	13.2	**407**	320	567	1040	---	9,150	---	Fixed
Braun	GP-3	10/24/1995	14.4	**653**	604	**1150**	2045	---	29,200	---	Fixed
Braun	GP-4	10/24/1995	14.4	<4.0	<4.0	<4.0	<4.0	---	<100	---	Fixed
Braun	GP-5	10/24/1995	10	<4.0	<4.0	<4.0	<4.0	---	<100	---	Fixed
Braun	GP-6	10/24/1995	14	**2,030**	**1,290**	734	3,950	---	50,600	---	Fixed
Braun	GP-7	10/24/1995	13.5	**496**	348	272	752	---	11,000	---	Fixed
Northern	SB-1-99	05/13/99	11	<1.0	<1.0	<1.0	<2.6	<1.0	<20	---	Fixed
Northern	SB-2-99	---		---	---	---	---	---	---	---	Fixed
Northern	SB-3-99	05/13/99	15	<1.0	<1.0	<1.0	<2.6	<1.0	<20	---	Fixed
Northern	SB-4-99	05/13/99	12	<1.0	<1.0	1.5	<2.6	3.7	<20	---	Fixed
Northern	SB-5-99	05/13/99	10	**370**	69	13	9.6	<1.0	1900 (2)	---	Fixed
Northern	SB-6-99	08/16/99	12	**280**	38	5.6	3.2	<0.4	620	77	Fixed
Northern	SB-7-99	08/16/99	11	<0.4	<0.6	<0.6	<1.8	1.1 (3)	28	35	Fixed
Northern	SB-8-99	08/16/99	12	<0.4	<0.6	<0.6	<1.8	1.0 (3)	<20	---	Fixed
Northern	SB-9-99	08/16/99	12	<0.4	<0.6	<0.6	<1.8	1.1 (3)	<20	46	Fixed
Northern	SB-10-99	---	12	---	---	---	---	---	---	---	Fixed
Northern	SB-21	05/01/00	12.5	**150**	2.1	1.7	1.56	<0.32	370	---	Fixed
Northern	SB-22	05/01/00	10	<0.27	<0.32	<0.27	<0.67	<0.32	<23	---	Fixed
Northern	SB-23	05/01/00	10	<0.27	<0.32	<0.27	<0.67	<0.32	<23	---	Fixed

TABLE 7
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM BORINGS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Consultant	Boring ID	Sample Date	Sampled Depth (ft	Benzene (µg/L)	Ethyl Benzene (µg/L)	Toluene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
DPRA	SB-D2	04/15/02	Unknown	**4,800**	**1,300**	**290**	**4,170**	<20	---	16,000	Fixed
DPRA	SB-D3	04/15/02	Unknown	**5.3**	**1.9**	**1.3**	**17.5**	<1.0	---	560	Fixed
Bay West	SB-24-12	09/12/12	12	**28.6**	1.1	3.4	<3.0	NA*	578	293	Fixed
Bay West	SB-25-12	09/12/12	12	**22,100**	**15,300**	**2,150**	**11,100**	NA*	66,000	6,330	Fixed
Bay West	SB-26-12	09/12/12	12	**2,890**	59	688	4,660	NA*	21,000	6,680	Fixed
Bay West	SB-27-12	09/11/12	12	**4,470**	627	**1,880**	6,270	NA*	31,100	6,940	Fixed
Bay West	SB-28-12	09/11/12	10	**18,900**	**1,480**	**2,340**	**10,100**	NA*	48,400	3,890	Fixed
Bay West	SB-29-12	09/12/12	12	**17,300**	170	**878**	2,400	NA*	31,000	3,750	Fixed
Bay West	SB-30-12	09/12/12	12	**413**	13	11	16	NA*	701	141	Fixed
Bay West	Water Dup	09/12/12	12	**21,300**	**14,600**	**2,020**	**10,400**	NA*	62,900	7,770	Fixed
Bay West	T-4	10/30/2012		**364**	**1,150**	**2,650**	**11,800**	NA*	41,500	998,000	Fixed
Bay West	T-5	10/30/2012		**7,250**	**16,900**	**2,280**	**13,900**	NA*	97,300	833,000	Fixed
Bay West	SP-1W	4/19/2013	18	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<109	Fixed
Bay West	SP-5	4/23/2013	14	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<171	Fixed
Bay West	SP-6	4/23/2013	14	<1.0	<1.0	<1.0	<3.0	<1.0	<500	331	Fixed
Bay West	Trip Blank	4/23/2013		<1.0	<1.0	<1.0	<3.0	<1.0	NA*	NA*	Fixed
Bay West	SP-7	4/23/2013	15	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<109	Fixed
Bay West	SP-8	4/24/2013	14	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<114	Fixed
Bay West	SP-9	4/24/2013	15	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<123	Fixed
HRL/HBV (1)				**2**	**50**	**200**	**300**	NE	NE	NE	

Notes:
MTBE - methyl tertiary butyl ether
GRO - gasoline-range organics
DRO - diesel-range organics
µg/L - micrograms per liter
NE - not established
HRL - Minnesota Department of Health (MDH) Health Risk Limit
HBV - MDH Health-Based Value
NA - Not Analyzed
< - Less than reporting limit
Shaded - Result exceeds the laboratory reporting limit
Bold - Result exceeds the MDH HRL

TABLE 8
OTHER CONTAMINANTS DETECTED IN WATER SAMPLES FROM BORINGS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Boring ID	Date Sampled	Sample Depth (ft)	1,2,4-TMB (µg/L)	1,3,5-TMB (µg/L)	Acetone (µg/L)	1,1-Dichloroethene (µg/L)	1,2-Dichloroethane (µg/L)	Isopropyl-benzene (µg/L)	Methyl Ethyl Ketone (MEK) (µg/L)	Methyl Isobutyl Ketone or MIBK (µg/L)	Methylene Chloride (µg/L)	trans-1,2-Di-chloroethene (µg/L)	cis-1,2-Di-chloroethene (µg/L)	Chloro-form (µg/L)	1,2-Dichloro-propane (µg/L)	Tetrachloro-ethene (µg/L)	Trichloroethene (µg/L)	Tetrahydro-furan (µg/L)	1,1,2-Trichloro ethylene (µg/L)	Naphthalene (µg/L)	n-Propyl-benzene (µg/L)	Vinyl Chloride (µg/L)	Lab Type
GP-14	06/14/93	14	243	653	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Fixed
GP-16	06/14/93	20.5	176	588	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	Fixed
SB-1-99	05/13/99	11	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
SB-2-99	Unknown	12	ND	ND	ND	ND	ND	ND	ND	ND	8.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
SB-3-99	05/13/99	16	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
SB-4-99	05/13/99	12	1.3	ND	ND	ND	ND	ND	44	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	15	ND	ND	Fixed
SB-5-99	05/13/99	10	1	1	70	ND	ND	5.1	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	13	ND	Fixed
SB-6-99	08/16/99	12	ND	ND	100	ND	ND	1.3	ND	4.2	ND	ND	40	ND	ND	1.2	ND	33	ND	ND	2.9	ND	Fixed
SB-7-99	08/16/99	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.2	ND	ND	**150**	ND	ND	14	ND	ND	ND	Fixed
SB-8-99	08/16/99	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.2	ND	ND	ND	ND	ND	ND	Fixed
SB-9-99	08/16/99	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**38**	ND	ND	3.2	ND	ND	ND	Fixed
SB-21	05/01/00	12.5	ND	ND	ND	ND	ND	0.44	ND	---	ND	ND	ND	---	---	ND	ND	ND	ND	ND	ND	ND	Fixed
SB-22	05/01/00	10	ND	ND	ND	ND	1.1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
SP-1W	04/19/13	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.4	ND	ND	**41**	**9.3**	ND	ND	ND	ND	ND	Fixed
SP-5	04/23/13	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.2	ND	ND	**10.1**	1.8	ND	ND	ND	ND	ND	Fixed
SP-6	04/23/13	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5	ND	ND	ND	ND	ND	ND	Fixed
SP-7	04/23/13	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
SP-8	04/24/13	14	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND	25.2	ND	ND	**132**	**45.7**	ND	ND	ND	ND	**2.2**	Fixed
SP-9	04/24/13	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	ND	ND	1.2	1	ND	ND	ND	ND	**0.67**	Fixed

1 Report results in µg/L. Use less than symbols to show detection limit.
2 Indicate "mobile" or "fixed" in the lab type column.
3 See http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html for list of current HRLs.
Indicate other contaminants (either petroleum or non-petroleum derived) detected in water samples collected from soil borings and temporary wells. Add additional rows as needed, and copy the entire table if more columns are needed.

Notes:
µg/L - micrograms per liter
NE - not established
HRL - Minnesota Department of Health (MDH) Health Risk Limit
NS - not Sampled
NA - Not Analyzed
ND - Not Detected
Shaded - Result exceeds the laboratory reporting limit
Bold - Result exceeds the MDH HRL

TABLE 9
MONITORING WELL CONSTRUCTION SUMMARY

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

					Mean Sea Level						
Monitoring Well	MDH Unique ID	Date Installed	Top of Casing (feet)[1]	Ground Surface (feet)[1]	Top of Casing (feet)[1]	Ground Surface (feet)[1]	Top of Seal (feet)[1]	Top of Filter Pack (feet)[1]	Top of Well Screen (feet)[1]	Bottom of Well Screen (feet)[1]	Bottom of Well (feet)[1]
MW-1		8/23/1991	-	96.40	-	636.20	-	-	611.20	621.20	615.20
		Abandoned October 1993									
MW-2		8/24/1991	-	96.50	-	636.30	-	-	608.30	618.30	618.30
		Abandoned October 1993									
MW-3		8/24/1991	-	95.70	-	635.50	-	-	607.50	617.50	617.50
		Abandoned October 1993									
MW-4		8/24/1991	-	96.20	-	636.00	-	-	-	-	616.00
		Abandoned October 1993									
MW-5		8/24/1991	-	96.30	-	636.10	-	-	-	-	619.10
		Abandoned October 1993									
MW-6		8/24/1991	-	96.30	-	636.10	-	-	-	-	619.10
		Abandoned October 1993									
MW-7		8/24/1991	-	96.10	-	635.90	-	-	-	-	620.90
		Abandoned October 1993									
MW-8	574387	6/18/1996	101.47	98.59	641.27	638.39	631.39	629.39	628.39	618.39	618.39
		4/26/2010	101.27	98.58	641.07	638.38	631.38	629.38	628.38	618.38	618.38
MW-9	574388	6/20/1996	98.19	98.15	637.99	637.95	630.95	628.95	627.95	617.95	617.95
		4/26/2010	98.02	98.29	637.82	638.09	631.09	629.09	628.09	618.09	618.09
		(4)	98.01	98.11	637.81	637.91	631.09	629.09	628.09	618.09	618.09
MW-10	574389	6/22/1996	100.56	97.57	640.36	637.37	630.37	628.37	627.37	617.37	617.37
		4/26/2010	100.58	97.69	640.38	637.49	630.49	628.49	627.49	617.49	617.49
MW-11	574390	6/24/1996	100.46	97.41	640.26	637.21	630.21	628.21	627.21	617.21	617.21
		4/26/2010	100.74	97.4	640.54	637.20	630.20	628.20	627.20	617.20	617.20
MW-12	574391	6/26/1996	99.89	97.28	639.69	637.08	630.08	628.08	627.08	617.08	617.08
		4/26/2010	99.98	97.41	639.78	637.21	630.21	628.21	627.21	617.21	617.21
MW-13	671197	04/16/02	95.98	94.05	635.78	633.85	629.85	627.85	626.85	616.85	615.85
MW-14	720628	12/07/04	99.78	97.74	639.58	637.54	634.64	632.64	630.64	615.64	615.64
MW-15	747670	11/01/06	101.06	99.09	640.86	638.89	631.89	629.89	627.89	617.89	617.39
		04/26/10	101.05	99.12	640.85	638.92	631.92	629.92	627.92	617.92	617.42
MW-16	747671	10/31/06	96.52	94.68	636.32	634.48	629.48	627.48	626.48	616.48	616.48
MW-17	747669	11/01/06	100.86	98.88	640.66	638.68	630.68	628.68	626.68	616.68	616.68
MW-18	747672	10/31/06	94.93	92.79	634.73	632.59	627.59	625.59	624.59	614.59	614.59
MW-19	747696	01/29/07	101.22	99.18	641.02	638.98	630.57	628.57	626.57	616.57	616.57
MW-20	756056	10/02/07	99.75	97.97	639.55	637.77	631.77	629.77	627.77	617.77	617.77
MW-21	756057	10/02/07	95.73	95.73	635.53	635.53	629.53	627.53	625.53	615.53	615.53
MW-22	783615	04/05/11	97.42	97.65	637.22	637.45	632.45	632.45	630.45	621.45	617.45
		(4)	97.51	97.70	637.31	637.50	632.45	632.45	630.45	621.45	617.45
MW-23	796642	04/22/13	97.66	95.26	637.46	635.06	628.51	626.51	624.51	614.51	614.51
MW-24	796643	04/23/13	93.55	93.83	633.35	633.63	627.86	625.86	623.86	613.86	612.86
MW-25	796641	04/22/13	97.55	95.11	637.35	634.91	628.75	626.75	624.75	614.75	614.75
MW-26	803453	11/19/13	97.78	98.36	637.58	638.16	636.16	630.16	628.66	618.66	618.16

TABLE 9
MONITORING WELL CONSTRUCTION SUMMARY

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

					Mean Sea Level						
Monitoring Well	MDH Unique ID	Date Installed	Top of Casing (feet)[1]	Ground Surface (feet)[1]	Top of Casing (feet)[1]	Ground Surface (feet)[1]	Top of Seal (feet)[1]	Top of Filter Pack (feet)[1]	Top of Well Screen (feet)[1]	Bottom of Well Screen (feet)[1]	Bottom of Well (feet)[1]
MW-27	803452	11/18/13	97.77	98.13	637.57	637.93	635.57	628.93	627.93	617.93	617.93
MW-28	810685	02/10/15	99.41	97.07	639.21	636.87	632.87	628.87	626.87	616.87	616.37
RW-1	688479	04/08/03	97.18	97.46	636.98	637.26	634.98	632.98	631.98	616.98	616.98
		04/26/10	97.33	97.56	637.13	637.36	635.08	633.08	632.08	617.08	617.08
		(2)	97.38	97.66	637.18	637.46	635.18	633.18	632.18	617.18	617.18
RW-2	688480	04/08/03	96.25	96.58	636.05	636.38	634.05	632.05	631.05	616.05	616.05
		04/26/10	96.48	96.75	636.28	636.55	634.22	632.22	631.22	616.22	616.22
		(2)	96.47	96.76	636.27	636.56	634.23	632.23	631.23	616.23	616.23
		(4)	96.57	96.63	636.37	636.43	634.23	632.23	631.23	616.23	616.23
RW-3	688481	04/09/03	96.83	97.06	636.63	636.86	634.63	632.63	631.63	616.63	616.63
		04/26/10	96.82	97.19	636.62	636.99	634.76	632.76	631.76	616.76	616.76
RW-4	688482	04/09/03	97.17	97.68	636.97	637.48	634.97	632.97	631.97	616.97	616.97
		04/26/10	97.17	97.81	636.97	637.61	635.10	633.10	632.10	617.10	617.10
RW-5	720629	12/06/04	100.72	98.84	640.52	638.64	636.74	634.74	632.74	617.74	617.74
		04/26/10	100.73	98.83	640.53	638.63	636.73	634.73	632.73	617.73	617.73
RW-6	720629	04/05/11	97.38	97.43	637.18	637.23	630.73	630.73	628.73	618.73	617.23
Sully MW-1	691821	06/16/04	NA	NA	639.97	638.05	NA	NA	630.2	620.2	619.9
		(3)	98.03	98.31	637.83	638.11	NA	NA	630.26	620.26	619.96
Sully MW-2	691822	06/16/04	NA	NA	639.43	637.43	NA	NA	630.4	620.4	620.1
		(3)	99.57	97.82	639.37	637.62	NA	NA	630.59	620.59	620.29
Sully MW-3	691823	06/15/04	NA	NA	639.63	637.71	NA	NA	632.7	622.7	622.4
		(3)	99.97	97.92	639.77	637.72	NA	NA	632.71	622.71	622.41
Sully MW-4	691824	06/17/04	NA	NA	639.77	637.86	NA	NA	628.4	618.4	618.1
		Abandoned									

(1) Referenced to a mean sea level elevation; benchmark elevation of 639.799 feet on the top nut of the fire hydrant located on the northeast corner of Central Avenue and Grand Aveneue
(2) = Wells were re-surveyed following cutting of well casings due to heaving.
(3) = Wells were re-surveyed following well re-configurations.
(4) = Wells were re-surveyed following well re-configurations.

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
Braun	MW-1	08/29/90	---	---	---	8.00	---	90.19 (4)	-
Braun	MW-1	10/02/90	---	---	---	11.85	---	86.34 (4)	-
Braun	MW-1	01/29/91	---	---	---	13.79	---	84.40 (4)	-
Braun	MW-1	05/07/91	---	---	---	7.21	---	91.05 (4)	-
Braun	MW-1	09/05/91	---	---	---	8.39	---	89.87 (4)	-
Braun	MW-1	01/23/92	---	---	---	12.69	---	85.57 (4)	-
Braun	MW-1	04/07/92	---	---	---	8.52	---	89.73 (4)	-
Braun	MW-1	05/21/92	---	---	---	8.04	---	90.21 (4)	-
Braun	MW-1	06/17/92	---	---	---	9.89	---	88.36 (4)	-
Braun	MW-1	07/20/93	---	---	---	7.97	---	90.28 (4)	-
Braun	MW-2	08/29/90	---	---	---	14.69	---	83.99 (4)	-
Braun	MW-2	10/02/90	---	---	---	14.63	---	84.05 (4)	-
Braun	MW-2	01/29/91	---	---	---	15.53	---	83.15 (4)	-
Braun	MW-2	05/07/91	---	---	---	14.25	---	84.47 (4)	-
Braun	MW-2	09/05/91	---	---	---	13.82	---	84.90 (4)	-
Braun	MW-2	01/23/92	---	---	---	14.46	---	84.26 (4)	-
Braun	MW-2	04/07/92	---	---	---	14.14	---	84.55 (4)	-
Braun	MW-2	05/21/92	---	---	---	13.86	---	84.83 (4)	-
Braun	MW-2	06/17/92	---	---	---	13.94	---	84.75 (4)	-
Braun	MW-2	07/20/93	---	---	---	13.70	---	84.99 (4)	-
Braun	MW-3	08/29/90	---	---	---	12.28	---	85.6 (4)	-
Braun	MW-3	10/02/90	---	---	---	12.44	---	85.44 (4)	-
Braun	MW-3	01/29/91	---	---	---	13.30	---	84.55 (4)	-
Braun	MW-3	05/07/91	---	---	---	12.06	---	85.82 (4)	-
Braun	MW-3	09/05/91	---	---	---	12.24	---	85.64 (4)	-
Braun	MW-3	01/23/92	---	---	---	12.78	---	85.10 (4)	-
Braun	MW-3	04/07/92	---	---	---	12.24	---	85.61 (4)	-
Braun	MW-3	05/21/92	---	---	---	12.08	---	85.77 (4)	-
Braun	MW-3	06/17/92	---	---	---	12.08	---	85.77 (4)	-
Braun	MW-3	07/20/93	---	---	---	12.03	---	85.82 (4)	-
Braun	MW-4	05/07/91	---	---	---	12.24	---	85.99 (4)	-
Braun	MW-4	09/05/91	---	---	---	12.31	---	85.92 (4)	-
Braun	MW-4	01/23/92	---	---	---	12.88	---	85.35 (4)	-
Braun	MW-4	04/07/92	---	---	---	12.36	---	85.86 (4)	-
Braun	MW-4	05/21/92	---	---	---	12.20	---	86.02 (4)	-
Braun	MW-4	06/17/92	---	---	---	12.18	---	86.04 (4)	-
Braun	MW-4	07/20/93	---	---	---	12.05	---	86.17 (4)	-
Braun	MW-5	05/07/91	---	---	---	13.53	---	85.17 (4)	-
Braun	MW-5	09/05/91	---	---	---	13.53	---	85.92 (4)	-
Braun	MW-5	01/23/92	---	---	---	13.94	---	84.76 (4)	-
Braun	MW-5	04/07/92	---	---	---	13.54	---	85.13 (4)	-
Braun	MW-5	05/21/92	---	---	---	13.38	---	85.29 (4)	-
Braun	MW-5	06/17/92	---	---	---	13.47	---	85.20 (4)	-
Braun	MW-5	07/20/93	---	---	---	13.33	---	85.34 (4)	-
Braun	MW-6	05/07/91	---	---	---	11.37	---	87.07 (4)	-
Braun	MW-6	09/05/91	---	---	---	12.32	---	86.06 (4)	-
Braun	MW-6	01/23/92	---	---	---	13.23	---	85.15 (4)	-
Braun	MW-6	04/07/92	---	---	---	NA	---	NA	-
Braun	MW-6	05/21/92	---	---	---	12.48	---	85.86 (4)	-
Braun	MW-6	06/17/92	---	---	---	12.84	---	85.50 (4)	-
Braun	MW-6	07/20/93	---	---	---	12.35	---	85.99 (4)	-
Braun	MW-7	05/07/91	---	---	---	11.58	---	86.95 (4)	-
Braun	MW-7	09/05/91	---	---	---	12.58	---	85.95 (4)	-
Braun	MW-7	01/23/92	---	---	---	13.99	---	85.14 (4)	-
Braun	MW-7	04/07/92	---	---	---	12.68	---	85.80 (4)	-
Braun	MW-7	05/21/92	---	---	---	12.68	---	85.80 (4)	-
Braun	MW-7	06/17/92	---	---	---	13.02	---	85.46 (4)	-
Braun	MW-7	07/20/93	---	---	---	12.55	---	85.93 (4)	-
Braun	MW-8	06/18/96	101.51	641.31	---	14.00	---	87.51	627.31
Braun	MW-8	07/02/96	101.51	641.31	---	14.81	---	86.7	626.50
Braun	MW-8	01/08/97	101.51	641.31	---	15.27	---	86.24	626.04
Braun	MW-8	05/01/97	101.51	641.31	---	14.90	---	86.61	626.41
Braun	MW-8	03/04/98	101.51	641.31	---	14.92	---	86.59	626.39
DPRA	MW-8	04/15/02	101.47	641.27	---	15.20	0.00	86.27	626.07
DPRA	MW-8	07/05/02	101.47	641.27	---	14.94	0.00	86.53	626.33
DPRA	MW-8	09/17/02	101.47	641.27	---	14.74	0.00	86.73	626.53
DPRA	MW-8	12/10/02	101.47	641.27	---	15.34	0.00	86.13	625.93
DPRA	MW-8	04/09/03	101.47	641.27	---	15.63	0.00	85.84	625.64
DPRA	MW-8	10/22/03	101.47	641.27	---	15.12	0.00	86.35	626.15
DPRA	MW-8	12/17/03	101.47	641.27	---	15.22	0.00	86.25	626.05
DPRA	MW-8	03/16/04	101.47	641.27	---	15.45	0.00	86.02	625.82
DPRA	MW-8	06/08/04	101.47	641.27	---	14.67	0.00	86.8	626.60
DPRA	MW-8	08/31/04	101.47	641.27	---	14.74	0.00	86.73	626.53
DPRA	MW-8	12/07/04	101.47	641.27	---	15.24	0.00	86.23	626.03
DPRA	MW-8	03/15/05	101.47	641.27	---	16.00	0.00	85.47	625.27
DPRA	MW-8	04/13/05	101.47	641.27	---	15.75	0.00	85.72	625.52
DPRA	MW-8	05/06/05	101.47	641.27	---	15.70	0.00	85.77	625.57
DPRA	MW-8	06/01/05	101.47	641.27	---	15.46	0.00	86.01	625.81
DPRA	MW-8	09/15/05	101.47	641.27	---	15.52	0.00	85.95	625.75
DPRA	MW-8	10/04/05	101.47	641.27	---	15.39	0.00	86.08	625.88
DPRA	MW-8	02/01/06	101.47	641.27	---	15.72	0.00	85.75	625.55
DPRA	MW-8	07/05/06	101.47	641.27	---	15.34	0.00	86.13	625.93
DPRA	MW-8	11/15/06	101.49	641.29	---	13.72	0.00	87.77	627.57
DPRA	MW-8	01/29/07	101.49	641.29	---	14.12	0.00	87.37	627.17
DPRA	MW-8	05/30/07	101.49	641.29	---	12.21	0.00	89.28	629.08
DPRA	MW-8	10/02/07	101.49	641.29	---	12.40	0.00	89.09	628.89
Bay West	MW-8	02/27/08	101.49	641.29	---	14.66	0.00	86.83	626.63
Bay West	MW-8	09/23/08	101.49	641.29	---	12.82	0.00	88.67	628.47
Bay West	MW-8	02/15/10	101.49	641.29	---	14.50	0.00	86.99	626.79
Bay West	MW-8*	04/26/10	101.27	641.07	---	13.60	0.00	87.67	627.47
Bay West	MW-8	12/03/10	101.27	641.07	---	12.64	0.00	88.63	628.43

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
Bay West	MW-8	04/25/11	101.27	641.07	---	12.86	0.00	88.41	628.21
Bay West	MW-8	10/11/11	101.27	641.07	---	13.47	0.00	87.80	627.60
Bay West	MW-8	04/01/12	101.27	641.07	---	13.63	0.00	87.64	627.44
Bay West	MW-8	09/11/12	101.27	641.07	---	13.73	0.00	87.54	627.34
Bay West	MW-8	04/08/13	101.27	641.07	---	13.50	0.00	87.77	627.57
Bay West	MW-8	12/02/13	101.27	641.07	---	13.38	0.00	87.89	627.69
Bay West	MW-8	03/28/14	101.27	641.07	---	14.33	0.00	86.94	626.74
Bay West	MW-8	04/28/14	101.27	641.07	---	11.33	0.00	89.94	629.74
Bay West	MW-8	10/27/14	101.27	641.07	---	12.84	0.00	88.43	628.23
Bay West	MW-8	04/20/15	101.27	641.07	---	13.25	0.00	88.02	627.82
Bay West	MW-8	09/28/15	101.27	641.07	---	11.48	0.00	89.79	629.59
Braun	MW-9	06/18/96	98.19	637.99	---	13.00	---	85.19	624.99
Braun	MW-9	07/02/96	98.19	637.99	---	12.79	---	85.4	625.20
Braun	MW-9	01/08/97	98.19	637.99	---	13.09	---	85.1	624.90
Braun	MW-9	05/01/97	98.19	637.99	---	12.95	---	85.24	625.04
Northern	MW-9	04/05/01	---	---	---	---	---	---	---
Northern	MW-9	04/12/01	---	---	---	---	---	---	---
DPRA	MW-9	04/15/02	98.19	637.99	13.38	13.55	0.17	84.76	624.56
DPRA	MW-9	05/09/02	98.19	637.99	13.15	13.25	0.10	85.01	624.81
DPRA	MW-9	05/24/02	98.19	637.99	13.45	13.55	0.10	84.71	624.51
DPRA	MW-9	06/08/02	98.19	637.99	---	13.66	0.00	84.53	624.33
DPRA	MW-9	06/20/02	98.19	637.99	---	13.71	0.00	84.48	624.28
DPRA	MW-9	07/05/02	98.19	637.99	---	13.04	0.00	85.15	624.95
DPRA	MW-9	07/17/02	98.19	637.99	---	13.65	0.00	84.54	624.34
DPRA	MW-9	08/05/02	98.19	637.99	---	13.51	0.00	84.68	624.48
DPRA	MW-9	08/19/02	98.19	637.99	---	13.55	0.00	84.64	624.44
DPRA	MW-9	08/30/02	98.19	637.99	---	13.60	0.00	84.59	624.39
DPRA	MW-9	09/03/02	98.19	637.99	---	13.58	0.00	84.61	624.41
DPRA	MW-9	09/17/02	98.19	637.99	---	12.77	0.00	85.42	625.22
DPRA	MW-9	09/30/02	98.19	637.99	---	13.61	0.00	84.58	624.38
DPRA	MW-9	10/11/02	98.19	637.99	---	13.60	0.00	84.59	624.39
DPRA	MW-9	10/30/02	98.19	637.99	---	13.62	0.00	84.57	624.37
DPRA	MW-9	11/10/02	98.19	637.99	---	13.59	0.00	84.60	624.40
DPRA	MW-9	11/20/02	98.19	637.99	---	13.55	0.00	84.64	624.44
DPRA	MW-9	12/10/02	98.19	637.99	---	13.20	0.00	84.99	624.79
DPRA	MW-9	04/09/03	98.19	637.99	---	13.64	0.00	84.55	624.35
DPRA	MW-9	04/11/03	98.19	637.99	---	13.63	0.00	84.56	624.36
DPRA	MW-9	05/08/03	98.19	637.99	---	13.30	0.00	84.89	624.69
DPRA	MW-9	05/29/03	98.19	637.99	---	13.13	0.00	85.06	624.86
DPRA	MW-9	06/17/03	98.19	637.99	---	12.70	0.00	85.49	625.29
DPRA	MW-9	07/22/03	98.19	637.99	---	12.45	0.00	85.74	625.54
DPRA	MW-9	08/15/03	98.19	637.99	---	12.42	0.00	85.77	625.57
DPRA	MW-9	08/21/03	98.19	637.99	---	12.50	0.00	85.69	625.49
DPRA	MW-9	09/05/03	98.19	637.99	---	12.53	0.00	85.66	625.46
DPRA	MW-9	09/22/03	98.19	637.99	---	12.49	0.00	85.70	625.50
DPRA	MW-9	10/09/03	98.19	637.99	---	12.59	0.00	85.60	625.40
DPRA	MW-9	10/17/03	98.19	637.99	---	12.67	0.00	85.52	625.32
DPRA	MW-9	10/22/03	98.19	637.99	---	12.72	0.00	85.47	625.27
DPRA	MW-9	10/28/03	98.19	637.99	---	12.75	0.00	85.44	625.24
DPRA	MW-9	11/05/03	98.19	637.99	---	12.80	0.00	85.39	625.19
DPRA	MW-9	11/11/03	98.19	637.99	---	12.76	0.00	85.43	625.23
DPRA	MW-9	11/28/03	98.19	637.99	---	12.84	0.00	85.35	625.15
DPRA	MW-9	12/05/03	98.19	637.99	---	12.87	0.00	85.32	625.12
DPRA	MW-9	12/10/03	98.19	637.99	---	12.90	0.00	85.29	625.09
DPRA	MW-9	12/17/03	98.19	637.99	---	12.92	0.00	85.27	625.07
DPRA	MW-9	02/23/04	98.19	637.99	---	13.30	0.00	84.89	624.69
DPRA	MW-9	03/16/04	98.19	637.99	13.35	13.45	0.10	84.81	624.61
DPRA	MW-9	03/16/04	98.19	637.99	13.36	13.47	0.11	84.80	624.60
DPRA	MW-9	03/16/04	98.19	637.99	13.38	13.41	0.03	84.80	624.60
DPRA	MW-9	03/16/04	98.19	637.99	13.39	13.49	0.10	84.77	624.57
DPRA	MW-9	03/16/04	98.19	637.99	13.37	13.39	0.02	84.81	624.61
DPRA	MW-9	03/16/04	98.19	637.99	13.35	13.43	0.08	84.82	624.62
DPRA	MW-9	03/16/04	98.19	637.99	13.38	13.41	0.03	84.80	624.60
DPRA	MW-9	03/25/04	98.19	637.99	13.32	13.36	0.04	84.86	624.66
DPRA	MW-9	04/05/04	98.19	637.99	13.19	13.45	0.26	84.93	624.73
DPRA	MW-9	04/05/04	98.19	637.99	13.21	13.40	0.19	84.93	624.73
DPRA	MW-9	04/05/04	98.19	637.99	13.20	13.37	0.17	84.94	624.74
DPRA	MW-9	04/14/04	98.19	637.99	13.11	13.13	0.02	85.07	624.87
DPRA	MW-9	05/10/04	98.19	637.99	---	12.95	0.00	85.24	625.04
DPRA	MW-9	06/08/04	98.19	637.99	---	12.82	0.00	85.37	625.17
DPRA	MW-9	06/29/04	98.19	637.99	---	12.72	0.00	85.47	625.27
DPRA	MW-9	07/15/04	98.19	637.99	---	15.00	0.00	83.19	622.99
DPRA	MW-9	07/21/04	98.19	637.99	---	12.73	0.00	85.46	625.26
DPRA	MW-9	08/09/04	98.19	637.99	---	12.74	0.00	85.45	625.25
DPRA	MW-9	08/16/04	98.19	637.99	---	12.70	0.00	85.49	625.29
DPRA	MW-9	08/31/04	98.19	637.99	---	12.72	0.00	85.47	625.27
DPRA	MW-9	09/27/04	98.19	637.99	---	12.67	0.00	85.52	625.32
DPRA	MW-9	10/26/04	98.19	637.99	---	12.78	0.00	85.41	625.21
DPRA	MW-9	11/23/04	98.19	637.99	---	10.04	0.00	88.15	627.95
DPRA	MW-9	12/07/04	98.19	637.99	---	12.88	0.00	85.31	625.11
DPRA	MW-9	03/15/05	98.19	637.99	---	13.40	0.00	84.79	624.59
DPRA	MW-9	04/05/05	98.19	637.99	---	13.39	0.00	84.80	624.60
DPRA	MW-9	04/13/05	98.19	637.99	13.30	13.39	0.05	84.84	624.64
DPRA	MW-9	05/06/05	98.19	637.99	---	13.09	0.00	85.10	624.90
DPRA	MW-9	06/01/05	98.19	637.99	---	12.94	0.00	85.25	625.05
DPRA	MW-9	06/29/05	98.19	637.99	---	12.72	0.00	85.47	625.27
DPRA	MW-9	09/15/05	98.19	637.99	---	13.00	0.00	85.19	624.99
DPRA	MW-9	10/04/05	98.19	637.99	---	13.05	0.00	85.14	624.94
DPRA	MW-9	11/03/05	98.19	637.99	---	12.83	0.00	85.36	625.16
DPRA	MW-9	12/20/05	98.19	637.99	---	12.95	0.00	85.24	625.04
DPRA	MW-9	02/01/06	98.19	637.99	---	13.10	0.00	85.09	624.89
DPRA	MW-9	03/07/06	98.19	637.99	---	13.20	0.00	84.99	624.79
DPRA	MW-9	04/10/06	98.19	637.99	---	13.10	0.00	85.09	624.89
DPRA	MW-9	05/03/06	98.19	637.99	---	12.95	0.00	85.24	625.04
DPRA	MW-9	07/05/06	98.19	637.99	---	12.86	0.00	85.33	625.13
DPRA	MW-9	08/17/06	98.19	637.99	---	12.69	0.00	85.50	625.30
DPRA	MW-9	09/28/06	98.19	637.99	---	12.82	0.00	85.37	625.17

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
DPRA	MW-9	11/15/06	98.19	637.99	---	12.63	0.00	85.56	625.36
DPRA	MW-9	1/12/2007	98.19	637.99	---	12.81	0.00	85.38	625.18
DPRA	MW-9	01/29/07	98.19	637.99	---	12.85	0.00	85.34	625.14
DPRA	MW-9	02/12/07	98.19	637.99	---	13.00	0.00	85.19	624.99
DPRA	MW-9	03/15/07	98.19	637.99	---	13.25	0.00	84.94	624.74
DPRA	MW-9	04/16/07	98.19	637.99	---	12.74	0.00	85.45	625.25
DPRA	MW-9	05/30/07	98.19	637.99	---	12.27	0.00	85.92	625.72
DPRA	MW-9	08/29/07	98.19	637.99	---	12.55	0.00	85.64	625.44
DPRA	MW-9	10/02/07	98.19	637.99	---	12.35	0.01	85.84	625.65
DPRA	MW-9	10/09/07	98.19	637.99	---	12.30	0.00	85.89	625.69
DPRA	MW-9	11/01/07	98.19	637.99	---	11.84	0.00	86.35	626.15
DPRA	MW-9	11/16/07	98.19	637.99	---	12.09	0.00	86.10	625.90
DPRA	MW-9	11/30/07	98.19	637.99	---	12.34	0.00	85.85	625.65
DPRA	MW-9	12/17/07	98.19	637.99	---	12.54	0.00	85.65	625.45
Bay West	MW-9	02/27/08	98.19	637.99	---	13.27	0.00	84.92	624.72
Bay West	MW-9	09/23/08	98.19	637.99	12.21	12.22	0.01	85.97	625.78
Bay West	MW-9	02/15/10	98.19	637.99	---	13.08	0.00	85.11	624.91
Bay West	MW-9	03/03/10	98.19	637.99	---	13.16	0.00	85.03	624.83
Bay West	MW-9	03/29/10	98.19	637.99	---	12.93	0.00	85.26	625.06
Bay West	MW-9*	04/26/10	98.02	637.82	---	12.76	0.00	85.26	625.06
Bay West	MW-9	05/14/10	98.02	637.82	---	12.75	0.00	85.27	625.07
Bay West	MW-9	05/28/10	98.02	637.82	---	12.59	0.00	85.43	625.23
Bay West	MW-9	12/01/10	98.02	637.82	---	11.43	0.00	86.59	626.39
Bay West	MW-9	04/25/11	98.02	637.82	---	12.70	0.00	85.32	625.12
Bay West	MW-9	10/11/11	98.02	637.82	---	12.58	0.00	85.44	625.24
Bay West	MW-9	04/06/12	98.02	637.82	---	13.23	0.00	84.79	624.59
Bay West	MW-9	09/11/12	98.02	637.82	---	12.61	0.00	85.41	625.21
Bay West	MW-9	04/08/13	98.02	637.82	---	13.51	0.00	84.51	624.31
Bay West	MW-9	12/02/13	98.02	637.82	---	12.64	0.00	85.38	625.18
Bay West	MW-9	03/28/14	98.02	637.82	---	13.57	0.00	84.45	624.25
Bay West	MW-9	04/28/14	98.02	637.82	---	12.95	0.00	85.07	624.87
Bay West	MW-9	10/27/14	98.02	637.82	---	12.48	0.00	85.54	625.34
Bay West	MW-9	04/20/15	98.01	637.81	---	7.00	0.00	91.01	630.81
Bay West	MW-9	09/28/15	98.01	637.81	---	11.87	0.00	86.14	625.94
Braun	MW-10	06/18/96	100.61	640.41	---	12.00	-	88.61	628.41
Braun	MW-10	07/02/96	100.61	640.41	---	13.02	-	87.59	627.39
Braun	MW-10	01/08/97	100.61	640.41	86.31	14.30	0.2	86.41	626.26
Braun	MW-10	05/01/97	100.61	640.41	86.39	14.22	1.53	87.46	627.31
Braun	MW-10	03/04/98	100.61	640.41	86.41	14.20	0.49	86.72	626.57
DPRA	MW-10	04/15/02	100.56	640.36	14.00	14.85	0.85	86.33	626.13
DPRA	MW-10	05/09/02	100.56	640.36	13.17	14.24	1.07	87.10	626.90
DPRA	MW-10	05/24/02	100.56	640.36	13.50	13.80	0.30	86.98	626.78
DPRA	MW-10	06/08/02	100.56	640.36	13.60	13.92	0.32	86.87	626.67
DPRA	MW-10	06/20/02	100.56	640.36	13.65	13.84	0.19	86.86	626.66
DPRA	MW-10	07/05/02	100.56	640.36	13.60	13.83	0.23	86.90	626.70
DPRA	MW-10	07/17/02	100.56	640.36	13.40	13.61	0.21	87.10	626.90
DPRA	MW-10	08/05/02	100.56	640.36	13.42	13.58	0.16	87.10	626.90
DPRA	MW-10	08/19/02	100.56	640.36	13.41	13.45	0.04	87.14	626.94
DPRA	MW-10	08/30/02	100.56	640.36	13.48	13.52	0.04	87.07	626.87
DPRA	MW-10	09/03/02	100.56	640.36	13.51	13.53	0.02	87.04	626.84
DPRA	MW-10	09/17/02	100.56	640.36	13.19	13.54	0.35	87.28	627.07
DPRA	MW-10	09/30/02	100.56	640.36	---	13.56	0.00	87.00	626.80
DPRA	MW-10	10/11/02	100.56	640.36	---	13.60	0.00	86.96	626.76
DPRA	MW-10	10/30/03	100.56	640.36	---	13.64	0.00	86.92	626.72
DPRA	MW-10	11/10/02	100.56	640.36	---	13.65	0.00	86.91	626.71
DPRA	MW-10	11/20/02	100.56	640.36	---	13.63	0.00	86.93	626.73
DPRA	MW-10	12/10/02	100.56	640.36	13.89	14.18	0.29	86.59	626.39
DPRA	MW-10	04/09/03	100.56	640.36	14.46	15.79	1.33	85.74	625.54
DPRA	MW-10	04/11/03	100.56	640.36	14.75	16.47	1.72	85.35	625.14
DPRA	MW-10	05/08/03	100.56	640.36	14.02	14.52	0.50	86.41	626.20
DPRA	MW-10	05/29/03	100.56	640.36	13.19	13.29	0.10	87.34	627.14
DPRA	MW-10	06/17/03	100.56	640.36	13.51	13.52	0.01	87.05	626.85
DPRA	MW-10	07/22/03	100.56	640.36	13.18	13.29	0.11	87.35	627.15
DPRA	MW-10	08/15/03	100.56	640.36	13.67	13.73	0.06	86.87	626.67
DPRA	MW-10	08/21/03	100.56	640.36	13.83	14.03	0.20	86.68	626.48
DPRA	MW-10	09/05/03	100.56	640.36	14.04	14.23	0.19	86.47	626.27
DPRA	MW-10	09/22/03	100.56	640.36	13.88	14.34	0.46	86.56	626.35
DPRA	MW-10	10/09/03	100.56	640.36	14.09	14.35	0.26	86.40	626.20
DPRA	MW-10	10/17/03	100.56	640.36	14.13	14.62	0.49	86.30	626.10
DPRA	MW-10	10/22/03	100.56	640.36	14.17	14.56	0.39	86.28	626.08
DPRA	MW-10	10/28/03	100.56	640.36	14.21	14.91	0.70	86.16	625.96
DPRA	MW-10	11/05/03	100.56	640.36	14.16	14.79	0.63	86.23	626.03
DPRA	MW-10	11/11/03	100.56	640.36	14.03	14.50	0.47	86.40	626.20
DPRA	MW-10	11/28/03	100.56	640.36	14.09	14.33	0.24	86.41	626.20
DPRA	MW-10	12/05/03	100.56	640.36	14.16	14.53	0.37	86.30	626.10
DPRA	MW-10	12/10/03	100.56	640.36	14.18	14.65	0.47	86.25	626.05
DPRA	MW-10	12/17/03	100.56	640.36	14.21	14.81	0.60	86.19	625.99
DPRA	MW-10	02/23/04	100.56	640.36	14.50	15.82	1.32	85.70	625.50
DPRA	MW-10	02/23/04	100.56	640.36	14.55	15.83	1.28	85.66	625.46
DPRA	MW-10	02/23/04	100.56	640.36	14.51	15.78	1.27	85.71	625.51
DPRA	MW-10	02/24/04	100.56	640.36	14.62	15.95	1.33	85.58	625.38
DPRA	MW-10	02/24/04	100.56	640.36	14.67	15.58	0.91	85.64	625.44
DPRA	MW-10	02/24/04	100.56	640.36	14.59	15.45	0.86	85.74	625.54
DPRA	MW-10	02/24/04	100.56	640.36	14.62	15.40	0.78	85.73	625.53
DPRA	MW-10	02/24/04	100.56	640.36	14.61	15.43	0.82	85.73	625.53
DPRA	MW-10	02/25/04	100.56	640.36	14.80	16.13	1.33	85.40	625.20
DPRA	MW-10	02/25/04	100.56	640.36	14.62	15.32	0.70	85.75	625.55
DPRA	MW-10	02/25/04	100.56	640.36	14.58	15.38	0.80	85.76	625.56
DPRA	MW-10	02/25/04	100.56	640.36	14.62	15.40	0.78	85.73	625.53
DPRA	MW-10	02/25/04	100.56	640.36	14.56	15.46	0.90	85.76	625.56
DPRA	MW-10	03/16/04	100.56	640.36	14.49	15.55	1.06	85.78	625.58
DPRA	MW-10	03/16/04	100.56	640.36	14.31	15.10	0.79	86.04	625.84
DPRA	MW-10	03/16/04	100.56	640.36	14.39	14.43	0.04	86.16	625.96
DPRA	MW-10	03/16/04	100.56	640.36	14.35	15.01	0.66	86.03	625.83
DPRA	MW-10	03/16/04	100.56	640.36	14.38	14.47	0.09	86.16	625.95
DPRA	MW-10	03/16/04	100.56	640.36	14.37	15.11	0.74	85.99	625.79
DPRA	MW-10	03/16/04	100.56	640.36	14.39	14.44	0.05	86.16	625.96

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
DPRA	MW-10	03/25/04	100.56	640.36	14.16	14.52	0.36	86.30	626.10
DPRA	MW-10	04/05/04	100.56	640.36	13.72	13.85	0.13	86.80	626.60
DPRA	MW-10	04/05/04	100.56	640.36	13.71	13.81	0.10	86.82	626.62
DPRA	MW-10	04/05/04	100.56	640.36	13.69	13.74	0.05	86.86	626.66
DPRA	MW-10	04/14/04	100.56	640.36	13.51	13.60	0.09	87.03	626.82
DPRA	MW-10	05/10/04	100.56	640.36	13.56	13.60	0.04	86.99	626.79
DPRA	MW-10	06/08/04	100.56	640.36	---	12.90	0.00	87.66	627.46
DPRA	MW-10	06/29/04	100.56	640.36	---	13.41	0.00	87.15	626.95
DPRA	MW-10	07/10/04	100.56	640.36	13.72	13.73	0.01	86.84	626.64
DPRA	MW-10	07/15/04	100.56	640.36	---	13.45	0.00	87.11	626.91
DPRA	MW-10	07/21/04	100.56	640.36	---	13.43	0.00	87.13	626.93
DPRA	MW-10	08/09/04	100.56	640.36	---	13.70	0.00	86.86	626.66
DPRA	MW-10	08/16/04	100.56	640.36	---	13.51	0.00	87.05	626.85
DPRA	MW-10	08/31/04	100.56	640.36	---	13.80	0.00	86.76	626.56
DPRA	MW-10	09/27/04	100.56	640.36	13.00	13.05	0.05	87.55	627.35
DPRA	MW-10	10/26/04	100.56	640.36	---	12.93	0.00	87.63	627.43
DPRA	MW-10	11/23/04	100.56	640.36	---	8.97	0.00	91.59	631.39
DPRA	MW-10	12/07/04	100.56	640.36	---	13.54	0.00	87.02	626.82
DPRA	MW-10	03/15/05	100.56	640.36	14.07	14.13	0.06	86.47	626.27
DPRA	MW-10	04/05/05	100.56	640.36	13.04	13.10	0.06	87.50	627.30
DPRA	MW-10	04/13/05	100.56	640.36	12.90	12.96	0.06	87.64	627.44
DPRA	MW-10	05/06/05	100.56	640.36	13.22	13.29	0.07	87.32	627.12
DPRA	MW-10	06/01/05	100.56	640.36	12.83	12.90	0.07	87.71	627.51
DPRA	MW-10	06/29/05	100.56	640.36	12.88	12.89	0.01	87.68	627.48
DPRA	MW-10	09/15/05	100.56	640.36	---	13.81	0.00	86.75	626.55
DPRA	MW-10	10/04/05	100.56	640.36	13.50	13.52	0.02	87.05	626.85
DPRA	MW-10	11/03/05	100.56	640.36	13.33	13.45	0.12	87.20	627.00
DPRA	MW-10	12/20/05	100.56	640.36	13.35	13.45	0.10	87.18	626.98
DPRA	MW-10	02/01/06	100.56	640.36	13.44	13.45	0.01	87.12	626.92
DPRA	MW-10	03/07/06	100.56	640.36	13.86	13.88	0.02	86.69	626.49
DPRA	MW-10	04/10/06	100.56	640.36	12.78	12.85	0.07	87.76	627.56
DPRA	MW-10	05/03/06	100.56	640.36	---	13.10	0.00	87.46	627.26
DPRA	MW-10	07/05/06	100.56	640.36	13.69	13.70	0.01	86.87	626.67
DPRA	MW-10	08/17/06	100.56	640.36	---	13.72	0.00	86.84	626.64
DPRA	MW-10	09/28/06	100.56	640.36	13.93	14.15	0.22	86.57	626.37
DPRA	MW-10	11/15/06	100.56	640.36	---	14.18	0.00	86.38	626.18
DPRA	MW-10	01/12/07	100.56	640.36	14.06	14.07	0.01	86.50	626.30
DPRA	MW-10	01/29/07	100.56	640.36	14.18	14.50	0.32	86.29	626.09
DPRA	MW-10	02/12/07	100.56	640.36	14.32	14.80	0.48	86.11	625.91
DPRA	MW-10	03/15/07	100.56	640.36	14.33	15.20	0.87	86.00	625.79
DPRA	MW-10	04/16/07	100.56	640.36	---	13.25	0.00	87.31	627.11
DPRA	MW-10	05/30/07	100.56	640.36	---	12.93	0.00	87.63	627.43
DPRA	MW-10	08/29/07	100.56	640.36	---	14.08	0.00	86.48	626.28
DPRA	MW-10	10/02/07	100.56	640.36	13.39	13.40	0.01	87.17	626.97
DPRA	MW-10	10/09/07	100.56	640.36	---	12.53	0.00	88.03	627.83
DPRA	MW-10	11/01/07	100.56	640.36	---	12.82	0.00	87.74	627.54
DPRA	MW-10	11/16/07	100.56	640.36	---	13.24	0.00	87.32	627.12
DPRA	MW-10	11/30/07	100.56	640.36	---	13.59	0.00	86.97	626.77
DPRA	MW-10	12/17/07	100.56	640.36	---	13.78	0.00	86.78	626.58
Bay West	MW-10	02/27/08	100.56	640.36	---	14.51	0.00	86.05	625.85
Bay West	MW-10	09/23/08	100.56	640.36	14.07	14.08	0.01	86.49	626.29
Bay West	MW-10	02/15/10	100.56	640.36	14.10	14.12	0.02	86.45	626.25
Bay West	MW-10	03/03/10	100.56	640.36	14.21	14.23	0.02	86.34	626.14
Bay West	MW-10	03/29/10	100.56	640.36	13.43	13.45	0.02	87.12	626.92
Bay West	MW-10*	04/26/10	100.58	640.38	13.69	13.71	0.02	86.86	626.68
Bay West	MW-10	05/06/10	100.58	640.38	13.84	13.86	0.02	86.73	626.53
Bay West	MW-10	05/14/10	100.58	640.38	13.48	13.50	0.02	87.09	626.89
Bay West	MW-10	05/28/10	100.58	640.38	13.42	13.43	0.01	87.16	626.96
Bay West	MW-10	06/10/10	100.58	640.38	13.40	13.41	0.01	87.18	626.98
Bay West	MW-10	12/03/10	100.58	640.38	---	12.92	0.00	87.66	627.46
Bay West	MW-10	04/25/11	100.58	640.38	---	13.02	0.00	87.56	627.36
Bay West	MW-10	10/11/11	100.58	640.38	13.93	13.95	0.02	86.64	626.44
Bay West	MW-10	04/02/12	100.58	640.38	14.20	14.52	0.32	86.29	626.09
Bay West	MW-10	09/11/12	100.58	640.38	13.63	13.73	0.10	86.92	626.72
Bay West	MW-10	04/08/13	100.58	640.38	14.39	15.02	0.63	86.02	625.82
Bay West	MW-10	12/02/13	100.58	640.38	---	13.82	0.00	86.76	626.56
Bay West	MW-10	03/28/14	100.58	640.38	14.34	14.78	0.44	86.12	625.92
Bay West	MW-10	04/28/14	100.58	640.38	12.17	12.20	0.03	88.40	628.20
Bay West	MW-10	10/27/14	100.58	640.38	13.74	13.75	0.01	86.84	626.64
Bay West	MW-10	04/20/15	100.58	640.38	14.34	14.65	0.31	86.16	625.96
Bay West	MW-10	09/28/15	100.58	640.38	12.61	12.63	0.02	87.00	627.76
Braun	MW-11	06/18/96	100.29	640.09	---	12.00	---	88.29	628.09
Braun	MW-11	07/02/96	100.29	640.09	---	12.74	---	87.55	627.35
Braun	MW-11	01/08/97	100.29	640.09	---	13.75	---	86.54	626.34
Braun	MW-11	05/01/97	100.29	640.09	---	12.78	---	87.51	627.31
Braun	MW-11	03/04/98	100.29	640.09	---	13.42	---	86.87	626.67

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
DPRA	MW-11	04/15/02	100.46	640.26	---	13.81	0.00	86.65	626.45
DPRA	MW-11	07/05/02	100.46	640.26	---	13.58	0.00	86.88	626.68
DPRA	MW-11	09/17/02	100.46	640.26	---	13.07	0.00	87.39	627.19
DPRA	MW-11	12/10/02	100.46	640.26	---	13.97	0.00	86.49	626.29
DPRA	MW-11	04/09/03	100.46	640.26	---	14.78	0.00	85.68	625.48
DPRA	MW-11	10/22/03	100.46	640.26	---	14.27	0.00	86.19	625.99
DPRA	MW-11	12/17/03	100.46	640.26	---	14.32	0.00	86.14	625.94
DPRA	MW-11	03/16/04	100.46	640.26	---	14.55	0.00	85.91	625.71
DPRA	MW-11	06/08/04	100.46	640.26	---	12.82	0.00	87.64	627.44
DPRA	MW-11	08/31/04	100.46	640.26	---	13.85	0.00	86.61	626.41
DPRA	MW-11	12/07/04	100.46	640.26	---	13.62	0.00	86.84	626.64
DPRA	MW-11	03/15/05	100.46	640.26	---	14.14	0.00	86.32	626.12
DPRA	MW-11	04/13/05	100.46	640.26	---	12.84	0.00	87.62	627.42
DPRA	MW-11	05/06/05	100.46	640.26	---	13.25	0.00	87.21	627.01
DPRA	MW-11	06/01/05	100.46	640.26	---	12.84	0.00	87.62	627.42
DPRA	MW-11	09/15/05	100.46	640.26	---	13.93	0.00	86.53	626.33
DPRA	MW-11	10/04/05	100.46	640.26	---	13.41	0.00	87.05	626.85
DPRA	MW-11	02/01/06	100.46	640.26	---	13.41	0.00	87.05	626.85
DPRA	MW-11	07/05/06	100.46	640.26	---	13.83	0.00	86.63	626.43
DPRA	MW-11	11/15/06	100.88	640.68	---	14.19	0.00	86.69	626.49
DPRA	MW-11	01/29/07	100.88	640.68	---	14.39	0.00	86.49	626.29
DPRA	MW-11	05/30/07	100.88	640.68	---	12.97	0.00	87.91	627.71
DPRA	MW-11	10/02/07	100.88	640.68	---	13.55	0.00	87.33	627.13
Bay West	MW-11	02/27/08	100.88	640.68	---	14.63	0.00	86.25	626.05
Bay West	MW-11	09/23/08	100.88	640.68	---	13.60	0.00	87.28	627.08
Bay West	MW-11	02/15/10	100.88	640.68	---	14.37	0.00	86.51	626.31
Bay West	MW-11*	04/26/10	100.74	640.54	---	13.97	0.00	86.77	626.57
Bay West	MW-11	11/30/10	100.74	640.54	---	13.16	0.00	87.58	627.38
Bay West	MW-11	04/25/11	100.74	640.54	---	13.20	0.00	87.54	627.34
Bay West	MW-11	10/11/11	100.74	640.54	---	14.21	0.00	86.53	626.33
Bay West	MW-11	04/02/12	100.74	640.54	---	14.51	0.00	86.23	626.03
Bay West	MW-11	09/11/12	100.74	640.54	---	13.90	0.00	86.84	626.64
Bay West	MW-11	04/08/13	100.74	640.54	---	14.68	0.00	86.06	625.86
Bay West	MW-11	12/02/13	101.74	641.54	---	14.17	0.00	87.57	627.37
Bay West	MW-11	03/28/14	101.74	641.54	---	14.63	0.00	87.11	626.91
Bay West	MW-11	04/28/14	101.74	641.54	---	12.22	0.00	89.52	629.32
Bay West	MW-11	10/27/14	101.74	641.54	---	14.00	0.00	87.74	627.54
Bay West	MW-11	04/20/15	101.74	641.54	---	14.53	0.00	87.21	627.01
Bay West	MW-11	09/28/15	101.74	641.54	---	12.78	0.00	88.96	628.76
Braun	MW-12	06/18/96	99.91	639.71	---	13.00	---	86.91	626.71
Braun	MW-12	07/02/96	99.91	639.71	---	17.83	---	82.08	621.88
Braun	MW-12	01/08/97	99.91	639.71	---	15.27	---	84.64	624.44
Braun	MW-12	05/01/97	99.91	639.71	---	14.84	---	85.07	624.87
Braun	MW-12	03/04/98	99.91	639.71	---	16.08	---	83.83	623.63
DPRA	MW-12	04/15/02	99.89	639.69	---	16.40	0.00	83.49	623.29
DPRA	MW-12	07/05/02	99.89	639.69	---	15.20	0.00	84.69	624.49
DPRA	MW-12	09/17/02	99.89	639.69	---	14.60	0.00	85.29	625.09
DPRA	MW-12	12/10/02	99.89	639.69	---	15.29	0.00	84.60	624.40
DPRA	MW-12	04/09/03	99.89	639.69	---	17.97	0.00	81.92	621.72
DPRA	MW-12	10/22/03	99.89	639.69	---	15.05	0.00	84.84	624.64
DPRA	MW-12	12/17/03	99.89	639.69	---	16.20	0.00	83.69	623.49
DPRA	MW-12	03/16/04	99.89	639.69	---	16.97	0.00	82.92	622.72
DPRA	MW-12	06/08/04	99.89	639.69	---	13.95	0.00	85.94	625.74
DPRA	MW-12	08/31/04	99.89	639.69	---	14.66	0.00	85.23	625.03
DPRA	MW-12	12/07/04	99.89	639.69	---	14.76	0.00	85.13	624.93
DPRA	MW-12	03/15/05	99.89	639.69	---	16.24	0.00	83.65	623.45
DPRA	MW-12	04/13/05	99.89	639.69	---	14.14	0.00	85.75	625.55
DPRA	MW-12	05/06/05	99.89	639.69	---	14.28	0.00	85.61	625.41
DPRA	MW-12	06/01/05	99.89	639.69	---	14.14	0.00	85.75	625.55
DPRA	MW-12	09/15/05	99.89	639.69	---	15.06	0.00	84.83	624.63
DPRA	MW-12	10/04/05	99.89	639.69	---	12.94	0.00	86.95	626.75
DPRA	MW-12	12/20/05	99.89	639.69	---	14.68	0.00	85.21	625.01
DPRA	MW-12	02/01/06	99.89	639.69	---	15.26	0.00	84.63	624.43
DPRA	MW-12	07/05/06	99.89	639.69	---	15.01	0.00	84.88	624.68
DPRA	MW-12	11/15/06	100.03	639.83	---	14.81	0.00	85.22	625.02
DPRA	MW-12	01/29/07	100.03	639.83	---	15.31	0.00	84.72	624.52
DPRA	MW-12	05/30/07	100.03	639.83	---	13.79	0.00	86.24	626.04
DPRA	MW-12	10/02/07	100.03	639.83	---	14.40	0.00	85.63	625.43
Bay West	MW-12	02/27/08	100.03	639.83	---	16.05	0.00	83.98	623.78
Bay West	MW-12	09/23/08	100.03	639.83	---	14.22	0.00	85.81	625.61
Bay West	MW-12	02/15/10	100.03	639.83	---	15.66	0.00	84.37	624.17
Bay West	MW-12*	04/26/10	99.98	639.78	---	14.65	0.00	85.33	625.13
Bay West	MW-12	12/01/10	99.98	639.78	---	14.39	0.00	85.59	625.39
Bay West	MW-12	04/25/11	99.98	639.78	---	13.98	0.00	86.00	625.80
Bay West	MW-12	10/11/11	99.98	639.78	---	15.05	0.00	84.93	624.73
Bay West	MW-12	04/02/12	99.98	639.78	---	14.23	0.00	85.75	625.55
Bay West	MW-12	09/11/12	99.98	639.78	---	15.12	0.00	84.86	624.66
Bay West	MW-12	4/8/2013	99.98	639.78	---	16.85	0.00	83.13	622.93
Bay West	MW-12	12/02/13	99.98	639.78	---	15.02	0.00	84.96	624.76
Bay West	MW-12	03/28/14	99.98	639.78	---	16.79	0.00	83.19	622.99
Bay West	MW-12	04/28/14	99.98	639.78	---	13.52	0.00	86.46	626.26
Bay West	MW-12	10/27/14	99.98	639.78	---	14.59	0.00	85.39	625.19
Bay West	MW-12	04/20/15	99.98	639.78	---	16.93	0.00	83.05	622.85
Bay West	MW-12	09/28/15	99.98	639.78	---	13.92	0.00	86.06	625.86

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
DPRA	MW-13	04/15/02	95.98	635.78	---	15.72	0.00	80.26	620.06
DPRA	MW-13	07/05/02	95.98	635.78	---	15.08	0.00	80.90	620.70
DPRA	MW-13	09/17/02	95.98	635.78	---	14.75	0.00	81.23	621.03
DPRA	MW-13	12/10/02	95.98	635.78	---	15.30	0.00	80.68	620.48
DPRA	MW-13	04/09/03	95.98	635.78	---	16.08	0.00	79.90	619.70
DPRA	MW-13	10/22/03	95.98	635.78	---	15.54	0.00	80.44	620.24
DPRA	MW-13	12/17/03	95.98	635.78	---	15.70	0.00	80.28	620.08
DPRA	MW-13	03/16/04	95.98	635.78	---	16.05	0.00	79.93	619.73
DPRA	MW-13	06/08/04	95.98	635.78	---	14.90	0.00	81.08	620.88
DPRA	MW-13	08/31/04	95.98	635.78	---	14.95	0.00	81.03	620.83
DPRA	MW-13	12/07/04	95.98	635.78	---	14.96	0.00	81.02	620.82
DPRA	MW-13	03/15/05	95.98	635.78	---	15.61	0.00	80.37	620.17
DPRA	MW-13	04/13/05	95.98	635.78	---	15.11	0.00	80.87	620.67
DPRA	MW-13	05/06/05	95.98	635.78	---	14.93	0.00	81.05	620.85
DPRA	MW-13	06/01/05	95.98	635.78	---	14.73	0.00	81.25	621.05
DPRA	MW-13	09/15/05	95.98	635.78	---	15.02	0.00	80.96	620.76
DPRA	MW-13	10/04/05	95.98	635.78	---	15.05	0.00	80.93	620.73
DPRA	MW-13	11/03/05	95.98	635.78	---	14.51	0.00	81.47	621.27
DPRA	MW-13	12/20/05	95.98	635.78	---	14.61	0.00	81.37	621.17
DPRA	MW-13	02/01/06	95.98	635.78	---	14.99	0.00	80.99	620.79
DPRA	MW-13	03/07/06	95.98	635.78	---	15.23	0.00	80.75	620.55
DPRA	MW-13	04/10/06	95.98	635.78	---	14.73	0.00	81.25	621.05
DPRA	MW-13	05/03/06	95.98	635.78	---	14.75	0.00	81.23	621.03
DPRA	MW-13	07/05/06	95.98	635.78	---	14.82	0.00	81.16	620.96
DPRA	MW-13	08/17/06	95.98	635.78	---	14.93	0.00	81.05	620.85
DPRA	MW-13	09/28/06	95.98	635.78	---	15.25	0.00	80.73	620.53
DPRA	MW-13	11/15/06	96.06	635.86	---	15.32	0.00	80.74	620.54
DPRA	MW-13	01/12/07	96.06	635.86	---	15.40	0.00	80.66	620.46
DPRA	MW-13	01/29/07	96.06	635.86	---	15.50	0.00	80.56	620.36
DPRA	MW-13	02/12/07	96.06	635.86	---	16.60	0.00	79.46	619.26
DPRA	MW-13	05/30/07	96.06	635.86	---	14.85	0.00	81.21	621.01
DPRA	MW-13	10/02/07	96.06	635.86	---	14.83	0.00	81.23	621.03
Bay West	MW-13	02/27/08	96.06	635.86	---	15.55	0.00	80.51	620.31
Bay West	MW-13	09/23/08	96.06	635.86	---	14.41	0.00	81.65	621.45
Bay West	MW-13	02/15/10	96.06	635.86	---	15.47	0.00	80.59	620.39
Bay West	MW-13	04/26/10	96.06	635.86	---	15.51	0.00	80.55	620.35
Bay West	MW-13	12/02/10	96.06	635.86	---	14.53	0.00	81.53	621.33
Bay West	MW-13	04/25/11	96.06	635.86	---	15.22	0.00	80.84	620.64
Bay West	MW-13	10/11/11	96.06	635.86	---	15.09	0.00	80.97	620.77
Bay West	MW-13	04/02/12	96.06	635.86	---	14.73	0.00	81.33	621.13
Bay West	MW-13	09/11/12	96.06	635.86	---	14.74	0.00	81.32	621.12
Bay West	MW-13	04/08/13	96.06	635.86	---	15.90	0.00	80.16	619.96
Bay West	MW-13	12/02/13	96.06	635.86	---	15.01	0.00	81.05	620.85
Bay West	MW-13	03/28/14	96.06	635.86	---	15.65	0.00	80.41	620.21
Bay West	MW-13	04/28/14	96.06	635.86	---	14.61	0.00	81.45	621.25
Bay West	MW-13	10/27/14	96.06	635.86	---	14.48	0.00	81.58	621.38
Bay West	MW-13	04/20/15	96.06	635.86	---	15.75	0.00	80.31	620.11
Bay West	MW-13	09/28/15	96.06	635.86	---	14.07	0.00	81.99	621.79
DPRA	MW-14	12/07/04	99.78	639.58	---	Dry	0.00		
DPRA	MW-14	03/15/05	99.78	639.58	---	13.05	0.00	86.73	626.53
DPRA	MW-14	04/05/05	99.78	639.58	---	12.05	0.00	87.73	627.53
DPRA	MW-14	04/13/05	99.78	639.58	---	11.85	0.00	87.93	627.73
DPRA	MW-14	05/06/05	99.78	639.58	---	12.11	0.00	87.67	627.47
DPRA	MW-14	06/01/05	99.78	639.58	---	11.78	0.00	88.00	627.80
DPRA	MW-14	09/15/05	99.78	639.58	---	12.95	0.00	86.83	626.63
DPRA	MW-14	10/04/05	99.78	639.58	---	12.33	0.00	87.45	627.25
DPRA	MW-14	12/20/05	99.78	639.58	---	12.23	0.00	87.55	627.35
DPRA	MW-14	02/01/06	99.78	639.58	---	12.28	0.00	87.50	627.30
DPRA	MW-14	03/07/06	99.78	639.58	---	12.79	0.00	86.99	626.79
DPRA	MW-14	04/10/06	99.78	639.58	---	11.71	0.00	88.07	627.87
DPRA	MW-14	05/03/06	99.78	639.58	---	12.02	0.00	87.76	627.56
DPRA	MW-14	07/05/06	99.78	639.58	---	12.58	0.00	87.20	627.00
DPRA	MW-14	08/17/06	99.78	639.58	---	12.64	0.00	87.14	626.94
DPRA	MW-14	09/28/06	99.78	639.58	---	12.98	0.00	86.80	626.60
DPRA	MW-14	11/15/06	100.03	639.83	---	12.99	0.00	87.04	626.84
DPRA	MW-14	01/12/07	100.03	639.83	---	12.95	0.00	87.08	626.88
DPRA	MW-14	01/29/07	100.03	639.83	---	13.13	0.00	86.90	626.70
DPRA	MW-14	05/30/07	100.03	639.83	---	11.90	0.00	88.13	627.93
DPRA	MW-14	10/02/07	100.03	639.83	---	12.34	0.00	87.69	627.49
Bay West	MW-14	02/27/08	100.03	639.83	---	13.36	0.00	86.67	626.47
Bay West	MW-14	09/23/08	100.03	639.83	---	12.26	0.00	87.77	627.57
Bay West	MW-14	02/15/10	100.03	639.83	---	13.10	0.00	86.93	626.73
Bay West	MW-14	04/26/10	100.03	639.83	---	12.70	0.00	87.33	627.13
Bay West	MW-14	12/02/10	100.03	639.83	---	11.94	0.00	88.09	627.89
Bay West	MW-14	04/25/11	100.03	639.83	---	11.99	0.00	88.04	627.84
Bay West	MW-14	10/11/11	100.03	639.83	---	12.89	0.00	87.14	626.94
Bay West	MW-14	04/02/12	100.03	639.83	---	13.31	0.00	86.72	626.52
Bay West	MW-14	09/11/12	100.03	639.83	---	12.75	0.00	87.28	627.08
Bay West	MW-14	04/08/13	100.03	639.83	---	13.70	0.00	86.33	626.13
Bay West	MW-14	12/02/13	100.03	639.83	---	12.78	0.00	87.25	627.05
Bay West	MW-14	03/28/14	100.03	639.83	---	13.39	0.00	86.64	626.44
Bay West	MW-14	04/28/14	100.03	639.83	---	11.11	0.00	88.92	628.72
Bay West	MW-14	10/27/14	100.03	639.83	---	12.60	0.00	87.43	627.23
Bay West	MW-14	04/20/15	100.03	639.83	---	13.38	0.00	86.65	626.45
Bay West	MW-14	09/28/15	100.03	639.83	---	11.55	0.00	88.48	628.28

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
DPRA	MW-15	11/15/06	101.06	640.86	---	16.37	0.00	84.69	624.49
DPRA	MW-15	01/29/07	101.06	640.86	---	16.50	0.00	84.56	624.36
DPRA	MW-15	03/15/07	101.06	640.86	---	16.75	0.00	84.31	624.11
DPRA	MW-15	04/16/07	101.06	640.86	---	16.43	0.00	84.63	624.43
DPRA	MW-15	05/30/07	101.06	640.86	---	16.06	0.00	85.00	624.80
DPRA	MW-15	08/29/07	101.06	640.86	---	16.27	0.00	84.79	624.59
DPRA	MW-15	10/02/07	101.06	640.86	---	16.12	0.00	84.94	624.74
DPRA	MW-15	11/01/07	101.06	640.86	---	15.77	0.00	85.29	625.09
DPRA	MW-15	11/16/07	101.06	640.86	---	15.82	0.00	85.24	625.04
DPRA	MW-15	11/30/07	101.06	640.86	---	16.01	0.00	85.05	624.85
DPRA	MW-15	12/17/07	101.06	640.86	---	16.16	0.00	84.90	624.70
Bay West	MW-15	02/27/08	101.06	640.86	---	16.68	0.00	84.38	624.18
Bay West	MW-15	09/23/08	101.06	640.86	---	15.90	0.00	85.16	624.96
Bay West	MW-15	02/15/10	101.06	640.86	---	16.51	0.00	84.55	624.35
Bay West	MW-15	03/03/10	101.06	640.86	---	16.57	0.00	84.49	624.29
Bay West	MW-15	03/29/10	101.06	640.86	---	16.44	0.00	84.62	624.42
Bay West	MW-15*	04/26/10	101.05	640.85	---	16.40	0.00	84.65	624.45
Bay West	MW-15	05/14/10	101.05	640.85	---	16.38	0.00	84.67	624.47
Bay West	MW-15	05/28/10	101.05	640.85	---	16.27	0.00	84.78	624.58
Bay West	MW-15	06/10/10	101.05	640.85	---	16.23	0.00	84.82	624.62
Bay West	MW-15	12/02/10	101.05	640.85	---	15.66	0.00	85.39	625.19
Bay West	MW-15	04/25/11	101.05	640.85	---	16.28	0.00	84.77	624.57
Bay West	MW-15	10/11/11	101.05	640.85	---	16.16	0.00	84.89	624.69
Bay West	MW-15	04/02/12	101.05	640.85	---	16.89	0.00	84.16	623.96
Bay West	MW-15	09/11/12	101.05	640.85	---	16.01	0.00	85.04	624.84
Bay West	MW-15	04/08/13	101.05	640.85	---	16.98	0.00	84.07	623.87
Bay West	MW-15	12/02/13	101.05	640.85	---	16.25	0.00	84.80	624.60
Bay West	MW-15	03/28/14	101.05	640.85	---	16.85	0.00	84.20	624.00
Bay West	MW-15	04/28/14	101.05	640.85	---	16.29	0.00	84.76	624.56
Bay West	MW-15	10/27/14	101.05	640.85	---	16.01	0.00	85.04	624.84
Bay West	MW-15	04/20/15	101.05	640.85	---	16.74	0.00	84.31	624.11
Bay West	MW-15	09/28/15	101.05	640.85	---	15.81	0.00	85.24	625.04
DPRA	MW-16	11/15/06	96.52	636.32	---	14.51	0.00	82.01	621.81
DPRA	MW-16	01/29/07	96.52	636.32	---	14.72	0.00	81.80	621.60
DPRA	MW-16	05/30/07	96.52	636.32	---	13.64	0.00	82.88	622.68
DPRA	MW-16	10/02/07	96.52	636.32	---	13.66	0.00	82.86	622.66
Bay West	MW-16	02/27/08	96.52	636.32	---	14.79	0.00	81.73	621.53
Bay West	MW-16	09/23/08	96.52	636.32	---	13.46	0.00	83.06	622.86
Bay West	MW-16	02/15/10	96.52	636.32	---	14.54	0.00	81.98	621.78
Bay West	MW-16	04/26/10	96.52	636.32	---	15.57	0.00	80.95	620.75
Bay West	MW-16	11/30/10	96.52	636.32	---	13.60	0.00	82.92	622.72
Bay West	MW-16	04/25/11	96.52	636.32	---	14.14	0.00	82.38	622.18
Bay West	MW-16	10/11/11	96.52	636.32	---	14.16	0.00	82.36	622.16
Bay West	MW-16	04/12/12	96.52	636.32	---	14.90	0.00	81.62	621.42
Bay West	MW-16	09/11/12	96.52	636.32	---	14.07	0.00	82.45	622.25
Bay West	MW-16	04/08/13	96.52	636.32	---	14.98	0.00	81.54	621.34
Bay West	MW-16	12/02/13	96.52	636.32	---	14.19	0.00	82.33	622.13
Bay West	MW-16	03/28/14	96.52	636.32	---	14.75	0.00	81.77	621.57
Bay West	MW-16	04/28/14	96.52	636.32	---	12.96	0.00	83.56	623.36
Bay West	MW-16	10/27/14	96.52	636.32	---	13.75	0.00	82.77	622.57
Bay West	MW-16	04/20/15	96.52	636.32	---	14.90	0.00	81.62	621.42
Bay West	MW-16	09/28/15	96.52	636.32	---	12.91	0.00	83.61	623.41
DPRA	MW-17	11/15/06	100.86	640.66	---	17.84	0.00	83.02	622.82
DPRA	MW-17	01/29/07	100.86	640.66	---	18.11	0.00	82.75	622.55
DPRA	MW-17	05/30/07	100.86	640.66	---	17.34	0.00	83.52	623.32
DPRA	MW-17	10/02/07	100.86	640.66	---	17.38	0.00	83.48	623.28
Bay West	MW-17	02/27/08	100.86	640.66	---	18.23	0.00	82.63	622.43
Bay West	MW-17	09/23/08	100.86	640.66	---	17.27	0.00	83.59	623.39
Bay West	MW-17	02/15/10	100.86	640.66	---	18.04	0.00	82.82	622.62
Bay West	MW-17	04/26/10	100.86	640.66	---	17.94	0.00	82.92	622.72
Bay West	MW-17	12/02/10	100.86	640.66	---	17.36	0.00	83.50	623.30
Bay West	MW-17	04/25/11	100.86	640.66	---	17.46	0.00	83.40	623.20
Bay West	MW-17	10/11/11	100.86	640.66	---	17.58	0.00	83.28	623.08
Bay West	MW-17	04/02/12	100.86	640.66	---	18.15	0.00	82.71	622.51
Bay West	MW-17	09/11/12	100.86	640.66	---	17.65	0.00	83.21	623.01
Bay West	MW-17	04/08/13	100.86	640.66	---	18.21	0.00	82.65	622.45
Bay West	MW-17	12/02/13	100.86	640.66	---	17.70	0.00	83.16	622.96
Bay West	MW-17	03/28/14	100.86	640.66	---	18.06	0.00	82.80	622.60
Bay West	MW-17	04/28/14	100.86	640.66	---	17.10	0.00	83.76	623.56
Bay West	MW-17	10/27/14	100.86	640.66	---	17.45	0.00	83.41	623.21
Bay West	MW-17	04/20/15	100.86	640.66	---	18.18	0.00	82.68	622.48
Bay West	MW-17	09/28/15	100.86	640.66	---	17.09	0.00	83.77	623.57
DPRA	MW-18	11/15/06	94.93	634.73	---	15.63	0.00	79.30	619.10
DPRA	MW-18	01/29/07	94.93	634.73	---	15.88	0.00	79.05	618.85
DPRA	MW-18	05/30/07	94.93	634.73	---	15.29	0.00	79.64	619.44
DPRA	MW-18	10/02/07	94.93	634.73	---	15.20	0.00	79.73	619.53
Bay West	MW-18	02/27/08	94.93	634.73	---	15.77	0.00	79.16	618.96
Bay West	MW-18	09/23/08	94.93	634.73	---	14.73	0.00	80.20	620.00
Bay West	MW-18	02/15/10	94.93	634.73	---	15.68	0.00	79.25	619.05
Bay West	MW-18	04/26/10	94.93	634.73	---	15.86	0.00	79.07	618.87
Bay West	MW-18	11/30/10	94.93	634.73	---	14.68	0.00	80.25	620.05
Bay West	MW-18	04/25/11	94.93	634.73	---	15.33	0.00	79.60	619.40
Bay West	MW-18	10/11/11	94.93	634.73	---	15.24	0.00	79.69	619.49
Bay West	MW-18	04/02/12	94.93	634.73	---	15.14	0.00	79.79	619.59
Bay West	MW-18	09/11/12	94.93	634.73	---	14.69	0.00	80.24	620.04
Bay West	MW-18	04/08/13	94.93	634.73	---	16.19	0.00	78.74	618.54
Bay West	MW-18	12/02/13	94.93	634.73	---	15.15	0.00	79.78	619.58
Bay West	MW-18	03/28/14	94.93	634.73	---	16.04	0.00	78.89	618.69
Bay West	MW-18	04/28/14	94.93	634.73	---	14.95	0.00	79.98	619.78
Bay West	MW-18	10/27/14	94.93	634.73	---	14.61	0.00	80.32	620.12
Bay West	MW-18	04/20/15	94.93	634.73	---	16.01	0.00	78.92	618.72
Bay West	MW-18	09/28/15	94.93	634.73	---	14.17	0.00	80.76	620.56

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
DPRA	MW-19	01/29/07	101.22	641.02	---	15.12	0.00	86.10	625.90
DPRA	MW-19	05/30/07	101.22	641.02	---	14.01	0.00	87.21	627.01
DPRA	MW-19	10/02/07	101.22	641.02	---	13.96	0.00	87.26	627.06
Bay West	MW-19	02/27/08	101.22	641.02	---	15.23	0.00	85.99	625.79
Bay West	MW-19	09/23/08	101.22	641.02	---	14.01	0.00	87.21	627.01
Bay West	MW-19	02/15/10	101.22	641.02	---	15.12	0.00	86.10	625.90
Bay West	MW-19	04/26/10	101.22	641.02	---	14.84	0.00	86.38	626.18
Bay West	MW-19	12/03/10	101.22	641.02	---	14.26	0.00	86.96	626.76
Bay West	MW-19	04/25/11	101.22	641.02	---	14.59	0.00	86.63	626.43
Bay West	MW-19	10/11/11	101.22	641.02	---	14.57	0.00	86.65	626.45
Bay West	MW-19	04/02/12	101.22	641.02	---	15.14	0.00	86.08	625.88
Bay West	MW-19	09/11/12	101.22	641.02	---	14.82	0.00	86.40	626.20
Bay West	MW-19	04/08/13	101.22	641.02	---	15.56	0.00	85.66	625.46
Bay West	MW-19	12/02/13	101.22	641.02	---	14.85	0.00	86.37	626.17
Bay West	MW-19	03/28/14	101.22	641.02	---	15.26	0.00	85.96	625.76
Bay West	MW-19	04/28/14	101.22	641.02	---	13.83	0.00	87.39	627.19
Bay West	MW-19	10/27/14	101.22	641.02	---	14.51	0.00	86.71	626.51
Bay West	MW-19	04/20/15	101.22	641.02	---	15.09	0.00	86.13	625.93
Bay West	MW-19	09/28/15	101.22	641.02	---	13.80	0.00	87.42	627.22
DPRA	MW-20	10/02/07	99.75	639.55	---	15.20	0.00	84.55	624.35
Bay West	MW-20	02/27/08	99.75	639.55	---	15.71	0.00	84.04	623.84
Bay West	MW-20	09/23/08	99.75	639.55	---	14.84	0.00	84.91	624.71
Bay West	MW-20	02/15/10	99.75	639.55	---	15.63	0.00	84.12	623.92
Bay West	MW-20	04/26/10	99.75	639.55	---	15.81	0.00	83.94	623.74
Bay West	MW-20	12/02/10	99.75	639.55	---	14.80	0.00	84.95	624.75
Bay West	MW-20	04/25/11	99.75	639.55	---	15.52	0.00	84.23	624.03
Bay West	MW-20	10/11/11	99.75	639.55	---	15.31	0.00	84.44	624.24
Bay West	MW-20	04/02/12	99.75	639.55	---	16.10	0.00	83.65	623.45
Bay West	MW-20	09/11/12	99.75	639.55	---	14.77	0.00	84.98	624.78
Bay West	MW-20	04/08/13	99.75	639.55	---	15.98	0.00	83.77	623.57
Bay West	MW-20	12/02/13	99.75	639.55	---	15.17	0.00	84.58	624.38
Bay West	MW-20	03/28/14	99.75	639.55	---	15.88	0.00	83.87	623.67
Bay West	MW-20	04/28/14	99.75	639.55	---	14.74	0.00	85.01	624.81
Bay West	MW-20	10/27/14	99.75	639.55	---	14.67	0.00	85.08	624.88
Bay West	MW-20	04/20/15	99.75	639.55	---	15.82	0.00	83.93	623.73
Bay West	MW-20	09/28/15	99.75	639.55	---	14.19	0.00	85.56	625.36
DPRA	MW-21	10/02/07	95.73	635.53	---	14.77	0.00	80.96	620.76
Bay West	MW-21	02/27/08	95.73	635.53	---	15.08	0.00	80.65	620.45
Bay West	MW-21	09/23/08	95.73	635.53	---	14.83	0.00	80.90	620.70
Bay West	MW-21	02/15/10	95.73	635.53	---	15.32	0.00	80.41	620.21
Bay West	MW-21	04/26/10	95.73	635.53	---	15.37	0.00	80.36	620.16
Bay West	MW-21	12/02/10	95.73	635.53	---	14.98	0.00	80.75	620.55
Bay West	MW-21	04/25/11	95.73	635.53	---	15.37	0.00	80.36	620.16
Bay West	MW-21	10/11/11	95.73	635.53	---	15.10	0.00	80.63	620.43
Bay West	MW-21	04/02/12	95.73	635.53	---	15.74	0.00	79.99	619.79
Bay West	MW-21	09/11/12	95.73	635.53	---	15.17	0.00	80.56	620.36
Bay West	MW-21	04/08/13	95.73	635.53	---	15.81	0.00	79.92	619.72
Bay West	MW-21	12/02/13	95.73	635.53	---	15.12	0.00	80.61	620.41
Bay West	MW-21	03/28/14	95.73	635.53	---	15.67	0.00	80.06	619.86
Bay West	MW-21	04/28/14	95.73	635.53	---	15.15	0.00	80.58	620.38
Bay West	MW-21	10/27/14	95.73	635.53	---	14.90	0.00	80.83	620.63
Bay West	MW-21	04/20/15	95.73	635.53	---	15.73	0.00	80.00	619.80
Bay West	MW-21	09/28/15	95.73	635.53	---	14.90	0.00	80.83	620.63
Bay West	MW-22	04/25/11	97.42	637.22	---	7.37	0.00	90.05	629.85
Bay West	MW-22	10/11/11	97.42	637.22	---	9.22	0.00	88.20	628.00
Bay West	MW-22	04/02/12	97.42	637.22	---	8.61	0.00	88.81	628.61
Bay West	MW-22	09/11/12	97.42	637.22	---	7.16	0.00	90.26	630.06
Bay West	MW-22	04/08/13	97.42	637.22	---	9.38	0.00	88.04	627.84
Bay West	MW-22	12/02/13	97.42	637.22	---	7.00	0.00	90.42	630.22
Bay West	MW-22	03/28/14	97.42	637.22	---	9.14	0.00	88.28	628.08
Bay West	MW-22	04/28/14	97.42	637.22	---	6.12	0.00	91.30	631.10
Bay West	MW-22	10/27/14	97.42	637.22	---	6.45	0.00	90.97	630.77
Bay West	MW-22	04/20/15	97.51	637.31	---	7.59	0.00	89.92	629.72
Bay West	MW-22	09/28/15	97.51	637.31	---	5.46	0.00	92.05	631.85
Bay West	MW-23	04/24/13	97.66	637.46	---	16.32	0.00	81.34	621.14
Bay West	MW-23	12/02/13	97.66	637.46	---	16.05	0.00	81.61	621.41
Bay West	MW-23	03/28/14	97.66	637.46	---	16.52	0.00	81.14	620.94
Bay West	MW-23	04/28/14	97.66	637.46	---	15.45	0.00	82.21	622.01
Bay West	MW-23	10/27/14	97.66	637.46	---	15.61	0.00	82.05	621.85
Bay West	MW-23	04/20/15	97.66	637.46	---	16.53	0.00	81.13	620.93
Bay West	MW-23	09/28/15	97.66	637.46	---	14.85	0.00	82.81	622.61
Bay West	MW-24	04/24/13	93.55	633.35	---	12.31	0.00	81.24	621.04
Bay West	MW-24	12/02/13	93.55	633.35	---	12.66	0.00	80.89	620.69
Bay West	MW-24	03/28/14	93.55	633.35	---	Could Not Locate Well			
Bay West	MW-24	04/28/14	93.55	633.35	---	12.02	0.00	81.53	621.33
Bay West	MW-24	10/29/14	Well Abandoned						
Bay West	MW-25	04/24/13	97.55	637.35	---	15.49	0.00	82.06	621.86
Bay West	MW-25	12/02/13	97.55	637.35	---	15.33	0.00	82.22	622.02
Bay West	MW-25	03/28/14	97.55	637.35	---	15.72	0.00	81.83	621.63
Bay West	MW-25	04/28/14	97.55	637.35	---	14.73	0.00	82.82	622.62
Bay West	MW-25	10/27/14	97.55	637.35	---	15.02	0.00	82.53	622.33
Bay West	MW-25	04/20/15	97.55	637.35	---	15.83	0.00	81.72	621.52
Bay West	MW-25	09/28/15	97.55	637.35	---	14.58	0.00	82.97	622.77
Bay West	MW-26	12/02/13	97.78	637.58	---	10.04	0.00	87.74	627.54
Bay West	MW-26	03/28/14	97.78	637.58	---	Could Not Locate Well			
Bay West	MW-26	04/28/14	97.78	637.58	---	8.12	0.00	89.66	629.46
Bay West	MW-26	10/27/14	97.78	637.58	---	9.00	0.00	88.78	628.58
Bay West	MW-26	04/20/15	97.78	637.58	---	9.91	0.00	87.87	627.67
Bay West	MW-26	09/28/15	97.78	637.58	---	8.81	0.00	88.67	628.77

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
Bay West	MW-27	12/02/13	97.77	637.57	---	14.13	0.00	83.64	623.44
Bay West	MW-27	03/28/14	97.77	637.57	---	14.78	0.00	82.99	622.79
Bay West	MW-27	04/28/14	97.77	637.57	---	14.03	0.00	83.74	623.54
Bay West	MW-27	10/27/14	97.77	637.57	---	13.87	0.00	83.90	623.70
Bay West	MW-27	04/20/15	97.77	637.57	---	14.81	0.00	82.96	622.76
Bay West	MW-27	09/28/15	97.77	637.57	---	13.69	0.00	84.08	623.88
Bay West	MW-28	04/20/15	99.41	639.21	---	16.83	0.00	82.58	622.38
Bay West	MW-28	09/28/15	99.41	639.21	---	15.67	0.00	83.74	623.54
DPRA	RW-1	04/09/03	97.18	636.98	---	11.42	0.00	85.76	625.56
DPRA	RW-1	04/11/03	97.18	636.98	---	11.34	0.00	85.84	625.64
DPRA	RW-1	05/08/03	97.18	636.98	---	10.61	0.00	86.57	626.37
DPRA	RW-1	05/29/03	97.18	636.98	---	9.87	0.00	87.31	627.11
DPRA	RW-1	06/17/03	97.18	636.98	---	10.14	0.00	87.04	626.84
DPRA	RW-1	07/22/03	97.18	636.98	---	9.79	0.00	87.39	627.19
DPRA	RW-1	08/15/03	97.18	636.98	---	10.29	0.00	86.89	626.69
DPRA	RW-1	08/21/03	97.18	636.98	---	10.50	0.00	86.68	626.48
DPRA	RW-1	09/05/03	97.18	636.98	---	10.64	0.00	86.54	626.34
DPRA	RW-1	09/22/03	97.18	636.98	---	10.68	0.00	86.50	626.30
DPRA	RW-1	10/09/03	97.18	636.98	---	10.74	0.00	86.44	626.24
DPRA	RW-1	10/17/03	97.18	636.98	---	10.73	0.00	86.45	626.25
DPRA	RW-1	10/22/03	97.18	636.98	---	10.80	0.00	86.38	626.18
DPRA	RW-1	10/28/03	97.18	636.98	---	10.92	0.00	86.26	626.06
DPRA	RW-1	11/05/03	97.18	636.98	---	10.86	0.00	86.32	626.12
DPRA	RW-1	11/11/03	97.18	636.98	---	10.77	0.00	86.41	626.21
DPRA	RW-1	11/28/03	97.18	636.98	---	10.67	0.00	86.51	626.31
DPRA	RW-1	12/05/03	97.18	636.98	---	10.83	0.00	86.35	626.15
DPRA	RW-1	12/10/03	97.18	636.98	---	10.91	0.00	86.27	626.07
DPRA	RW-1	12/17/03	97.18	636.98	---	10.96	0.00	86.22	626.02
DPRA	RW-1	02/23/04	97.18	636.98	---	11.50	0.00	85.68	625.48
DPRA	RW-1	02/23/04	97.18	636.98	---	11.50	0.00	85.68	625.48
DPRA	RW-1	03/16/04	97.18	636.98	---	11.21	0.00	85.97	625.77
DPRA	RW-1	03/25/04	97.18	636.98	---	10.76	0.00	86.42	626.22
DPRA	RW-1	04/14/04	97.18	636.98	---	10.02	0.00	87.16	626.96
DPRA	RW-1	05/10/04	97.18	636.98	---	10.02	0.00	87.16	626.96
DPRA	RW-1	06/08/04	97.18	636.98	---	9.51	0.00	87.67	627.47
DPRA	RW-1	06/29/04	97.18	636.98	---	9.64	0.00	87.54	627.34
DPRA	RW-1	07/15/04	97.18	636.98	---	10.20	0.00	86.98	626.78
DPRA	RW-1	07/21/04	97.18	636.98	---	10.04	0.00	87.14	626.94
DPRA	RW-1	08/09/04	97.18	636.98	---	10.37	0.00	86.81	626.61
DPRA	RW-1	08/16/04	97.18	636.98	---	10.20	0.00	86.98	626.78
DPRA	RW-1	08/31/04	97.18	636.98	---	10.41	0.00	86.77	626.57
DPRA	RW-1	09/27/04	97.18	636.98	---	10.02	0.00	87.16	626.96
DPRA	RW-1	10/26/04	97.18	636.98	---	9.81	0.00	87.37	627.17
DPRA	RW-1	11/23/04	97.18	636.98	---	10.04	0.00	87.14	626.94
DPRA	RW-1	12/07/04	97.18	636.98	---	10.23	0.00	86.95	626.75
DPRA	RW-1	03/15/05	97.18	636.98	---	10.81	0.00	86.37	626.17
DPRA	RW-1	04/05/05	97.18	636.98	---	9.43	0.00	87.75	627.55
DPRA	RW-1	04/13/05	97.18	636.98	---	9.53	0.00	87.65	627.45
DPRA	RW-1	05/06/05	97.18	636.98	---	9.94	0.00	87.24	627.04
DPRA	RW-1	06/01/05	97.18	636.98	---	9.40	0.00	87.78	627.58
DPRA	RW-1	06/29/05	97.18	636.98	---	9.45	0.00	87.73	627.53
DPRA	RW-1	09/15/05	97.18	636.98	---	10.59	0.00	86.59	626.39
DPRA	RW-1	10/04/05	97.18	636.98	---	10.44	0.00	86.74	626.54
DPRA	RW-1	11/03/05	97.18	636.98	---	10.14	0.00	87.04	626.84
DPRA	RW-1	12/20/05	97.18	636.98	---	10.20	0.00	86.98	626.78
DPRA	RW-1	02/01/06	97.18	636.98	---	10.21	0.00	86.97	626.77
DPRA	RW-1	03/07/06	97.18	636.98	---	10.83	0.00	86.35	626.15
DPRA	RW-1	04/10/06	97.18	636.98	---	9.51	0.00	87.67	627.47
DPRA	RW-1	05/03/06	97.18	636.98	---	9.91	0.00	87.27	627.07
DPRA	RW-1	07/05/06	97.18	636.98	---	10.57	0.00	86.61	626.41
DPRA	RW-1	08/17/06	97.18	636.98	---	10.63	0.00	86.55	626.35
DPRA	RW-1	09/28/06	97.18	636.98	---	10.83	0.00	86.35	626.15
DPRA	RW-1	11/15/06	97.44	637.24	---	10.74	0.00	86.70	626.50
DPRA	RW-1	01/12/07	97.44	637.24	---	10.75	0.00	86.69	626.49
DPRA	RW-1	01/29/07	97.44	637.24	---	10.99	0.00	86.45	626.25
DPRA	RW-1	02/12/07	97.44	637.24	---	11.15	0.00	86.29	626.09
DPRA	RW-1	03/15/07	97.44	637.24	---	11.25	0.00	86.19	625.99
DPRA	RW-1	05/30/07	97.44	637.24	---	9.39	0.00	88.05	627.85
DPRA	RW-1	10/02/07	97.44	637.24	---	10.09	0.00	87.35	627.15
DPRA	RW-1	10/09/07	97.44	637.24	---	8.38	0.00	89.06	628.86
Bay West	RW-1	02/27/08	97.44	637.24	---	11.32	0.00	86.12	625.92
Bay West	RW-1	09/23/08	97.44	637.24	---	10.26	0.00	87.18	626.98
Bay West	RW-1	02/15/10	97.44	637.24	---	11.12	0.00	86.32	626.12
Bay West	RW-1*	04/26/10	97.33	637.13	---	10.48	0.00	86.85	626.65
Bay West	RW-1	12/01/10	97.33	637.13	---	9.74	0.00	87.59	627.39
Bay West	RW-1	04/25/11	97.33	637.13	---	9.80	0.00	87.53	627.33
Bay West	RW-1	10/11/11	97.33	637.13	---	10.81	0.00	86.52	626.32
Bay West	RW-1	04/02/12	97.33	637.13	---	11.14	0.00	86.19	625.99
Bay West	RW-1	09/11/12	97.33	637.13	---	10.57	0.00	86.76	626.56
Bay West	RW-1	04/08/13	97.33	637.13	---	11.19	0.00	86.14	625.94
Bay West	RW-1	12/02/13	97.38	637.18	---	10.80	0.00	86.58	626.38
Bay West	RW-1	03/28/14	97.38	637.18	---	11.29	0.00	86.09	625.89
Bay West	RW-1	04/28/14	97.38	637.18	---	7.91	0.00	89.47	629.27
Bay West	RW-1	10/27/14	97.38	637.18	---	10.62	0.00	86.76	626.56
Bay West	RW-1	04/20/15	97.38	637.18	---	11.04	0.00	86.34	626.14
Bay West	RW-1	09/28/15	97.38	637.18	---	9.21	0.00	88.17	627.97

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
DPRA	RW-2	04/09/03	96.25	636.05	---	10.28	0.00	85.97	625.77
DPRA	RW-2	04/11/03	96.25	636.05	---	10.23	0.00	86.02	625.82
DPRA	RW-2	05/08/03	96.25	636.05	---	9.57	0.00	86.68	626.48
DPRA	RW-2	05/29/03	96.25	636.05	---	8.79	0.00	87.46	627.26
DPRA	RW-2	06/17/03	96.25	636.05	---	9.05	0.00	87.20	627.00
DPRA	RW-2	07/22/03	96.25	636.05	---	8.74	0.00	87.51	627.31
DPRA	RW-2	08/15/03	96.25	636.05	---	9.20	0.00	87.05	626.85
DPRA	RW-2	08/21/03	96.25	636.05	---	9.41	0.00	86.84	626.64
DPRA	RW-2	09/05/03	96.25	636.05	---	9.57	0.00	86.68	626.48
DPRA	RW-2	09/22/03	96.25	636.05	---	9.44	0.00	86.81	626.61
DPRA	RW-2	10/09/03	96.25	636.05	---	9.65	0.00	86.60	626.40
DPRA	RW-2	10/17/03	96.25	636.05	---	9.70	0.00	86.55	626.35
DPRA	RW-2	10/22/03	96.25	636.05	---	9.74	0.00	86.51	626.31
DPRA	RW-2	10/28/03	96.25	636.05	---	9.78	0.00	86.47	626.27
DPRA	RW-2	11/05/03	96.25	636.05	---	9.71	0.00	86.54	626.34
DPRA	RW-2	11/11/03	96.25	636.05	---	9.58	0.00	86.67	626.47
DPRA	RW-2	11/28/03	96.25	636.05	---	9.53	0.00	86.72	626.52
DPRA	RW-2	12/05/03	96.25	636.05	---	9.71	0.00	86.54	626.34
DPRA	RW-2	12/10/03	96.25	636.05	---	9.72	0.00	86.53	626.33
DPRA	RW-2	12/17/03	96.25	636.05	---	9.83	0.00	86.42	626.22
DPRA	RW-2	02/23/04	96.25	636.05	---	10.31	0.00	85.94	625.74
DPRA	RW-2	03/16/04	96.25	636.05	---	10.02	0.00	86.23	626.03
DPRA	RW-2	03/25/04	96.25	636.05	---	8.77	0.00	87.48	627.28
DPRA	RW-2	04/14/04	96.25	636.05	---	9.09	0.00	87.16	626.96
DPRA	RW-2	05/10/04	96.25	636.05	---	9.05	0.00	87.20	627.00
DPRA	RW-2	06/01/04	96.25	636.05	---	8.49	0.00	87.76	627.56
DPRA	RW-2	06/29/04	96.25	636.05	---	9.64	0.00	86.61	626.41
DPRA	RW-2	07/15/04	96.25	636.05	---	9.00	0.00	87.25	627.05
DPRA	RW-2	07/21/04	96.25	636.05	---	8.93	0.00	87.32	627.12
DPRA	RW-2	08/09/04	96.25	636.05	---	9.28	0.00	86.97	626.77
DPRA	RW-2	08/16/04	96.25	636.05	---	9.04	0.00	87.21	627.01
DPRA	RW-2	08/31/04	96.25	636.05	---	9.35	0.00	86.90	626.70
DPRA	RW-2	09/27/04	96.25	636.05	---	8.63	0.00	87.62	627.42
DPRA	RW-2	10/26/04	96.25	636.05	---	8.56	0.00	87.69	627.49
DPRA	RW-2	11/23/04	96.25	636.05	---	8.97	0.00	87.28	627.08
DPRA	RW-2	12/07/04	96.25	636.05	---	9.10	0.00	87.15	626.95
DPRA	RW-2	03/15/05	96.25	636.05	---	9.70	0.00	86.55	626.35
DPRA	RW-2	04/05/05	96.25	636.05	---	8.74	0.00	87.51	627.31
DPRA	RW-2	04/13/05	96.25	636.05	---	8.64	0.00	87.61	627.41
DPRA	RW-2	05/06/05	96.25	636.05	---	8.89	0.00	87.36	627.16
DPRA	RW-2	06/01/05	96.25	636.05	---	8.55	0.00	87.70	627.50
DPRA	RW-2	06/29/05	96.25	636.05	---	8.61	0.00	87.64	627.44
DPRA	RW-2	09/15/05	96.25	636.05	---	9.04	0.00	87.21	627.01
DPRA	RW-2	10/04/05	96.25	636.05	---	9.07	0.00	87.18	626.98
DPRA	RW-2	11/03/05	96.25	636.05	---	8.54	0.00	87.71	627.51
DPRA	RW-2	12/20/05	96.25	636.05	---	8.68	0.00	87.57	627.37
DPRA	RW-2	02/01/06	96.25	636.05	---	9.14	0.00	87.11	626.91
DPRA	RW-2	03/07/06	96.25	636.05	---	9.64	0.00	86.61	626.41
DPRA	RW-2	04/10/06	96.25	636.05	---	8.53	0.00	87.72	627.52
DPRA	RW-2	05/03/06	96.25	636.05	---	8.86	0.00	87.39	627.19
DPRA	RW-2	07/05/06	96.25	636.05	---	9.14	0.00	87.11	626.91
DPRA	RW-2	08/17/06	96.25	636.05	---	9.54	0.00	86.71	626.51
DPRA	RW-2	09/28/06	96.25	636.05	---	9.51	0.00	86.74	626.54
DPRA	RW-2	11/15/06	96.57	636.37	---	9.48	0.00	87.09	626.89
DPRA	RW-2	01/12/07	96.57	636.37	---	9.67	0.00	86.9	626.70
DPRA	RW-2	01/29/07	96.57	636.37	---	9.85	0.00	86.72	626.52
DPRA	RW-2	02/12/07	96.57	636.37	---	10.03	0.00	86.54	626.34
DPRA	RW-2	03/15/07	96.57	636.37	---	10.13	0.00	86.44	626.24
DPRA	RW-2	05/30/07	96.57	636.37	---	8.76	0.00	87.81	627.61
DPRA	RW-2	05/31/07	96.57	636.37	---	9.31	0.00	87.26	627.06
DPRA	RW-2	10/09/07	96.57	636.37	---	8.38	0.00	88.19	627.99
Bay West	RW-2	02/27/08	96.57	636.37	---	10.12	0.00	86.45	626.25
Bay West	RW-2	09/23/08	96.57	636.37	---	9.04	0.00	87.53	627.33
Bay West	RW-2	02/15/10	96.57	636.37	---	Obstruction	0.00	---	---
Bay West	RW-2	03/03/10	96.57	636.37	---	Obstruction	0.00	---	---
Bay West	RW-2	03/29/10	96.57	636.37	---	Obstruction	0.00	---	---
Bay West	RW-2*	04/26/10	96.48	636.28	---	9.42	0.00	87.06	626.86
Bay West	RW-2	12/03/10	96.48	636.28	---	8.69	0.00	87.79	627.59
Bay West	RW-2	04/25/11	96.48	636.28	---	8.74	0.00	87.74	627.54
Bay West	RW-2	10/11/11	96.48	636.28	---	9.68	0.00	86.80	626.60
Bay West	RW-2	04/02/12	96.48	636.28	---	10.05	0.00	86.43	626.23
Bay West	RW-2	09/11/12	96.48	636.28	---	9.44	0.00	87.04	626.84
Bay West	RW-2	04/08/13	96.48	636.28	---	10.31	0.00	86.17	625.97
Bay West	RW-2	12/02/13	96.47	636.27	---	9.59	0.00	86.88	626.68
Bay West	RW-2	03/28/14	96.47	636.27	---	10.17	0.00	86.30	626.10
Bay West	RW-2	04/28/14	96.47	636.27	---	well frozen at depth of 2.0 ft BTOC			
Bay West	RW-2	10/27/14	96.47	636.27	---	9.34	0.00	87.13	626.93
Bay West	RW-2	04/20/15	96.57	636.37	---	10.03	0.00	86.54	626.34
Bay West	RW-2	09/28/15	96.57	636.37	---	8.23	0.00	88.34	628.14

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
DPRA	RW-3	04/09/03	96.83	636.63	---	0.00	0.00	---	---
DPRA	RW-3	04/11/03	96.83	636.63	---	17.74	0.00	---	---
DPRA	RW-3	05/08/03	96.83	636.63	---	9.06	0.00	87.77	627.57
DPRA	RW-3	05/29/03	96.83	636.63	8.19	10.91	2.72	87.91	627.70
DPRA	RW-3	06/17/03	96.83	636.63	8.75	10.06	1.31	87.73	627.53
DPRA	RW-3	07/22/03	96.83	636.63	9.13	9.39	0.26	87.63	627.43
DPRA	RW-3	08/15/03	96.83	636.63	10.68	10.69	0.01	86.15	625.95
DPRA	RW-3	08/21/03	96.83	636.63	9.68	9.69	0.01	87.15	626.95
DPRA	RW-3	09/05/03	96.83	636.63	---	9.92	0.00	86.91	626.71
DPRA	RW-3	09/22/03	96.83	636.63	---	9.79	0.00	87.04	626.84
DPRA	RW-3	10/09/03	96.83	636.63	---	10.03	0.00	86.80	626.60
DPRA	RW-3	10/17/03	96.83	636.63	10.02	10.03	0.01	86.81	626.61
DPRA	RW-3	10/22/03	96.83	636.63	10.05	10.06	0.01	86.78	626.58
DPRA	RW-3	10/28/03	96.83	636.63	---	9.43	0.00	87.40	627.20
DPRA	RW-3	11/05/03	96.83	636.63	---	9.48	0.00	87.35	627.15
DPRA	RW-3	11/11/03	96.83	636.63	---	9.74	0.00	87.09	626.89
DPRA	RW-3	11/28/03	96.83	636.63	---	9.71	0.00	87.12	626.92
DPRA	RW-3	12/05/03	96.83	636.63	---	10.01	0.00	86.82	626.62
DPRA	RW-3	12/10/03	96.83	636.63	---	10.07	0.00	86.76	626.56
DPRA	RW-3	12/17/03	96.83	636.63	---	10.15	0.00	86.68	626.48
DPRA	RW-3	02/23/04	96.83	636.63	10.61	10.79	0.18	86.17	625.97
DPRA	RW-3	02/23/04	96.83	636.63	10.52	10.81	0.29	86.23	626.03
DPRA	RW-3	02/23/04	96.83	636.63	10.78	11.53	0.75	85.85	625.65
DPRA	RW-3	02/24/04	96.83	636.63	10.61	10.90	0.29	86.14	625.94
DPRA	RW-3	02/24/04	96.83	636.63	10.78	10.95	0.17	86.00	625.80
DPRA	RW-3	02/24/04	96.83	636.63	10.82	10.96	0.14	85.97	625.77
DPRA	RW-3	02/24/04	96.83	636.63	10.80	10.93	0.13	85.99	625.79
DPRA	RW-3	02/24/04	96.83	636.63	10.82	10.97	0.15	85.97	625.77
DPRA	RW-3	02/25/04	96.83	636.63	10.62	10.79	0.17	86.16	625.96
DPRA	RW-3	02/25/04	96.83	636.63	10.58	10.73	0.15	86.21	626.01
DPRA	RW-3	02/25/04	96.83	636.63	10.51	10.71	0.20	86.27	626.07
DPRA	RW-3	02/25/04	96.83	636.63	10.57	10.73	0.16	86.22	626.02
DPRA	RW-3	02/25/04	96.83	636.63	10.53	10.72	0.19	86.25	626.05
DPRA	RW-3	03/16/04	96.83	636.63	10.51	10.52	0.01	86.32	626.12
DPRA	RW-3	03/25/04	96.83	636.63	8.88	8.96	0.08	87.93	627.73
DPRA	RW-3	04/05/04	96.83	636.63	9.23	9.29	0.06	87.58	627.38
DPRA	RW-3	04/05/04	96.83	636.63	9.27	9.31	0.04	87.55	627.35
DPRA	RW-3	04/05/04	96.83	636.63	9.26	9.30	0.04	87.56	627.36
DPRA	RW-3	04/14/04	96.83	636.63	9.31	9.34	0.03	87.51	627.31
DPRA	RW-3	05/10/04	96.83	636.63	8.65	8.69	0.04	88.17	627.97
DPRA	RW-3	6/8/2004	96.83	636.63	---	8.31	0.00	88.52	628.32
DPRA	RW-3	06/29/04	96.83	636.63	9.10	9.19	0.09	87.71	627.50
DPRA	RW-3	07/15/04	96.83	636.63	---	9.04	0.00	87.79	627.59
DPRA	RW-3	07/21/04	96.83	636.63	---	9.08	0.00	87.75	627.55
DPRA	RW-3	08/09/04	96.83	636.63	---	9.20	0.00	87.63	627.43
DPRA	RW-3	08/16/04	96.83	636.63	---	9.00	0.00	87.83	627.63
DPRA	RW-3	08/31/04	96.83	636.63	---	9.35	0.00	87.48	627.28
DPRA	RW-3	09/27/04	96.83	636.63	8.28	9.20	0.92	88.30	628.10
DPRA	RW-3	10/26/04	96.83	636.63	9.14	9.39	0.25	87.62	627.42
DPRA	RW-3	11/23/04	96.83	636.63	9.71	9.73	0.02	87.11	626.91
DPRA	RW-3	12/07/04	96.83	636.63	9.79	9.80	0.01	87.04	626.84
DPRA	RW-3	03/15/05	96.83	636.63	10.39	10.40	0.01	86.44	626.24
DPRA	RW-3	04/05/05	96.83	636.63	---	9.95	0.00	86.88	626.68
DPRA	RW-3	04/13/05	96.83	636.63	---	9.35	0.00	87.48	627.28
DPRA	RW-3	05/06/05	96.83	636.63	---	9.15	0.00	87.68	627.48
DPRA	RW-3	06/01/05	96.83	636.63	---	9.15	0.00	87.68	627.48
DPRA	RW-3	06/29/05	96.83	636.63	---	9.25	0.00	87.58	627.38
DPRA	RW-3	09/15/05	96.83	636.63	9.90	9.91	0.01	86.93	626.73
DPRA	RW-3	10/04/05	96.83	636.63	9.90	9.92	0.02	86.92	626.72
DPRA	RW-3	11/03/05	96.83	636.63	9.84	10.04	0.20	86.94	626.74
DPRA	RW-3	12/20/05	96.83	636.63	9.23	9.36	0.13	87.56	627.36
DPRA	RW-3	02/01/06	96.83	636.63	9.20	9.21	0.01	87.63	627.43
DPRA	RW-3	03/07/06	96.83	636.63	9.87	9.88	0.01	86.96	626.76
DPRA	RW-3	04/10/06	96.83	636.63	---	8.50	0.00	88.33	628.13
DPRA	RW-3	05/03/06	96.83	636.63	---	9.23	0.00	87.60	627.40
DPRA	RW-3	07/05/06	96.83	636.63	---	10.10	0.00	86.73	626.53
DPRA	RW-3	08/17/06	96.83	636.63	11.04	11.72	0.68	85.61	625.41
DPRA	RW-3	09/28/06	96.83	636.63	10.50	10.88	0.38	86.23	626.03
DPRA	RW-3	11/15/06	96.83	636.63	---	10.14	0.00	86.69	626.49
DPRA	RW-3	01/12/07	96.83	636.63	10.35	11.20	0.85	86.25	626.05
DPRA	RW-3	01/29/07	Well plug frozen						---
DPRA	RW-3	02/12/07	Well plug frozen						---
DPRA	RW-3	03/15/07	96.83	636.63	10.73	11.13	0.40	85.99	625.79
DPRA	RW-3	04/16/07	96.83	636.63	---	9.69	0.00	87.14	626.94
DPRA	RW-3	05/30/07	96.83	636.63	---	9.22	0.00	87.61	627.41
DPRA	RW-3	08/29/07	96.83	636.63	9.39	9.90	0.51	87.30	627.10
DPRA	RW-3	10/02/07	96.83	636.63	9.06	9.48	0.42	87.66	627.46
DPRA	RW-3	10/09/07	96.83	636.63	8.62	8.76	0.14	88.17	627.97
DPRA	RW-3	11/02/07	96.83	636.63	---	8.45	0.00	88.38	628.18
DPRA	RW-3	11/16/07	96.83	636.63	Well dry	---	---	---	---
DPRA	RW-3	11/30/07	96.83	636.63	Well plug frozen	---	---	---	---
DPRA	RW-3	12/17/07	96.83	636.63	Well dry	---	---	---	---

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
Bay West	RW-3	02/27/08	96.83	636.63	Obstruction	---	---	---	---
Bay West	RW-3	09/25/08	96.83	636.63	11.05	11.15	0.10	85.75	625.55
Bay West	RW-3	02/15/10	96.83	636.63	Obstruction	---	---	---	---
Bay West	RW-3	03/03/10	96.83	636.63	Obstruction	---	---	---	---
Bay West	RW-3	03/29/10	96.83	636.63	Obstruction	---	---	---	---
Bay West	RW-3*	04/26/10	96.82	636.62	---	8.68	0.00	88.14	627.94
Bay West	RW-3	05/06/10	96.82	636.62	---	9.77	0.00	87.05	626.85
Bay West	RW-3	05/14/10	96.82	636.62	---	8.66	0.00	88.16	627.96
Bay West	RW-3	05/28/10	96.82	636.62	---	9.03	0.00	87.79	627.59
Bay West	RW-3	06/10/10	96.82	636.62	---	8.45	0.00	88.37	628.17
Bay West	RW-3	12/03/10	96.82	636.62	---	8.75	0.00	88.07	627.87
Bay West	RW-3	04/25/11	96.82	636.62	---	8.36	0.00	88.46	628.26
Bay West	RW-3	10/11/11	96.82	636.62	---	9.61	0.00	87.21	627.01
Bay West	RW-3	04/02/12	96.82	636.62	---	7.59	0.00	89.23	629.03
Bay West	RW-3	09/11/12	96.82	636.62	---	8.99	0.00	87.83	627.63
Bay West	RW-3	04/08/13	96.82	636.62	---	9.37	0.00	87.45	627.25
Bay West	RW-3	12/02/13	96.82	636.62	---	9.26	0.00	87.56	627.36
Bay West	RW-3	03/28/14	96.82	636.62	---	10.35	0.00	86.47	626.27
Bay West	RW-3	04/28/14	96.82	636.62	---	3.60	0.00	93.22	633.02
Bay West	RW-3	10/27/14	96.82	636.62	---	8.35	0.00	88.47	628.27
Bay West	RW-3	04/20/15	96.82	636.62	---	8.60	0.00	88.22	628.02
Bay West	RW-3	09/28/15	96.82	636.62	---	6.60	0.00	90.22	630.02
DPRA	RW-4	04/09/03	97.17	636.97	11.48	11.67	0.19	85.64	625.44
DPRA	RW-4	04/11/03	97.17	636.97	11.44	11.94	0.50	85.60	625.39
DPRA	RW-4	05/08/03	97.17	636.97	10.69	11.63	0.94	86.23	626.03
DPRA	RW-4	05/29/03	97.17	636.97	9.68	11.14	1.46	87.10	626.89
DPRA	RW-4	06/17/03	97.17	636.97	10.10	11.38	1.28	86.72	626.52
DPRA	RW-4	07/22/03	97.17	636.97	9.54	11.46	1.92	87.11	626.91
DPRA	RW-4	08/15/03	97.17	636.97	10.20	11.60	1.40	86.59	626.39
DPRA	RW-4	08/21/03	97.17	636.97	10.36	11.40	1.04	86.53	626.33
DPRA	RW-4	09/05/03	97.17	636.97	10.66	11.60	0.94	86.26	626.06
DPRA	RW-4	09/22/03	97.17	636.97	10.51	11.70	1.19	86.34	626.14
DPRA	RW-4	10/09/03	97.17	636.97	10.76	11.72	0.96	86.15	625.95
DPRA	RW-4	10/17/03	97.17	636.97	10.84	11.68	0.84	86.10	625.90
DPRA	RW-4	10/22/03	97.17	636.97	11.02	11.40	0.38	86.05	625.85
DPRA	RW-4	10/28/03	97.17	636.97	10.96	11.51	0.55	86.06	625.86
DPRA	RW-4	11/05/03	97.17	636.97	10.92	11.43	0.51	86.11	625.91
DPRA	RW-4	11/11/03	97.17	636.97	10.82	11.13	0.31	86.27	626.07
DPRA	RW-4	11/28/03	97.17	636.97	10.81	11.50	0.69	86.17	625.97
DPRA	RW-4	12/05/03	97.17	636.97	10.96	11.25	0.29	86.13	625.93
DPRA	RW-4	12/10/03	97.17	636.97	11.03	11.20	0.17	86.09	625.89
DPRA	RW-4	12/17/03	97.17	636.97	11.11	11.35	0.24	86.00	625.79
DPRA	RW-4	02/23/04	97.17	636.97	11.48	11.92	0.44	85.57	625.37
DPRA	RW-4	02/23/04	97.17	636.97	11.58	11.91	0.33	85.50	625.30
DPRA	RW-4	02/23/04	97.17	636.97	11.61	11.93	0.32	85.47	625.27
DPRA	RW-4	02/24/04	97.17	636.97	11.54	11.86	0.32	85.54	625.34
DPRA	RW-4	02/24/04	97.17	636.97	11.46	11.75	0.29	85.63	625.43
DPRA	RW-4	02/24/04	97.17	636.97	11.47	11.76	0.29	85.62	625.42
DPRA	RW-4	02/24/04	97.17	636.97	11.49	11.83	0.34	85.59	625.39
DPRA	RW-4	02/24/04	97.17	636.97	11.51	11.84	0.33	85.57	625.37
DPRA	RW-4	02/25/04	97.17	636.97	11.51	11.93	0.42	85.55	625.35
DPRA	RW-4	02/25/04	97.17	636.97	11.53	11.96	0.43	85.52	625.32
DPRA	RW-4	02/25/04	97.17	636.97	11.57	11.99	0.42	85.49	625.29
DPRA	RW-4	02/25/04	97.17	636.97	11.54	11.96	0.42	85.52	625.32
DPRA	RW-4	02/25/04	97.17	636.97	11.53	11.93	0.40	85.53	625.33
DPRA	RW-4	03/16/04	97.17	636.97	11.47	11.50	0.03	85.69	625.49
DPRA	RW-4	03/25/04	97.17	636.97	10.58	11.21	0.63	86.42	626.22
DPRA	RW-4	04/05/04	97.17	636.97	10.10	11.40	1.30	86.72	626.52
DPRA	RW-4	04/05/04	97.17	636.97	10.09	11.37	1.28	86.73	626.53
DPRA	RW-4	04/05/04	97.17	636.97	10.08	11.35	1.27	86.75	626.55
DPRA	RW-4	04/14/04	97.17	636.97	10.03	11.60	1.57	86.72	626.52
DPRA	RW-4	05/10/04	97.17	636.97	9.85	10.25	0.40	87.21	627.01
DPRA	RW-4	06/08/04	97.17	636.97	8.92	11.42	2.50	87.58	627.37
DPRA	RW-4	06/29/04	97.17	636.97	8.70	11.21	2.51	87.79	627.59
DPRA	RW-4	07/10/04	97.17	636.97	10.07	11.40	1.33	86.74	626.54
DPRA	RW-4	07/15/04	97.17	636.97	8.23	9.23	1.00	88.67	628.47
DPRA	RW-4	07/21/04	97.17	636.97	9.82	11.36	1.54	86.93	626.73
DPRA	RW-4	07/27/04	97.17	636.97	10.00	11.30	1.30	86.82	626.62
DPRA	RW-4	08/09/04	97.17	636.97	10.04	11.24	1.20	86.81	626.61
DPRA	RW-4	08/16/04	97.17	636.97	9.85	11.25	1.40	86.94	626.74
DPRA	RW-4	08/31/04	97.17	636.97	10.18	11.18	1.00	86.72	626.52
DPRA	RW-4	09/27/04	97.17	636.97	8.84	11.45	2.61	87.63	627.42
DPRA	RW-4	10/26/04	97.17	636.97	8.82	11.06	2.24	87.75	627.54
DPRA	RW-4	11/23/04	97.17	636.97	9.49	11.43	1.94	87.16	626.96
DPRA	RW-4	12/07/04	97.17	636.97	9.73	11.33	1.60	87.01	626.81
DPRA	RW-4	03/15/05	97.17	636.97	10.43	11.28	0.85	86.51	626.31
DPRA	RW-4	04/05/05	97.17	636.97	8.74	11.38	2.64	87.72	627.52
DPRA	RW-4	04/13/05	97.17	636.97	8.64	11.05	2.41	87.88	627.68
DPRA	RW-4	05/06/05	97.17	636.97	9.22	11.30	2.08	87.39	627.19
DPRA	RW-4	06/01/05	97.17	636.97	8.60	11.30	2.70	87.84	627.64
DPRA	RW-4	06/29/05	97.17	636.97	8.65	11.30	2.65	87.80	627.60
DPRA	RW-4	09/15/05	97.17	636.97	10.04	11.42	1.38	86.76	626.56
DPRA	RW-4	10/04/05	97.17	636.97	9.58	11.14	1.56	87.17	626.97
DPRA	RW-4	11/03/05	97.17	636.97	9.41	11.40	1.99	87.22	627.02
DPRA	RW-4	12/20/05	97.17	636.97	9.45	11.35	1.90	87.21	627.01
DPRA	RW-4	02/01/06	97.17	636.97	9.41	11.35	1.94	87.24	627.04
DPRA	RW-4	03/07/06	97.17	636.97	10.22	11.20	0.98	86.69	626.48
DPRA	RW-4	04/10/06	97.17	636.97	8.64	11.45	2.81	87.77	627.57
DPRA	RW-4	05/03/06	97.17	636.97	9.00	11.44	2.44	87.51	627.31
DPRA	RW-4	07/05/06	97.17	636.97	9.90	11.30	1.40	86.89	626.69
DPRA	RW-4	08/17/06	97.17	636.97	9.96	11.40	1.44	86.82	626.62
DPRA	RW-4	09/28/06	97.17	636.97	10.26	11.20	0.94	86.66	626.46
DPRA	RW-4	11/15/06	97.17	636.97	10.50	11.42	0.92	86.42	626.22
DPRA	RW-4	01/12/07	97.17	636.97	10.38	11.40	1.02	86.51	626.31
DPRA	RW-4	01/29/07	97.17	636.97	10.71	11.40	0.69	86.27	626.07
DPRA	RW-4	02/12/07	97.17	636.97	10.92	11.30	0.38	86.15	625.95
DPRA	RW-4	03/15/07	97.17	636.97	10.85	11.00	0.15	86.28	626.08

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
DPRA	RW-4	04/16/07	97.17	636.97	9.68	10.68	1.00	87.22	627.02
DPRA	RW-4	05/30/07	97.17	636.97	10.88	12.88	2.00	85.75	625.55
DPRA	RW-4	08/29/07	97.17	636.97	10.37	11.20	0.83	86.58	626.37
DPRA	RW-4	10/02/07	97.17	636.97	9.45	11.27	1.82	87.23	627.03
DPRA	RW-4	10/09/07	97.17	636.97	8.10	8.40	0.30	88.99	628.79
DPRA	RW-4	11/01/07	97.17	636.97	---	8.58	---	88.59	628.39
DPRA	RW-4	11/16/07	97.17	636.97	---	9.40	---	87.77	627.57
DPRA	RW-4	11/30/07	97.17	636.97	---	11.41	---	85.76	625.56
DPRA	RW-4	12/17/07	97.17	636.97	---	10.02	---	87.15	626.95
Bay West	RW-4	02/27/08	97.17	636.97	10.98	11.34	0.36	86.09	625.89
Bay West	RW-4	09/23/08	97.17	636.97	9.62	11.34	1.72	87.09	626.88
Bay West	RW-4	02/15/10	97.17	636.97	10.53	11.28	0.75	86.44	626.24
Bay West	RW-4	03/03/10	97.17	636.97	10.63	11.24	0.61	86.38	626.17
Bay West	RW-4	03/29/10	97.17	636.97	9.52	11.22	1.70	87.19	626.99
Bay West	RW-4*	04/26/10	97.17	636.97	9.96	11.20	1.24	86.88	626.67
Bay West	RW-4	05/06/10	97.17	636.97	10.19	11.24	1.05	86.70	626.50
Bay West	RW-4	05/14/10	97.17	636.97	9.53	11.20	1.67	87.19	626.99
Bay West	RW-4	05/28/10	97.17	636.97	9.57	11.25	1.68	87.15	626.95
Bay West	RW-4	06/10/10	97.17	636.97	9.55	11.23	1.68	87.17	626.97
Bay West	RW-4	12/01/10	97.17	636.97	8.83	11.26	2.43	87.68	627.48
Bay West	RW-4	04/25/11	97.17	636.97	8.82	10.92	2.10	87.78	627.58
Bay West	RW-4	10/11/11	97.17	636.97	10.22	10.75	0.53	86.81	626.61
Bay West	RW-4	04/02/12	97.17	636.97	10.66	10.67	0.01	86.51	626.31
Bay West	RW-4	09/11/12	97.17	636.97	9.63	10.99	1.36	87.17	626.97
Bay West	RW-4	04/08/13	97.17	636.97	10.90	10.96	0.06	86.25	626.05
Bay West	RW-4	12/02/13	97.17	636.97	10.29	10.42	0.13	86.84	626.64
Bay West	RW-4	03/28/14	97.17	636.97	Could Not Locate Well				
Bay West	RW-4	04/28/14	97.17	636.97	8.12	9.29	1.17	88.73	628.53
Bay West	RW-4	10/27/14	97.17	636.97	10.11	10.47	0.36	86.96	626.76
Bay West	RW-4	04/20/15	97.17	636.97	10.71	10.77	0.06	86.44	626.24
Bay West	RW-4	09/28/15	97.17	636.97	8.70	8.74	0.04	87.33	628.26
DPRA	RW-5	12/07/04	100.72	640.52	---	11.47	0.00	89.25	629.05
DPRA	RW-5	03/15/05	100.72	640.52	---	14.32	0.00	86.40	626.20
DPRA	RW-5	04/05/05	100.72	640.52	---	12.06	0.00	88.66	628.46
DPRA	RW-5	04/13/05	100.72	640.52	---	12.02	0.00	88.70	628.50
DPRA	RW-5	05/06/05	100.72	640.52	---	12.16	0.00	88.56	628.36
DPRA	RW-5	06/01/05	100.72	640.52	---	11.64	0.00	89.08	628.88
DPRA	RW-5	06/29/05	100.72	640.52	---	11.44	0.00	89.28	629.08
DPRA	RW-5	09/15/05	100.72	640.52	---	12.20	0.00	88.52	628.32
DPRA	RW-5	10/04/05	100.72	640.52	---	11.66	0.00	89.06	628.86
DPRA	RW-5	11/03/05	100.72	640.52	---	11.70	0.00	89.02	628.82
DPRA	RW-5	12/03/05	100.72	640.52	---	11.90	0.00	88.82	628.62
DPRA	RW-5	02/01/06	100.72	640.52	---	12.80	0.00	87.92	627.72
DPRA	RW-5	03/07/06	100.72	640.52	---	14.21	0.00	86.51	626.31
DPRA	RW-5	04/10/06	100.72	640.52	---	11.82	0.00	88.90	628.70
DPRA	RW-5	05/03/06	100.72	640.52	---	12.00	0.00	88.72	628.52
DPRA	RW-5	07/05/06	100.72	640.52	---	12.05	0.00	88.67	628.47
DPRA	RW-5	08/17/06	100.72	640.52	---	11.88	0.00	88.84	628.64
DPRA	RW-5	09/28/06	100.72	640.52	---	11.98	0.00	88.74	628.54
DPRA	RW-5	11/15/06	100.74	640.54	---	12.45	0.00	88.27	628.09
DPRA	RW-5	01/12/07	100.74	640.54	---	13.20	0.00	87.52	627.34
DPRA	RW-5	01/29/07	100.74	640.54	---	14.31	0.00	86.41	626.23
DPRA	RW-5	02/12/07	100.74	640.54	---	14.60	0.00	86.12	625.94
DPRA	RW-5	03/15/07	100.74	640.54	---	12.49	0.00	88.23	628.05
DPRA	RW-5	05/30/07	100.74	640.54	---	11.79	0.00	88.93	628.75
DPRA	RW-5	08/29/07	100.74	640.54	---	12.13	0.00	88.59	628.41
DPRA	RW-5	10/02/07	100.74	640.54	---	11.83	0.00	88.89	628.71
DPRA	RW-5	10/09/07	100.74	640.54	---	11.11	0.00	89.61	629.43
Bay West	RW-5	02/27/08	100.74	640.54	---	14.78	0.00	85.94	625.76
Bay West	RW-5	09/23/08	100.74	640.54	---	11.61	0.00	89.11	628.93
Bay West	RW-5	02/15/10	100.74	640.54	---	12.52	0.00	88.22	628.02
Bay West	RW-5*	04/26/10	100.73	640.53	---	12.27	0.00	88.46	628.26
Bay West	RW-5	12/01/10	100.73	640.53	---	10.89	0.00	89.84	629.64
Bay West	RW-5	04/25/11	100.73	640.53	---	11.85	0.00	88.88	628.68
Bay West	RW-5	10/11/11	100.73	640.53	---	11.73	0.00	89.00	628.80
Bay West	RW-5	04/02/12	100.73	640.53	---	12.45	0.00	88.28	628.08
Bay West	RW-5	09/11/12	100.73	640.53	---	11.79	0.00	88.94	628.74
Bay West	RW-5	04/08/13	100.73	640.53	---	11.97	0.00	88.76	628.56
Bay West	RW-5	12/02/13	100.73	640.53	---	11.70	0.00	89.03	628.83
Bay West	RW-5	03/28/14	100.73	640.53	---	12.55	0.00	88.18	627.98
Bay West	RW-5	04/28/14	100.73	640.53	---	10.97	0.00	89.76	629.56
Bay West	RW-5	10/27/14	100.73	640.53	---	11.83	0.00	88.90	628.70
Bay West	RW-5	04/20/15	100.73	640.53	---	12.71	0.00	88.02	627.82
Bay West	RW-5	09/28/15	100.73	640.53	---	10.09	0.00	90.64	630.44
Bay West	RW-6	04/25/11	97.38	637.18	---	7.37	0.00	90.01	629.81
Bay West	RW-6	10/11/11	97.38	637.18	---	9.88	0.00	87.50	627.30
Bay West	RW-6	04/02/12	97.38	637.18	---	8.71	0.00	88.67	628.47
Bay West	RW-6	09/11/12	97.38	637.18	---	7.37	0.00	90.01	629.81
Bay West	RW-6	04/08/13	97.38	637.18	---	9.49	0.00	87.89	627.69
Bay West	RW-6	12/02/13	97.38	637.18	---	7.05	0.00	90.33	630.13
Bay West	RW-6	03/28/14	97.38	637.18	---	9.20	0.00	88.18	627.98
Bay West	RW-6	04/28/14	97.38	637.18	---	5.86	0.00	91.52	631.32
Bay West	RW-6	10/27/14	97.38	637.18	---	6.27	0.00	91.11	630.91
Bay West	RW-6	04/20/15	97.38	637.18	---	7.63	0.00	89.75	629.55
Bay West	RW-6	09/28/15	97.38	637.18	---	5.25	0.00	92.13	631.93
AECOM	Sully MW-1	04/25/11	100.11	639.91	---	11.65	0.00	88.46	628.26
AECOM	Sully MW-1	10/11/11	100.11	639.91	---	12.94	0.00	87.17	626.97
AECOM	Sully MW-1	04/02/12	100.11	639.91	---	12.95	0.00	87.16	626.96
Bay West	Sully MW-1	09/11/12	100.11	639.91	---	12.97	0.00	87.14	626.94
Bay West	Sully MW-1	12/10/13	98.03	637.83	---	10.88	0.00	87.15	626.95
Bay West	Sully MW-1	03/28/14	98.03	637.83	---	11.33	0.00	86.70	626.50
Bay West	Sully MW-1	04/28/14	98.03	637.83	---	9.81	0.00	88.22	628.02
Bay West	Sully MW-1	10/27/14	98.03	637.83	---	10.58	0.00	87.45	627.25
Bay West	Sully MW-1	04/20/15	98.03	637.83	---	10.68	0.00	87.35	627.15
Bay West	Sully MW-1	09/28/15	98.03	637.83	---	10.15	0.00	87.88	627.68

TABLE 10
WATER LEVEL MEASUREMENTS IN WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Measuring Consultant	Well ID	Date Measured	100 ft BM Top of casing Elevation (feet)	Mean Sea Level BM Top of casing Elevation (feet)	Depth to Product (feet)	Depth to Groundwater (feet)	Free Product Thickness (feet)	Calculated Groundwater Elevation (feet)	Calculated Groundwater Elevation (msl, feet)
AECOM	Sully MW-2	04/25/11	99.54	639.34	---	11.62	0.00	87.92	627.72
AECOM	Sully MW-2	10/11/11	99.54	639.34	Couldn't Open				
AECOM	Sully MW-2	04/02/12	99.54	639.34	---	12.11	0.00	87.43	627.23
Bay West	Sully MW-2	09/11/12	99.54	639.34	---	12.07	0.00	87.47	627.27
Bay West	Sully MW-2	12/10/13	99.57	639.37	---	12.15	0.00	87.42	627.22
Bay West	Sully MW-2	03/28/14	99.57	639.37	---	12.71	0.00	86.86	626.66
Bay West	Sully MW-2	04/28/14	99.57	639.37	---	10.16	0.00	89.41	629.21
Bay West	Sully MW-2	10/27/14	99.57	639.37	---	11.70	0.00	87.87	627.67
Bay West	Sully MW-2	04/20/15	99.57	639.37	---	11.84	0.00	87.73	627.53
Bay West	Sully MW-2	09/28/15	99.57	639.37	---	11.08	0.00	88.49	628.29
AECOM	Sully MW-3	04/25/11	99.88	639.68	11.69	11.73	0.04	85.47	627.95
AECOM	Sully MW-3	10/11/11	99.88	639.68	12.39	12.41	0.02	84.77	627.27
AECOM	Sully MW-3	04/02/12	99.88	639.68	---	12.42	0.00	84.75	627.26
Bay West	Sully MW-3	09/11/12	99.88	639.68	---	12.27	0.00	84.90	627.41
Bay West	Sully MW-3	12/10/13	99.97	639.77	---	12.55	0.00	84.62	627.22
Bay West	Sully MW-3	03/28/14	99.97	639.77	---	13.27	0.00	83.90	626.50
Bay West	Sully MW-3	04/28/14	99.97	639.77	---	10.40	0.00	86.77	629.37
Bay West	Sully MW-3	10/27/14	99.97	639.77	---	11.97	0.00	85.20	627.80
Bay West	Sully MW-3	04/20/15	99.97	639.77	---	12.05	0.00	85.12	627.72
Bay West	Sully MW-3	09/28/15	99.97	639.77	---	10.83	0.00	86.34	628.94
AECOM	Sully MW-4	04/25/11	99.93	639.73	---	11.91	0.00	88.02	627.82
AECOM	Sully MW-4	10/11/11	Data not obtained from AECOM						
AECOM	Sully MW-4	04/02/12	Data not obtained from AECOM						
Bay West	Sully MW-4	09/11/12	99.93	639.73	---	12.67	0.00	87.26	627.06

(2) Measured from the top of the well casing.
(3) Elevation adjusted due to the presence of free product.
(4) Referenced to benchmark elevation of 100.00 feet on the top nut of the fire hydrant located on the southwest corner of Central Avenue and Grand Aveneue
* =TOC and ground surface were resurveyed om 4/26/10, the first event after well repairs/maintenance were completed.
--- = No Product Present

FREE PRODUCT CORRECTION CALCULATION (ASSUMED TO BE GASOLINE)
[(Measured Free Product Thickness (ft) x Specific Gravity of Free Product) + (Elevation of water surface)]

TABLE 11
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM WELLS (PETROLEUM)

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
ST-1/MW-1*	8/30/1990	**490**	**870**	**150**	**1,100**	---	13,000	---	Fixed
ST-1/MW-1*	5/8/1990	**440**	10	17	81	2.6	2,800	---	Fixed
MW-1	05/08/91	**440**	10	17	81	-	2,800	---	Fixed
MW-1	09/06/91	**210**	1.2	1.9	ND	-	1,800	---	Fixed
MW-1	01/23/92	**260**	1.7	3.5	1	ND	660	---	Fixed
MW-1	06/17/92	**190**	0.69	1.3	ND	-	630	---	Fixed
MW-1	12/17/92	**96**	7.2	6	6.7	ND	220	---	Fixed
MW-1	07/20/93	**21**	ND	1.3	ND	-	ND	---	Fixed
MW-1	10/93	Abandoned							
ST-2/MW-2*	8/30/1990	**12,000**	**9,100**	**1,200**	**8,800**	NA	91,000	---	Fixed
MW-2	05/08/91	**9,500**	**11,000**	**1,700**	**12,000**	-	71,000	---	Fixed
MW-2	09/06/91	**10,000**	**12,000**	**1,600**	**6,200**	-	120,000	---	Fixed
MW-2	01/24/92	**8,300**	**8,800**	**2,300**	**12,000**	ND	88,000	---	Fixed
MW-2	06/17/92	**6,800**	**9,600**	**2,900**	**16,000**	-	150,000	---	Fixed
MW-2	12/17/92	**15,000**	**18,000**	**5,000**	**21,500**	ND	36,000	---	Fixed
MW-2	07/20/93	**4,100**	**5,500**	**2,300**	**12,000**	-	37,000	---	Fixed
MW-2	10/93	Abandoned							
ST-3/MW-3*	8/30/1990	**25**	15	10	66	4.5	2,000	NA	Fixed
MW-3	05/08/91	**32**	32	**200**	180	-	8,700	---	Fixed
MW-3	09/06/91	**30**	ND	**500**	**480**	-	19,000	---	Fixed
MW-3	01/23/92	**54**	100	**740**	**770**	ND	24,000	---	Fixed
MW-3	06/17/92	**17**	42	**390**	**480**	-	17,000	---	Fixed
MW-3	12/17/92	**30**	81	**850**	**565**	ND	4,700	---	Fixed
MW-3	07/20/93	**220**	49	**240**	**360**	-	3,900	---	Fixed
MW-3	10/93	Abandoned							
MW-4	05/08/91	**1,800**	**710**	ND	**8,500**	-	31,000	---	Fixed
MW-4	09/06/91	**1,300**	**220**	ND	**1,200**	-	32,000	---	Fixed
MW-4	01/23/92	**1,100**	**440**	**940**	**2,800**	ND	54,000	---	Fixed
MW-4	06/17/92	**1,300**	**200**	**690**	**1,500**	-	39,000	---	Fixed
MW-4	12/17/92	**4,300**	**740**	**1,200**	**1,580**	ND	13,000	---	Fixed
MW-4	07/20/93	**1,600**	100	**900**	**1,600**	-	8,200	---	Fixed
MW-4	10/93	Abandoned							
MW-5	05/08/91	**5,200**	**12,000**	**1,600**	**1,600**	-	63,000	---	Fixed
MW-5	09/06/91	**2,800**	**5,200**	**1,400**	**4,700**	-	65,000	---	Fixed
MW-5	01/24/92	**3,200**	**6,000**	**1,600**	**13,000**	ND	57,000	---	Fixed
MW-5	06/17/92	**420**	**1,600**	**300**	**2,200**	-	16,000	---	Fixed
MW-5	12/17/92	**3,400**	**17,000**	**4,700**	**39,900**	ND	34,000	---	Fixed
MW-5	07/20/93	**850**	**5,500**	**2,000**	**13,000**	-	31,000	---	Fixed
MW-5	10/93	Abandoned							
MW-6	05/08/91	**14**	ND	ND	5.1	-	ND	---	Fixed
MW-6	09/06/91	ND	ND	ND	ND	-	ND	---	Fixed
MW-6	01/23/92	**28**	1.5	1	4.6	ND	280	---	Fixed
MW-6	06/17/92	**20**	ND	0.41	1.2	-	74	---	Fixed
MW-6	12/17/92	**1,000**	**730**	**1,500**	**1,260**	ND	5,900	---	Fixed
MW-6	07/20/93	ND	ND	ND	ND	-	ND	---	Fixed
MW-6	10/93	Abandoned							
MW-7	05/08/91	**12**	2.2	ND	2.4	-	2.4	---	Fixed
MW-7	09/06/91	**62**	ND	ND	ND	-	ND	---	Fixed
MW-7	01/23/92	**3,400**	110	**86**	12	ND	10,000	---	Fixed
MW-7	06/17/92	**1,700**	81	39	59	-	59	---	Fixed
MW-7	12/17/92	**390**	14	6.6	4.3	ND	440	---	Fixed
MW-7	07/20/93	**21**	ND	1.3	ND	-	ND	---	Fixed
MW-7	10/93	Abandoned							

TABLE 11
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM WELLS (PETROLEUM)

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
MW-8	07/02/96	**53**	**800**	**110**	**9,480**	<1.0	29,000	---	Fixed
MW-8	01/08/97	**73**	**660**	**84**	**5,630**	---	14,000	---	Fixed
MW-8	05/01/97	**83**	**420**	44	**4,230**	<1.0	13,000	---	Fixed
MW-8	03/04/98	**340**	**410**	19	**3,360**	---	11,000	---	Fixed
MW-8	05/11/99	**19**	35	**50**	**680**	16	4,200	---	Fixed
MW-8	06/09/00	**73**	12	**150**	**1,400**	20	7,800	---	Fixed
MW-8	01/10/01	**75**	<2.5	**240**	**2,580**	<2.5	9,600	---	Fixed
MW-8	04/16/02	**100**	<1.0	**75**	**700**	440	6,100	---	Fixed
MW-8	07/05/02	**63**	<2.0	48	**479**	8	4,100	---	Fixed
MW-8	09/17/02	**37**	1.9	40	**425**	8.8	4,000	---	Fixed
MW-8	12/10/02	**230**	24	**76**	**652**	9.4	4,600	---	Fixed
MW-8	04/09/03	**300**	20	**110**	**860**	73	5,300	---	Fixed
MW-8	10/22/03	**250**	6.9	24	240	---	2,300	---	Fixed
MW-8	03/16/04	**370**	9.7	**74**	**830**	<8.0	5,200	---	Fixed
MW-8	08/31/04	**520**	100	19	120	<8.0	2,300	---	Fixed
MW-8	03/17/05	**346**	27.5	**64.7**	195	13.7	4,050	---	Fixed
MW-8	10/06/05	**150**	**310**	29	**450**	46	3,200	---	Fixed
MW-8	07/06/06	**1,890**	**1,710**	**124**	**618**	<200	10,700	---	Fixed
MW-8	11/16/06	**908**	61.9	15.7	91.4	<40.0	2,570	---	Fixed
MW-8	05/30/07	**143**	36.1	12.7	46.8	<4.0	611	---	Fixed
MW-8	10/03/07	**367**	52.9	20.6	33.2	<4.0	978	---	Fixed
MW-8	02/27/08	**5,700**	**1,900**	**320**	**3,140**	100	20,000	---	Fixed
MW-8	09/23/08	**4,900**	**4,600**	**530**	**2,440**	<100	20,000	---	Fixed
MW-8	02/17/10	**25,900**	**35,800**	**2290**	**12,500**	<500	93,800	8,780	Fixed
MW-8	04/28/10	**27,800**	**37,100**	**3,150**	**17,200**	<500	113,000	11,600	Fixed
MW-8	12/03/10	**19,600**	**19,400**	**1,440**	**8,060**	NA*	59,900	8,240	Fixed
MW-8	04/27/11	**31,200**	**25,700**	**3,030**	**15,900**	NA*	106,000	8,910	Fixed
MW-8	10/19/11	**22,800**	**20,100**	**1,830**	**9,870**	NA*	68,100	8,480	Fixed
MW-8	04/06/12	**28,800**	**13,500**	**2,230**	**12,400**	NA*	68,000	13,200	Fixed
MW-8	09/13/12	**18,900**	**9,250**	**1,460**	**8,480**	NA*	50,100	7,590	Fixed
MW-8	04/11/13	**22,500**	**11,500**	**2,360**	**12,200**	<100	66,700	10,600	Fixed
MW-8	12/09/13	**9,720**	**9,850**	**1,480**	**7,970**	<100	38,600[1]	8,820[1]	Fixed
MW-8	11/03/14	**6,320**	**14,800[1]**	**1,740[1]**	**9,270[1]**	<100	53,100[1]	7,480[1]	Fixed
MW-8	10/02/15	**1,570**	**6,270**	**655**	**3,730**	<25.0	15,700	5,000	Fixed
MW-9	07/02/96	**3,200**	**2,500**	**7,300**	**15,400**	200	42,000	---	Fixed
MW-9	01/08/97	**2,700**	**1,800**	**2,500**	**8,300**	---	25,000	---	Fixed
MW-9	05/01/97	**4,200**	**2,400**	**4,200**	**10,400**	<1.0	35,000	---	Fixed
MW-9	05/11/99	**3,200**	**2,100**	**1,600**	**8,200**	160	28,000	---	Fixed
MW-9	06/09/00	**4,700**	**2,500**	**2,200**	**10,800**	860	40,000	---	Fixed
MW-9	01/10/01	**5,700**	**3,200**	**1,800**	**10,400**	<50	39,000	---	Fixed
MW-9	04/16/02	Free Product Present							
MW-9	07/05/02	**4,900**	**1,600**	**1,400**	**7,300**	<50	25,000	---	Fixed
MW-9	09/17/02	**5,900**	**2,300**	**1,900**	**10,200**	<50	35,000	---	Fixed
MW-9	12/10/02	**5,500**	**1,900**	**1,800**	**10,400**	<50	34,000	---	Fixed
MW-9	04/09/03	**7,000**	**1,800**	**2,000**	**10,000**	420	32,000	---	Fixed
MW-9	10/22/03	**5,100**	**1,100**	**1,600**	**10,000**	---	30,000	---	Fixed
MW-9	03/16/04	Free Product Present							
MW-9	08/31/04	**6,000**	**1,600**	**1,700**	**12,000**	<200	37,000	---	Fixed
MW-9	03/17/05	**7,790**	**1,040**	**1,990**	**9,910**	<200	37,800	---	Fixed
MW-9	10/06/05	**6,000**	**1,000**	**100**	**7,000**	280	18,000	---	Fixed
MW-9	07/06/06	**7,900**	**1,330**	**2,050**	**9,570**	<80	31,900	---	Fixed
MW-9	11/16/06	**2,850**	**499**	**1,110**	**5,890**	<100	25,600	---	Fixed
MW-9	05/30/07	**3,850**	**236**	**607**	**4,450**	<40.0	18,900	---	Fixed
MW-9	10/03/07	Free Product Present							
MW-9	02/27/08	**3,700**	**300**	**1,200**	**4,300**	260	25,000	---	Fixed
MW-9	09/23/08	**3,500**	**420**	**1,600**	**8,500**	390	30,000	---	Fixed
MW-9	02/17/10	**5,240**	**366**	**1,610**	**6,630**	<100	25,500	8,030	Fixed

TABLE 11
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM WELLS (PETROLEUM)

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
MW-9	04/28/10	**5,710**	**406**	**1,640**	**6,390**	<100	25,000	7,640	Fixed
MW-9	12/01/10	**6,150**	**1,080**	**1,680**	**6,710**	NA*	26,900	7,610	Fixed
MW-9	04/27/11	**6,520**	**570**	**1,670**	**5,930**	NA*	28,300	5,520	Fixed
MW-9	10/19/11	**6,030**	**311**	**1,230**	**4,020**	NA*	20,900	4,220	Fixed
MW-9	04/06/12	**5,060**	184	**1,220**	**4,950**	<25.0	16,500	3,620	Fixed
MW-9	09/13/12	**6,680**	**515**	**1,320**	**5,370**	<25.0	20,700	3,520	Fixed
MW-9	04/11/13	**4,610**	185	**963**	**3,820**	<50.0	15,700	3,190	Fixed
MW-9	12/09/13	**6,210**	**385**	**1,100**	**4,280**	<50.0	19,700	2,920	Fixed
MW-9	10/30/14	**7,760**	**436**	**1,070**	**4,090**	<100	20,500	2,920	Fixed
MW-9	10/02/15	**6,360**	**1,340**	**1,620**	**8,010**	<100	24,400	2,800	Fixed
MW-10	07/02/96	**21,000**	**1,200**	**17,000**	**9,200**	390	91,000	---	Fixed
MW-10	04/16/02	Free Product Present							
MW-10	07/05/02	Free Product Present							
MW-10	09/17/02	Free Product Present							
MW-10	12/10/02	Free Product Present							
MW-10	04/09/03	Free Product Present							
MW-10	10/22/03	Free Product Present							
MW-10	03/16/04	Free Product Present							
MW-10	08/31/04	Free Product Present							
MW-10	03/17/05	Free Product Present							
MW-10	10/06/05	Free Product Present							
MW-10	07/06/06	Free Product Present							
MW-10	11/16/06	Free Product Present							
MW-10	05/30/07	Free Product Present							
MW-10	10/03/07	Free Product Present							
MW-10	02/27/08	Free Product Present							
MW-10	09/23/08	Free Product Present							
MW-10	02/17/10	Free Product Present							
MW-10	04/28/10	Free Product Present							
MW-10	12/03/10	**5,100**	**5,930**	**1,030**	**5,360**	NA*	31,600	6,560	Fixed
MW-10	04/27/11	**5,320**	**6,560**	**1,060**	**6,490**	NA*	44,500	5,180	Fixed
MW-10	10/11/11	Free Product Present							
MW-10	04/03/12	Free Product Present							
MW-10	09/11/12	Free Product Present							
MW-10	04/08/13	Free Product Present							
MW-10	12/10/13	**2,880**	**3,380**	**496**	**4,270**	<40.0	20,800	4,400	Fixed
MW-10	10/27/14	Free Product Present							
MW-10	09/28/15	Free Product Present							
MW-11	07/02/96	**36**	10	**56**	68	<1.0	260	---	Fixed
MW-11	05/01/97	<1.0	<1.0	<1.0	<1.0	<1.0	<100	---	Fixed
MW-11	03/04/98	<1.0	1.5	4	8.5	---	<100	---	Fixed
MW-11	05/11/99	<3.0	<3.0	<3.0	<8.0	<1.0	<20	---	Fixed
MW-11	06/09/00	<1.0	<1.0	<1.0	<3.5	<0.28	<23	---	Fixed
MW-11	01/10/01	<1.0	<1.0	<1.0	<2.6	<1.0	<23	---	Fixed
MW-11	04/16/02	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-11	07/05/02	<1.0	<1.0	<1.0	<2.0	<1.0	<50	---	Fixed
MW-11	09/17/02	<1.0	<1.0	<1.0	<2.0	<1.0	<50	---	Fixed
MW-11	12/10/02	<1.0	3.4	1.1	5.3	<1.0	<50	---	Fixed
MW-11	04/09/03	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-11	10/22/03	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-11	03/16/04	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-11	08/31/04	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-11	03/17/05	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-11	10/04/05	<0.16	<1.6	<0.16	<0.16	<0.33	<33	---	Fixed
MW-11	07/06/06	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-11	11/16/06	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-11	05/30/07	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed

TABLE 11
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM WELLS (PETROLEUM)

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
MW-11	10/03/07	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-11	02/27/08	<0.5	<5.0	<0.5	<0.5	<1.0	<100	---	Fixed
MW-11	09/23/08	<0.5	<5.0	<0.5	<0.5	<1.0	<100	---	Fixed
MW-11	02/16/10	<1.0	<1.0	<1.0	<3.0	<5.0	<100	107	Fixed
MW-11	04/27/10	<1.0	<1.0	<1.0	<3.0	<5.0	<100	<103	Fixed
MW-11	11/30/10	<1.0	<1.0	<1.0	<3.0	NA*	<100	<102	Fixed
MW-11	04/25/11	<1.0	<1.0	<1.0	<3.0	NA*	<100	<102	Fixed
MW-11	10/11/11	<1.0	<1.0	<1.0	<3.0	NA*	<100	<102	Fixed
MW-11	04/03/12	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<106	Fixed
MW-11	09/11/12	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<102	Fixed
MW-11	04/08/13	Not Sampled							
MW-11	12/03/13	Not Sampled							
MW-12	07/02/96	**1,400**	15	**120**	121	92	6,000	---	Fixed
MW-12	01/08/97	**990**	6.5	**89**	22.9	---	1,600	---	Fixed
MW-12	05/01/97	**930**	4.9	19	14.7	<1.0	2,200	---	Fixed
MW-12	03/04/98	**730**	8.6	11	6.5	---	2,100	---	Fixed
MW-12	05/11/99	**600**	51	12	34	24	1,900	---	Fixed
MW-12	06/09/00	**720**	24	<10	<35	49	1,700	---	Fixed
MW-12	01/10/01	**850**	37	5.4	16.2	<5	1,900	---	Fixed
MW-12	04/16/02	**1,000**	170	22	130	720	2,000	---	Fixed
MW-12	07/05/02	**640**	56	17	60	5.2	1,400	---	Fixed
MW-12	09/17/02	**790**	37	33	67	6	1,700	---	Fixed
MW-12	12/10/02	**930**	53	**57**	131	<10	2,300	---	Fixed
MW-12	04/09/03	**170**	10	1.6	5.2	14	590	---	Fixed
MW-12	10/22/03	**960**	35	28	45	---	1,400	---	Fixed
MW-12	03/16/04	**590**	53	47	100	<20	2,000	---	Fixed
MW-12	08/31/04	**820**	35	**60**	90	<40	1,000	---	Fixed
MW-12	03/17/05	**202**	12.3	6.1	11.1	7.6	619	---	Fixed
MW-12	10/06/05	**570**	100	3.5	126	100	2,000	---	Fixed
MW-12	07/06/06	**388**	13.3	15.1	18.3	7.7	968	---	Fixed
MW-12	11/16/06	**190**	9.6	4.4	22.4	<4.0	792	---	Fixed
MW-12	05/30/07	**808**	45.1	38.3	121	<4.0	2,860	---	Fixed
MW-12	10/03/07	**404**	70.5	15.6	88.3	<20.0	1,690	---	Fixed
MW-12	02/27/08	**170**	39	7.6	26.7	21	950	---	Fixed
MW-12	09/23/08	**450**	46	30	44	19	2,400	---	Fixed
MW-12	02/17/10	**159**	18.6	9	22.2	5.9	658	454	Fixed
MW-12	04/27/10	**296**	47.8	7.1	36.7	6.6	987	1,680	Fixed
MW-12	12/01/10	**419**	34.1	35.4	54.6	N/A	1320	679	Fixed
MW-12	04/26/11	**189**	29.8	2.7	11.5	NA	1,180	2,200	Fixed
MW-12	10/18/11	**173**	9.7	6.5	14.3	NA	1,020	584	Fixed
MW-12	04/05/12	**125**	16.2	5.1	22.7	<1.0	522	830	Fixed
MW-12	09/12/12	**146**	7.5	4.5	11.7	<1.0	383	265	Fixed
MW-12	04/10/13	**130**	34.7	1.9	26.6	<1.0	1,020	445	Fixed
MW-12	12/04/13	**281**	43.8	16.9	69	<2.0	1,200	790	Fixed
MW-12	04/30/14	**697**	**201**	27.8	229	<2.0	3,640	1,680	Fixed
MW-12	10/29/14	**434**	38.4	28.8	89	<1.0	2,270	645	Fixed
MW-12	04/21/15	**77.2**	15.5	2.8	29.1	<1.0	889	330	Fixed
MW-12	09/30/15	**535**	48.3	46.3	152	<1.0	2,460	840	Fixed
MW-13	04/16/02	**15**	<1.0	<1.0	<2.0	<1.0	<100	---	Fixed
MW-13	07/05/02	1.2	<1.0	<1.0	<2.0	<1.0	<50	---	Fixed
MW-13	09/17/02	1.3	<1.0	<1.0	<2.0	<1.0	<50	---	Fixed
MW-13	12/10/02	**150**	35	30	65	2.5	1,000	---	Fixed
MW-13	04/09/03	1.3	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-13	10/22/03	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-13	12/17/03	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-13	03/16/04	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-13	06/08/04	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed

TABLE 11
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM WELLS (PETROLEUM)

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
MW-13	08/31/04	**130**	11	19	11	<4.0	650	---	Fixed
MW-13	11/23/04	**2,400**	150	**510**	**780**	23	9,000	---	Fixed
MW-13	03/17/05	**2,560**	**951**	**516**	**814**	247	10,300	---	Fixed
MW-13	10/06/05	**3,300**	**860**	**700**	260	910	14,000	---	Fixed
MW-13	07/06/06	**2,420**	**307**	**812**	**1,720**	139	10,600	---	Fixed
MW-13	11/16/06	**1,700**	134	**667**	**625**	<40.0	9,280	---	Fixed
MW-13	05/30/07	**344**	3.7	**132**	4.8	<4.0	2,510	---	Fixed
MW-13	10/03/07	**874**	64	**274**	80.3	87.7	6,140	---	Fixed
MW-13	02/26/08	**980**	**280**	**340**	**730**	180	7,100	---	Fixed
MW-13	09/23/08	**1,400**	**210**	**510**	**842**	270	13,000	---	Fixed
MW-13	02/17/10	**1,800**	**387**	**770**	**2,080**	<50.0	13,200	2,850	Fixed
MW-13	04/28/10	**2,160**	**1,160**	**982**	**3,740**	73.9	18,400	3,600	Fixed
MW-13	12/02/10	**1,210**	**210**	**670**	**1,320**	NA*	9,140	1,560	Fixed
MW-13	04/27/11	**1,800**	**1,880**	**1,080**	**4,200**	NA*	24,200	3,020	Fixed
MW-13	10/18/11	**1,360**	**204**	**721**	**1,900**	NA*	14,600	2,010	Fixed
MW-13	04/05/12	**472**	16.3	253	100	<5.0	2,530	809	Fixed
MW-13	09/13/12	**1,050**	**200**	**686**	**971**	<5.0	8,340	1,640	Fixed
MW-13	04/10/13	**368**	15.5	**88.6**(1)	128	<2.0	2,030	621	Fixed
MW-13	12/09/13	**748**	**428**	**531**	**1,990**	<5.0	11,900	2,030	Fixed
MW-13	05/01/14	**717**	**397**	**812**	**2,590**	<5.0	6,540	2,200	Fixed
MW-13	10/30/14	**602**	186	**538**	**1,010**	<1.0	8,140	1,130	Fixed
MW-13	04/22/15	**833**	**1,090**(1)	**820**(1)	**3,660**	<5.0	10,100(1)	2,800	Fixed
MW-13	09/30/15	**585**	**376**	**488**	**1,900**	<10.0	10,600	1,300	Fixed
MW-14	11/23/04	Dry; no sample collected							
MW-14	01/24/05	<1.0	<1.0	<1.0	<3.0	<1.0	<100	---	Fixed
MW-14	03/17/05	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-14	10/06/05	0.46	<1.6	<0.16	0.72	<0.33	66	---	Fixed
MW-14	07/06/06	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-14	11/16/06	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-14	05/30/07	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-14	10/03/07	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-14	02/27/08	0.42	<5.0	<0.5	0.56	<1.0	<100	---	Fixed
MW-14	09/23/08	<0.5	<5.0	<0.5	<0.5	<1.0	<100	---	Fixed
MW-14	02/17/10	<1.0	<1.0	<1.0	<3.0	<5.0	<100	108	Fixed
MW-14	04/27/10	<1.0	<1.0	<1.0	<3.0	<5.0	<100	<106	Fixed
MW-14	12/02/10	<1.0	<1.0	<1.0	<3.0	NA*	<100	<102	Fixed
MW-14	04/27/11	<1.0	<1.0	<1.0	<3.0	NA*	<100	<103	Fixed
MW-14	10/12/11	<1.0	<1.0	<1.0	<3.0	NA*	<100	<104	Fixed
MW-14	04/04/12	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<111	Fixed
MW-14	09/11/12	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<102	Fixed
MW-14	04/10/13	Not Sampled							
MW-14	12/02/13	Not Sampled							
MW-15	11/16/06	**6,940**	**861**	**747**	**1,800**	<10.0	16,400	---	Fixed
MW-15	05/30/07	**4,760**	**658**	**600**	**1,430**	<100	13,800	---	Fixed
MW-15	10/03/07	**4,490**	**539**	**532**	**1,150**	203	14,400	---	Fixed
MW-15	02/27/08	**3,600**	**370**	**330**	**930**	240	12,000	---	Fixed
MW-15	09/23/08	**3,000**	**320**	**320**	**830**	230	13,000	---	Fixed
MW-15	02/17/10	**5,240**	**752**	**551**	**1,680**	<100	14,800	3,880	Fixed
MW-15	04/28/10	**6,020**	**797**	**649**	**1,900**	<100	16,500	3,420	Fixed
MW-15	12/02/10	**5,930**	**787**	**615**	**1,900**	NA*	17,200	3,220	Fixed
MW-15	04/27/11	**6,760**	**851**	**719**	**2,260**	NA*	20,400	3,230	Fixed
MW-15	10/18/11	**4,420**	**519**	**459**	**1,390**	NA*	15,200	4,070	Fixed
MW-15	04/06/12	**5,690**	**462**	**557**	**1,620**	<25.0	12,100	3,310	Fixed
MW-15	09/13/12	**7,260**	**576**	**696**	**1,870**	<25.0	15,400	2,720	Fixed
MW-15	04/11/13	**3,930**	**209**(1)	**476**(1)	**1,200**(1)	<50.0	11,900	4,140(1)	Fixed
MW-15	12/09/13	**2,280**	126	**318**	**752**	<25.0	7,150	2,690	Fixed

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Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
MW-15	10/30/14	**2,800**	**237**	**370**(1)	**747**(1)	<1.0	10,600(1)	2,530	Fixed
MW-15	10/01/15	**1,450**	**215**(1)	**231**(1)	**524**(1)	<20.0	5,940	2,800	Fixed
MW-16	11/16/06	**934**	35.2	**118**	76.2	<1.0	3,940	---	Fixed
MW-16	05/30/07	**495**	14.2	**144**	18.4	<20.0	3,980	---	Fixed
MW-16	10/03/07	**38**	<2.0	2.8	<6.0	<8.0	473	---	Fixed
MW-16	02/27/08	**130**	6.1	0.57	4.8	14	760	---	Fixed
MW-16	09/23/08	**42**	<5.0	0.48	0.8	3.7	320	---	Fixed
MW-16	02/17/10	**455**	49.5	46.4	80.8	<5.0	1,190	365	Fixed
MW-16	04/27/10	**1,450**	**249**	**277**	**421**	<25.0	5,240	871	Fixed
MW-16	11/30/10	**69.4**	<1.0	<1.0	<3.0	NA*	276	113	Fixed
MW-16	04/26/11	**2,050**	**260**	**466**	**477**	NA*	96,400	1,440	Fixed
MW-16	10/18/11	**851**	62	**207**	111	NA*	11,900	769	Fixed
MW-16	04/05/12	**820**	16.1	209	17.6	<5.0	2,860	700	Fixed
MW-16	09/13/12	**923**	<5.0	54.1	50.7	<5.0	2,930	641	Fixed
MW-16	04/10/13	**433**	<5.0	148	<15.0	<5.0	2,700	715	Fixed
MW-16	12/05/13	**729**	6.6	**117**	41.3	<1.0	3,100	449	Fixed
MW-16	05/01/14	**533**	31.5	**208**	47.4	<5.0	4,820	783(1)	Fixed
MW-16	10/29/14	**995**	20.5	**111**	51.5	<1.0	4,980	455	Fixed
MW-16	04/21/15	**1,180**	133	**295**	283	<10.0	4,550	760	Fixed
MW-16	09/30/15	**550**	4.9(1)	**55.9**(1)	13.3(1)	<10.0	3,750(1)	460	Fixed
MW-17	11/16/06	**102**	<1.0	13.2	<3.0	<1.0	896	---	Fixed
MW-17	05/30/07	**71**	<1.0	4.1	<3.0	<4.0	981	---	Fixed
MW-17	10/03/07	**4.6**	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-17	02/27/08	**140**	4	44.0	3.9	43	1,400	---	Fixed
MW-17	09/23/08	**43**	<5.0	5.5	1.68	14	710	---	Fixed
MW-17	02/17/10	**120**	2.4	41.9	4.4	14.4	1,270	308	Fixed
MW-17	04/28/10	**160**	1.7	43.3	5	23	1,510	229	Fixed
MW-17	12/02/10	**106**	3.8	**51.2**	5.5	NA*	1090	226	Fixed
MW-17	04/27/11	**33.3**	1.5	14.4	<1.0	NA*	404	118	Fixed
MW-17	10/14/11	**122**	3.5	15.8	4.7	NA*	1,570	270	Fixed
MW-17	04/04/12	**15.3**	<1.0	1.9	<3.0	<1.0	<100	118	Fixed
MW-17	09/11/12	**87.7**	2.2	5.3	3.3	<1.0	1,340	162	Fixed
MW-17	04/09/13	**117**	1.4	10.6	3.4	<1.0	1,250	495	Fixed
MW-17	12/04/13	**33**	<1.0	<1.0	<3.0	<1.0	389	117	Fixed
MW-17	04/30/14	**45.9**	<1.0	3.8	<3.0	<1.0	561	<110	Fixed
MW-17	10/28/14	**53.9**	<1.0	8.6	<3.0	<1.0	806	158	Fixed
MW-17	04/21/15	**242**	4.8	**97.7**	12.5	<1.0	3,310	630	Fixed
MW-17	09/29/15	**18.7**	<1.0	3.3	<3.0	<1.0	309	<110	Fixed
MW-18	11/16/06	**232**	86.6	**323**	**356**	<1.0	4,770	---	Fixed
MW-18	05/30/07	**272**	82.0	**370**	**878**	<4.0	7,140	---	Fixed
MW-18	10/03/07	**153**	43.2	**382**	**496**	<80	5,250	---	Fixed
MW-18	02/26/08	**8**	1.6	11	1.15	22	380	---	Fixed
MW-18	09/23/08	**17**	4.2	40	3.89	36	1,200	---	Fixed
MW-18	02/16/10	<1.0	1.1	2.1	<3.0	10.3	263	238	Fixed
MW-18	04/27/10	<1.0	<1.0	1.3	<3.0	12.8	255	149	Fixed
MW-18	11/30/10	**10.3**	1.7	36.7	9.7	NA*	1,010	382	Fixed
MW-18	04/26/11	<1.0	<1.0	<1.0	<3.0	NA*	114	<104	Fixed
MW-18	10/14/11	1.4	<1.0	3.3	<3.0	NA*	397	178	Fixed
MW-18	04/04/12	**2.7**	1.7	21.5	10.0	<1.0	784	291	Fixed
MW-18	09/11/12	**29.5**	2.5	41.6	<3.0	<1.0	2,350	371	Fixed
MW-18	04/09/13	**12.6**	7.1	**53.4**	52.3	<1.0	1,690	699	Fixed
MW-18	12/04/13	**26.7**	8.7	**88.8**	125	<1.0	2,130	1,050	Fixed
MW-18	04/30/14	**16.5**	5.4	**56.8**	46.2	<1.0	1,670	313	Fixed
MW-18	10/29/14	**2.1**	<1.0	1.5	<3.0	<1.0	533	160	Fixed
MW-18	04/21/15	**2.1**	<1.0	<1.0	<3.0	<1.0	<100	<110	Fixed
MW-18	09/29/15	1.3	<1.0	4.7	<3.0	<1.0	759	170	Fixed

TABLE 11
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM WELLS (PETROLEUM)

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
MW-19	01/29/07	**2,260**	**1,100**	**889**	**3,510**	<5	12,700	---	Fixed
MW-19	05/30/07	**39**	1	9	8.2	<4.0	237	---	Fixed
MW-19	10/03/07	**2.5**	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-19	02/27/08	**1,400**	**280**	**610**	**1450**	140	9,100	---	Fixed
MW-19	09/23/08	**7.2**	<5.0	1.3	<0.5	<1.0	33	---	Fixed
MW-19	02/17/10	**1,430**	**312**	**572**	**1,430**	<25.0	9,400	2,360	Fixed
MW-19	04/28/10	**25.5**	3.6	7.5	10.5	<5.0	193	113	Fixed
MW-19	12/03/10	**516**	53.9	**188**	85.2	NA*	2,480	455	Fixed
MW-19	04/27/11	**102**	62.1	40.9	120	NA*	860	210	Fixed
MW-19	10/14/11	**508**	21.7	**133**	61	NA*	2,570	323	Fixed
MW-19	04/05/12	**107**	26.3	39.0	86.1	<1.0	476	150	Fixed
MW-19	09/12/12	**735**	74.5	**229**	**365**	<1.0	3,940	766	Fixed
MW-19	04/09/13	**1,210**	**298**	**363**	**702**	<5.0	6,700	1,670	Fixed
MW-19	12/05/13	<1.0	<1.0	<1.0	<3.0	<1.0	4,400	737	Fixed
MW-19	05/01/14	**19.9**	4.1	10.8	21.5	<1.0	172	<109	Fixed
MW-19	10/28/14	**486**	94.8	**218**	175	<1.0	2,580	407	Fixed
MW-19	04/21/15	**305**	17.0	**94.3**	74.0	<2.0	1,370	270	Fixed
MW-19	09/29/15	**6.6**	1.3	5.7	8.3	<1.0	122	<110	Fixed
MW-20	10/03/07	**3.1**	<1.0	<1.0	<3.0	<4.0	141	---	Fixed
MW-20	02/26/08	**5**	3.3	<0.5	1.36	5	200	---	Fixed
MW-20	09/23/08	0.42	<5.0	<0.5	<0.5	1	83	---	Fixed
MW-20	02/16/10	<1.0	<1.0	<1.0	<3.0	<5.0	<100	259	Fixed
MW-20	04/27/10	<1.0	<1.0	<1.0	<3.0	<5.0	<100	241	Fixed
MW-20	12/02/10	<1.0	<1.0	<1.0	<3.0	NA*	<100	<102	Fixed
MW-20	04/27/11	<1.0	<1.0	<1.0	<3.0	NA*	<100	123	Fixed
MW-20	10/14/11	<1.0	<1.0	<1.0	<3.0	NA*	<100	<102	Fixed
MW-20	04/04/12	<1.0	<1.0	<1.0	<3.0	<1.0	<100	165	Fixed
MW-20	09/11/12	**71.8**	3.9	5.9	3	<1.0	634	114	Fixed
MW-20	04/09/13	**39.3**	2.4	<1.0	<3.0	<1.0	241	270	Fixed
MW-20	12/03/13	**207**	9.2	26.2	13.1	<1.0	1,620	240	Fixed
MW-20	04/30/14	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<110	Fixed
MW-20	10/29/14	**2.7**	<1.0	<1.0	<3.0	<1.0	<100	<105	Fixed
MW-20	04/21/15	<1.0	<1.0	<1.0	<3.0	<1.0	<100	120	Fixed
MW-20	09/29/15	<1.0	<1.0	<1.0	<3.0	<1.0	121	<110	Fixed
MW-21	10/03/07	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
MW-21	02/26/08	0.22	<1.6	<0.16	<0.16	<0.33	<33	---	Fixed
MW-21	09/23/08	<0.5	<5.0	<0.5	<0.5	<1.0	<100	---	Fixed
MW-21	02/16/10	<1.0	<1.0	<1.0	<3.0	<5.0	<100	120	Fixed
MW-21	04/27/10	<1.0	<1.0	<1.0	<3.0	<5.0	<100	<102	Fixed
MW-21	12/02/10	<1.0	<1.0	<1.0	<3.0	NA*	<100	<104	Fixed
MW-21	04/25/11	<1.0	<1.0	<1.0	<3.0	NA*	<100	<104	Fixed
MW-21	10/11/11	<1.0	<1.0	<1.0	<3.1	NA*	<100	<104	Fixed
MW-21	04/03/12	<1.0	<1.0	<1.0	<3.0	NA*	<100	<114	Fixed
MW-21	09/10/12	<1.0	<1.0	<1.0	<3.0	NA*	<100	<100	Fixed
MW-21	04/08/13	Not Sampled							
MW-21	12/02/13	<1.0	<1.0	<1.0	<3.0	<1.0	<50.0	<108	Fixed
MW-21	10/27/14	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<106	Fixed
MW-21	09/28/15	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<110	Fixed
MW-22	04/28/11	<1.0	<1.0	<1.0	<3.0	NA*	<100	<103	Fixed
MW-22	10/13/11	**87.3**	1.5	2.1	5.6	NA*	271	1,810	Fixed
MW-22	04/04/12	**117**	<1.0	<1.0	3.2	NA*	242	1,940	Fixed
MW-22	09/12/12	**19**	<1.0	<1.0	<3.0	NA*	105	1,530	Fixed
MW-22	04/09/13	**8.6**	<1.0	1.1	9.9	<1.0	141	3,620	Fixed
MW-22	12/04/13	**3.7**	<1.0	<1.0	<3.0	<1.0	<50.0	1,110	Fixed
MW-22	04/30/14	<1.0	<1.0	<1.0	<3.0	<1.0	<100	1,250	Fixed

TABLE 11
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM WELLS (PETROLEUM)

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
MW-22	10/28/14	**2.8**	<1.0	<1.0	<3.0	<1.0	<500	1,420	Fixed
MW-22	04/21/15	**5.0**	<1.0	<1.0	<3.0	<1.0	<100	2,100	Fixed
MW-22	09/28/15	<1.0	<1.0	<1.0	<3.0	<1.0	<100	960	Fixed
MW-23	04/24/13	<1.0	3.1	2.3	17.3	<1.0	692	367	Fixed
MW-23	12/03/13	<1.0	<1.0	<1.0	<3.0	<1.0	<50.0	<108	Fixed
MW-23	04/28/14	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<111	Fixed
MW-23	10/30/14	<1.0	<1.0	<1.0	<3.0	<1.0	106	<110	Fixed
MW-23	04/20/15	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<110	Fixed
MW-23	09/29/15	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<110	Fixed
MW-24	04/24/13	<1.0	2.8	2.9	23.6	<1.0	962	698	Fixed
MW-24	12/03/13	<1.0	<1.0	<1.0	<3.0	<1.0	<50.0	<105	Fixed
MW-24	04/28/14	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<109	Fixed
MW-24	10/2014	Well Abandoned							
MW-25	04/24/13	**85.7**	4.3	29	4.1	<1.0	703	229	Fixed
MW-25	12/03/13	**913**	**1,490**	**681**	**3,560**	<10.0	10,900	2,210	Fixed
MW-25	04/28/14	**216**	85.4	**322**	**854**	<10.0	4,710	863	Fixed
MW-25	10/30/14	**985**	**212**	**685**	**1,830**	<1.0	12,500	1,730	Fixed
MW-25	04/22/15	**911**	**1,090**	**980**	**4,270**	<10.0	12,600	3,300	Fixed
MW-25	09/30/15	**625**	**1,420**	**705**	**3,640**	<10.0	12,200	1,900	Fixed
MW-26	12/05/13	**5,960**	**552**[1]	**1,210**[1]	**5,360**[1]	<5.0	26,300	2,700	Fixed
MW-26	05/01/14	**6,170**	99.3	**1,370**	**4,140**	<50.0	15,500	2,280	Fixed
MW-26	11/03/14	**3,780**	**510**	**2,130**	**6,950**	<50.0	25,900	3,410	Fixed
MW-26	04/22/15	**3,200**	59.7	**1,570**	**3,620**	<25.0	9,710	2,300	Fixed
MW-26	10/01/15	**2,320**	97.9	**2,450**	**7,810**	<25.0	19,200	3,900	Fixed
MW-27	12/05/13	**275**	**251**	**758**	**2,190**	<1.0	12,200	3,330	Fixed
MW-27	05/01/14	**316**	**242**	**1,110**	**4,050**	<5.0	15,200	3960[1]	Fixed
MW-27	10/29/14	**454**	**307**	**971**	**2,710**	<10.0	17,300	2,990	Fixed
MW-27	04/22/15	**359**	**272**	**1,150**	**3,240**	<10.0	12,300	3,500	Fixed
MW-27	10/01/15	**203**	198	**894**	**2,440**	<10.0	11,700	3,200	Fixed
MW-28	04/22/15	**393**	**474**	**586**	**5,670**	<1.0	12,600	5,000	Fixed
MW-28	09/30/15	**497**	**1,280**[1]	**733**[1]	**5,690**[1]	<1.0	18,400[1]	4,700	Fixed
RW-1	04/09/03	**1,800**	**810**	**620**	**480**	<4.0	10,000	---	Fixed
RW-1	10/22/03	**1,200**	180	**380**	**350**	<4.0	6,600	---	Fixed
RW-1	08/31/04	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
RW-1	03/17/05	<1.0	<1.0	1.4	<3.0	<4.0	<100	---	Fixed
RW-1	10/04/05	<0.16	<1.6	<0.16	<0.16	<0.33	<33	---	Fixed
RW-1	07/06/06	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
RW-1	11/16/06	**1,050**	**371**	**227**	**307**	<4.0	4,890	---	Fixed
RW-1	05/30/07	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
RW-1	10/03/07	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
RW-1	02/27/08	**36**	<5.0	<0.5	1.05	<1.0	87	---	Fixed
RW-1	09/23/08	<0.5	<5.0	<0.5	<0.5	<1.0	<100	---	Fixed
RW-1	02/16/10	**58.3**	1.4	<1.0	<3.0	<5.0	129	105	Fixed
RW-1	04/27/10	<1.0	<1.0	<1.0	<3.0	<5.0	<100	131	Fixed
RW-1	12/01/10	<1.0	<1.0	<1.0	<3.0	NA*	<100	<103	Fixed
RW-1	04/26/11	<1.0	<1.0	<1.0	<3.0	NA*	<100	<104	Fixed
RW-1	10/18/11	**195**	33.1	3.8	48.9	NA*	788	122	Fixed
RW-1	04/04/12	1.2	<1.0	<1.0	<3.0	<1.0	<100	111	Fixed
RW-1	09/11/12	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<103	Fixed
RW-1	04/08/13	Not Sampled							
RW-1	12/02/13	**4.4**	<1.0	<1.0	<3.0	<1.0	<50.0	<106	Fixed

TABLE 11
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM WELLS (PETROLEUM)

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
RW-1	10/28/14	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<108	Fixed
RW-1	09/28/15	<1.0	<1.0	<1.0	<3.0	<1.0	<100	<110	Fixed
RW-2	04/09/03	**650**	8.6	**74**	150	<4.0	2,100	---	Fixed
RW-2	10/22/03	**150**	3.3	**86**	110	<4.0	830	---	Fixed
RW-2	08/31/04	**41**	11	25	44	<4.0	950	---	Fixed
RW-2	03/17/05	**120**	2.4	**50.2**	65.6	<4.0	706	---	Fixed
RW-2	10/06/05	**29**	4.5	11	8.5	<0.33	660	---	Fixed
RW-2	07/06/06	**245**	25.4	**84.6**	90.6	10.2	1,490	---	Fixed
RW-2	11/16/06	**98.4**	5.6	**68.5**	83.6	<4.0	857	---	Fixed
RW-2	05/30/07	**61.7**	3.2	**54.9**	60.7	<4.0	463	---	Fixed
RW-2	10/03/07	**50.4**	2.1	46.4	53.2	<1.0	490	---	Fixed
RW-2	02/27/08	**66**	2.3	**54**	63	1.3	510	---	Fixed
RW-2	09/23/08	**32**	<5.0	32	38	1.3	240	---	Fixed
RW-2	02/17/10	NS	NS	NS	NS	NS	NS	NS	NS
RW-2	04/28/10	**73.1**	2.3	45.9	49.9	<5.0	448	415	Fixed
RW-2	12/03/10	**74.20**	10.3	45.8	50.6	NA*	529	540	Fixed
RW-2	04/28/11	**70**	3.8	45.9	51.8	NA*	503	504	Fixed
RW-2	10/11/11	**82.6**	4.2	**51.4**	58.5	NA*	591	513	Fixed
RW-2	04/04/12	**79.0**	5.2	40.4	43.0	NA*	597	809	Fixed
RW-2	09/12/12	**85.2**	5.4	44.8	52.2	NA*	659	365	Fixed
RW-2	04/08/13	Not Sampled							
RW-2	12/04/13	**85.3**	6.1	32	35.5	<1.0	542	494	Fixed
RW-2	10/29/14	**98.1**	5.3	28.2	27.8	<1.0	563	344	Fixed
RW-2	09/30/15	**66.9**	5.3	19.8	25.4	<1.0	469	310	Fixed
RW-3	04/09/03	Free Product Present							
RW-3	10/22/03	Free Product Present							
RW-3	08/31/04	**8,800**	**22,000**	**2,300**	**13,000**	<4.0	70,000	---	Fixed
RW-3	03/17/05	Free Product Present							
RW-3	10/06/05	Free Product Present							
RW-3	07/06/06	**6,650**	**19,400**	**1,890**	**10,900**	155	81,000	---	Fixed
RW-3	11/16/06	Free Product Present							
RW-3	05/30/07	**5,100**	**16,000**	**1,810**	**11,300**	<200	60,900	---	Fixed
RW-3	10/03/07	Free Product Present							
RW-3	02/27/08	Free Product Present							
RW-3	09/23/08	Free Product Present							
RW-3	02/17/10	NS	NS	NS	NS	NS	NS	NS	NS
RW-3	04/28/10	**3,640**	**14,600**	**2,100**	**11,900**	<250	60,800	22,300	Fixed
RW-3	12/03/10	**3,030**	**13,400**	**2,060**	**11,600**	NA*	58,000	73,400	Fixed
RW-3	04/28/11	**2,930**	**12,400**	**2,130**	**12,000**	NA*	64,300	25,200	Fixed
RW-3	10/19/11	**2,770**	**12,000**	**2,010**	**11,000**	NA*	57,000	16,400	Fixed
RW-3	04/06/12	**1,940**	**10,800**	**1,900**	**11,200**	NA*	59,500	32,000	Fixed
RW-3	09/13/12	**2,880**	**13,700**	**2,130**	**12,200**	NA*	52,500	15,200	Fixed
RW-3	04/08/13	Not Sampled							
RW-3	12/09/13	**1,900**	**8,990**	**1,750**	**10,600**	<40.0	48,000	50,300	Fixed
RW-3	10/28/14	**1,750**	**10,500**	**2,050**	**12,800**	<200	64,800	25,800	Fixed
RW-3	09/30/15	**1,320**	**8,450**	**1,580**	**9,630**	<200	61,000	10,400	Fixed
RW-4	04/09/03	Free Product Present							
RW-4	10/22/03	Free Product Present							
RW-4	08/31/04	Free Product Present							
RW-4	03/17/05	Free Product Present							
RW-4	10/06/05	Free Product Present							
RW-4	07/06/06	Free Product Present							
RW-4	11/16/06	Free Product Present							
RW-4	05/30/07	Free Product Present							
RW-4	10/03/07	Free Product Present							
RW-4	02/27/08	Free Product Present							

TABLE 11
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM WELLS (PETROLEUM)

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
RW-4	09/23/08	Free Product Present							
RW-4	02/17/10	Free Product Present							
RW-4	04/28/10	Free Product Present							
RW-4	12/01/10	**7,480**	**11,000**	**1,810**	**10,900**	NA*	58,400	16,000	Fixed
RW-4	04/28/11	**4,740**	**7,960**	**1,350**	**7,430**	NA*	46,100	224,000	Fixed
RW-4	10/11/11	Free Product Present							
RW-4	04/03/12	Free Product Present							
RW-4	09/11/12	Free Product Present							
RW-4	04/08/13	Free Product Present							
RW-4	12/02/13	Free Product Present							
RW-4	10/27/14	Free Product Present							
RW-4	09/28/15	Free Product Present							
RW-5	12/07/04	**4.5**	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
RW-5	03/17/05	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
RW-5	10/06/05	0.36	<1.6	<0.16	0.27	<0.33	66	---	Fixed
RW-5	07/06/06	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
RW-5	11/16/06	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
RW-5	05/30/07	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
RW-5	10/03/07	<1.0	<1.0	<1.0	<3.0	<4.0	<100	---	Fixed
RW-5	02/27/08	0.31	<5.0	<0.5	<0.5	<1.0	<100	---	Fixed
RW-5	09/23/08	<0.5	<5.0	<0.5	<0.5	<1.0	<100	---	Fixed
RW-5	02/16/10	<1.0	<1.0	<1.0	<3.0	<5.0	<100	166	Fixed
RW-5	04/27/10	<1.0	<1.0	<1.0	<3.0	<5.0	<100	<104	Fixed
RW-5	12/01/10	<1.0	<1.0	<1.0	<3.0	NA*	<100	114	Fixed
RW-5	04/25/11	<1.0	<1.0	<1.0	<3.0	NA*	<100	<104	Fixed
RW-5	10/14/11	<1.0	<1.0	<1.0	<3.0	NA*	<100	<105	Fixed
RW-5	04/03/12	<1.0	<1.0	<1.0	<3.0	<1.0	<100	140	Fixed
RW-5	09/11/12	**41.4**	1.1	2.6	15.5	<1.0	462	174	Fixed
RW-5	04/08/13	Not Sampled							
RW-5	12/03/13	<1.0	<1.0	<1.0	<3.0	<1.0	<50.0	<106	Fixed
RW-5	10/28/14	**229**	30	**343**	**936**	<5.0	6,380	1,630	Fixed
RW-5	09/28/15	**5.4**	<5.0	<5.0	<15.0	<5.0	147	340	Fixed
RW-6	04/28/11	**128**	131	**133**	**765**	NA*	2,840	1,150	Fixed
RW-6	10/14/11	**804**	74.1	**515**	**2460**	NA*	8,780	3,010	Fixed
RW-6	04/05/12	**191**	21.7	61.5	324	NA*	1,380	1,080	Fixed
RW-6	09/12/12	**310**	7.9	**244**	**1610**	NA*	4,540	2,000	Fixed
RW-6	04/08/13	Not Sampled							
RW-6	12/05/13	**33.6**	<1.0	1.6	27.2	<1.0	151	344	Fixed
RW-6	10/28/14	**22.6**	<1.0	1.2	43.9	<1.0	205	440	Fixed
RW-6	09/29/15	**29.7**	<1.0	2.5	48.5	<1.0	565	580	Fixed
Sully MW-1	10/21/10	**716**	132	**1,170**	**2,110**	12.50	10,300	4.1	Fixed
Sully MW-1	05/16/11	**273**	56.6	**503**	**1,100**	<25	4,790	2,000	Fixed
Sully MW-1	12/10/13	**905**	119	**1,490**	**2,800**	<20.0	11,000	5,140	Fixed
Sully MW-1	05/02/14	**17.2**	2.2	31.9	76.1	<5.0	251	174	Fixed
Sully MW-1	11/03/14	**636**	89.2	**1,030**	**2,020**	<25.0	9,800	2,900	Fixed
Sully MW-1	04/20/15	1.2	<1.0	4.4	7.9	<1.0	<100	180	Fixed
Sully MW-1	10/01/15	**150**	21.5	**234**	**648**	<1.0	2,220	1,100	Fixed
Sully MW-2	10/21/10	**11.1**	12.8	**194**	**4,070**	<10	13,600	8.4	Fixed
Sully MW-2	05/19/11	<10	<10	**84.2**	**1,960**	<50	7,740	4,700	Fixed
Sully MW-2	12/10/13	**25.3**	<20.0	**227**	**3,750**	<20.0	12,000	4,470	Fixed
Sully MW-2	05/02/14	<1.0	<1.0	2.7	39.5	<5.0	338	672	Fixed
Sully MW-2	11/03/14	**9.9**	6.9	**87.4**	**1,160**	<25.0	5,380	4,320	Fixed
Sully MW-2	04/20/15	**4.0**	<2.0	22.5	**307**	<10.0	1,870	4,500	Fixed
Sully MW-2	10/01/15	<5.0	<5.0	11.9	124	<5.0	905	1,400	Fixed

TABLE 11
ANALYTICAL RESULTS OF WATER SAMPLES COLLECTED FROM WELLS (PETROLEUM)

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well ID	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	GRO (µg/L)	DRO (µg/L)	Lab Type
Sully MW-3	10/21/10	Free Product Present							
Sully MW-3	05/19/11	NS	NS	NS	NS	NS	NS	NS	NS
Sully MW-3	12/10/13	**153**	**248**	**1,230**	**18,500**	<50.0	39,100	15,100	Fixed
Sully MW-3	05/02/14	**149**	154	**876**	**13,500**(1)	<50.0	30,500	15,400(1)	Fixed
Sully MW-3	11/03/14	**135**	**226**(1)	**1,150**(1)	**15,300**(1)	<50.0	40,000(1)	11,200	Fixed
Sully MW-3	04/20/15	**86**	139	**986**	**13,500**	<50.0	25,600	11,900	Fixed
Sully MW-3	10/01/15	**89.5**	170	**1,260**	**15,900**	<50.0	28,800	9,600	Fixed
Sully MW-4	10/21/10	<1	<1	<1	<3	<5	<100	0.18	Fixed
Sully MW-4	05/19/11	<2	<2	<1.4	<4	<2.3	<100	300	Fixed
Sully MW-4	2013	Abandoned							
HRL/HBV (2)	--	**2**	**200**	**50**	**300**	NE	NE	NE	--

Notes:
MTBE - methyl tertiary butyl ether
GRO - gasoline-range organics
DRO - diesel-range organics
µg/L - micrograms per liter
NE - not established
HRL - Minnesota Department of Health (MDH) Health Risk Limit
HBV - MDH Health-Based Value

NA - Not Analyzed
< - Less than Report Limit
Shaded - Result exceeds the laboratory reporting limit
Bold - Result exceeds the MDH HRL
(1) - Reported result is from a duplicate sample
(2) See http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html for list of current HRLs

TABLE 12
OTHER CONTAMINANTS DETECTED IN WATER SAMPLES - WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Sample ID	Collected Date	Parameter	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Acetone	Benzene	Bromochloromethane	Bromomethane	cis-1,2-Dichloroethene	Cholorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,1 Dichloroethane	1,2-Dichloroethane	1,2-Dibromomethane	trans-1,3-Dichloro-1-propene	Dichlorodifluoromethane	Diesel Range Organics	Ethylbenzene	Ethyl Ether	Gasoline Range Organics	Isopropylbenzene (Cumene)	Lead	m&p-Xylene	Methyl Ethyl Ketone (MEK)	Methylene Chloride	Methyl Isobutyl Ketone or 4-methyl-2-pentanone (MIBK)	Methyl-tert-butyl ether	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	sec-Butylbenzene	tert-butylbenzene	Styrene	Sulfate	Tetrachloroethene	Tricholorethene	Tetrahydrofuran	Toluene	1,1,2-Trichloroethylene	1,2,3-Trichloropropane	Vinyl Chloride	Xylene (Total)	Lab Type
Sample ID	**Collected Date**	**Units**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**-**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**µg/L**	**---**
ST-1/MW-1*	8/30/1990	Results	NA	NA	50	**490**	ND	ND	0.8	<1.0	<1.0	ND	ND	ND	ND	NA	**11**	ND	<0.2	NA	NA	**150**	24	13,000*	9.2	3	NA	14	NA	24	NA	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	70	**870**	NA	ND	<1.0	**1,100**	Fixed
ST-1/MW-1*	5/8/1990	Results	NA	NA	<50	**440**	ND	ND	<2.0	<10	4.2	ND	ND	ND	ND	ND	**20**	ND	<2.0	NA	NA	17	40	2,800*	4	<2.0	NA	<5.0	NA	25	2.6	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	53	10	<0.2	ND	<1.0	81	Fixed
ST-1/MW-1*	9/5/1991	Results	NA	NA	<50	**210**	ND	ND	0.4	<1.0	<1.0	ND	ND	ND	ND	ND	**21**	ND	<0.2	NA	NA	1.9	37	1,800*	<3.0	<2.0	NA	5.5	NA	5.1	<1.0	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	18	1.2	<0.2	ND	**3.7**	<1.0	Fixed
ST-1/MW-1*	1/23/1992	Results	NA	NA	<50	**260**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	**10**	ND	<0.2	NA	NA	3.5	8.1	660*	<3.0	<2.0	NA	15	NA	3	<1.0	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	22	1.7	<0.5	ND	<1.0	1	Fixed
ST-2/MW-2*	8/30/1990	Results	NA	NA	<50	**12,000**	ND	ND	0.8	<1.0	<1.0	ND	ND	ND	ND	ND	**54**	ND	<0.2	NA	NA	**1,200**	**1,100**	91,000*	20	3	NA	<5.0	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	170	**9,100**	0.2	ND	<1.0	**8,800**	Fixed
ST-2/MW-2*	5/8/1991	Results	NA	NA	<500	**9,500**	ND	ND	<2.0	<10	<10	ND	ND	ND	ND	ND	**82**	ND	<2.0	NA	NA	**1,700**	100	71,000*	**340**	<2.0	NA	130	NA	180	<10	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	450	**11,000**	<2.0	ND	<10	**12,000**	Fixed
ST-2/MW-2*	9/5/1991	Results	NA	NA	<500	**10,000**	ND	ND	<2.0	<2	<10	ND	ND	ND	ND	ND	**98**	ND	<2.0	NA	NA	**1,600**	**1,200**	120,000*	37	<2.0	NA	720	NA	39	14	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	380	**12,000**	<2.0	ND	<10	**6,200**	Fixed
ST-2/MW-2*	1/24/1992	Results	NA	NA	<50	**8,300**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	**20**	ND	<0.2	NA	NA	**2,300**	**1,200**	88,000*	43	<2.0	NA	1600	NA	190	<1.0'-	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	10,000	**8,800**	<0.5	ND	<1.0	**12,000**	Fixed
ST-3/MW-3*	8/30/1990	Results	NA	NA	<50	**25**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	<0.3	ND	<0.2	NA	NA	10	44	2,000*	<3.0	<2.0	NA	150	NA	11	4.5	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	47	15	<0.2	ND	<1.0	66	Fixed
ST-3/MW-3*	5/8/1991	Results	NA	NA	<50	**32**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	<0.3	ND	<0.2	NA	NA	**200**	180	8,700*	8.6	<2.0	NA	14	NA	26	11	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	190	32	<0.2	ND	<1.0	180	Fixed
ST-3/MW-3*	9/5/1991	Results	NA	NA	<50	**30**	ND	ND	<2.0	<10	<10	ND	ND	ND	ND	ND	<3.0	ND	<2.0	NA	NA	**500**	**1,600**	19,000*	23	<2.0	NA	790	NA	<5.0	<1.0	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	370	<1.0	<2.0	ND	<10	**480**	Fixed
ST-3/MW-3*	1/23/1992	Results	NA	NA	95	**54**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	<0.3	ND	<0.2	NA	NA	**740**	420	24,000*	32	<2.0	NA	1800	NA	190	3.2	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	11,000	100	<0.	ND	<1.0	**770**	Fixed
ST-4/MW-4*	5/7/1991	Results	NA	NA	88	**1,800**	ND	ND	<0.2	2.1	<1.0	ND	ND	ND	ND	ND	**7.7**	ND	4.2	NA	NA	<1.0	390	31,000*	<3.0	4	NA	25	NA	43	12	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	150	**710**	<0.2	ND	<5.0	**8,500**	Fixed
ST-4/MW-4*	0-05-91	Results	NA	NA	<500	**1,300**	ND	ND	<2.0	<10	<10	ND	ND	ND	ND	ND	**24**	ND	<2.0	NA	NA	<10	**1,800**	32,000*	<30	3	NA	640	NA	<50	<1.0	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	360	**220**	<2.0	ND	<10	**1,200**	Fixed
ST-4/MW-4*	1/23/1992	Results	NA	NA	190	**1,100**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	**3.9**	ND	<0.2	NA	NA	**940**	250	54,000*	30	2	NA	850	NA	120	<10	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	6,100	**440**	<0.5	ND	<1.0	**2,800**	Fixed
ST-5/MW-5*	5/7/1991	Results	NA	NA	<500	**5,200**	ND	ND	<2.0	<10	<10	ND	ND	ND	ND	ND	**7.8**	ND	<2.0	NA	NA	**1,600**	190	63,000*	81	6	NA	<50	NA	200	<10	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	240	**12,000**	<0.2	ND	<10	**11,000**	Fixed
ST-5/MW-5*	9/5/1991	Results	NA	NA	<500	**2,800**	ND	ND	<2.0	<1.0	<10	ND	ND	ND	ND	ND	**21**	ND	<2.0	NA	NA	**1,400**	410	65,000*	46	17	NA	120	NA	76	<1.0	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	120	**5,200**	<0.2	ND	<10	**47,000**	Fixed
ST-5/MW-5*	1/24/1992	Results	NA	NA	<50	**3,200**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	**4.6**	ND	<0.2	NA	NA	**1,600**	120	57,000*	50	6	NA	500	NA	70	<1.0	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	2,300	**6,000**	<0.5	ND	<1.0	**13,000**	Fixed
ST-6/MW-6*	5/8/1991	Results	NA	NA	<50	**14**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	0.7	ND	<0.2	NA	<500*	<1.0	1.2	<100*	<3.0	<2.0	NA	<5.0	NA	<5.0	<1.0	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	<5.0	1.1	<0.2	ND	<1.0	5.1	Fixed
ST-6/MW-6*	9/5/1991	Results	NA	NA	<50	<1.0	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	**44**	ND	<0.2	NA	<500*	<1.0	<1.0	<100*	<3.0	3	NA	<5.0	NA	<5.0	<1.0	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	<5.0	<1.0	<0.2	ND	<1.0	<1.0	Fixed
ST-6/MW-6*	1/23/1992	Results	NA	NA	<50	**28**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	0.7	ND	<0.2	NA	NA	1	1.6	280*	<3.0	<2.0	NA	<5.0	NA	<5.0	<1.0	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	12	1.5	<0.5	ND	<1.0	4.6	Fixed
ST-7/MW-7*	5/7/1991	Results	NA	NA	<50	**12**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	<0.3	ND	<0.2	NA	NA	<1.0	12	1,400*	<3.0	<2.0	NA	<5.0	NA	8.4	1.9	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	43	<0.2	<0.2	ND	<1.0	<1.0	Fixed
ST-7/MW-7*	9/5/1991	Results	NA	NA	<50	**62**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	**1.8**	ND	<0.2	NA	NA	<1.0	190	2,800*	<3.0	<2.0	NA	120	NA	14	3.8	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	92	<0.2	<0.2	ND	<1.0	<1.0	Fixed
ST-7/MW-7*	1/23/1992	Results	NA	NA	<50	**3,400**	ND	ND	<0.2	<1.0	<1.0	ND	ND	ND	ND	ND	**23**	ND	<0.2	NA	NA	12	82	10,000*	<3.0	<2.0	NA	140	NA	7.4	<1.0	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	ND	620	<0.5	<0.5	ND	<1.0	12	Fixed
MW-1*	12/17/1992	Results	ND	ND	ND	**96**	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	6	ND	ND	ND	ND	2.8	ND	9.9	ND	ND	ND	ND	ND	3.9	ND	ND	-	ND	ND	ND	ND	ND	7.2	ND	ND	ND	ND	Fixed
MW-2*	12/17/1992	Results	**990**	ND	ND	**15,000**	ND	8.4	ND	ND	ND	ND	ND	190	110	NA	ND	ND	ND	30	ND	**5,000**	ND	ND	**990**	ND	14,000	160	ND	140	ND	ND	8,900	5,000	7,500	ND	14	-	190	ND	370	ND	83	**18,000**	ND	**180**	ND	ND	Fixed
MW-3*	12/17/1992	Results	ND	ND	ND	**30**	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	**850**	ND	ND	ND	ND	530	ND	ND	ND	ND	140	320	300	35	ND	ND	-	ND	ND	ND	ND	ND	81	ND	ND	ND	ND	Fixed
MW-4*	12/17/1992	Results	**170**	13	ND	**4,300**	ND	ND	ND	ND	ND	ND	ND	12	ND	NA	ND	ND	ND	ND	ND	**1,200**	ND	ND	170	ND	1,300	ND	ND	ND	ND	ND	2,300	700	280	ND	39	-	15	ND	170	ND	24	**740**	ND	ND	ND	ND	Fixed
MW-5*	12/17/1992	Results	**140**	ND	ND	**3,400**	ND	ND	ND	ND	ND	ND	ND	ND	16	NA	ND	ND	ND	ND	ND	**4,700**	ND	ND	**420**	ND	31,000	ND	ND	ND	ND	ND	2,000	420	8,900	ND	ND	-	220	ND	16	ND	ND	**17,000**	ND	ND	ND	ND	Fixed
MW-6*	12/17/1992	Results	16	ND	ND	**1,000**	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	260	ND	ND	ND	**1,500**	ND	ND	16	ND	700	ND	ND	ND	ND	ND	74	49	560	ND	ND	-	18	ND	170	ND	ND	**730**	ND	ND	ND	ND	Fixed
MW-7*	12/17/1992	Results	ND	ND	ND	**390**	ND	ND	ND	ND	ND	19	ND	ND	ND	NA	ND	ND	ND	ND	ND	6.6	ND	ND	ND	ND	4.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	51	ND	ND	14	ND	ND	ND	ND	Fixed
RW-1	11/16/2006	Results	NA	NA	NA	**1,050**	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	**227**	ND *	4,890	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	34.4	NA	ND	ND	**371**	ND *	ND *	ND *	**307**	Fixed
RW-1	10/13/2011	Results	4.1	2.2	ND	**195**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	122	3.8	ND	788	ND	NA	38.3	ND	ND	ND	ND	ND	ND	ND	10.6	ND	ND	-	ND	NA	ND	ND	ND	33.1	ND	ND	ND	48.9	Fixed
RW-1	09/11/12	Results	<1.0	<1.0	ND	ND	ND	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	<1.0	ND	ND	<1.0	NA	ND	ND *	ND	<1.0	NA	<2.0	ND	ND	ND	ND	<4.0	<1.0	<1.0	<1.0	ND	<1.0	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
RW-2	11/16/2006	Results	NA	NA	NA	**98.4**	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	**68.5**	ND *	857	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	ND	NA	ND	ND *	5.6	ND *	ND *	ND *	83.6	Fixed
RW-5	12/7/2004	Results	NA	NA	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND	ND *	ND *	ND	NA	ND *	ND *	1.6	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	-	ND *	ND *	ND *	ND	ND *	ND *	ND *	ND *	ND *	ND *	Fixed
RW-5	11/16/2006	Results	NA	NA	NA	ND	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	ND	ND *	ND	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	59.8	NA	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
RW-5	10/12/2011	Results	NA	NA	NA	ND	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	ND	ND *	ND	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	ND *	NA	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
RW-6	09/11/12	Results	22.6	9.7	NA	ND	ND *	ND *	<1.0	NA	NA	ND *	ND	ND *	ND *	ND	<1.0	ND *	NA	<1.0	NA	ND	ND *	ND	1.7	ND *	10.8	ND *	ND *	NA	NA	<4.0		1.7	4.7	NA	<1.0	-	ND *	ND *	NA	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
RW-6	10/14/2011	Results	NA	NA	NA	**804**	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	3,010	**515**	ND *	8,780	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	NA	NA	ND	ND *	74.1	ND *	ND *	ND *	**2,460**	Fixed
MW-8	11/16/2006	Results	NA	NA	NA	**908**	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	15.7	ND *	2,570	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	16.1	NA	ND	ND *	61.9	ND *	ND *	ND *	91.4	Fixed
MW-8	10/19/2011	Results	NA	NA	NA	**22,800**	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	8,480	**1,830**	ND *	68,100	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	NA	NA	ND	ND *	**20,100**	ND *	ND *	ND *	**9,870**	Fixed
MW-8	4/11/2013	Results	**1,210**	**311**	ND	**22,500**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	10,600	**2,360**	ND	66,700	ND	NA	NA	ND	ND	ND	ND	ND	ND	130	NA	ND	ND	-	ND	NA	ND	ND	ND	**11,500**	NA	ND	ND	**12,200**	Fixed
MW-8	12/9/2013	Results	NA	NA	NA	**9,720**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8,820	**1,480**	NA	38,600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	**9,850**	NA	NA	NA	**7,970**	Fixed
MW-9	11/16/2006	Results	NA	NA	NA	**2,850**	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	**1,110**	ND *	25,600	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	NA*	NA	ND	ND *	**499**	ND *	ND *	ND *	**5,890**	Fixed
MW-9	10/18/2011	Results	**946**	**311**	ND	**6,030**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4,220	**1,230**	ND *	20,900	30.9	ND	3,870	ND	ND	ND	ND	219	ND	64.8	153	ND	ND	-	ND	NA	ND	ND	ND	**311**	ND	ND	ND	**4,020**	Fixed
MW-9	4/6/2012	Results	**940**	**304**	ND	**5,060**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,620	**1,220**	ND	16,500	29.2	ND	4,850	ND	ND	ND	ND	187	ND	ND	104	ND	ND	-	ND	ND	ND	ND	ND	184	ND	ND	ND	**4,950**	Fixed
MW-9	09/13/12	Results	**1020**	**353**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<25.0	NA	ND	ND *	ND	30.9	ND	5150	ND	ND	ND	ND	169	<25.0	68.7	219	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-9	4/11/2013	Results	**581**	**188**	ND	**4,610**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,190	**963**	ND	15,700	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	-	ND	NA	ND	ND	ND	185	NA	ND	ND	**3,820**	Fixed
MW-9	12/9/2013	Results	NA	NA	NA	**6,210**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2,920	**1,100**	NA	19,700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	-	NA	NA	NA	NA	NA	**385**	NA	NA	NA	**4,280**	Fixed
MW-11	11/16/2006	Results	NA	NA	NA	ND	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	ND	ND *	ND	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	63.7	NA	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
MW-11	10/11/2011	Results	NA	NA	NA	ND	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	ND	ND *	ND	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	ND *	NA	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
MW-11	09/11/12	Results	<1.0	<1.0	NA	ND	ND *	ND *	<1.0	NA	NA	ND *	ND	ND *	ND *	ND	<1.0	ND *	NA	<1.0	NA	ND	ND *	ND	<1.0	ND *	<2.0	ND *	ND *	NA	NA	<4.0	<1.0	<1.0	<1.0	NA	<1.0	-	ND *	ND *	NA	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
MW-12	11/16/2006	Results	NA	NA	NA	**190**	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	4.4	ND *	792	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	5.3	NA	ND	ND *	9.6	ND *	ND *	ND *	22.4	Fixed
MW-12	10/18/2011	Results	1.1	NA	NA	**173**	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	6.5	ND *	1,020	NA	ND *	9.7	ND *	ND *	NA	NA	NA	NA	NA	4.5	NA	NA	-	ND *	ND *	NA	ND	ND *	9.7	ND *	ND *	ND *	14.3	Fixed
MW-12	4/5/2012	Results	1.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	830	5.1	ND	522	ND	NA	16.3	ND	ND	4.8	ND	ND	ND	ND	6.4	NA	ND	-	ND	NA	ND	ND	ND	16.2	ND	ND	ND	22.7	Fixed
MW-12	09/12/12	Results	1.3	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	NA	ND	ND *	ND	<1.0	NA	9.5	ND	ND	5.8	ND	<4.0	<1.0	<1.0	2.2	NA	ND	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-12	4/10/2013	Results	ND	ND	ND	**130**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.1**	ND	NA	ND	445	1.9	ND	1,020	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	-	ND	NA	ND	ND	ND	34.7	NA	ND	ND	26.6	Fixed
MW-12	12/4/2013	Results	4.2	ND	ND	**281**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	790	16.9	ND	1,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	43.8	ND	ND	ND	ND	69	Fixed
MW-12	4/30/2014	Results	3.1	ND	ND	**697**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1680	27.8	ND	3,640	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	**201**	ND	ND	ND	229	Fixed
MW-12	4/21/2015	Results	1.4	<1.0	ND	**77.2**	ND	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	330	2.8	ND	889	<1.0	ND	ND	ND	ND	ND	<1.0	<4.0	<1.0	<1.0		<1.0	<1.0	-	ND	ND	<1.0	<0.40	<10.0	15.5	ND	ND	ND	29.1	Fixed
MW-13	4/6/2002	Results	NA	NA	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND	ND *	ND *	ND	ND	ND *	ND *	NA	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	-	ND *	ND *	ND *	ND	ND *	ND *	ND *	ND *	ND *	ND *	Fixed
MW-13	7/5/2002	Results	NA	NA	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND	ND *	ND *	ND	**3.4**	ND *	ND *	NA	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	ND *	-	ND *	ND *	ND *	ND	ND *	ND *	ND *	ND *	ND *	ND *	Fixed
MW-13	11/16/2006	Results	NA	NA	NA	**1,700**	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	**667**	ND *	9,280	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	ND	NA	ND	ND *	134	ND *	ND *	ND *	**625**	Fixed
MW-13	10/18/2011	Results	**370**	**130**	ND	**1,360**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,010	**721**	ND	14,600	24.7	NA	1,670	ND	ND	ND	ND	229	ND	61.5	229	ND	ND	-	ND	NA	ND	ND	ND	**204**	ND	ND	ND	**1,900**	Fixed
MW-13	4/5/2012	Results	46.1	22.8	ND	**472**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	809	**253**	ND	2,530	9.6	ND	93.4	ND	ND	ND	ND	25	ND	ND	6.8	ND	ND	-	ND	ND	ND	ND	ND	16.3	ND	ND	ND	100	Fixed
MW-13	09/13/12	Results	**267**	**140**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.3	ND *	ND *	ND *	ND *	28.2	ND	842	ND	ND	ND	ND	141	6.4	77.6	128	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-13	4/10/2013	Results	19.0[2]	6.5	ND	**368**[2]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.5[2]	621	**88.6**[2]	ND	2,030	4.8[2]	NA	NA	ND	ND	ND	ND	ND	ND	4.5	NA	ND	ND	-	ND	NA	ND	ND	ND	16	NA	ND	ND	128	Fixed
MW-13	12/9/2013	Results	**324**	95.1	ND	**748**	ND	ND	ND	ND	ND	ND	69.8	ND	ND	ND	ND	ND	ND	5.1	2,030	**531**	ND	11,900	18.3	ND	ND	ND	ND	ND	ND	97.4	ND	50.7	ND	ND	ND	-	ND	ND	ND	ND	ND	**428**	ND	ND	ND	**1,990**	Fixed
MW-13	5/1/2014	Results	**562**	**143**	ND	**717**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,200	**812**	ND	6,540	ND	ND	ND	ND	ND	ND	ND	158	ND	55.4	ND	ND	ND	-	ND	ND	ND	ND	ND	**397**	ND	ND	ND	**2,590**	Fixed
MW-13	4/22/2015	Results	**544**[2]	**180**	ND	**813**	ND	ND	<5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.4[2]	2,800	**808**	ND	9,770	25.2	ND	ND	ND	ND	ND	<5.0	188[2]	<5.0	65.7[2]	ND	<5.0	<5.0	-	ND	ND	<5.0	<2.0	<50.0	**1,070**	ND	ND	ND	**3,660**	Fixed
MW-14	11/16/2006	Results	NA	NA	NA	ND	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	ND	ND *	ND	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	35.2	NA	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
MW-14	10/12/2011	Results	NA	NA	NA	ND	ND *	ND *	NA	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	NA	NA	ND	ND *	ND	NA	ND *	NA	ND *	ND *	NA	NA	NA	NA	NA	NA	NA	NA	-	ND *	ND *	NA	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
MW-14	09/11/12	Results	<1.0	<1.0	NA	ND	ND *	ND *	<1.0	NA	NA	ND *	ND	ND *	ND *	ND	<1.0	ND *	NA	ND	NA	ND	ND *	ND	<1.0	ND *	ND	ND *	ND *	NA	NA	ND	ND	ND	ND	NA	ND	-	ND *	ND *	NA	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
MW-15	11/16/2006	Results	**410**	**123**	ND	**6,940**	ND *	ND *	ND	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	ND	NA	**747**	ND *	16,400	19.2	ND *	1,600	ND *	ND *	NA	ND	161	ND	50.7	200	ND	ND	-	ND *	ND	ND	ND	ND *	**861**	ND *	ND *	ND *	**1,800**	Fixed
MW-15	10/18/2011	Results	**286**	99.1	ND	**4,420**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND *	NA	ND	4,020	**459**	ND	15,200	ND	NA	1,130	ND	ND	ND	ND	103	ND	40.5	250	ND	ND	-	ND *	NA	ND	ND	ND	**519**	ND	ND	ND	**1,390**	Fixed
MW-15	4/6/2012	Results	**315**	90.1	ND	**5,690**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,310	**557**	ND	12,100	ND	ND	1,400	ND	ND	ND	ND	102	ND	46.1	221	ND	ND	-	ND	ND	ND	ND	ND	**462**	ND	ND	ND	**1,620**	Fixed
MW-15	09/13/12	Results	**405**	**111**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	1590	ND	ND	ND	ND	127	ND	62.4	278	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-15	4/11/2013	Results	**241**[2]	76.3[2]	ND	**3,930**[2]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	4,140[2]	**476**[2]	ND	11,900	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	-	ND	NA	ND	ND	ND	**209**[2]	NA	ND	ND	**1,200**	Fixed
MW-15	12/9/2013	Results	**215**	69.2	ND	**2,280**	ND	ND	ND	ND	ND	ND	114	ND	ND	ND	ND	ND	ND	ND	2,690	**318**	ND	7,150	ND	NA	NA	ND	ND	ND	ND	ND	ND	37.9	NA	ND	ND	-	ND	NA	ND	ND	ND	126	ND	ND	ND	**752**	Fixed
MW-16	11/16/2006	Results	6.2	6.3	12.3	**934**	ND *	ND *	ND	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	ND	NA	**118**	ND *	3,940	12.3	ND *	31.2	ND *	ND *	NA	ND	13	ND	21.2	45	ND	14	-	ND *	5	ND	ND	ND *	35.2	ND *	ND *	ND *	76.2	Fixed
MW-16	10/18/2011	Results	19.5	30.2	ND	**851**	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	769	**207**	ND	11,900	15.9	NA	89.2	ND	ND	ND	ND	64.2	2.6	33.1	22.2	ND	1.7	-	ND	NA	ND	ND	ND	62	ND	ND	ND	111	Fixed
MW-16	4/5/2012	Results	ND	13.4	ND	**820**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	700	**209**	ND	2,860	11.7	NA	ND	ND	ND	ND	ND	30.2	ND	25.2	7.9	ND	ND	-	ND	NA	ND	ND	ND	16.1	ND	ND	ND	17.6	Fixed
MW-16	09/13/12	Results	11.0	14.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	16.3	NA	46.0	ND	ND	ND	ND	29.5	<5.0	30.3	<5.0	ND	ND	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-16	4/10/2013	Results	ND	ND	ND	**433**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	715	**148**	ND	2,700	8.8	NA	NA	ND	ND	ND	ND	ND	ND	19.3	NA	ND	ND	-	ND	NA	ND	ND	ND	ND	NA	ND	ND	ND	Fixed
MW-16	12/5/2013	Results	4.6	2.0	ND	**729**	ND	ND	ND	ND	ND	ND	ND	ND	6.1	ND	ND	ND	ND	ND	449	**117**	ND	3,100	13.2	NA	NA	ND	ND	ND	ND	17.4	1.7	24.3	NA	ND	1.6	-	ND	NA	ND	ND	ND	6.6	ND	ND	ND	41.3	Fixed
MW-16	5/1/2014	Results	8.2	17.5	ND	**520**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	742	**208**	ND	4,820	14.6	NA	NA	ND	ND	ND	ND	54.0	ND	30.9	NA	ND	ND	-	ND	NA	ND	ND	ND	31.5	ND	ND	ND	47.4	Fixed
MW-16	4/21/2015	Results	32.9	25.5	ND	**1,180**	ND	ND	<10.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<10.0	760	**295**	ND	4,550	12.8	NA	NA	ND	ND	ND	<10.0	<40.0	<10.0	23.9	NA	<10.0	<10.0	-	ND	NA	<10.0	<4.0	<100	133	ND	ND	ND	283	Fixed

TABLE 12
OTHER CONTAMINANTS DETECTED IN WATER SAMPLES - WELLS

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Sample ID	Collected Date	Parameter	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Acetone	Benzene	Bromochloromethane	Bromomethane	cis-1,2-Dichloroethene	Chlorobenzene	Chloroethane	Chloroform	Chloromethane	2-Chlorotoluene	4-Chlorotoluene	1,1 Dichloroethane	1,2-Dichloroethane	1,2-Dibromomethane	trans-1,3-Dichloro-1-propene	Dichlorodifluoromethane	Diesel Range Organics	Ethylbenzene	Ethyl Ether	Gasoline Range Organics	Isopropylbenzene (Cumene)	Lead	m&p-Xylene	Methyl Ethyl Ketone (MEK)	Methylene Chloride	Methyl Isobutyl Ketone or 4-methyl-2-pentanone (MIBK)	Methyl-tert-butyl ether	Naphthalene	n-Butylbenzene	n-Propylbenzene	o-Xylene	p-Isopropyltoluene	sec-Butylbenzene	tert-butylbenzene	Styrene	Sulfate	Tetrachloroethene	Trichloroethene	Tetrahydrofuran	Toluene	1,1,2-Trichloroethylene	1,2,3-Trichloropropane	Vinyl Chloride	Xylene (Total)	Lab Type
		Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	-	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	---
MW-17	11/16/2006	Results	ND	ND	51.9	**102**	ND *	ND *	ND	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	8.6	NA	13.2	ND *	896	3	ND *	ND	30.6	ND *	NA	ND	3.5	ND	3	ND	ND	ND	-	ND *	39	ND	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
MW-17	10/14/2011	Results	ND	8	ND	**122**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7	270	15.8	ND	1,570	4.8	NA	3.9	ND	ND	ND	ND	ND	1.1	5.1	ND	ND	ND	-	ND	40	ND	ND	ND	3.5	ND	ND	ND	4.7	Fixed
MW-17	4/4/2012	Results	ND	ND	ND	**15.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.2	118	1.9	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-17	09/11/12	Results	<1.0	3.7	ND	ND	ND	ND	<1.0	NA	NA	ND *	ND	ND *	ND *	ND	ND	ND	ND	5.9	NA	ND	ND	ND	2.3	NA	2.7	ND	ND	ND	ND	ND	1.9	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-17	4/9/2013	Results	ND	1.6	20.3	**117**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	10.1	495	10.6	ND	1,250	2.5	NA	NA	ND	ND	ND	ND	ND	1.6	NA	ND	ND	ND	-	ND	NA	ND	ND	ND	1.4	NA	ND	ND	3.4	Fixed
MW-17	12/4/2013	Results	ND	ND	ND	**33**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.9	117	ND	ND	389	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-17	4/30/2014	Results	ND	ND	ND	**45.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.4	ND	3.8	ND	561	1.1	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-17	4/21/2015	Results	<1.0	11.9	ND	**242**	ND	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.5	630	**97.7**	ND	3,310	12.7	NA	NA	ND	ND	ND	<1.0	<4.0	1.5	15.5	NA	<1.0	2.1	-	ND	NA	<1.0	<0.40	<10.0	4.8	ND	ND	ND	12.5	Fixed
MW-18	11/16/2006	Results	**289**	18.4	63.6	**232**	ND *	ND *	6.4	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	ND	NA	**323**	ND *	4,770	24.3	ND *	266	26.9	ND *	NA	ND	30.6	11.4	72.3	90.3	1.5	4.6	-	ND *	7.4	3	ND	ND *	86.6	ND *	ND *	ND *	**356**	Fixed
MW-18	10/13/2011	Results	ND	ND	ND	ND	ND	ND	3.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	178	ND	ND	397	2.3	NA	ND	ND	ND	ND	ND	ND	7.4	ND	ND	1.1	-	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	Fixed
MW-18	4/3/2012	Results	16.3	1.4	ND	**2.7**	ND	ND	29.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	291	21.5	ND	784	7.8	NA	9	ND	ND	ND	ND	ND	1.8	15.7	1	ND	2.2	-	ND	NA	73.7	**15.4**	ND	1.7	ND	ND	ND	10.0	Fixed
MW-18	09/11/12	Results	1.1	<1.0	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	NA	ND	ND	NA	16.0	NA	<2.0	ND	ND	ND	ND	<4.0	6	34.6	<1.0	ND	4.8	-	ND	NA	ND	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
MW-18	4/9/2013	Results	45	7.2	ND	**12.6**	ND	ND	12.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	699	**53.4**	ND	1,690	7.5	NA	NA	ND	ND	ND	ND	ND	8.9	2.2	18.5	NA	ND	2.4	-	ND	NA	20.4	**5.2**	ND	7.1	NA	ND	ND	52.3	Fixed
MW-18	12/4/2013	Results	**109**	26.3	ND	**26.7**	ND	ND	4.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,050	**88.8**	ND	2,130	17.2	NA	NA	ND	ND	ND	ND	19.1	6.9	53.5	NA	1.1	4.6	-	ND	NA	ND	0.45	14.3	8.7	ND	ND	ND	125.0	Fixed
MW-18	4/30/2014	Results	48.0	4.3	ND	**16.5**	ND	ND	5.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	313	**56.8**	ND	1,670	11.4	NA	NA	ND	ND	ND	ND	ND	4.2	36.5	NA	ND	3.3	-	ND	NA	ND	ND	ND	5.4	ND	ND	ND	46.2	Fixed
MW-18	4/21/2015	Results	<1.0	<1.0	ND	**2.1**	ND	ND	33.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<110	<1.0	ND	<100	1.1	NA	NA	ND	ND	ND	<1.0	<4.0	<1.0	2.2	NA	<1.0	<1.0	-	ND	NA	**74.6**	**16.6**	<10.0	<1.0	ND	ND	ND	<3.0	Fixed
MW-19	1/29/2007	Results	**521**	**166**	31.4	**2,260**	ND *	ND *	ND	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	ND	2,000	**889**	ND *	12,700	31.6	ND *	2,580	ND *	ND *	ND *	30.6	ND	197	20.8	80.3	913	ND	ND	-	ND *	ND	ND	ND	ND *	**1,100**	ND *	ND *	ND *	**3,510**	Fixed
MW-19	10/14/2011	Results	13.2	ND	ND	**508**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	323	**133**	ND	2,570	5.3	NA	53.7	ND	ND	ND	ND	12.2	ND	10.4	7.3	ND	ND	-	ND	NA	ND	ND	ND	21.7	ND	ND	ND	61	Fixed
MW-19	4/5/2012	Results	12.4	3.3	ND	**107**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150	39	ND	476	1.1	NA	66.9	ND	ND	ND	ND	6.2	ND	2.5	19.2	ND	ND	-	ND	NA	ND	ND	ND	26.3	ND	ND	ND	86	Fixed
MW-19	09/12/12	Results	67.0	23.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**4.2**	ND	ND	<1.0	NA	ND	ND	NA	9.6	NA	256	ND	ND	ND	ND	45.5	1.6	21.3	109	ND	1.0	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-19	4/9/2013	Results	**106**	28.2	ND	**1,210**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	1,670	**363**	ND	6,700	8.5	NA	NA	ND	ND	ND	ND	51.4	ND	21.2	NA	ND	ND	-	ND	NA	ND	ND	ND	**298**	NA	ND	ND	**702**	Fixed
MW-19	12/5/2013	Results	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	737	ND	ND	4,400	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-19	5/1/2014	Results	3.0	ND	ND	**19.9**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10.8	ND	172	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	-	ND	NA	ND	ND	ND	4.1	ND	ND	ND	21.5	Fixed
MW-19	4/21/2015	Results	16.4	4.9	ND	**305.0**	ND	ND	<2.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<2.0	270	**94.3**	ND	1,370	3.1	NA	NA	ND	ND	ND	<2.0	9.8	<2.0	6	NA	<2.0	<2.0	-	ND	NA	<2.0	<0.80	<20.0	17.0	ND	ND	ND	74.0	Fixed
MW-20	10/3/2007	Results	ND	ND	ND	1.6	ND *	ND *	ND	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	ND	NA	ND	ND *	NA	ND	ND *	ND	ND *	ND *	NA	ND	ND	ND	ND	NA	ND	ND	-	ND *	ND	ND	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
MW-20	10/12/2011	Results	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	NA	ND	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-20	09/11/12	Results	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	2.7	NA	ND	ND	NA	1.5	NA	ND	ND	ND	ND	ND	ND	ND	2.2	ND	ND	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-20	4/9/2013	Results	ND	ND	ND	**39.3**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	4.8	270	ND	ND	241	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	-	ND	NA	ND	ND	ND	2.4	NA	ND	ND	ND	Fixed
MW-20	12/3/2013	Results	ND	3.1	ND	**207**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.1	240	26.2	ND	1,620	3.3	NA	NA	ND	ND	ND	ND	ND	ND	2	NA	ND	ND	-	ND	NA	ND	ND	ND	9.2	ND	ND	ND	13	Fixed
MW-20	4/21/2015	Results	<1.0	<1.0	ND	<1.0	ND	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.3	120	<1.0	ND	<100	<1.0	NA	NA	ND	ND	ND	<1.0	<4.0	<1.0	<1.0	NA	<1.0	<1.0	-	ND	NA	<1.0	<0.40	<10.0	<1.0	ND	ND	ND	<3.0	Fixed
MW-21	10/3/2007	Results	ND	ND	5.8	ND	ND *	ND *	ND	NA	NA	ND *	ND	ND *	ND *	ND	NA	ND *	NA	ND	NA	ND	ND *	NA	ND	ND *	ND	5.9	ND *	NA	ND	ND	ND	ND	NA	ND	ND	-	ND *	ND	ND	ND	ND *	ND	ND *	ND *	ND *	ND	Fixed
MW-21	12/2/2013	Results	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-22	4/9/2013	Results	2.2	ND	ND	**8.6**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	3,620	1.1	ND	141	2.6	NA	NA	ND	ND	ND	ND	ND	1.6	NA	ND	ND	1.5	ND	NA	ND	ND	ND	NA	ND	ND	ND	9.9	Fixed
MW-22	12/4/2013	Results	ND	ND	ND	**3.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1,110	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	-	ND	NA	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-22	4/21/2015	Results	<1.0	<1.0	ND	**5.0**	ND	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	2,100	<1.0	ND	<100	<1.0	NA	NA	ND	ND	ND	<1.0	<4.0	<1.0	<1.0	NA	<1.0	<1.0	-	ND	NA	<1.0	<0.40	<10.0	<1.0	ND	ND	ND	<3.0	Fixed
MW-23	4/24/2013	Results	99.3	22.7	48.9	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	367	2.3	ND	692	1.0	NA	NA	80.9	ND	47.8	ND	41.1	9.6	6.6	NA	7.2	2.8	ND	ND	NA	8.8	ND	ND	3.1	NA	ND	ND	17.3	Fixed
MW-23	12/3/2013	Results	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	9.2	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-23	4/28/2014	Results	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	8.4	ND	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-23	4/20/2015	Results	<1.0	<1.0	ND	<1.0	ND	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<1.0	<110	<1.0	ND	<100	<1.0	NA	NA	ND	ND	ND	<1.0	<4.0	<1.0	<1.0	NA	<1.0	<1.0	ND	ND	NA	**6.3**	<0.40	<10.0	<1.0	ND	ND	ND	<3.0	Fixed
MW-24	4/24/2013	Results	**158**	35.3	39.5	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	ND	698	2.9	ND	962	1.6	NA	NA	45.2	ND	19.6	ND	27.3	16.9	11.5	NA	8.2	4.7	ND	ND	NA	6.2	1.6	ND	2.8	NA	ND	**0.44**	23.6	Fixed
MW-24	12/3/2013	Results	ND	ND	ND	ND	ND	ND	1.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	3.1	1.0	ND	ND	ND	ND	**0.50**	ND	Fixed
MW-24	4/28/2014	Results	ND	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND	ND	ND	ND	NA	ND	ND	ND	ND	NA	4.0	1.1	ND	ND	ND	ND	ND	ND	ND	Fixed
MW-25	4/24/2013	Results	3.1	ND	ND	**85.7**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	1.6	229	29	ND	703	2.5	NA	NA	ND	ND	ND	ND	ND	ND	7.2	NA	ND	ND	ND	ND	NA	ND	ND	ND	4.3	NA	ND	ND	4.1	Fixed
MW-25	12/3/2013	Results	**588**	**148**	ND	**913**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,210	**681**	ND	10,900	21.4	NA	NA	ND	ND	ND	ND	155	ND	64.2	NA	ND	ND	ND	ND	NA	ND	ND	ND	**1,490**	ND	ND	ND	**3,560**	Fixed
MW-25	4/28/2014	Results	**255**	47	ND	**216**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	863	**322**	ND	4,710	12.9	NA	NA	ND	ND	ND	ND	63.8	ND	35.0	NA	ND	ND	ND	ND	NA	ND	ND	ND	85.4	ND	ND	ND	**854**	Fixed
MW-25	4/22/2015	Results	**689**	**201**	ND	**911**	ND	ND	<10.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<10.0	3,300	**980**	ND	12,600	30.1	NA	NA	ND	ND	ND	<10.0	225	<10.0	84.5	NA	<10.0	<10.0	ND	ND	NA	<10.0	<4.0	<100	**1,090**	ND	ND	ND	**4,270**	Fixed
MW-26	12/5/2013	Results	**529**	**167**	1,150	**5,960**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,700	**1,210**	ND	26,300	21.7	NA	NA	162	ND	ND	ND	148	ND	54.7	NA	ND	ND	ND	ND	NA	ND	ND	3,220	**552**	ND	ND	ND	**5,360**	Fixed
MW-26	5/1/2014	Results	**384**	**117**	ND	**6,170**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,280	**1,370**	ND	15,500	ND	NA	NA	ND	ND	ND	ND	ND	ND	62.8	NA	ND	ND	ND	ND	NA	ND	ND	2,320	99.3	ND	ND	ND	**4,140**	Fixed
MW-26	11/3/2014	Results	**801**	**191**	ND	**3,780**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3,410	**2,130**	ND	25,900	ND	NA	NA	ND	ND	ND	ND	ND	ND	120	NA	ND	ND	ND	ND	NA	ND	ND	ND	**510**	ND	ND	ND	**6,950**	Fixed
MW-26	4/22/2015	Results	**464**	**114**	ND	**3,200**	ND	ND	<25.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<25.0	2,300	**1,570**	ND	9,710	27.6	NA	NA	ND	ND	ND	<25.0	<100	<25.0	76.3	NA	<25.0	<25.0	ND	ND	NA	<25.0	<10.0	805	59.7	ND	ND	ND	**3,620**	Fixed
MW-27	12/5/2013	Results	**699**	**236**	366	**275**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.3**	ND	ND	28.7	3,330	**758**	ND	12,200	33.7	NA	NA	ND	ND	ND	ND	166	9.2	94.5	NA	2.6	5	ND	1.2	NA	ND	ND	825	**251**	ND	ND	ND	**2,190**	Fixed
MW-27	5/1/2014	Results	**960**	**238**	ND	**316**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15.8	3,710	**1,110**	ND	15,200	34.9	NA	NA	68.5	ND	ND	ND	273	5.6	88.4	NA	ND	ND	ND	ND	NA	ND	ND	78.7	**242**	ND	ND	ND	**4,050**	Fixed
MW-27	10/29/2014	Results	**759**	**231**	ND	**454**	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22.9	2,990	**971**	ND	17,300	38.0	NA	NA	ND	ND	ND	ND	217	ND	96.4	NA	ND	ND	ND	ND	NA	ND	ND	ND	**307**	ND	ND	ND	**2,710**	Fixed
MW-27	4/22/2015	Results	**1,040**	**280**	ND	**359**	ND	ND	<10.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22.4	3,500	**1,150**	ND	12,300	44.7	NA	NA	ND	ND	ND	<10.0	232	<10.0	119	NA	<10.0	<10.0	ND	ND	NA	<10.0	<4.0	<100	**272**	ND	ND	ND	**3,240**	Fixed
MW-28	4/22/2015	Results	**944**	**287**	ND	**393**	ND	ND	<1.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.3	5,000	**586**	ND	12,600	18.0	NA	NA	ND	ND	ND	<1.0	248	3.2	41.5	NA	3	2.9	ND	ND	NA	<1.0	<0.40	<10.0	**474**	ND	ND	ND	**5,670**	Fixed
MW-28	9/30/2015	Results	**1,000**[2]	**292**[2]	127	**497**[2]	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	**1.7**	ND	ND	6.9	4,700	**733**[2]	ND	18,400[2]	20.6	NA	NA	106	ND	56.7	<50.0	269[2]	4.5	50	NA	2.3	3	ND	3.3	NA	ND	ND	ND	**1,280**[2]	ND	ND	ND	**5,690**[2]	Fixed
		HRL/HBV [1]	**100**	**100**	**4,000**	**2**	**NE**	**10**	**70**	**100**	**NE**	**60**	**NE**	**NE**	**NE**	**100**	**1**	**NE**	**NE**	**1,000**	**NE**	**50**	**1,000**	**NE**	**300**	**NE**	**NE**	**4,000**	**NE**	**300**	**NE**	**300**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**NE**	**5**	**NE**	**200**	**5** *(1)*	**40**	**0.2**	**300**	---

Notes

µg/L	=	Micrograms per liter which is equivalent to parts per billion (ppb)
NA	=	Not analyzed
NE	=	Not established
ND*	=	Assumed non-detect based on not in historical table or not reported
HRL	=	Minnesota Department of Health (MDH) Health Risk Limit
*	=	Samples collected by Braun Intertec
Bold	=	Concentration exceeds MDH HRL/HBV

(1) See http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html for list of current HRLs
(2) Analyte detected in a duplicate sample of the same well.
- result assumed to be non-detect based on that it was not previously reported

TABLE 13
NATURAL ATTENUATION

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Monitoring Well	Date Measured	Redox Potential (MV)	pH	Temp. °C	D.O. mg/l	Sulfide ppm	Nitrate ppm	FE (Iron) ppm	Sulfate mg/L	Mn mg/L	Calcium	Total Hardness by 2340B
MW-8	01/08/97	---	7.18	8.6	1.74	---	0.02	---	14	---	---	---
	05/01/97	---	4.98	9.1	2.53	---	---	---	60	---	---	---
	03/04/98	---	6.52	8.2	3.26	---	ND	---	<50	---	---	---
	04/16/02	-123	7.6	8.2	---	---	---	---	---	---	---	---
	07/05/02	-58.5	6.79	10.22	0.97	---	---	---	---	---	---	---
	09/17/02	-55.5	7.09	14.84	0.67	---	---	---	---	---	---	---
	12/10/02	16.3	6.73	11.6	1	---	---	---	---	---	---	---
	04/09/03	-79	7.04	10.38	0.86	---	---	---	---	---	---	---
	10/22/03	-33.1	6.99	13.18	0.94	---	---	---	---	---	---	---
	12/17/03	-29.2	6.51	12.16	1.03	0.02	3	4.2	---	---	---	---
	03/16/04	-52.4	6.66	7.18	1.95	0.2	5.5	---	---	---	---	---
	08/31/04	170.5	---	12.75	1.46	---	---	---	---	---	---	---
	12/07/04	-72.4	5.04	10.45	3.95	---	---	---	14.9	---	---	---
	03/15/05	-79.1	6.96	7.94	2.67	---	---	---	---	---	---	---
	10/04/05	-6.6	6.64	13.75	0.62	0.03	6.5	13	20	---	---	---
	11/15/06	-66	6.93	11.81	1.74	0.16	5.5	6.1	16.1	---	---	---
	09/23/08	-108.9	6.53	14.4	5.93	---	0.06	1.21	0.0	---	---	---
	04/27/10	-112	6.77	6.98	4.66	---	8	3.3+	8.0	---	---	---
	12/03/10	-141.8	6.52	11.89	3.48	---	---	---	---	---	---	---
	04/27/11	-88.1	6.70	6.42	0.16	---	---	---	---	---	---	---
	10/19/11	-90.1	6.60	13.15	0.77	---	---	---	---	---	---	---
	04/06/12	-75	6.48	7.74	7.51	---	---	---	---	---	---	---
	09/13/12	-101.4	6.64	15.69	0.77	---	---	---	---	---	---	---
	04/11/13	-109.9	6.68	5.79	0.34	---	---	---	---	---	---	---
	12/09/13	-84.0	6.70	9.71	0.38	---	---	---	---	---	---	---
	12/09/13	-84.0	6.70	9.71	0.38	---	---	---	---	---	---	---
	11/03/14	-72.1	6.64	13.40	4.83	---	---	---	---	---	---	---
	10/02/15	-85.5	6.56	15.71	0.65	---	---	---	---	---	---	---
MW-9	01/08/97	---	7.05	7.9	1.68	---	0.02	---	<10	---	---	---
	05/01/97	---	5.12	9.3	1.88	---	---	---	<50	---	---	---
	04/16/02	FP	FP	FP	FP	---	---	---	---	---	---	---
	07/05/02	-104.7	7.06	10.48	0.2	---	---	---	---	---	---	---
	09/17/02	-123	7	13.32	0.5	---	---	---	---	---	---	---
	12/10/02	-77	6.85	11.69	0.6	---	---	---	---	---	---	---
	04/09/03	-103.3	7.06	10.27	0.42	---	---	---	---	---	---	---
	10/22/03	-91	7.08	12.38	0.32	---	---	---	---	---	---	---
	12/17/03	-84	6.49	10.51	0.88	0.02	3	>15	---	---	---	---
	03/16/04	FP	FP	FP	FP	FP	FP	FP	---	---	---	---
	08/31/04	105.2	---	13.06	2.13	---	---	---	---	---	---	---
	12/07/04	-83	5.06	10.71	4.37	---	---	---	<2.5	---	---	---
	03/15/05	-83.4	6.9	9.55	2.13	---	---	---	---	---	---	---
	10/04/05	-31.4	7.24	11.79	0.63	0.23	7	13.2	<0.17	---	---	---
	11/15/06	-77.1	6.96	12.32	1.41	0.04	6.0	11.0	<2.5	---	---	---
	09/23/08	-121.4	6.62	12.84	2.5	---	0.0	3.2	0.0	---	---	---
	04/27/10	-129	6.92	9.53	4.01	---	27.0	2.6	34.0	---	---	---
	12/01/10	-110.8	6.73	11.42	1.8	---	---	2.6	---	4.1	---	---
	04/28/11	-61.9	6.51	9.34	3.1	---	---	3.3	---	5.0	192000.0	787000.0
	10/19/11	-86.8	6.74	11.55	0.99	---	---	---	---	---	---	---
	04/06/12	purged dry										
	09/13/12	-123.8	7.1	13.57	2.71	---	---	---	---	---	---	---
	04/11/13	-172.3	6.84	8.53	0.47	Well Purged Dry						
	12/09/13	-120.3	6.94	8.44	0.39	---	---	---	---	---	---	---
	10/30/14	-108.1	6.84	10.91	4.71	---	---	---	---	---	---	---
	10/02/15	-149.7	6.62	12.81	0.93	---	---	---	---	---	---	---

TABLE 13
NATURAL ATTENUATION

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Monitoring Well	Date Measured	Redox Potential (MV)	pH	Temp. °C	D.O. mg/l	Sulfide ppm	Nitrate ppm	FE (Iron) ppm	Sulfate mg/L	Mn mg/L	Calcium	Total Hardness by 2340B
MW-10	04/16/02	FP	FP	FP	FP	---	---	---	---	---	---	---
	07/05/02	FP	FP	FP	FP	---	---	---	---	---	---	---
	09/17/02	FP	FP	FP	FP	---	---	---	---	---	---	---
	12/10/02	FP	FP	FP	FP	---	---	---	---	---	---	---
	04/09/03	FP	FP	FP	FP	---	---	---	---	---	---	---
	10/22/03	FP	FP	FP	FP	---	---	---	---	---	---	---
	12/17/03	FP	FP	FP	FP	FP	FP	FP	---	---	---	---
	03/16/04	FP	FP	FP	FP	FP	FP	FP	---	---	---	---
	08/31/04	FP	FP	FP	FP	FP	FP	FP	---	---	---	---
	12/07/04	-62	5.12	9.55	5.03	---	---	---	<2.5	---	---	---
	03/15/05	FP	FP	FP	FP	---	---	---	---	---	---	---
	10/04/05	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	11/15/06	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	09/23/08	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	04/27/10	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	12/03/10	-118.1	6.6	11.37	4.27	---	---	---	---	---	---	---
	04/27/11	-82.3	6.79	7.64	0.3	---	---	---	---	---	---	---
	12/10/13	-89.0	6.68	7.95	2.28	Product drawn into well - parameters not stable						
MW-11	01/08/97	---	7.27	6.7	1.6	---	0.46	---	82	---	---	---
	05/01/97	---	7.18	8.9	3.93	---	---	---	50	---	---	---
	03/04/98	---	6.55	7.8	2.02	---	ND	---	<50	---	---	---
	04/16/02	-96.5	6.98	8.6	---	---	---	---	---	---	---	---
	07/05/02	50.3	7.1	9.48	0.83	---	---	---	---	---	---	---
	09/17/02	-25.1	7.04	12.81	1.2	---	---	---	---	---	---	---
	12/10/02	120.8	6.96	7.96	0.76	---	---	---	---	---	---	---
	04/09/03	109	7.1	9.64	0.81	---	---	---	---	---	---	---
	10/22/03	-20	7.23	10.55	1.03	---	---	---	---	---	---	---
	12/17/03	7.1	6.59	7.66	1.26	0.1	4	0.7	---	---	---	---
	03/16/04	-67.1	6.73	7.13	3.36	0.15	6	9.1	---	---	---	---
	08/31/04	181.2	---	11.04	9.58	---	---	---	---	---	---	---
	12/07/04	4.9	5.15	10.09	4.58	---	---	---	52.7	---	---	---
	03/15/05	162.7	7.09	8.54	2.76	---	---	---	---	---	---	---
	10/04/05	150.4	7.54	11.47	1.58	0.0	0.0	0.0	60	---	---	---
	11/15/06	90.7	7.08	11.0	4.21	0.1	8.0	0.6	63.7	---	---	---
	09/23/08	-88	6.59	12.0	9.02	---	0.07	0.04	50	---	---	---
	04/27/10	-40.3	6.99	8.5	5.69	---	10.00	0.98	80+	---	---	---
	11/30/10	-84.2	6.78	10.7	6.9	---	---	---	---	---	219000	747000
	04/25/11	128.5	6.83	8.1	1.54	---	---	---	---	---	---	---
	10/11/11	80.4	6.68	10.2	0.94	---	---	---	---	---	---	---
	04/03/12	97.6	6.97	10.6	3.27	---	---	---	---	---	---	---
	09/11/12	71.8	6.89	11.8	2.04	---	---	---	---	---	---	---
	04/09/13	-179.8	6.9	8.36	0.32	Well Purged Dry						
	12/02/13	Well Not Sampled										

TABLE 13
NATURAL ATTENUATION

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Monitoring Well	Date Measured	Redox Potential (MV)	pH	Temp. °C	D.O. mg/l	Sulfide ppm	Nitrate ppm	FE (Iron) ppm	Sulfate mg/L	Mn mg/L	Calcium	Total Hardness by 2340B
MW-12	01/08/97	---	7.25	7	2.08	---	<0.02	---	33	---	---	---
	05/01/97	---	6.14	9.8	3.38	---	---	---	<50	---	---	---
	03/04/98	---	6.62	8	1.78	---	ND	---	<50	---	---	---
	04/16/02	-152.8	7.4	9.4	---	---	---	---	---	---	---	---
	07/05/02	-84.7	7.06	9.52	0.83	---	---	---	---	---	---	---
	09/17/02	-90.8	6.93	12.17	1.27	---	---	---	---	---	---	---
	12/10/02	-59.2	6.84	9.5	1.01	---	---	---	---	---	---	---
	04/09/03	-48.7	7.01	10.52	0.79	---	---	---	---	---	---	---
	10/22/03	-55.1	7.14	11.79	1.38	---	---	---	---	---	---	---
	12/17/03	-47.9	6.54	7.22	0.69	0.59	7	13	---	---	---	---
	03/16/04	-43.8	6.76	7.77	1.73	10.5	0.17	9.9	---	---	---	---
	08/31/04	170.5	---	8.49	1.83	---	---	---	---	---	---	---
	12/07/04	-126.1	5.26	10.09	3.93	---	---	---	<2.5	---	---	---
	03/15/05	-45.4	6.94	8.32	2.71	---	---	---	---	---	---	---
	10/04/05	-16.7	7.08	11.88	0.5	0.05	3.5	5.9	75	---	---	---
	11/15/06	-44.9	7.09	9.8	1.8	0.13	7.5	4.6	5.3	---	---	---
	09/23/08	-77.2	6.6	11.27	7.02	---	0.13	1.69	0.0	---	---	---
	04/27/10	-90.7	6.83	9.83	6.57	---	3	2.8	31.0	---	---	---
	12/01/10	-123.3	6.69	10.52	3.15	---	---	---	---	---	---	---
	04/26/11	-54.4	6.96	7.83	2.47	---	---	---	---	---	---	---
	10/11/11	purged dry										
	04/05/12	purged dry										
	09/12/12	purged dry										
	04/10/13	-129.4	6.76	9.1	1.43	Well Purged Dry						
	12/04/13	-82.4	6.75	8.12	1.05	---	---	---	---	---	---	---
	04/30/14	-82.2	6.74	6.4	0.38	---	---	---	---	---	---	---
	10/29/14	-74.8	6.75	10.37	2.87	---	---	---	---	---	---	---
	04/21/15	-64.8	6.80	6.98	1.34	---	---	---	---	---	---	---
	09/30/15	-95.5	6.59	12.42	0.77	---	---	---	---	---	---	---
MW-13	04/16/02	-69.1	7.3	9.9	---	---	---	---	---	---	---	---
	07/05/02	-101.1	7.04	10.2	0.74	---	---	---	---	---	---	---
	09/17/02	-81.6	6.99	13.2	1.56	---	---	---	---	---	---	---
	12/10/02	-35.1	6.86	9.06	2.15	---	---	---	---	---	---	---
	04/09/03	-52.7	7.04	11.15	1.2	---	---	---	---	---	---	---
	10/22/03	-72.9	7.14	10.53	1.77	---	---	---	---	---	---	---
	12/17/03	-45.2	6.68	7.84	3.2	0.72	9.5	13.3	---	---	---	---
	03/16/04	-23.9	6.79	7.57	3.5	0.35	8.5	---	---	---	---	---
	08/31/04	114.2	---	12.92	1.76	---	---	---	---	---	---	---
	12/07/04	-124.4	5.73	10.96	3.17	---	---	---	<2.5	---	---	---
	03/15/05	-78.8	6.92	8.81	2.62	---	---	---	---	---	---	---
	10/04/05	-66.1	7.4	10.43	0.66	0.09	5.5	13.3	<0.17	---	---	---
	11/15/06	-115.5	7.13	10.42	1.06	0.00	4.5	44	<2.5	---	---	---
	09/23/08	-151.8	8.39	10.97	6.52	---	0	3.3	0.0	---	---	---
	04/27/10	-142.3	6.97	7.1	6.2	---	11	3.26	10.0	---	---	---
	12/02/10	-118.3	6.78	10.45	1.04	---	---	---	---	---	---	---
	04/27/11	-131.4	6.99	8.03	0.19	---	---	---	---	---	---	---
	10/11/11	-128.7	6.86	9.55	0.54	---	---	---	---	---	---	---
	04/05/12	-87.8	6.58	9.72	9.08	---	---	---	---	---	---	---
	09/13/12	-144.8	6.83	11.53	0.74	---	---	---	---	---	---	---
	04/10/13	-125.8	6.9	7.67	2.71	Well Purged Dry						
	12/09/13	-137.4	6.93	6.82	0.29	---	---	---	---	---	---	---
	05/01/14	-109.8	6.91	7.22	1.02	---	---	---	---	---	---	---
	10/30/14	-120.6	6.91	10.48	4.17	---	---	---	---	---	---	---
	04/22/15	-84.7	6.79	6.87	1.31	---	---	---	---	---	---	---
	09/30/15	-127.9	6.77	12.92	0.91	---	---	---	---	---	---	---

TABLE 13
NATURAL ATTENUATION

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Monitoring Well	Date Measured	Redox Potential (MV)	pH	Temp. °C	D.O. mg/l	Sulfide ppm	Nitrate ppm	FE (Iron) ppm	Sulfate mg/L	Mn mg/L	Calcium	Total Hardness by 2340B
MW-14	12/07/04	Well is dry										
	03/15/05	159.5	7.33	7.45	2.7	---	---	---	---	---	---	---
	10/04/05	139.4	7.66	7.26	3.87	0.17	10.0	1.0	28	---	---	---
	11/15/06	82.8	7.47	8.61	9.24	0.16	9.0	1.2	35.2	---	---	---
	09/23/08	-71.2	7.14	11.3	10.48	---	0.05	0.09	75	---	---	---
	04/27/10	19	7.1	8.58	5.93	---	9.00	1.19	71	---	---	---
	12/02/10	-73.3	7.06	9.05	2.69	---	---	---	---	---	---	---
	04/26/11	249.8	7.14	7.84	2.98	---	---	---	---	---	---	---
	10/11/11	66.8	7.03	9.94	1.02	---	---	---	---	---	---	---
	04/04/12	78.6	7.42	8.77	2.58	---	---	---	---	---	---	---
	09/11/12	45.0	7.21	10.8	1.82	---	---	---	---	---	---	---
MW-15	11/15/06	47.4	7.05	11.33	4.65	0.02	4.5	0.9	<2.5	---	---	---
	09/23/08	-125.5	6.68	11.06	5.82	---	0.19	2.6	0.0	---	---	---
	04/27/10	-138.1	6.87	10.05	3.81	---	42.00	3.3+	50.0	---	---	---
	12/02/10	-144.7	6.71	10.81	0.39	---	---	---	---	---	---	---
	04/27/11	-136.4	6.87	10.07	0.22	---	---	---	---	---	---	---
	10/18/11	146	6.77	10.88	0.41	---	---	---	---	---	---	---
	04/06/12	-123.3	6.37	11.63	4.06	---	---	---	---	---	---	---
	09/13/12	150.4	6.83	12.2	0.8	---	---	---	---	---	---	---
	04/11/13	-171.3	6.81	9.37	0.43	---	---	---	---	---	---	---
	12/09/13	-137.0	6.82	9.28	0.24	---	---	---	---	---	---	---
	10/30/14	-120.9	6.82	10.66	4.85	---	---	---	---	---	---	---
	10/01/15	-162.9	6.69	11.90	0.60	---	---	---	---	---	---	---
MW-16	11/15/06	42.8	6.89	10.22	5.88	0.2	6.0	1.3	5	---	---	---
	09/23/08	-54.2	6.97	12.92	6.87	---	0.01	0.86	0.00	---	---	---
	04/27/10	-79.4	6.82	7.49	8.18	---	4.00	1.94	7.00	---	---	---
	11/30/10	-138.7	6.85	9.89	0.51	---	---	---	---	---	---	---
	04/26/11	-11.8	6.84	5.95	0.42	---	---	---	---	---	---	---
	10/11/11	-43.5	6.73	9.52	0.63	---	---	---	---	---	---	---
	04/05/12	-42.8	6.64	7.12	8.0	---	---	---	---	---	---	---
	09/13/12	-63.4	6.87	11.19	0.7	---	---	---	---	---	---	---
	04/10/13	-122.4	6.72	5.74	0.44	---	---	---	---	---	---	---
	12/05/13	-74.7	6.82	6.13	0.81	---	---	---	---	---	---	---
	05/01/14	-86.2	6.78	5.56	0.33	---	---	---	---	---	---	---
	10/29/14	-33.5	6.78	9.95	3.50	---	---	---	---	---	---	---
	04/21/15	-39.8	6.74	6.22	1.31	---	---	---	---	---	---	---
	09/30/15	-73.8	6.67	9.96	1.26	---	---	---	---	---	---	---
MW-17	11/15/06	77.5	6.96	10.16	8.68	0.65	11.5	5.4	39	---	---	---
	09/23/08	-6.7	7.07	11.12	6.89	---	0.08	0.75	80	---	---	---
	04/27/10	30	6.94	8.58	3.37	---	12.00	1.65	75	---	---	---
	12/02/10	-91.5	6.59	10.31	1.39	---	---	---	---	---	---	---
	04/27/11	166.8	6.68	9.25	1.24	---	---	---	---	---	---	---
	10/11/11	30.2	6.5	9.39	1.81	---	---	---	---	---	---	---
	04/04/12	-9.8	6.89	13.63	4.76	---	---	---	---	---	---	---
	09/11/12	-10.2	6.62	11.48	2.05	---	---	---	---	---	---	---
	04/09/13	-80.1	6.81	10.12	0.64	---	---	---	---	---	---	---
	12/04/13	19.6	6.71	10.03	1.56	---	---	---	---	---	---	---
	04/30/14	-17.3	6.76	8.54	0.78	---	---	---	---	---	---	---
	10/28/14	77.1	6.71	10.77	2.48	---	---	---	---	---	---	---
	04/21/15	-25.5	6.7	9.46	1.71	---	---	---	---	---	---	---
	09/29/15	110.3	6.66	11.20	0.76	---	---	---	---	---	---	---

TABLE 13
NATURAL ATTENUATION

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Monitoring Well	Date Measured	Redox Potential (MV)	pH	Temp. °C	D.O. mg/l	Sulfide ppm	Nitrate ppm	FE (Iron) ppm	Sulfate mg/L	Mn mg/L	Calcium	Total Hardness by 2340B
MW-18	11/15/06	-43.3	6.98	11	1.53	0.61	10.5	13.1	7.4	---	---	---
	09/23/08	-88.1	6.99	16.16	4.37	---	0.01	3.3	7	---	---	---
	04/27/10	-19.6	6.84	8.52	7.51	---	7.00	2.4	29	---	---	---
	11/30/10	-154	7	10.59	0.38	---	---	---	---	---	---	---
	04/26/11	-44.9	7.03	8.08	3.4	---	---	---	---	---	---	---
	10/11/11	-84.1	6.94	11.05	0.83	---	---	---	---	---	---	---
	04/04/12	-98	7.14	10.82	4.56	---	---	---	---	---	---	---
	09/11/12	-93.8	6.91	13.24	1.06	---	---	---	---	---	---	---
	04/09/13	-138.1	7.03	9.27	2.31	Well Purged Dry						
	12/04/13	-101.1	6.95	10.29	1.36	---	---	---	---	---	---	---
	04/30/14	-50	6.89	6.41	0.5	---	---	---	---	---	---	---
	10/29/14	-91.4	6.93	10.95	2.70	---	---	---	---	---	---	---
	04/21/15	-76.8	7.09	7.16	2.32	---	---	---	---	---	---	---
	09/29/15	-136.7	7.12	12.79	0.37	---	---	---	---	---	---	---
MW-19	01/29/07	18.3	6.77	8.7	9.75	---	---	---	---	---	---	---
	09/23/08	-39.5	6.8	10.74	10.01	---	0.16	0.09	14	---	---	---
	04/27/10	-113.6	7.29	7.74	7.71	---	9	0.35	21	---	---	---
	12/03/10	89.4	6.72	10.12	2.84	---	---	---	---	---	---	---
	04/27/11	-8.9	6.99	7.91	0.49	---	---	---	---	---	---	---
	10/14/11	32.8	6.82	9.62	4.86	---	---	---	---	---	---	---
	04/05/12	-58.7	6.7	8.8	6.72	---	---	---	---	---	---	---
	09/12/12	-100.7	6.64	9.96	0.67	---	---	---	---	---	---	---
	04/09/13	-145.8	6.89	8.39	0.29	Well Purged Dry						
	12/05/13	-19.4	6.86	6.22	0.81	---	---	---	---	---	---	---
	05/01/14	2.3	6.97	5.45	1.52	---	---	---	---	---	---	---
	10/28/14	30.7	6.76	9.52	2.53	---	---	---	---	---	---	---
	04/21/15	-30.2	6.92	6.62	2.08	---	---	---	---	---	---	---
	09/29/15	105.4	6.81	10.58	0.64	---	---	---	---	---	---	---
MW-20	09/23/08	-14.5	6.93	12.53	4.05	---	0.8	0.24	19	---	---	---
	04/27/10	73.8	6.77	8.4	4.78	---	8	1.25	49	---	---	---
	12/02/10	43.8	6.75	10.04	5.15	---	---	---	---	---	---	---
	04/26/11	166.9	6.87	8.42	1.57	---	---	---	---	---	---	---
	10/11/11	-1.8	6.72	10.6	2.41	---	---	---	---	---	---	---
	04/04/12	-30.4	7.04	9.52	1.46	---	---	---	---	---	---	---
	09/11/12	-34.3	6.91	11.29	3.81	---	---	---	---	---	---	---
	04/09/13	-38.8	6.82	8.07	1.95	---	---	---	---	---	---	---
	12/03/13	-23.8	6.82	8.76	2.32	---	---	---	---	---	---	---
	04/30/14	98.1	6.92	6.83	5.82	---	---	---	---	---	---	---
	10/29/14	-5.8	6.89	10.46	5.84	---	---	---	---	---	---	---
	04/21/15	-7.7	6.74	8.12	1.72	---	---	---	---	---	---	---
	09/29/15	44.2	6.83	11.71	2.96	---	---	---	---	---	---	---
MW-21	09/23/08	11.1	8.32	11.69	6.83	---	0.36	0.43	0.0	---	---	---
	04/27/10	-70	7.08	8.03	4.49	---	25	3.3	80.0	---	---	---
	12/02/10	-68.7	7	8.73	2.42	---	---	---	---	---	---	---
	04/25/11	7.2	7.02	7.6	1.61	---	---	---	---	---	---	---
	10/11/11	-94.4	6.97	9.78	0.62	---	---	---	---	---	---	---
	04/03/12	-118.9	7.2	10.23	0.86	---	---	---	---	---	---	---
	09/10/12	-122.8	6.97	13.8	0.72	---	---	---	---	---	---	---
	12/02/13	-87.9	7.13	7.71	1.27*	*DO Not Stable		---	---	---	---	---
	10/27/14	-111.7	7.18	10.17	1.45	---	---	---	---	---	---	---
	09/28/15	-132.0	7.14	12.6	0.84	---	---	---	---	---	---	---

TABLE 13
NATURAL ATTENUATION

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Monitoring Well	Date Measured	Redox Potential (MV)	pH	Temp. °C	D.O. mg/l	Sulfide ppm	Nitrate ppm	FE (Iron) ppm	Sulfate mg/L	Mn mg/L	Calcium	Total Hardness by 2340B
MW-22	04/25/11	-132.4	6.97	7.42	0.34	---	---	1.27	---	22	239000	827000
	10/11/11	purged dry										
	04/04/12	-171.8	0.12	10.27	0.94	---	---	---	---	---	---	---
	09/12/12	-145.1	6.61	19.83	0.76	---	---	---	---	---	---	---
	04/09/13	-179.8	6.9	8.36	0.32	Well Purged Dry						
	12/04/13	-155.0	6.93	11.44*	1.04	*Temp. Not Stable		---	---	---	---	---
	04/30/14	-98.0	6.81	4.07	0.23	---	---	---	---	---	---	---
	10/28/14	-129.1	6.86	15.67	4.03	---	---	---	---	---	---	---
	04/21/15	-126.4	6.97	6	1.33	---	---	---	---	---	---	---
	09/28/15	-159.1	6.90	19.43	0.43	---	---	---	---	---	---	---
MW-23	12/03/13	186.1	6.9	9.49	3.66	---	---	---	---	---	---	---
	04/28/14	172.2	6.96	6.57	5.16	---	---	---	---	---	---	---
	10/30/14	166.7	6.91	10.72	4.03	---	---	---	---	---	---	---
	04/20/15	29.5	7.05	6.99	3.62	---	---	---	---	---	---	---
	09/29/15	86.4	7.12	14.70	4.30	---	---	---	---	---	---	---
MW-24	12/03/13	124.8	7.13	11.05	5.51*	*DO Not Stable		---	---	---	---	---
	04/28/14	154.3	7.08	6.29	1.61	---	---	---	---	---	---	---
MW-25	12/03/13	-133.4	6.95	8.71	0.93	---	---	---	---	---	---	---
	04/28/14	-126.5	7.04	5.89	0.24	---	---	---	---	---	---	---
	10/30/14	-117.6	6.94	9.50	4.21	---	---	---	---	---	---	---
	04/22/15	-94.0	6.84	6.28	1.14	---	---	---	---	---	---	---
	09/30/15	-143.3	6.85	10.01	0.23	---	---	---	---	---	---	---
MW-26	12/05/13	-0.4	6.76	8.32	0.89	---	---	---	---	---	---	---
	05/01/14	-102.2	6.83	7.5	0.22	---	---	---	---	---	---	---
	11/03/14	-92.9	6.72	11.43	3.90	---	---	---	---	---	---	---
	04/22/15	-64.8	6.84	8.09	1.15	---	---	---	---	---	---	---
	10/01/15	-117.9	6.61	13.41	0.22	---	---	---	---	---	---	---
MW-27	12/05/13	-85.5	6.88	8.86	1.22	---	---	---	---	---	---	---
	05/01/14	-121.1	6.91	8.15	0.52	---	---	---	---	---	---	---
	10/29/14	-99.8	6.91	10.43	3.75	---	---	---	---	---	---	---
	04/22/15	-86.1	6.82	8.47	1.33	---	---	---	---	---	---	---
	10/01/15	-136.3	6.77	12.13	0.27	---	---	---	---	---	---	---
MW-28	04/22/15	8.4	6.59	8.39	1.44	---	---	---	---	---	---	---
	09/30/15	-43.5	6.55	12.00	0.43	---	---	---	---	---	---	---
RW-1	04/09/03	198.7	7.01	10.25	1.92	---	---	---	---	---	---	---
	10/22/03	-20.9	7.15	10.76	1.06	---	---	---	---	---	---	---
	12/17/03	45.4	6.55	7.57	1.29	0	7	7.1	---	---	---	---
	08/31/04	315.5	---	12.8	6.75	---	---	---	---	---	---	---
	12/07/04	26.7	5.19	10.76	1.96	---	---	---	59.1	---	---	---
	03/15/05	143.7	6.82	7.54	2.78	---	---	---	---	---	---	---
	10/04/05	155.5	7.42	15.58	2.55	0.03	5.0	0.1	50	---	---	---
	11/15/06	87.4	7.16	11.97	6.36	0.03	6.5	0.2	34.4	---	---	---
	09/23/08	-34.1	6.71	15.91	8.32	---	0.0	0.14	78	---	---	---
	04/27/10	67.7	6.89	8.34	9.99	---	6.0	0.16	80+	---	---	---
	12/01/10	-61.7	6.75	12.79	3.65	---	---	---	---	---	---	---
	04/26/11	247.9	6.75	7.02	8.34	---	---	---	---	---	---	---
	10/11/11	104.9	6.56	12.69	1.68	---	---	---	---	---	---	---
	04/04/12	100.8	7.12	8.83	6	---	---	---	---	---	---	---
	09/11/12	92.1	6.52	14.64	1.68	---	---	---	---	---	---	---
	12/02/13	33.3	6.96	10.86	1.44	---	---	---	---	---	---	---
	10/28/14	91.1	6.68	12.32	3.41	---	---	---	---	---	---	---
	09/28/15	92.5	6.79	18.51	3.49	---	---	---	---	---	---	---

TABLE 13
NATURAL ATTENUATION

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Monitoring Well	Date Measured	Redox Potential (MV)	pH	Temp. °C	D.O. mg/l	Sulfide ppm	Nitrate ppm	FE (Iron) ppm	Sulfate mg/L	Mn mg/L	Calcium	Total Hardness by 2340B
RW-2	04/09/03	-30.6	6.8	9.66	1.82	---	---	---	---	---	---	---
	10/22/03	-68.9	6.81	10.72	1.17	---	---	---	---	---	---	---
	12/17/03	-40.1	6.29	9.22	1.64	0.03	7.5	>15	---	---	---	---
	08/31/04	185.7	---	12.13	1.9	---	---	---	---	---	---	---
	12/07/04	-59	5.27	10.47	3.31	---	---	---	22.9	---	---	---
	03/15/05	-72.4	6.55	7.59	3.02	---	---	---	---	---	---	---
	10/04/05	31.0	6.72	12.71	1.1	0.04	13.0	13.0	10	---	---	---
	11/15/06	-40.8	6.7	11.89	2.04	0.01	5.5	20.5	<2.5	---	---	---
	09/23/08	-106.0	6.21	13.02	7.09	---	0.0	1.52	0.0	---	---	---
	04/27/10	-106.0	6.75	8.51	6.46	---	58.0	3.28	24.0	---	---	---
	12/03/10	-127.8	6.54	11.28	0.38	---	---	---	---	---	---	---
	04/28/11	-117.9	6.76	7.85	0.44	---	---	---	---	---	---	---
	10/14/11	-104.6	6.49	10.89	0.48	---	---	---	---	---	---	---
	04/04/12	-126.7	6.85	8.33	1.41	---	---	---	---	---	---	---
	09/12/12	-111.3	6.33	12.4	0.77	---	---	---	---	---	---	---
	12/04/13	-119.3	6.63	9.54	1.57	---	---	---	---	---	---	---
	10/29/14	-85.5	6.74	11.27	2.89	---	---	---	---	---	---	---
	09/30/15	-126.3	6.52	12.58	0.69	---	---	---	---	---	---	---
RW-3	04/09/03	*	*	*	*	---	---	---	---	---	---	---
	10/22/03	FP	FP	FP	FP	---	---	---	---	---	---	---
	12/17/03	-34.7	6.51	9.36	0.58	0.01	4	0.7	---	---	---	---
	08/31/04	222.1	---	11.91	1.06	---	---	---	---	---	---	---
	12/07/04	-43.6	5.18	10.34	1.68	---	---	---	3.8	---	---	---
	03/15/05	FP	FP	FP	FP	---	---	---	---	---	---	---
	10/04/05	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	11/15/06	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	09/23/08	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	04/27/10	-117.3	6.94	9.79	2.32	---	38	3.3+	33	---	---	---
	12/03/10	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	04/28/11	---	---	---	---	---	---	---	---	---	---	---
	10/19/11	---	---	---	---	---	---	---	---	---	---	---
	04/06/12	---	---	---	---	---	---	---	---	---	---	---
	09/13/12	---	---	---	---	---	---	---	---	---	---	---
RW-4	04/09/03	FP	FP	FP	FP	---	---	---	---	---	---	---
	10/22/03	FP	FP	FP	FP	---	---	---	---	---	---	---
	12/17/03	FP	FP	FP	FP	FP	FP	FP	---	---	---	---
	08/31/04	FP	FP	FP	FP	FP	FP	FP	---	---	---	---
	12/07/04	-60.2	5.07	12.18	6.85	---	---	---	<2.5	---	---	---
	03/15/05	FP	FP	FP	FP	---	---	---	---	---	---	---
	10/04/05	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	11/15/06	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	09/23/08	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	04/27/10	FP	FP	FP	FP	FP	FP	FP	FP	---	---	---
	12/01/10	FP	FP	FP	FP	FP	FP	1.11	FP	6.3	399000	1370000
	04/28/11	FP	FP	FP	FP	FP	FP	0.77	FP	4.6	339000	1190000
RW-5	12/07/04	-26.2	4.79	12.87	6.68	---	---	---	---	---	---	---
	03/15/05	37.5	7.03	9.94	2.68	---	---	---	---	---	---	---
	10/04/05	163.0	7.09	15.47	0.85	0.0	0.0	0.0	86	---	---	---
	11/15/06	-48.8	7.32	12.83	1.83	0.0	4..5	0.6	59.8	---	---	---
	09/23/08	3.2	6.7	15.16	8.73	---	0	0.2	52	---	---	---
	04/27/10	-85.1	7	7.63	3.8	---	6	0.46	69	---	---	---
	12/01/10	-34.9	6.95	13.37	2.19	---	---	0.07	---	0	219000	747000
	04/25/11	7.2	7.02	7.6	1.61	---	---	---	---	---	---	---
	10/11/11	-26.1	6.91	14.2	0.49	---	---	---	---	---	---	---
	4/3/12	45.3	7.18	8.71	1.89	---	---	---	---	---	---	---
	9/11/12	-76.6	6.95	16.22	1.21	---	---	---	---	---	---	---
	12/03/13	86.4	7.11	10.8	1.08	---	---	---	---	---	---	---
	10/28/14	-117.4	7.09	14.11	2.42	---	---	---	---	---	---	---
	09/28/15	-72.3	6.98	16.08	0.60	---	---	---	---	---	---	---

TABLE 13
NATURAL ATTENUATION

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Monitoring Well	Date Measured	Redox Potential (MV)	pH	Temp. °C	D.O. mg/l	Sulfide ppm	Nitrate ppm	FE (Iron) ppm	Sulfate mg/L	Mn mg/L	Calcium	Total Hardness by 2340B
RW-6	04/25/11	---	---	---	---	---	---	1.64	---	7.3	436000	---
	10/14/11	-130.8	6.87	16.07	0.45	---	---	---	---	---	---	---
	04/05/12	-74.8	6.44	9.29	1.08	---	---	---	---	---	---	---
	09/12/12	-110.6	6.61	20.44	1.11	---	---	---	---	---	---	---
	12/05/13	-78.6	7.00	10.39	1.09	---	---	---	---	---	---	---
	10/28/14	-72.3	6.97	14.95	3.91	---	---	---	---	---	---	---
	09/29/15	-101.8	6.99	18.72	0.71	---	---	---	---	---	---	---
Sully MW-1	12/10/13	-67.6	6.66	9.46	0.44	---	---	---	---	---	---	---
	05/02/14	68.6	7.27	3.48	4.90	---	---	---	---	---	---	---
	11/03/14	-42.1	6.74	12.56	4.84	---	---	---	---	---	---	---
	04/20/15	98.3	7.26	4.30	7.13	---	---	---	---	---	---	---
	10/01/15	20.2	6.92	15.07	3.60	---	---	---	---	---	---	---
Sully MW-2	12/10/13	-91.5	6.69	9.15	0.55	---	---	---	---	---	---	---
	05/02/14	-6.1	6.71	4.33	0.50	---	---	---	---	---	---	---
	11/03/14	-47.7	6.60	12.81	5.44	---	---	---	---	---	---	---
	04/20/15	-41.0	6.71	6.21	1.55	---	---	---	---	---	---	---
	10/01/15	-65.8	6.47	14.88	0.23	---	---	---	---	---	---	---
Sully MW-3	12/10/13	-117.3	6.81	9.83	0.55	---	---	---	---	---	---	---
	05/02/14	-109.2	6.83	6.55	0.47	---	---	---	---	---	---	---
	11/03/14	-98.2	6.81	12.96	4.07	---	---	---	---	---	---	---
	04/20/15	-99.5	6.84	7.04	1.34	---	---	---	---	---	---	---
	10/01/15	-146.1	6.77	14.75	0.25	---	---	---	---	---	---	---

Notes
MV = millivolts
C = Celsius
D.O. = Dissolved Oxygen
mg/l = milligrams per liter
--- = Data not available or not analyzed
FP = Free product present, no data available
* = No water in well
ppm = parts per million

TABLE 14
FREE PRODUCT RECOVERY

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative		Comments
		Depth to FP[1] (ft)	Depth to GW[2] (ft)	FP Thickness (ft)	FP Volume (gal)		FP (gal)	GW (gal)	FP (gal)	GW (gal)	
MW-9	04/05/01	---	---	---	0.22	Bailer	0.22	0	0.22	0	None
MW-9	04/12/01	---	---	---	Trace	Bailer	0	0	0.22	0	None
MW-9	04/15/02	13.38	13.55	0.17	0.00	Bailer	0.00	0	0.22	0	None
MW-9	05/09/02	13.15	13.25	0.10	0.05	Bailer	0.05	0	0.27	0	None
MW-9	05/24/02	13.45	13.55	0.10	0.05	Bailer	0.05	0	0.32	0	None
MW-9	03/16/04	13.35	13.45	0.10	0.00	Bailer	0.00	0	0.32	0	None
MW-9	03/16/04	13.36	13.47	0.11	0.00	Bailer	0.00	0	0.32	0	None
MW-9	03/16/04	13.38	13.41	0.03	0.00	Bailer	0.00	0	0.32	0	None
MW-9	03/16/04	13.39	13.49	0.10	0.00	Bailer	0.00	0	0.32	0	None
MW-9	03/16/04	13.37	13.39	0.02	0.00	Bailer	0.00	0	0.32	0	None
MW-9	03/16/04	13.35	13.43	0.08	0.00	Bailer	0.00	0	0.32	0	None
MW-9	03/16/04	13.38	13.41	0.03	0.00	Bailer	0.00	0	0.32	0	None
MW-9	03/25/04	13.32	13.36	0.04	0.00	Bailer	0.00	0	0.32	0	None
MW-9	04/05/04	13.19	13.45	0.26	0.10	Bailer	0.10	0	0.42	0	None
MW-9	04/05/04	13.21	13.40	0.19	0.10	Bailer	0.10	0	0.52	0	None
MW-9	04/05/04	13.20	13.37	0.17	0.10	Bailer	0.10	0	0.62	0	None
MW-9	04/14/04	13.11	13.13	0.02	0.00	Bailer	0.00	0	0.62	0	None
MW-9	05/10/04	---	12.95	0.00	0.03	Bailer	0.03	0	0.65	0	None
MW-9	04/13/05	13.30	13.39	0.05	0.00	Bailer	0.00	0	0.65	0	None
MW-9	09/23/08	12.21	12.22	0.01	0.00	Bailer	0.00	0	0.65	0	None
MW-9	02/15/10	---	13.08	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	03/03/10	---	13.16	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	03/29/10	---	12.93	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	04/26/10	---	12.76	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	05/14/10	---	12.75	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	05/28/10	---	12.59	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	09/28/11	---	12.6	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	10/05/11	---	12.52	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	10/19/11	---	12.58	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	11/02/11	---	12.77	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	12/06/11	---	13	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	01/11/12	---	12.96	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	02/09/12	---	13.11	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	03/08/12	---	13.47	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	04/02/12	---	13.23	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	05/16/12	---	12.53	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	09/11/12	---	12.61	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	12/21/12	---	13.03	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	01/23/13	---	13.19	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	02/14/13	---	13.33	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	04/09/13	---	13.51	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	05/13/13	---	12.31	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	06/28/13	---	11.99	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	08/05/13	---	12.23	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	09/05/13	---	12.42	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	10/25/13	---	10.32	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	11/21/13	---	12.67	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	12/02/13	---	12.64	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	01/02/14	---	12.92	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	02/10/14	---	13.25	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	03/28/14	---	13.57	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	04/28/14	---	12.95	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	05/29/14	---	11.81	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	09/02/14	---	12.08	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	10/27/14	---	12.48	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	11/18/14	---	12.68	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	02/02/15	---	13.11	0.00	0.00	---	0.00	0	0.65	0	None

TABLE 14
FREE PRODUCT RECOVERY

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative		Comments
		Depth to FP[1] (ft)	Depth to GW[2] (ft)	FP Thickness (ft)	FP Volume (gal)		FP (gal)	GW (gal)	FP (gal)	GW (gal)	
MW-9	03/05/15	---	13.35	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	04/02/15	---	13.41	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	05/07/15	---	12.95	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	06/02/15	---	12.46	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	09/11/15	---	11.91	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	10/16/15	---	12.02	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	11/18/15	---	12.07	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	12/10/15	---	11.88	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	01/15/16	---	12.15	0.00	0.00	---	0.00	0	0.65	0	None
MW-9	02/12/16	---	12.61	0.00	0.00	---	0.00	0	0.65	0	None
MW-10	01/08/97	86.31	14.3	0.2	-	Bailer	-	0	0	0	None
MW-10	05/01/97	86.39	14.22	1.53	-	Bailer	-	0	0	0	None
MW-10	03/04/98	86.41	14.2	0.49	-	Bailer	-	0	0	0	None
MW-10	03/20/01	---	---	---	0.17	Bailer	0.17	0	0.17	0	None
MW-10	04/05/01	---	---	---	0.22	Bailer	0.22	0	0.39	0	None
MW-10	04/07/01	---	---	---	0.03	Bailer	0.03	0	0.41	0	None
MW-10	04/12/01	---	---	---	0.03	Bailer	0.03	0	0.44	0	None
MW-10	04/25/01	---	---	---	0.03	Bailer	0.03	0	0.47	0	None
MW-10	06/04/01	---	---	---	0.06	Bailer	0.06	0	0.53	0	None
MW-10	04/15/02	14.00	14.85	0.85	0.00	Bailer	0.00	0	0.53	0	None
MW-10	05/09/02	13.17	14.24	1.07	0.25	Bailer	0.25	0	0.78	0	None
MW-10	05/24/02	13.50	13.80	0.30	0.13	Bailer	0.13	0	0.90	0	None
MW-10	06/08/02	13.60	13.92	0.32	0.10	Bailer	0.10	0	1.00	0	None
MW-10	06/20/02	13.65	13.84	0.19	0.20	Bailer	0.20	0	1.20	0	None
MW-10	07/05/02	13.60	13.83	0.23	0.10	Bailer	0.10	0	1.30	0	None
MW-10	07/17/02	13.40	13.61	0.21	0.20	Bailer	0.20	0	1.50	0	None
MW-10	08/05/02	13.42	13.58	0.16	0.10	Bailer	0.10	0	1.60	0	None
MW-10	08/19/02	13.41	13.45	0.04	0.05	Bailer	0.05	0	1.65	0	None
MW-10	08/30/02	13.48	13.52	0.04	0.05	Bailer	0.05	0	1.70	0	None
MW-10	09/03/02	13.51	13.53	0.02	0.05	Bailer	0.05	0	1.75	0	None
MW-10	09/17/02	13.19	13.54	0.35	0.13	Bailer	0.13	0	1.88	0	None
MW-10	12/10/02	13.89	14.18	0.29	0.10	Bailer	0.10	0	1.98	0	None
MW-10	04/09/03	14.46	15.79	1.33	0.00	Bailer	0.00	0	1.98	0	None
MW-10	04/11/03	14.75	16.47	1.72	0.00	Bailer	0.00	0	1.98	0	None
MW-10	05/08/03	14.02	14.52	0.50	0.00	Bailer	0.00	0	1.98	0	None
MW-10	05/29/03	13.19	13.29	0.10	0.25	Bailer	0.25	0	2.23	0	None
MW-10	06/17/03	13.51	13.52	0.01	0.25	Bailer	0.25	0	2.48	0	None
MW-10	07/22/03	13.18	13.29	0.11	0.25	Bailer	0.25	0	2.73	0	None
MW-10	08/15/03	13.67	13.73	0.06	0.25	Bailer	0.25	0	2.98	0	None
MW-10	08/21/03	13.83	14.03	0.20	0.13	Bailer	0.13	0	3.10	0	None
MW-10	09/05/03	14.04	14.23	0.19	0.25	Bailer	0.25	0	3.35	0	None
MW-10	09/22/03	13.88	14.34	0.46	0.25	Bailer	0.25	0	3.60	0	None
MW-10	10/09/03	14.09	14.35	0.26	0.00	Bailer	0.00	0	3.60	0	None
MW-10	10/17/03	14.13	14.62	0.49	0.25	Bailer	0.25	0	3.85	0	None
MW-10	10/22/03	14.17	14.56	0.39	0.25	Bailer	0.25	0	4.10	0	None
MW-10	10/28/03	14.21	14.91	0.70	0.25	Bailer	0.25	0	4.35	0	None
MW-10	11/05/03	14.16	14.79	0.63	0.25	Bailer	0.25	0	4.60	0	None
MW-10	11/11/03	14.03	14.50	0.47	0.25	Bailer	0.25	0	4.85	0	None
MW-10	11/28/03	14.09	14.33	0.24	0.25	Bailer	0.25	0	5.10	0	None
MW-10	12/05/03	14.16	14.53	0.37	0.25	Bailer	0.25	0	5.35	0	None
MW-10	12/10/03	14.18	14.65	0.47	0.25	Bailer	0.25	0	5.60	0	None
MW-10	12/17/03	14.21	14.81	0.60	0.25	Bailer	0.25	0	5.85	0	None
MW-10	02/23/04	14.50	15.82	1.32	0.40	Bailer	0.40	0	6.25	0	None
MW-10	02/23/04	14.55	15.83	1.28	0.30	Bailer	0.30	0	6.55	0	None
MW-10	02/23/04	14.51	15.78	1.27	0.30	Bailer	0.30	0	6.85	0	None
MW-10	02/24/04	14.62	15.95	1.33	0.30	Bailer	0.30	0	7.15	0	None

TABLE 14
FREE PRODUCT RECOVERY

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative		Comments
		Depth to FP[1] (ft)	Depth to GW[2] (ft)	FP Thickness (ft)	FP Volume (gal)		FP (gal)	GW (gal)	FP (gal)	GW (gal)	
MW-10	02/24/04	14.67	15.58	0.91	0.30	Bailer	0.30	0	7.45	0	None
MW-10	02/24/04	14.59	15.45	0.86	0.30	Bailer	0.30	0	7.75	0	None
MW-10	02/24/04	14.62	15.40	0.78	0.30	Bailer	0.30	0	8.05	0	None
MW-10	02/24/04	14.61	15.43	0.82	0.30	Bailer	0.30	0	8.35	0	None
MW-10	02/25/04	14.80	16.13	1.33	0.30	Bailer	0.30	0	8.65	0	None
MW-10	02/25/04	14.62	15.32	0.70	0.30	Bailer	0.30	0	8.95	0	None
MW-10	02/25/04	14.58	15.38	0.80	0.30	Bailer	0.30	0	9.25	0	None
MW-10	02/25/04	14.62	15.40	0.78	0.30	Bailer	0.30	0	9.55	0	None
MW-10	02/25/04	14.56	15.46	0.90	0.30	Bailer	0.30	0	9.85	0	None
MW-10	03/16/04	14.49	15.55	1.06	0.10	Bailer	0.10	0	9.95	0	None
MW-10	03/16/04	14.31	15.10	0.79	0.10	Bailer	0.10	0	10.05	0	None
MW-10	03/16/04	14.39	14.43	0.04	0.10	Bailer	0.10	0	10.15	0	None
MW-10	03/16/04	14.35	15.01	0.66	0.10	Bailer	0.10	0	10.25	0	None
MW-10	03/16/04	14.38	14.47	0.09	0.10	Bailer	0.10	0	10.35	0	None
MW-10	03/16/04	14.37	15.11	0.74	0.10	Bailer	0.10	0	10.45	0	None
MW-10	03/16/04	14.39	14.44	0.05	0.10	Bailer	0.10	0	10.55	0	None
MW-10	03/25/04	14.16	14.52	0.36	1.00	Bailer	1.00	0	11.55	0	None
MW-10	04/05/04	13.72	13.85	0.13	0.10	Bailer	0.10	0	11.65	0	None
MW-10	04/05/04	13.71	13.81	0.10	0.10	Bailer	0.10	0	11.75	0	None
MW-10	04/05/04	13.69	13.74	0.05	0.10	Bailer	0.10	0	11.85	0	None
MW-10	04/14/04	13.51	13.60	0.09	0.13	Bailer	0.13	0	11.98	0	None
MW-10	05/10/04	13.56	13.60	0.04	0.00	Bailer	0.00	0	11.98	0	None
MW-10	07/10/04	13.72	13.73	0.01	0.00	Bailer	0.00	0	11.98	0	None
MW-10	09/27/04	13.00	13.05	0.05	0.00	Bailer	0.00	0	11.98	0	None
MW-10	12/07/04	---	13.54	0.00	4.50	Bailer	4.50	0	16.48	0	None
MW-10	03/15/05	14.07	14.13	0.06	1.00	Bailer	1.00	0	17.48	0	None
MW-10	04/05/05	13.04	13.10	0.06	1.00	Bailer	1.00	0	18.48	0	None
MW-10	04/13/05	12.90	12.96	0.06	0.00	Bailer	0.00	0	18.48	0	None
MW-10	05/06/05	13.22	13.29	0.07	0.50	Bailer	0.50	0	18.98	0	None
MW-10	06/01/05	12.83	12.90	0.07	0.00	Bailer	0.00	0	18.98	0	None
MW-10	06/29/05	12.88	12.89	0.01	0.00	Bailer	0.00	0	18.98	0	None
MW-10	10/04/05	13.50	13.52	0.02	0.00	Bailer	0.00	0	18.98	0	None
MW-10	11/03/05	13.33	13.45	0.12	0.00	Bailer	0.00	0	18.98	0	None
MW-10	12/20/05	13.35	13.45	0.10	0.00	Bailer	0.00	0	18.98	0	None
MW-10	02/01/06	13.44	13.45	0.01	0.00	Bailer	0.00	0	18.98	0	None
MW-10	03/07/06	13.86	13.88	0.02	0.10	Bailer	0.10	0	19.08	0	None
MW-10	04/10/06	12.78	12.85	0.07	0.10	Bailer	0.10	0	19.18	0	None
MW-10	07/05/06	13.69	13.70	0.01	0.00	Bailer	0.00	0	19.18	0	None
MW-10	09/28/06	13.93	14.15	0.22	0.00	Bailer	0.00	0	19.18	0	None
MW-10	01/12/07	14.06	14.07	0.01	0.00	Bailer	0.00	0	19.18	0	None
MW-10	03/15/07	14.18	14.50	0.32	0.00	Bailer	0.00	0	19.18	0	None
MW-10	10/02/07	14.32	14.80	0.48	0.50	Bailer	1.00	0	20.18	0	None
MW-10	09/23/08	14.33	15.20	0.87	2.00	Bailer	2.00	0	22.18	0	None
MW-10	02/15/10	14.10	14.12	0.02	0.00	---	0.00	0	22.18	0	None
MW-10	03/03/10	14.21	14.23	0.02	0.00	---	0.00	0	22.18	0	None
MW-10	03/29/10	13.43	13.45	0.02	0.00	---	0.00	0	22.18	0	None
MW-10	04/26/10	13.69	13.71	0.02	0.00	---	0.00	0	22.18	0	None
MW-10	05/06/10	13.84	13.86	0.02	0.00	---	0.00	0	22.18	0	None
MW-10	05/14/10	13.48	13.5	0.02	0.00	---	0.00	0	22.18	0	None
MW-10	05/28/10	13.42	13.43	0.01	0.00	---	0.00	0	22.18	0	None
MW-10	06/10/10	13.40	13.41	0.01	0.00	---	0.00	0	22.18	0	None
MW-10	09/28/11	13.74	13.98	0.24	0.38	Bailer	0.38	0	22.56	0	None
MW-10	10/05/11	13.88	13.9	0.02	0.00	---	0.00	0	22.56	0	None
MW-10	10/11/11	13.93	13.95	0.02	0.00	---	0.00	0	22.56	0	None
MW-10	11/02/11	14.11	14.12	0.01	0.00	---	0.00	0	22.56	0	None
MW-10	12/06/11	14.32	14.38	0.06	0.00	---	0.00	0	22.56	0	None
MW-10	01/11/12	14.25	14.26	0.01	0.00	---	0.00	0	22.56	0	None

TABLE 14
FREE PRODUCT RECOVERY

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative		Comments
		Depth to FP[1] (ft)	Depth to GW[2] (ft)	FP Thickness (ft)	FP Volume (gal)		FP (gal)	GW (gal)	FP (gal)	GW (gal)	
MW-10	02/09/12	15.75	15.76	0.01	0.00	---	0.00	0	22.56	0	None
MW-10	03/08/12	14.49	14.5	0.01	0.00	---	0.00	0	22.56	0	None
MW-10	04/02/12	14.20	14.52	0.32	0.00	---	0.00	0	22.56	0	None
MW-10	05/16/12	13.19	13.2	0.01	0.00	---	0.00	0	22.56	0	Did not bail
MW-10	09/11/12	13.63	13.73	0.10	0.00	---	0.00	0	22.56	0	None
MW-10	12/21/12	14.31	14.95	0.64	0.10	Bailer	0.25	0	22.81	0	None
MW-10	01/23/13	14.42	15.44	1.02	0.16	Bailer	0.75	0	23.56	0	None
MW-10	02/14/13	14.54	15.81	1.27	0.20	Bailer	0.50	0	24.06	0	None
MW-10	04/09/13	14.39	15.02	0.63	0.10	Bailer	0.3	0	24.36	0	None
MW-10	05/13/13	---	13.05	0.00	0.00	---	0.00	0	24.36	0	None
MW-10	06/28/13	---	12.6	0.00	0.00	---	0.00	0	24.36	0	None
MW-10	08/05/13	---	---	0.00	0.00	---	0.00	0	24.36	0	Wrong Key
MW-10	09/05/13	---	13.72	0.00	0.00	---	0.00	0	24.36	0	None
MW-10	10/25/13	---	13.31	0.00	0.00	---	0.00	0	24.36	0	None
MW-10	11/21/13	---	13.84	0.00	0.00	---	0.00	0	24.36	0	None
MW-10	12/02/13	---	13.82	0.00	0.00	---	0.00	0	24.36	0	None
MW-10	01/02/14	14.22	14.38	0.16	0.03	---	0.00	0	24.36	0	Did not bail
MW-10	02/10/14	14.41	15.38	0.97	0.16	---	0.50	0	24.86	0	None
MW-10	03/28/14	14.34	14.78	0.44	0.07	---	0.25	0	25.11	0	None
MW-10	04/28/14	12.17	12.2	0.03	0.005	---	0.00	0	25.11	0	Did not bail
MW-10	05/29/14	---	---	---	---	---	0.00	0	25.11	0	Could not get lock open
MW-10	09/02/14	12.65	12.66	0.01	0.002	---	0.00	0	25.11	0	Did not bail
MW-10	10/27/14	13.74	13.75	0.01	0.002	---	0.00	0	25.11	0	Did not bail
MW-10	11/18/14	14.03	14.04	0.01	0.002	---	0.00	0	25.11	0	Did not bail
MW-10	02/02/15	14.42	14.45	0.03	0.005	---	0.00	0	25.11	0	Did not bail
MW-10	03/05/15	14.52	15.43	0.91	0.146	---	0.00	0	25.11	0	Did not bail
MW-10	04/02/15	14.52	15.47	0.95	0.152	Bailer	1.70	0	26.81	0	None
MW-10	04/20/15	14.34	14.65	0.31	0.050	---	0.00	0	26.81	0	Did not bail
MW-10	05/07/15	---	14.05	0.00	0.000	---	0.00	0	26.81	0	Did not bail
MW-10	05/13/15	---	13.81	0.00	0.000	---	0.00	0	26.81	0	Did not bail
MW-10	06/02/15	---	12.89	0.00	0.000	---	0.00	0	26.81	0	Did not bail
MW-10	09/11/15	---	13.91	0.00	0.000	---	0.00	0	26.81	0	Did not bail
MW-10	10/16/15	---	13.58	0.00	0.000	---	0.00	0	26.81	0	Did not bail
MW-10	11/18/15	---	12.12	0.00	0.000	---	0.00	0	26.81	0	Did not bail
MW-10	12/10/15	---	12.39	0	0	---	0	0	26.81	0	Did not bail
MW-10	01/15/16		12.94	0	0		0	0	26.81	0	Did not bail
MW-10	02/12/16	Well Lock Frozen, No Access To Gauge Well									
MW-15	02/15/10	---	16.51	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	03/03/10	---	16.57	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	03/29/10	---	16.44	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	04/26/10	---	16.40	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	05/14/10	---	16.38	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	05/28/10	---	16.27	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	06/10/10	---	16.23	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	09/28/11	---	16.06	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	10/05/11	---	16.06	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	10/11/11	---	16.16	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	11/02/11	---	16.35	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	12/06/11	---	16.49	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	01/11/12	---	16.42	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	02/09/12	---	16.88	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	03/08/12	---	16.65	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	04/02/12	---	16.84	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	05/16/12	---	16.21	0.00	0.00	---	0.00	0	0.00	0	None

TABLE 14
FREE PRODUCT RECOVERY

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative		Comments
		Depth to FP[1] (ft)	Depth to GW[2] (ft)	FP Thickness (ft)	FP Volume (gal)		FP (gal)	GW (gal)	FP (gal)	GW (gal)	
MW-15	10/31/12	---	16.38	0.00	0.00	---	0.00	0	0.00	0	None
MW-15	12/21/12	---	16.54	0.00	0.00	---	0.00	0	0.00	0	None
MW-22	09/28/11	---	8.86	0.00	0.00	---	0.00	0	0.00	0	None
MW-22	10/06/11	---	9.1	0.00	0.00	---	0.00	0	0.00	0	None
MW-22	10/11/11	---	9.22	0.00	0.00	---	0.00	0	0.00	0	None
MW-22	11/02/11	---	10.19	0.00	0.00	---	0.00	0	0.00	0	None
MW-22	12/06/11	---	11.01	0.00	0.00	---	0.00	0	0.00	0	None
MW-22	01/11/12	---	10.89	0.00	0.00	---	0.00	0	0.00	0	None
MW-22	02/09/12	---	11.62	0.00	0.00	---	0.00	0	0.00	0	None
MW-22	03/08/12	---	11.31	0.00	0.00	---	0.00	0	0.00	0	None
MW-22	04/02/12	---	8.61	0.00	0.00	---	0.00	0	0.00	0	None
MW-22	05/16/12	---	7.1	0.00	0.00	---	0.00	0	0.00	0	None
MW-22	10/31/12	---	8.57	0.00	0.00	---	0.00	0	0.00	0	None
MW-26	12/02/13	---	10.04	0.00	0.00	---	0.00	0	0.00	0	None
MW-26	04/28/14	---	8.12	0.00	0.00	---	0.00	0	0.00	0	None
MW-26	09/02/14	---	8.26	0.00	0.00	---	0.00	0	0.00	0	None
MW-26	10/27/14	---	9.00	0.00	0.00	---	0.00	0	0.00	0	None
MW-26	11/18/14	---	9.84	0.00	0.00	---	0.00	0	0.00	0	None
MW-26	02/02/15	Well Frozen Above Well Plug; Cannot Access for LNAPL Guaging									
MW-26	03/05/15	Well Frozen Above Well Plug; Cannot Access for LNAPL Guaging									
MW-26	04/02/15	---	10.75	0.00	0.00	---	0.00	0	0.00	0.00	None
MW-26	05/07/15	---	10.21	0.00	0.00	---	0.00	0	0.00	0.00	None
MW-26	06/02/15	---	8.65	0.00	0.00	---	0.00	0	0.00	0.00	None
MW-26	09/11/15	---	8.76	0.00	0.00	---	0.00	0	0.00	0.00	None
MW-26	10/16/15	---	9.11	0.00	0.00	---	0.00	0	0.00	0.00	None
MW-26	11/18/15	---	9.91	0.00	0.00	---	0.00	0	0.00	0.00	None
MW-26	12/10/15	---	8.65	0.00	0.00	---	0.00	0	0.00	0.00	None
MW-26	01/15/16	---	9.62	0.00	0.00	---	0.00	0	0.00	0.00	None
MW-26	02/12/16	Well Frozen Above Well Plug; Cannot Access for LNAPL Guaging									
MW-27	12/02/13	---	14.13	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	04/28/14	---	14.03	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	09/02/14	---	13.41	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	10/27/14	---	13.87	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	11/18/14	---	14.07	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	02/02/15	---	14.50	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	03/05/15	---	14.76	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	04/02/15	---	14.88	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	05/07/15	---	14.82	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	06/02/15	---	14.14	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	09/11/15	---	13.81	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	10/16/15	---	13.81	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	11/18/15	---	13.71	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	12/10/15	---	13.51	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	01/15/16	---	13.78	0.00	0.00	---	0.00	0	0.00	0	None
MW-27	02/12/16	---	14.15	0.00	0.00	---	0.00	0	0.00	0	None
MW-28	03/05/15	---	16.91	0.00	0.00	---	0.00	0	0.00	0	None
MW-28	04/02/15	---	16.98	0.00	0.00	---	0.00	0	0.00	0	None
MW-28	05/07/15	---	17.05	0.00	0.00	---	0.00	0	0.00	0	None
MW-28	06/02/15	---	16.14	0.00	0.00	---	0.00	0	0.00	0	None
MW-28	09/11/15	---	15.88	0.00	0.00	---	0.00	0	0.00	0	None
MW-28	10/16/15	---	16.00	0.00	0.00	---	0.00	0	0.00	0	None
MW-28	11/18/15	---	15.73	0.00	0.00	---	0.00	0	0.00	0	None
MW-28	12/10/15	---	15.64	0.00	0.00	---	0.00	0	0.00	0	None

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Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative		Comments
		Depth to FP[1] (ft)	Depth to GW[2] (ft)	FP Thickness (ft)	FP Volume (gal)		FP (gal)	GW (gal)	FP (gal)	GW (gal)	
MW-28	01/15/16	---	16.01	0.00	0.00	---	0.00	0	0.00	0	None
MW-28	02/12/16	---	16.32	0.00	0.00	---	0.00	0	0.00	0	None
RW-3	05/29/03	13.39	13.40	0.01	1.00	Bailer	1.00	0	1.00	0	None
RW-3	06/17/03	14.07	14.08	0.01	0.00	Bailer	0.00	0	1.00	0	None
RW-3	07/22/03	8.19	10.91	2.72	2.50	Bailer	2.50	0	3.50	0	None
RW-3	08/15/03	8.75	10.06	1.31	1.50	Bailer	1.50	0	5.00	0	None
RW-3	08/21/03	9.13	9.39	0.26	0.50	Bailer	0.50	0	5.50	0	None
RW-3	10/17/03	10.68	10.69	0.01	0.50	Bailer	0.50	0	6.00	0	None
RW-3	10/22/03	9.68	9.69	0.01	0.00	Bailer	0.00	0	6.00	0	None
RW-3	02/23/04	10.02	10.03	0.01	0.00	Bailer	0.00	0	6.00	0	None
RW-3	02/23/04	10.05	10.06	0.01	0.00	Bailer	0.00	0	6.00	0	None
RW-3	02/23/04	10.61	10.79	0.18	0.05	Bailer	0.05	0	6.05	0	None
RW-3	02/24/04	10.52	10.81	0.29	0.04	Bailer	0.04	0	6.09	0	None
RW-3	02/24/04	10.78	11.53	0.75	0.04	Bailer	0.04	0	6.13	0	None
RW-3	02/24/04	10.61	10.90	0.29	0.02	Bailer	0.02	0	6.15	0	None
RW-3	02/24/04	10.78	10.95	0.17	0.02	Bailer	0.02	0	6.17	0	None
RW-3	02/24/04	10.82	10.96	0.14	0.02	Bailer	0.02	0	6.19	0	None
RW-3	02/25/04	10.80	10.93	0.13	0.02	Bailer	0.02	0	6.21	0	None
RW-3	02/25/04	10.82	10.97	0.15	0.02	Bailer	0.02	0	6.23	0	None
RW-3	02/25/04	10.62	10.79	0.17	0.02	Bailer	0.02	0	6.25	0	None
RW-3	02/25/04	10.58	10.73	0.15	0.02	Bailer	0.02	0	6.27	0	None
RW-3	02/25/04	10.51	10.71	0.20	0.02	Bailer	0.02	0	6.29	0	None
RW-3	03/16/04	10.57	10.73	0.16	0.02	Bailer	0.02	0	6.31	0	None
RW-3	03/25/04	10.53	10.72	0.19	0.02	Bailer	0.02	0	6.33	0	None
RW-3	04/05/04	10.51	10.52	0.01	0.02	Bailer	0.02	0	6.35	0	None
RW-3	04/05/04	8.88	8.96	0.08	0.00	Bailer	0.00	0	6.35	0	None
RW-3	04/05/04	9.23	9.29	0.06	0.10	Bailer	0.10	0	6.45	0	None
RW-3	04/14/04	9.27	9.31	0.04	0.10	Bailer	0.10	0	6.55	0	None
RW-3	05/10/04	9.26	9.30	0.04	0.10	Bailer	0.10	0	6.65	0	None
RW-3	06/29/04	9.31	9.34	0.03	0.13	Bailer	0.13	0	6.78	0	None
RW-3	09/27/04	8.65	8.69	0.04	0.07	Bailer	0.07	0	6.85	0	None
RW-3	10/26/04	9.10	9.19	0.09	0.00	Bailer	0.00	0	6.85	0	None
RW-3	11/23/04	8.28	9.20	0.92	1.50	Bailer	1.50	0	8.35	0	None
RW-3	12/07/04	9.14	9.39	0.25	1.50	Bailer	1.50	0	9.85	0	None
RW-3	03/15/05	9.71	9.73	0.02	0.00	Bailer	0.00	0	9.85	0	None
RW-3	09/15/05	9.79	9.80	0.01	0.00	Bailer	0.00	0	9.85	0	None
RW-3	10/04/05	10.39	10.40	0.01	0.00	Bailer	0.00	0	9.85	0	None
RW-3	11/03/05	9.90	9.91	0.01	0.00	Bailer	0.00	0	9.85	0	None
RW-3	12/20/05	9.90	9.92	0.02	0.00	Bailer	0.00	0	9.85	0	None
RW-3	02/01/06	9.84	10.04	0.20	0.00	Bailer	0.00	0	9.85	0	None
RW-3	03/07/06	9.23	9.36	0.13	0.00	Bailer	0.00	0	9.85	0	None
RW-3	08/17/06	9.20	9.21	0.01	0.00	Bailer	0.00	0	9.85	0	None
RW-3	09/28/06	9.87	9.88	0.01	0.00	Bailer	0.00	0	9.85	0	None
RW-3	01/12/07	11.04	11.72	0.68	0.50	Bailer	0.50	0	10.35	0	None
RW-3	01/29/07	10.50	10.88	0.38	0.00	Bailer	0.00	0	10.35	0	None
RW-3	02/12/07	10.35	11.20	0.85	0.00	Bailer	0.00	0	10.35	0	None
RW-3	03/15/07	10.73	11.13	0.40	0.00	Bailer	0.00	0	10.35	0	None
RW-3	08/29/07	9.39	9.90	0.51	1.00	Bailer	1.00	0	11.35	0	None
RW-3	10/02/07	9.06	9.48	0.42	0.00	Bailer	0.00	0	11.35	0	None
RW-3	10/09/07	8.62	8.76	0.14	0.00	Bailer	0.00	0	11.35	0	None
RW-3	09/25/08	11.05	11.15	0.10	0.00	Bailer	0.00	0	11.35	0	None
RW-3	02/15/10	---	---	---	---	---	0.00	0	11.35	0	None
RW-3	03/03/10	---	---	---	---	---	0.00	0	11.35	0	None
RW-3	03/29/10	---	---	---	---	---	0.00	0	11.35	0	None
RW-3	04/26/10	---	8.68	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	05/06/10	---	9.77	0.00	0.00	---	0.00	0	11.35	0	None

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Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative		Comments
		Depth to FP[1] (ft)	Depth to GW[2] (ft)	FP Thickness (ft)	FP Volume (gal)		FP (gal)	GW (gal)	FP (gal)	GW (gal)	
RW-3	05/14/10	---	8.66	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	05/28/10	---	9.03	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	06/10/10	---	8.45	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	09/28/11	---	9.45	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	10/05/11	---	9.58	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	10/11/11	---	9.61	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	11/02/11	---	10.05	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	12/06/11	---	10.37	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	01/11/12	---	10.29	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	02/09/12	---	10.83	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	03/08/12	---	9.1	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	04/02/12	---	7.59	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	05/16/12	---	8.02	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	12/21/12	---	9.52	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	01/23/13	---	10.44	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	02/14/13	---	10.62	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	04/09/13	---	9.37	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	05/13/13	---	7.76	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	06/28/13	---	7.44	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	08/05/13	---	8.71	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	09/05/13	---	9.13	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	10/25/13	---	8.41	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	11/21/13	---	9.04	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	12/02/13	---	9.26	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	01/02/14	---	10.54	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	02/10/14	---	10.56	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	03/28/14	---	10.35	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	04/28/14	---	3.60	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	05/29/14	---	4.85	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	09/02/14	---	7.60	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	10/27/14	---	8.35	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	11/18/14	---	10.85	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	02/02/15	---	10.18	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	03/05/15	---	10.60	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	04/02/15	---	7.70	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	05/07/15	---	8.82	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	06/02/15	---	7.85	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	09/11/15	---	6.49	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	10/16/15	---	9.08	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	11/18/15	---	7.83	0.00	0.00	---	0.00	0	11.35	0	None
Rw-3	12/10/15	---	7.12	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	01/15/16	---	7.96	0.00	0.00	---	0.00	0	11.35	0	None
RW-3	02/12/16	---	8.14	0.00	0.00	---	0.00	0	11.35	0	None
RW-4	04/09/03	11.48	11.67	0.19	0.00	Bailer	0.00	0	0.00	0	None
RW-4	04/11/03	11.44	11.94	0.50	0.00	Bailer	0.00	0	0.00	0	None
RW-4	05/08/03	10.69	11.63	0.94	1.00	Bailer	1.00	0	1.00	0	None
RW-4	05/29/03	9.68	11.14	1.46	0.75	Bailer	0.75	0	1.75	0	None
RW-4	06/17/03	10.10	11.38	1.28	2.50	Bailer	2.50	0	4.25	0	None
RW-4	07/22/03	9.54	11.46	1.92	4.00	Bailer	4.00	0	8.25	0	None
RW-4	08/15/03	10.20	11.60	1.40	3.00	Bailer	3.00	0	11.25	0	None
RW-4	08/21/03	10.36	11.40	1.04	2.00	Bailer	2.00	0	13.25	0	None
RW-4	09/05/03	10.66	11.60	0.94	2.00	Bailer	2.00	0	15.25	0	None
RW-4	09/22/03	10.51	11.70	1.19	2.00	Bailer	2.00	0	17.25	0	None
RW-4	10/09/03	10.76	11.72	0.96	2.00	Bailer	2.00	0	19.25	0	None
RW-4	10/17/03	10.84	11.68	0.84	1.50	Bailer	1.50	0	20.75	0	None
RW-4	10/22/03	11.02	11.40	0.38	0.75	Bailer	0.75	0	21.50	0	None

TABLE 14
FREE PRODUCT RECOVERY

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative		Comments
		Depth to FP[1] (ft)	Depth to GW[2] (ft)	FP Thickness (ft)	FP Volume (gal)		FP (gal)	GW (gal)	FP (gal)	GW (gal)	
RW-4	10/28/03	10.96	11.51	0.55	1.25	Bailer	1.25	0	22.75	0	None
RW-4	11/05/03	10.92	11.43	0.51	0.75	Bailer	0.75	0	23.50	0	None
RW-4	11/11/03	10.82	11.13	0.31	0.75	Bailer	0.75	0	24.25	0	None
RW-4	11/28/03	10.81	11.50	0.69	1.50	Bailer	1.50	0	25.75	0	None
RW-4	12/05/03	10.96	11.25	0.29	0.75	Bailer	0.75	0	26.50	0	None
RW-4	12/10/03	11.03	11.20	0.17	0.50	Bailer	0.50	0	27.00	0	None
RW-4	12/17/03	11.11	11.35	0.24	0.50	Bailer	0.50	0	27.50	0	None
RW-4	02/23/04	11.48	11.92	0.44	0.05	Bailer	0.05	0	27.55	0	None
RW-4	02/23/04	11.58	11.91	0.33	0.04	Bailer	0.04	0	27.59	0	None
RW-4	02/23/04	11.61	11.93	0.32	0.04	Bailer	0.04	0	27.63	0	None
RW-4	02/24/04	11.54	11.86	0.32	0.03	Bailer	0.03	0	27.66	0	None
RW-4	02/24/04	11.46	11.75	0.29	0.03	Bailer	0.03	0	27.69	0	None
RW-4	02/24/04	11.47	11.76	0.29	0.03	Bailer	0.03	0	27.72	0	None
RW-4	02/24/04	11.49	11.83	0.34	0.03	Bailer	0.03	0	27.75	0	None
RW-4	02/24/04	11.51	11.84	0.33	0.03	Bailer	0.03	0	27.78	0	None
RW-4	02/25/04	11.51	11.93	0.42	0.03	Bailer	0.03	0	27.81	0	None
RW-4	02/25/04	11.53	11.96	0.43	0.03	Bailer	0.03	0	27.84	0	None
RW-4	02/25/04	11.57	11.99	0.42	0.03	Bailer	0.03	0	27.87	0	None
RW-4	02/25/04	11.54	11.96	0.42	0.03	Bailer	0.03	0	27.90	0	None
RW-4	02/25/04	11.53	11.93	0.40	0.03	Bailer	0.03	0	27.93	0	None
RW-4	03/16/04	11.47	11.50	0.03	0.03	Bailer	0.03	0	27.96	0	None
RW-4	03/25/04	10.58	11.21	0.63	2.00	Bailer	2.00	0	29.96	0	None
RW-4	04/05/04	10.10	11.40	1.30	0.20	Bailer	0.20	0	30.16	0	None
RW-4	04/05/04	10.09	11.37	1.28	0.20	Bailer	0.20	0	30.36	0	None
RW-4	04/05/04	10.08	11.35	1.27	0.20	Bailer	0.20	0	30.56	0	None
RW-4	04/14/04	10.03	11.60	1.57	3.00	Bailer	3.00	0	33.56	0	None
RW-4	05/10/04	9.85	10.25	0.40	0.40	Bailer	0.40	0	33.96	0	None
RW-4	06/08/04	8.92	11.42	2.50	4.00	Bailer	4.00	0	37.96	0	None
RW-4	06/29/04	8.70	11.21	2.51	4.00	Bailer	4.00	0	41.96	0	None
RW-4	07/10/04	10.07	11.40	1.33	0.00	Bailer	0.00	0	41.96	0	None
RW-4	07/15/04	8.23	9.23	1.00	0.50	Bailer	0.50	0	42.46	0	None
RW-4	07/21/04	9.82	11.36	1.54	0.50	Bailer	0.50	0	42.96	0	None
RW-4	07/27/04	10.00	11.30	1.30	0.50	Bailer	0.50	0	43.46	0	None
RW-4	08/09/04	10.04	11.24	1.20	3.00	Bailer	3.00	0	46.46	0	None
RW-4	08/16/04	9.85	11.25	1.40	2.50	Bailer	2.50	0	48.96	0	None
RW-4	08/31/04	10.18	11.18	1.00	3.00	Bailer	3.00	0	51.96	0	None
RW-4	09/27/04	8.84	11.45	2.61	4.00	Bailer	4.00	0	55.96	0	None
RW-4	10/26/04	8.82	11.06	2.24	4.00	Bailer	4.00	0	59.96	0	None
RW-4	11/23/04	9.49	11.43	1.94	4.50	Bailer	4.50	0	64.46	0	None
RW-4	12/07/04	9.73	11.33	1.60	3.50	Bailer	3.50	0	67.96	0	None
RW-4	03/15/05	10.43	11.28	0.85	2.00	Bailer	2.00	0	69.96	0	None
RW-4	04/05/05	8.74	11.38	2.64	5.00	Bailer	5.00	0	74.96	0	None
RW-4	04/13/05	8.64	11.05	2.41	5.00	Bailer	5.00	0	79.96	0	None
RW-4	05/06/05	9.22	11.30	2.08	4.00	Bailer	4.00	0	83.96	0	None
RW-4	06/01/05	8.60	11.30	2.70	5.00	Bailer	5.00	0	88.96	0	None
RW-4	06/29/05	8.65	11.30	2.65	4.00	Bailer	4.00	0	92.96	0	None
RW-4	09/15/05	10.04	11.42	1.38	0.00	Bailer	0.00	0	92.96	0	None
RW-4	10/04/05	9.58	11.14	1.56	3.00	Bailer	3.00	0	95.96	0	None
RW-4	11/03/05	9.41	11.40	1.99	0.00	Bailer	0.00	0	95.96	0	None
RW-4	12/20/05	9.45	11.35	1.90	0.00	Bailer	0.00	0	95.96	0	None
RW-4	02/01/06	9.41	11.35	1.94	5.00	Bailer	5.00	0	100.96	0	None
RW-4	03/07/06	10.22	11.20	0.98	2.00	Bailer	2.00	0	102.96	0	None
RW-4	04/10/06	8.64	11.45	2.81	5.00	Bailer	5.00	0	107.96	0	None
RW-4	05/03/06	9.00	11.44	2.44	4.00	Bailer	4.00	0	111.96	0	None
RW-4	07/05/06	9.90	11.30	1.40	3.50	Bailer	3.50	0	115.46	0	None
RW-4	08/17/06	9.96	11.40	1.44	4.00	Bailer	4.00	0	119.46	0	None
RW-4	09/28/06	10.26	11.20	0.94	2.50	Bailer	2.50	0	121.96	0	None

TABLE 14
FREE PRODUCT RECOVERY

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative		Comments
		Depth to FP[1] (ft)	Depth to GW[2] (ft)	FP Thickness (ft)	FP Volume (gal)		FP (gal)	GW (gal)	FP (gal)	GW (gal)	
RW-4	11/15/06	10.50	11.42	0.92	2.00	Bailer	2.00	0	123.96	0	None
RW-4	01/12/07	10.38	11.40	1.02	4.00	Bailer	4.00	0	127.96	0	None
RW-4	01/29/07	10.71	11.40	0.69	3.00	Bailer	3.00	0	130.96	0	None
RW-4	02/12/07	10.92	11.30	0.38	3.00	Bailer	3.00	0	133.96	0	None
RW-4	03/15/07	10.85	11.00	0.15	1.00	Bailer	1.00	0	134.96	0	None
RW-4	04/16/07	9.68	10.68	1.00	4.00	Bailer	4.00	0	138.96	0	None
RW-4	05/30/07	10.88	12.88	2.00	4.00	Bailer	4.00	0	142.96	0	None
RW-4	08/29/07	10.37	11.20	0.83	3.00	Bailer	3.00	0	145.96	0	None
RW-4	10/02/07	9.45	11.27	1.82	3.00	Bailer	3.00	0	148.96	0	None
RW-4	10/09/07	8.10	8.40	0.30	4.50	Bailer	4.50	0	153.46	0	None
RW-4	11/01/07	---	8.58	---	4.33	Bailer	4.33	0	157.79	0	None
RW-4	11/16/07	---	9.40	---	4.00	Bailer	4.00	0	161.79	0	None
RW-4	11/30/07	---	11.41	---	2.00	Bailer	2.00	0	163.79	0	None
RW-4	12/17/07	---	10.02	---	1.50	Bailer	1.50	0	165.29	0	None
RW-4	02/27/08	10.98	11.34	0.36	---	Bailer	0.00	0	165.29	0	None
RW-4	09/23/08	9.62	11.34	1.72	3.00	Bailer	3.00	0	168.29	0	None
RW-4	02/15/10	10.53	11.28	0.75	0.50	Bailer	0.50	0	168.79	0	None
RW-4	03/03/10	10.63	11.24	0.61	0.50	Bailer	0.50	0	169.29	0	None
RW-4	03/29/10	9.52	11.22	1.70	1.50	Bailer	1.50	0	170.79	0	None
RW-4	04/26/10	9.96	11.2	1.24	1.00	Bailer	1.00	0	171.79	0	None
RW-4	05/06/10	10.19	11.24	1.05	0.50	Bailer	0.50	0	172.29	0	None
RW-4	05/14/10	9.53	11.2	1.67	2.00	Bailer	2.00	0	174.29	0	None
RW-4	05/28/10	9.57	11.25	1.68	3.00	Bailer	3.00	0	177.29	0	None
RW-4	06/10/10	9.55	11.23	1.68	2.00	Bailer	2.00	0	179.29	0	None
RW-4	12/01/10	8.83	11.26	2.43	2.50	Purge	2.50	0	181.79	0	None
RW-4	04/28/11	8.82	10.92	2.10	1.37	Bailer	3.00	0	184.79	0	None
RW-4	10/05/11	10.14	10.82	0.68	0.44	Bailer	1.00	0	185.79	0	None
RW-4	10/11/11	10.22	10.75	0.53	0.34	---	---	0	185.79	0	Didn't bail
RW-4	11/02/11	10.50	10.9	0.40	0.26	Bailer	1.00	0	186.79	0	None
RW-4	12/06/11	10.82	10.99	0.17	0.11	Bailer	0.25	0	187.04	0	None
RW-4	01/11/12	11.15	11.27	0.12	0.08	Bailer	0.25	0	187.29	0	None
RW-4	02/09/12	11.34	11.46	0.12	0.08	Bailer	0.15	0	187.44	0	None
RW-4	03/08/12	11.40	11.47	0.07	0.05	Bailer	0.15	0	187.59	0	None
RW-4	04/02/12	10.66	10.67	0.01	0.01	---	---	0	187.59	0	Didn't bail
RW-4	05/16/12	9.41	9.53	0.12	0.08	Bailer	0.15	0	187.74	0	None
RW-4	09/11/12	9.63	10.99	1.36	0.88	Bailer	0.75	0	188.49	0	None
RW-4	10/31/12	10.68	10.85	0.17	0.11	---	---	0	188.49	0	Didn't bail
RW-4	12/21/12	---	10.98	0.00	0.00	---	---	0	188.49	0	None
RW-4	01/23/13	11.19	11.20	0.01	0.01	---	---	0	188.49	0	Didn't bail
RW-4	02/14/13	11.40	11.42	0.02	0.01	---	---	0	188.49	0	None
RW-4	04/09/13	10.9	10.96	0.06	0.039	---	---	0	188.49	0	Didn't bail
RW-4	05/13/13	9.39	9.51	0.12	0.078	---	---	0	188.49	0	Didn't bail
RW-4	06/28/13	8.82	9.11	0.29	0.1885	---	---	0	188.49	0	Didn't bail
RW-4	08/05/13	9.81	10.13	0.32	0.208	Bailer	0.25	0	188.74	0	None
RW-4	09/05/13	10.04	10.33	0.29	0.1885	Bailer	0.25	0	188.99	0	None
RW-4	10/25/13	---	9.51	0.00	0.00	---	---	0	188.99	0	None
RW-4	11/21/13	---	10.30	0.00	0.00	---	---	0	188.99	0	None
RW-4	12/02/13	10.29	10.42	0.13	0.08	---	---	0	188.99	0	Didn't bail
RW-4	01/02/14	10.76	10.90	0.14	0.09	---	---	0	188.99	0	Didn't bail
RW-4	02/10/14	11.16	11.25	0.09	0.06	---	---	0	188.99	0	Didn't bail
RW-4	03/28/14	Could Not Locate Well - Under Frozen Snowbank									
RW-4	04/28/14	8.12	9.29	1.17	0.76	Bailer	1.00	0	189.99	0	None
RW-4	05/29/14	7.58	8.89	1.31	0.85	Bailer	1.25	0	191.24	0	None
RW-4	09/02/14	8.88	9.20	0.32	0.21	Bailer	0.10	0	191.34	0	None
RW-4	10/27/14	10.11	10.47	0.36	0.23	Bailer	0.10	0	191.44	0	None
RW-4	11/18/14	10.45	10.71	0.26	0.17	Bailer	0.10	0	191.54	0	None
RW-4	02/02/15	10.84	10.96	0.12	0.08	---	0.00	0	191.54	0	None

TABLE 14
FREE PRODUCT RECOVERY

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative		Comments
		Depth to FP[1] (ft)	Depth to GW[2] (ft)	FP Thickness (ft)	FP Volume (gal)		FP (gal)	GW (gal)	FP (gal)	GW (gal)	
RW-4	03/05/15	11.20	11.27	0.07	0.05	---	0.00	0	191.54	0	None
RW-4	04/02/15	11.15	11.17	0.02	0.01	---	0.00	0	191.54	0	None
RW-4	05/07/15	10.39	10.73	0.34	0.22	---	0.00	0	191.54	0	None
RW-4	06/02/15	9.11	9.69	0.58	0.38	---	0.00	0	191.54	0	None
RW-4	09/11/15	9.30	10.03	0.73	0.47	---	0.00	0	191.54	0	None
RW-4	10/16/15	9.84	10.57	0.73	0.47	---	0.00	0	191.54	0	None
RW-4	11/18/15	8.07	8.76	0.69	0.45	---	0.00	0	191.54	0	None
RW-4	12/10/15	8.36	9.55	1.19	0.77	---	0.00	0	191.54	0	None
RW-4	01/15/16	8.71	8.79	0.08	0.05	---	0.00	0	191.54	0	None
RW-4	02/12/16	9.44	10.67	1.23	0.80	---	0.00	0	191.54	0	None
RW-6	09/28/11	---	9.56	0.00	0.00	---	0.00	0	0	0	None
RW-6	10/05/11	---	9.78	0.00	0.00	---	0.00	0	0	0	None
RW-6	10/11/11	---	9.88	0.00	0.00	---	0.00	0	0	0	None
RW-6	11/02/11	---	10.25	0.00	0.00	---	0.00	0	0	0	None
RW-6	12/06/11	---	10.52	0.00	0.00	---	0.00	0	0	0	None
RW-6	01/11/12	---	10.48	0.00	0.00	---	0.00	0	0	0	None
RW-6	02/09/12	---	10.6	0.00	0.00	---	0.00	0	0	0	None
RW-6	03/08/12	---	10.33	0.00	0.00	---	0.00	0	0	0	None
RW-6	04/02/12	---	8.71	0.00	0.00	---	0.00	0	0	0	None
RW-6	05/16/12	---	7.41	0.00	0.00	---	0.00	0	0	0	Rust sediment
RW-6	10/31/12	---	8.58	0.00	0.00	---	0.00	0	0	0	None
RW-6	12/21/12	---	9.17	0.00	0.00	---	0.00	0	0	0	None
						CUMULATIVE SITE TOTAL			**225.35**		

Notes:
[1] FP = Free Product
[2] GW = Ground Water
[3] Volume recovered during individual recovery event for that location.
[4] Cumulative volume recovered at each recovery location (i.e., keep a running total for each recovery point).

TABLE 15
Properties Located Within 500 feet of the Release Source.

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

ID #		Water Well	How	Well	Public Water Supply	Confirmed By City	Basement Or Sump	Possible Petroleum Sources	Comments (including
(See Fig. 10)	Property Address	(Y or N)	Determined*	Use**	(Y or N)	(Y or N)	(Y or N)	(Y or N)	property use)
1	512 N. 54th Ave W.	No	Contact	NA	Y	Y	yes	No	Owner-Kelly @ 591-8886
2	5319 Wadena St.	No	Contact	NA	Y	Y	yes	No	Cellar doors along north side
3	430 N. 54th Ave W.	No	Contact	NA	Y	Y	yes	No	Viola Bloom @ 628-2524
4	424 N. 54th Ave W.	No	Contact	NA	Y	Y	yes	No	Slopes up to crawlspace under kitchen. Owner-Jill Kilby @624-7607
5	422 N. 54th Ave W.	No	Contact	NA	Y	Y	yes-sump	No	got info from Rich Nickles
6	418 N. 54th Ave W.	No	Contact	NA	Y	Y	yes-sump	No	Owner-Rich Nickles @590-7396
7	414 N. 54th Ave W.	No	Contact	NA	Y	Y	Unknown	No	None
8	412 N. 54th Ave W.	No	Contact	NA	Y	Y	yes	No	Residence owner-Darnell Slosson @ 624-5984
9	410 N. 54th Ave W.	No	Contact	NA	Y	Y	yes-sump	No	Penny is owner@722-0280, rents bedroom
10	408 N. 54th Ave W.	No	Contact	NA	Y	Y	Unknown	No	None
11	406 N. 54th Ave W.	No	Contact	NA	Y	Y	yes	No	Owner-nne Blodgett@786-6382
12	5405 Ramsey St.	No	Contact	NA	Y	Y	yes-sump	No	Funeral home owner-Paul Hegstrom @ 392-4721
13	5405 1/2 Ramsey St.	No	Contact	NA	Y	Y	Unknown	No	Apartments Owner - Paul Hegstrom @ 392-4721
14	425 N. 54th Ave W.	No	Contact	NA	Y	Y	no	possible	Autobody shop, slab on grade. Owner-William Leland@391-2398
15	416 Central Ave.	No	Contact	NA	Y	Y	yes	No	Eye Care upstairs. 722-5556
16	412 Central Ave.	No	Contact	NA	Y	Y	yes	No	Apartment bldg owner James Westman 628-1270
17	413 Central Ave.	No	Contact	NA	Y	Y	Unknown	No	Open M-F 8-5pm Closed T thru Th ?
18	406 Central Ave.	No	Contact	NA	Y	Y	yes	No	Olafson Genereau Realty and a beauty shop. Bldg owner-James Aird @ 628-2237
19	404 Central Ave.	No	Contact	NA	Y	Y	yes-bar	No	Bar/Grill owner Steve Laplante @ 624-9793
20	5402 Ransey St.	No	Contact	NA	Y	Y	No	No	Residence, slab on grade @ 624-2344
21	5316 Ramsey St.	No	Contact	NA	Y	Y	Unknown	No	Loomis Armored Car Service

Notes:
* - E.g., visual observation, personal contact, telephone, returned postcardsurvey, no survey returned).
** - E.g., domestic, industrial, municipal, livestock, lawn/gardening, irrigation.
NA - Not applicable
PC - Personal Contact
NSR - No Survey Returned - The well receptor survey was not returned after being left at the property

TABLE 16
Water Supply Wells Located Within 500 Feet of the Release Source and Municipal or Industrial Wells Within ½ Mile

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Unique Number	Stratigraphy	County	Well Name	Township	Range	Dir	Section	Sub Sections	Depth (ft)	Use	Elevation (ft)	Cased Depth (ft)	SWL	Casing Diameter	Casing Material	Aquifer	Address	Sampled?	Comments	Distance from Site
None per Minnesota Department of Health (MDH) County Well Index (CWI) online database																				

Notes:
SWL - Static Water Level

TABLE 17
SURFACE WATER RECEPTOR INFORMATION

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Map ID[1]	Name and Type[2]	Distance and Direction from Plume Edge (ft)	Clean Boring/Well Between?[3] (Y or N)
See Fig. 1	Lake Superior	3000 East of Site	Y
See Fig. 1	Keene Creek	3000 South of Site	Y

[1] Map ID should correspond to a surface water feature ID on the Potential Receptor Map.
[2] Type includes, but is not limited to, lake, retention pond, infiltration pond, ditch, intermittent stream, river, creek, rain garden, etc.
[3] If the surface water feature is upgradient or cross-gradient from the site, indicate so with “NA” for not applicable.

TABLE 18
UTILITY RECEPTOR INFORMATION

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Utility ID1	Description	Construction Material	Depth to Top of Structure	Diameter	Flow Direction (for liquids)	Year Installed	Backfill Material	Distance to Water Table
See Map	Sanitary sewer along the western edge and south of the site.	Vitrious Clay	12 ft	10 in and 12 in	South	1904 and 1895	Fine-grained Sand	At or below water table
See Map	Natural gas along northern boundary and extending northeast along Grand Ave	Polyethylene	3 ft	2 in	NA	1983	Native	Approximately 7 ft
See Map (2)	Timber culvert extending from center of property southeast	Timber	10.5	2.5 ft. by 5 ft.	Southeast	Pre-1982	Fine-Silty Sand/Fill Material	At or below water table
See Map	Stormsewer north of Site along Grand	Reinforced Concrete	3 ft	3 ft	East	2002	Granular	Approximately 7 ft
See Map	Stormsewer south of Site, 54th Ave, Wadena, and Ramsey Streets	Reinforced Concrete	4 ft	18 in	Wadena and Ramsey to the East; 54th Avenue to the South	1993 and 1971	Fine-grained Sand	Approximately 5 ft
See Map	Water along western and northern boundaries of the Site	Cast Iron/Cast Iron	7 ft/7 ft	8 in/12 in	South/ West	1890/1890	Native	Approximately 3 ft
Utility ID[1]	**Name, title, and telephone number for public entity contacted to obtain information or other source of information**							
1	Duluth Engineering Department, Bill Bergstrom [bbergstrom@duluthmn.gov]							

Notes:
Utilities are identified on the Site Map (Figure 2).
(2) City of Duluth Engineering, found a faded copy of an Seway/S.E.H. map of McDonalds construction in 1982. S.E.H. project 8224T. Notes on map say found collapsed timber culvert at 10.5 feet deep.

TABLE 19
FIELD VAPOR MONITORING

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Location	Date Sampled	Utiltity Type	Diameter / Dimensions	Material	Construction Date	Total Depth	Screen Depth	PID Reading (ppm)	LEL	Comments
SG-6	1/29/2007	Permanent Soil Gas Monitoring Point	1/4 inch	Poly Tubing with Screen point	11/3/2006	8	8	0	---	
	10/2/2007					8	8	0	---	
	9/25/2008					8	8	0	---	
	6/10/2010					8	8	0	---	
	11/29/2010					8	8	0	0	Oxygen = 20.9%
	1/17/2012					8	8	0	0	
	1/14/2014					8	8	0	0	Oxygen = 20.9%
SG-7	1/29/2007	Permanent Soil Gas Monitoring Point	1/4 inch	Poly Tubing with Screen point	11/3/2006	8	8	0	---	
	10/2/2007					8	8	0	---	
	9/25/2008					8	8	0	---	
	6/10/2010					8	8	0	---	
	11/29/2010					8	8	0	0	Oxygen = 20.9%
	1/17/2012					8	8	0	0	
	1/13/2014					8	8	(1)	(1)	
SG-8	1/29/2007	Permanent Soil Gas Monitoring Point	1/4 inch	Poly Tubing with Screen point	11/3/2006	8	8	0	---	
	10/2/2007					8	8	0	---	
	9/25/2008					8	8	0	---	
	6/10/2010					8	8	0.5	---	
	11/29/2010					8	8	0	0	Oxygen = 15.6%
	1/17/2012					8	8	0	2	
	1/13/2014					8	8	0	0	Oxygen = 20.9%
SG-9	1/29/2007	Permanent Soil Gas Monitoring Point	1/4 inch	Poly Tubing with Screen point	11/3/2006	8	8	0	---	
	10/2/2007					8	8	0	---	
	9/25/2008					8	8	0	---	
	6/10/2010					8	8	0.5	---	
	11/29/2010					8	8	0	0	Oxygen = 19.2%
	1/17/2012					8	8	0	1	
	1/14/2014					8	8	0	0	Oxygen = 19.2%
SG-10	1/29/2007	Permanent Soil Gas Monitoring Point	1/4 inch	Poly Tubing with Screen point	11/3/2006	8	8	0	---	
	10/2/2007					8	8	0	---	
	9/25/2008					8	8	0	---	
	6/10/2010					8	8	0	---	
	11/29/2010					8	8	0	0	Oxygen = 18.3%
	1/17/2012					8	8	0	1	
	1/14/2014					8	8	0.2	0	Oxygen =20.2%
SG-11	1/29/2007	Permanent Soil Gas Monitoring Point	1/4 inch	Poly Tubing with Screen point	11/3/2006	8	8	0	---	
	10/2/2007					8	8	0	---	
	9/25/2008					8	8	0	---	
	6/10/2010					8	8	0	---	
	11/29/2010					8	8	0	0	Oxygen = 20.9%
	1/17/2012					8	8	0	1	
	1/14/2014					8	8	0	0	Oxygen = 20.9%
SG-12	1/29/2007	Permanent Soil Gas Monitoring Point	1/4 inch	Poly Tubing with Screen point	11/3/2006	8	8	0	---	
	10/2/2007					8	8	0	---	
	9/25/2008					8	8	0	---	
	6/10/2010					8	8	0	---	
	11/29/2010					8	8	0	0	Oxygen = 20.9%
	1/17/2012					8	8	0	1	
	1/14/2014					8	8	0	0	Oxygen = 20.9%
SG-13	1/29/2007	Permanent Soil Gas Monitoring Point	1/4 Inch	Poly Tubing with Screen point	11/3/2006	8	8	0	---	
	10/2/2007					8	8	0	---	
	6/10/2010					8		Not present		
	1/20/2011					8	8	0.3	0	Oxygen = 19.0%
	1/17/2012	Removed								
SG-14	1/14/2014	Permanent Soil Gas Monitoring Point	1/4 Inch	Poly Tubing with Screen Point	11/19/2013	4	4	1.1	0	Oxygen = 18.6%; CO = 11
SG-15	1/14/2014	Permanent Soil Gas Monitoring Point	1/4 Inch	Poly Tubing with Screen Point	11/20/2013	4	4	0.2	0	Oxygen = 17.4%

TABLE 19
FIELD VAPOR MONITORING

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Location	Date Sampled	Utiltity Type	Diameter / Dimensions	Material	Construction Date	Total Depth	Screen Depth	PID Reading (ppm)	LEL	Comments
VMP-1	4/16/2002	Sanitary Manhole	12 in	Vitrious Clay	1904/1895	12	2	0	0	
	7/5/2002					12	2	0	0	
	9/17/2002					12	2	0	0	
	12/10/2002					12	2	0	0	
	11/16/2006					12	6	0	---	
	11/16/2006					12	12	0	---	
	5/30/2007					12	8.5	0	---	
	10/2/2007					12	unknown	0	---	
	9/25/2008					12	9	0	0	
	5/6/2010					12	5	0	0	
	10/5/2011					12	8	0	0	
	4/2/2012					12	8	0	0	
	9/11/2012					12	8	0	0	
	4/8/2013					Not Measured - Could Not Open				
	1/14/2014					12	8	1.2	0	Full of foam at ~8 feet
	5/8/2014					12	8	0	0	Oxygen = 20.9%
VMP-3	4/16/2002	Storm Catch Basin	18 in	Reinforced Concrete	1993/1971	6	2	0	0	
	7/5/2002					6	2	0	0	
	9/17/2002					6	2	0	0	
	12/10/2002					6	2	0	0	
	5/30/2007					6	2	0	---	
	10/2/2007					6	unknown	0	---	
	9/25/2008					6	5.5	7	0	
	5/6/2010					6	5	0	0	
	10/5/2011					6	5	0	0	
	4/2/2012					6	5	0	0	
	9/11/2012					6	5	0	0	
	4/8/2013					6	5	0	0	
	1/14/2014					6	5	0	0	
	5/8/2014					6	5	0	0	Oxygen = 20.9%
VMP-4	4/16/2002	Storm Catch Basin in Holiday Parking lot near MW-11	18 in	Reinforced Concrete	1993/1971	4	2	0	0	
	7/5/2002					4	2	0	0	
	9/17/2002					4	2	0	0	
	12/10/2002					4	2	0	0	
	5/30/2007					4	2	0	---	
	10/2/2007					4	unknown	0	---	
	9/25/2008					4	3	0	0	
	5/6/2010					4	4	0	0	
	10/5/2011					4	3	0	0	
	4/2/2012					4	3	0	0	
	9/11/2012					4	3	0	0	
	4/8/2013					4	3	0	0	
	1/14/2014					4	3	0	0	
	5/8/2014					4	3	0	0	Oxygen = 20.9%
VMP-5	4/16/2002	Storm Catch Basin in Holiday Parking lot near MW-10	18 in	Reinforced Concrete	1993/1971	3	2	0	0	
	7/5/2002					3	2	0	0	
	9/17/2002					3	2	0	0	
	12/10/2002					3	2	0	0	
	5/30/2007					3	2	0	---	
	10/2/2007					3	unknown	0	---	
	9/25/2008					3	3	0	0	
	5/6/2010					3	3	0	0	
	10/5/2011					3	2	0	0	
	4/2/2012					3	2	0	0	
	9/11/2012					3	2	0	0	
	4/8/2013					3	2	0	0	
	1/14/2014					3	2	0	0	
	5/8/2014					3	1.5	0	0	full of water; Oxygen = 20.9%
VMP-6	4/16/2002	Storm Catch Basin in Parl Parking lot	18 in	Reinforced Concrete	1993/1971	4	2	0	0	
	7/5/2002					4	2	0	0	
	9/17/2002					4	2	0	0	
	12/10/2002					4	2	0	0	
	9/25/2008					4	4	0	0	
	5/6/2010					4	4	0	0	
	10/5/2011					4	3	0	0	
	4/2/2012					4	3	0	0	
	9/11/2012					4	3	0	0	
	4/8/2013					4	3	0	0	
	1/14/2014					Unable to Locate - Large Snowbanks Covering Area				
	5/8/2014					4	3	0	0	Oxygen = 20.9%

TABLE 19
FIELD VAPOR MONITORING

Holiday Station (former Spur #4576)
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Location	Date Sampled	Utiltity Type	Diameter / Dimensions	Material	Construction Date	Total Depth	Screen Depth	PID Reading (ppm)	LEL	Comments
VMP-7	4/16/2002	Storm Catch Basin	3 ft	Reinforced Concrete	1993/1971	3	2	0	0	
	7/5/2002					3	2	0	0	
	9/17/2002					3	2	0	0	
	12/10/2002					3	2	0	0	
	9/25/2008					Covered by asphalt				
	5/6/2010					3	3	0	0	
	10/5/2011					3	2	0	0	
	4/2/2012					3	2	0	0	
	9/11/2012					3	2	0	0	
	4/8/2013					3	2	0	0	
	1/14/2014					Unable to Locate - Largre Snowbanks Covering Area				
	5/8/2014					3	2	0	0	Oxygen = 20.9%
VMP-8	4/16/2002	Storm Catch Basin Northeast on Central Ave. South side of road.	3 ft	Reinforced Concrete	1993/1971	3	2	0	0	
	7/5/2002					3	2	0	0	
	9/17/2002					3	2	0	0	
	12/10/2002					3	2	0	0	
	5/30/2007					3	2	0	---	
	9/25/2008					3	4	0	0	
	5/6/2010					3	---	---	---	
	10/5/2011					3	2	0	0	
	4/2/2012					3	2	0	0	
	9/11/2012					3	2	0	0	
	4/8/2013					3	2	0	0	
	1/14/2014					Unable to Locate - Largre Snowbanks Covering Area				
	5/8/2014					3	2	0	0	Oxygen = 20.9%
VMP-9	4/16/2002	Storm Catch Basin Northeast on Central Ave. South side of road.	3 ft	Reinforced Concrete	1993/1971	3	2	0	0	
	7/5/2002					3	2	0	0	
	9/17/2002					3	2	0	0	
	12/10/2002					3	2	0	0	
	9/25/2008					3	4	0	0	
	5/6/2010					3	---	---	---	
	10/5/2011					3	2	0	0	
	4/2/2012					3	2	0	0	
	9/11/2012					3	2	0	0	
	4/8/2013					3	2	0	0	
	1/14/2014					3	2	0	0	
	5/8/2014					3	2	0	0	Oxygen = 20.9%
VMP-10	4/16/2002	Storm Catch Basin	3 ft	Reinforced Concrete	1993/1971	5	2	0	0	
	7/5/2002					5	2	0	0	
	9/17/2002					5	2	0	0	
	12/10/2002					5	2	0	0	
	9/25/2008					5	5	0	0	
	5/6/2010					5	5	0	0	
	10/5/2011					5	4	0	0	
	4/2/2012					5	4	0	0	
	9/11/2012					5	4	0	0	
	4/8/2013					5	4	0	0	
	1/14/2014					5	4	0	0	
	5/8/2014					5	4	0	0	Oxygen = 20.9%
VMP-11	4/16/2002	Manhole in busy Intersection	3 ft	Reinforced Concrete	1193/1971	3	2	0	0	
	7/5/2002					3	2	0	0	
	9/17/2002					3	2	0	0	
	12/10/2002					3	2	0	0	
	9/25/2008					3	---	---	---	
	5/6/2010					3	---	---	---	
	4/8/2013					Not Measured - In Busy Intersection				
	1/14/2014					Not Measured - In Busy Intersection				
	5/8/2014					Not Measured - In Busy Intersection				
VMP-12	4/16/2002	Storm Catch Basin	3 ft	Reinforced Concrete	1993/1971	4	2	0	0	
	7/5/2002					4	2	0	0	
	9/17/2002					4	2	0	0	
	12/10/2002					4	2	0	0	
	9/25/2008					4	5	0	0	
	5/6/2010					4	5	0	0	
	10/5/2011					4	3	0	0	
	4/2/2012					4	3	0	0	
	9/11/2012					4	3	0	0	
	4/8/2013					4	3	0	0	
	1/14/2014					4	3	0	0	
	5/8/2014					4	3	0	0	Oxygen = 20.9%

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FIELD VAPOR MONITORING

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Location	Date Sampled	Utiltity Type	Diameter / Dimensions	Material	Construction Date	Total Depth	Screen Depth	PID Reading (ppm)	LEL	Comments
VMP-13	4/16/2002	Storm Catch Basin	3 ft	Reinforced Concrete	1993/1971	4	2	0	0	
	7/5/2002					4	2	0	0	
	9/17/2002					4	2	0	0	
	12/10/2002					4	2	0	0	
	9/25/2008					Not present				
	5/6/2010					4	3	0	0	
	4/2/2012					4	3	0	0	
	9/11/2012					4	3	0	0	
	4/8/2013					Not Measured - In Busy Intersection				
	1/14/2014					4	3	0	0	
	5/8/2014					4	3	0	0	Oxygen = 20.9%
VMP-14	4/16/2002	Storm Catch Basin	3 ft	Reinforced Concrete	1993/1971	4	2	0	0	
	7/5/2002					4	2	0	0	
	9/17/2002					4	2	0	0	
	12/10/2002					4	2	0	0	
	5/30/2007					4	2	0	---	
	9/25/2008					4	3	0	0	
	5/6/2010					4	3	0	0	
	10/5/2011					4	3	0	0	
	4/2/2012					4	3	0	0	
	9/11/2012					4	3	0	0	
	4/8/2013					4	3	0	0	
	1/14/2014					4	3	0	0	
	5/8/2014					4	3	0	0	Oxygen = 20.9%
VMP-16	4/16/2002	Storm Catch Basin	3 ft	Reinforced Concrete	1993/1971	3	2	0	0	
	7/5/2002					3	2	0	0	
	9/17/2002					3	2	0	0	
	12/10/2002					3	2	0	0	
	9/25/2008					3	3	0	0	
	5/6/2010					3	3	0	0	
	10/5/2011					3	2	0	0	
	4/2/2012					3	2	0	0	
	9/11/2012					3	2	0	0	
	4/8/2013					3	2	0	0	
	1/14/2014					3	2	0	0	
	5/8/2014					3	1	0	0	full of water; Oxygen = 20.9%
VMP-17	4/16/2002	Storm Manhole in sidewalk	3 ft	Reinforced Concrete	1993/1971	12	2	0	0	
	7/5/2002					12	2	0	0	
	9/17/2002					12	2	0	0	
	12/10/2002					12	2	0	0	
	9/25/2008					12	12	0	0	
	5/6/2010					12	5	0	0	
	10/5/2011					12	5	0	0	
	4/2/2012					12	5	0	0	
	9/11/2012					12	5	0	0	
	4/8/2013					12	5	0	0	
	1/14/2014					12	5	0	0	
	5/8/2014					12	5	0	0	Oxygen = 20.9%
VMP-18	4/16/2002	Storm Manhole in alley	3 ft	Reinforced Concrete	1993/1971	12	2	0	0	
	7/5/2002					12	2	0	0	
	9/17/2002					12	2	0	0	
	12/10/2002					12	2	0	0	
	9/25/2008					12	12	0	0	
	5/6/2010					12	5	0	0	
	10/5/2011					12	5	0	0	
	4/2/2012					12	5	0	0	
	9/11/2012					12	5	0	0	
	4/8/2013					12	5	0	0	
	1/13/2014					12	8	0	0	Oxygen = 20.9%
	5/8/2014					12	8	0	0	Oxygen = 20.9%
VMP-19	4/16/2002	Storm Catch Basin	3 ft	Reinforced Concrete	1993/1971	3	2	0	0	
	7/5/2002					3	2	0	0	
	9/17/2002					3	2	0	0	
	12/10/2002					3	2	0	0	
	9/25/2008					3	3	0	0	
	5/6/2010					3	3	0	0	
	10/5/2011					3	2	0	0	
	4/2/2012					3	2	0	0	
	9/11/2012					3	2	0	0	
	4/8/2013					3	2	0	0	
	1/14/2014					3	2	0	0	
	5/8/2014					3	2	0	0	Oxygen = 20.9%

TABLE 19
FIELD VAPOR MONITORING

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MPCA Leak #17591

Location	Date Sampled	Utiltity Type	Diameter / Dimensions	Material	Construction Date	Total Depth	Screen Depth	PID Reading (ppm)	LEL	Comments
VMP-20	4/16/2002	Storm Catch Basin	3 ft	Reinforced Concrete	1993/1971	3	2	0	0	
	7/5/2002					3	2	0	0	
	9/17/2002					3	2	0	0	
	12/10/2002					3	2	0	0	
	9/25/2008					3	not reported	0	0	
	5/6/2010					3	3	0	0	
	10/5/2011					3	2	0	0	
	4/2/2012					3	2	0	0	
	9/11/2012					3	2	0	0	
	4/8/2013					3	2	0	0	
	1/14/2014					3	2	0	0	
	5/8/2014					3	2	0	0	Oxygen = 20.9%
VMP-21	4/16/2002	Storm Catch Basin	3 ft	Reinforced Concrete	1993/1971	3	2	0	0	
	7/5/2002					3	2	0	0	
	9/17/2002					3	2	0	0	
	12/10/2002					3	2	0	0	
	9/25/2008					3	3	0	0	
	5/6/2010					3	3	0	0	
	10/5/2011					3	2	0	0	
	4/2/2012					3	2	0	0	
	9/11/2012					3	2	0	0	
	4/8/2013					3	2	0	0	
	1/14/2014					3	2	0	0	
	5/8/2014					3	2	0	0	Oxygen = 20.9%
VMP-22	4/16/2002	Storm Catch Basin	3 ft	Reinforced Concrete	1993/1971	3	2	0	0	
	7/5/2002					3	2	0	0	
	9/17/2002					3	2	0	0	
	12/10/2002					3	2	0	0	
	5/30/2007					3	2	0	---	
	9/25/2008					3	3	0	0	
	5/6/2010					3	3	0	0	
	10/5/2011					3	2	0	0	
	4/2/2012					3	2	0	0	
	9/11/2012					3	2	0	0	
	4/8/2013					3	2	0	0	
	1/14/2014					3	2	0	0	
	5/8/2014					3	2	0	0	Oxygen = 20.9%
VMP-23	4/16/2002	Storm Catch Basin	3 ft	Reinforced Concrete	1993/1971	3	2	0	0	
	7/5/2002					3	2	0	0	
	9/17/2002					3	2	0	0	
	12/10/2002					3	2	0	0	
	5/30/2007					3	2	0	---	
	9/25/2008					3	3	0	0	
	5/6/2010					3	---	---	---	
	10/5/2011					3	2	0	0	
	4/2/2012					3	2	0	0	
	9/11/2012					3	2	0	0	
	4/8/2013					3	2	0	0	
	1/14/2014					3	2	0	0	
	5/8/2014					3	2	0	0	Oxygen = 20.9%
VMP-26	4/16/2002	Storm Catch Basin	18 in	Reinforced Concrete	1993/1971	6	2	0	0	
	7/5/2002					6	2	0	0	
	9/17/2002					6	2	0	0	
	12/10/2002					6	2	0	0	
	10/2/2007					6	unknown	0	---	
	9/25/2008					6	6	0	0	
	5/6/2010					6	5	0	0	
	10/5/2011					6	5	0	0	
	4/2/2012					6	5	0	0	
	9/11/2012					6	5	0	0	
	4/8/2013					6	5	0	0	
	1/14/2014					6	5	0	0	
	5/8/2014					6	5	0	0	Oxygen = 20.9%

TABLE 19
FIELD VAPOR MONITORING

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Location	Date Sampled	Utiltity Type	Diameter / Dimensions	Material	Construction Date	Total Depth	Screen Depth	PID Reading (ppm)	LEL	Comments
VMP-27	11/16/2006	Sanitary manhole near SG-7	18 in	Reinforced Concrete	1993/1971	13	6	0	---	
	11/16/2006					13	12	0	---	
	5/30/2007					13	6	0	---	
	10/2/2007					13	unknown	0	---	
	9/25/2008					13	13	0	0	
	5/6/2010					13	---	---	---	
	10/5/2011					13	12	0	0	
	4/2/2012					13	12	0	0	
	9/11/2012					13	12	0	0	
	4/8/2013					13	12	0	0	
	1/14/2014					13	10	0	0	Oxygen = 20.9%
	5/8/2014					13	12	0	0	Oxygen = 20.9%
VMP-28	5/6/2010	Sanitary manhole near VMP-19	18 in	Reinforced Concrete	1993/1971	unknown	5	0	0	
	10/5/2011					unknown	5	0	0	
	4/2/2012					unknown	5	0	0	
	9/11/2012					unknown	5	0	0	
	4/8/2013					unknown	5	0	0	
	1/14/2014					Unable to Locate - Large Snowbanks Covering Area				
	5/8/2014					~12	5 & 10	0	0	0's at both depths; Oxygen = 20.9%
VMP-29	1/14/2014	Manhole near SG-7	18 in	Reinforced Concrete	Unknown	13	8	0	0	
	5/8/2014					13	8	0	0	Oxygen = 20.9%
Upgradient Manhole	1/13/2014	Sanitary manhole	18 in	Reinforced Concrete	1993/1971	13	10	0	0	Oxygen = 20.9%
	5/8/2014					13	10	0	0	Oxygen = 20.9%

Notes:
PID = Photoionization Detector
PPM = Parts Per Million
LEL = Lower Explosive Limit
VMP = Vapor monitoring points
(1) = PID and CGI meters could not draw enough air to collect readings; screen must be clogged and will not allow air to enter the tubing.

Table 20
SOIL GAS ANALYTICAL RESULTS

Holiday Gas Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Parameter	Units	SG-6					SG-7			SG-8					SG-9					SG-10					SG-11				
Date		11/3/06	4/3/08	11/29/10	1/17/12	1/14/14	11/3/06	11/29/10	1/17/12	11/3/06	4/3/08	11/29/10	1/17/12	1/13/14	11/3/06	2/27/08	11/29/10	1/17/12	1/14/14	11/3/06	4/3/08	11/29/10	1/17/12	1/14/14	11/3/06	4/3/08	11/29/10	1/17/12	1/14/14
Depth				8.0				8.0				8.0					8.0					6.0					8.0			
1,1,1-Trichloroethane	ug/m3	ND	<8.70	<1.4	<1.7	<3.0	ND	<1.4	<1.7	ND	<2.18	<1.5	<1.8	<2.9	ND	<1.09	<1.5	<1.7	<1.7	ND	<1.09	<1.5	<1.7	<1.6	ND	<2.18	<1.5	<1.7	<1.7
1,1,2,2-Tetrachloroethane	ug/m3	ND	<11.0	<1.8	<1.1	<1.9	ND	<1.8	<1.1	ND	<2.75	<1.9	<1.2	<1.8	ND	<1.37	<1.9	<1.1	<1.1	ND	<1.37	<1.9	<1.1	<1.0	ND	<2.75	<1.9	<1.1	<1.1
1,1,2-Trichloroethane	ug/m3	ND	<8.70	<1.4	<0.86	<1.5	ND	<1.4	<0.86	ND	<2.18	<1.5	<0.92	<1.5	ND	<1.09	<1.5	<0.86	<0.86	ND	<1.09	<1.5	<0.86	<0.81	ND	<2.18	<1.5	<0.86	<0.86
1,1,2-Trichlorotrifluoroethane (Freon-113)	ug/m3	ND	<12.2	<2.0	<2.5	<4.3	ND	<2.0	<2.5	ND	<3.06	<2.1	<2.7	<4.2	ND	<1.53	<2.1	<2.5	<2.5	ND	<1.53	<2.1	<2.5	<2.4	ND	<3.06	<2.1	<2.5	<2.5
1,1-Dichloroethane	ug/m3	ND	<6.41	<1.0	<1.3	<2.2	ND	<1.0	<1.3	ND	<1.60	<1.1	<1.4	<2.2	ND	<0.802	<1.1	<1.3	<1.3	ND	<0.802	<1.1	<1.3	<1.2	ND	<1.60	<1.1	<1.3	<1.3
1,1-Dichloroethene	ug/m3	ND	<6.34	<1.0	<1.3	<2.2	ND	<1.0	<1.3	ND	<1.59	<1.1	<1.4	<2.1	ND	<0.793	<1.1	<1.3	<1.3	ND	<0.793	<1.1	<1.3	<1.2	ND	<1.59	<1.1	<1.3	<1.3
1,2,4-Trichlorobenzene	ug/m3	ND	<37.3	<1.2	<1.6	<4.0	ND	<1.2	<1.6	ND	<9.33	<1.3	<1.7	<4.0	ND	<4.66	<1.3	<1.6	<2.4	ND	<4.66	<1.3	<1.6	<2.2	ND	<9.33	<1.3	<1.6	<2.4
1,2,4-Trimethylbenzene	ug/m3	ND	**11**	<1.2	**26.1**	5.1	ND	<1.2	<1.6	3.7	<1.96	<1.3	<1.7	<2.6	**7.1**	<0.982	<1.3	<1.6	<1.6	ND	<0.982	**17.8**	<1.6	<1.5	6.8	**110**	<1.3	<1.6	<1.6
1,2-Dibromoethane (EDB)	ug/m3	ND	<12.3	<2.0	<2.5	<4.1	ND	<2.0	<2.5	ND	<3.08	<2.1	<2.7	<4.1	ND	<1.54	<2.1	<2.5	<2.4	ND	<1.54	<2.1	<2.5	<2.3	ND	<3.08	<2.1	<2.5	<2.4
1,2-Dichlorobenzene	ug/m3	ND	<9.62	<1.5	<1.9	<3.2	ND	<1.5	<1.9	ND	<2.40	<1.6	<2.0	<3.2	ND	<1.20	<1.6	<1.9	<1.9	ND	<1.20	<1.6	<1.9	<1.8	ND	<2.40	<1.6	<1.9	<1.9
1,2-Dichloroethane	ug/m3	ND	<6.48	<1.0	<0.64	<1.1	ND	<1.0	<0.64	ND	<1.62	<1.1	<0.69	<1.1	ND	<0.810	<1.1	<0.64	<0.64	ND	<0.810	<1.1	<0.64	<0.61	ND	<1.62	<1.1	<0.64	<0.64
1,2-Dichloropropane	ug/m3	ND	<7.39	<1.2	<1.5	<2.5	ND	<1.2	<1.5	ND	<1.85	<1.3	<1.6	<2.5	ND	<0.924	<1.3	<1.5	<1.5	ND	<0.924	<1.3	<1.5	<1.4	ND	<1.85	<1.3	<1.5	<1.5
1,3,5-Trimethylbenzene	ug/m3	ND	<7.85	<1.2	<1.6	5.2	ND	<1.2	<1.6	ND	<1.96	<1.3	<1.7	<2.6	ND	<0.982	<1.3	<1.6	<1.6	ND	<0.982	<1.3	<1.6	<1.5	ND	**29**	<1.3	<1.6	<1.6
1,3-Butadiene	ug/m3	ND	<35.4	<0.56	<0.71	<1.2	ND	<0.56	<0.71	ND	<8.85	<0.60	<0.76	<1.2	ND	<4.43	<0.60	<0.71	<0.71	ND	<4.43	<0.60	<0.71	**97.6**	ND	<8.85	<0.60	<0.71	<0.71
1,3-Dichlorobenzene	ug/m3	ND	<9.62	<1.5	<1.9	<3.2	ND	<1.5	<1.9	ND	<2.40	<1.6	<2.0	<3.2	ND	<1.20	<1.6	<1.9	<1.9	ND	<1.20	<1.6	<1.9	<1.8	ND	<2.40	<1.6	<1.9	<1.9
1,4-Dichlorobenzene	ug/m3	ND	<9.62	<1.5	<1.9	5.7	ND	<1.5	<1.9	ND	<2.40	<1.6	<2.0	<3.2	ND	<1.20	<1.6	2.5	2	ND	<1.20	<1.6	3.2	6.3	ND	<2.40	<1.6	2.8	2.6
1,4-Dioxane	ug/m3	ND	<5.77	NA*	NA*	NA*	ND	NA*	NA*	ND	<1.44	NA*	NA*	NA*	ND	<0.721	NA*	NA*	NA*	ND	<0.721	NA*	NA*	NA*	ND	<1.44	NA*	NA*	NA*
2,2,4-Trimethylpentane	ug/m3	ND	1300	NA*	NA*	NA*	ND	NA*	NA*	ND	21	NA*	NA*	NA*	ND	3.6	NA*	NA*	NA*	ND	1.1	NA*	NA*	NA*	ND	210	NA*	NA*	NA*
2-Chlorotoluene	ug/m3	ND	<8.25	NA*	NA*	NA*	ND	NA*	NA*	ND	<2.06	NA*	NA*	NA*	ND	<1.03	NA*	NA*	NA*	ND	<1.03	NA*	NA*	NA*	ND	<2.06	NA*	NA*	NA*
2-Butanone (MEK)	ug/m3	1.9	<29.5	1.3	1.9	11.2	0.98	3.9	12.6	2.1	<7.37	2.4	<1.0	<1.6	9.3	<3.69	1.8	<0.94	5.6	ND	<3.69	1.5	<0.94	1.6	1.9	<7.37	0.95	26	5.2
2-Hexanone	ug/m3	ND	<40.9	<1.0	<1.3	<2.2	ND	<1.0	<1.3	ND	<10.2	<1.1	<1.4	<2.2	ND	<5.11	<1.1	<1.3	<1.3	ND	<5.11	<1.1	<1.3	<1.2	ND	<10.2	<1.1	<1.3	<1.3
2-Propanol	ug/m3	ND	1100	<3.1	<3.9	2.6	ND	11.4	<3.9	ND	<6.15	4.6	<4.2	5.3	ND	<3.07	<3.4	<3.9	<0.78	ND	<3.07	<3.4	<3.9	<0.74	ND	7.1	<3.4	<3.9	<0.78
4-Ethyltoluene	ug/m3	ND	<7.85	<3.1	11.8	<2.7	ND	<3.1	<3.9	ND	<1.96	<3.4	<4.2	<2.6	ND	<0.982	<3.4	<3.9	<1.6	ND	<0.982	<3.4	<3.9	<1.5	ND	2.7	<3.4	<3.9	<1.6
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	<40.9	<1.0	<1.3	<2.2	ND	<1.0	<1.3	ND	<10.2	1.9	<1.4	<2.2	ND	<5.12	<1.1	<1.3	<1.3	ND	<5.12	<1.1	<1.3	<1.2	ND	<10.2	<1.1	<1.3	<1.3
Acetone	ug/m3	5	310	10.7	7.2	44.3	2.1	27.4	57.6	3.4	<5.94	18.3	12.5	18.2	51.7	12	6.6	6.8	27.3	ND	9	7.2	5.2	9.8	19.6	<5.94	6.9	5.2	17.9
Allyl chloride	ug/m3	ND	<5.01	NA*	NA*	NA*	ND	NA*	NA*	ND	<1.25	NA*	NA*	NA*	ND	<0.626	NA*	NA*	NA*	ND	<0.626	NA*	NA*	NA*	ND	<1.25	NA*	NA*	NA*
Benzene	ug/m3	1.5	<5.11	<0.81	**62**	**6.8**	ND	0.94	0.58	ND	<1.28	<0.87	1.2	2.1	3.7	<0.639	<0.87	<0.51	<0.51	ND	<0.639	<0.87	<0.51	**4.9**	2	<1.28	<0.87	1.5	2.1
Benzyl Chloride	ug/m3	ND	<8.31	<1.3	<1.6	<2.8	ND	<1.3	<1.6	ND	<2.08	<1.4	<1.8	<2.8	ND	<1.04	<1.4	<1.6	<1.6	ND	<1.04	<1.4	<1.6	<1.6	ND	<2.08	<1.4	<1.6	<1.6
Bromodichloromethane	ug/m3	ND	<10.7	<1.8	<2.2	<3.6	ND	<1.8	<2.2	ND	<2.68	<1.9	<2.4	<3.6	ND	<1.34	<1.9	<2.2	<2.1	ND	<1.34	<1.9	<2.2	<2.0	ND	<2.68	<1.9	<2.2	<2.1
Bromoform	ug/m3	ND	<49.7	<2.6	<3.3	<5.6	ND	<2.6	<3.3	ND	<12.4	<2.8	<3.5	<5.5	ND	<6.21	<2.8	<3.3	<3.3	ND	<6.21	<2.8	<3.3	<3.1	ND	<12.4	<2.8	<3.3	<3.3
Bromomethane	ug/m3	ND	<6.21	<0.99	<1.2	<2.1	ND	<0.99	<1.2	ND	<1.55	<1.1	<1.3	<2.1	ND	<0.776	<1.1	<1.2	<1.2	ND	<0.776	<1.1	<1.2	<1.2	ND	<1.55	<1.1	<1.2	<1.2
Carbon disulfide	ug/m3	ND	<4.98	<0.79	7.3	<1.7	ND	<0.79	3.1	ND	<1.24	<0.84	2	<1.7	ND	<0.622	7.3	1.8	<0.99	ND	<0.622	<0.84	<0.99	<0.93	ND	<1.24	<0.84	<0.99	<0.99
Carbon tetrachloride	ug/m3	ND	<10.1	<1.6	<1.0	<1.7	ND	<1.6	<1.0	ND	<2.52	<1.7	<1.1	**3.2**	ND	<1.26	<1.7	<1.0	<1.0	ND	<1.26	<1.7	<1.0	<0.95	ND	<2.52	<1.7	<1.0	<1.0
Chlorobenzene	ug/m3	ND	<7.39	<1.2	<1.5	<2.5	ND	<1.2	<1.5	ND	<1.85	<1.3	<1.6	<2.5	ND	<0.924	<1.3	<1.5	<1.5	ND	<0.924	<1.3	<1.5	<1.4	ND	<1.85	<1.3	<1.5	<1.5
Chloroethane (ethyl chloride)	ug/m3	ND	<4.22	<0.68	<0.85	<1.4	ND	<0.68	<0.85	ND	<1.06	<0.72	<0.91	<1.4	ND	<0.528	<0.72	<0.85	<0.85	ND	<0.528	<0.72	<0.85	<0.80	ND	<1.06	<0.72	<0.85	<0.85
Chloroform	ug/m3	ND	<7.79	<1.2	<1.6	<2.6	ND	<1.2	<1.6	2.2	<1.95	<1.3	<1.7	<2.6	8.4	<0.973	<1.3	<1.6	<1.6	ND	<0.973	<1.3	<1.6	<1.5	ND	<1.95	<1.3	<1.6	<1.6
Chloromethane (methyl chloride)	ug/m3	ND	<3.30	0.69	<0.66	<1.1	ND	0.68	<0.66	ND	<0.826	<0.56	<0.71	2.2	ND	<0.413	<0.56	<0.66	<0.66	ND	<0.413	<0.56	<0.66	<0.62	ND	<0.826	0.69	0.67	1
cis-1,2-Dichloroethene	ug/m3	ND	<6.34	<1.0	<1.3	<2.2	ND	<1.0	<1.3	ND	<1.59	<1.1	<1.4	<2.1	ND	<0.793	<1.1	<1.3	<1.3	ND	<0.793	<1.1	<1.3	<1.2	ND	<1.59	<1.1	<1.3	<1.3
cis-1,3-Dichloropropene	ug/m3	ND	<7.26	<1.2	<1.4	<2.4	ND	<1.2	<1.4	ND	<1.82	<1.2	<1.5	<2.4	ND	<0.908	<1.2	<1.4	<1.4	ND	<0.908	<1.2	<1.4	<1.4	ND	<1.82	<1.2	<1.4	<1.4
Cyclohexane	ug/m3	15	<5.51	<0.85	8.5	<1.9	9.3	<0.85	<1.1	9.3	1.5	<0.91	<1.1	<1.8	46.1	<0.689	<0.91	<1.1	<1.1	83.6	<0.689	10.5	<1.1	<1.0	48.9	<1.38	<0.91	<1.1	<1.1
Dibromochloromethane	ug/m3	ND	<13.6	<2.1	<2.7	<4.6	ND	<2.1	<2.7	ND	<3.40	<2.3	<2.9	<4.6	ND	<1.70	<2.3	<2.7	<2.7	ND	<1.70	<2.3	<2.7	<2.6	ND	<3.40	<2.3	<2.7	<2.7
Dichlorodifluoromethane (Freon-12)	ug/m3	ND	<7.92	2.3	1.9	<2.7	ND	2.3	2	109	170	31.9	1.9	4.4	5.9	5.4	5.8	7.2	8	34.5	120	7.9	3.1	2.6	ND	6.4	2.7	2.1	<1.6
Dichlorotetrafluoroethane (Freon-114)	ug/m3	ND	<11.2	<1.8	<2.2	<3.8	ND	<1.8	<2.2	ND	<2.80	<1.9	<2.4	<3.7	ND	<1.40	<1.9	<2.2	<2.2	ND	<1.40	<1.9	<2.2	<2.1	ND	<2.80	<1.9	<2.2	<2.2
Ethanol	ug/m3	ND	810	6.3	45.4	5.7	ND	99	5.6	ND	<2.38	10.7	3.3	46.5	ND	1.7	5.2	<3.0	7	ND	4.3	6.7	<3.0	59	ND	15	5	<3.0	122
Ethyl acetate	ug/m3	ND	ND	<0.91	<1.1	<1.9	ND	<0.91	<1.1	ND	ND	<0.98	<1.2	2.4	ND	ND	<0.98	<1.1	<1.1	ND	ND	<0.98	<1.1	<1.1	ND	ND	<0.98	<1.1	<1.1
Ethylbenzene	ug/m3	ND	<6.94	<1.1	31.6	8.3	ND	<1.1	<1.4	1.5	<1.73	<1.2	<1.5	<2.3	3.9	<0.867	<1.2	<1.4	<1.4	ND	<0.867	<1.2	<1.4	1.9	2.3	4.2	<1.2	<1.4	<1.4
Hexachloro-1,3-butadiene	ug/m3	ND	<53.8	<2.8	<3.5	<5.9	ND	<2.8	<3.5	ND	<13.5	<2.9	<3.7	<5.8	ND	<6.73	<2.9	<3.5	<3.5	ND	<6.73	<2.9	<3.5	<3.3	ND	<13.5	<2.9	<3.5	<3.5
Isopropylbenzene (cumene)	ug/m3	ND	<7.87	NA*	NA*	NA*	ND	NA*	NA*	ND	<1.97	NA*	NA*	NA*	ND	<0.983	NA*	NA*	NA*	ND	<0.983	NA*	NA*	NA*	ND	<1.97	NA*	NA*	NA*
m&p-Xylene	ug/m3	4.1	<13.9	<2.2	58.1	14.5	ND	<2.2	<2.8	5.2	<3.47	<2.4	<3.0	<4.6	14.7	<1.73	<2.4	<2.8	<2.8	ND	<1.73	3	<2.8	<2.6	8.1	16	<2.4	<2.8	<2.8
Methyl Butyl Ketone	ug/m3	ND	<40.9	NA*	NA*	NA*	ND	NA*	NA*	ND	<10.2	NA*	NA*	NA*	ND	<5.11	NA*	NA*	NA*	ND	<5.11	NA*	NA*	NA*	ND	<10.2	NA*	NA*	NA*
Methyl methacrylate	ug/m3	ND	<6.55	NA*	NA*	NA*	ND	NA*	NA*	ND	<1.64	NA*	NA*	NA*	ND	<0.819	NA*	NA*	NA*	ND	<0.819	NA*	NA*	NA*	ND	<1.64	NA*	NA*	NA*
Methylene Chloride (dichloromethane)	ug/m3	ND	<5.56	1.9	<1.1	7.5	ND	3.2	**31.2**	ND	<1.39	6.8	2.4	**118**	ND	<0.694	11.5	2.3	3.1	ND	<0.694	2.9	2.1	3	2	<1.39	10.7	2.3	3.2
Methyl-tert-butyl ether (MTBE)	ug/m3	ND	<5.77	<0.91	<1.1	<1.9	ND	<0.91	<1.1	ND	<1.44	<0.98	<1.2	<1.9	ND	<0.721	<0.98	<1.1	<1.1	ND	<0.721	<0.98	<1.1	<1.1	ND	<1.44	<0.98	<1.1	<1.1
Naphthalene	ug/m3	ND	<26.4	<3.4	9	<2.8	ND	<3.4	<4.2	ND	<6.60	<3.6	<4.5	<2.8	ND	<3.30	<3.6	<4.2	<1.7	ND	<3.30	**14.6**	<4.2	5.2	ND	**18**	<3.6	<4.2	3.4
n-Heptane	ug/m3	3.6	<6.54	<1.0	<1.3	<2.2	ND	<1.0	<1.3	2	<1.64	5	<1.4	<2.2	ND	0.98	<1.1	<1.3	<1.3	ND	<0.818	2.3	<1.3	<1.2	ND	4.9	<1.1	<1.3	<1.3
n-Hexane	ug/m3	2.8	<5.64	<0.90	25.7	8.1	ND	1.3	18.5	ND	<1.41	<0.96	3.1	7.1	ND	0.85	1.7	<1.1	<1.1	ND	<0.705	4.4	<1.1	<1.1	2.5	<1.41	1.1	1.2	<1.1
o-Xylene	ug/m3	ND	<6.94	<1.1	24.9	8	ND	<1.1	<1.4	2	<1.73	<1.2	<1.5	<2.3	6.8	<0.867	<1.2	<1.4	<1.4	ND	<0.867	<1.2	<1.4	<1.3	3.5	5.6	<1.2	<1.4	1.6
Propylene (methylethylene)	ug/m3	ND	<5.51	<0.44	108	<0.93	2.7	<0.44	<0.55	ND	<1.38	<0.47	<0.59	7.4	ND	<0.689	<0.47	<0.55	<0.55	12.7	<0.689	<0.47	<0.55	**13,200**	8.7	<1.38	<0.47	4	<0.55
Styrene	ug/m3	1.5	<6.81	<1.1	<1.4	<2.3	ND	<1.1	<1.4	1.4	<1.70	<1.2	<1.5	<2.3	2.3	<0.851	<1.2	<1.4	<1.4	ND	<0.851	<1.2	<1.4	<1.3	ND	<1.70	<1.2	<1.4	<1.4
tert-Butyl alcohol	ug/m3	ND	<4.85	NA*	NA*	NA*	ND	NA*	NA*	ND	<1.21	NA*	NA*	NA*	ND	<0.606	NA*	NA*	NA*	ND	<0.606	NA*	NA*	NA*	ND	<1.21	NA*	NA*	NA*
Tetrachloroethene	ug/m3	**20.1**	<10.9	<1.8	<1.1	<1.8	7	<1.8	<1.1	ND	<2.72	<1.9	<1.2	<1.8	ND	<1.36	<1.9	<1.1	<1.1	ND	<1.36	<1.9	<1.1	<1.0	ND	5.6	<1.9	<1.1	<1.1
Tetrahydrofuran	ug/m3	ND	<4.72	<0.75	<0.94	<1.6	ND	7.3	<0.94	ND	<1.18	<0.80	<1.0	<1.6	ND	<0.590	<0.80	<0.94	<0.94	ND	<0.590	<0.80	<0.94	<0.89	ND	<1.18	<0.80	<0.94	<0.94
Toluene (methylbenzene)	ug/m3	64.8	35	1.2	97.2	247	12.8	2.2	9	85.4	<1.51	23.7	1.3	39.8	134	<0.753	1.2	<1.2	1.3	39.6	0.83	<1.0	<1.2	1.7	25.2	11	<1.0	1.6	2.1
TPH-GRO	ug/m3	ND	25,000	NA*	NA*	NA*	ND	NA*	NA*	ND	990	NA*	NA*	NA*	ND	ND	NA*	NA*	NA*	ND	700	NA*	NA*	NA*	ND	70,000	NA*	NA*	NA*
trans-1,2-Dichloroethene	ug/m3	ND	<6.34	<1.0	<1.3	<2.2	ND	<1.0	<1.3	ND	<1.59	<1.1	<1.4	<2.1	ND	<0.793	<1.1	<1.3	<1.3	ND	<0.793	<1.1	<1.3	<1.2	ND	<1.59	<1.1	<1.3	<1.3
trans-1,3-Dichloropropene	ug/m3	ND	<7.26	<1.2	<1.4	<2.4	ND	<1.2	<1.4	ND	<1.82	<1.2	<1.5	<2.4	ND	<0.908	<1.2	<1.4	<1.4	ND	<0.908	<1.2	<1.4	<1.4	ND	<1.82	<1.2	<1.4	<1.4
Trichloroethene	ug/m3	ND	<8.57	<1.4	<0.86	<1.5	ND	<1.4	<0.86	ND	<2.14	<1.5	<0.92	<1.5	**4.4**	<1.07	<1.5	<0.86	<0.86	ND	<1.07	<1.5	<0.86	<0.81	ND	<2.14	**139**	<0.86	<0.86
Trichlorofluoromethane (Freon-11)	ug/m3	ND	<8.97	<1.4	<1.7	<3.0	ND	<1.4	<1.7	ND	<2.24	<1.5	<1.8	<3.0	ND	<1.12	<1.5	<1.7	<1.8	ND	<1.12	<1.5	<1.7	<1.7	ND	<2.24	<1.5	<1.7	<1.8
Vinyl acetate	ug/m3	ND	<5.63	<0.89	<1.1	<1.9	ND	<0.89	<1.1	ND	<1.41	<0.95	<1.2	<1.9	ND	<0.704	<0.95	<1.1	<1.1	ND	<0.704	<0.95	<1.1	<1.1	ND	<1.41	<0.95	<1.1	<1.1
Vinyl Bromide	ug/m3	ND	<7.00	NA*	NA*	NA*	ND	NA*	NA*	ND	<1.75	NA*	NA*	NA*	ND	<0.875	NA*	NA*	NA*	ND	<0.875	NA*	NA*	NA*	ND	<1.75	NA*	NA*	NA*
Vinyl chloride	ug/m3	ND	<4.09	<0.65	<0.41	<0.69	ND	<0.65	<0.41	ND	<1.02	<0.70	<0.44	<0.69	ND	<0.511	<0.70	<0.41	<0.41	ND	<0.511	<0.70	<0.41	<0.38	ND	<1.02	<0.70	<0.41	<0.41

Notes:
A sample was unable to be collected from SG-7 during the January 2014 sampling event due to blockage of the sample tubing - air could not be drawn into the sampling canister.
NA = Not Applicable
All results are in micrograms per cubic meter (µg/m 3)
ISV - Intrusion Screening Value
< - Less than the laboratory Reporting Limit (RL)
NE - Not Etablished
Gray Shaded - Result exceeds the laboratory RL
Bold - Result exceeds the ISV
Yellow Shaded - Result exceeds the 10x ISV
Pink Shaded - Result exceeds the 100x ISV
Orange Shaded - Result exceeds the Acute ISV

Table 20
SOIL GAS ANALYTICAL RESULTS

Holiday Gas Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Parameter	Units	SG-12				SG-13				SG-14	SG-15	Upgradient Manhole (VMP 30)	VMP-18	VMP-27	ISVs ($\mu g/m^3$)	10x ISVs ($\mu g/m^3$)	100x ISVs ($\mu g/m^3$)	Acute ISVs ($\mu g/m^3$)	Lab Type
Date		11/3/06	11/29/10	1/17/12	1/14/14	11/3/06	4/3/08	1/20/11	2012	1/14/14	1/14/14	1/13/14	1/13/14	1/13/14					
Depth		8.0				8.0				4.0	4.0	10.0	8.0	10.0					
1,1,1-Trichloroethane	ug/m^3	ND	<1.4	<1.7	<1.6	ND	<2.18	<1.3		<3.1	<1.7	<1.5	<33.1	<1.5	**5,000**	50,000	500,000	140,000	Fixed
1,1,2,2-Tetrachloroethane	ug/m^3	ND	<1.8	<1.1	<1.0	ND	<2.75	<1.7		<2.0	<1.1	<0.94	<20.8	<0.94	**0.2**	2	20	NE	Fixed
1,1,2-Trichloroethane	ug/m^3	ND	<1.4	<0.86	<0.81	ND	<2.18	<1.3		<1.6	<0.86	<0.74	<16.4	<0.74	**0.6**	6	60	NE	Fixed
1,1,2-Trichlorotrifluoroethane (Freon-113)	ug/m^3	ND	<2.0	<2.5	<2.4	ND	<3.06	<1.9		<4.5	<2.5	<2.1	<47.7	<2.1	**30,000**	300,000	3,000,000	NE	Fixed
1,1-Dichloroethane	ug/m^3	ND	<1.0	<1.3	<1.2	ND	<1.60	<0.97		<2.3	<1.3	<1.1	<24.4	<1.1	**500**	5,000	50,000	NE	Fixed
1,1-Dichloroethene	ug/m^3	ND	<1.0	<1.3	<1.2	ND	<1.59	<0.96		<2.3	<1.3	<1.1	<24.1	<1.1	**200**	2,000	20,000	NE	Fixed
1,2,4-Trichlorobenzene	ug/m^3	ND	<1.2	<1.6	<2.2	ND	<9.33	<1.2		<4.3	<2.4	<2.0	<45.0	<2.0	**4**	40	400	NE	Fixed
1,2,4-Trimethylbenzene	ug/m^3	ND	<1.2	<1.6	<1.5	4.3	<1.96	3		<2.8	<1.6	<1.3	<29.8	<1.3	**7**	70	700	NE	Fixed
1,2-Dibromoethane (EDB)	ug/m^3	ND	<2.0	<2.5	<2.3	ND	<3.08	<1.9		<4.4	<2.4	<2.1	<46.5	<2.1	**0.02**	0.2	2	NE	Fixed
1,2-Dichlorobenzene	ug/m^3	ND	<1.5	<1.9	<1.8	ND	<2.40	<1.4		<3.4	<1.9	<1.6	<36.4	<1.6	**200**	2,000	20,000	NE	Fixed
1,2-Dichloroethane	ug/m^3	ND	<1.0	<0.64	<0.61	ND	<1.62	<0.97		<1.2	<0.64	<0.55	<12.2	<0.55	**0.4**	4	40	NE	Fixed
1,2-Dichloropropane	ug/m^3	ND	<1.2	<1.5	<1.4	ND	<1.85	<1.1		<2.7	<1.5	<1.3	<28.0	<1.3	**4**	40	400	235	Fixed
1,3,5-Trimethylbenzene	ug/m^3	ND	<1.2	<1.6	<1.5	ND	<1.96	<1.2		<2.8	<1.6	<1.3	<29.8	<1.3	**6**	60	600	NE	Fixed
1,3-Butadiene	ug/m^3	ND	<0.56	<0.71	<0.67	ND	<8.85	<0.53		<1.3	<0.71	<0.60	<13.4	<0.60	**0.3**	3	30	NE	Fixed
1,3-Dichlorobenzene	ug/m^3	ND	<1.5	<1.9	<1.8	ND	<2.40	<1.4		<3.4	<1.9	<1.6	<36.4	<1.6	**NE**	NE	NE	NE	Fixed
1,4-Dichlorobenzene	ug/m^3	ND	<1.5	<1.9	2.9	ND	<2.40	<1.4		<3.4	4.4	1.7	<36.4	2.3	**60**	600	6,000	12,000	Fixed
1,4-Dioxane	ug/m^3	ND	NA*	NA*	NA*	ND	<1.44	NA*		NA*	NA*	NA*	NA*	NA*	**NE**	NE	NE	NE	Fixed
2,2,4-Trimethylpentane	ug/m^3	ND	NA*	NA*	NA*	ND	6.5	NA*		NA*	NA*	NA*	NA*	NA*	**NE**	NE	NE	NE	Fixed
2-Chlorotoluene	ug/m^3	ND	NA*	NA*	NA*	ND	<2.06	NA*		NA*	NA*	NA*	NA*	NA*	**5,000**	50,000	500,000	NE	Fixed
2-Butanone (MEK)	ug/m^3	ND	1.9	<0.94	2.2	2.4	<7.37	5.7		<1.7	4.4	0.97	<17.9	<0.80	**NE**	NE	NE	10,000	Fixed
2-Hexanone	ug/m^3	ND	<1.0	<1.3	<1.2	ND	<10.2	<0.98		<2.3	<1.3	<1.1	<24.7	<1.1	**NE**	NE	NE	NE	Fixed
2-Propanol	ug/m^3	ND	6.4	<3.9	<0.74	ND	<6.15	<3.0		<1.4	<0.78	<0.67	<14.9	<0.67	**7,000**	70,000	700,000	3,200	Fixed
4-Ethyltoluene	ug/m^3	ND	<3.1	<3.9	<1.5	ND	<1.96	<3.0		<2.8	<1.6	<1.3	<29.8	<1.3	**NE**	NE	NE	NE	Fixed
4-Methyl-2-pentanone (MIBK)	ug/m^3	ND	<1.0	<1.3	<1.2	ND	<10.2	<0.98		<2.3	<1.3	<1.1	<24.7	<1.1	**3,000**	30,000	300,000	NE	Fixed
Acetone	ug/m^3	ND	6.1	7.8	21	115	18	2.6		27.1	10	8.1	<14.3	3.8	**31,000**	310,000	3,100,000	60,000	Fixed
Allyl chloride	ug/m^3	ND	NA*	NA*	NA*	ND	<1.25	NA*		NA*	NA*	NA*	NA*	NA*	**NE**	NE	NE	NE	Fixed
Benzene	ug/m^3	ND	<0.81	<0.51	<0.48	2.4	<1.28	<0.77		3.7	<0.51	2.2	<9.7	1.9	**4.5**	45	450	1,000	Fixed
Benzyl Chloride	ug/m^3	ND	<1.3	<1.6	<1.6	ND	<2.08	<1.2		<3.0	<1.6	<1.4	<31.3	<1.4	**1**	10	100	240	Fixed
Bromodichloromethane	ug/m^3	ND	<1.8	<2.2	<2.0	ND	<2.68	<1.7		<3.8	<2.1	<1.8	<40.5	<1.8	**NE**	6	60	NE	Fixed
Bromoform	ug/m^3	ND	<2.6	<3.3	<3.1	ND	<12.4	<2.5		<5.9	<3.3	<2.8	<62.6	<2.8	**9**	90	900	NE	Fixed
Bromomethane	ug/m^3	ND	<0.99	<1.2	<1.2	ND	<1.55	<0.93		<2.2	<1.2	<1.1	<23.5	<1.1	**5**	50	500	2,000	Fixed
Carbon disulfide	ug/m^3	ND	<0.79	<0.99	<0.93	1.5	<1.24	<0.74		<1.8	2.1	<0.84	<18.8	<0.84	**700**	7,000	70,000	6,000	Fixed
Carbon tetrachloride	ug/m^3	ND	<1.6	<1.0	<0.95	ND	<2.52	<1.5		<1.8	<1.0	<0.86	<19.1	<0.86	**0.7**	7	70	1,900	Fixed
Chlorobenzene	ug/m^3	ND	<1.2	<1.5	<1.4	ND	<1.85	<1.1		<2.7	<1.5	<1.3	<28.0	<1.3	**50**	500	5,000	NE	Fixed
Chloroethane (ethyl chloride)	ug/m^3	ND	<0.68	<0.85	<0.80	ND	<1.06	<0.64		<1.5	<0.85	<0.72	<16.1	<0.72	**10,000**	100,000	1,000,000	100,000	Fixed
Chloroform	ug/m^3	ND	<1.2	<1.6	<1.5	1.9	<1.95	<1.2		<2.8	29.5	<1.3	<29.5	<1.3	**100**	1,000	10,000	150	Fixed
Chloromethane (methyl chloride)	ug/m^3	ND	0.7	<0.66	<0.62	ND	<0.826	<0.50		<1.2	<0.66	0.91	<12.5	0.9	**90**	900	9,000	1,000	Fixed
cis-1,2-Dichloroethene	ug/m^3	ND	<1.0	<1.3	<1.2	ND	<1.59	<0.96		<2.3	<1.3	<1.1	<24.1	<1.1	**NE**	NE	NE	NE	Fixed
cis-1,3-Dichloropropene	ug/m^3	ND	<1.2	<1.4	<1.4	ND	<1.82	<1.1		<2.6	<1.4	<1.2	<27.4	<1.2	**20**	200	2,000	NE	Fixed
Cyclohexane	ug/m^3	74.3	<0.85	<1.1	<1.0	6.1	<1.38	<0.80		37.8	2.6	2.5	<20.9	<0.94	**6,000**	60,000	600,000	NE	Fixed
Dibromochloromethane	ug/m^3	ND	<2.1	<2.7	<2.6	ND	<3.40	<2.0		<4.9	<2.7	<2.3	<51.6	<2.3	**NE**	NE	NE	NE	Fixed
Dichlorodifluoromethane (Freon-12)	ug/m^3	ND	2.6	<1.6	1.7	29.8	94	1.8		<2.8	50.8	1.4	<30.1	1.7	**200**	2,000	20,000	NE	Fixed
Dichlorotetrafluoroethane (Freon-114)	ug/m^3	ND	<1.8	<2.2	<2.1	ND	<2.80	<1.7		<4.0	<2.2	<1.9	<42.3	<1.9	**NE**	NE	NE	NE	Fixed
Ethanol	ug/m^3	ND	12.4	<3.0	3.5	ND	70	3.4		167	8.2	14	18.2	6.6	**15,000**	150,000	1,500,000	180,000	Fixed
Ethyl acetate	ug/m^3	ND	<0.91	<1.1	<1.1	ND	ND	<0.86		<2.1	<1.1	<0.98	<21.8	<0.98	**3,000**	30,000	300,000	40,000	Fixed
Ethylbenzene	ug/m^3	ND	<1.1	<1.4	<1.3	1.9	<1.73	<1.0		<2.5	2.5	2	<26.2	1.8	**1,000**	10,000	100,000	10,000	Fixed
Hexachloro-1,3-butadiene	ug/m^3	ND	<2.8	<3.5	<3.3	ND	<13.5	<2.6		<6.2	<3.5	<2.9	<65.6	<2.9	**0.5**	5	50	NE	Fixed
Isopropylbenzene (cumene)	ug/m^3	ND	NA*	NA*	NA*	ND	<1.97	NA*		NA*	NA*	NA*	NA*	NA*	**NE**	NE	NE	NE	Fixed
m&p-Xylene	ug/m^3	ND	<2.2	<2.8	<2.6	7.6	<3.47	<2.1		<5.0	2.8	3	<52.4	<2.4	**100**	1,000	10,000	43,000	Fixed
Methyl Butyl Ketone	ug/m^3	ND	NA*	NA*	NA*	ND	<10.2	NA*		NA*	NA*	NA*	NA*	NA*	**NE**	NE	NE	NE	Fixed
Methyl methacrylate	ug/m^3	ND	NA*	NA*	NA*	ND	<1.64	NA*		NA*	NA*	NA*	NA*	NA*	**NE**	NE	NE	NE	Fixed
Methylene Chloride (dichloromethane)	ug/m^3	ND	2.4	**23.1**	5.1	ND	<1.39	<0.84		**298**	3.9	1.3	**23.8**	1.5	**20**	200	2,000	10,000	Fixed
Methyl-tert-butyl ether (MTBE)	ug/m^3	ND	<0.91	<1.1	<1.1	ND	<1.44	<0.86		<2.1	<1.1	<0.98	<21.8	<0.98	**3,000**	30,000	300,000	7,000	Fixed
Naphthalene	ug/m^3	ND	<3.4	<4.2	<1.6	ND	<6.60	<3.2		<3.0	<1.7	2.8	<31.9	<1.4	**9**	90	900	NE	Fixed
n-Heptane	ug/m^3	ND	<1.0	<1.3	<1.2	6.3	<1.64	<0.98		7.1	2.7	1.6	<24.7	1.2	**NE**	NE	NE	NE	Fixed
n-Hexane	ug/m^3	ND	<0.90	1.1	<1.1	9.6	<1.41	<0.85		72.2	2.4	1.7	<21.5	1.4	**2,000**	20,000	200,000	NE	Fixed
o-Xylene	ug/m^3	ND	<1.1	<1.4	<1.3	3	<1.73	<1.0		<2.5	1.5	1.4	<26.2	<1.2	**100**	1,000	10,000	43,000	Fixed
Propylene (methylethylene)	ug/m^3	ND	<0.44	<0.55	<0.52	11	<1.38	<0.41		21	<0.55	<0.47	<10.4	<0.47	**3,000**	30,000	300,000	NE	Fixed
Styrene	ug/m^3	ND	<1.1	<1.4	<1.3	ND	<1.70	<1.0		<2.5	<1.4	<1.2	<25.9	<1.2	**1,000**	10,000	100,000	21,000	Fixed
tert-Butyl alcohol	ug/m^3	ND	NA*	NA*	NA*	ND	<1.21	NA*		NA*	NA*	NA*	NA*	NA*	**NE**	NE	NE	NE	Fixed
Tetrachloroethene	ug/m^3	ND	<1.8	<1.1	<1.0	**1,550**	**2,900**	<1.7		<1.9	<1.1	<0.92	<20.5	<0.92	**20**	200	2,000	20,000	Fixed
Tetrahydrofuran	ug/m^3	ND	2.3	<0.94	<0.89	ND	<1.18	<0.71		<1.7	<0.94	<0.80	<17.9	<0.80	**NE**	NE	NE	NE	Fixed
Toluene (methylbenzene)	ug/m^3	44	1	<1.2	1.2	25.5	<1.51	3		5.7	4.3	3.9	<22.9	3.2	**5,000**	50,000	500,000	37,000	Fixed
TPH-GRO	ug/m^3	ND	NA*	NA*	NA*	ND	2,600	NA*		NA*	NA*	NA*	NA*	NA*	**NE**	NE	NE	NE	Fixed
trans-1,2-Dichloroethene	ug/m^3	ND	<1.0	<1.3	<1.2	ND	<1.59	<0.96		<2.3	<1.3	<1.1	<24.1	<1.1	**60**	600	6,000	800	Fixed
trans-1,3-Dichloropropene	ug/m^3	ND	<1.2	<1.4	<1.4	ND	<1.82	<1.1		<2.6	<1.4	<1.2	<27.4	<1.2	**20**	200	2,000	NE	Fixed
Trichloroethene	ug/m^3	ND	<1.4	<0.86	1.2	**31.9**	**20**	<1.3		<1.6	**25.1**	<0.74	<16.4	<0.74	**3**	30	300	2,000	Fixed
Trichlorofluoromethane (Freon-11)	ug/m^3	ND	<1.4	<1.7	<1.7	ND	<2.24	<1.3		<3.2	<1.8	<1.5	<34.0	<1.5	**700**	7,000	70,000	NE	Fixed
Vinyl acetate	ug/m^3	ND	<0.89	<1.1	<1.1	ND	<1.41	<0.84		<2.0	<1.1	<0.96	<21.3	<0.96	**200**	2,000	20,000	NE	Fixed
Vinyl Bromide	ug/m^3	ND	NA*	NA*	NA*	ND	<1.75	NA*		NA*	NA*	NA*	NA*	NA*	**NE**	NE	NE	NE	Fixed
Vinyl chloride	ug/m^3	ND	<0.65	<0.41	<0.38	ND	<1.02	<0.61		<0.73	<0.41	<0.35	<7.7	<0.35	**1**	10	100	180,000	Fixed

Removed

Notes:
A sample was unable to be collected from SG-7 durin
NA = Not Applicable
All results are in micrograms per cubic meter ($\mu g/m^3$)
ISV - Intrusion Screening Value
< - Less than the laboratory Reporting Limit (RL)
NE - Not Etablished
Gray Shaded - Result exceeds the laboratory RL
Bold - Result exceeds the ISV
Yellow Shaded - Result exceeds the 10x ISV
Pink Shaded - Result exceeds the 100x ISV
Orange Shaded - Result exceeds the Acute ISV

Appendix A

Lab Analytical Reports

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

February 23, 2015

Amanda Malaney
Bay West, Inc.
5 Empire Drive
Saint Paul, MN 55103

RE: Project: J140399.02 Current Holiday Sta
Pace Project No.: 10296589

Dear Amanda Malaney:
Enclosed are the analytical results for sample(s) received by the laboratory on February 11, 2015. 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,

Steve Albrecht
steve.albrecht@pacelabs.com
Project Manager

Enclosures

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

SAMPLE SUMMARY

Project: J140399.02 Current Holiday Sta
Pace Project No.: 10296589

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10296589001	**MW-28(14-17.5)**	Solid	02/09/15 14:00	02/11/15 18:05

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project:
Pace Project No.:

Method:
Description:
Client:
Date:

This data package has been reviewed for quality and completeness and is approved for release.

Bay West
Customer-Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTODY / Analytical Request Document

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

1029589

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Report To: Amanda Malaney	Attention: accountspayable@baywest.com	Facility_Name: Current Holiday Station	Page 1 of 1
Address: 5 Empire Drive	Copy To:	Company Name: Bay West LLC	Facility_Code: Holiday Station	
St. Paul, MN 55103		Address: SAME	Facility_ID:	COC# 02092015
Email To: amandam@baywest.com	Purchase Order No.: 101733	Lab Quote Reference:	Subfacility_code:	
Phone: 651-291-3495	Project Name: Current Holiday Station	Lab Project Manager: Steve Albrecht		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J140399.02			

ITEM #	Section E Required Client Information: Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO	VOCs	GRO/BTEX/MTBE	Grainsize - ASTM D422 w/ hydrometer	Comments
1	MW-28	MW-28 (14-17.5)	SL	G	02/09/15	1400	1	X												X	on
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
STATE ADMIN CONTRACT PROJECT	Hillary McBowen / Bay West	02/10/15	1325		2/10/15	1325	0.8	Y	Y	Y
MPCA WO # 3000011808		2/10/15	1605		2/10/15	1605				
		2/10/15	1741		2/11/15	0800				
		2/11/15	1400	RACE	2-11-15	1505				
							Temp (°C)	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hillary McBowen

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 02/09/15

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 4Feb2015 Page 1 of 1
	Document No.: **F-MN-L-213-rev.10**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Bay West

Project #: WO# : 10296589

10296589

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

Tracking Number: _____

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

Optional: Proj. Due Date: Proj. Name:

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

Thermometer Used: ☑ B88A9130516413 ☐ B88A912167504 ☐ B88A0143310098 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 0-6 **Cooler Temp Corrected (°C):** 0-8 **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C **Correction Factor:** +0.2 **Date and Initials of Person Examining Contents:** 2/11/15 mm

USDA Regulated Soil

Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

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

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** _____

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).

Chain of Custody

WO# : 1243613

PM: GMK Due Date: 02/20/15

CLIENT: 14PACE MPLS

Workorder: 10296589 **Workorder Name:** J140399.02 Current Holiday Sta **Owner Received Date:** 2/11/2015 **Results Requested By:** 2/26/2015

Report To	Subcontract To
Steve Albrecht Pace Analytical Services, Inc. 1700 Elm Street, Suite 200 Minneapolis, MN 55414 Phone (612)607-1700 Fax (612)607-6444	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Methanol Sterile Amber	Requested Analysis: Grain Size - ASTM D422 w/ hydrometer	LAB USE ONLY
1	MW-28(14-17.5)	PS	2/9/2015 14:00	10296589001	Solid	1	X	001
2								
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace MN	2/12/15 12:40	[signature]	2/12/15 17:0
2	[signature]	2/12/15 2/25	[signature]	2-13-15 9:30
3				

Comments

Cooler Temperature on Receipt 2.5 °C | **Custody Seal** (Y) or N | **Received on Ice** (Y) or N | **Samples Intact** (Y) or N

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

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 12Jan2015 Page 1 of 1
	Document No.: F-VM-C-001-Rev.08	Issuing Authority: Pace Virginia, Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Bay West inc

Project #: WO#: 1243613
PM: GMK Due Date: 02/20/15
CLIENT: 14PACE MPLS

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

Tracking Number:

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

Optional: Proj. Due Date: Proj. Name:

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

Thermometer Used: ☑ 140792808 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Cooler Temp Read °C: 5.5 **Cooler Temp Corrected °C:** 5.8
Temp should be above freezing to 6°C Correction Factor: .3
Biological Tissue Frozen? ☐ Yes ☐ No ☑ NA
Date and Initials of Person Examining Contents: JPK 2/12/15

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☐ No	☒ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: SL				
All containers needing acid/base preservation will be checked and documented in the pH logbook.	☐ Yes	☐ No	☒ N/A	See pH log for results and additional preservation documentation
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☒ N/A	13.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: LA Koski **Date:** 2-13-15

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., M&E Lab
206 2nd Avenue West
Virginia, MN 55792
(218) 735-6740

February 20, 2015

Steve Albrecht
Pace Analytical Services
1700 Elm Street
Suite 200
Minneapolis, MN 55414

RE: Project: 10296589
Pace Project No.: 1243613

Dear Steve Albrecht:
Enclosed are the analytical results for sample(s) received by the laboratory on February 13, 2015. The results relate only to the samples included in this report.

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

Sincerely,

Gina Koski

Gina M Koski
gina.koski@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc., M&E Lab
206 2nd Avenue West
Virginia, MN 55792
(218) 735-6740

SAMPLE SUMMARY

Project: 10296589
Pace Project No.: 1243613

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10296589001	**MW-28(14-17.5)**	Mine, Non	02/09/15 14:00	02/13/15 09:30

REPORT OF LABORATORY ANALYSIS

Chain of Custody

WO#: 1243613
PM: GMK Due Date: 02/20/15
CLIENT: 14PACE MPLS

Workorder: 10296589 **Workorder Name:** J140399.02 Current Holiday Sta **Owner Received Date:** 2/11/2015 **Results Requested By:** 2/26/2015

Report To	Subcontract To
Steve Albrecht Pace Analytical Services, Inc. 1700 Elm Street, Suite 200 Minneapolis, MN 55414 Phone (612)607-1700 Fax (612)607-6444	Pace Analytical Virginia MN 315 Chestnut Street Virginia, MN 55792 Phone (218)742-1042

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: 5035 Methanol	Requested Analysis: Grain Size - ASTM D422 w/ hydrometer	LAB USE ONLY
1	MW-28(14-17.5)	PS	2/9/2015 14:00	10296589001	Solid	1	X	001
2								
3								
4								
5								

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature] Pace MN	2/12/15 12:40	[signature]	2/12/15 17:0
2	[signature]	2/12/15 2/25	[signature]	2-13-15 9:30
3				

Comments

Cooler Temperature on Receipt 2.5 °C | Custody Seal (Y) or N | Received on Ice (Y) or N | Samples Intact (Y) or N

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

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 12Jan2015 Page 1 of 1
	Document No.: F-VM-C-001-Rev.08	Issuing Authority: Pace Virginia, Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Bay West inc

Project #: WO#: 1243613
PM: GMK Due Date: 02/20/15
CLIENT: 14PACE MPLS

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

Tracking Number: _____

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

Optional: Proj. Due Date: Proj. Name:

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

Thermometer Used: ☑ 140792808 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☑ Samples on ice, cooling process has begun

Cooler Temp Read °C: 5.5 **Cooler Temp Corrected °C:** 5.8
Temp should be above freezing to 6°C Correction Factor: .3
Biological Tissue Frozen? ☐ Yes ☐ No ☑ NA
Date and Initials of Person Examining Contents: JPK 2/12/15

				Comments:
Chain of Custody Present?	☒ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☒ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and Signature on COC?	☐ Yes	☐ No	☒ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	11.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: SL				
All containers needing acid/base preservation will be checked and documented in the pH logbook.	☐ Yes	☐ No	☒ N/A	See pH log for results and additional preservation documentation
Headspace in Methyl Mercury Container	☐ Yes	☐ No	☒ N/A	13.
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	
Pace Trip Blank Lot # (if purchased): _____				

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

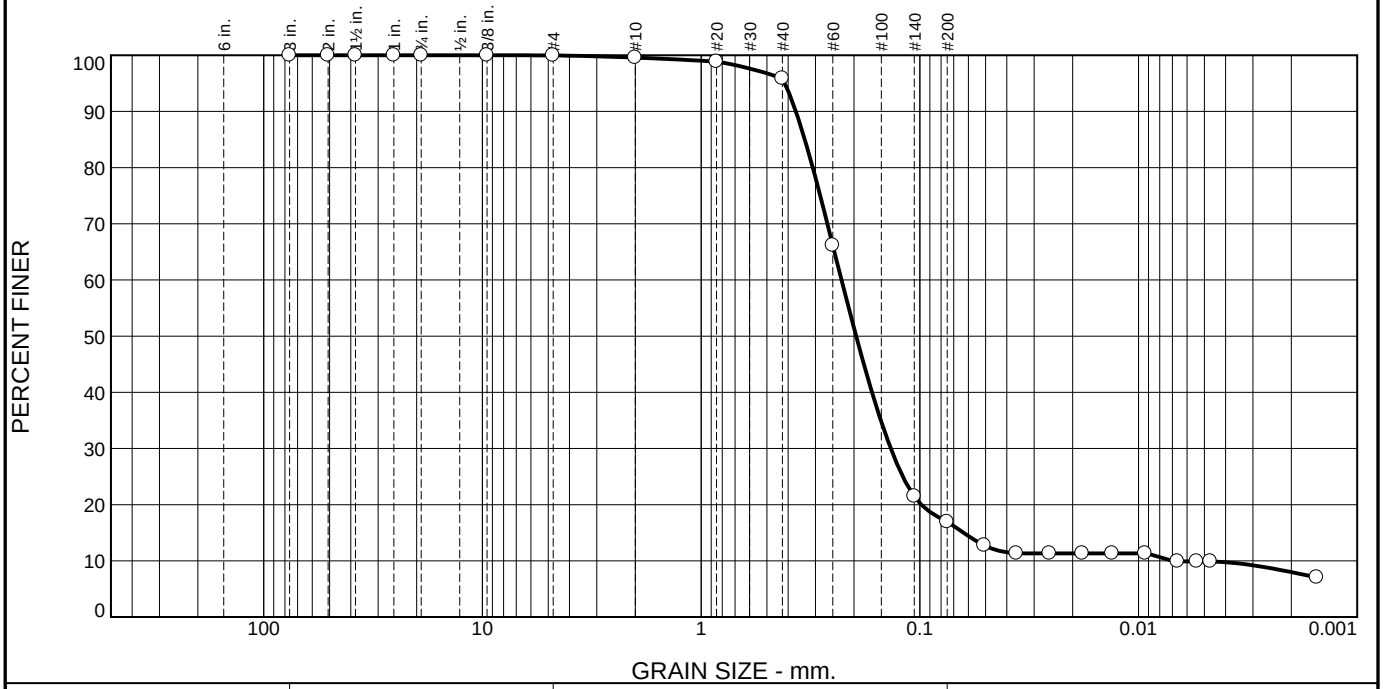
Comments/Resolution: _____

FECAL WAIVER ON FILE Y N TEMPERATURE WAIVER ON FILE Y N

Project Manager Review: _____ **Date:** 2-13-15

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)

ASTM D-422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.4	3.7	79.0	7.0	9.9

TEST RESULTS (ASTM D422)

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
3.0	100.0		
2.0	100.0		
1.5	100.0		
1.0	100.0		
3/4	100.0		
3/8	100.0		
#4	100.0		
#10	99.6		
#20	98.9		
#40	95.9		
#60	66.1		
#140	21.5		
#200	16.9		
0.0508 mm.	12.7		
0.0361 mm.	11.3		
0.0255 mm.	11.3		
0.0181 mm.	11.3		
0.0132 mm.	11.3		
0.0093 mm.	11.3		
0.0066 mm.	9.9		
0.0054 mm.	9.9		
0.0047 mm.	9.9		
0.0015 mm.	7.1		

* (no specification provided)

Material Description

silty, clayey sand

Atterberg Limits (ASTM D 4318)

PL= **LL=** **PI=**

Classification

USCS (D 2487)= SC-SM **AASHTO (M 145)=**

Coefficients

D_{90}= 0.3685 D_{85}= 0.3355 D_{60}= 0.2281
D_{50}= 0.1955 D_{30}= 0.1358 D_{15}= 0.0630
D_{10}= 0.0069 C_u= 33.09 C_c= 11.73

Remarks

Moisture ASTM D2216=17.9%

Date Received: 02/13/2015 **Date Tested:** 02/13/15

Tested By: Jake Weikum

Checked By: Gina Koski

Title: Lab Analyst I

Location: MW-28(14-17.5)
Sample Number: 10296589-001

Date Sampled: 02/09/2015

Pace Analytical Services, Inc.

Virginia, MN

Client: Pace MPLS WO#10296589
Project: J140399.02 Current Holiday Sta

Project No: 1243613 **Figure**

GRAIN SIZE DISTRIBUTION TEST DATA

2/20/2015

Client: Pace MPLS WO#10296589
Project: J140399.02 Current Holiday Sta
Project Number: 1243613
Location: MW-28(14-17.5)
Sample Number: 10296589-001
Material Description: silty, clayey sand
Sample Date: 02/09/2015
Date Received: 02/13/2015
USCS Classification: SC-SM
Grain Size Test Method: ASTM D422
Testing Remarks: Moisture ASTM D2216=17.9%
Tested By: Jake Weikum **Test Date:** 02/13/15
Checked By: Gina Koski **Title:** Lab Analyst I

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
872.90	420.50	3.0	0.00	0.00	100.0
		2.0	0.00	0.00	100.0
		1.5	0.00	0.00	100.0
		1.0	0.00	0.00	100.0
		3/4	0.00	0.00	100.0
		3/8	0.00	0.00	100.0
		#4	0.10	0.00	100.0
		#10	1.80	0.00	99.6
70.00	0.00	#20	0.50	0.00	98.9
		#40	2.10	0.00	95.9
		#60	20.90	0.00	66.1
		#140	31.40	0.00	21.5
		#200	3.20	0.00	16.9

Pace Analytical Services, Inc.

Hydrometer Test Data

Hydrometer test uses material passing #10
Percent passing #10 based upon complete sample = 99.6
Weight of hydrometer sample =70
Automatic temperature correction
Composite correction (fluid density and meniscus height) at 20 deg. C = -6
Meniscus correction only = 0.0
Specific gravity of solids = 2.65
Hydrometer type = 152H
Hydrometer effective depth equation: L = 16.294964 **-** 0.164 **x Rm**

Elapsed Time (min.)	Temp. (deg. C.)	Actual Reading	Corrected Reading	K	Rm	Eff. Depth	Diameter (mm.)	Percent Finer
1.00	20.0	15.0	9.0	0.0136	15.0	13.8	0.0508	12.7
2.00	20.0	14.0	8.0	0.0136	14.0	14.0	0.0361	11.3
4.00	20.0	14.0	8.0	0.0136	14.0	14.0	0.0255	11.3
8.00	20.0	14.0	8.0	0.0136	14.0	14.0	0.0181	11.3
15.00	20.0	14.0	8.0	0.0136	14.0	14.0	0.0132	11.3
30.00	20.0	14.0	8.0	0.0136	14.0	14.0	0.0093	11.3
60.00	20.0	13.0	7.0	0.0136	13.0	14.2	0.0066	9.9
90.00	20.0	13.0	7.0	0.0136	13.0	14.2	0.0054	9.9
120.00	20.0	13.0	7.0	0.0136	13.0	14.2	0.0047	9.9
1150.00	20.0	11.0	5.0	0.0136	11.0	14.5	0.0015	7.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.4	3.7	79.0	83.1	7.0	9.9	16.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0069	0.0630	0.0984	0.1358	0.1955	0.2281	0.3086	0.3355	0.3685	0.4142

Fineness Modulus	C_u	C_c
0.91	33.09	11.73

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

May 12, 2015

Amanda Malaney
Bay West, Inc.
5 Empire Drive
Saint Paul, MN 55103

RE: Project: J140399Current Holiday Station
Pace Project No.: 10303629

Dear Amanda Malaney:
Enclosed are the analytical results for sample(s) received by the laboratory on April 22, 2015. 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,

Lori Castille
lori.castille@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Minnesota Certification IDs

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

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SAMPLE SUMMARY

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10303629001	**Sully MW-1**	Water	04/20/15 12:10	04/22/15 18:30
10303629002	**Sully MW-2**	Water	04/20/15 13:20	04/22/15 18:30
10303629003	**Sully MW-3**	Water	04/20/15 14:10	04/22/15 18:30
10303629004	**MW-23**	Water	04/20/15 16:00	04/22/15 18:30
10303629005	**D-1**	Water	04/21/15 00:00	04/22/15 18:30
10303629006	**MW-20**	Water	04/21/15 09:50	04/22/15 18:30
10303629007	**MW-18**	Water	04/21/15 11:20	04/22/15 18:30
10303629008	**MW-17**	Water	04/21/15 12:20	04/22/15 18:30
10303629009	**MW-22**	Water	04/21/15 13:20	04/22/15 18:30
10303629010	**MW-12**	Water	04/21/15 14:15	04/22/15 18:30
10303629011	**MW-19**	Water	04/21/15 15:30	04/22/15 18:30
10303629012	**MW-16**	Water	04/21/15 16:40	04/22/15 18:30
10303629013	**FB-1**	Water	04/21/15 17:05	04/22/15 18:30
10303629014	**D-2**	Water	04/22/15 00:00	04/22/15 18:30
10303629015	**MW-13**	Water	04/22/15 09:15	04/22/15 18:30
10303629016	**MW-25**	Water	04/22/15 10:30	04/22/15 18:30
10303629017	**MW-28**	Water	04/22/15 11:40	04/22/15 18:30
10303629018	**MW-27**	Water	04/22/15 12:55	04/22/15 18:30
10303629019	**MW-26**	Water	04/22/15 13:50	04/22/15 18:30
10303629020	**Trip Blank**	Water	04/20/15 00:00	04/22/15 18:30

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SAMPLE ANALYTE COUNT

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10303629001	**Sully MW-1**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	DJB	8
10303629002	**Sully MW-2**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	7
10303629003	**Sully MW-3**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	DJB	8
10303629004	**MW-23**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629005	**D-1**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629006	**MW-20**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629007	**MW-18**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629008	**MW-17**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629009	**MW-22**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629010	**MW-12**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629011	**MW-19**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629012	**MW-16**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629013	**FB-1**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2

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SAMPLE ANALYTE COUNT

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 8260	AJC	70
10303629014	**D-2**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629015	**MW-13**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629016	**MW-25**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629017	**MW-28**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629018	**MW-27**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629019	**MW-26**	WI MOD DRO	JRH	2
		WI MOD GRO	LLC	2
		EPA 8260	AJC	70
10303629020	**Trip Blank**	WI MOD GRO	LLC	2
		EPA 8260	AJC	70

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PROJECT NARRATIVE

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Method: **WI MOD DRO**
Description: WIDRO GCS
Client: Bay West, Inc.
Date: May 12, 2015

General Information:
19 samples were analyzed for WI MOD DRO. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with WI MOD DRO with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: OEXT/28949

T6: High boiling point hydrocarbons are present in the sample.
- MW-22 (Lab ID: 10303629009)
  - WDRO C10-C28
- Sully MW-2 (Lab ID: 10303629002)
  - WDRO C10-C28

T7: Low boiling point hydrocarbons are present in the sample.
- Sully MW-2 (Lab ID: 10303629002)
  - WDRO C10-C28
- Sully MW-3 (Lab ID: 10303629003)
  - WDRO C10-C28

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PROJECT NARRATIVE

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Method: **WI MOD DRO**
Description: WIDRO GCS
Client: Bay West, Inc.
Date: May 12, 2015

Analyte Comments:

QC Batch: OEXT/28953

T7: Low boiling point hydrocarbons are present in the sample.

- D-2 (Lab ID: 10303629014)
  - WDRO C10-C28
- MW-12 (Lab ID: 10303629010)
  - WDRO C10-C28
- MW-13 (Lab ID: 10303629015)
  - WDRO C10-C28
- MW-16 (Lab ID: 10303629012)
  - WDRO C10-C28
- MW-25 (Lab ID: 10303629016)
  - WDRO C10-C28
- MW-26 (Lab ID: 10303629019)
  - WDRO C10-C28
- MW-27 (Lab ID: 10303629018)
  - WDRO C10-C28
- MW-28 (Lab ID: 10303629017)
  - WDRO C10-C28

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PROJECT NARRATIVE

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Method: **WI MOD GRO**
Description: WIGRO GCV
Client: Bay West, Inc.
Date: May 12, 2015

General Information:
20 samples were analyzed for WI MOD GRO. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

QC Batch: GCV/13673

IS: The internal standard recovery associated with this result exceeds the lower control limit. The reported result should be considered an estimated value.

- Sully MW-2 (Lab ID: 10303629002)
  - a,a,a-Trifluorotoluene (S)

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: GCV/13673

P2: Re-extraction or re-analysis could not be performed due to insufficient sample amount.

- Sully MW-2 (Lab ID: 10303629002)
  - a,a,a-Trifluorotoluene (S)

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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PROJECT NARRATIVE

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Method: **EPA 8260**
Description: 8260 VOC
Client: Bay West, Inc.
Date: May 12, 2015

General Information:
17 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
- D-2 (Lab ID: 10303629014)
- FB-1 (Lab ID: 10303629013)
- MW-13 (Lab ID: 10303629015)
- MW-16 (Lab ID: 10303629012)
- MW-17 (Lab ID: 10303629008)
- MW-18 (Lab ID: 10303629007)
- MW-20 (Lab ID: 10303629006)
- MW-22 (Lab ID: 10303629009)
- MW-23 (Lab ID: 10303629004)
- MW-25 (Lab ID: 10303629016)
- MW-27 (Lab ID: 10303629018)
- MW-28 (Lab ID: 10303629017)
- Trip Blank (Lab ID: 10303629020)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: MSV/31257

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
- BLANK (Lab ID: 1950039)
  - Bromomethane
- D-1 (Lab ID: 10303629005)
  - Bromomethane
- LCS (Lab ID: 1950040)
  - Bromomethane
- MS (Lab ID: 1950913)
  - Bromomethane
- MSD (Lab ID: 1950914)
  - Bromomethane
- MW-12 (Lab ID: 10303629010)
  - Bromomethane
- MW-19 (Lab ID: 10303629011)
  - Bromomethane
- MW-26 (Lab ID: 10303629019)
  - Bromomethane

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PROJECT NARRATIVE

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Method: **EPA 8260**
Description: 8260 VOC
Client: Bay West, Inc.
Date: May 12, 2015

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: MSV/31237

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
- LCS (Lab ID: 1949111)
  - Bromomethane

QC Batch: MSV/31257

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
- LCS (Lab ID: 1950040)
  - Bromoform

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/31237

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10303629006

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- MS (Lab ID: 1950232)
  - Bromomethane

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 1950232)
  - Bromoform

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Method: **EPA 8260**
Description: 8260 MSV UST
Client: Bay West, Inc.
Date: May 12, 2015

General Information:
2 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: Sully MW-1 **Lab ID: 10303629001** Collected: 04/20/15 12:10 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.18**	mg/L	0.11	0.023	1	04/23/15 14:15	04/27/15 14:50		
Surrogates									
n-Triacontane (S)	86	%.	50-150		1	04/23/15 14:15	04/27/15 14:50	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	50.0	1		04/23/15 22:44		
Surrogates									
a,a,a-Trifluorotoluene (S)	97	%.	80-150		1		04/23/15 22:44	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**1.2**	ug/L	1.0	0.15	1		04/30/15 00:05	71-43-2	
Ethylbenzene	**4.4**	ug/L	1.0	0.16	1		04/30/15 00:05	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.17	1		04/30/15 00:05	1634-04-4	
Toluene	ND	ug/L	1.0	0.11	1		04/30/15 00:05	108-88-3	
Xylene (Total)	**7.9**	ug/L	3.0	0.40	1		04/30/15 00:05	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	96	%.	75-125		1		04/30/15 00:05	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		04/30/15 00:05	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		04/30/15 00:05	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: Sully MW-2 **Lab ID: 10303629002** Collected: 04/20/15 13:20 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**4.5**	mg/L	0.11	0.023	1	04/23/15 14:15	04/27/15 13:49		T6,T7
Surrogates									
n-Triacontane (S)	88	%.	50-150		1	04/23/15 14:15	04/27/15 13:49	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Benzene	**4.0**	ug/L	2.0	0.34	2		04/28/15 19:41	71-43-2	
Ethylbenzene	**22.5**	ug/L	2.0	1.0	2		04/28/15 19:41	100-41-4	
Gasoline Range Organics	**1870**	ug/L	200	100	2		04/28/15 19:41		
Methyl-tert-butyl ether	ND	ug/L	10.0	5.0	2		04/28/15 19:41	1634-04-4	
Toluene	ND	ug/L	2.0	1.0	2		04/28/15 19:41	108-88-3	
Xylene (Total)	**307**	ug/L	6.0	1.6	2		04/28/15 19:41	1330-20-7	
Surrogates									
a,a,a-Trifluorotoluene (S)	80	%.	80-150		2		04/28/15 19:41	98-08-8	IS,P2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: Sully MW-3 **Lab ID: 10303629003** Collected: 04/20/15 14:10 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**11.9**	mg/L	1.1	0.23	10	04/23/15 14:15	04/27/15 16:41		T7
Surrogates									
n-Triacontane (S)	62	%.	50-150		10	04/23/15 14:15	04/27/15 16:41	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**25600**	ug/L	5000	2500	50		04/23/15 23:32		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%.	80-150		50		04/23/15 23:32	98-08-8	
8260 MSV UST	Analytical Method: EPA 8260								
Benzene	**86.0**	ug/L	50.0	7.5	50		04/30/15 00:21	71-43-2	
Ethylbenzene	**986**	ug/L	50.0	8.2	50		04/30/15 00:21	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	50.0	8.4	50		04/30/15 00:21	1634-04-4	
Toluene	**139**	ug/L	50.0	5.5	50		04/30/15 00:21	108-88-3	
Xylene (Total)	**13500**	ug/L	150	20.2	50		04/30/15 00:21	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-125		50		04/30/15 00:21	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		50		04/30/15 00:21	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		50		04/30/15 00:21	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-23 **Lab ID: 10303629004** Collected: 04/20/15 16:00 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.023	1	04/23/15 14:15	04/27/15 14:58		
Surrogates									
n-Triacontane (S)	84	%.	50-150		1	04/23/15 14:15	04/27/15 14:58	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	50.0	1		04/24/15 20:22		
Surrogates									
a,a,a-Trifluorotoluene (S)	98	%.	80-150		1		04/24/15 20:22	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	20.0	10.0	1		04/27/15 19:19	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.45	1		04/27/15 19:19	107-05-1	
Benzene	ND	ug/L	1.0	0.15	1		04/27/15 19:19	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.13	1		04/27/15 19:19	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.12	1		04/27/15 19:19	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.20	1		04/27/15 19:19	75-27-4	
Bromoform	ND	ug/L	4.0	2.0	1		04/27/15 19:19	75-25-2	
Bromomethane	ND	ug/L	4.0	2.0	1		04/27/15 19:19	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		04/27/15 19:19	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		04/27/15 19:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.066	1		04/27/15 19:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.27	1		04/27/15 19:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.16	1		04/27/15 19:19	67-66-3	
Chloromethane	ND	ug/L	4.0	0.34	1		04/27/15 19:19	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.14	1		04/27/15 19:19	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.083	1		04/27/15 19:19	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		04/27/15 19:19	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.50	1		04/27/15 19:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.15	1		04/27/15 19:19	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.18	1		04/27/15 19:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.16	1		04/27/15 19:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.50	1		04/27/15 19:19	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.16	1		04/27/15 19:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.13	1		04/27/15 19:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/27/15 19:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		04/27/15 19:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.23	1		04/27/15 19:19	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/27/15 19:19	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.14	1		04/27/15 19:19	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		04/27/15 19:19	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.17	1		04/27/15 19:19	594-20-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-23 **Lab ID: 10303629004** Collected: 04/20/15 16:00 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.13	1		04/27/15 19:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.18	1		04/27/15 19:19	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	10.0	0.14	1		04/27/15 19:19	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.16	1		04/27/15 19:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.50	1		04/27/15 19:19	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		04/27/15 19:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.5	1		04/27/15 19:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.17	1		04/27/15 19:19	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		04/27/15 19:19	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	103-65-1	
Styrene	ND	ug/L	1.0	0.069	1		04/27/15 19:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 19:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 19:19	79-34-5	
Tetrachloroethene	**6.3**	ug/L	1.0	0.16	1		04/27/15 19:19	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	2.0	1		04/27/15 19:19	109-99-9	
Toluene	ND	ug/L	1.0	0.11	1		04/27/15 19:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.26	1		04/27/15 19:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		04/27/15 19:19	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.091	1		04/27/15 19:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.22	1		04/27/15 19:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1.2	1		04/27/15 19:19	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		04/27/15 19:19	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:19	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.10	1		04/27/15 19:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.40	1		04/27/15 19:19	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%.	75-125		1		04/27/15 19:19	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		04/27/15 19:19	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1		04/27/15 19:19	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: D-1 **Lab ID: 10303629005** Collected: 04/21/15 00:00 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.023	1	04/23/15 14:15	04/27/15 15:44		
Surrogates									
n-Triacontane (S)	83	%.	50-150		1	04/23/15 14:15	04/27/15 15:44	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	50.0	1		04/24/15 21:09		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%.	80-150		1		04/24/15 21:09	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	20.0	10.0	1		04/28/15 15:19	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.45	1		04/28/15 15:19	107-05-1	
Benzene	ND	ug/L	1.0	0.15	1		04/28/15 15:19	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.13	1		04/28/15 15:19	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.12	1		04/28/15 15:19	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.20	1		04/28/15 15:19	75-27-4	
Bromoform	ND	ug/L	4.0	2.0	1		04/28/15 15:19	75-25-2	L3
Bromomethane	ND	ug/L	4.0	2.0	1		04/28/15 15:19	74-83-9	CL
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		04/28/15 15:19	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		04/28/15 15:19	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.066	1		04/28/15 15:19	108-90-7	
Chloroethane	ND	ug/L	1.0	0.27	1		04/28/15 15:19	75-00-3	
Chloroform	ND	ug/L	1.0	0.16	1		04/28/15 15:19	67-66-3	
Chloromethane	ND	ug/L	4.0	0.34	1		04/28/15 15:19	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.14	1		04/28/15 15:19	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.083	1		04/28/15 15:19	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		04/28/15 15:19	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.50	1		04/28/15 15:19	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.15	1		04/28/15 15:19	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.18	1		04/28/15 15:19	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.16	1		04/28/15 15:19	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	106-46-7	
Dichlorodifluoromethane	**1.3**	ug/L	1.0	0.50	1		04/28/15 15:19	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.16	1		04/28/15 15:19	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.13	1		04/28/15 15:19	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/28/15 15:19	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		04/28/15 15:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.23	1		04/28/15 15:19	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/28/15 15:19	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.14	1		04/28/15 15:19	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		04/28/15 15:19	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.17	1		04/28/15 15:19	594-20-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: D-1 **Lab ID: 10303629005** Collected: 04/21/15 00:00 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.13	1		04/28/15 15:19	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.18	1		04/28/15 15:19	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	10.0	0.14	1		04/28/15 15:19	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.16	1		04/28/15 15:19	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.50	1		04/28/15 15:19	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		04/28/15 15:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.5	1		04/28/15 15:19	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.17	1		04/28/15 15:19	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		04/28/15 15:19	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	103-65-1	
Styrene	ND	ug/L	1.0	0.069	1		04/28/15 15:19	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/28/15 15:19	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/28/15 15:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.16	1		04/28/15 15:19	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	2.0	1		04/28/15 15:19	109-99-9	
Toluene	ND	ug/L	1.0	0.11	1		04/28/15 15:19	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.26	1		04/28/15 15:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		04/28/15 15:19	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.091	1		04/28/15 15:19	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.22	1		04/28/15 15:19	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1.2	1		04/28/15 15:19	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		04/28/15 15:19	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:19	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.10	1		04/28/15 15:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.40	1		04/28/15 15:19	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%.	75-125		1		04/28/15 15:19	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		04/28/15 15:19	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1		04/28/15 15:19	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-20 **Lab ID: 10303629006** Collected: 04/21/15 09:50 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.12**	mg/L	0.11	0.023	1	04/23/15 14:15	04/27/15 14:12		
Surrogates									
n-Triacontane (S)	89	%.	50-150		1	04/23/15 14:15	04/27/15 14:12	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	50.0	1		04/24/15 21:56		
Surrogates									
a,a,a-Trifluorotoluene (S)	98	%.	80-150		1		04/24/15 21:56	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	20.0	10.0	1		04/27/15 18:35	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.45	1		04/27/15 18:35	107-05-1	
Benzene	ND	ug/L	1.0	0.15	1		04/27/15 18:35	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.13	1		04/27/15 18:35	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.12	1		04/27/15 18:35	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.20	1		04/27/15 18:35	75-27-4	
Bromoform	ND	ug/L	4.0	2.0	1		04/27/15 18:35	75-25-2	M1
Bromomethane	ND	ug/L	4.0	2.0	1		04/27/15 18:35	74-83-9	L2,M0
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		04/27/15 18:35	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		04/27/15 18:35	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.066	1		04/27/15 18:35	108-90-7	
Chloroethane	ND	ug/L	1.0	0.27	1		04/27/15 18:35	75-00-3	
Chloroform	ND	ug/L	1.0	0.16	1		04/27/15 18:35	67-66-3	
Chloromethane	ND	ug/L	4.0	0.34	1		04/27/15 18:35	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.14	1		04/27/15 18:35	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.083	1		04/27/15 18:35	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		04/27/15 18:35	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.50	1		04/27/15 18:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.15	1		04/27/15 18:35	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.18	1		04/27/15 18:35	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.16	1		04/27/15 18:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	106-46-7	
Dichlorodifluoromethane	**1.3**	ug/L	1.0	0.50	1		04/27/15 18:35	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.16	1		04/27/15 18:35	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.13	1		04/27/15 18:35	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/27/15 18:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		04/27/15 18:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.23	1		04/27/15 18:35	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/27/15 18:35	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.14	1		04/27/15 18:35	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		04/27/15 18:35	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.17	1		04/27/15 18:35	594-20-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-20 **Lab ID: 10303629006** Collected: 04/21/15 09:50 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.13	1		04/27/15 18:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.18	1		04/27/15 18:35	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	10.0	0.14	1		04/27/15 18:35	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.16	1		04/27/15 18:35	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.50	1		04/27/15 18:35	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		04/27/15 18:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.5	1		04/27/15 18:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.17	1		04/27/15 18:35	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		04/27/15 18:35	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	103-65-1	
Styrene	ND	ug/L	1.0	0.069	1		04/27/15 18:35	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:35	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:35	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.16	1		04/27/15 18:35	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	2.0	1		04/27/15 18:35	109-99-9	
Toluene	ND	ug/L	1.0	0.11	1		04/27/15 18:35	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.26	1		04/27/15 18:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		04/27/15 18:35	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.091	1		04/27/15 18:35	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.22	1		04/27/15 18:35	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1.2	1		04/27/15 18:35	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:35	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:35	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.10	1		04/27/15 18:35	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.40	1		04/27/15 18:35	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-125		1		04/27/15 18:35	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		04/27/15 18:35	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		04/27/15 18:35	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-18 **Lab ID: 10303629007** Collected: 04/21/15 11:20 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.024	1	04/23/15 14:15	04/27/15 15:52		
Surrogates									
n-Triacontane (S)	86	%.	50-150		1	04/23/15 14:15	04/27/15 15:52	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	50.0	1		04/24/15 22:20		
Surrogates									
a,a,a-Trifluorotoluene (S)	86	%.	80-150		1		04/24/15 22:20	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	20.0	10.0	1		04/27/15 18:50	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.45	1		04/27/15 18:50	107-05-1	
Benzene	**2.1**	ug/L	1.0	0.15	1		04/27/15 18:50	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.13	1		04/27/15 18:50	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.12	1		04/27/15 18:50	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.20	1		04/27/15 18:50	75-27-4	
Bromoform	ND	ug/L	4.0	2.0	1		04/27/15 18:50	75-25-2	
Bromomethane	ND	ug/L	4.0	2.0	1		04/27/15 18:50	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		04/27/15 18:50	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		04/27/15 18:50	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.066	1		04/27/15 18:50	108-90-7	
Chloroethane	ND	ug/L	1.0	0.27	1		04/27/15 18:50	75-00-3	
Chloroform	ND	ug/L	1.0	0.16	1		04/27/15 18:50	67-66-3	
Chloromethane	ND	ug/L	4.0	0.34	1		04/27/15 18:50	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.14	1		04/27/15 18:50	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.083	1		04/27/15 18:50	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		04/27/15 18:50	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.50	1		04/27/15 18:50	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.15	1		04/27/15 18:50	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.18	1		04/27/15 18:50	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.16	1		04/27/15 18:50	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.50	1		04/27/15 18:50	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.16	1		04/27/15 18:50	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.13	1		04/27/15 18:50	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/27/15 18:50	75-35-4	
cis-1,2-Dichloroethene	**33.8**	ug/L	1.0	0.13	1		04/27/15 18:50	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.23	1		04/27/15 18:50	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/27/15 18:50	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.14	1		04/27/15 18:50	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		04/27/15 18:50	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.17	1		04/27/15 18:50	594-20-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-18 **Lab ID: 10303629007** Collected: 04/21/15 11:20 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.13	1		04/27/15 18:50	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.18	1		04/27/15 18:50	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	10.0	0.14	1		04/27/15 18:50	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.16	1		04/27/15 18:50	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	87-68-3	
Isopropylbenzene (Cumene)	**1.1**	ug/L	1.0	0.50	1		04/27/15 18:50	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		04/27/15 18:50	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.5	1		04/27/15 18:50	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.17	1		04/27/15 18:50	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		04/27/15 18:50	91-20-3	
n-Propylbenzene	**2.2**	ug/L	1.0	0.50	1		04/27/15 18:50	103-65-1	
Styrene	ND	ug/L	1.0	0.069	1		04/27/15 18:50	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:50	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:50	79-34-5	
Tetrachloroethene	**74.6**	ug/L	1.0	0.16	1		04/27/15 18:50	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	2.0	1		04/27/15 18:50	109-99-9	
Toluene	ND	ug/L	1.0	0.11	1		04/27/15 18:50	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.26	1		04/27/15 18:50	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		04/27/15 18:50	79-00-5	
Trichloroethene	**16.6**	ug/L	0.40	0.091	1		04/27/15 18:50	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.22	1		04/27/15 18:50	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1.2	1		04/27/15 18:50	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:50	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:50	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.10	1		04/27/15 18:50	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.40	1		04/27/15 18:50	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%.	75-125		1		04/27/15 18:50	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		04/27/15 18:50	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		1		04/27/15 18:50	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-17 **Lab ID: 10303629008** Collected: 04/21/15 12:20 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.63**	mg/L	0.11	0.023	1	04/23/15 14:15	04/27/15 16:00		
Surrogates									
n-Triacontane (S)	89	%.	50-150		1	04/23/15 14:15	04/27/15 16:00	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**3310**	ug/L	100	50.0	1		04/24/15 22:43		
Surrogates									
a,a,a-Trifluorotoluene (S)	106	%.	80-150		1		04/24/15 22:43	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	20.0	10.0	1		04/27/15 19:34	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.45	1		04/27/15 19:34	107-05-1	
Benzene	**242**	ug/L	1.0	0.15	1		04/27/15 19:34	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.13	1		04/27/15 19:34	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.12	1		04/27/15 19:34	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.20	1		04/27/15 19:34	75-27-4	
Bromoform	ND	ug/L	4.0	2.0	1		04/27/15 19:34	75-25-2	
Bromomethane	ND	ug/L	4.0	2.0	1		04/27/15 19:34	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		04/27/15 19:34	78-93-3	
n-Butylbenzene	**1.5**	ug/L	1.0	0.50	1		04/27/15 19:34	104-51-8	
sec-Butylbenzene	**2.1**	ug/L	1.0	0.50	1		04/27/15 19:34	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:34	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		04/27/15 19:34	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.066	1		04/27/15 19:34	108-90-7	
Chloroethane	ND	ug/L	1.0	0.27	1		04/27/15 19:34	75-00-3	
Chloroform	ND	ug/L	1.0	0.16	1		04/27/15 19:34	67-66-3	
Chloromethane	ND	ug/L	4.0	0.34	1		04/27/15 19:34	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.14	1		04/27/15 19:34	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.083	1		04/27/15 19:34	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		04/27/15 19:34	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.50	1		04/27/15 19:34	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.15	1		04/27/15 19:34	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.18	1		04/27/15 19:34	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.16	1		04/27/15 19:34	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:34	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:34	106-46-7	
Dichlorodifluoromethane	**8.5**	ug/L	1.0	0.50	1		04/27/15 19:34	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.16	1		04/27/15 19:34	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.13	1		04/27/15 19:34	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/27/15 19:34	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		04/27/15 19:34	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.23	1		04/27/15 19:34	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/27/15 19:34	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.14	1		04/27/15 19:34	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		04/27/15 19:34	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.17	1		04/27/15 19:34	594-20-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-17 **Lab ID: 10303629008** Collected: 04/21/15 12:20 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		04/27/15 19:34	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.13	1		04/27/15 19:34	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.18	1		04/27/15 19:34	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	10.0	0.14	1		04/27/15 19:34	60-29-7	
Ethylbenzene	**97.7**	ug/L	1.0	0.16	1		04/27/15 19:34	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.50	1		04/27/15 19:34	87-68-3	
Isopropylbenzene (Cumene)	**12.7**	ug/L	1.0	0.50	1		04/27/15 19:34	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		04/27/15 19:34	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		04/27/15 19:34	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.5	1		04/27/15 19:34	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.17	1		04/27/15 19:34	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		04/27/15 19:34	91-20-3	
n-Propylbenzene	**15.5**	ug/L	1.0	0.50	1		04/27/15 19:34	103-65-1	
Styrene	ND	ug/L	1.0	0.069	1		04/27/15 19:34	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 19:34	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 19:34	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.16	1		04/27/15 19:34	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	2.0	1		04/27/15 19:34	109-99-9	
Toluene	**4.8**	ug/L	1.0	0.11	1		04/27/15 19:34	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:34	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:34	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.26	1		04/27/15 19:34	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		04/27/15 19:34	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.091	1		04/27/15 19:34	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.22	1		04/27/15 19:34	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1.2	1		04/27/15 19:34	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		04/27/15 19:34	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:34	95-63-6	
1,3,5-Trimethylbenzene	**11.9**	ug/L	1.0	0.50	1		04/27/15 19:34	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.10	1		04/27/15 19:34	75-01-4	
Xylene (Total)	**12.5**	ug/L	3.0	0.40	1		04/27/15 19:34	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-125		1		04/27/15 19:34	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		04/27/15 19:34	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1		04/27/15 19:34	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-22 **Lab ID: 10303629009** Collected: 04/21/15 13:20 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**2.1**	mg/L	0.11	0.023	1	04/23/15 14:15	04/27/15 14:20		T6
Surrogates									
n-Triacontane (S)	92	%.	50-150		1	04/23/15 14:15	04/27/15 14:20	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	50.0	1		04/24/15 23:07		
Surrogates									
a,a,a-Trifluorotoluene (S)	98	%.	80-150		1		04/24/15 23:07	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	20.0	10.0	1		04/27/15 19:49	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.45	1		04/27/15 19:49	107-05-1	
Benzene	**5.0**	ug/L	1.0	0.15	1		04/27/15 19:49	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.13	1		04/27/15 19:49	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.12	1		04/27/15 19:49	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.20	1		04/27/15 19:49	75-27-4	
Bromoform	ND	ug/L	4.0	2.0	1		04/27/15 19:49	75-25-2	
Bromomethane	ND	ug/L	4.0	2.0	1		04/27/15 19:49	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		04/27/15 19:49	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		04/27/15 19:49	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.066	1		04/27/15 19:49	108-90-7	
Chloroethane	ND	ug/L	1.0	0.27	1		04/27/15 19:49	75-00-3	
Chloroform	ND	ug/L	1.0	0.16	1		04/27/15 19:49	67-66-3	
Chloromethane	ND	ug/L	4.0	0.34	1		04/27/15 19:49	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.14	1		04/27/15 19:49	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.083	1		04/27/15 19:49	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		04/27/15 19:49	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.50	1		04/27/15 19:49	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.15	1		04/27/15 19:49	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.18	1		04/27/15 19:49	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.16	1		04/27/15 19:49	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.50	1		04/27/15 19:49	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.16	1		04/27/15 19:49	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.13	1		04/27/15 19:49	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/27/15 19:49	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		04/27/15 19:49	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.23	1		04/27/15 19:49	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/27/15 19:49	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.14	1		04/27/15 19:49	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		04/27/15 19:49	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.17	1		04/27/15 19:49	594-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-22 **Lab ID: 10303629009** Collected: 04/21/15 13:20 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.13	1		04/27/15 19:49	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.18	1		04/27/15 19:49	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	10.0	0.14	1		04/27/15 19:49	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.16	1		04/27/15 19:49	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.50	1		04/27/15 19:49	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		04/27/15 19:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.5	1		04/27/15 19:49	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.17	1		04/27/15 19:49	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		04/27/15 19:49	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	103-65-1	
Styrene	ND	ug/L	1.0	0.069	1		04/27/15 19:49	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 19:49	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 19:49	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.16	1		04/27/15 19:49	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	2.0	1		04/27/15 19:49	109-99-9	
Toluene	ND	ug/L	1.0	0.11	1		04/27/15 19:49	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.26	1		04/27/15 19:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		04/27/15 19:49	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.091	1		04/27/15 19:49	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.22	1		04/27/15 19:49	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1.2	1		04/27/15 19:49	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		04/27/15 19:49	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 19:49	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.10	1		04/27/15 19:49	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.40	1		04/27/15 19:49	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	90	%.	75-125		1		04/27/15 19:49	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		04/27/15 19:49	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1		04/27/15 19:49	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-12 **Lab ID: 10303629010** Collected: 04/21/15 14:15 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.33**	mg/L	0.11	0.024	1	04/23/15 18:52	04/24/15 09:53		T7
Surrogates									
n-Triacontane (S)	92	%.	50-150		1	04/23/15 18:52	04/24/15 09:53	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**889**	ug/L	100	50.0	1		04/24/15 23:31		
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%.	80-150		1		04/24/15 23:31	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	20.0	10.0	1		04/28/15 15:33	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.45	1		04/28/15 15:33	107-05-1	
Benzene	**77.2**	ug/L	1.0	0.15	1		04/28/15 15:33	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.13	1		04/28/15 15:33	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.12	1		04/28/15 15:33	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.20	1		04/28/15 15:33	75-27-4	
Bromoform	ND	ug/L	4.0	2.0	1		04/28/15 15:33	75-25-2	L3
Bromomethane	ND	ug/L	4.0	2.0	1		04/28/15 15:33	74-83-9	CL
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		04/28/15 15:33	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		04/28/15 15:33	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.066	1		04/28/15 15:33	108-90-7	
Chloroethane	ND	ug/L	1.0	0.27	1		04/28/15 15:33	75-00-3	
Chloroform	ND	ug/L	1.0	0.16	1		04/28/15 15:33	67-66-3	
Chloromethane	ND	ug/L	4.0	0.34	1		04/28/15 15:33	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.14	1		04/28/15 15:33	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.083	1		04/28/15 15:33	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		04/28/15 15:33	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.50	1		04/28/15 15:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.15	1		04/28/15 15:33	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.18	1		04/28/15 15:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.16	1		04/28/15 15:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.50	1		04/28/15 15:33	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.16	1		04/28/15 15:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.13	1		04/28/15 15:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/28/15 15:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		04/28/15 15:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.23	1		04/28/15 15:33	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/28/15 15:33	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.14	1		04/28/15 15:33	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		04/28/15 15:33	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.17	1		04/28/15 15:33	594-20-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-12 **Lab ID: 10303629010** Collected: 04/21/15 14:15 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.13	1		04/28/15 15:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.18	1		04/28/15 15:33	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	10.0	0.14	1		04/28/15 15:33	60-29-7	
Ethylbenzene	**2.8**	ug/L	1.0	0.16	1		04/28/15 15:33	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.50	1		04/28/15 15:33	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		04/28/15 15:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.5	1		04/28/15 15:33	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.17	1		04/28/15 15:33	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		04/28/15 15:33	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	103-65-1	
Styrene	ND	ug/L	1.0	0.069	1		04/28/15 15:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/28/15 15:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/28/15 15:33	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.16	1		04/28/15 15:33	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	2.0	1		04/28/15 15:33	109-99-9	
Toluene	**15.5**	ug/L	1.0	0.11	1		04/28/15 15:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.26	1		04/28/15 15:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		04/28/15 15:33	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.091	1		04/28/15 15:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.22	1		04/28/15 15:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1.2	1		04/28/15 15:33	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		04/28/15 15:33	76-13-1	
1,2,4-Trimethylbenzene	**1.4**	ug/L	1.0	0.50	1		04/28/15 15:33	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/28/15 15:33	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.10	1		04/28/15 15:33	75-01-4	
Xylene (Total)	**29.1**	ug/L	3.0	0.40	1		04/28/15 15:33	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	100	%.	75-125		1		04/28/15 15:33	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		04/28/15 15:33	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		1		04/28/15 15:33	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-19 **Lab ID: 10303629011** Collected: 04/21/15 15:30 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.27**	mg/L	0.11	0.024	1	04/23/15 18:52	04/24/15 10:01		
Surrogates									
n-Triacontane (S)	91	%.	50-150		1	04/23/15 18:52	04/24/15 10:01	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**1370**	ug/L	100	50.0	1		04/24/15 23:54		
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%.	80-150		1		04/24/15 23:54	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	40.0	20.0	2		04/28/15 16:02	67-64-1	
Allyl chloride	ND	ug/L	8.0	0.89	2		04/28/15 16:02	107-05-1	
Benzene	**305**	ug/L	2.0	0.30	2		04/28/15 16:02	71-43-2	
Bromobenzene	ND	ug/L	2.0	0.26	2		04/28/15 16:02	108-86-1	
Bromochloromethane	ND	ug/L	2.0	0.23	2		04/28/15 16:02	74-97-5	
Bromodichloromethane	ND	ug/L	2.0	0.40	2		04/28/15 16:02	75-27-4	
Bromoform	ND	ug/L	8.0	4.0	2		04/28/15 16:02	75-25-2	L3
Bromomethane	ND	ug/L	8.0	4.0	2		04/28/15 16:02	74-83-9	CL
2-Butanone (MEK)	ND	ug/L	10.0	5.0	2		04/28/15 16:02	78-93-3	
n-Butylbenzene	ND	ug/L	2.0	1.0	2		04/28/15 16:02	104-51-8	
sec-Butylbenzene	ND	ug/L	2.0	1.0	2		04/28/15 16:02	135-98-8	
tert-Butylbenzene	ND	ug/L	2.0	1.0	2		04/28/15 16:02	98-06-6	
Carbon tetrachloride	ND	ug/L	2.0	0.32	2		04/28/15 16:02	56-23-5	
Chlorobenzene	ND	ug/L	2.0	0.13	2		04/28/15 16:02	108-90-7	
Chloroethane	ND	ug/L	2.0	0.54	2		04/28/15 16:02	75-00-3	
Chloroform	ND	ug/L	2.0	0.32	2		04/28/15 16:02	67-66-3	
Chloromethane	ND	ug/L	8.0	0.68	2		04/28/15 16:02	74-87-3	
2-Chlorotoluene	ND	ug/L	2.0	0.28	2		04/28/15 16:02	95-49-8	
4-Chlorotoluene	ND	ug/L	2.0	0.17	2		04/28/15 16:02	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	8.0	4.0	2		04/28/15 16:02	96-12-8	
Dibromochloromethane	ND	ug/L	2.0	1.0	2		04/28/15 16:02	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	0.30	2		04/28/15 16:02	106-93-4	
Dibromomethane	ND	ug/L	8.0	0.37	2		04/28/15 16:02	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	2.0	0.32	2		04/28/15 16:02	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	2.0	1.0	2		04/28/15 16:02	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	2.0	1.0	2		04/28/15 16:02	106-46-7	
Dichlorodifluoromethane	ND	ug/L	2.0	1.0	2		04/28/15 16:02	75-71-8	
1,1-Dichloroethane	ND	ug/L	2.0	0.32	2		04/28/15 16:02	75-34-3	
1,2-Dichloroethane	ND	ug/L	2.0	0.26	2		04/28/15 16:02	107-06-2	
1,1-Dichloroethene	ND	ug/L	2.0	0.40	2		04/28/15 16:02	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	2.0	0.27	2		04/28/15 16:02	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	2.0	0.46	2		04/28/15 16:02	156-60-5	
Dichlorofluoromethane	ND	ug/L	2.0	0.40	2		04/28/15 16:02	75-43-4	
1,2-Dichloropropane	ND	ug/L	8.0	0.28	2		04/28/15 16:02	78-87-5	
1,3-Dichloropropane	ND	ug/L	2.0	1.0	2		04/28/15 16:02	142-28-9	
2,2-Dichloropropane	ND	ug/L	8.0	0.35	2		04/28/15 16:02	594-20-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-19 **Lab ID: 10303629011** Collected: 04/21/15 15:30 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	2.0	1.0	2		04/28/15 16:02	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	8.0	0.25	2		04/28/15 16:02	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	8.0	0.37	2		04/28/15 16:02	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	20.0	0.28	2		04/28/15 16:02	60-29-7	
Ethylbenzene	**94.3**	ug/L	2.0	0.33	2		04/28/15 16:02	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	2.0	1.0	2		04/28/15 16:02	87-68-3	
Isopropylbenzene (Cumene)	**3.1**	ug/L	2.0	1.0	2		04/28/15 16:02	98-82-8	
p-Isopropyltoluene	ND	ug/L	2.0	1.0	2		04/28/15 16:02	99-87-6	
Methylene Chloride	ND	ug/L	8.0	4.0	2		04/28/15 16:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	5.0	2		04/28/15 16:02	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	2.0	0.34	2		04/28/15 16:02	1634-04-4	
Naphthalene	**9.8**	ug/L	8.0	4.0	2		04/28/15 16:02	91-20-3	
n-Propylbenzene	**6.0**	ug/L	2.0	1.0	2		04/28/15 16:02	103-65-1	
Styrene	ND	ug/L	2.0	0.14	2		04/28/15 16:02	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	2.0	1.0	2		04/28/15 16:02	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	1.0	2		04/28/15 16:02	79-34-5	
Tetrachloroethene	ND	ug/L	2.0	0.31	2		04/28/15 16:02	127-18-4	
Tetrahydrofuran	ND	ug/L	20.0	4.0	2		04/28/15 16:02	109-99-9	
Toluene	**17.0**	ug/L	2.0	0.22	2		04/28/15 16:02	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1.0	2		04/28/15 16:02	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1.0	2		04/28/15 16:02	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	2.0	0.53	2		04/28/15 16:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	2.0	0.27	2		04/28/15 16:02	79-00-5	
Trichloroethene	ND	ug/L	0.80	0.18	2		04/28/15 16:02	79-01-6	
Trichlorofluoromethane	ND	ug/L	2.0	0.43	2		04/28/15 16:02	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	8.0	2.4	2		04/28/15 16:02	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	2.0	1.0	2		04/28/15 16:02	76-13-1	
1,2,4-Trimethylbenzene	**16.4**	ug/L	2.0	1.0	2		04/28/15 16:02	95-63-6	
1,3,5-Trimethylbenzene	**4.9**	ug/L	2.0	1.0	2		04/28/15 16:02	108-67-8	
Vinyl chloride	ND	ug/L	0.80	0.20	2		04/28/15 16:02	75-01-4	
Xylene (Total)	**74.0**	ug/L	6.0	0.81	2		04/28/15 16:02	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%.	75-125		2		04/28/15 16:02	17060-07-0	
Toluene-d8 (S)	101	%.	75-125		2		04/28/15 16:02	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		2		04/28/15 16:02	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-16 **Lab ID: 10303629012** Collected: 04/21/15 16:40 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.76**	mg/L	0.11	0.024	1	04/23/15 18:52	04/24/15 10:08		T7
Surrogates									
n-Triacontane (S)	87	%.	50-150		1	04/23/15 18:52	04/24/15 10:08	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**4550**	ug/L	500	250	5		04/27/15 14:47		
Surrogates									
a,a,a-Trifluorotoluene (S)	120	%.	80-150		5		04/27/15 14:47	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	200	100	10		04/27/15 20:47	67-64-1	
Allyl chloride	ND	ug/L	40.0	4.5	10		04/27/15 20:47	107-05-1	
Benzene	**1180**	ug/L	10.0	1.5	10		04/27/15 20:47	71-43-2	
Bromobenzene	ND	ug/L	10.0	1.3	10		04/27/15 20:47	108-86-1	
Bromochloromethane	ND	ug/L	10.0	1.2	10		04/27/15 20:47	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	2.0	10		04/27/15 20:47	75-27-4	
Bromoform	ND	ug/L	40.0	20.0	10		04/27/15 20:47	75-25-2	
Bromomethane	ND	ug/L	40.0	20.0	10		04/27/15 20:47	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	50.0	25.0	10		04/27/15 20:47	78-93-3	
n-Butylbenzene	ND	ug/L	10.0	5.0	10		04/27/15 20:47	104-51-8	
sec-Butylbenzene	ND	ug/L	10.0	5.0	10		04/27/15 20:47	135-98-8	
tert-Butylbenzene	ND	ug/L	10.0	5.0	10		04/27/15 20:47	98-06-6	
Carbon tetrachloride	ND	ug/L	10.0	1.6	10		04/27/15 20:47	56-23-5	
Chlorobenzene	ND	ug/L	10.0	0.66	10		04/27/15 20:47	108-90-7	
Chloroethane	ND	ug/L	10.0	2.7	10		04/27/15 20:47	75-00-3	
Chloroform	ND	ug/L	10.0	1.6	10		04/27/15 20:47	67-66-3	
Chloromethane	ND	ug/L	40.0	3.4	10		04/27/15 20:47	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	1.4	10		04/27/15 20:47	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	0.83	10		04/27/15 20:47	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	40.0	20.0	10		04/27/15 20:47	96-12-8	
Dibromochloromethane	ND	ug/L	10.0	5.0	10		04/27/15 20:47	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	1.5	10		04/27/15 20:47	106-93-4	
Dibromomethane	ND	ug/L	40.0	1.8	10		04/27/15 20:47	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	10.0	1.6	10		04/27/15 20:47	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 20:47	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 20:47	106-46-7	
Dichlorodifluoromethane	ND	ug/L	10.0	5.0	10		04/27/15 20:47	75-71-8	
1,1-Dichloroethane	ND	ug/L	10.0	1.6	10		04/27/15 20:47	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	1.3	10		04/27/15 20:47	107-06-2	
1,1-Dichloroethene	ND	ug/L	10.0	2.0	10		04/27/15 20:47	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	10.0	1.3	10		04/27/15 20:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	10.0	2.3	10		04/27/15 20:47	156-60-5	
Dichlorofluoromethane	ND	ug/L	10.0	2.0	10		04/27/15 20:47	75-43-4	
1,2-Dichloropropane	ND	ug/L	40.0	1.4	10		04/27/15 20:47	78-87-5	
1,3-Dichloropropane	ND	ug/L	10.0	5.0	10		04/27/15 20:47	142-28-9	
2,2-Dichloropropane	ND	ug/L	40.0	1.7	10		04/27/15 20:47	594-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-16 **Lab ID: 10303629012** Collected: 04/21/15 16:40 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	10.0	5.0	10		04/27/15 20:47	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	40.0	1.3	10		04/27/15 20:47	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	40.0	1.8	10		04/27/15 20:47	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	100	1.4	10		04/27/15 20:47	60-29-7	
Ethylbenzene	**295**	ug/L	10.0	1.6	10		04/27/15 20:47	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	5.0	10		04/27/15 20:47	87-68-3	
Isopropylbenzene (Cumene)	**12.8**	ug/L	10.0	5.0	10		04/27/15 20:47	98-82-8	
p-Isopropyltoluene	ND	ug/L	10.0	5.0	10		04/27/15 20:47	99-87-6	
Methylene Chloride	ND	ug/L	40.0	20.0	10		04/27/15 20:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	25.0	10		04/27/15 20:47	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	1.7	10		04/27/15 20:47	1634-04-4	
Naphthalene	ND	ug/L	40.0	20.0	10		04/27/15 20:47	91-20-3	
n-Propylbenzene	**23.9**	ug/L	10.0	5.0	10		04/27/15 20:47	103-65-1	
Styrene	ND	ug/L	10.0	0.69	10		04/27/15 20:47	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	5.0	10		04/27/15 20:47	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	5.0	10		04/27/15 20:47	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	1.6	10		04/27/15 20:47	127-18-4	
Tetrahydrofuran	ND	ug/L	100	19.9	10		04/27/15 20:47	109-99-9	
Toluene	**133**	ug/L	10.0	1.1	10		04/27/15 20:47	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 20:47	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 20:47	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	10.0	2.6	10		04/27/15 20:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	1.4	10		04/27/15 20:47	79-00-5	
Trichloroethene	ND	ug/L	4.0	0.91	10		04/27/15 20:47	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	2.2	10		04/27/15 20:47	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	40.0	12.2	10		04/27/15 20:47	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	5.0	10		04/27/15 20:47	76-13-1	
1,2,4-Trimethylbenzene	**32.9**	ug/L	10.0	5.0	10		04/27/15 20:47	95-63-6	
1,3,5-Trimethylbenzene	**25.5**	ug/L	10.0	5.0	10		04/27/15 20:47	108-67-8	
Vinyl chloride	ND	ug/L	4.0	1.0	10		04/27/15 20:47	75-01-4	
Xylene (Total)	**283**	ug/L	30.0	4.0	10		04/27/15 20:47	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%.	75-125		10		04/27/15 20:47	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		10		04/27/15 20:47	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		10		04/27/15 20:47	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: FB-1 **Lab ID: 10303629013** Collected: 04/21/15 17:05 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.024	1	04/23/15 18:52	04/24/15 10:16		
Surrogates									
n-Triacontane (S)	84	%.	50-150		1	04/23/15 18:52	04/24/15 10:16	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	50.0	1		04/25/15 00:42		
Surrogates									
a,a,a-Trifluorotoluene (S)	95	%.	80-150		1		04/25/15 00:42	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	20.0	10.0	1		04/27/15 18:21	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.45	1		04/27/15 18:21	107-05-1	
Benzene	ND	ug/L	1.0	0.15	1		04/27/15 18:21	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.13	1		04/27/15 18:21	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.12	1		04/27/15 18:21	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.20	1		04/27/15 18:21	75-27-4	
Bromoform	ND	ug/L	4.0	2.0	1		04/27/15 18:21	75-25-2	
Bromomethane	ND	ug/L	4.0	2.0	1		04/27/15 18:21	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		04/27/15 18:21	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		04/27/15 18:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.066	1		04/27/15 18:21	108-90-7	
Chloroethane	ND	ug/L	1.0	0.27	1		04/27/15 18:21	75-00-3	
Chloroform	ND	ug/L	1.0	0.16	1		04/27/15 18:21	67-66-3	
Chloromethane	ND	ug/L	4.0	0.34	1		04/27/15 18:21	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.14	1		04/27/15 18:21	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.083	1		04/27/15 18:21	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		04/27/15 18:21	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.50	1		04/27/15 18:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.15	1		04/27/15 18:21	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.18	1		04/27/15 18:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.16	1		04/27/15 18:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.50	1		04/27/15 18:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.16	1		04/27/15 18:21	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.13	1		04/27/15 18:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/27/15 18:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		04/27/15 18:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.23	1		04/27/15 18:21	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/27/15 18:21	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.14	1		04/27/15 18:21	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		04/27/15 18:21	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.17	1		04/27/15 18:21	594-20-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: FB-1 **Lab ID: 10303629013** Collected: 04/21/15 17:05 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.13	1		04/27/15 18:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.18	1		04/27/15 18:21	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	10.0	0.14	1		04/27/15 18:21	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.16	1		04/27/15 18:21	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.50	1		04/27/15 18:21	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		04/27/15 18:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.5	1		04/27/15 18:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.17	1		04/27/15 18:21	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		04/27/15 18:21	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	103-65-1	
Styrene	ND	ug/L	1.0	0.069	1		04/27/15 18:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.16	1		04/27/15 18:21	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	2.0	1		04/27/15 18:21	109-99-9	
Toluene	ND	ug/L	1.0	0.11	1		04/27/15 18:21	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.26	1		04/27/15 18:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		04/27/15 18:21	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.091	1		04/27/15 18:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.22	1		04/27/15 18:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1.2	1		04/27/15 18:21	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:21	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:21	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.10	1		04/27/15 18:21	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.40	1		04/27/15 18:21	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%.	75-125		1		04/27/15 18:21	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1		04/27/15 18:21	2037-26-5	
4-Bromofluorobenzene (S)	108	%.	75-125		1		04/27/15 18:21	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: D-2 **Lab ID: 10303629014** Collected: 04/22/15 00:00 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**2.4**	mg/L	0.11	0.023	1	04/23/15 18:52	04/24/15 10:24		T7
Surrogates									
n-Triacontane (S)	90	%.	50-150		1	04/23/15 18:52	04/24/15 10:24	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**10100**	ug/L	2000	1000	20		04/27/15 15:11		
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%.	80-150		20		04/27/15 15:11	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	50.0	5		04/27/15 21:01	67-64-1	
Allyl chloride	ND	ug/L	20.0	2.2	5		04/27/15 21:01	107-05-1	
Benzene	**833**	ug/L	5.0	0.75	5		04/27/15 21:01	71-43-2	
Bromobenzene	ND	ug/L	5.0	0.66	5		04/27/15 21:01	108-86-1	
Bromochloromethane	ND	ug/L	5.0	0.58	5		04/27/15 21:01	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1.0	5		04/27/15 21:01	75-27-4	
Bromoform	ND	ug/L	20.0	10.0	5		04/27/15 21:01	75-25-2	
Bromomethane	ND	ug/L	20.0	10.0	5		04/27/15 21:01	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	25.0	12.5	5		04/27/15 21:01	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:01	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:01	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:01	98-06-6	
Carbon tetrachloride	ND	ug/L	5.0	0.80	5		04/27/15 21:01	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.33	5		04/27/15 21:01	108-90-7	
Chloroethane	ND	ug/L	5.0	1.3	5		04/27/15 21:01	75-00-3	
Chloroform	ND	ug/L	5.0	0.80	5		04/27/15 21:01	67-66-3	
Chloromethane	ND	ug/L	20.0	1.7	5		04/27/15 21:01	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	0.69	5		04/27/15 21:01	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	0.42	5		04/27/15 21:01	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	20.0	10.0	5		04/27/15 21:01	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	2.5	5		04/27/15 21:01	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	0.74	5		04/27/15 21:01	106-93-4	
Dibromomethane	ND	ug/L	20.0	0.92	5		04/27/15 21:01	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.80	5		04/27/15 21:01	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:01	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:01	106-46-7	
Dichlorodifluoromethane	**5.4**	ug/L	5.0	2.5	5		04/27/15 21:01	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	0.80	5		04/27/15 21:01	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	0.66	5		04/27/15 21:01	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1.0	5		04/27/15 21:01	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.66	5		04/27/15 21:01	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1.2	5		04/27/15 21:01	156-60-5	
Dichlorofluoromethane	ND	ug/L	5.0	1.0	5		04/27/15 21:01	75-43-4	
1,2-Dichloropropane	ND	ug/L	20.0	0.71	5		04/27/15 21:01	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	2.5	5		04/27/15 21:01	142-28-9	
2,2-Dichloropropane	ND	ug/L	20.0	0.87	5		04/27/15 21:01	594-20-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: D-2 **Lab ID: 10303629014** Collected: 04/22/15 00:00 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	5.0	2.5	5		04/27/15 21:01	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	20.0	0.64	5		04/27/15 21:01	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	20.0	0.92	5		04/27/15 21:01	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	50.0	0.70	5		04/27/15 21:01	60-29-7	
Ethylbenzene	**820**	ug/L	5.0	0.82	5		04/27/15 21:01	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	2.5	5		04/27/15 21:01	87-68-3	
Isopropylbenzene (Cumene)	**24.5**	ug/L	5.0	2.5	5		04/27/15 21:01	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	2.5	5		04/27/15 21:01	99-87-6	
Methylene Chloride	ND	ug/L	20.0	10.0	5		04/27/15 21:01	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	12.5	5		04/27/15 21:01	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	0.84	5		04/27/15 21:01	1634-04-4	
Naphthalene	**188**	ug/L	20.0	10.0	5		04/27/15 21:01	91-20-3	
n-Propylbenzene	**65.7**	ug/L	5.0	2.5	5		04/27/15 21:01	103-65-1	
Styrene	ND	ug/L	5.0	0.34	5		04/27/15 21:01	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	2.5	5		04/27/15 21:01	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	2.5	5		04/27/15 21:01	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	0.78	5		04/27/15 21:01	127-18-4	
Tetrahydrofuran	ND	ug/L	50.0	10	5		04/27/15 21:01	109-99-9	
Toluene	**1090**	ug/L	5.0	0.55	5		04/27/15 21:01	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:01	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:01	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1.3	5		04/27/15 21:01	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	0.68	5		04/27/15 21:01	79-00-5	
Trichloroethene	ND	ug/L	2.0	0.46	5		04/27/15 21:01	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1.1	5		04/27/15 21:01	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	20.0	6.1	5		04/27/15 21:01	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	2.5	5		04/27/15 21:01	76-13-1	
1,2,4-Trimethylbenzene	**544**	ug/L	5.0	2.5	5		04/27/15 21:01	95-63-6	
1,3,5-Trimethylbenzene	**179**	ug/L	5.0	2.5	5		04/27/15 21:01	108-67-8	
Vinyl chloride	ND	ug/L	2.0	0.51	5		04/27/15 21:01	75-01-4	
Xylene (Total)	**3480**	ug/L	75.0	10.1	25		04/28/15 17:01	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%.	75-125		5		04/27/15 21:01	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		5		04/27/15 21:01	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		5		04/27/15 21:01	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-13 **Lab ID: 10303629015** Collected: 04/22/15 09:15 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**2.8**	mg/L	0.11	0.023	1	04/23/15 18:52	04/24/15 10:32		T7
Surrogates									
n-Triacontane (S)	94	%.	50-150		1	04/23/15 18:52	04/24/15 10:32	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**9770**	ug/L	2000	1000	20		04/27/15 17:10		
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%.	80-150		20		04/27/15 17:10	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	50.0	5		04/27/15 21:16	67-64-1	
Allyl chloride	ND	ug/L	20.0	2.2	5		04/27/15 21:16	107-05-1	
Benzene	**813**	ug/L	5.0	0.75	5		04/27/15 21:16	71-43-2	
Bromobenzene	ND	ug/L	5.0	0.66	5		04/27/15 21:16	108-86-1	
Bromochloromethane	ND	ug/L	5.0	0.58	5		04/27/15 21:16	74-97-5	
Bromodichloromethane	ND	ug/L	5.0	1.0	5		04/27/15 21:16	75-27-4	
Bromoform	ND	ug/L	20.0	10.0	5		04/27/15 21:16	75-25-2	
Bromomethane	ND	ug/L	20.0	10.0	5		04/27/15 21:16	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	25.0	12.5	5		04/27/15 21:16	78-93-3	
n-Butylbenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:16	104-51-8	
sec-Butylbenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:16	135-98-8	
tert-Butylbenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:16	98-06-6	
Carbon tetrachloride	ND	ug/L	5.0	0.80	5		04/27/15 21:16	56-23-5	
Chlorobenzene	ND	ug/L	5.0	0.33	5		04/27/15 21:16	108-90-7	
Chloroethane	ND	ug/L	5.0	1.3	5		04/27/15 21:16	75-00-3	
Chloroform	ND	ug/L	5.0	0.80	5		04/27/15 21:16	67-66-3	
Chloromethane	ND	ug/L	20.0	1.7	5		04/27/15 21:16	74-87-3	
2-Chlorotoluene	ND	ug/L	5.0	0.69	5		04/27/15 21:16	95-49-8	
4-Chlorotoluene	ND	ug/L	5.0	0.42	5		04/27/15 21:16	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	20.0	10.0	5		04/27/15 21:16	96-12-8	
Dibromochloromethane	ND	ug/L	5.0	2.5	5		04/27/15 21:16	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	5.0	0.74	5		04/27/15 21:16	106-93-4	
Dibromomethane	ND	ug/L	20.0	0.92	5		04/27/15 21:16	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	5.0	0.80	5		04/27/15 21:16	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:16	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:16	106-46-7	
Dichlorodifluoromethane	**5.3**	ug/L	5.0	2.5	5		04/27/15 21:16	75-71-8	
1,1-Dichloroethane	ND	ug/L	5.0	0.80	5		04/27/15 21:16	75-34-3	
1,2-Dichloroethane	ND	ug/L	5.0	0.66	5		04/27/15 21:16	107-06-2	
1,1-Dichloroethene	ND	ug/L	5.0	1.0	5		04/27/15 21:16	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	5.0	0.66	5		04/27/15 21:16	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	5.0	1.2	5		04/27/15 21:16	156-60-5	
Dichlorofluoromethane	ND	ug/L	5.0	1.0	5		04/27/15 21:16	75-43-4	
1,2-Dichloropropane	ND	ug/L	20.0	0.71	5		04/27/15 21:16	78-87-5	
1,3-Dichloropropane	ND	ug/L	5.0	2.5	5		04/27/15 21:16	142-28-9	
2,2-Dichloropropane	ND	ug/L	20.0	0.87	5		04/27/15 21:16	594-20-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-13 **Lab ID: 10303629015** Collected: 04/22/15 09:15 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	5.0	2.5	5		04/27/15 21:16	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	20.0	0.64	5		04/27/15 21:16	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	20.0	0.92	5		04/27/15 21:16	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	50.0	0.70	5		04/27/15 21:16	60-29-7	
Ethylbenzene	**808**	ug/L	5.0	0.82	5		04/27/15 21:16	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	2.5	5		04/27/15 21:16	87-68-3	
Isopropylbenzene (Cumene)	**25.2**	ug/L	5.0	2.5	5		04/27/15 21:16	98-82-8	
p-Isopropyltoluene	ND	ug/L	5.0	2.5	5		04/27/15 21:16	99-87-6	
Methylene Chloride	ND	ug/L	20.0	10.0	5		04/27/15 21:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	25.0	12.5	5		04/27/15 21:16	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	5.0	0.84	5		04/27/15 21:16	1634-04-4	
Naphthalene	**183**	ug/L	20.0	10.0	5		04/27/15 21:16	91-20-3	
n-Propylbenzene	**65.1**	ug/L	5.0	2.5	5		04/27/15 21:16	103-65-1	
Styrene	ND	ug/L	5.0	0.34	5		04/27/15 21:16	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	5.0	2.5	5		04/27/15 21:16	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	5.0	2.5	5		04/27/15 21:16	79-34-5	
Tetrachloroethene	ND	ug/L	5.0	0.78	5		04/27/15 21:16	127-18-4	
Tetrahydrofuran	ND	ug/L	50.0	10	5		04/27/15 21:16	109-99-9	
Toluene	**1070**	ug/L	5.0	0.55	5		04/27/15 21:16	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:16	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	2.5	5		04/27/15 21:16	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	5.0	1.3	5		04/27/15 21:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	5.0	0.68	5		04/27/15 21:16	79-00-5	
Trichloroethene	ND	ug/L	2.0	0.46	5		04/27/15 21:16	79-01-6	
Trichlorofluoromethane	ND	ug/L	5.0	1.1	5		04/27/15 21:16	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	20.0	6.1	5		04/27/15 21:16	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	5.0	2.5	5		04/27/15 21:16	76-13-1	
1,2,4-Trimethylbenzene	**538**	ug/L	5.0	2.5	5		04/27/15 21:16	95-63-6	
1,3,5-Trimethylbenzene	**180**	ug/L	5.0	2.5	5		04/27/15 21:16	108-67-8	
Vinyl chloride	ND	ug/L	2.0	0.51	5		04/27/15 21:16	75-01-4	
Xylene (Total)	**3660**	ug/L	75.0	10.1	25		04/28/15 17:15	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%.	75-125		5		04/27/15 21:16	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		5		04/27/15 21:16	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		5		04/27/15 21:16	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-25 **Lab ID: 10303629016** Collected: 04/22/15 10:30 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**3.3**	mg/L	0.11	0.024	1	04/23/15 18:52	04/24/15 10:39		T7
Surrogates									
n-Triacontane (S)	93	%.	50-150		1	04/23/15 18:52	04/24/15 10:39	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**12600**	ug/L	2000	1000	20		04/27/15 17:33		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%.	80-150		20		04/27/15 17:33	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	200	100	10		04/27/15 21:31	67-64-1	
Allyl chloride	ND	ug/L	40.0	4.5	10		04/27/15 21:31	107-05-1	
Benzene	**911**	ug/L	10.0	1.5	10		04/27/15 21:31	71-43-2	
Bromobenzene	ND	ug/L	10.0	1.3	10		04/27/15 21:31	108-86-1	
Bromochloromethane	ND	ug/L	10.0	1.2	10		04/27/15 21:31	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	2.0	10		04/27/15 21:31	75-27-4	
Bromoform	ND	ug/L	40.0	20.0	10		04/27/15 21:31	75-25-2	
Bromomethane	ND	ug/L	40.0	20.0	10		04/27/15 21:31	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	50.0	25.0	10		04/27/15 21:31	78-93-3	
n-Butylbenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:31	104-51-8	
sec-Butylbenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:31	135-98-8	
tert-Butylbenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:31	98-06-6	
Carbon tetrachloride	ND	ug/L	10.0	1.6	10		04/27/15 21:31	56-23-5	
Chlorobenzene	ND	ug/L	10.0	0.66	10		04/27/15 21:31	108-90-7	
Chloroethane	ND	ug/L	10.0	2.7	10		04/27/15 21:31	75-00-3	
Chloroform	ND	ug/L	10.0	1.6	10		04/27/15 21:31	67-66-3	
Chloromethane	ND	ug/L	40.0	3.4	10		04/27/15 21:31	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	1.4	10		04/27/15 21:31	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	0.83	10		04/27/15 21:31	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	40.0	20.0	10		04/27/15 21:31	96-12-8	
Dibromochloromethane	ND	ug/L	10.0	5.0	10		04/27/15 21:31	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	1.5	10		04/27/15 21:31	106-93-4	
Dibromomethane	ND	ug/L	40.0	1.8	10		04/27/15 21:31	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	10.0	1.6	10		04/27/15 21:31	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:31	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:31	106-46-7	
Dichlorodifluoromethane	ND	ug/L	10.0	5.0	10		04/27/15 21:31	75-71-8	
1,1-Dichloroethane	ND	ug/L	10.0	1.6	10		04/27/15 21:31	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	1.3	10		04/27/15 21:31	107-06-2	
1,1-Dichloroethene	ND	ug/L	10.0	2.0	10		04/27/15 21:31	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	10.0	1.3	10		04/27/15 21:31	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	10.0	2.3	10		04/27/15 21:31	156-60-5	
Dichlorofluoromethane	ND	ug/L	10.0	2.0	10		04/27/15 21:31	75-43-4	
1,2-Dichloropropane	ND	ug/L	40.0	1.4	10		04/27/15 21:31	78-87-5	
1,3-Dichloropropane	ND	ug/L	10.0	5.0	10		04/27/15 21:31	142-28-9	
2,2-Dichloropropane	ND	ug/L	40.0	1.7	10		04/27/15 21:31	594-20-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-25 **Lab ID: 10303629016** Collected: 04/22/15 10:30 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	10.0	5.0	10		04/27/15 21:31	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	40.0	1.3	10		04/27/15 21:31	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	40.0	1.8	10		04/27/15 21:31	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	100	1.4	10		04/27/15 21:31	60-29-7	
Ethylbenzene	**980**	ug/L	10.0	1.6	10		04/27/15 21:31	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	5.0	10		04/27/15 21:31	87-68-3	
Isopropylbenzene (Cumene)	**30.1**	ug/L	10.0	5.0	10		04/27/15 21:31	98-82-8	
p-Isopropyltoluene	ND	ug/L	10.0	5.0	10		04/27/15 21:31	99-87-6	
Methylene Chloride	ND	ug/L	40.0	20.0	10		04/27/15 21:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	25.0	10		04/27/15 21:31	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	1.7	10		04/27/15 21:31	1634-04-4	
Naphthalene	**225**	ug/L	40.0	20.0	10		04/27/15 21:31	91-20-3	
n-Propylbenzene	**84.5**	ug/L	10.0	5.0	10		04/27/15 21:31	103-65-1	
Styrene	ND	ug/L	10.0	0.69	10		04/27/15 21:31	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	5.0	10		04/27/15 21:31	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	5.0	10		04/27/15 21:31	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	1.6	10		04/27/15 21:31	127-18-4	
Tetrahydrofuran	ND	ug/L	100	19.9	10		04/27/15 21:31	109-99-9	
Toluene	**1090**	ug/L	10.0	1.1	10		04/27/15 21:31	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:31	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:31	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	10.0	2.6	10		04/27/15 21:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	1.4	10		04/27/15 21:31	79-00-5	
Trichloroethene	ND	ug/L	4.0	0.91	10		04/27/15 21:31	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	2.2	10		04/27/15 21:31	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	40.0	12.2	10		04/27/15 21:31	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	5.0	10		04/27/15 21:31	76-13-1	
1,2,4-Trimethylbenzene	**689**	ug/L	10.0	5.0	10		04/27/15 21:31	95-63-6	
1,3,5-Trimethylbenzene	**201**	ug/L	10.0	5.0	10		04/27/15 21:31	108-67-8	
Vinyl chloride	ND	ug/L	4.0	1.0	10		04/27/15 21:31	75-01-4	
Xylene (Total)	**4270**	ug/L	30.0	4.0	10		04/27/15 21:31	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	92	%.	75-125		10		04/27/15 21:31	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		10		04/27/15 21:31	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		10		04/27/15 21:31	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-28 **Lab ID: 10303629017** Collected: 04/22/15 11:40 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**5.0**	mg/L	0.11	0.023	1	04/23/15 18:52	04/24/15 10:47		T7
Surrogates									
n-Triacontane (S)	91	%.	50-150		1	04/23/15 18:52	04/24/15 10:47	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**12600**	ug/L	2000	1000	20		04/28/15 21:40		
Surrogates									
a,a,a-Trifluorotoluene (S)	104	%.	80-150		20		04/28/15 21:40	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	20.0	10.0	1		04/27/15 22:43	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.45	1		04/27/15 22:43	107-05-1	
Benzene	**393**	ug/L	25.0	3.8	25		04/28/15 17:30	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.13	1		04/27/15 22:43	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.12	1		04/27/15 22:43	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.20	1		04/27/15 22:43	75-27-4	
Bromoform	ND	ug/L	4.0	2.0	1		04/27/15 22:43	75-25-2	
Bromomethane	ND	ug/L	4.0	2.0	1		04/27/15 22:43	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		04/27/15 22:43	78-93-3	
n-Butylbenzene	**3.2**	ug/L	1.0	0.50	1		04/27/15 22:43	104-51-8	
sec-Butylbenzene	**2.9**	ug/L	1.0	0.50	1		04/27/15 22:43	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 22:43	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		04/27/15 22:43	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.066	1		04/27/15 22:43	108-90-7	
Chloroethane	ND	ug/L	1.0	0.27	1		04/27/15 22:43	75-00-3	
Chloroform	ND	ug/L	1.0	0.16	1		04/27/15 22:43	67-66-3	
Chloromethane	ND	ug/L	4.0	0.34	1		04/27/15 22:43	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.14	1		04/27/15 22:43	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.083	1		04/27/15 22:43	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		04/27/15 22:43	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.50	1		04/27/15 22:43	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.15	1		04/27/15 22:43	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.18	1		04/27/15 22:43	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.16	1		04/27/15 22:43	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 22:43	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 22:43	106-46-7	
Dichlorodifluoromethane	**5.3**	ug/L	1.0	0.50	1		04/27/15 22:43	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.16	1		04/27/15 22:43	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.13	1		04/27/15 22:43	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/27/15 22:43	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		04/27/15 22:43	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.23	1		04/27/15 22:43	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/27/15 22:43	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.14	1		04/27/15 22:43	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		04/27/15 22:43	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.17	1		04/27/15 22:43	594-20-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-28 **Lab ID: 10303629017** Collected: 04/22/15 11:40 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		04/27/15 22:43	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.13	1		04/27/15 22:43	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.18	1		04/27/15 22:43	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	10.0	0.14	1		04/27/15 22:43	60-29-7	
Ethylbenzene	**586**	ug/L	25.0	4.1	25		04/28/15 17:30	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.50	1		04/27/15 22:43	87-68-3	
Isopropylbenzene (Cumene)	**18.0**	ug/L	1.0	0.50	1		04/27/15 22:43	98-82-8	
p-Isopropyltoluene	**3.0**	ug/L	1.0	0.50	1		04/27/15 22:43	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		04/27/15 22:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.5	1		04/27/15 22:43	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.17	1		04/27/15 22:43	1634-04-4	
Naphthalene	**248**	ug/L	4.0	2.0	1		04/27/15 22:43	91-20-3	
n-Propylbenzene	**41.5**	ug/L	1.0	0.50	1		04/27/15 22:43	103-65-1	
Styrene	ND	ug/L	1.0	0.069	1		04/27/15 22:43	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 22:43	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 22:43	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.16	1		04/27/15 22:43	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	2.0	1		04/27/15 22:43	109-99-9	
Toluene	**474**	ug/L	25.0	2.8	25		04/28/15 17:30	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 22:43	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 22:43	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.26	1		04/27/15 22:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		04/27/15 22:43	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.091	1		04/27/15 22:43	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.22	1		04/27/15 22:43	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1.2	1		04/27/15 22:43	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		04/27/15 22:43	76-13-1	
1,2,4-Trimethylbenzene	**944**	ug/L	25.0	12.5	25		04/28/15 17:30	95-63-6	
1,3,5-Trimethylbenzene	**287**	ug/L	25.0	12.5	25		04/28/15 17:30	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.10	1		04/27/15 22:43	75-01-4	
Xylene (Total)	**5670**	ug/L	75.0	10.1	25		04/28/15 17:30	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-125		1		04/27/15 22:43	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		04/27/15 22:43	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		04/27/15 22:43	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-27 **Lab ID: 10303629018** Collected: 04/22/15 12:55 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**3.5**	mg/L	0.11	0.023	1	04/23/15 18:52	04/24/15 10:55		T7
Surrogates									
n-Triacontane (S)	81	%.	50-150		1	04/23/15 18:52	04/24/15 10:55	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**12300**	ug/L	2000	1000	20		04/28/15 20:29		
Surrogates									
a,a,a-Trifluorotoluene (S)	93	%.	80-150		20		04/28/15 20:29	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	200	100	10		04/27/15 21:45	67-64-1	
Allyl chloride	ND	ug/L	40.0	4.5	10		04/27/15 21:45	107-05-1	
Benzene	**359**	ug/L	10.0	1.5	10		04/27/15 21:45	71-43-2	
Bromobenzene	ND	ug/L	10.0	1.3	10		04/27/15 21:45	108-86-1	
Bromochloromethane	ND	ug/L	10.0	1.2	10		04/27/15 21:45	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	2.0	10		04/27/15 21:45	75-27-4	
Bromoform	ND	ug/L	40.0	20.0	10		04/27/15 21:45	75-25-2	
Bromomethane	ND	ug/L	40.0	20.0	10		04/27/15 21:45	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	50.0	25.0	10		04/27/15 21:45	78-93-3	
n-Butylbenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:45	104-51-8	
sec-Butylbenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:45	135-98-8	
tert-Butylbenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:45	98-06-6	
Carbon tetrachloride	ND	ug/L	10.0	1.6	10		04/27/15 21:45	56-23-5	
Chlorobenzene	ND	ug/L	10.0	0.66	10		04/27/15 21:45	108-90-7	
Chloroethane	ND	ug/L	10.0	2.7	10		04/27/15 21:45	75-00-3	
Chloroform	ND	ug/L	10.0	1.6	10		04/27/15 21:45	67-66-3	
Chloromethane	ND	ug/L	40.0	3.4	10		04/27/15 21:45	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	1.4	10		04/27/15 21:45	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	0.83	10		04/27/15 21:45	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	40.0	20.0	10		04/27/15 21:45	96-12-8	
Dibromochloromethane	ND	ug/L	10.0	5.0	10		04/27/15 21:45	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	1.5	10		04/27/15 21:45	106-93-4	
Dibromomethane	ND	ug/L	40.0	1.8	10		04/27/15 21:45	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	10.0	1.6	10		04/27/15 21:45	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:45	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:45	106-46-7	
Dichlorodifluoromethane	**22.4**	ug/L	10.0	5.0	10		04/27/15 21:45	75-71-8	
1,1-Dichloroethane	ND	ug/L	10.0	1.6	10		04/27/15 21:45	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	1.3	10		04/27/15 21:45	107-06-2	
1,1-Dichloroethene	ND	ug/L	10.0	2.0	10		04/27/15 21:45	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	10.0	1.3	10		04/27/15 21:45	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	10.0	2.3	10		04/27/15 21:45	156-60-5	
Dichlorofluoromethane	ND	ug/L	10.0	2.0	10		04/27/15 21:45	75-43-4	
1,2-Dichloropropane	ND	ug/L	40.0	1.4	10		04/27/15 21:45	78-87-5	
1,3-Dichloropropane	ND	ug/L	10.0	5.0	10		04/27/15 21:45	142-28-9	
2,2-Dichloropropane	ND	ug/L	40.0	1.7	10		04/27/15 21:45	594-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-27 **Lab ID: 10303629018** Collected: 04/22/15 12:55 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	10.0	5.0	10		04/27/15 21:45	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	40.0	1.3	10		04/27/15 21:45	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	40.0	1.8	10		04/27/15 21:45	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	100	1.4	10		04/27/15 21:45	60-29-7	
Ethylbenzene	**1150**	ug/L	10.0	1.6	10		04/27/15 21:45	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	5.0	10		04/27/15 21:45	87-68-3	
Isopropylbenzene (Cumene)	**44.7**	ug/L	10.0	5.0	10		04/27/15 21:45	98-82-8	
p-Isopropyltoluene	ND	ug/L	10.0	5.0	10		04/27/15 21:45	99-87-6	
Methylene Chloride	ND	ug/L	40.0	20.0	10		04/27/15 21:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	50.0	25.0	10		04/27/15 21:45	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	1.7	10		04/27/15 21:45	1634-04-4	
Naphthalene	**232**	ug/L	40.0	20.0	10		04/27/15 21:45	91-20-3	
n-Propylbenzene	**119**	ug/L	10.0	5.0	10		04/27/15 21:45	103-65-1	
Styrene	ND	ug/L	10.0	0.69	10		04/27/15 21:45	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	5.0	10		04/27/15 21:45	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	5.0	10		04/27/15 21:45	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	1.6	10		04/27/15 21:45	127-18-4	
Tetrahydrofuran	ND	ug/L	100	19.9	10		04/27/15 21:45	109-99-9	
Toluene	**272**	ug/L	10.0	1.1	10		04/27/15 21:45	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:45	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	5.0	10		04/27/15 21:45	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	10.0	2.6	10		04/27/15 21:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	1.4	10		04/27/15 21:45	79-00-5	
Trichloroethene	ND	ug/L	4.0	0.91	10		04/27/15 21:45	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	2.2	10		04/27/15 21:45	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	40.0	12.2	10		04/27/15 21:45	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	5.0	10		04/27/15 21:45	76-13-1	
1,2,4-Trimethylbenzene	**1040**	ug/L	10.0	5.0	10		04/27/15 21:45	95-63-6	
1,3,5-Trimethylbenzene	**280**	ug/L	10.0	5.0	10		04/27/15 21:45	108-67-8	
Vinyl chloride	ND	ug/L	4.0	1.0	10		04/27/15 21:45	75-01-4	
Xylene (Total)	**3240**	ug/L	30.0	4.0	10		04/27/15 21:45	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	95	%.	75-125		10		04/27/15 21:45	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		10		04/27/15 21:45	2037-26-5	
4-Bromofluorobenzene (S)	96	%.	75-125		10		04/27/15 21:45	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-26 **Lab ID: 10303629019** Collected: 04/22/15 13:50 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**2.3**	mg/L	0.11	0.023	1	04/23/15 18:52	04/24/15 11:03		T7
Surrogates									
n-Triacontane (S)	90	%.	50-150		1	04/23/15 18:52	04/24/15 11:03	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**9710**	ug/L	2000	1000	20		04/28/15 20:52		
Surrogates									
a,a,a-Trifluorotoluene (S)	94	%.	80-150		20		04/28/15 20:52	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	500	250	25		04/28/15 15:48	67-64-1	
Allyl chloride	ND	ug/L	100	11.2	25		04/28/15 15:48	107-05-1	
Benzene	**3200**	ug/L	25.0	3.8	25		04/28/15 15:48	71-43-2	
Bromobenzene	ND	ug/L	25.0	3.3	25		04/28/15 15:48	108-86-1	
Bromochloromethane	ND	ug/L	25.0	2.9	25		04/28/15 15:48	74-97-5	
Bromodichloromethane	ND	ug/L	25.0	5.0	25		04/28/15 15:48	75-27-4	
Bromoform	ND	ug/L	100	50.0	25		04/28/15 15:48	75-25-2	L3
Bromomethane	ND	ug/L	100	50.0	25		04/28/15 15:48	74-83-9	CL
2-Butanone (MEK)	ND	ug/L	125	62.5	25		04/28/15 15:48	78-93-3	
n-Butylbenzene	ND	ug/L	25.0	12.5	25		04/28/15 15:48	104-51-8	
sec-Butylbenzene	ND	ug/L	25.0	12.5	25		04/28/15 15:48	135-98-8	
tert-Butylbenzene	ND	ug/L	25.0	12.5	25		04/28/15 15:48	98-06-6	
Carbon tetrachloride	ND	ug/L	25.0	4.0	25		04/28/15 15:48	56-23-5	
Chlorobenzene	ND	ug/L	25.0	1.6	25		04/28/15 15:48	108-90-7	
Chloroethane	ND	ug/L	25.0	6.7	25		04/28/15 15:48	75-00-3	
Chloroform	ND	ug/L	25.0	4.0	25		04/28/15 15:48	67-66-3	
Chloromethane	ND	ug/L	100	8.5	25		04/28/15 15:48	74-87-3	
2-Chlorotoluene	ND	ug/L	25.0	3.4	25		04/28/15 15:48	95-49-8	
4-Chlorotoluene	ND	ug/L	25.0	2.1	25		04/28/15 15:48	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	100	50.0	25		04/28/15 15:48	96-12-8	
Dibromochloromethane	ND	ug/L	25.0	12.5	25		04/28/15 15:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	25.0	3.7	25		04/28/15 15:48	106-93-4	
Dibromomethane	ND	ug/L	100	4.6	25		04/28/15 15:48	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	25.0	4.0	25		04/28/15 15:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	25.0	12.5	25		04/28/15 15:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	25.0	12.5	25		04/28/15 15:48	106-46-7	
Dichlorodifluoromethane	ND	ug/L	25.0	12.5	25		04/28/15 15:48	75-71-8	
1,1-Dichloroethane	ND	ug/L	25.0	4.0	25		04/28/15 15:48	75-34-3	
1,2-Dichloroethane	ND	ug/L	25.0	3.3	25		04/28/15 15:48	107-06-2	
1,1-Dichloroethene	ND	ug/L	25.0	5.0	25		04/28/15 15:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	25.0	3.3	25		04/28/15 15:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	25.0	5.8	25		04/28/15 15:48	156-60-5	
Dichlorofluoromethane	ND	ug/L	25.0	5.0	25		04/28/15 15:48	75-43-4	
1,2-Dichloropropane	ND	ug/L	100	3.6	25		04/28/15 15:48	78-87-5	
1,3-Dichloropropane	ND	ug/L	25.0	12.5	25		04/28/15 15:48	142-28-9	
2,2-Dichloropropane	ND	ug/L	100	4.4	25		04/28/15 15:48	594-20-7	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: MW-26 **Lab ID: 10303629019** Collected: 04/22/15 13:50 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
1,1-Dichloropropene	ND	ug/L	25.0	12.5	25		04/28/15 15:48	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	100	3.2	25		04/28/15 15:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	100	4.6	25		04/28/15 15:48	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	250	3.5	25		04/28/15 15:48	60-29-7	
Ethylbenzene	**1570**	ug/L	25.0	4.1	25		04/28/15 15:48	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	25.0	12.5	25		04/28/15 15:48	87-68-3	
Isopropylbenzene (Cumene)	**27.6**	ug/L	25.0	12.5	25		04/28/15 15:48	98-82-8	
p-Isopropyltoluene	ND	ug/L	25.0	12.5	25		04/28/15 15:48	99-87-6	
Methylene Chloride	ND	ug/L	100	50.0	25		04/28/15 15:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	125	62.5	25		04/28/15 15:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	25.0	4.2	25		04/28/15 15:48	1634-04-4	
Naphthalene	ND	ug/L	100	50.0	25		04/28/15 15:48	91-20-3	
n-Propylbenzene	**76.3**	ug/L	25.0	12.5	25		04/28/15 15:48	103-65-1	
Styrene	ND	ug/L	25.0	1.7	25		04/28/15 15:48	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	25.0	12.5	25		04/28/15 15:48	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	25.0	12.5	25		04/28/15 15:48	79-34-5	
Tetrachloroethene	ND	ug/L	25.0	3.9	25		04/28/15 15:48	127-18-4	
Tetrahydrofuran	**805**	ug/L	250	49.8	25		04/28/15 15:48	109-99-9	
Toluene	**59.7**	ug/L	25.0	2.8	25		04/28/15 15:48	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	25.0	12.5	25		04/28/15 15:48	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	25.0	12.5	25		04/28/15 15:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	25.0	6.6	25		04/28/15 15:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	25.0	3.4	25		04/28/15 15:48	79-00-5	
Trichloroethene	ND	ug/L	10.0	2.3	25		04/28/15 15:48	79-01-6	
Trichlorofluoromethane	ND	ug/L	25.0	5.4	25		04/28/15 15:48	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	100	30.5	25		04/28/15 15:48	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	25.0	12.5	25		04/28/15 15:48	76-13-1	
1,2,4-Trimethylbenzene	**464**	ug/L	25.0	12.5	25		04/28/15 15:48	95-63-6	
1,3,5-Trimethylbenzene	**114**	ug/L	25.0	12.5	25		04/28/15 15:48	108-67-8	
Vinyl chloride	ND	ug/L	10.0	2.6	25		04/28/15 15:48	75-01-4	
Xylene (Total)	**3620**	ug/L	75.0	10.1	25		04/28/15 15:48	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	93	%.	75-125		25		04/28/15 15:48	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		25		04/28/15 15:48	2037-26-5	
4-Bromofluorobenzene (S)	105	%.	75-125		25		04/28/15 15:48	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: Trip Blank **Lab ID: 10303629020** Collected: 04/20/15 00:00 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	50.0	1		04/24/15 19:58		
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%.	80-150		1		04/24/15 19:58	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	20.0	10.0	1		04/27/15 18:06	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.45	1		04/27/15 18:06	107-05-1	
Benzene	ND	ug/L	1.0	0.15	1		04/27/15 18:06	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.13	1		04/27/15 18:06	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.12	1		04/27/15 18:06	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.20	1		04/27/15 18:06	75-27-4	
Bromoform	ND	ug/L	4.0	2.0	1		04/27/15 18:06	75-25-2	
Bromomethane	ND	ug/L	4.0	2.0	1		04/27/15 18:06	74-83-9	L2
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		04/27/15 18:06	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.16	1		04/27/15 18:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.066	1		04/27/15 18:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.27	1		04/27/15 18:06	75-00-3	
Chloroform	ND	ug/L	1.0	0.16	1		04/27/15 18:06	67-66-3	
Chloromethane	ND	ug/L	4.0	0.34	1		04/27/15 18:06	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.14	1		04/27/15 18:06	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.083	1		04/27/15 18:06	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		04/27/15 18:06	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.50	1		04/27/15 18:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.15	1		04/27/15 18:06	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.18	1		04/27/15 18:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.16	1		04/27/15 18:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.50	1		04/27/15 18:06	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.16	1		04/27/15 18:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.13	1		04/27/15 18:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.20	1		04/27/15 18:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.13	1		04/27/15 18:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.23	1		04/27/15 18:06	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.20	1		04/27/15 18:06	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.14	1		04/27/15 18:06	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		04/27/15 18:06	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.17	1		04/27/15 18:06	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.13	1		04/27/15 18:06	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.18	1		04/27/15 18:06	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	10.0	0.14	1		04/27/15 18:06	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.16	1		04/27/15 18:06	100-41-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Sample: Trip Blank **Lab ID: 10303629020** Collected: 04/20/15 00:00 Received: 04/22/15 18:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.50	1		04/27/15 18:06	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		04/27/15 18:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.5	1		04/27/15 18:06	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.17	1		04/27/15 18:06	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		04/27/15 18:06	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	103-65-1	
Styrene	ND	ug/L	1.0	0.069	1		04/27/15 18:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.16	1		04/27/15 18:06	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	2.0	1		04/27/15 18:06	109-99-9	
Toluene	ND	ug/L	1.0	0.11	1		04/27/15 18:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.26	1		04/27/15 18:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.14	1		04/27/15 18:06	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.091	1		04/27/15 18:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.22	1		04/27/15 18:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	1.2	1		04/27/15 18:06	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		04/27/15 18:06	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.50	1		04/27/15 18:06	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.10	1		04/27/15 18:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.40	1		04/27/15 18:06	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	95	%.	75-125		1		04/27/15 18:06	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		1		04/27/15 18:06	2037-26-5	
4-Bromofluorobenzene (S)	98	%.	75-125		1		04/27/15 18:06	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

QC Batch: GCV/13655 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10303629001, 10303629003

METHOD BLANK: 1946570 Matrix: Water
Associated Lab Samples: 10303629001, 10303629003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	04/23/15 15:15	
a,a,a-Trifluorotoluene (S)	%.	97	80-150	04/23/15 15:15	

LABORATORY CONTROL SAMPLE & LCSD: 1946571 1946572

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	838	855	84	86	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%.				101	103	80-150			

MATRIX SPIKE SAMPLE: 1947681

Parameter	Units	10303595024 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	ND	1000	961	96	80-120	
a,a,a-Trifluorotoluene (S)	%.				98	80-150	

SAMPLE DUPLICATE: 1947682

Parameter	Units	10303595025 Result	Dup Result	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	ND		20	
a,a,a-Trifluorotoluene (S)	%.	99	98	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

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(612)607-1700

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

QC Batch: GCV/13658 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10303629004, 10303629005, 10303629006, 10303629007, 10303629008, 10303629009, 10303629010, 10303629011, 10303629013, 10303629020

METHOD BLANK: 1947683 Matrix: Water
Associated Lab Samples: 10303629004, 10303629005, 10303629006, 10303629007, 10303629008, 10303629009, 10303629010, 10303629011, 10303629013, 10303629020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	04/24/15 19:34	
a,a,a-Trifluorotoluene (S)	%.	93	80-150	04/24/15 19:34	

LABORATORY CONTROL SAMPLE & LCSD: 1947684 1947685

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	963	972	96	97	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%.				108	101	80-150			

MATRIX SPIKE SAMPLE: 1949105

Parameter	Units	10303629004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	ND	1000	937	94	80-120	
a,a,a-Trifluorotoluene (S)	%.				101	80-150	

SAMPLE DUPLICATE: 1949106

Parameter	Units	10303629005 Result	Dup Result	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	ND		20	
a,a,a-Trifluorotoluene (S)	%.	100	105	5		

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

QC Batch: GCV/13668 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10303629012, 10303629014, 10303629015, 10303629016

METHOD BLANK: 1949112 Matrix: Water
Associated Lab Samples: 10303629012, 10303629014, 10303629015, 10303629016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	04/27/15 13:36	
a,a,a-Trifluorotoluene (S)	%.	98	80-150	04/27/15 13:36	

LABORATORY CONTROL SAMPLE & LCSD: 1949113 1949114

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	886	898	89	90	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%.				107	99	80-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1950239 1950240

Parameter	Units	10303629014 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Gasoline Range Organics	ug/L	10100	20000	20000	33600	32400	118	112	80-120	4	20	
a,a,a-Trifluorotoluene (S)	%.						117	113	80-150			

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

QC Batch: GCV/13673 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10303629002, 10303629017, 10303629018, 10303629019

METHOD BLANK: 1949920 Matrix: Water
Associated Lab Samples: 10303629002, 10303629017, 10303629018, 10303629019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	04/28/15 17:43	
Ethylbenzene	ug/L	ND	1.0	04/28/15 17:43	
Gasoline Range Organics	ug/L	ND	100	04/28/15 17:43	
Toluene	ug/L	ND	1.0	04/28/15 17:43	
Xylene (Total)	ug/L	ND	3.0	04/28/15 17:43	
a,a,a-Trifluorotoluene (S)	%.	95	80-150	04/28/15 17:43	

LABORATORY CONTROL SAMPLE & LCSD: 1949921 1949922

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/L	100	105	98.2	105	98	80-120	6	20	
Ethylbenzene	ug/L	100	98.7	98.4	99	98	80-120	0	20	
Gasoline Range Organics	ug/L	1000	898	931	90	93	80-120	4	20	
Toluene	ug/L	100	104	101	104	101	80-120	4	20	
Xylene (Total)	ug/L	300	338	335	113	112	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%.				99	99	80-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1952200 1952201

Parameter	Units	10303629017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	391	2000	2000	2530	2580	107	109	80-120	2	20	
Ethylbenzene	ug/L	447	2000	2000	2570	2590	106	107	80-120	1	20	
Gasoline Range Organics	ug/L	12600	20000	20000	36400	36100	119	117	80-120	1	20	
Toluene	ug/L	404	2000	2000	2620	2630	111	111	80-120	0	20	
Xylene (Total)	ug/L	4990	6000	6000	13000	13100	133	136	80-120	1	20	MS
a,a,a-Trifluorotoluene (S)	%.						101	96	80-150			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

QC Batch: MSV/31237 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 465 W
Associated Lab Samples: 10303629004, 10303629006, 10303629007, 10303629008, 10303629009, 10303629012, 10303629013, 10303629014, 10303629015, 10303629016, 10303629017, 10303629018, 10303629020

METHOD BLANK: 1949110 Matrix: Water
Associated Lab Samples: 10303629004, 10303629006, 10303629007, 10303629008, 10303629009, 10303629012, 10303629013, 10303629014, 10303629015, 10303629016, 10303629017, 10303629018, 10303629020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	04/27/15 17:52	
1,1,1-Trichloroethane	ug/L	ND	1.0	04/27/15 17:52	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/27/15 17:52	
1,1,2-Trichloroethane	ug/L	ND	1.0	04/27/15 17:52	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	04/27/15 17:52	
1,1-Dichloroethane	ug/L	ND	1.0	04/27/15 17:52	
1,1-Dichloroethene	ug/L	ND	1.0	04/27/15 17:52	
1,1-Dichloropropene	ug/L	ND	1.0	04/27/15 17:52	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	04/27/15 17:52	
1,2,3-Trichloropropane	ug/L	ND	4.0	04/27/15 17:52	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	04/27/15 17:52	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	04/27/15 17:52	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	04/27/15 17:52	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	04/27/15 17:52	
1,2-Dichlorobenzene	ug/L	ND	1.0	04/27/15 17:52	
1,2-Dichloroethane	ug/L	ND	1.0	04/27/15 17:52	
1,2-Dichloropropane	ug/L	ND	4.0	04/27/15 17:52	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	04/27/15 17:52	
1,3-Dichlorobenzene	ug/L	ND	1.0	04/27/15 17:52	
1,3-Dichloropropane	ug/L	ND	1.0	04/27/15 17:52	
1,4-Dichlorobenzene	ug/L	ND	1.0	04/27/15 17:52	
2,2-Dichloropropane	ug/L	ND	4.0	04/27/15 17:52	
2-Butanone (MEK)	ug/L	ND	5.0	04/27/15 17:52	
2-Chlorotoluene	ug/L	ND	1.0	04/27/15 17:52	
4-Chlorotoluene	ug/L	ND	1.0	04/27/15 17:52	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	04/27/15 17:52	
Acetone	ug/L	ND	20.0	04/27/15 17:52	
Allyl chloride	ug/L	ND	4.0	04/27/15 17:52	
Benzene	ug/L	ND	1.0	04/27/15 17:52	
Bromobenzene	ug/L	ND	1.0	04/27/15 17:52	
Bromochloromethane	ug/L	ND	1.0	04/27/15 17:52	
Bromodichloromethane	ug/L	ND	1.0	04/27/15 17:52	
Bromoform	ug/L	ND	4.0	04/27/15 17:52	
Bromomethane	ug/L	ND	4.0	04/27/15 17:52	
Carbon tetrachloride	ug/L	ND	1.0	04/27/15 17:52	
Chlorobenzene	ug/L	ND	1.0	04/27/15 17:52	
Chloroethane	ug/L	ND	1.0	04/27/15 17:52	
Chloroform	ug/L	ND	1.0	04/27/15 17:52	
Chloromethane	ug/L	ND	4.0	04/27/15 17:52	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/27/15 17:52	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

METHOD BLANK: 1949110 Matrix: Water

Associated Lab Samples: 10303629004, 10303629006, 10303629007, 10303629008, 10303629009, 10303629012, 10303629013, 10303629014, 10303629015, 10303629016, 10303629017, 10303629018, 10303629020

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,3-Dichloropropene	ug/L	ND	4.0	04/27/15 17:52	
Dibromochloromethane	ug/L	ND	1.0	04/27/15 17:52	
Dibromomethane	ug/L	ND	4.0	04/27/15 17:52	
Dichlorodifluoromethane	ug/L	ND	1.0	04/27/15 17:52	
Dichlorofluoromethane	ug/L	ND	1.0	04/27/15 17:52	
Diethyl ether (Ethyl ether)	ug/L	ND	10.0	04/27/15 17:52	
Ethylbenzene	ug/L	ND	1.0	04/27/15 17:52	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	04/27/15 17:52	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	04/27/15 17:52	
Methyl-tert-butyl ether	ug/L	ND	1.0	04/27/15 17:52	
Methylene Chloride	ug/L	ND	4.0	04/27/15 17:52	
n-Butylbenzene	ug/L	ND	1.0	04/27/15 17:52	
n-Propylbenzene	ug/L	ND	1.0	04/27/15 17:52	
Naphthalene	ug/L	ND	4.0	04/27/15 17:52	
p-Isopropyltoluene	ug/L	ND	1.0	04/27/15 17:52	
sec-Butylbenzene	ug/L	ND	1.0	04/27/15 17:52	
Styrene	ug/L	ND	1.0	04/27/15 17:52	
tert-Butylbenzene	ug/L	ND	1.0	04/27/15 17:52	
Tetrachloroethene	ug/L	ND	1.0	04/27/15 17:52	
Tetrahydrofuran	ug/L	ND	10.0	04/27/15 17:52	
Toluene	ug/L	ND	1.0	04/27/15 17:52	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/27/15 17:52	
trans-1,3-Dichloropropene	ug/L	ND	4.0	04/27/15 17:52	
Trichloroethene	ug/L	ND	0.40	04/27/15 17:52	
Trichlorofluoromethane	ug/L	ND	1.0	04/27/15 17:52	
Vinyl chloride	ug/L	ND	0.40	04/27/15 17:52	
Xylene (Total)	ug/L	ND	3.0	04/27/15 17:52	
1,2-Dichloroethane-d4 (S)	%.	92	75-125	04/27/15 17:52	
4-Bromofluorobenzene (S)	%.	98	75-125	04/27/15 17:52	
Toluene-d8 (S)	%.	99	75-125	04/27/15 17:52	

LABORATORY CONTROL SAMPLE: 1949111

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.8	104	75-125	
1,1,1-Trichloroethane	ug/L	20	20.1	101	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	22.7	114	75-125	
1,1,2-Trichloroethane	ug/L	20	22.0	110	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	20	19.2	96	60-135	
1,1-Dichloroethane	ug/L	20	21.8	109	69-125	
1,1-Dichloroethene	ug/L	20	18.7	94	68-125	
1,1-Dichloropropene	ug/L	20	20.6	103	74-125	
1,2,3-Trichlorobenzene	ug/L	20	20.9	104	69-136	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

LABORATORY CONTROL SAMPLE: 1949111

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,3-Trichloropropane	ug/L	20	21.2	106	75-125	
1,2,4-Trichlorobenzene	ug/L	20	21.6	108	73-127	
1,2,4-Trimethylbenzene	ug/L	20	20.3	102	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	45.1	90	65-145	
1,2-Dibromoethane (EDB)	ug/L	20	21.6	108	75-125	
1,2-Dichlorobenzene	ug/L	20	21.6	108	75-125	
1,2-Dichloroethane	ug/L	20	22.3	112	73-125	
1,2-Dichloropropane	ug/L	20	21.3	107	75-125	
1,3,5-Trimethylbenzene	ug/L	20	20.5	102	75-125	
1,3-Dichlorobenzene	ug/L	20	21.2	106	74-125	
1,3-Dichloropropane	ug/L	20	21.6	108	75-125	
1,4-Dichlorobenzene	ug/L	20	21.0	105	75-125	
2,2-Dichloropropane	ug/L	20	19.9	100	59-139	
2-Butanone (MEK)	ug/L	100	96.0	96	63-130	
2-Chlorotoluene	ug/L	20	19.9	99	72-125	
4-Chlorotoluene	ug/L	20	20.4	102	73-125	
4-Methyl-2-pentanone (MIBK)	ug/L	100	107	107	71-126	
Acetone	ug/L	100	69.6	70	69-131	
Allyl chloride	ug/L	20	18.4	92	67-125	
Benzene	ug/L	20	20.3	102	71-125	
Bromobenzene	ug/L	20	22.0	110	75-125	
Bromochloromethane	ug/L	20	20.7	104	75-125	
Bromodichloromethane	ug/L	20	18.9	95	75-125	
Bromoform	ug/L	20	15.1	75	70-125	
Bromomethane	ug/L	20	5.2	26	30-150	L0
Carbon tetrachloride	ug/L	20	17.3	86	75-126	
Chlorobenzene	ug/L	20	22.3	111	75-125	
Chloroethane	ug/L	20	22.3	111	65-134	
Chloroform	ug/L	20	19.5	97	75-125	
Chloromethane	ug/L	20	16.2	81	39-150	
cis-1,2-Dichloroethene	ug/L	20	21.0	105	72-125	
cis-1,3-Dichloropropene	ug/L	20	19.3	97	75-125	
Dibromochloromethane	ug/L	20	17.4	87	75-125	
Dibromomethane	ug/L	20	22.3	112	75-125	
Dichlorodifluoromethane	ug/L	20	18.4	92	50-134	
Dichlorofluoromethane	ug/L	20	19.6	98	69-125	
Diethyl ether (Ethyl ether)	ug/L	20	20.9	104	72-125	
Ethylbenzene	ug/L	20	21.2	106	75-125	
Hexachloro-1,3-butadiene	ug/L	20	21.1	105	70-138	
Isopropylbenzene (Cumene)	ug/L	20	20.8	104	75-125	
Methyl-tert-butyl ether	ug/L	20	20.1	100	73-125	
Methylene Chloride	ug/L	20	19.6	98	73-125	
n-Butylbenzene	ug/L	20	19.9	99	72-133	
n-Propylbenzene	ug/L	20	21.0	105	72-126	
Naphthalene	ug/L	20	17.6	88	70-127	
p-Isopropyltoluene	ug/L	20	21.7	108	72-132	
sec-Butylbenzene	ug/L	20	21.1	106	73-132	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

LABORATORY CONTROL SAMPLE: 1949111

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Styrene	ug/L	20	21.1	105	75-125	
tert-Butylbenzene	ug/L	20	21.5	107	73-128	
Tetrachloroethene	ug/L	20	22.2	111	74-125	
Tetrahydrofuran	ug/L	200	197	98	62-133	
Toluene	ug/L	20	21.0	105	74-125	
trans-1,2-Dichloroethene	ug/L	20	20.0	100	69-125	
trans-1,3-Dichloropropene	ug/L	20	18.5	92	75-125	
Trichloroethene	ug/L	20	20.9	104	75-125	
Trichlorofluoromethane	ug/L	20	19.6	98	74-127	
Vinyl chloride	ug/L	20	19.8	99	66-132	
Xylene (Total)	ug/L	60	63.5	106	75-125	
1,2-Dichloroethane-d4 (S)	%.			99	75-125	
4-Bromofluorobenzene (S)	%.			96	75-125	
Toluene-d8 (S)	%.			98	75-125	

MATRIX SPIKE SAMPLE: 1950232

Parameter	Units	10303629006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	18.4	92	70-138	
1,1,1-Trichloroethane	ug/L	ND	20	21.2	106	55-150	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	21.8	109	64-140	
1,1,2-Trichloroethane	ug/L	ND	20	20.1	101	67-137	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	20.9	104	51-150	
1,1-Dichloroethane	ug/L	ND	20	21.9	109	49-150	
1,1-Dichloroethene	ug/L	ND	20	20.2	101	40-150	
1,1-Dichloropropene	ug/L	ND	20	21.0	105	50-150	
1,2,3-Trichlorobenzene	ug/L	ND	20	16.0	80	59-148	
1,2,3-Trichloropropane	ug/L	ND	20	20.2	101	65-141	
1,2,4-Trichlorobenzene	ug/L	ND	20	17.6	88	61-140	
1,2,4-Trimethylbenzene	ug/L	ND	20	20.2	101	58-141	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	33.2	66	53-150	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.4	97	65-137	
1,2-Dichlorobenzene	ug/L	ND	20	20.1	100	66-133	
1,2-Dichloroethane	ug/L	ND	20	20.6	100	54-138	
1,2-Dichloropropane	ug/L	ND	20	21.2	106	62-138	
1,3,5-Trimethylbenzene	ug/L	ND	20	21.1	105	58-140	
1,3-Dichlorobenzene	ug/L	ND	20	20.1	101	66-132	
1,3-Dichloropropane	ug/L	ND	20	20.4	102	66-134	
1,4-Dichlorobenzene	ug/L	ND	20	19.5	97	65-129	
2,2-Dichloropropane	ug/L	ND	20	20.5	102	40-150	
2-Butanone (MEK)	ug/L	ND	100	80.4	80	51-147	
2-Chlorotoluene	ug/L	ND	20	20.4	102	58-147	
4-Chlorotoluene	ug/L	ND	20	20.3	101	64-138	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	104	104	59-143	
Acetone	ug/L	ND	100	66.3	66	63-147	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

MATRIX SPIKE SAMPLE: 1950232

Parameter	Units	10303629006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Allyl chloride	ug/L	ND	20	19.7	99	45-150	
Benzene	ug/L	ND	20	19.7	97	53-139	
Bromobenzene	ug/L	ND	20	21.0	105	66-136	
Bromochloromethane	ug/L	ND	20	19.6	98	64-136	
Bromodichloromethane	ug/L	ND	20	18.2	91	66-138	
Bromoform	ug/L	ND	20	11.6	58	59-136	M1
Bromomethane	ug/L	ND	20	5.5	27	30-150	M0
Carbon tetrachloride	ug/L	ND	20	18.3	92	56-150	
Chlorobenzene	ug/L	ND	20	21.4	107	65-133	
Chloroethane	ug/L	ND	20	22.0	110	48-150	
Chloroform	ug/L	ND	20	18.6	93	57-145	
Chloromethane	ug/L	ND	20	20.1	100	30-150	
cis-1,2-Dichloroethene	ug/L	ND	20	21.0	105	49-150	
cis-1,3-Dichloropropene	ug/L	ND	20	17.7	88	64-130	
Dibromochloromethane	ug/L	ND	20	15.1	76	68-138	
Dibromomethane	ug/L	ND	20	19.6	98	67-134	
Dichlorodifluoromethane	ug/L	1.3	20	20.3	95	45-150	
Dichlorofluoromethane	ug/L	ND	20	19.5	98	54-150	
Diethyl ether (Ethyl ether)	ug/L	ND	20	19.0	95	50-145	
Ethylbenzene	ug/L	ND	20	20.7	103	55-139	
Hexachloro-1,3-butadiene	ug/L	ND	20	18.9	95	49-150	
Isopropylbenzene (Cumene)	ug/L	ND	20	21.3	107	64-142	
Methyl-tert-butyl ether	ug/L	ND	20	19.3	96	62-129	
Methylene Chloride	ug/L	ND	20	18.8	94	57-132	
n-Butylbenzene	ug/L	ND	20	20.2	101	55-150	
n-Propylbenzene	ug/L	ND	20	21.7	108	59-142	
Naphthalene	ug/L	ND	20	14.5	72	51-150	
p-Isopropyltoluene	ug/L	ND	20	21.5	108	60-149	
sec-Butylbenzene	ug/L	ND	20	22.1	109	60-150	
Styrene	ug/L	ND	20	19.7	99	68-134	
tert-Butylbenzene	ug/L	ND	20	22.4	112	62-146	
Tetrachloroethene	ug/L	ND	20	21.7	108	50-150	
Tetrahydrofuran	ug/L	ND	200	231	115	59-145	
Toluene	ug/L	ND	20	21.2	106	52-148	
trans-1,2-Dichloroethene	ug/L	ND	20	20.2	101	45-150	
trans-1,3-Dichloropropene	ug/L	ND	20	16.9	85	68-132	
Trichloroethene	ug/L	ND	20	20.0	100	52-150	
Trichlorofluoromethane	ug/L	ND	20	20.3	102	55-150	
Vinyl chloride	ug/L	ND	20	20.7	104	43-150	
Xylene (Total)	ug/L	ND	60	62.3	104	54-144	
1,2-Dichloroethane-d4 (S)	%.				97	75-125	
4-Bromofluorobenzene (S)	%.				103	75-125	
Toluene-d8 (S)	%.				102	75-125	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

SAMPLE DUPLICATE: 1950233

Parameter	Units	10303629007 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	ND		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Allyl chloride	ug/L	ND	ND		30	
Benzene	ug/L	2.1	2.1	2	30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	33.8	32.5	4	30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Dichlorofluoromethane	ug/L	ND	ND		30	
Diethyl ether (Ethyl ether)	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	.53J		30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

SAMPLE DUPLICATE: 1950233

Parameter	Units	10303629007 Result	Dup Result	RPD	Max RPD	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	1.1	1.1	0	30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Butylbenzene	ug/L	ND	.57J		30	
n-Propylbenzene	ug/L	2.2	2.2	3	30	
Naphthalene	ug/L	ND	ND		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
sec-Butylbenzene	ug/L	ND	.94J		30	
Styrene	ug/L	ND	ND		30	
tert-Butylbenzene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	74.6	70.5	6	30	
Tetrahydrofuran	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	.64J		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	16.6	15.2	9	30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%.	94	95	2		
4-Bromofluorobenzene (S)	%.	96	97	1		
Toluene-d8 (S)	%.	98	99	1		

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

QC Batch: MSV/31257 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 465 W
Associated Lab Samples: 10303629005, 10303629010, 10303629011, 10303629019

METHOD BLANK: 1950039 Matrix: Water
Associated Lab Samples: 10303629005, 10303629010, 10303629011, 10303629019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	04/28/15 13:37	
1,1,1-Trichloroethane	ug/L	ND	1.0	04/28/15 13:37	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	04/28/15 13:37	
1,1,2-Trichloroethane	ug/L	ND	1.0	04/28/15 13:37	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	04/28/15 13:37	
1,1-Dichloroethane	ug/L	ND	1.0	04/28/15 13:37	
1,1-Dichloroethene	ug/L	ND	1.0	04/28/15 13:37	
1,1-Dichloropropene	ug/L	ND	1.0	04/28/15 13:37	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	04/28/15 13:37	
1,2,3-Trichloropropane	ug/L	ND	4.0	04/28/15 13:37	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	04/28/15 13:37	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	04/28/15 13:37	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	04/28/15 13:37	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	04/28/15 13:37	
1,2-Dichlorobenzene	ug/L	ND	1.0	04/28/15 13:37	
1,2-Dichloroethane	ug/L	ND	1.0	04/28/15 13:37	
1,2-Dichloropropane	ug/L	ND	4.0	04/28/15 13:37	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	04/28/15 13:37	
1,3-Dichlorobenzene	ug/L	ND	1.0	04/28/15 13:37	
1,3-Dichloropropane	ug/L	ND	1.0	04/28/15 13:37	
1,4-Dichlorobenzene	ug/L	ND	1.0	04/28/15 13:37	
2,2-Dichloropropane	ug/L	ND	4.0	04/28/15 13:37	
2-Butanone (MEK)	ug/L	ND	5.0	04/28/15 13:37	
2-Chlorotoluene	ug/L	ND	1.0	04/28/15 13:37	
4-Chlorotoluene	ug/L	ND	1.0	04/28/15 13:37	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	04/28/15 13:37	
Acetone	ug/L	ND	20.0	04/28/15 13:37	
Allyl chloride	ug/L	ND	4.0	04/28/15 13:37	
Benzene	ug/L	ND	1.0	04/28/15 13:37	
Bromobenzene	ug/L	ND	1.0	04/28/15 13:37	
Bromochloromethane	ug/L	ND	1.0	04/28/15 13:37	
Bromodichloromethane	ug/L	ND	1.0	04/28/15 13:37	
Bromoform	ug/L	ND	4.0	04/28/15 13:37	
Bromomethane	ug/L	ND	4.0	04/28/15 13:37	CL
Carbon tetrachloride	ug/L	ND	1.0	04/28/15 13:37	
Chlorobenzene	ug/L	ND	1.0	04/28/15 13:37	
Chloroethane	ug/L	ND	1.0	04/28/15 13:37	
Chloroform	ug/L	ND	1.0	04/28/15 13:37	
Chloromethane	ug/L	ND	4.0	04/28/15 13:37	
cis-1,2-Dichloroethene	ug/L	ND	1.0	04/28/15 13:37	
cis-1,3-Dichloropropene	ug/L	ND	4.0	04/28/15 13:37	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

METHOD BLANK: 1950039 Matrix: Water
Associated Lab Samples: 10303629005, 10303629010, 10303629011, 10303629019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	1.0	04/28/15 13:37	
Dibromomethane	ug/L	ND	4.0	04/28/15 13:37	
Dichlorodifluoromethane	ug/L	ND	1.0	04/28/15 13:37	
Dichlorofluoromethane	ug/L	ND	1.0	04/28/15 13:37	
Diethyl ether (Ethyl ether)	ug/L	ND	10.0	04/28/15 13:37	
Ethylbenzene	ug/L	ND	1.0	04/28/15 13:37	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	04/28/15 13:37	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	04/28/15 13:37	
Methyl-tert-butyl ether	ug/L	ND	1.0	04/28/15 13:37	
Methylene Chloride	ug/L	ND	4.0	04/28/15 13:37	
n-Butylbenzene	ug/L	ND	1.0	04/28/15 13:37	
n-Propylbenzene	ug/L	ND	1.0	04/28/15 13:37	
Naphthalene	ug/L	ND	4.0	04/28/15 13:37	
p-Isopropyltoluene	ug/L	ND	1.0	04/28/15 13:37	
sec-Butylbenzene	ug/L	ND	1.0	04/28/15 13:37	
Styrene	ug/L	ND	1.0	04/28/15 13:37	
tert-Butylbenzene	ug/L	ND	1.0	04/28/15 13:37	
Tetrachloroethene	ug/L	ND	1.0	04/28/15 13:37	
Tetrahydrofuran	ug/L	ND	10.0	04/28/15 13:37	
Toluene	ug/L	ND	1.0	04/28/15 13:37	
trans-1,2-Dichloroethene	ug/L	ND	1.0	04/28/15 13:37	
trans-1,3-Dichloropropene	ug/L	ND	4.0	04/28/15 13:37	
Trichloroethene	ug/L	ND	0.40	04/28/15 13:37	
Trichlorofluoromethane	ug/L	ND	1.0	04/28/15 13:37	
Vinyl chloride	ug/L	ND	0.40	04/28/15 13:37	
Xylene (Total)	ug/L	ND	3.0	04/28/15 13:37	
1,2-Dichloroethane-d4 (S)	%.	88	75-125	04/28/15 13:37	
4-Bromofluorobenzene (S)	%.	96	75-125	04/28/15 13:37	
Toluene-d8 (S)	%.	98	75-125	04/28/15 13:37	

LABORATORY CONTROL SAMPLE: 1950040

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	23.8	119	75-125	
1,1,1-Trichloroethane	ug/L	20	21.8	109	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	23.9	119	75-125	
1,1,2-Trichloroethane	ug/L	20	23.0	115	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.0	100	60-135	
1,1-Dichloroethane	ug/L	20	21.8	109	69-125	
1,1-Dichloroethene	ug/L	20	19.6	98	68-125	
1,1-Dichloropropene	ug/L	20	20.7	104	74-125	
1,2,3-Trichlorobenzene	ug/L	20	20.9	105	69-136	
1,2,3-Trichloropropane	ug/L	20	22.1	110	75-125	
1,2,4-Trichlorobenzene	ug/L	20	21.8	109	73-127	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

LABORATORY CONTROL SAMPLE: 1950040

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.5	103	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	59.2	118	65-145	
1,2-Dibromoethane (EDB)	ug/L	20	23.4	117	75-125	
1,2-Dichlorobenzene	ug/L	20	22.4	112	75-125	
1,2-Dichloroethane	ug/L	20	20.9	105	73-125	
1,2-Dichloropropane	ug/L	20	21.3	106	75-125	
1,3,5-Trimethylbenzene	ug/L	20	20.8	104	75-125	
1,3-Dichlorobenzene	ug/L	20	21.7	108	74-125	
1,3-Dichloropropane	ug/L	20	22.6	113	75-125	
1,4-Dichlorobenzene	ug/L	20	21.2	106	75-125	
2,2-Dichloropropane	ug/L	20	21.6	108	59-139	
2-Butanone (MEK)	ug/L	100	110	110	63-130	
2-Chlorotoluene	ug/L	20	19.8	99	72-125	
4-Chlorotoluene	ug/L	20	20.4	102	73-125	
4-Methyl-2-pentanone (MIBK)	ug/L	100	115	115	71-126	
Acetone	ug/L	100	103	103	69-131	
Allyl chloride	ug/L	20	21.1	106	67-125	
Benzene	ug/L	20	20.1	101	71-125	
Bromobenzene	ug/L	20	22.9	114	75-125	
Bromochloromethane	ug/L	20	21.7	108	75-125	
Bromodichloromethane	ug/L	20	22.7	113	75-125	
Bromoform	ug/L	20	25.3	126	70-125	L0
Bromomethane	ug/L	20	10.7	53	30-150	CL
Carbon tetrachloride	ug/L	20	21.4	107	75-126	
Chlorobenzene	ug/L	20	23.2	116	75-125	
Chloroethane	ug/L	20	25.0	125	65-134	
Chloroform	ug/L	20	19.7	98	75-125	
Chloromethane	ug/L	20	13.5	68	39-150	
cis-1,2-Dichloroethene	ug/L	20	22.2	111	72-125	
cis-1,3-Dichloropropene	ug/L	20	21.9	109	75-125	
Dibromochloromethane	ug/L	20	22.8	114	75-125	
Dibromomethane	ug/L	20	24.6	123	75-125	
Dichlorodifluoromethane	ug/L	20	18.8	94	50-134	
Dichlorofluoromethane	ug/L	20	19.8	99	69-125	
Diethyl ether (Ethyl ether)	ug/L	20	21.2	106	72-125	
Ethylbenzene	ug/L	20	21.8	109	75-125	
Hexachloro-1,3-butadiene	ug/L	20	21.3	106	70-138	
Isopropylbenzene (Cumene)	ug/L	20	22.3	111	75-125	
Methyl-tert-butyl ether	ug/L	20	21.2	106	73-125	
Methylene Chloride	ug/L	20	20.9	104	73-125	
n-Butylbenzene	ug/L	20	20.1	100	72-133	
n-Propylbenzene	ug/L	20	21.1	105	72-126	
Naphthalene	ug/L	20	18.0	90	70-127	
p-Isopropyltoluene	ug/L	20	22.0	110	72-132	
sec-Butylbenzene	ug/L	20	21.6	108	73-132	
Styrene	ug/L	20	22.1	111	75-125	
tert-Butylbenzene	ug/L	20	21.8	109	73-128	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

LABORATORY CONTROL SAMPLE: 1950040

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	20	24.2	121	74-125	
Tetrahydrofuran	ug/L	200	206	103	62-133	
Toluene	ug/L	20	21.7	109	74-125	
trans-1,2-Dichloroethene	ug/L	20	20.7	103	69-125	
trans-1,3-Dichloropropene	ug/L	20	21.9	110	75-125	
Trichloroethene	ug/L	20	21.4	107	75-125	
Trichlorofluoromethane	ug/L	20	20.2	101	74-127	
Vinyl chloride	ug/L	20	19.5	97	66-132	
Xylene (Total)	ug/L	60	67.2	112	75-125	
1,2-Dichloroethane-d4 (S)	%.			92	75-125	
4-Bromofluorobenzene (S)	%.			95	75-125	
Toluene-d8 (S)	%.			101	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1950913 1950914

Parameter	Units	10303629019 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1,2-Tetrachloroethane	ug/L	ND	500	500	574	569	115	114	70-138	1	30	
1,1,1-Trichloroethane	ug/L	ND	500	500	555	545	111	109	55-150	2	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	500	500	591	583	118	117	64-140	1	30	
1,1,2-Trichloroethane	ug/L	ND	500	500	565	557	113	111	67-137	1	30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	500	500	520	530	104	106	51-150	2	30	
1,1-Dichloroethane	ug/L	ND	500	500	574	552	115	110	49-150	4	30	
1,1-Dichloroethene	ug/L	ND	500	500	497	512	99	102	40-150	3	30	
1,1-Dichloropropene	ug/L	ND	500	500	550	508	110	102	50-150	8	30	
1,2,3-Trichlorobenzene	ug/L	ND	500	500	531	527	106	105	59-148	1	30	
1,2,3-Trichloropropane	ug/L	ND	500	500	564	540	113	108	65-141	4	30	
1,2,4-Trichlorobenzene	ug/L	ND	500	500	551	543	110	109	61-140	1	30	
1,2,4-Trimethylbenzene	ug/L	464	500	500	977	935	103	94	58-141	4	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	1250	1250	1310	1340	105	107	53-150	2	30	
1,2-Dibromoethane (EDB)	ug/L	ND	500	500	557	543	111	109	65-137	3	30	
1,2-Dichlorobenzene	ug/L	ND	500	500	560	542	112	108	66-133	3	30	
1,2-Dichloroethane	ug/L	ND	500	500	530	505	106	101	54-138	5	30	
1,2-Dichloropropane	ug/L	ND	500	500	557	522	111	104	62-138	6	30	
1,3,5-Trimethylbenzene	ug/L	114	500	500	639	616	105	100	58-140	4	30	
1,3-Dichlorobenzene	ug/L	ND	500	500	556	535	111	107	66-132	4	30	
1,3-Dichloropropane	ug/L	ND	500	500	553	556	111	111	66-134	1	30	
1,4-Dichlorobenzene	ug/L	ND	500	500	533	514	107	103	65-129	4	30	
2,2-Dichloropropane	ug/L	ND	500	500	541	518	108	104	40-150	4	30	
2-Butanone (MEK)	ug/L	ND	2500	2500	2580	2760	103	110	51-147	7	30	
2-Chlorotoluene	ug/L	ND	500	500	525	513	105	103	58-147	2	30	
4-Chlorotoluene	ug/L	ND	500	500	521	505	104	101	64-138	3	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	2500	2500	2790	2710	111	109	59-143	3	30	
Acetone	ug/L	ND	2500	2500	2640	2610	106	105	63-147	1	30	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1950913 1950914

Parameter	Units	10303629019 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Allyl chloride	ug/L	ND	500	500	496	488	99	97	45-150	2	30	
Benzene	ug/L	3200	500	500	3660	3510	92	63	53-139	4	30	
Bromobenzene	ug/L	ND	500	500	571	556	114	111	66-136	3	30	
Bromochloromethane	ug/L	ND	500	500	549	540	110	108	64-136	2	30	
Bromodichloromethane	ug/L	ND	500	500	530	540	106	108	66-138	2	30	
Bromoform	ug/L	ND	500	500	519	520	104	104	59-136	0	30	
Bromomethane	ug/L	ND	500	500	349	319	70	64	30-150	9	30	CL
Carbon tetrachloride	ug/L	ND	500	500	532	507	106	101	56-150	5	30	
Chlorobenzene	ug/L	ND	500	500	574	566	115	113	65-133	1	30	
Chloroethane	ug/L	ND	500	500	579	530	116	106	48-150	9	30	
Chloroform	ug/L	ND	500	500	506	492	100	98	57-145	3	30	
Chloromethane	ug/L	ND	500	500	312	295	62	59	30-150	6	30	
cis-1,2-Dichloroethene	ug/L	ND	500	500	562	547	112	109	49-150	3	30	
cis-1,3-Dichloropropene	ug/L	ND	500	500	509	516	102	103	64-130	1	30	
Dibromochloromethane	ug/L	ND	500	500	525	507	105	101	68-138	3	30	
Dibromomethane	ug/L	ND	500	500	583	572	117	114	67-134	2	30	
Dichlorodifluoromethane	ug/L	ND	500	500	463	450	93	90	45-150	3	30	
Dichlorofluoromethane	ug/L	ND	500	500	515	475	103	95	54-150	8	30	
Diethyl ether (Ethyl ether)	ug/L	ND	500	500	513	507	103	101	50-145	1	30	
Ethylbenzene	ug/L	1570	500	500	2040	2000	95	86	55-139	2	30	
Hexachloro-1,3-butadiene	ug/L	ND	500	500	554	512	111	102	49-150	8	30	
Isopropylbenzene (Cumene)	ug/L	27.6	500	500	585	570	112	108	64-142	3	30	
Methyl-tert-butyl ether	ug/L	ND	500	500	516	514	103	103	62-129	0	30	
Methylene Chloride	ug/L	ND	500	500	504	511	101	102	57-132	1	30	
n-Butylbenzene	ug/L	ND	500	500	529	512	106	102	55-150	3	30	
n-Propylbenzene	ug/L	76.3	500	500	617	590	108	103	59-142	4	30	
Naphthalene	ug/L	ND	500	500	580	571	99	97	51-150	2	30	
p-Isopropyltoluene	ug/L	ND	500	500	569	547	114	109	60-149	4	30	
sec-Butylbenzene	ug/L	ND	500	500	560	537	112	107	60-150	4	30	
Styrene	ug/L	ND	500	500	547	526	109	105	68-134	4	30	
tert-Butylbenzene	ug/L	ND	500	500	565	537	113	107	62-146	5	30	
Tetrachloroethene	ug/L	ND	500	500	602	582	120	116	50-150	3	30	
Tetrahydrofuran	ug/L	805	5000	5000	6920	6520	122	114	59-145	6	30	
Toluene	ug/L	59.7	500	500	608	586	110	105	52-148	4	30	
trans-1,2-Dichloroethene	ug/L	ND	500	500	513	501	103	100	45-150	2	30	
trans-1,3-Dichloropropene	ug/L	ND	500	500	505	495	101	99	68-132	2	30	
Trichloroethene	ug/L	ND	500	500	531	528	106	106	52-150	0	30	
Trichlorofluoromethane	ug/L	ND	500	500	505	487	101	97	55-150	4	30	
Vinyl chloride	ug/L	ND	500	500	466	445	93	89	43-150	5	30	
Xylene (Total)	ug/L	3620	1500	1500	5220	5090	107	98	54-144	3	30	
1,2-Dichloroethane-d4 (S)	%.						94	90	75-125			
4-Bromofluorobenzene (S)	%.						94	94	75-125			
Toluene-d8 (S)	%.						100	100	75-125			

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

QC Batch: MSV/31279 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV UST-WATER
Associated Lab Samples: 10303629001, 10303629003

METHOD BLANK: 1951389 Matrix: Water
Associated Lab Samples: 10303629001, 10303629003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	04/29/15 18:57	
Ethylbenzene	ug/L	ND	1.0	04/29/15 18:57	
Methyl-tert-butyl ether	ug/L	ND	1.0	04/29/15 18:57	
Toluene	ug/L	ND	1.0	04/29/15 18:57	
Xylene (Total)	ug/L	ND	3.0	04/29/15 18:57	
1,2-Dichloroethane-d4 (S)	%.	97	75-125	04/29/15 18:57	
4-Bromofluorobenzene (S)	%.	99	75-125	04/29/15 18:57	
Toluene-d8 (S)	%.	99	75-125	04/29/15 18:57	

LABORATORY CONTROL SAMPLE: 1951390

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.3	96	71-125	
Ethylbenzene	ug/L	20	19.2	96	75-125	
Methyl-tert-butyl ether	ug/L	20	18.1	90	73-125	
Toluene	ug/L	20	20.4	102	74-125	
Xylene (Total)	ug/L	60	59.6	99	75-125	
1,2-Dichloroethane-d4 (S)	%.			97	75-125	
4-Bromofluorobenzene (S)	%.			100	75-125	
Toluene-d8 (S)	%.			99	75-125	

MATRIX SPIKE SAMPLE: 1951493

Parameter	Units	10303829004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	ND	20	19.9	99	53-139	
Ethylbenzene	ug/L	ND	20	19.7	98	55-139	
Methyl-tert-butyl ether	ug/L	ND	20	14.2	71	62-129	
Toluene	ug/L	ND	20	19.6	96	52-148	
Xylene (Total)	ug/L	ND	60	61.9	103	54-144	
1,2-Dichloroethane-d4 (S)	%.				96	75-125	
4-Bromofluorobenzene (S)	%.				98	75-125	
Toluene-d8 (S)	%.				98	75-125	

SAMPLE DUPLICATE: 1951494

Parameter	Units	10303829005 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

SAMPLE DUPLICATE: 1951494

Parameter	Units	10303829005 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethylbenzene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Toluene	ug/L	ND	.26J		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%.	94	95	1		
4-Bromofluorobenzene (S)	%.	100	99	1		
Toluene-d8 (S)	%.	98	97	1		

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

QC Batch: OEXT/28949 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10303629001, 10303629002, 10303629003, 10303629004, 10303629005, 10303629006, 10303629007, 10303629008, 10303629009

METHOD BLANK: 1946686 Matrix: Water
Associated Lab Samples: 10303629001, 10303629002, 10303629003, 10303629004, 10303629005, 10303629006, 10303629007, 10303629008, 10303629009

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	04/27/15 13:33	
n-Triacontane (S)	%.	85	50-150	04/27/15 13:33	

LABORATORY CONTROL SAMPLE & LCSD: 1946687 1946688

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	2	1.8	1.8	88	91	75-115	3	20	
n-Triacontane (S)	%.				88	89	50-150			

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140399Current Holiday Station
Pace Project No.: 10303629

QC Batch: OEXT/28953 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10303629010, 10303629011, 10303629012, 10303629013, 10303629014, 10303629015, 10303629016, 10303629017, 10303629018, 10303629019

METHOD BLANK: 1947278 Matrix: Water
Associated Lab Samples: 10303629010, 10303629011, 10303629012, 10303629013, 10303629014, 10303629015, 10303629016, 10303629017, 10303629018, 10303629019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	04/24/15 09:14	
n-Triacontane (S)	%.	69	50-150	04/24/15 09:14	

LABORATORY CONTROL SAMPLE & LCSD: 1947279 1947280

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	2	1.9	1.9	93	95	75-115	3	20	
n-Triacontane (S)	%.				80	85	50-150			

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: J140399Current Holiday Station
Pace Project No.: 10303629

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.

ANALYTE QUALIFIERS

CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
IS	The internal standard recovery associated with this result exceeds the lower control limit. The reported result should be considered an estimated value.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
L3	Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
P2	Re-extraction or re-analysis could not be performed due to insufficient sample amount.
T6	High boiling point hydrocarbons are present in the sample.
T7	Low boiling point hydrocarbons are present in the sample.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10303629001	Sully MW-1	WI MOD DRO	OEXT/28949	WI MOD DRO	GCSV/15555
10303629002	Sully MW-2	WI MOD DRO	OEXT/28949	WI MOD DRO	GCSV/15555
10303629003	Sully MW-3	WI MOD DRO	OEXT/28949	WI MOD DRO	GCSV/15555
10303629004	MW-23	WI MOD DRO	OEXT/28949	WI MOD DRO	GCSV/15555
10303629005	D-1	WI MOD DRO	OEXT/28949	WI MOD DRO	GCSV/15555
10303629006	MW-20	WI MOD DRO	OEXT/28949	WI MOD DRO	GCSV/15555
10303629007	MW-18	WI MOD DRO	OEXT/28949	WI MOD DRO	GCSV/15555
10303629008	MW-17	WI MOD DRO	OEXT/28949	WI MOD DRO	GCSV/15555
10303629009	MW-22	WI MOD DRO	OEXT/28949	WI MOD DRO	GCSV/15555
10303629010	MW-12	WI MOD DRO	OEXT/28953	WI MOD DRO	GCSV/15538
10303629011	MW-19	WI MOD DRO	OEXT/28953	WI MOD DRO	GCSV/15538
10303629012	MW-16	WI MOD DRO	OEXT/28953	WI MOD DRO	GCSV/15538
10303629013	FB-1	WI MOD DRO	OEXT/28953	WI MOD DRO	GCSV/15538
10303629014	D-2	WI MOD DRO	OEXT/28953	WI MOD DRO	GCSV/15538
10303629015	MW-13	WI MOD DRO	OEXT/28953	WI MOD DRO	GCSV/15538
10303629016	MW-25	WI MOD DRO	OEXT/28953	WI MOD DRO	GCSV/15538
10303629017	MW-28	WI MOD DRO	OEXT/28953	WI MOD DRO	GCSV/15538
10303629018	MW-27	WI MOD DRO	OEXT/28953	WI MOD DRO	GCSV/15538
10303629019	MW-26	WI MOD DRO	OEXT/28953	WI MOD DRO	GCSV/15538
10303629001	Sully MW-1	WI MOD GRO	GCV/13655		
10303629002	Sully MW-2	WI MOD GRO	GCV/13673		
10303629003	Sully MW-3	WI MOD GRO	GCV/13655		
10303629004	MW-23	WI MOD GRO	GCV/13658		
10303629005	D-1	WI MOD GRO	GCV/13658		
10303629006	MW-20	WI MOD GRO	GCV/13658		
10303629007	MW-18	WI MOD GRO	GCV/13658		
10303629008	MW-17	WI MOD GRO	GCV/13658		
10303629009	MW-22	WI MOD GRO	GCV/13658		
10303629010	MW-12	WI MOD GRO	GCV/13658		
10303629011	MW-19	WI MOD GRO	GCV/13658		
10303629012	MW-16	WI MOD GRO	GCV/13668		
10303629013	FB-1	WI MOD GRO	GCV/13658		
10303629014	D-2	WI MOD GRO	GCV/13668		
10303629015	MW-13	WI MOD GRO	GCV/13668		
10303629016	MW-25	WI MOD GRO	GCV/13668		
10303629017	MW-28	WI MOD GRO	GCV/13673		
10303629018	MW-27	WI MOD GRO	GCV/13673		
10303629019	MW-26	WI MOD GRO	GCV/13673		
10303629020	Trip Blank	WI MOD GRO	GCV/13658		
10303629004	MW-23	EPA 8260	MSV/31237		
10303629005	D-1	EPA 8260	MSV/31257		
10303629006	MW-20	EPA 8260	MSV/31237		

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J140399Current Holiday Station
Pace Project No.: 10303629

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10303629007	**MW-18**	EPA 8260	MSV/31237		
10303629008	**MW-17**	EPA 8260	MSV/31237		
10303629009	**MW-22**	EPA 8260	MSV/31237		
10303629010	**MW-12**	EPA 8260	MSV/31257		
10303629011	**MW-19**	EPA 8260	MSV/31257		
10303629012	**MW-16**	EPA 8260	MSV/31237		
10303629013	**FB-1**	EPA 8260	MSV/31237		
10303629014	**D-2**	EPA 8260	MSV/31237		
10303629015	**MW-13**	EPA 8260	MSV/31237		
10303629016	**MW-25**	EPA 8260	MSV/31237		
10303629017	**MW-28**	EPA 8260	MSV/31237		
10303629018	**MW-27**	EPA 8260	MSV/31237		
10303629019	**MW-26**	EPA 8260	MSV/31257		
10303629020	**Trip Blank**	EPA 8260	MSV/31237		
10303629001	**Sully MW-1**	EPA 8260	MSV/31279		
10303629003	**Sully MW-3**	EPA 8260	MSV/31279		

Bay West
Customer-Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTODY / Analytical Request Document

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

L0303629

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Copy To: Amanda Malaney	Attention: Accounts Payable	Facility_Code: Holiday Station	Page 1 of 2
Address: 5 Empire Drive		Company Name: Bay West LLC	Subfacility_code:	
St Paul, MN 55103	Purchase Order No.: 101733	Address: SAME		COC# 04202015
Email To: amandam@baywest.com	Project Name (EQuIS Facility Name): Current Holiday Station	accountspayable@baywest.com		
Phone: 651-291-3495		Lab Project Manager:		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J140399			

ITEM #	Section E Required Client Information: Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection: DATE	Collection: Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO / MBTEX	GRO	VOCs	Comments
1	Sully MW-1	Sully MW-1	WT	G	4/20/15	1210	5				5					X	X			001
2	Sully MW-2	Sully MW-2	WT	G	4/20/15	1320	5				5					X	X			002
3	Sully MW-3	Sully MW-3	WT	G	4/20/15	1410	5				5					X	X			003
4	MW-23	MW-23	WT	G	4/20/15	1600	8				8					X		X	X	004
5	D-1	D-1	WT	G	4/21/15	—	8				8					X		X	X	005
6	MW-20	MW-20	WT	G	4/21/15	0950	8				8					X		X	X	006
7	MW-18	MW-18	WT	G	4/21/15	1120	8				8					X		X	X	007
8	MW-17	MW-17	WT	G	4/21/15	1220	8				8					X		X	X	008
9	MW-22	MW-22	WT	G	4/21/15	1320	8				8					X		X	X	009
10	MW-12	MW-12	WT	G	4/21/15	1415	8				8					X		X	X	010
11	MW-19	MW-19	WT	G	4/21/15	1530	8				8					X		X	X	011
12	MW-16	MW-16	WT	G	4/21/15	1640	8				8					X		X	X	012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	Temp (°C)	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
STATE ADMIN. CONTRACT PROJECT	Hillary McGowan/BayWest	4/22/15	1440		4/22/15	1440	4-3, 1-2 3-0, 2-1 3-9, 2-7		Y	Y	Y
MPCA WO # 3000011808		4/22/15	1600		4/22/15	1600					
		4/22/15			4/22/15	1830					

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hillary McGowan

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 04/20/15

Bay West
Customer-Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Copy To: Amanda Malaney	Attention: Accounts Payable	Facility_Code: Holiday Station	Page 2 of 2
Address: 5 Empire Drive		Company Name: Bay West LLC	Subfacility_code:	
St Paul, MN 55103	Purchase Order No.: 101733	Address: SAME		COC# 04212015
Email To: amandam@baywest.com	Project Name (EQuIS Facility Name):	accountspayable@baywest.com		
Phone: 651-291-3495	Current Holiday Station	Lab Project Manager:		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J140399			

Valid Matrix Codes: Sediment SE; Soil SO; Soil QC SQ; Aqueous W; Groundwater WG; Suface WS

ITEM #	Section E Required Client Information: Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO / MBTEX	GRO	VOCs	Comments
1	FB-1	FB-1	WT	G	4/21/15	1705	8				8					X		X	X	013
2	D-2	D-2	WT	G	4/22/15	—	8				8					X		X	X	014
3	MW-13	MW-13	WT	G	4/22/15	0915	8				8					X		X	X	015
4	MW-25	MW-25	WT	G	4/22/15	1030	8				8					X		X	X	016
5	MW-28	MW-28	WT	G	4/22/15	1140	8				8					X		X	X	017
6	MW-27	MW-27	WT	G	4/22/15	1255	8				8					X		X	X	018
7	MW-26	MW-26	WT	G	4/22/15	1350	8				8					X		X	X	019
8	Trip Blank	VOC Trip Blank	← LAB PREPARED →				2				2								X	020
9	Trip Blank	GRO Trip Blank	← LAB PREPARED →				2				2							X		
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
STATE ADMIN. CONTRACT PROJECT	[signature]/BayWest	4/22/15	1440	[signature]	4/22/15	1440	4-3, 1-2 3-0, 2-1 3-9, 2-7	Y	Y	Y
MPCA WO # 3000011808	[signature]	4/22/15	1600	[signature]	4/22/15	1600				
	[signature]	4/22/15		[signature]	4/22/15	1630	Temp (°C)	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hillary McBown

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 04/21/15

Pace Analytical	Document Name: Sample Condition Upon Receipt Form	Document Revised: 23Feb2015 Page 1 of 1
	Document No.: F-MN-L-213-rev.13	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Bay West

Project #: WO# : 10303629

10303629

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

Tracking Number: _____

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

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

Thermometer Used: ☑ B88A9130516413 ☐ B88A912167504 ☐ B88A0143310098 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

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

Temp should be above freezing to 6°C **Correction Factor:** +0.3 **Date and Initials of Person Examining Contents:** 4/22/15 mm

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match COC?	☑ Yes	☐ No	☐ N/A	12.
-Includes Date/Time/ID/Analysis Matrix: WT				
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☑ N/A	
Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	☑ Yes	☐ No	☐ N/A	Initial when completed: _____ Lot # of added preservative: _____
Headspace in VOA Vials (>6mm)?	☐ Yes	☑ No	☐ N/A	14.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☑ No	☐ N/A	
Pace Trip Blank Lot # (if purchased): 24105-01				

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Barbara Albrecht **Date:** April 23, 2015

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: **SCUR Exceptions Form**	Document Revised: 16Apr2012 Page 1 of 1
	Document No.: **F-MN-L-220-Rev.00**	Issuing Authority: Pace Minnesota Quality Office

Workorder #: 1030629

Issue	Sample ID	Container Type/#
Multiple coolers: Temps:		
4.3, 1.2, 3.0, 2.1, 3.9, 2.7°C		
(Corrected temps)		

Data File: \\192.168.10.12\chem\10gcs4.i\042715dro.b/04270028.D

Report Date: 04/27/2015

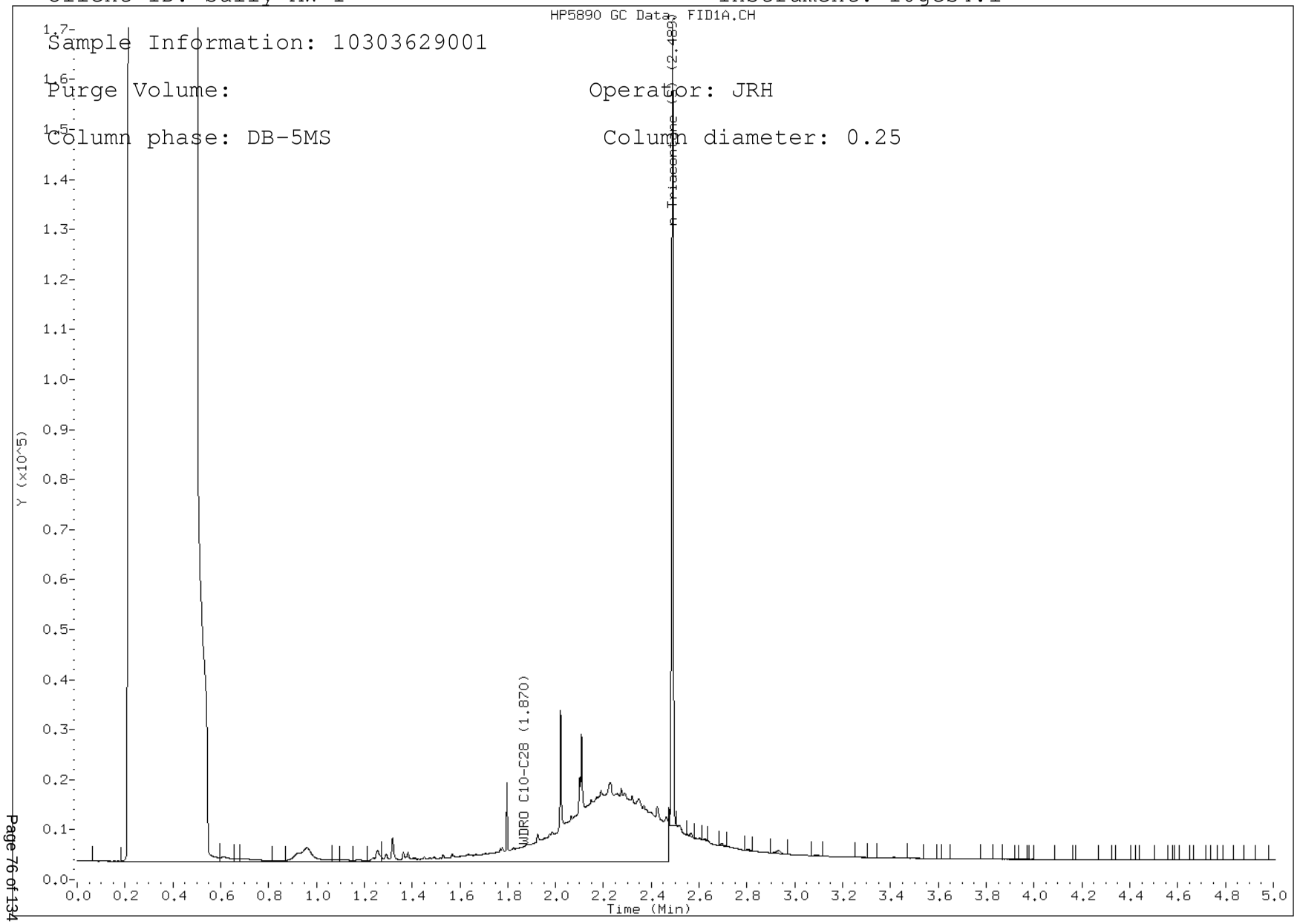
Sample ID: 10303629001

Client ID: Sully MW-1 Instrument: 10gcs4.i

Sample Information: 10303629001

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25

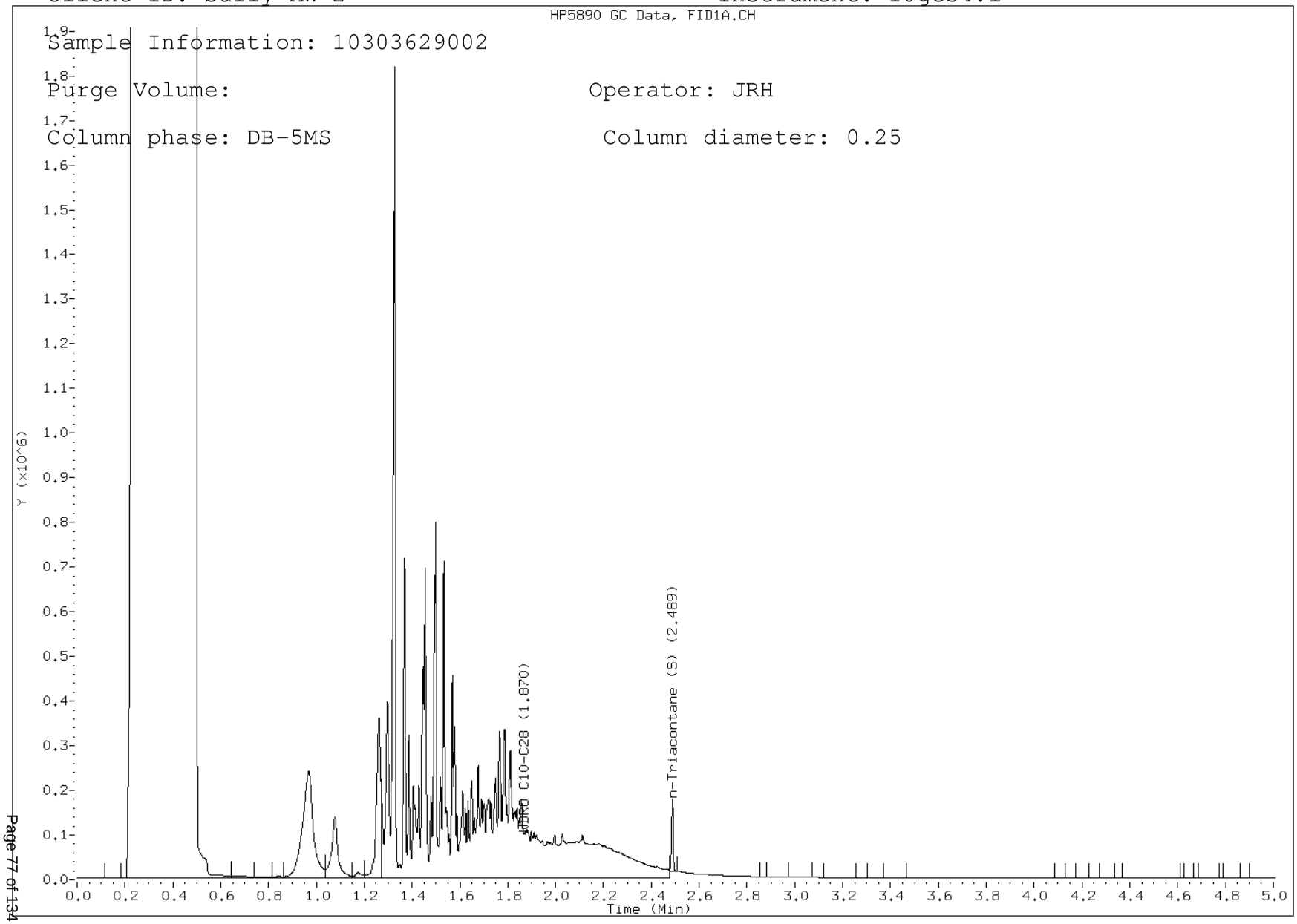


Data File: \\192.168.10.12\chem\10gcs4.i\042715dro.b/04270020.D

Report Date: 04/27/2015

Sample ID: 10303629002

Client ID: Sully MW-2 Instrument: 10gcs4.i



Data File: \\192.168.10.12\chem\10gcs4.i\042715dro.b/04270042.D

Report Date: 04/27/2015

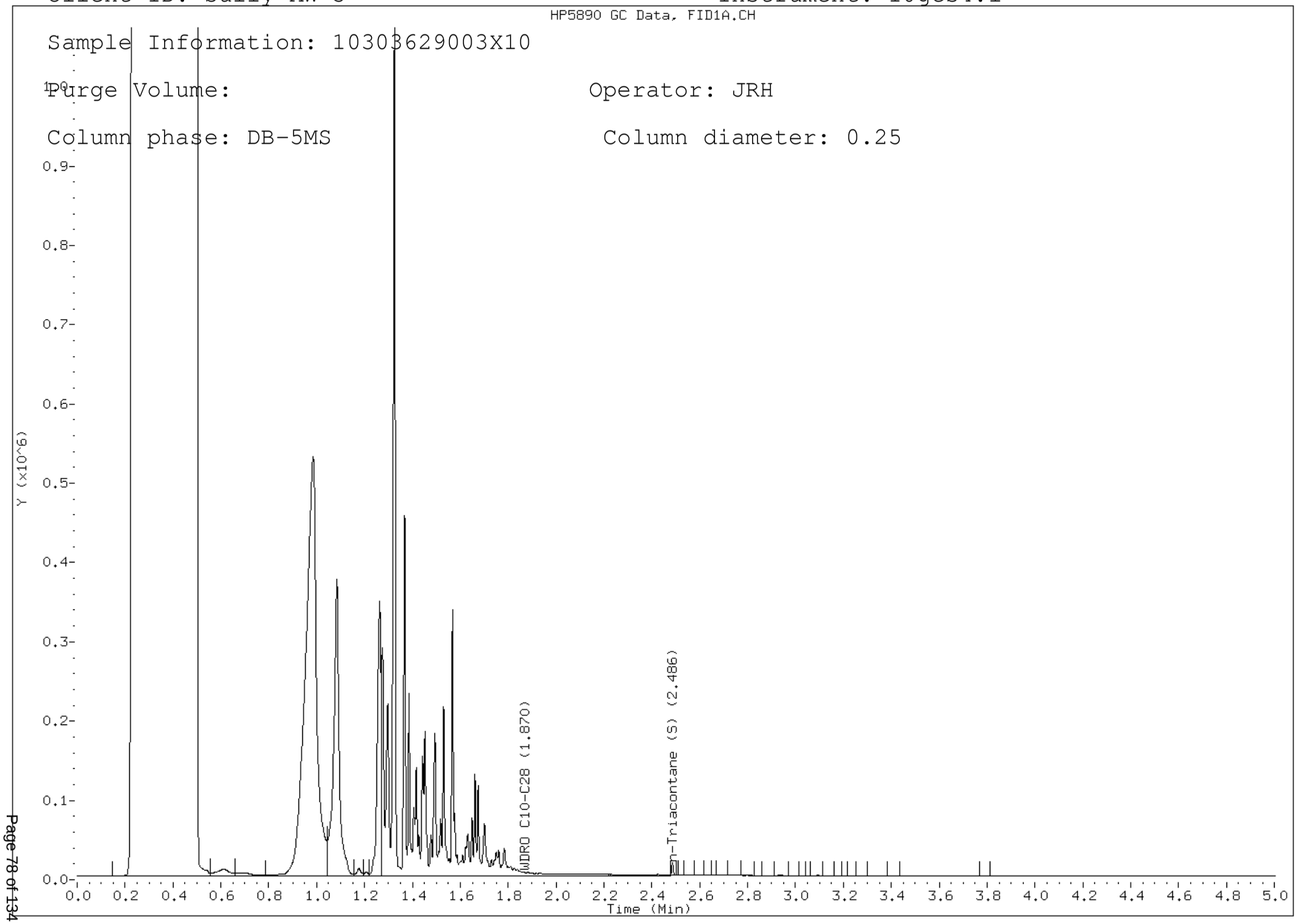
Sample ID: 10303629003

Client ID: Sully MW-3 Instrument: 10gcs4.i

Sample Information: 10303629003X10

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042715dro.b/04270029.D

Report Date: 04/27/2015

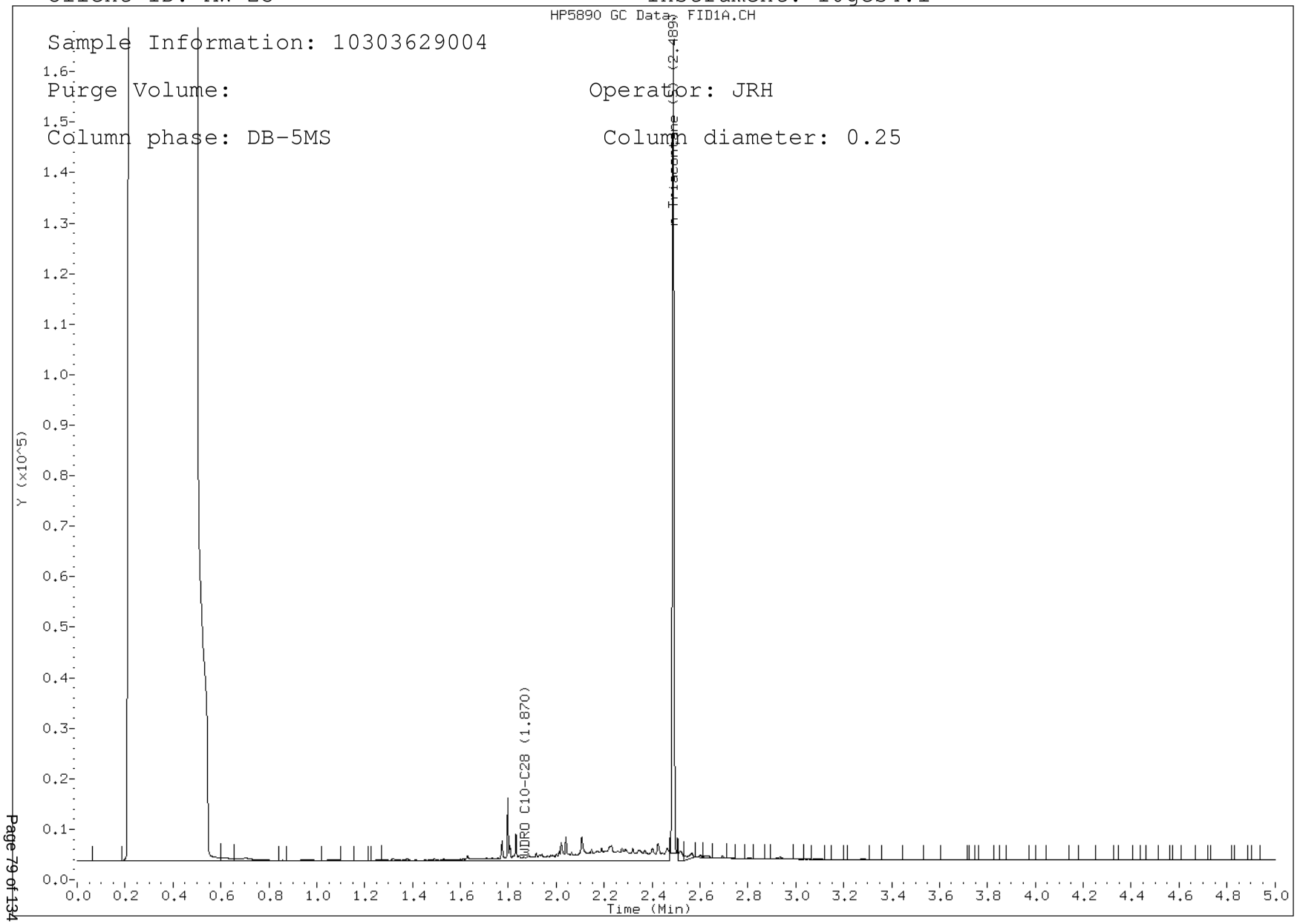
Sample ID: 10303629004

Client ID: MW-23 Instrument: 10gcs4.i

Sample Information: 10303629004

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042715dro.b/04270035.D

Report Date: 04/27/2015

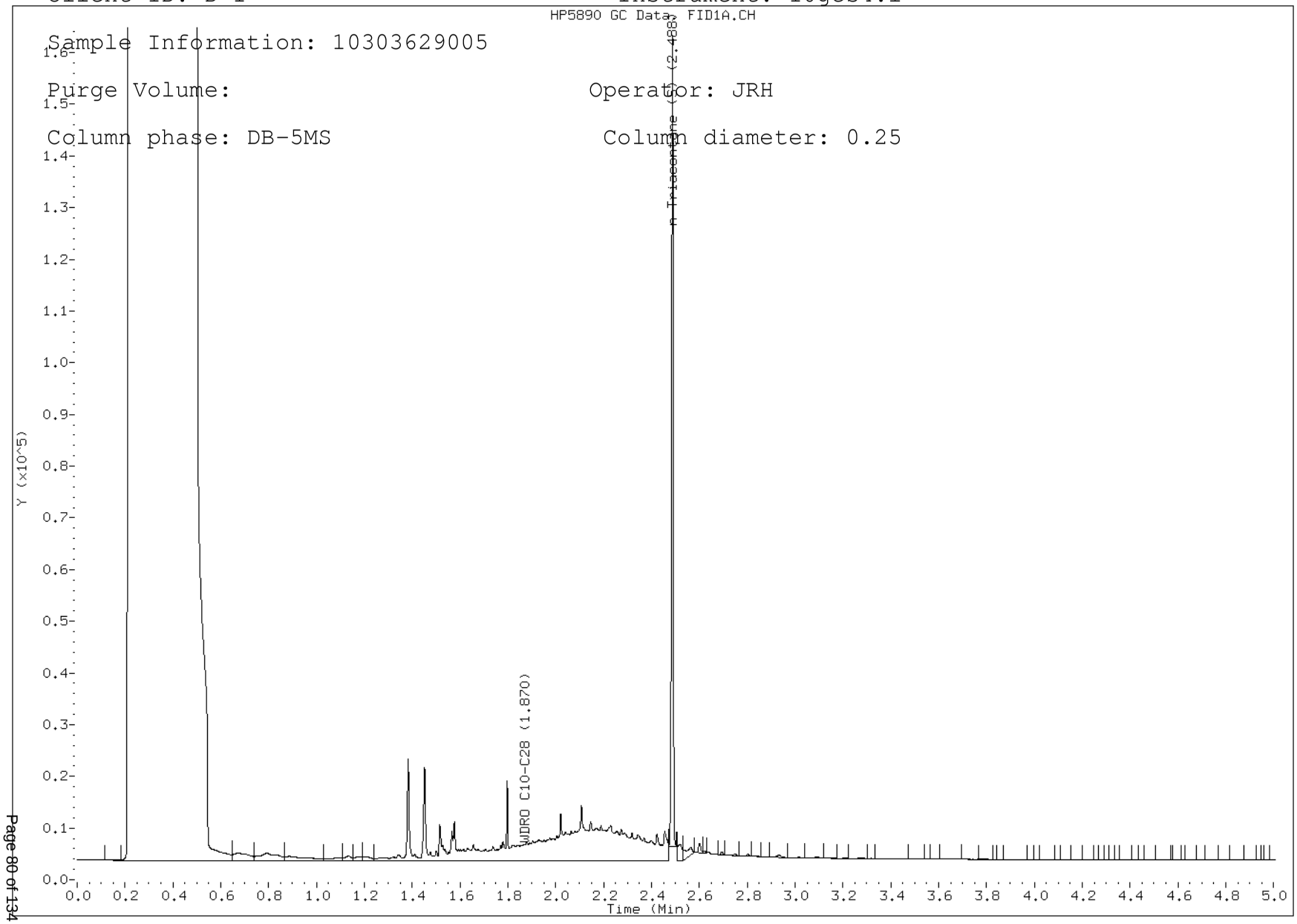
Sample ID: 10303629005

Client ID: D-1 Instrument: 10gcs4.i

Sample Information: 10303629005

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042715dro.b/04270023.D

Report Date: 04/27/2015

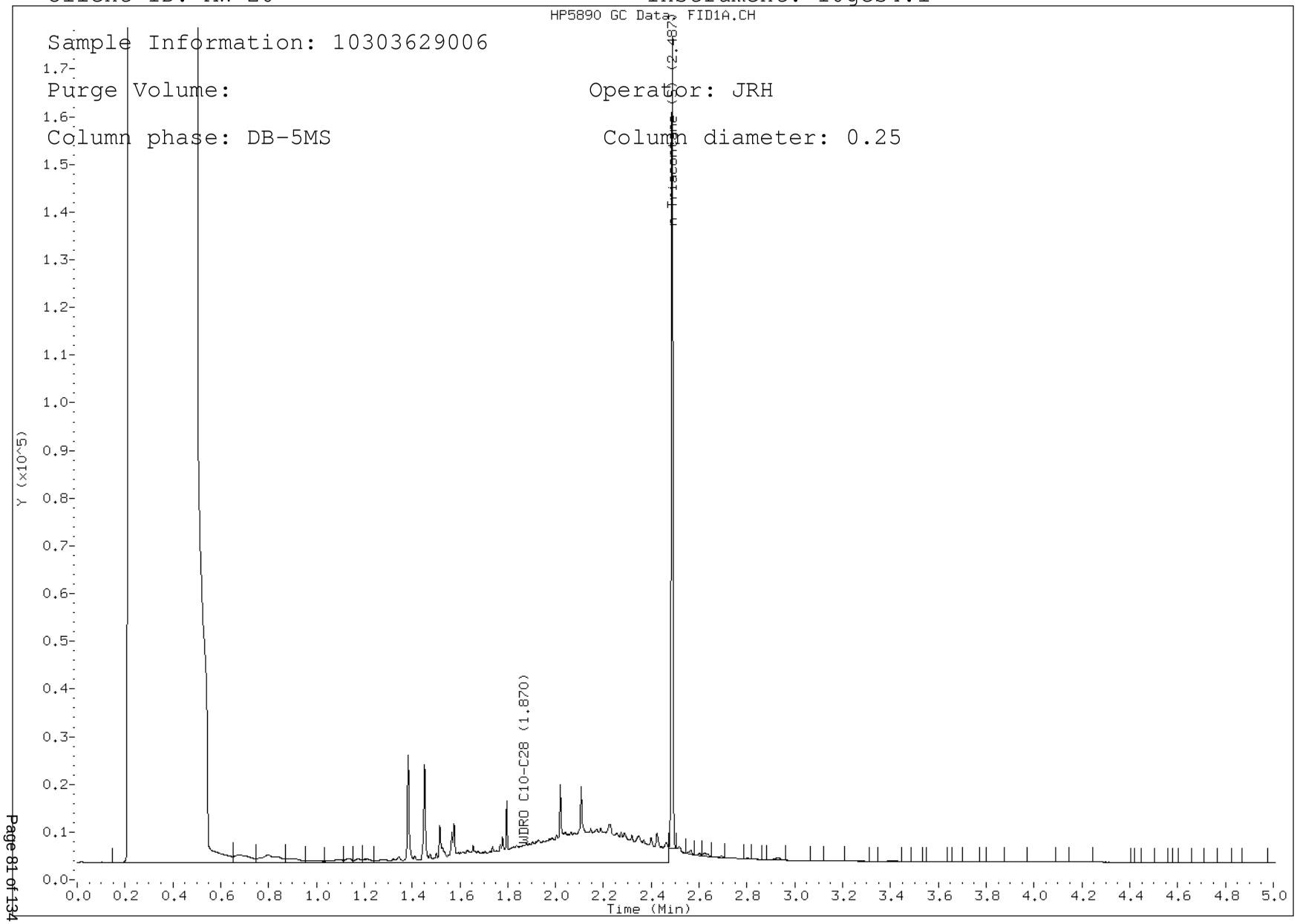
Sample ID: 10303629006

Client ID: MW-20 Instrument: 10gcs4.i

Sample Information: 10303629006

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042715dro.b/04270036.D

Report Date: 04/27/2015

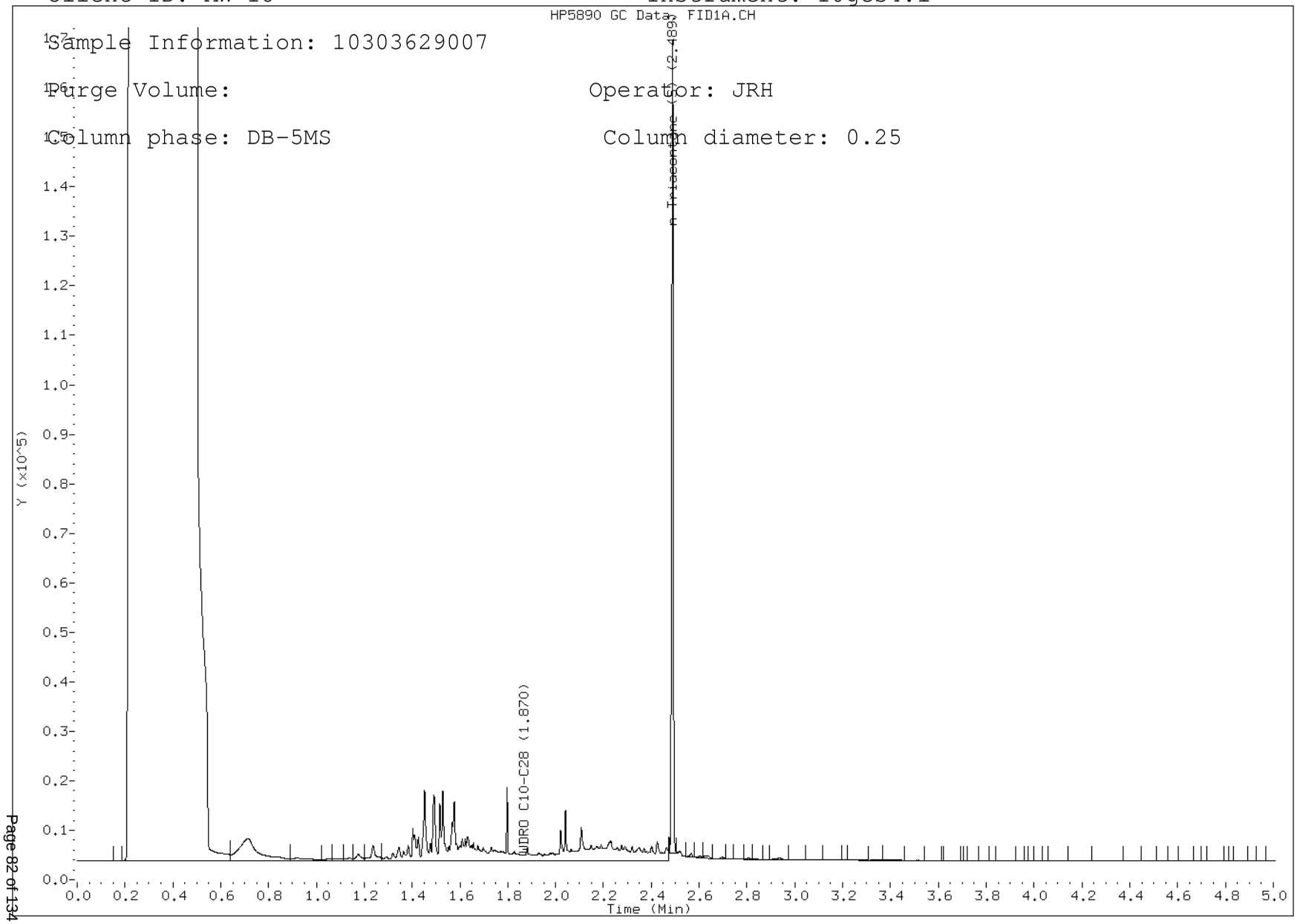
Sample ID: 10303629007

Client ID: MW-18 Instrument: 10gcs4.i

Sample Information: 10303629007

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042715dro.b/04270037.D

Report Date: 04/27/2015

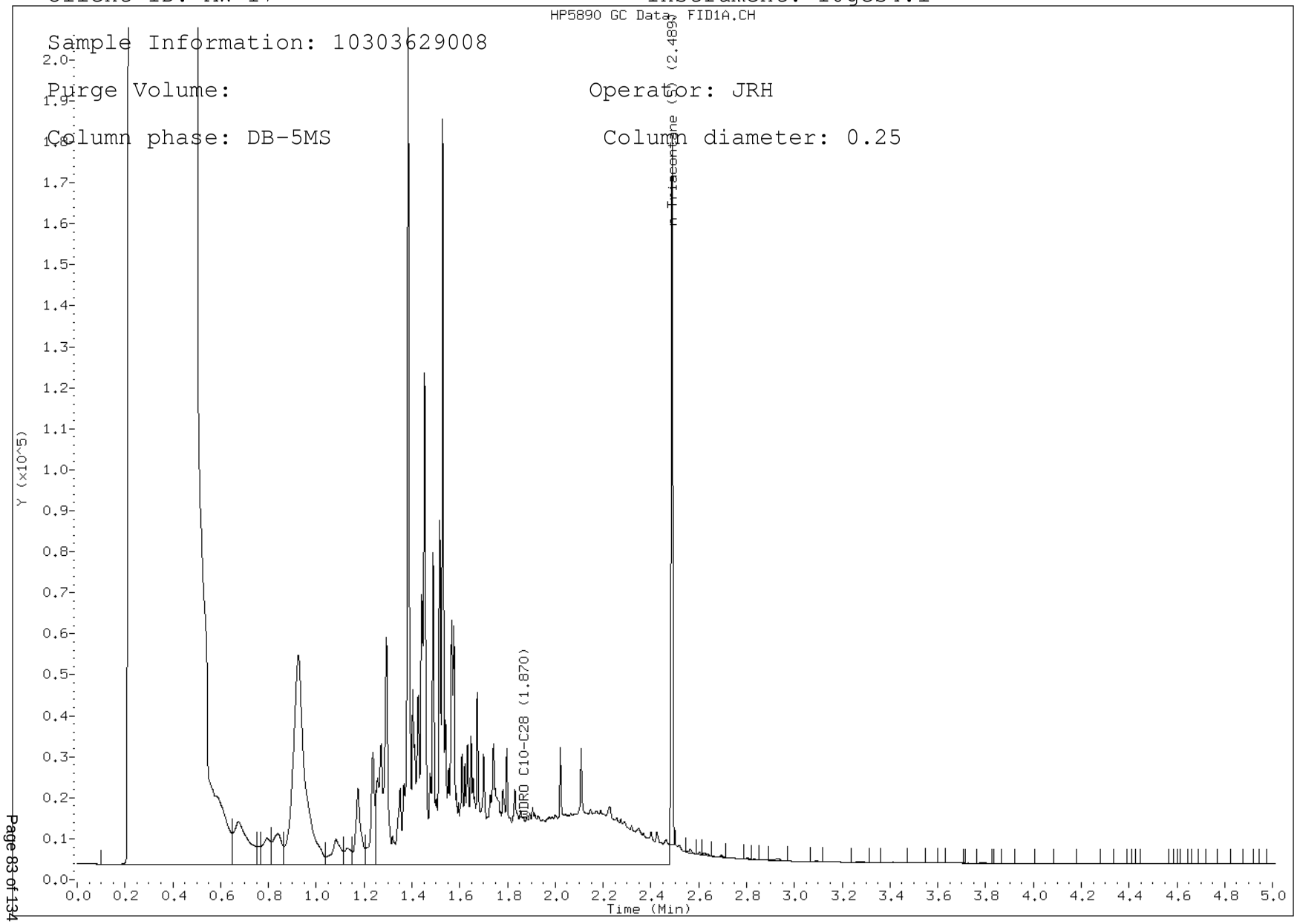
Sample ID: 10303629008

Client ID: MW-17 Instrument: 10gcs4.i

Sample Information: 10303629008

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042715dro.b/04270024.D

Report Date: 04/27/2015

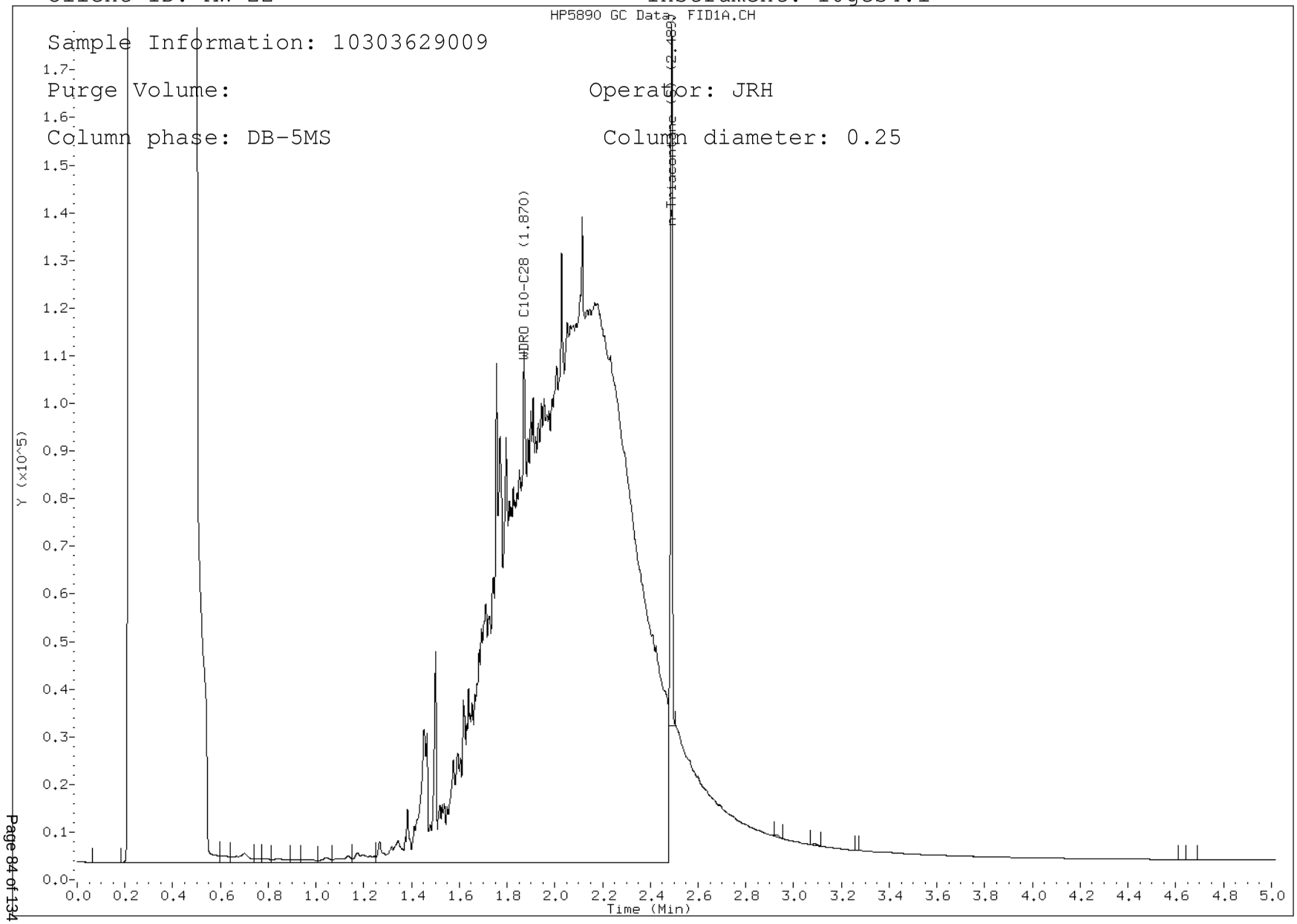
Sample ID: 10303629009

Client ID: MW-22 Instrument: 10gcs4.i

Sample Information: 10303629009

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042415dro.b/04240010.D

Report Date: 04/24/2015

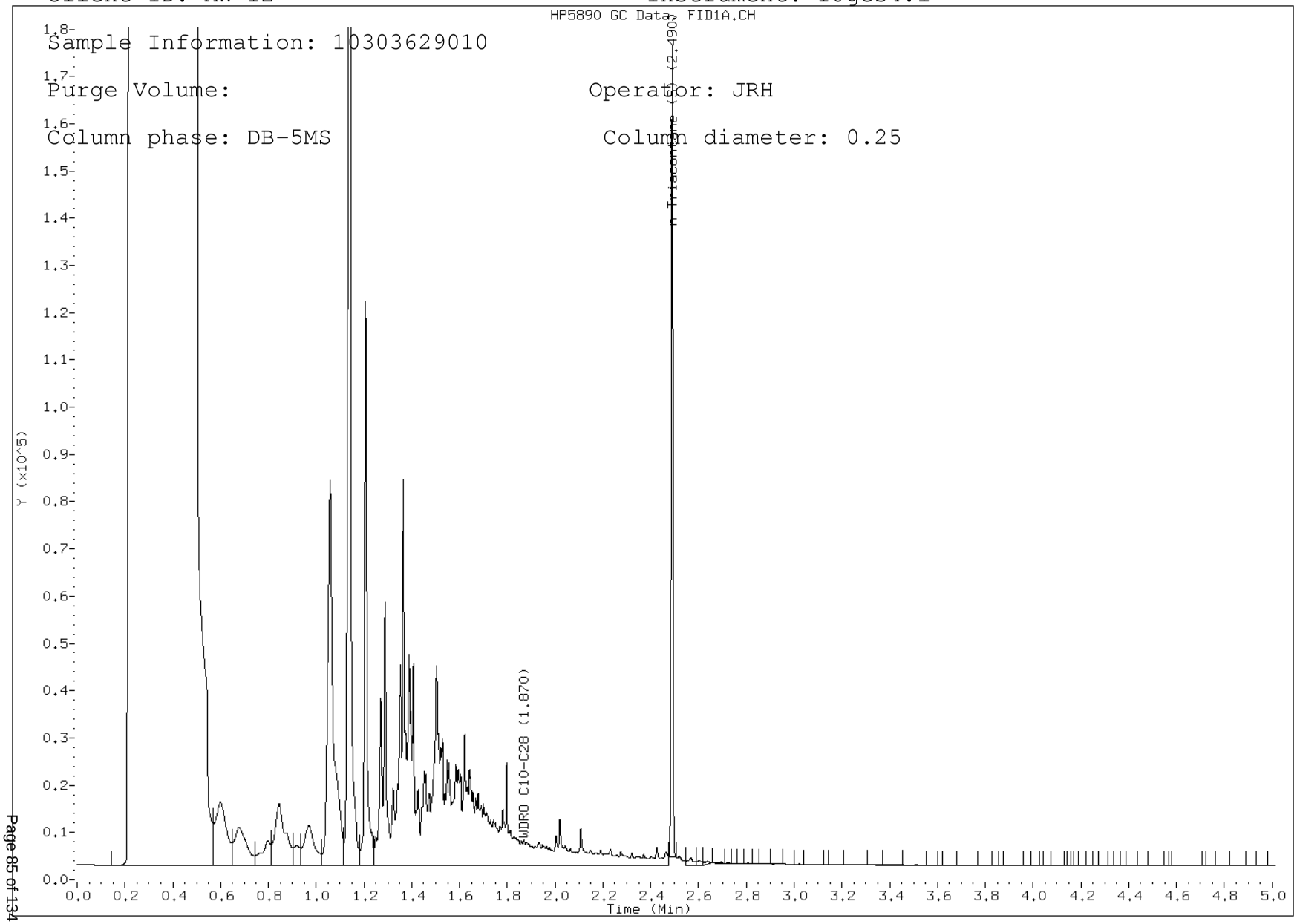
Sample ID: 10303629010

Client ID: MW-12 Instrument: 10gcs4.i

Sample Information: 10303629010

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042415dro.b/04240011.D

Report Date: 04/24/2015

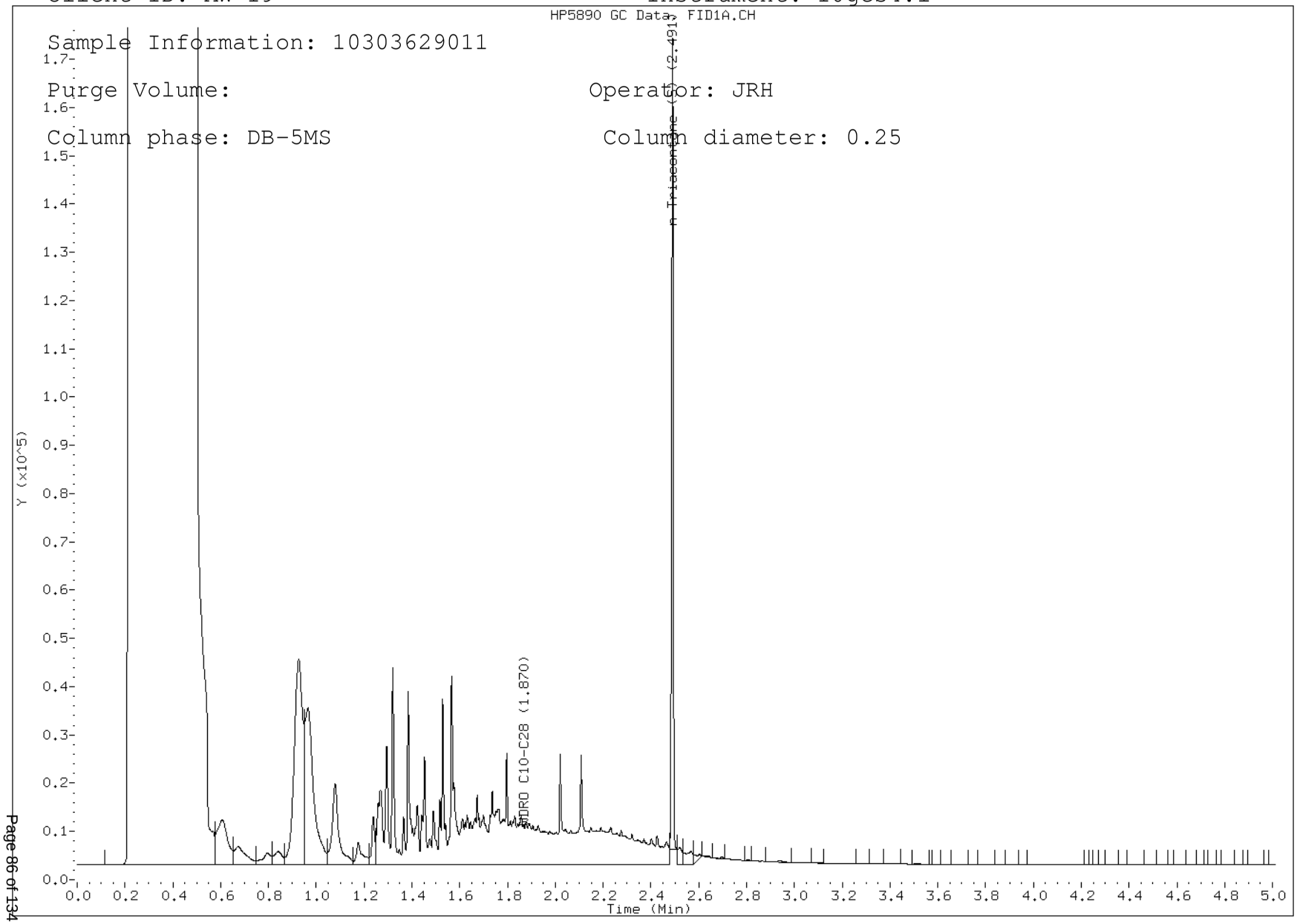
Sample ID: 10303629011

Client ID: MW-19 Instrument: 10gcs4.i

Sample Information: 10303629011

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042415dro.b/04240012.D

Report Date: 04/24/2015

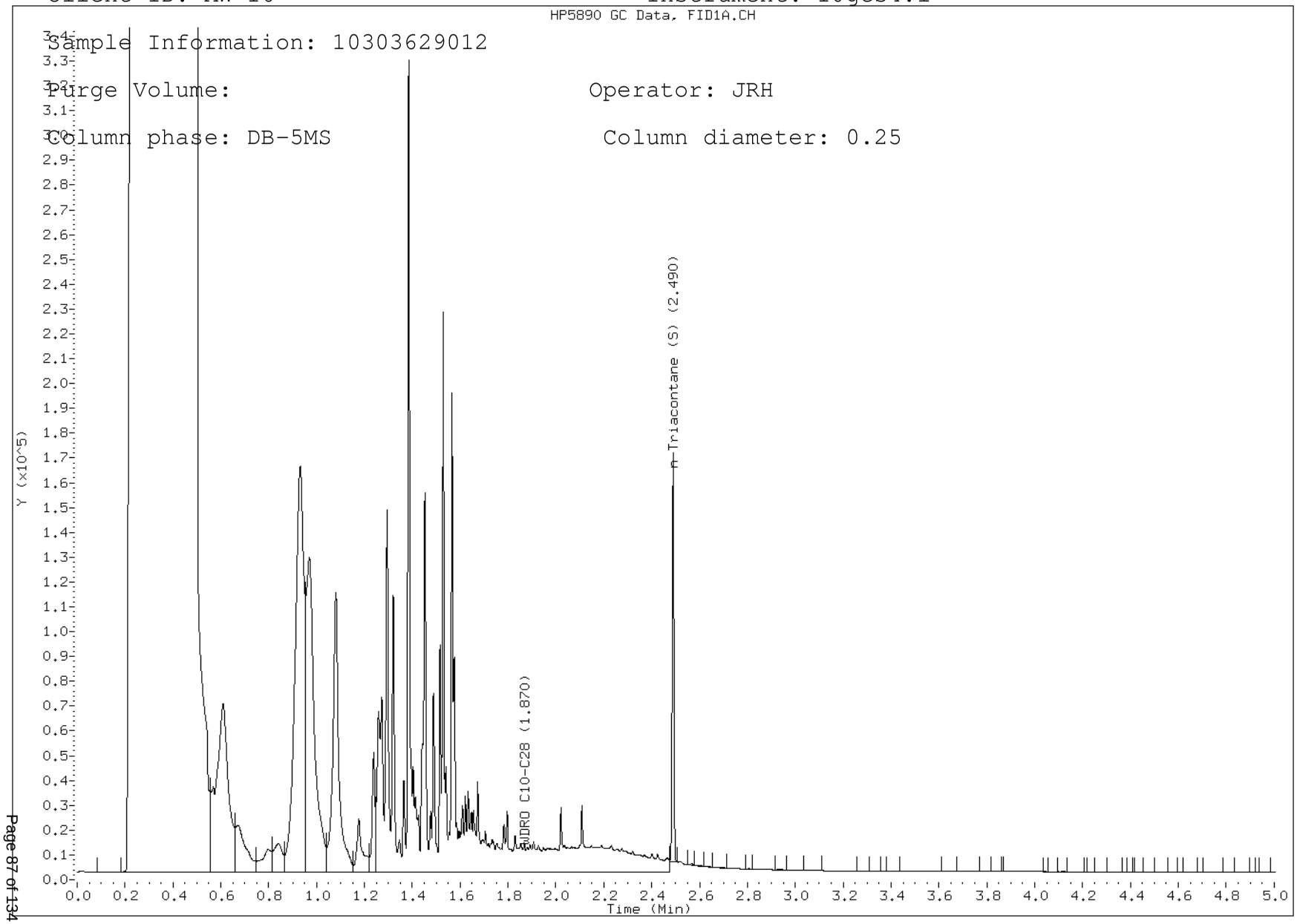
Sample ID: 10303629012

Client ID: MW-16 Instrument: 10gcs4.i

Sample Information: 10303629012

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042415dro.b/04240013.D

Report Date: 04/24/2015

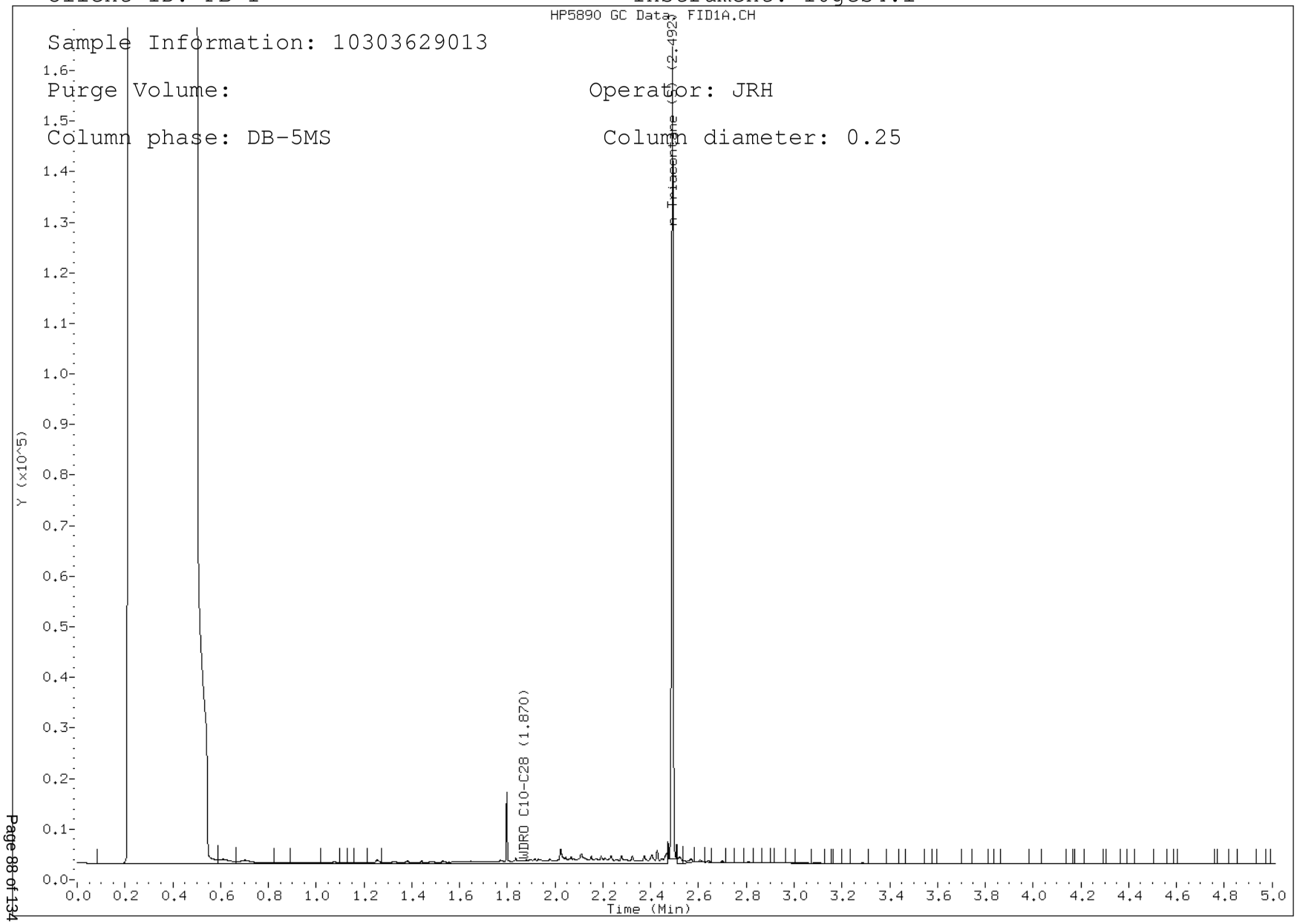
Sample ID: 10303629013

Client ID: FB-1 Instrument: 10gcs4.i

Sample Information: 10303629013

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042415dro.b/04240014.D

Report Date: 04/24/2015

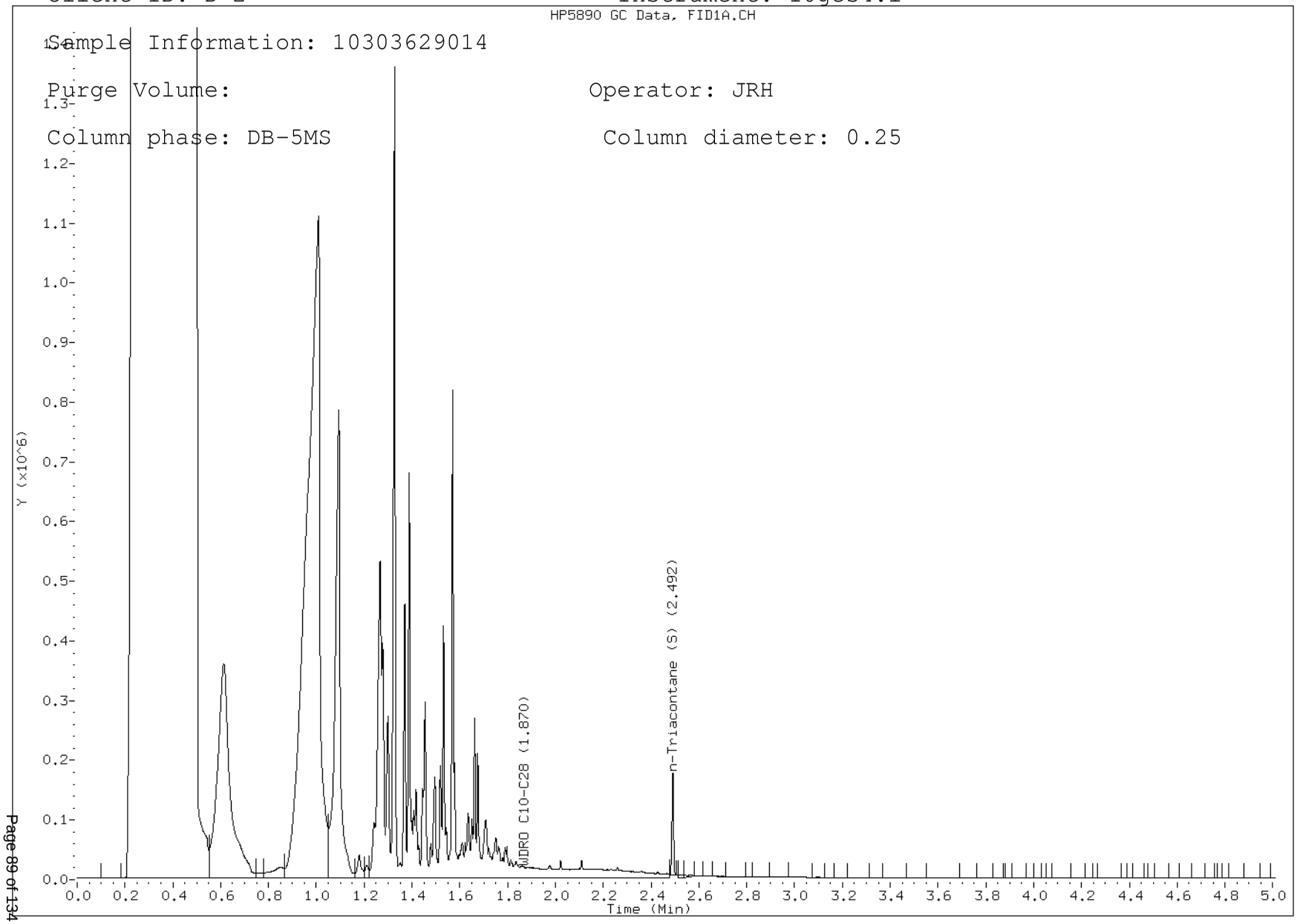
Sample ID: 10303629014

Client ID: D-2 Instrument: 10gcs4.i

Sample Information: 10303629014

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042415dro.b/04240015.D

Report Date: 04/24/2015

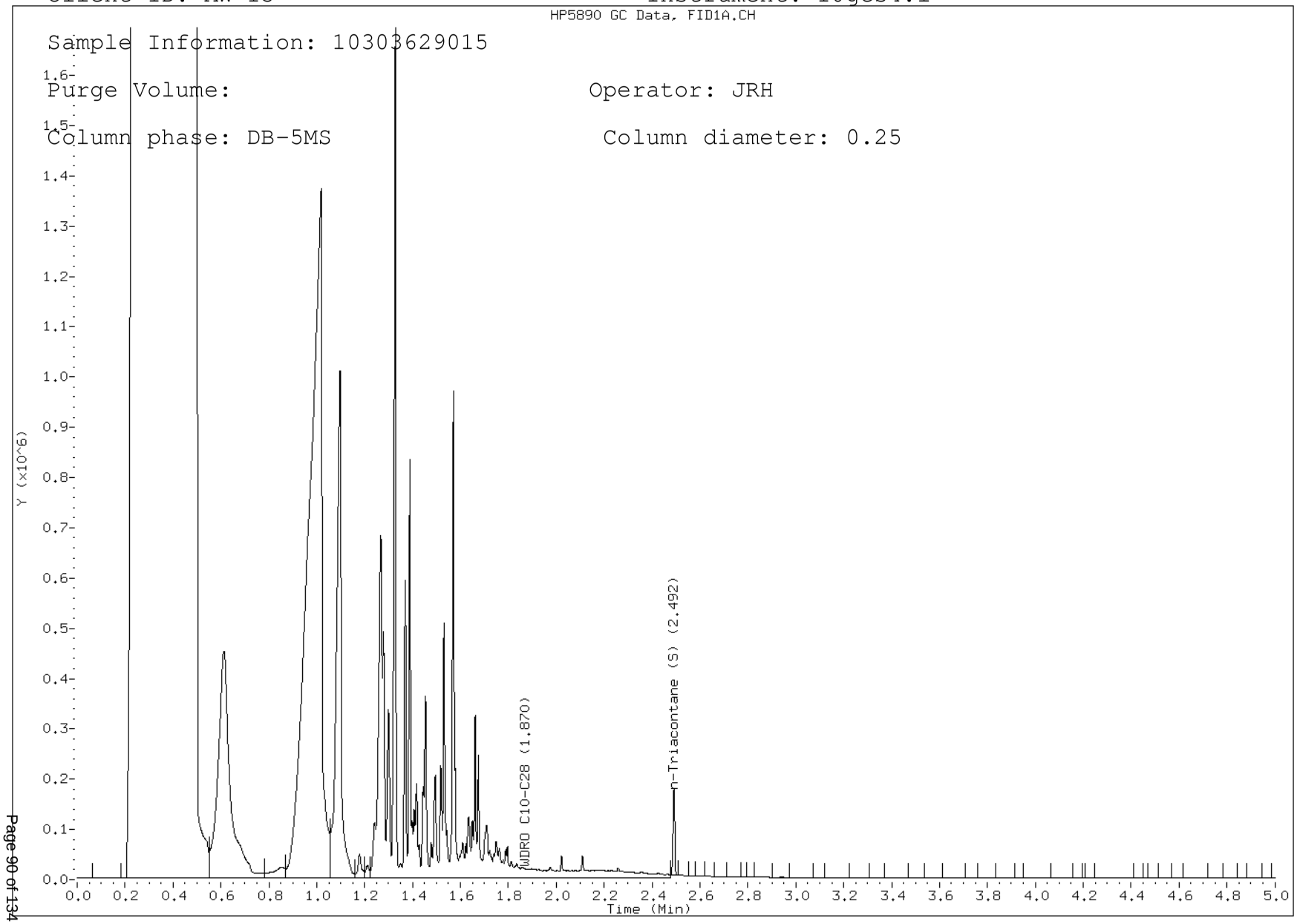
Sample ID: 10303629015

Client ID: MW-13 Instrument: 10gcs4.i

Sample Information: 10303629015

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042415dro.b/04240016.D

Report Date: 04/24/2015

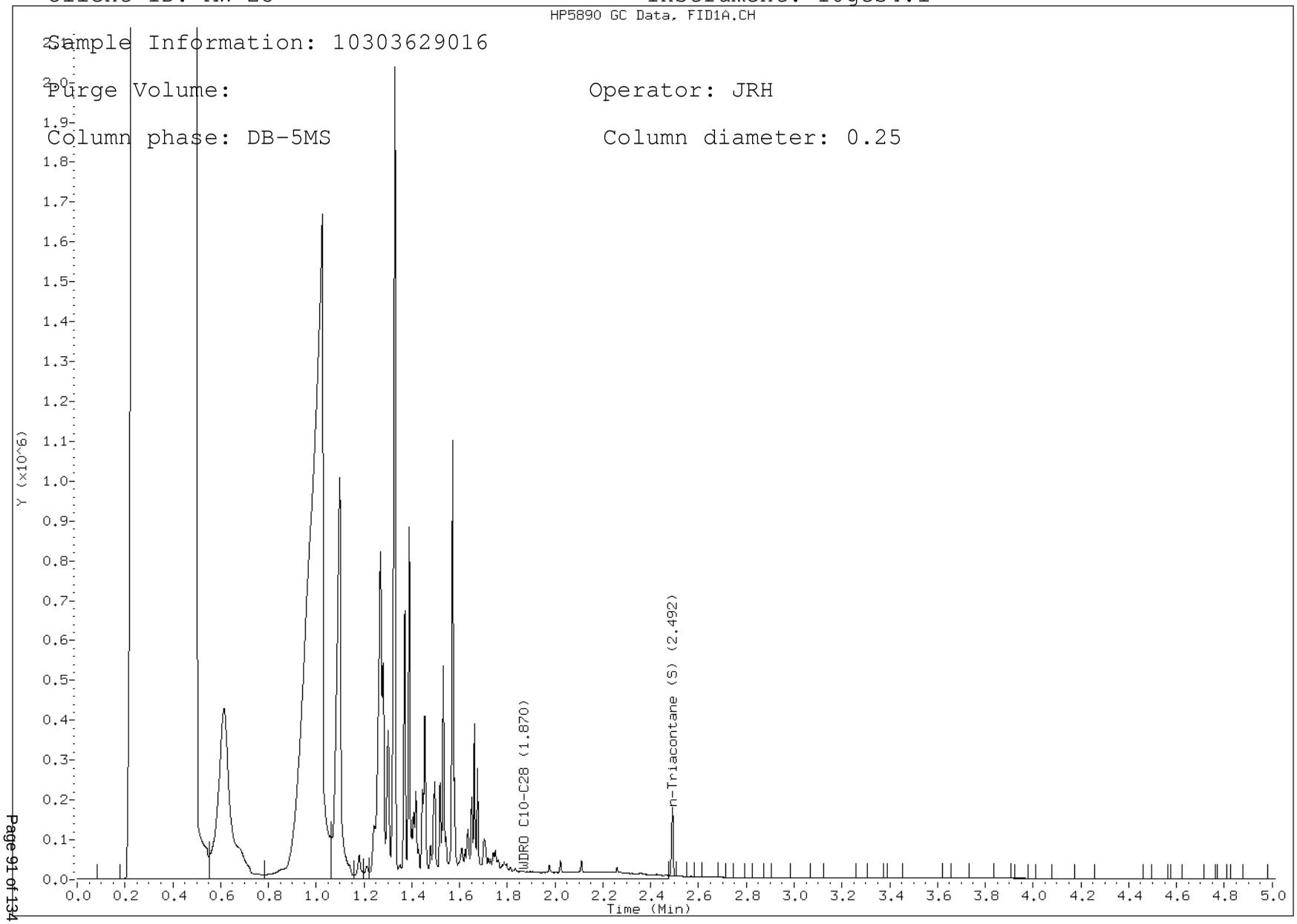
Sample ID: 10303629016

Client ID: MW-25 Instrument: 10gcs4.i

Sample Information: 10303629016

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042415dro.b/04240017.D

Report Date: 04/24/2015

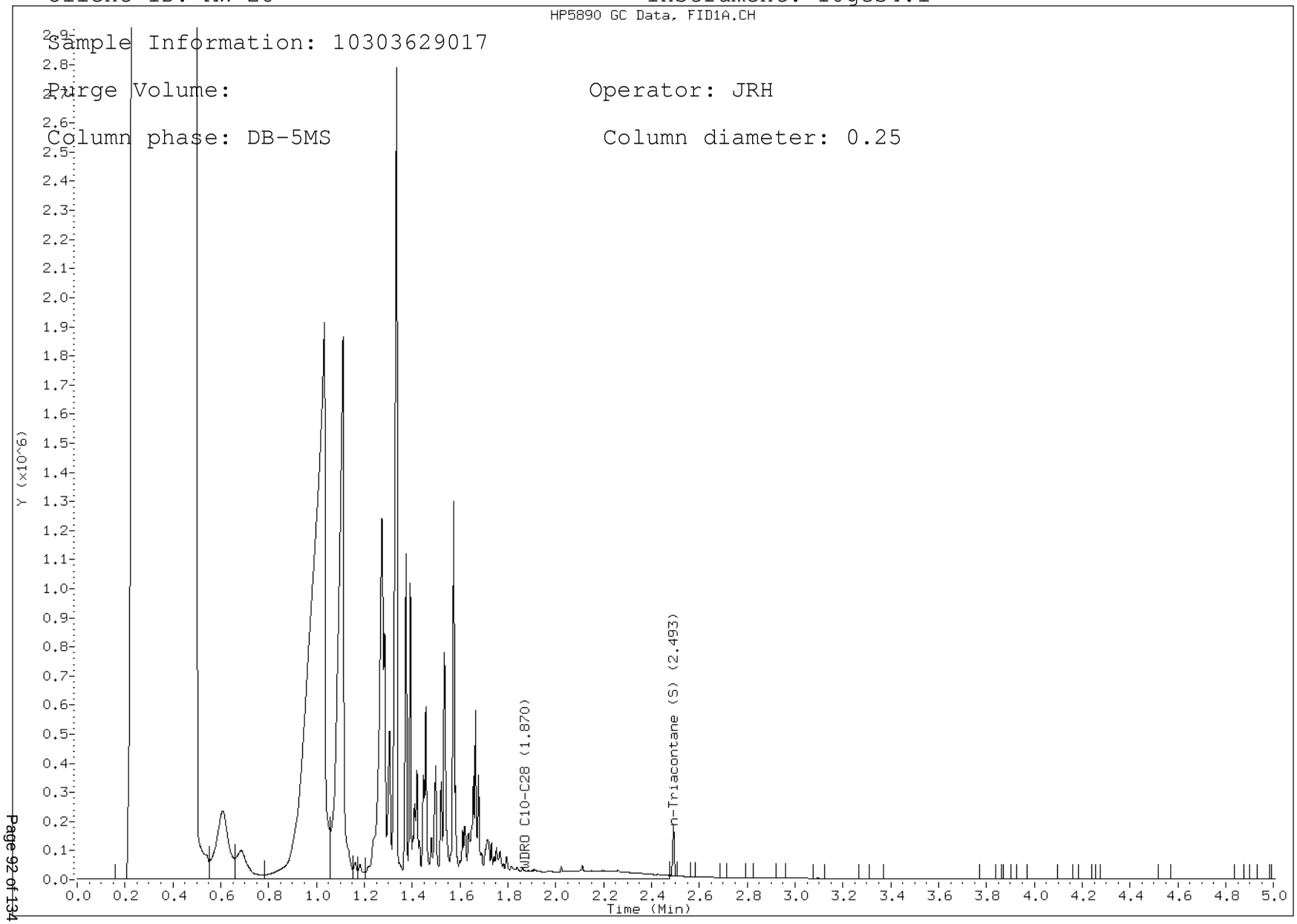
Sample ID: 10303629017

Client ID: MW-28 Instrument: 10gcs4.i

Sample Information: 10303629017

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042415dro.b/04240018.D

Report Date: 04/24/2015

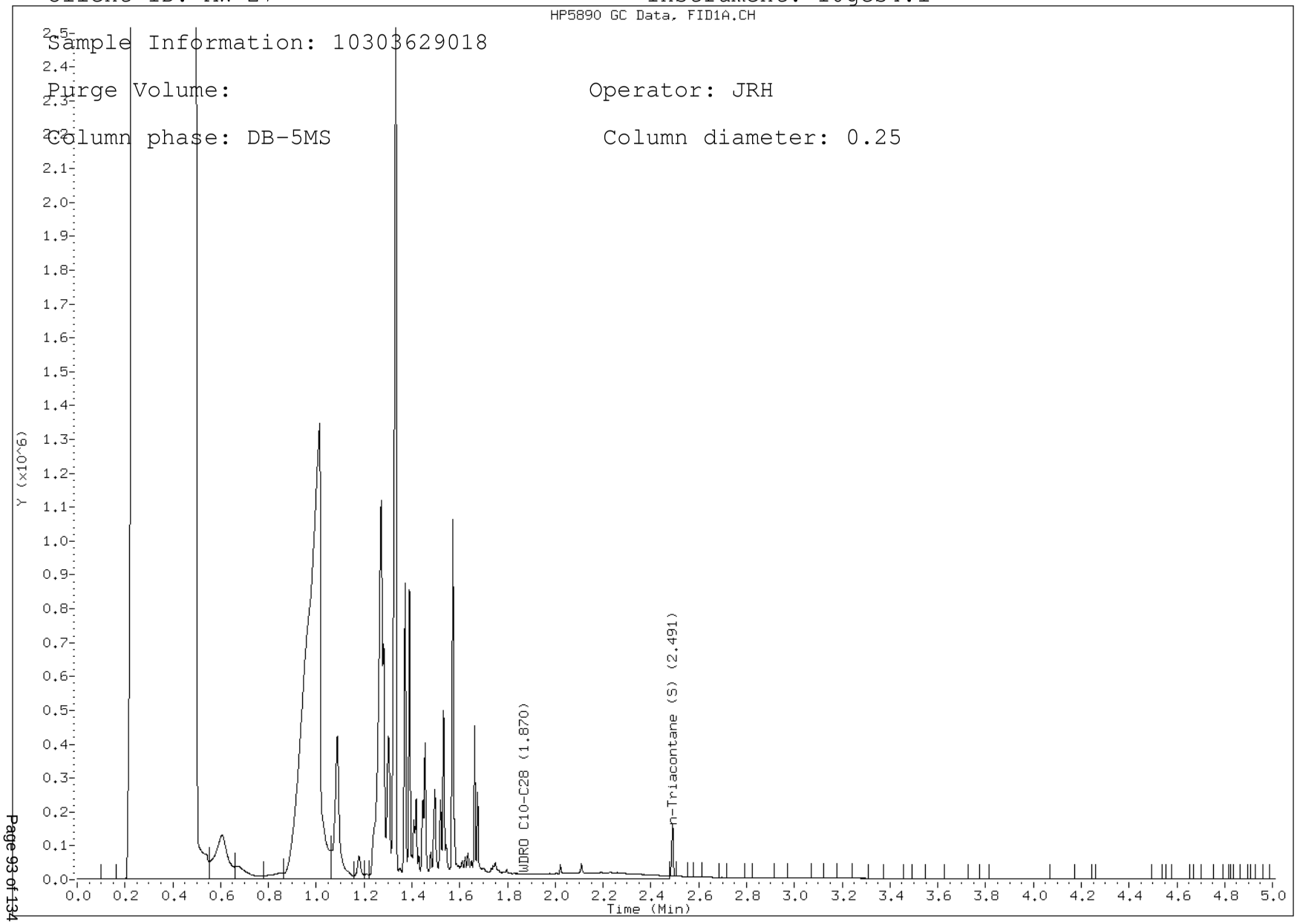
Sample ID: 10303629018

Client ID: MW-27 Instrument: 10gcs4.i

Sample Information: 10303629018

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\042415dro.b/04240019.D

Report Date: 04/24/2015

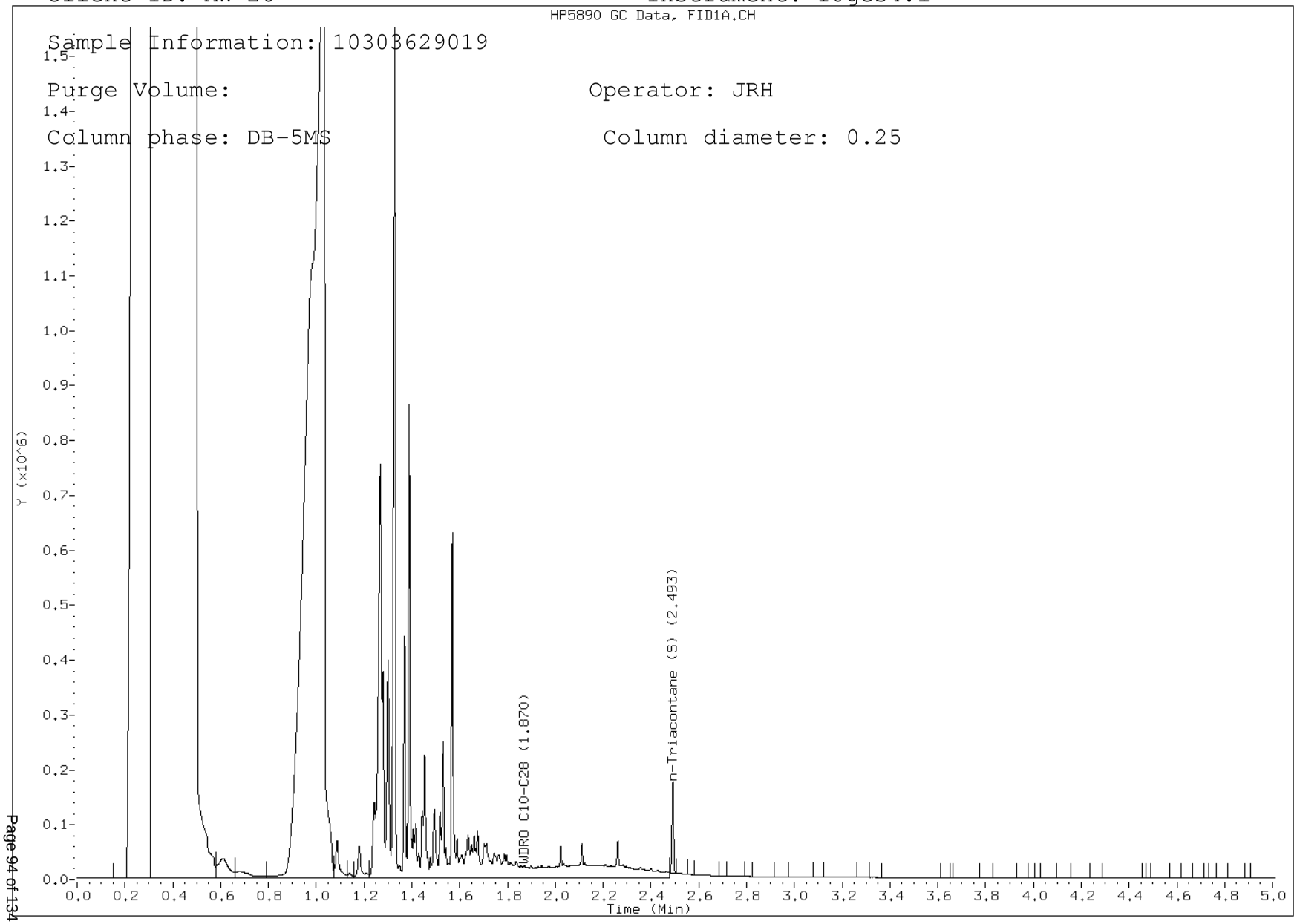
Sample ID: 10303629019

Client ID: MW-26 Instrument: 10gcs4.i

Sample Information: 10303629019

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcv3.i\042315a-1.b/1-113024.d

Report Date: 04/24/2015

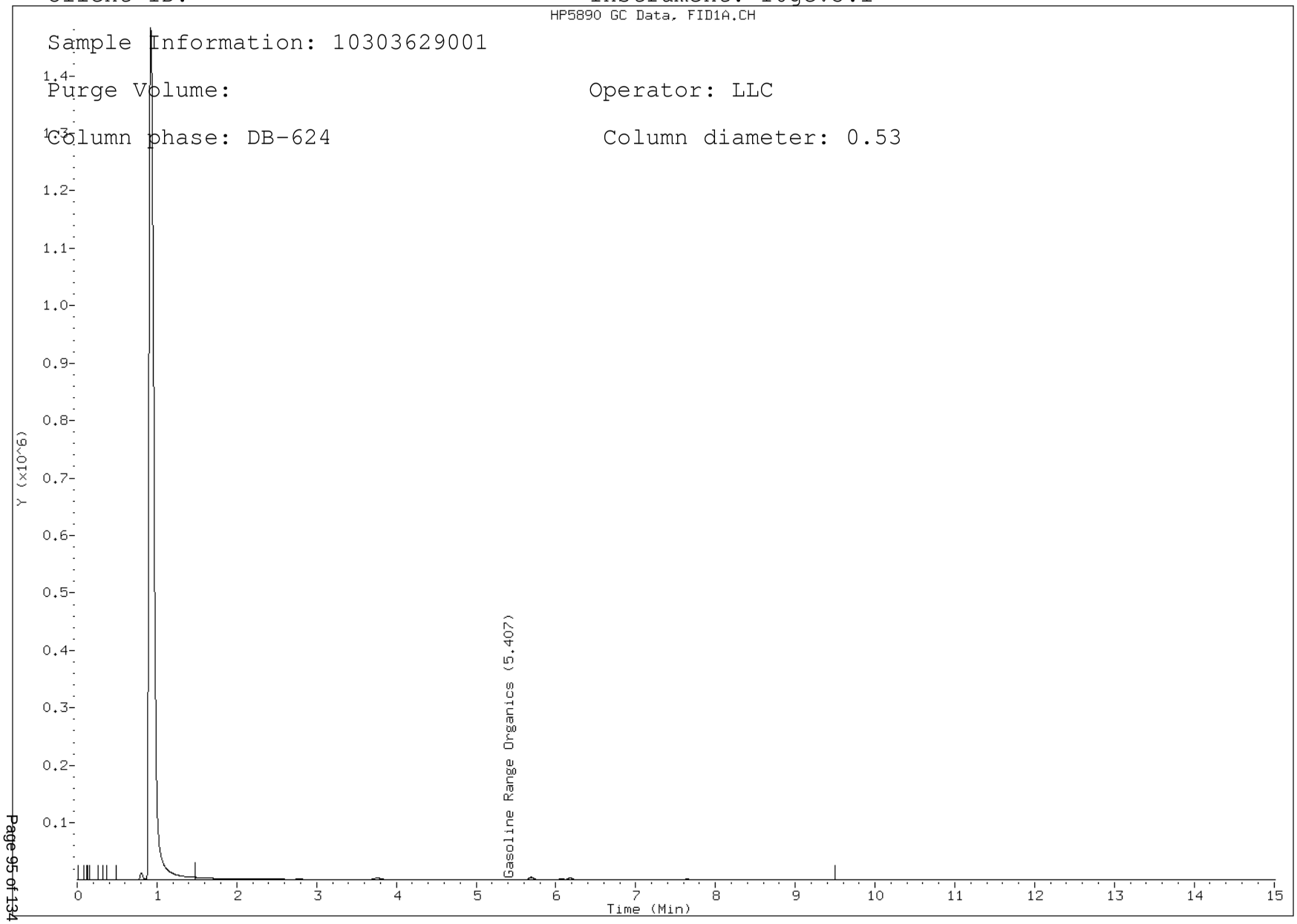
Sample ID: 10303629001

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629001

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042315a-2.b/1-113024.d

Report Date: 04/24/2015

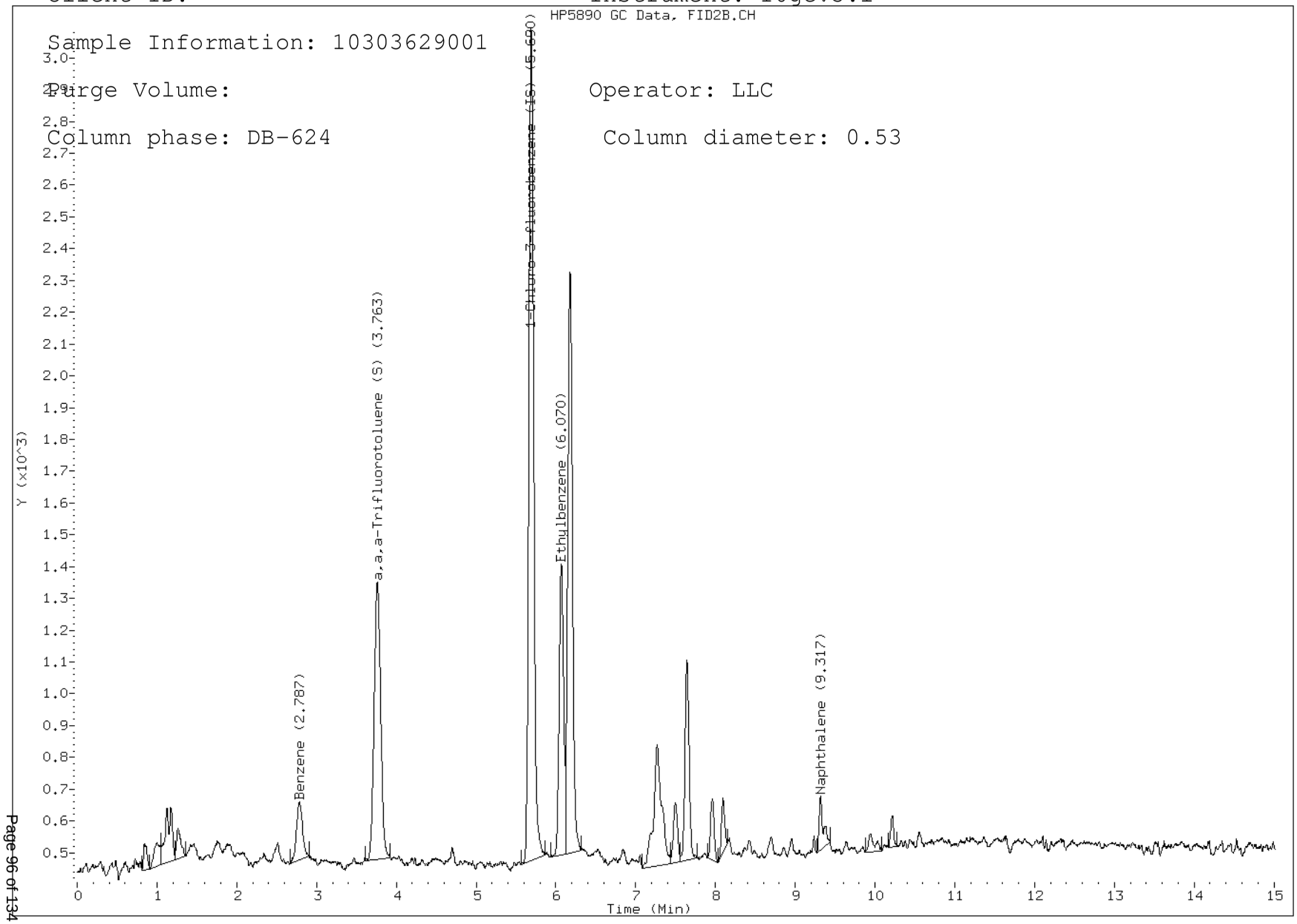
Sample ID: 10303629001

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629001

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042815a-1.b/1-118012.d

Report Date: 04/30/2015

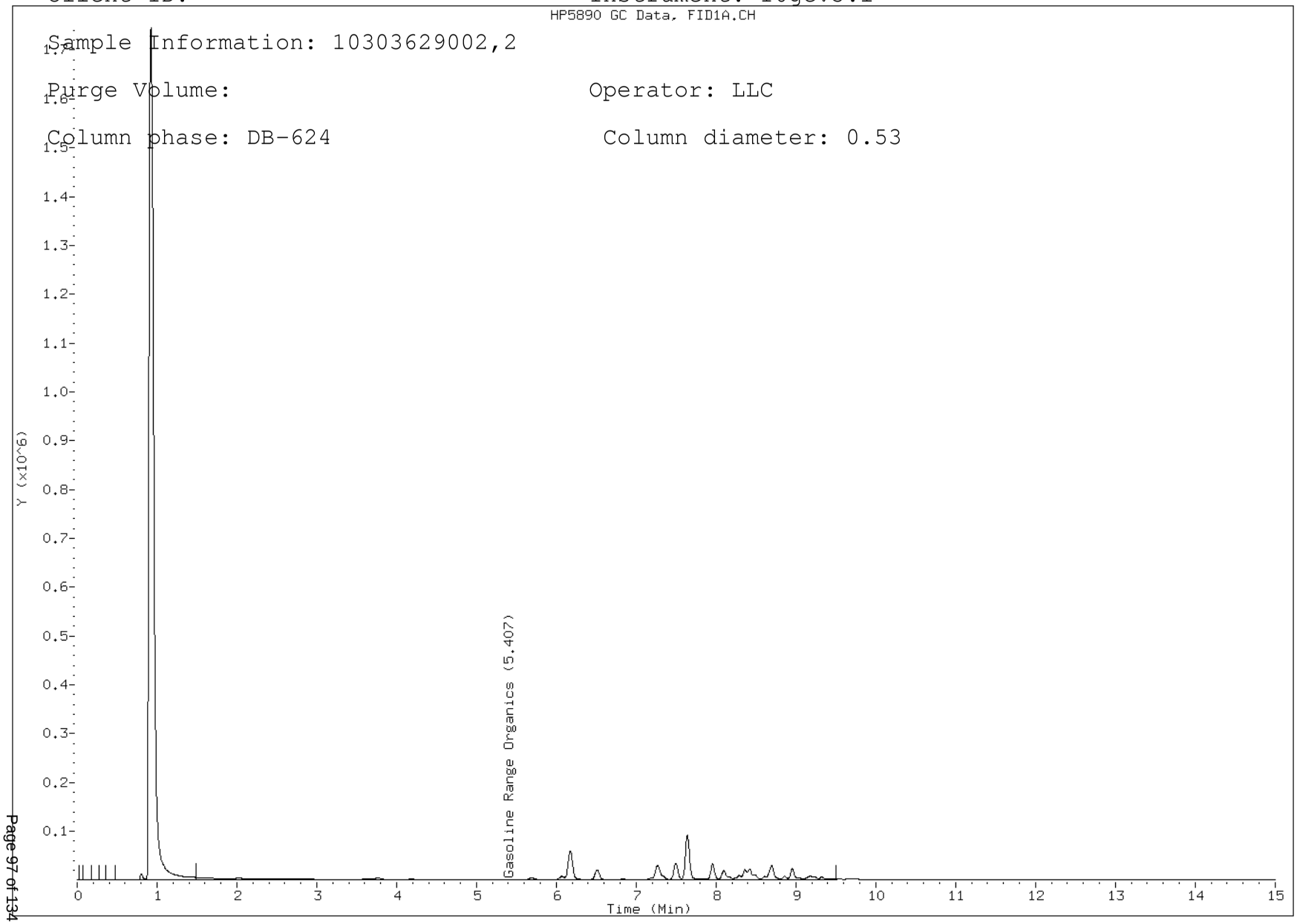
Sample ID: 10303629002

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629002,2

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042815a-2.b/1-118012.d

Report Date: 04/30/2015

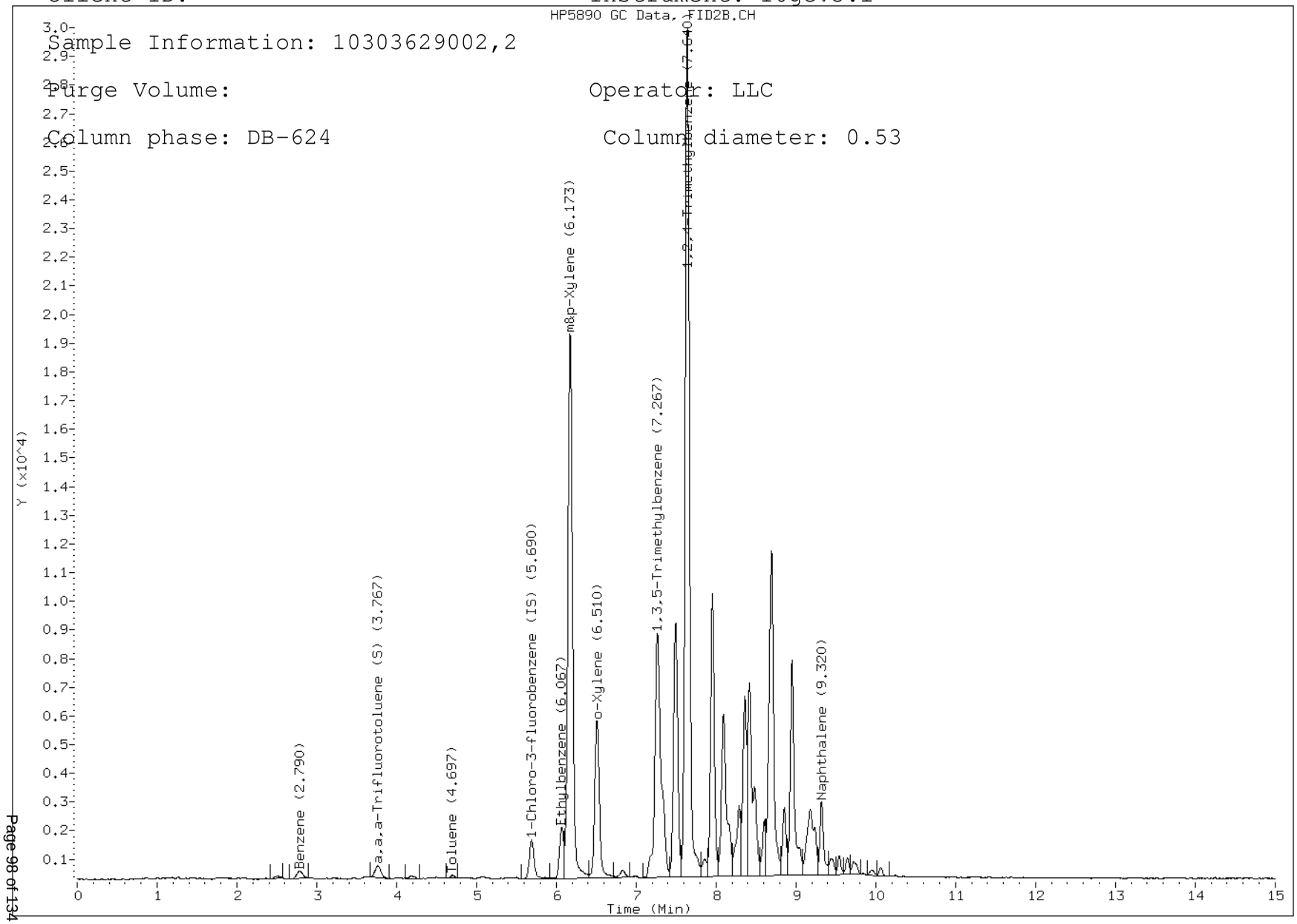
Sample ID: 10303629002

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629002,2

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042315a-1.b/1-113026.d

Report Date: 04/24/2015

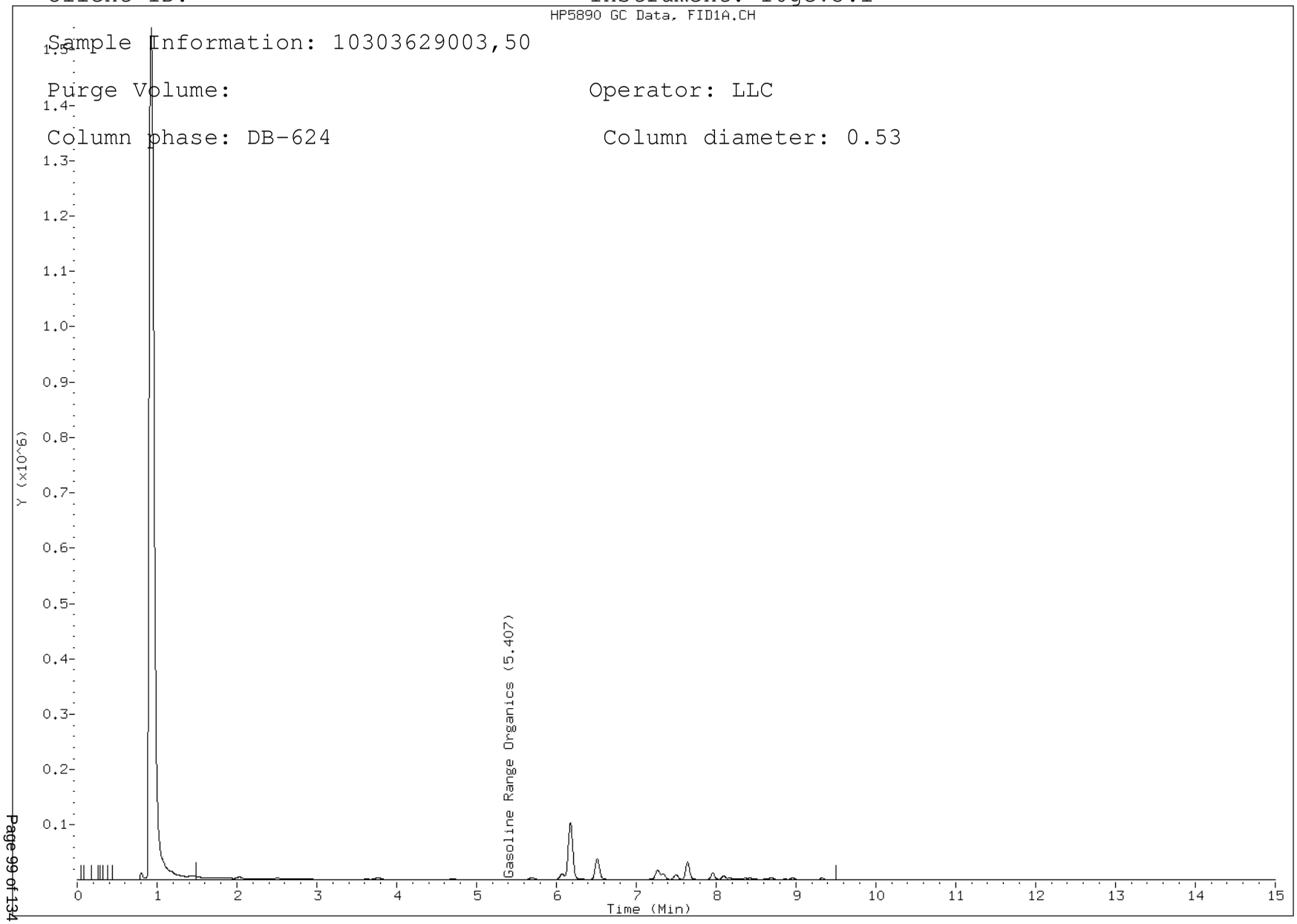
Sample ID: 10303629003

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629003,50

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042315a-2.b/1-113026.d

Report Date: 04/24/2015

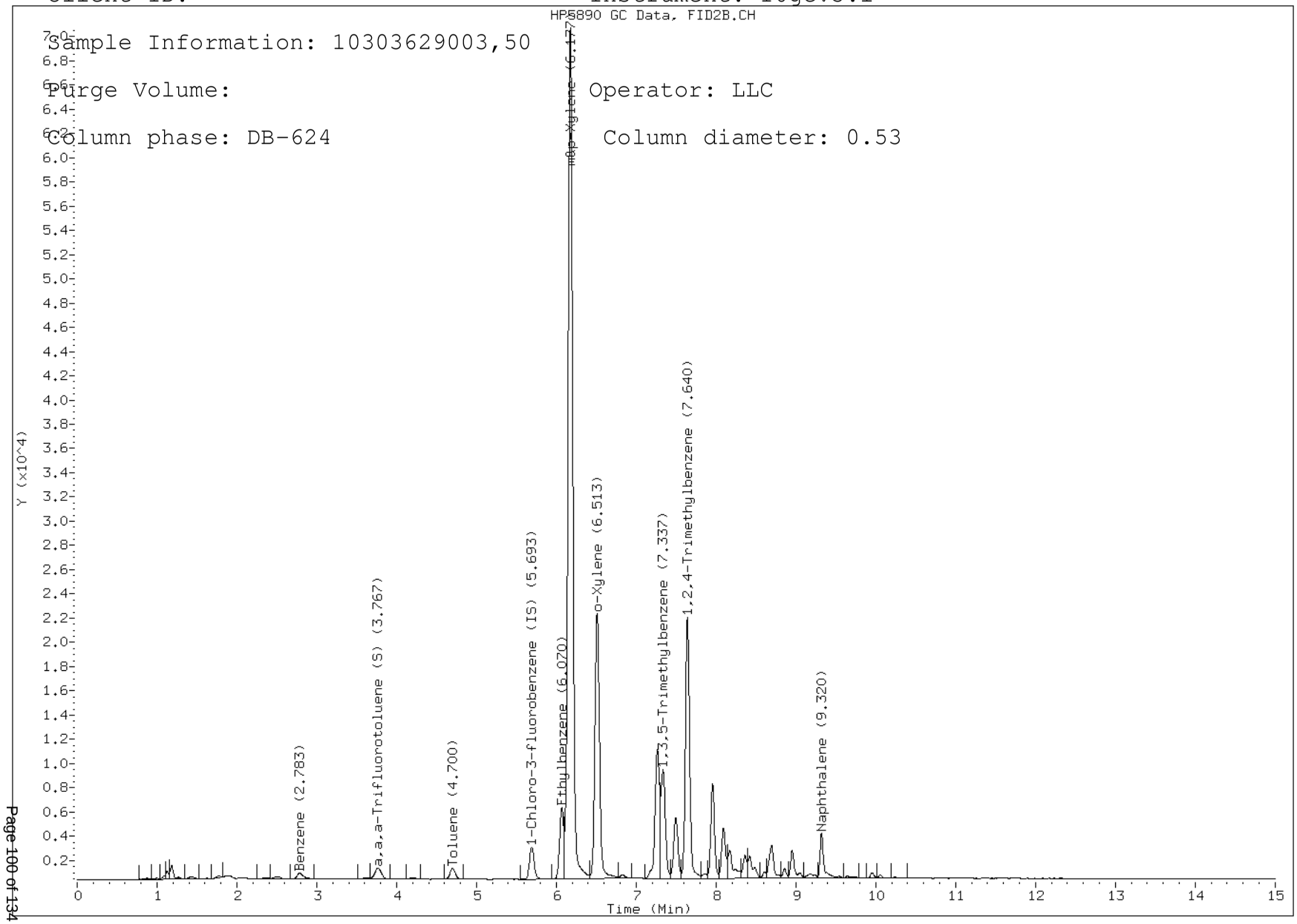
Sample ID: 10303629003

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629003,50

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042415a-1.b/1-114023.d

Report Date: 04/27/2015

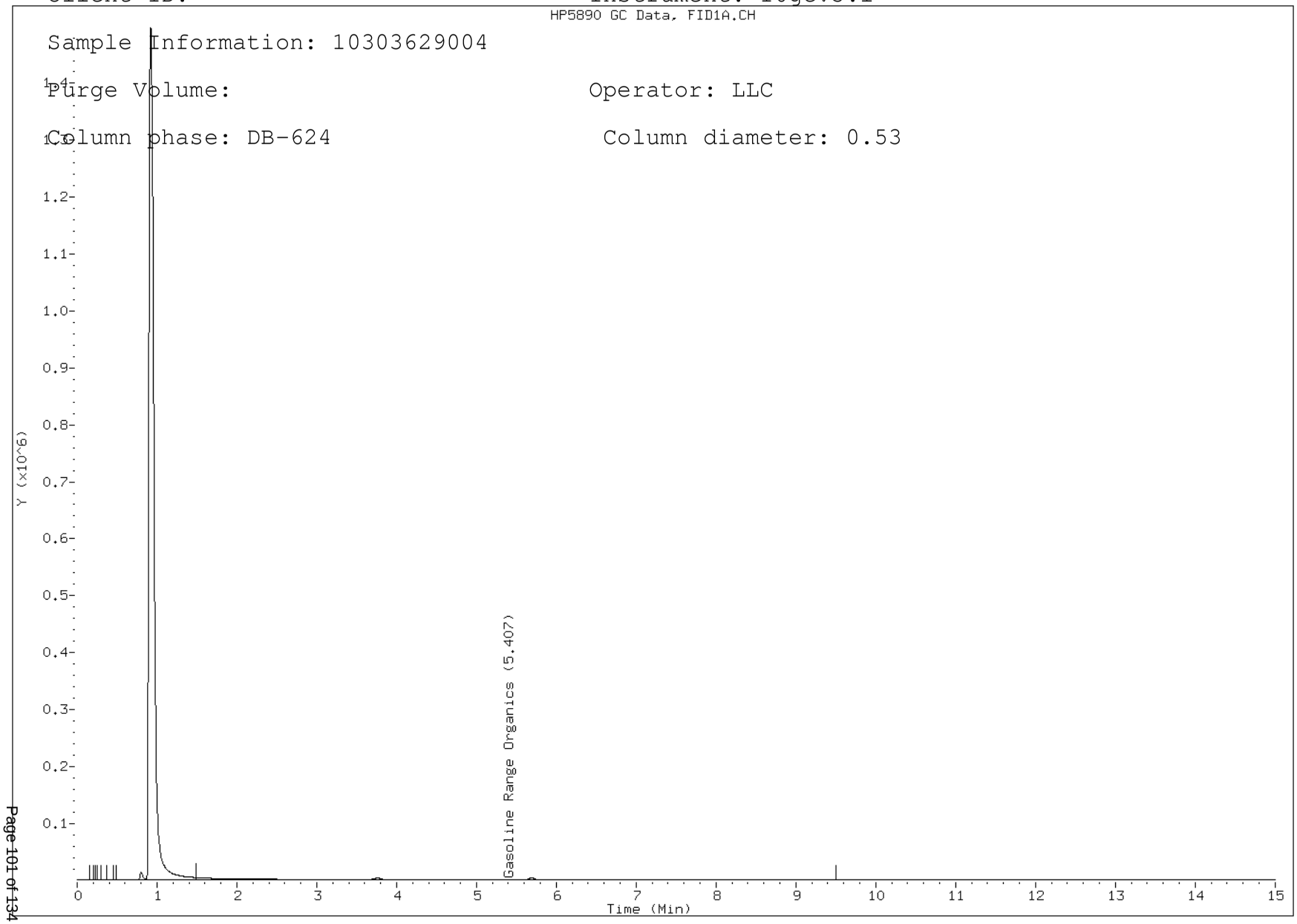
Sample ID: 10303629004

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629004

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



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Report Date: 04/27/2015

Sample ID: 10303629004

Client ID:

Instrument: 10gcv3.i

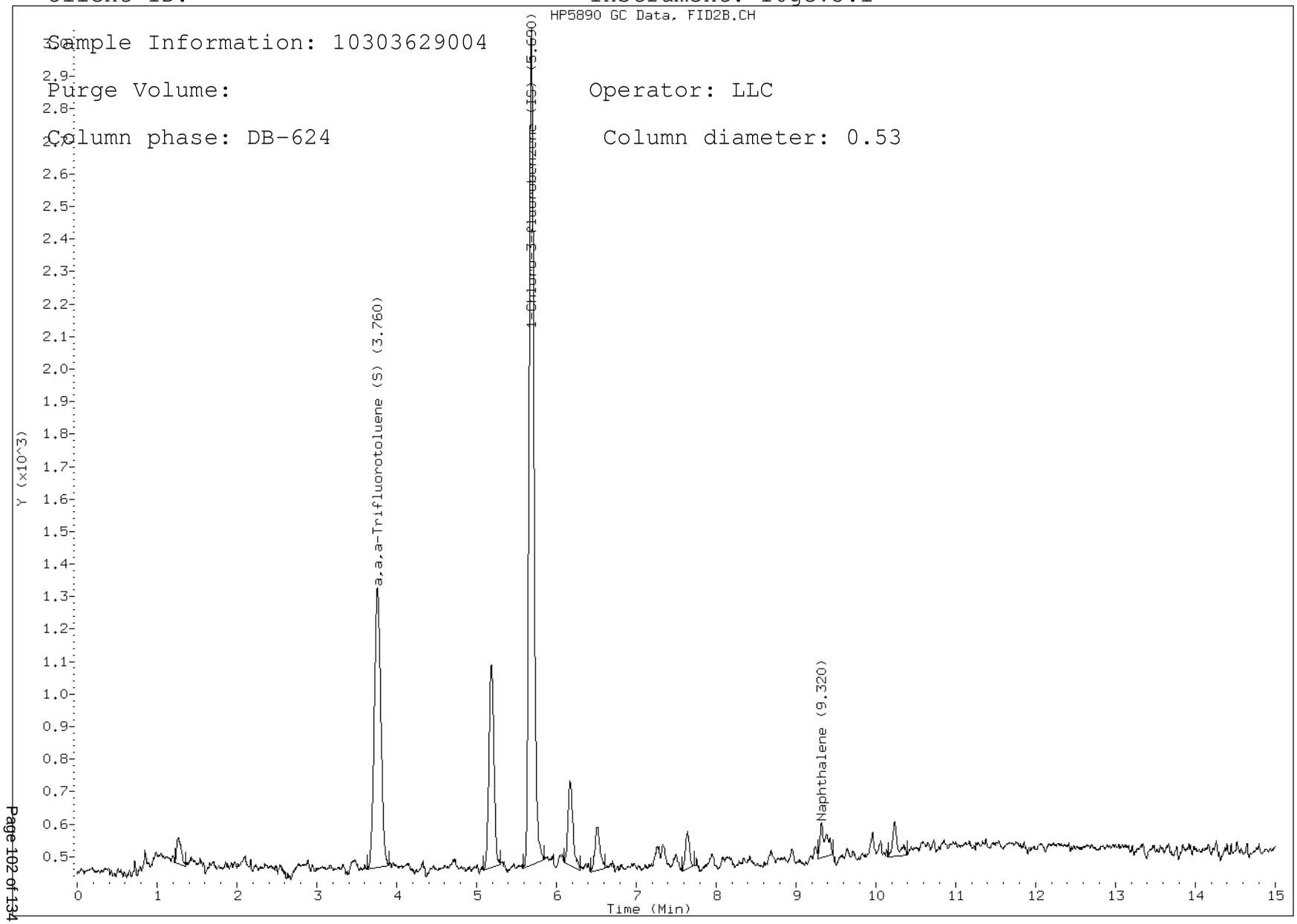
Sample Information: 10303629004

Purge Volume:

Operator: LLC

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042415a-1.b/1-114025.d

Report Date: 04/27/2015

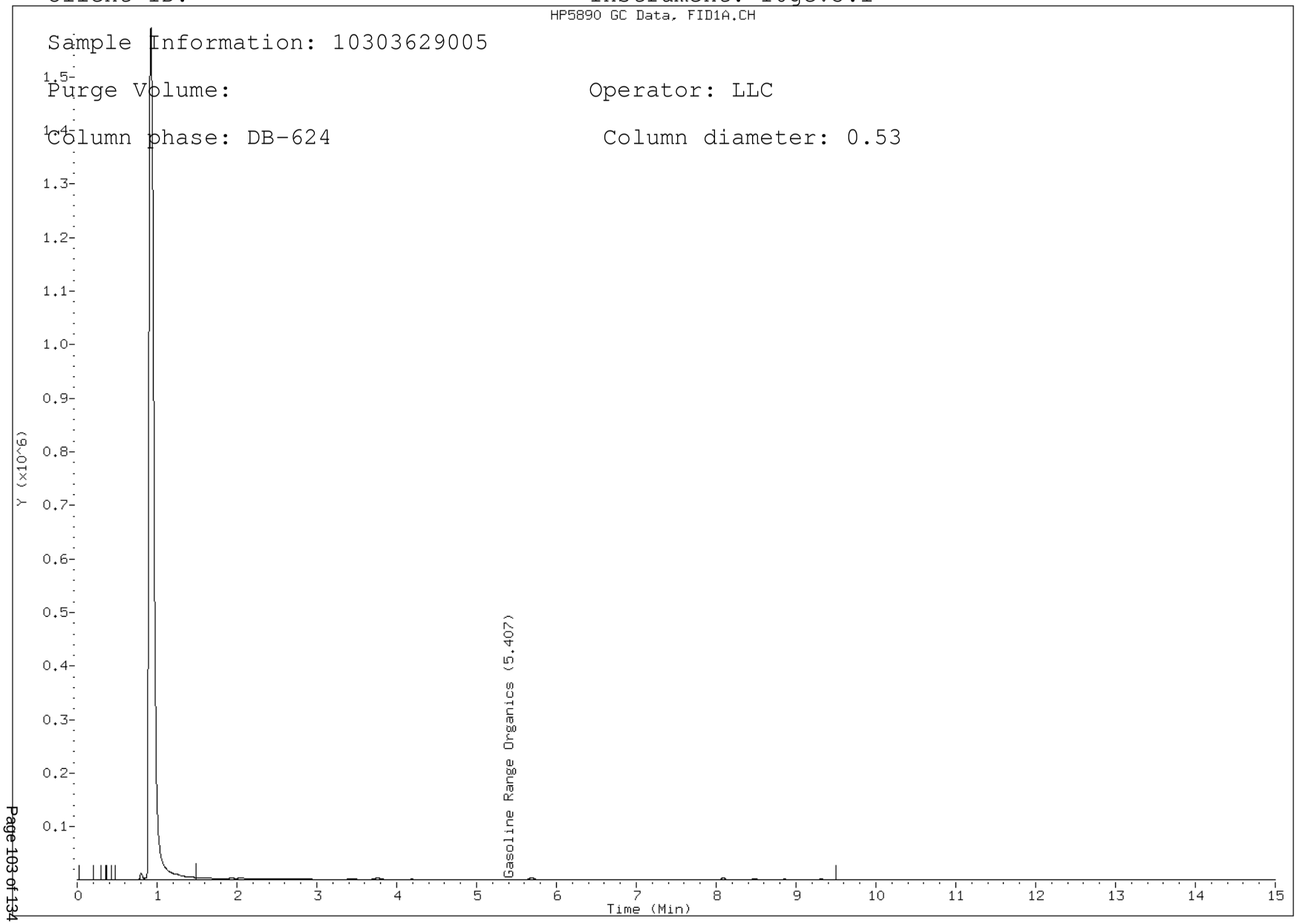
Sample ID: 10303629005

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629005

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042415a-2.b/1-114025.d

Report Date: 04/27/2015

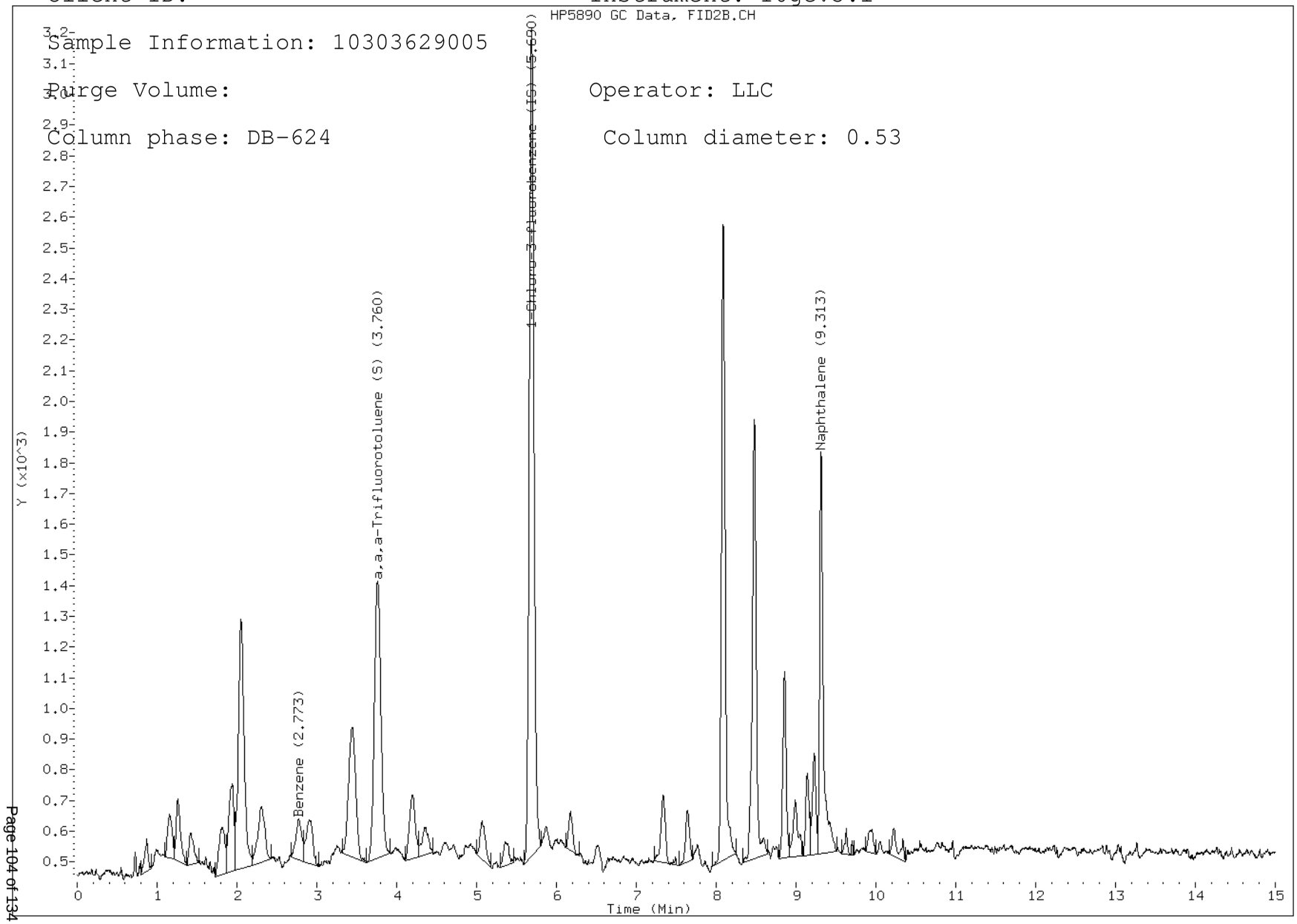
Sample ID: 10303629005

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629005

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042415a-1.b/1-114027.d

Report Date: 04/27/2015

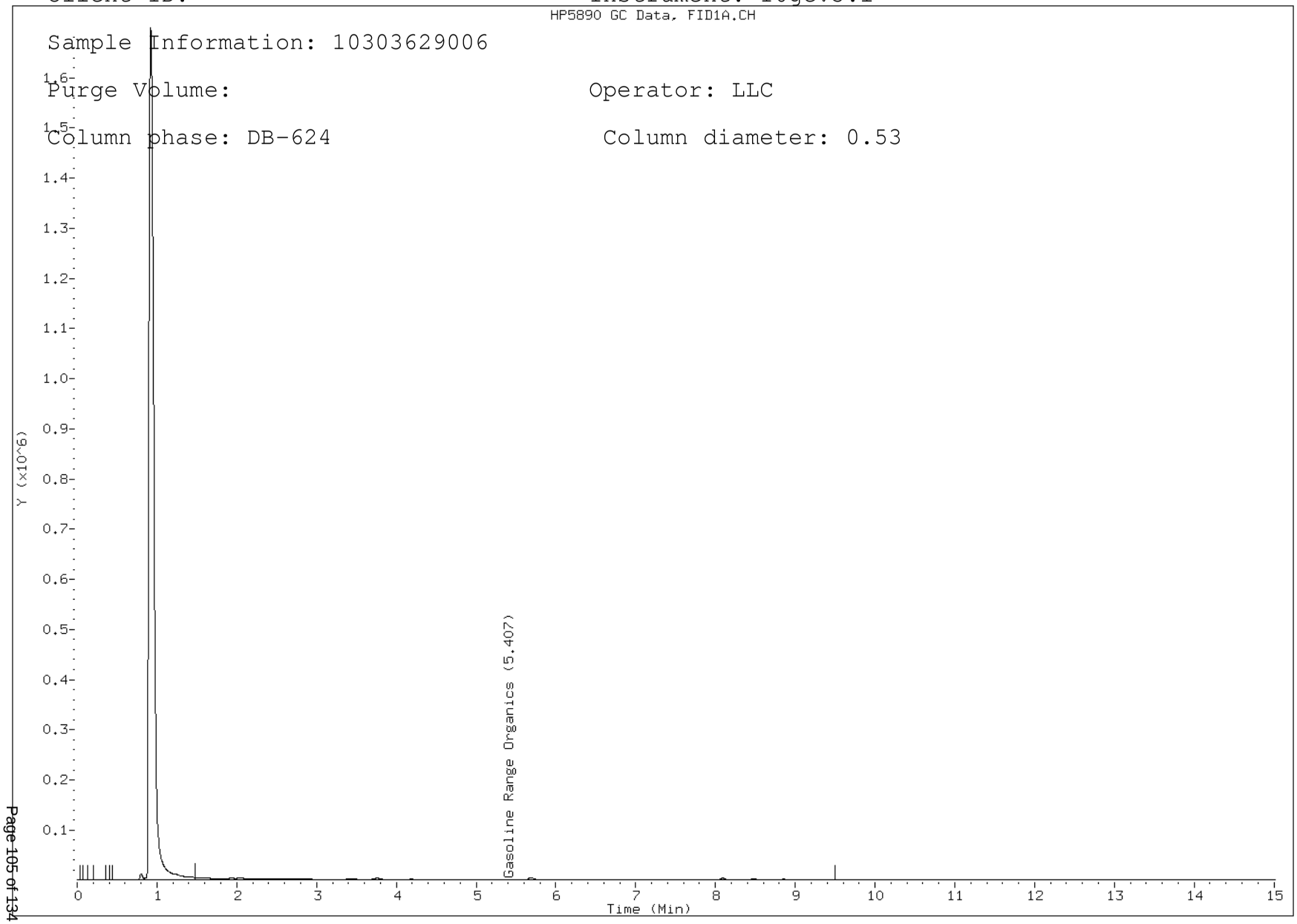
Sample ID: 10303629006

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629006

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042415a-2.b/1-114027.d

Report Date: 04/27/2015

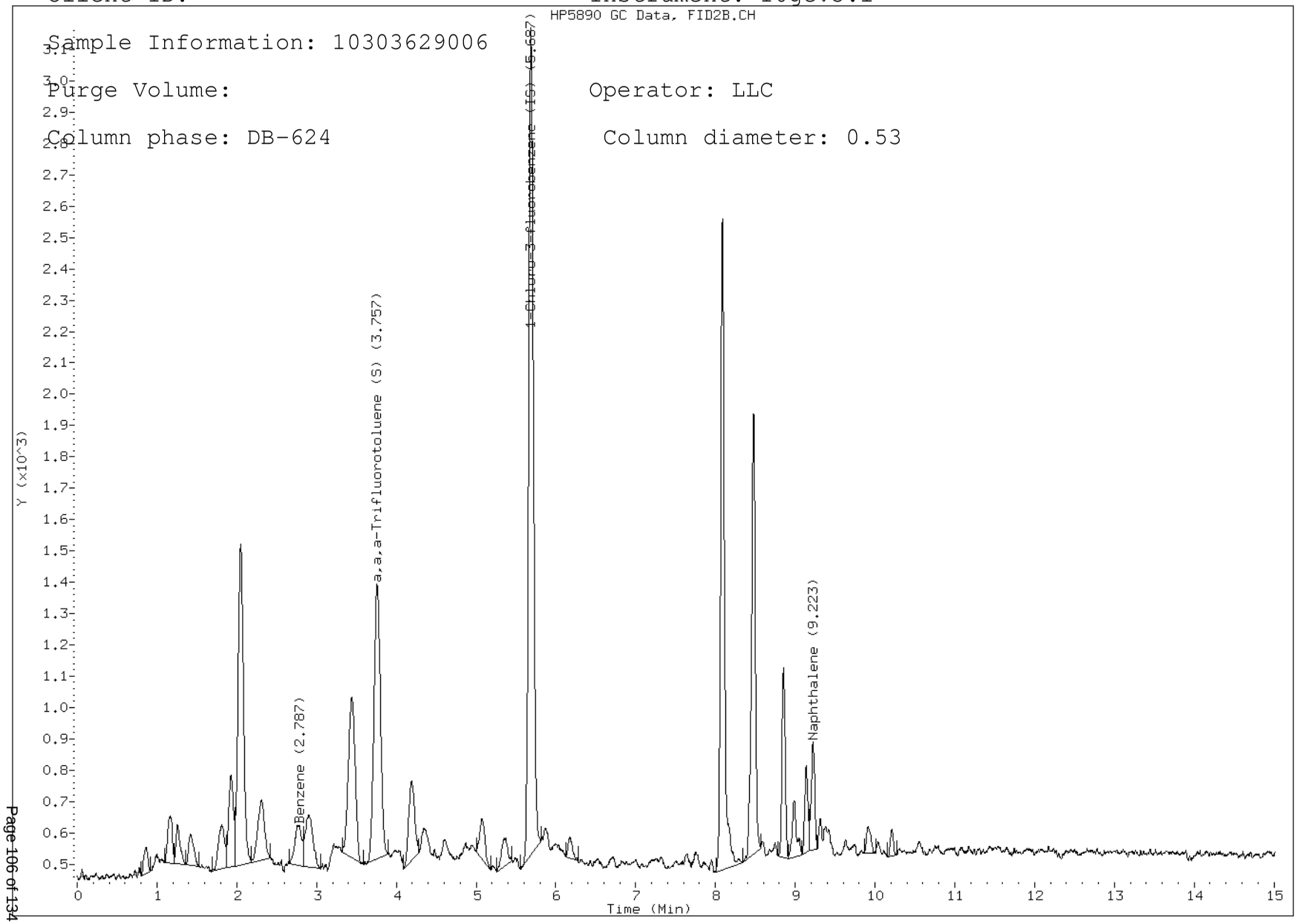
Sample ID: 10303629006

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629006

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53

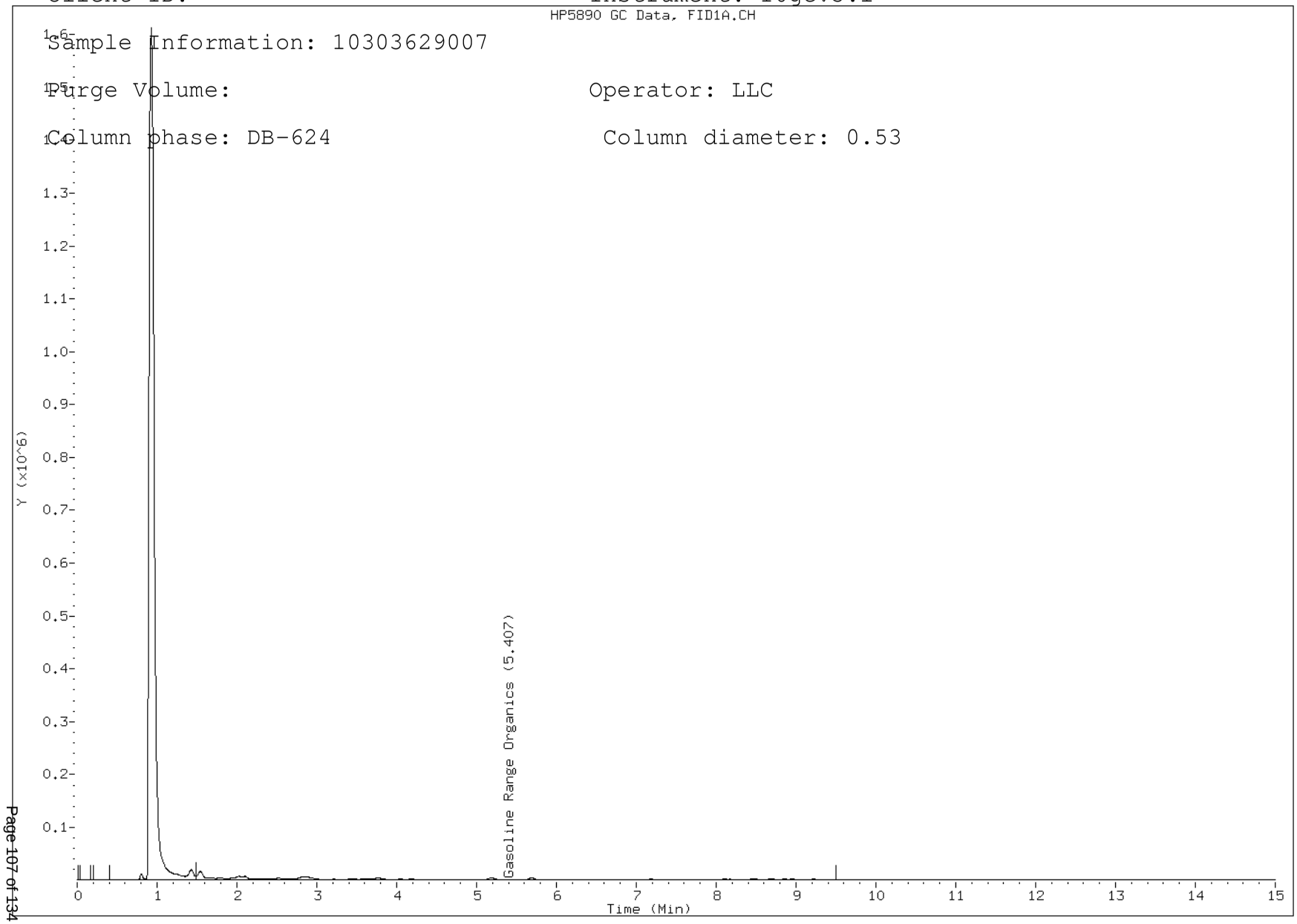


Data File: \\192.168.10.12\chem\10gcv3.i\042415a-1.b/1-114028.d

Report Date: 04/27/2015

Sample ID: 10303629007

Client ID: Instrument: 10gcv3.i



Sample Information: 10303629007

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\042415a-2.b/1-114028.d

Report Date: 04/27/2015

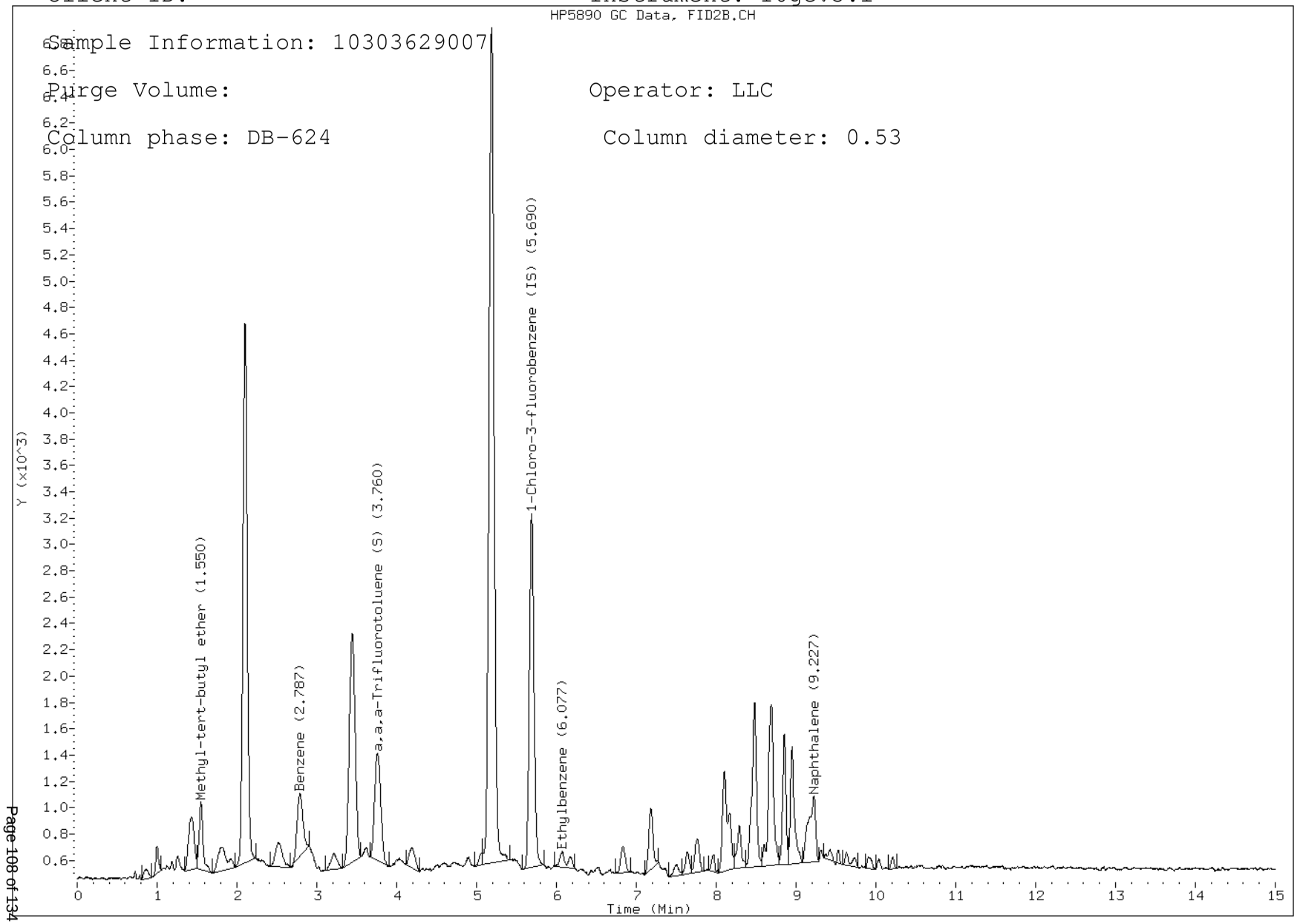
Sample ID: 10303629007

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629007

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53

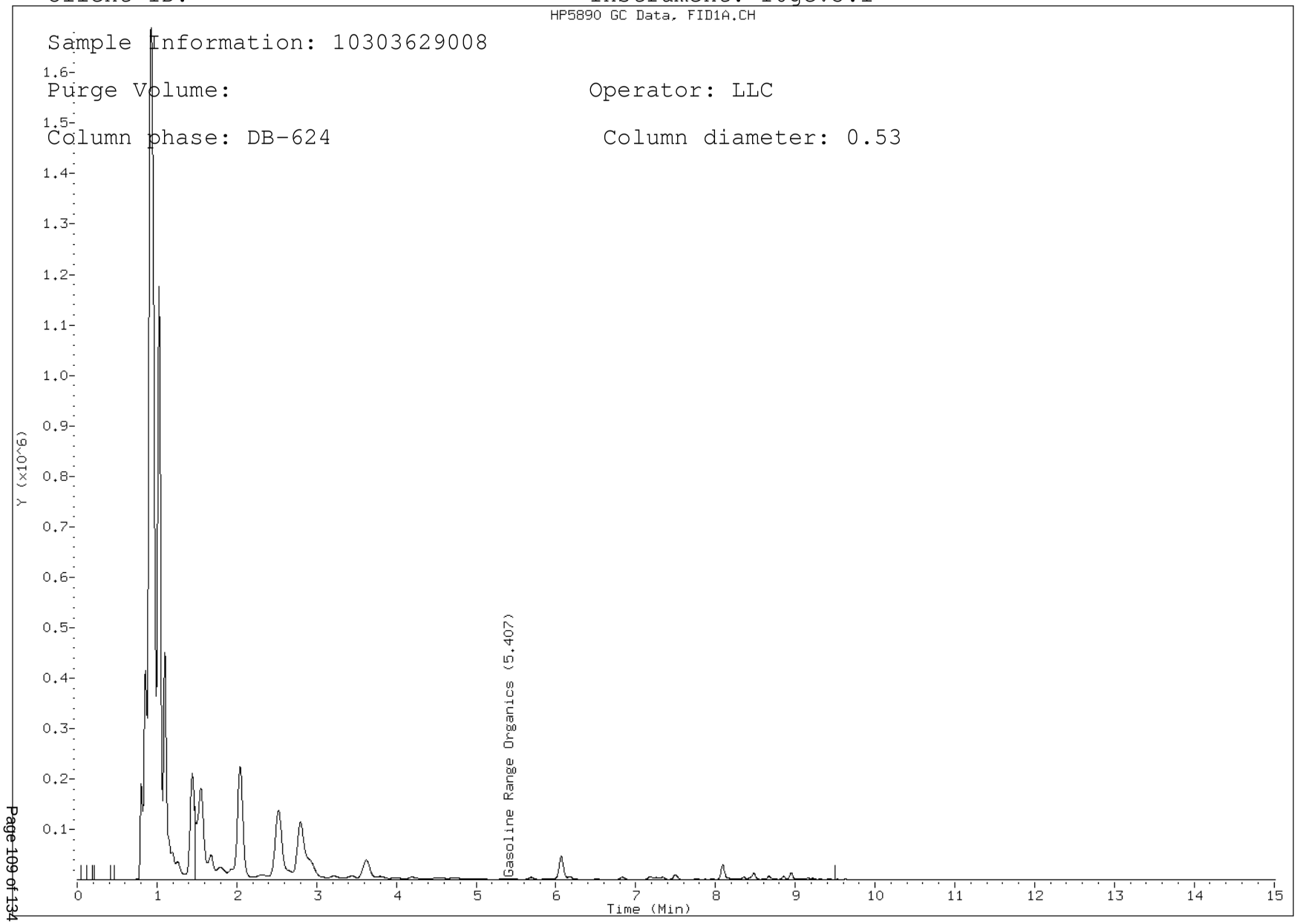


Data File: \\192.168.10.12\chem\10gcv3.i\042415a-1.b/1-114029.d

Report Date: 04/27/2015

Sample ID: 10303629008

Client ID: Instrument: 10gcv3.i



Sample Information: 10303629008

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\042415a-2.b/1-114029.d

Report Date: 04/27/2015

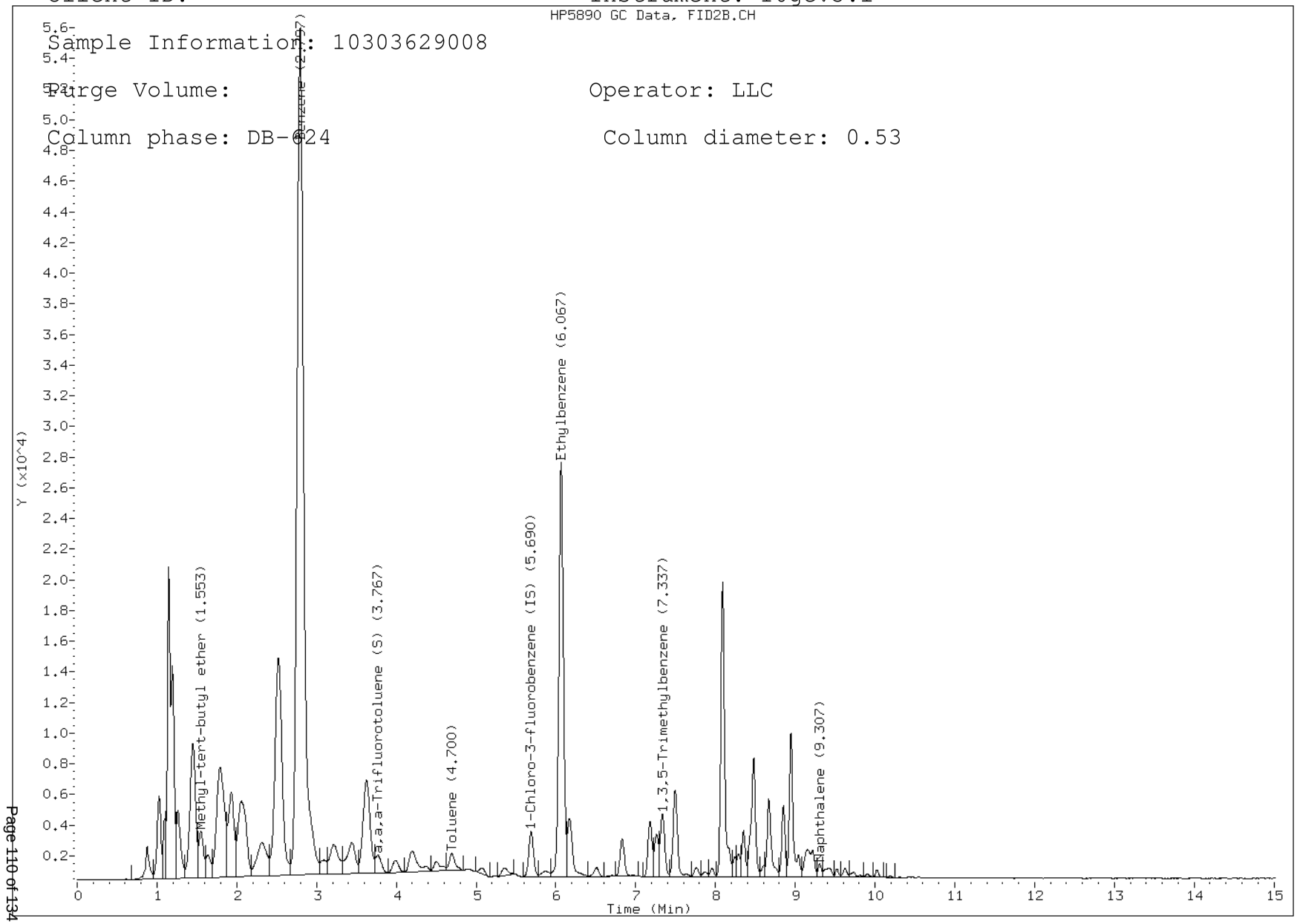
Sample ID: 10303629008

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629008

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53

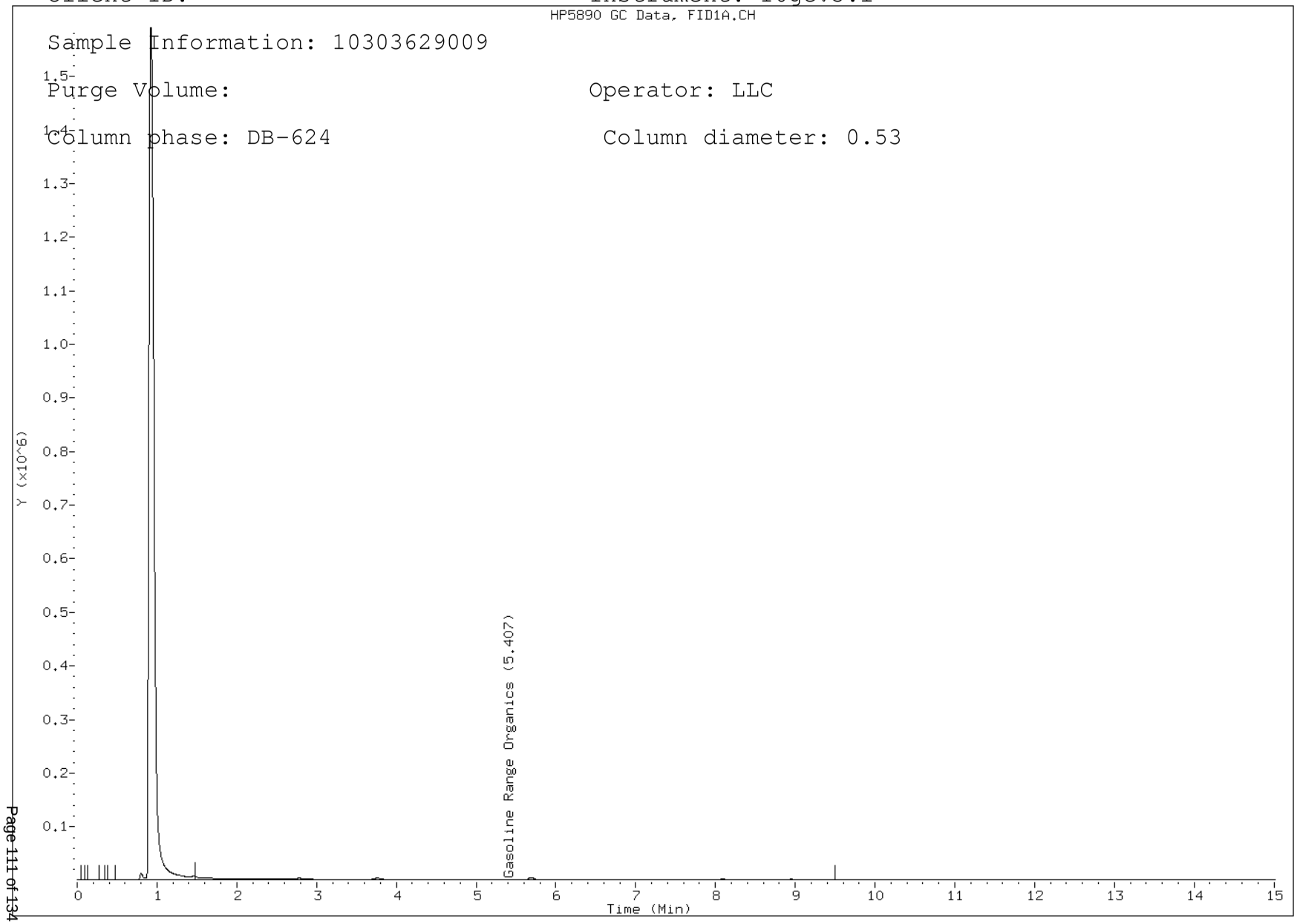


Data File: \\192.168.10.12\chem\10gcv3.i\042415a-1.b/1-114030.d

Report Date: 04/27/2015

Sample ID: 10303629009

Client ID: Instrument: 10gcv3.i



Sample Information: 10303629009

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\042415a-2.b/1-114030.d

Report Date: 04/27/2015

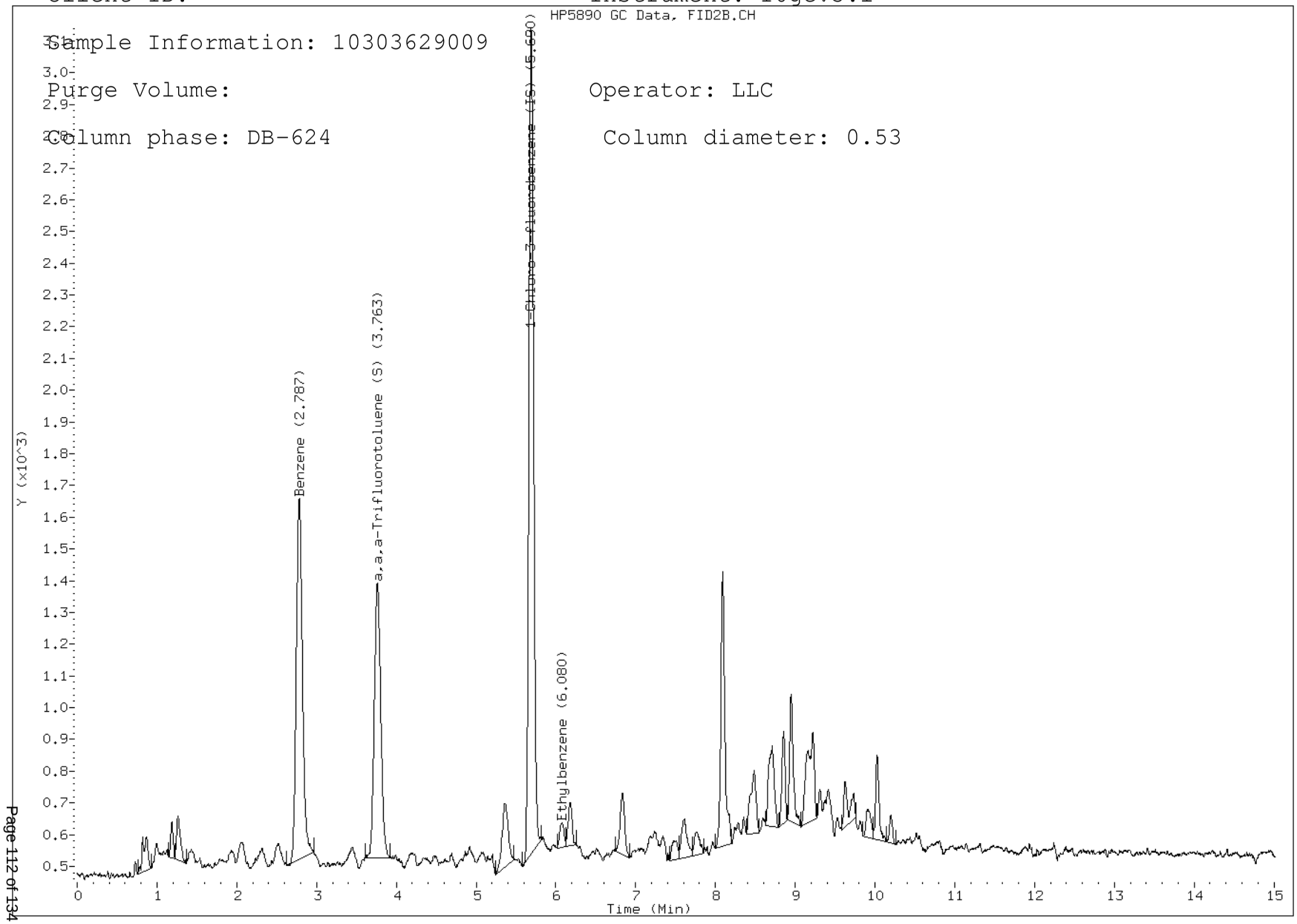
Sample ID: 10303629009

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629009

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53

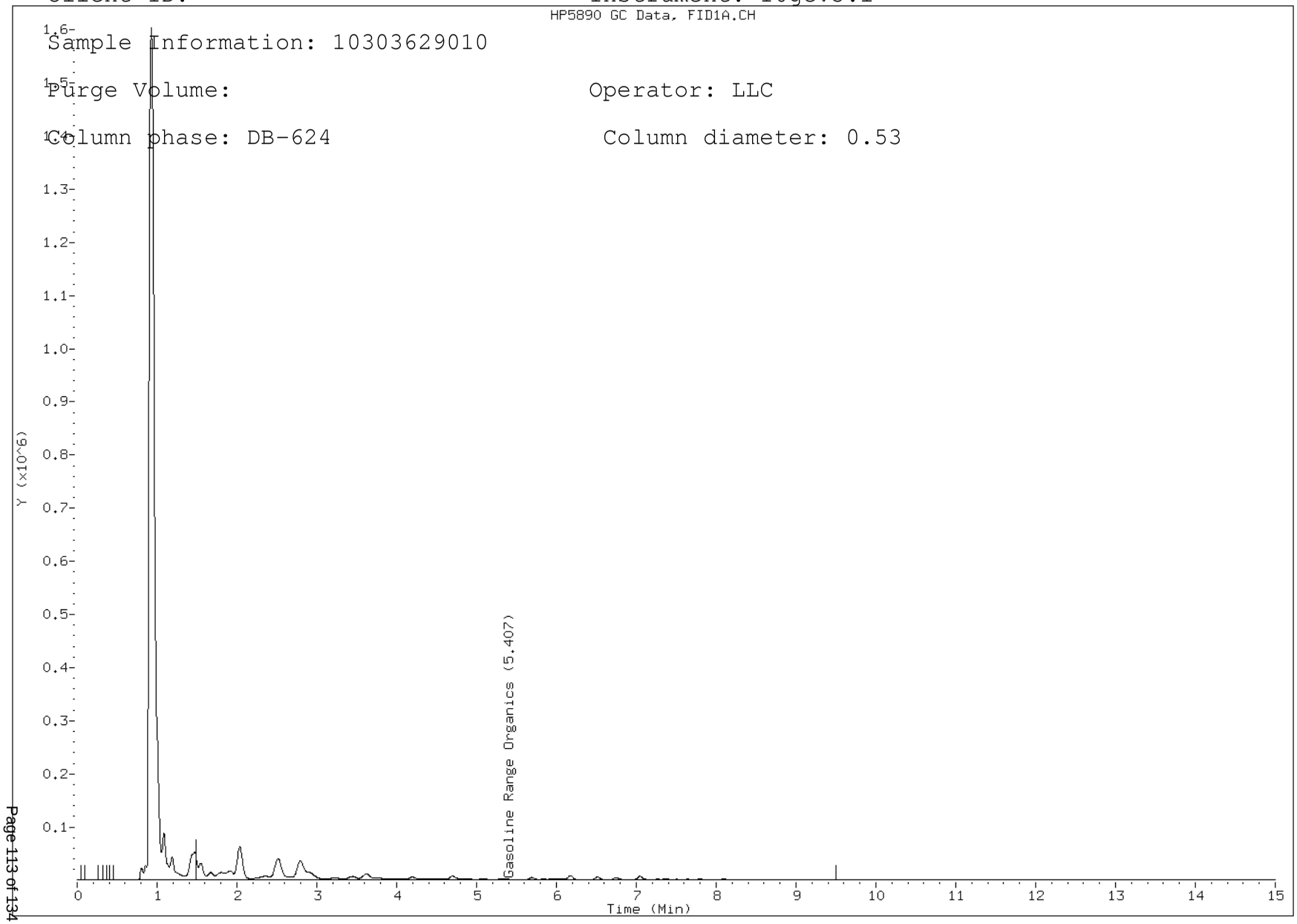


Data File: \\192.168.10.12\chem\10gcv3.i\042415a-1.b/1-114031.d

Report Date: 04/27/2015

Sample ID: 10303629010

Client ID: Instrument: 10gcv3.i



Sample Information: 10303629010

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\042415a-2.b/1-114031.d

Report Date: 04/27/2015

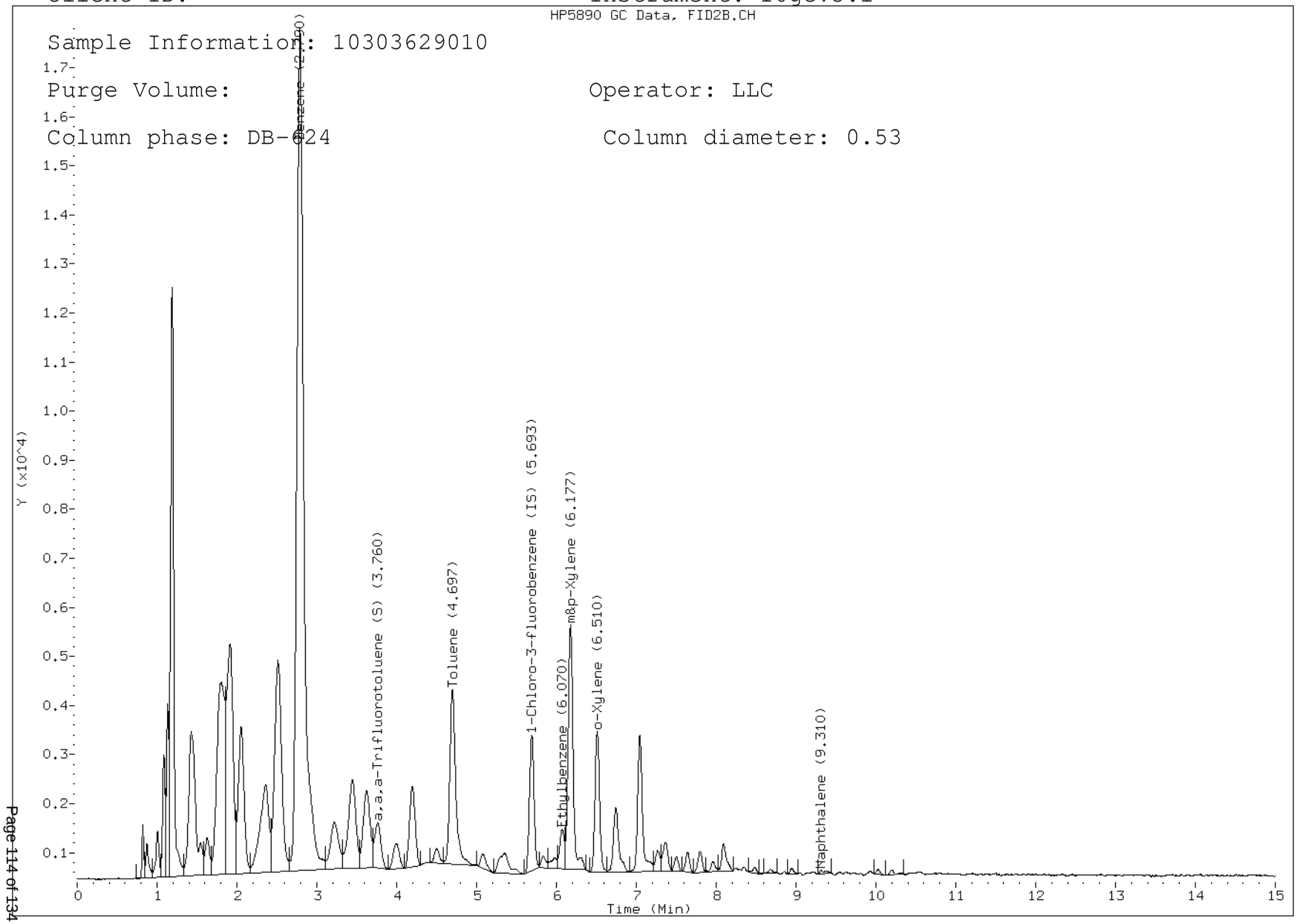
Sample ID: 10303629010

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629010

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042415a-1.b/1-114032.d

Report Date: 04/27/2015

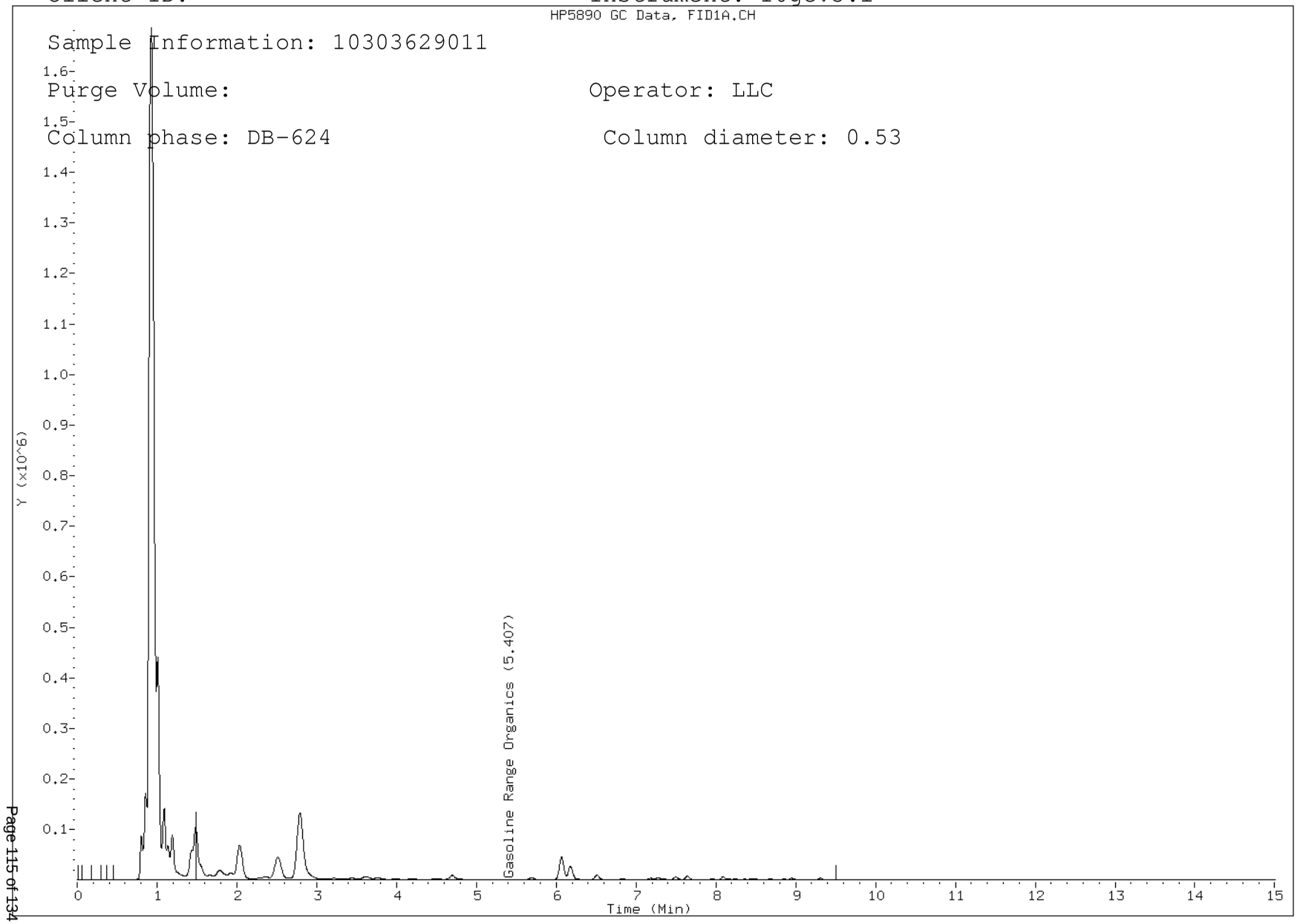
Sample ID: 10303629011

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629011

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042415a-2.b/1-114032.d

Report Date: 04/27/2015

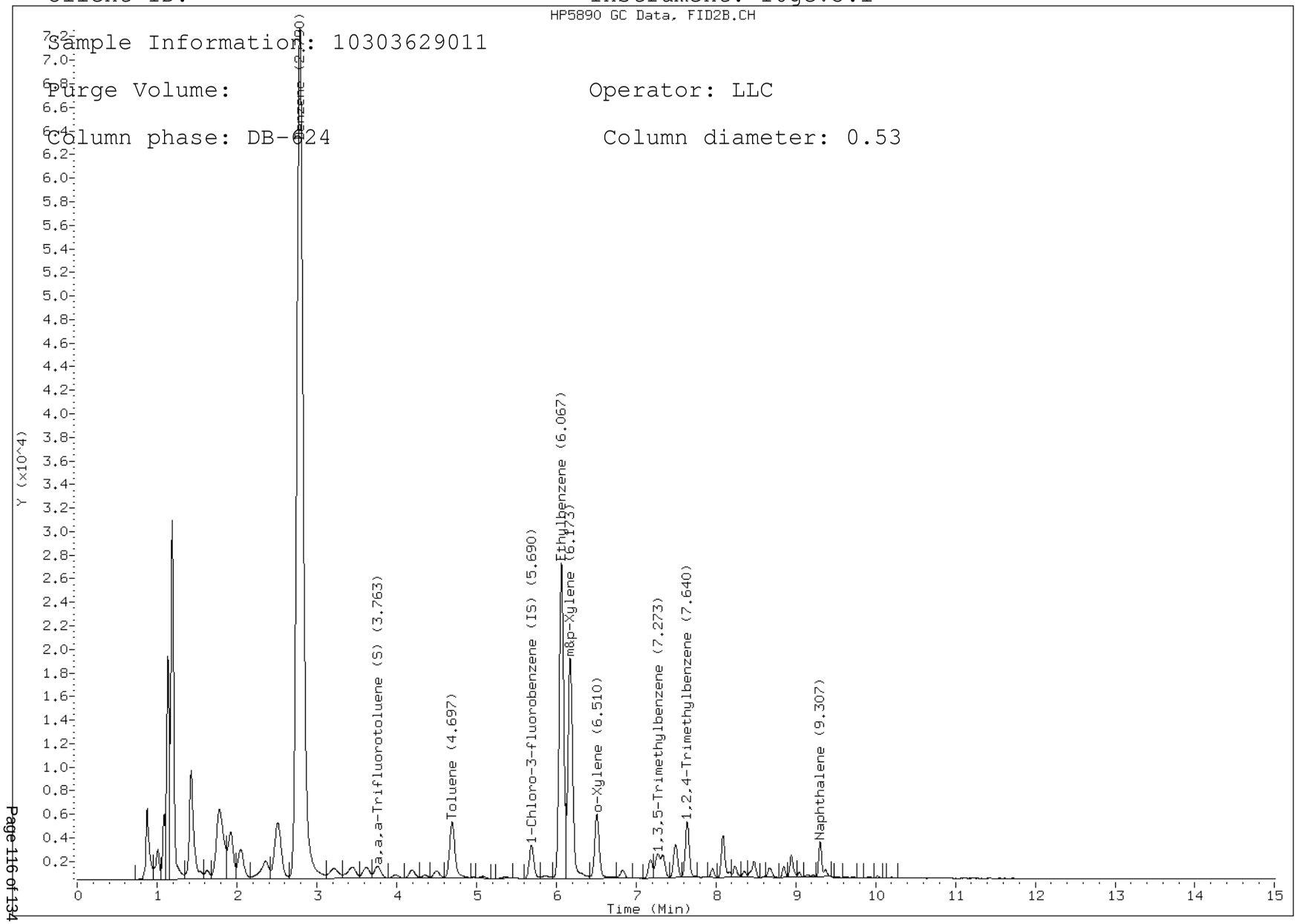
Sample ID: 10303629011

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629011

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042715a-1.b/1-117008.d

Report Date: 04/30/2015

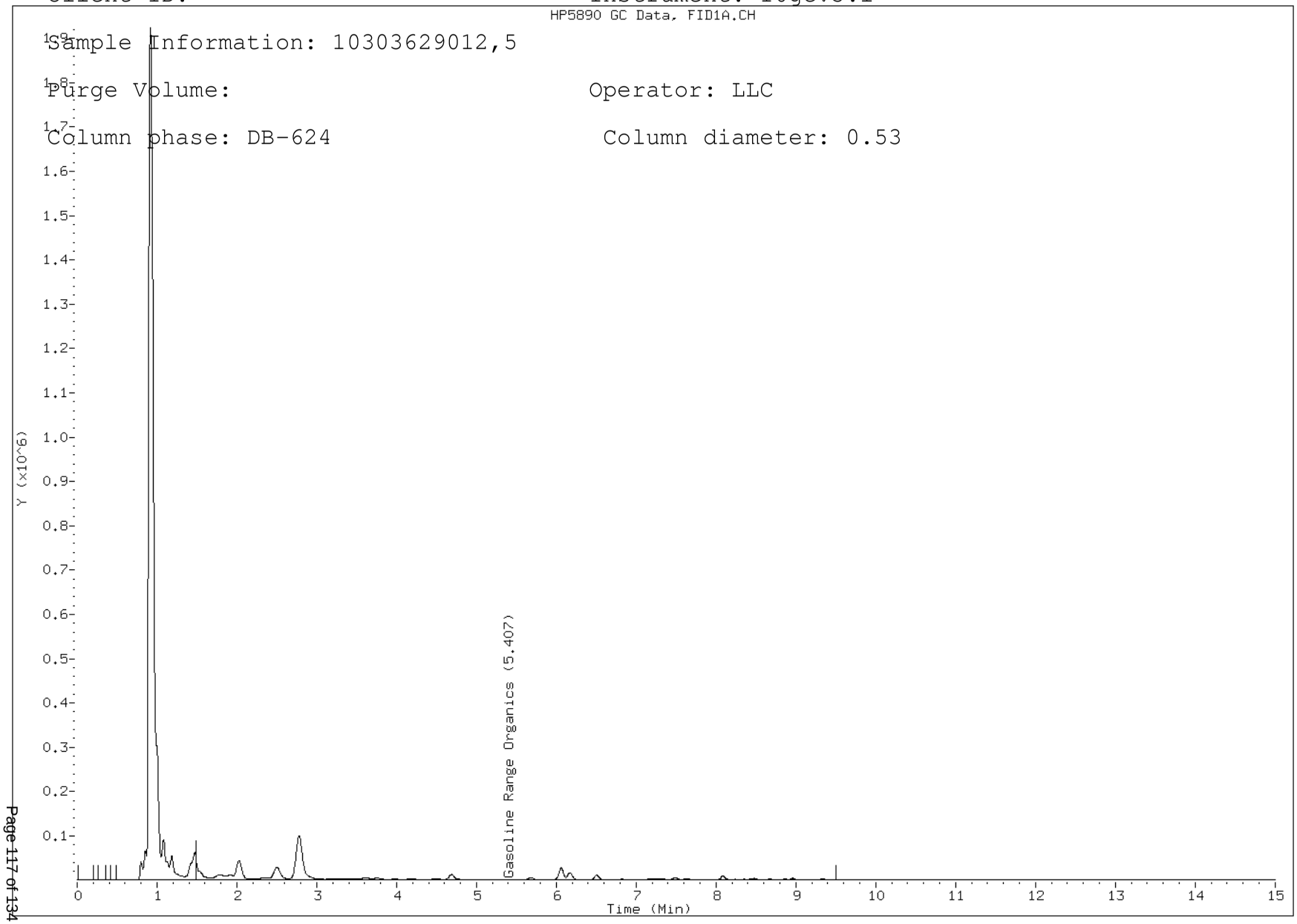
Sample ID: 10303629012

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629012,5

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042715a-2.b/1-117008.d

Report Date: 04/30/2015

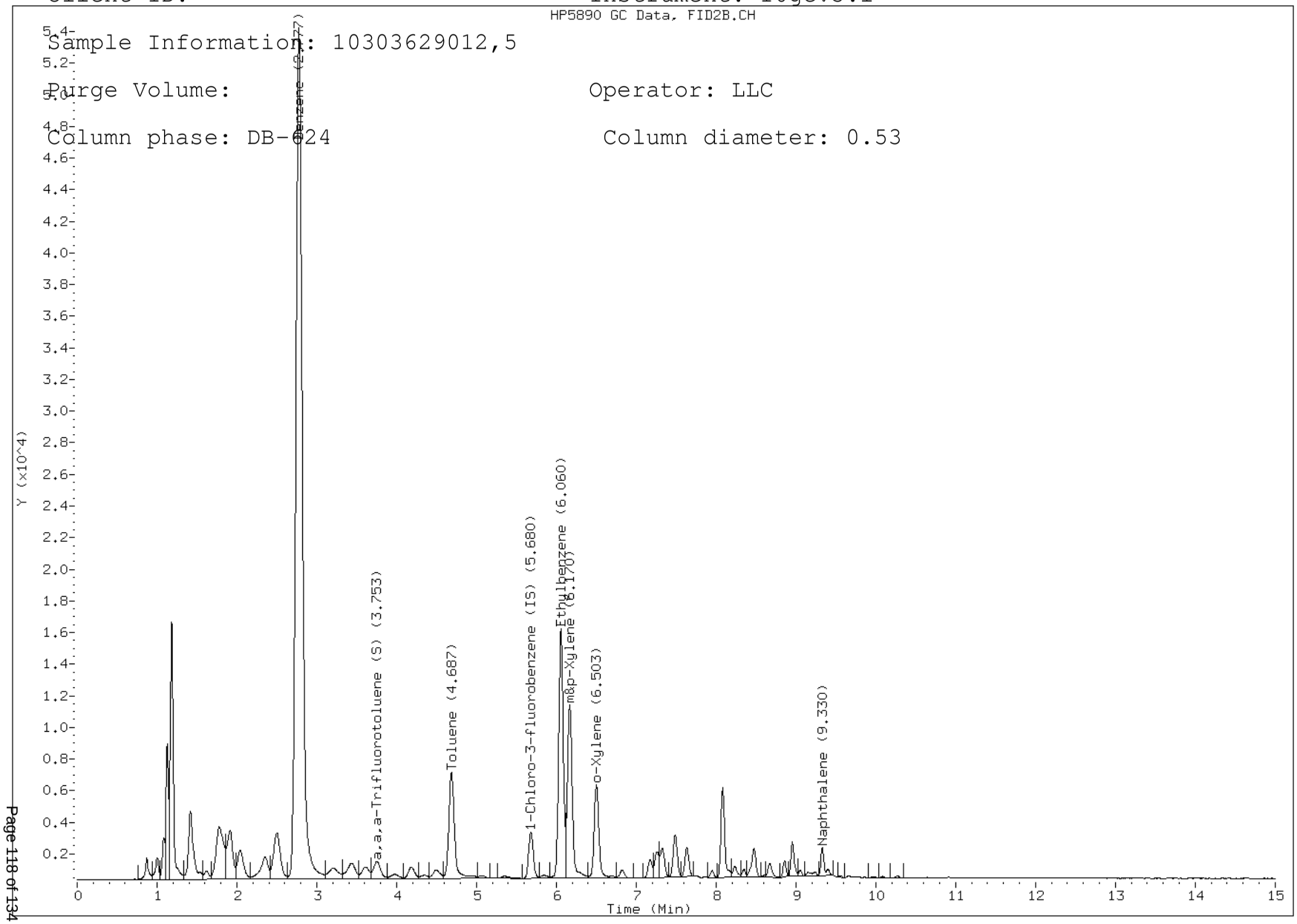
Sample ID: 10303629012

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629012,5

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042415a-1.b/1-114034.d

Report Date: 04/27/2015

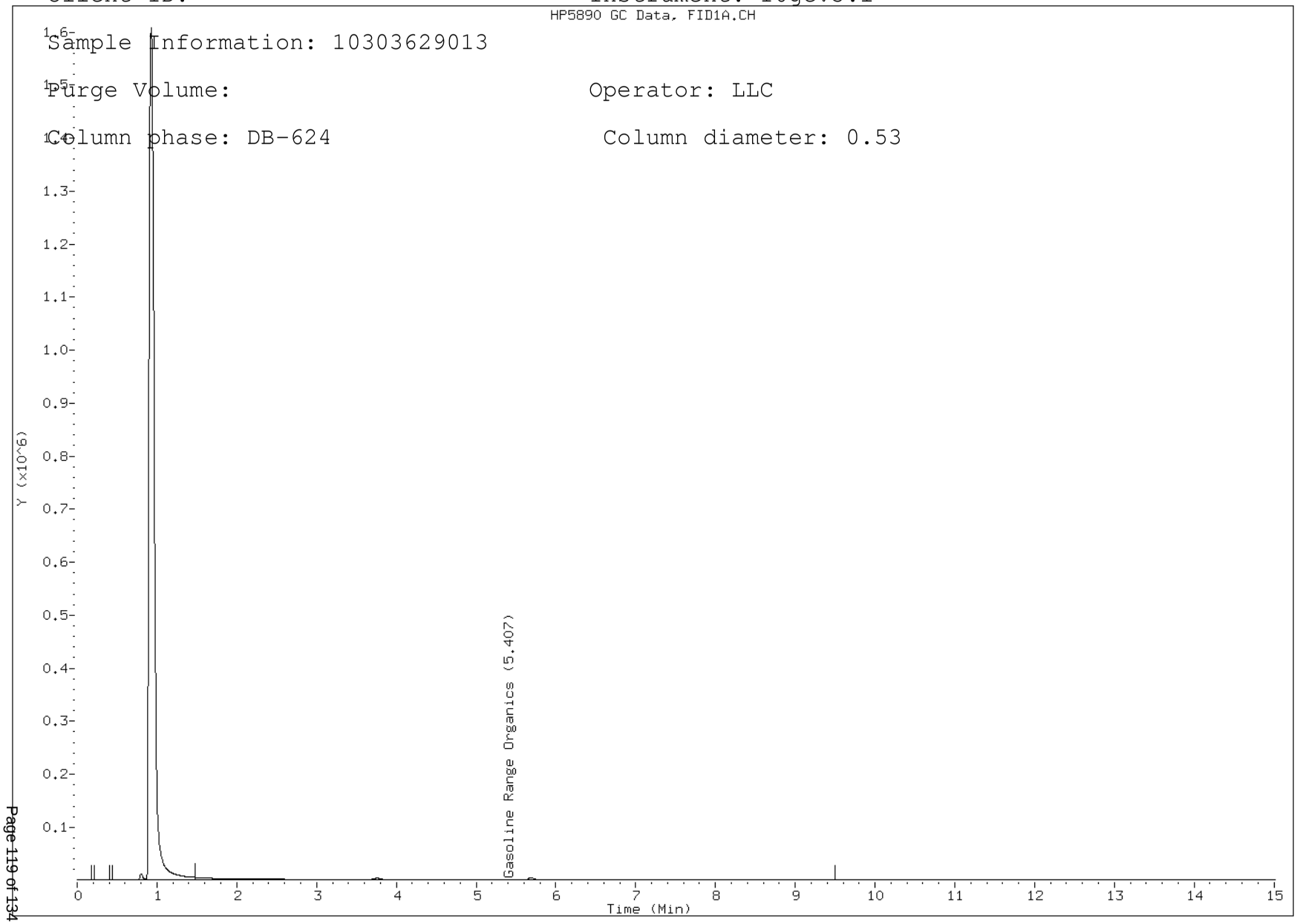
Sample ID: 10303629013

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629013

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042415a-2.b/1-114034.d

Report Date: 04/27/2015

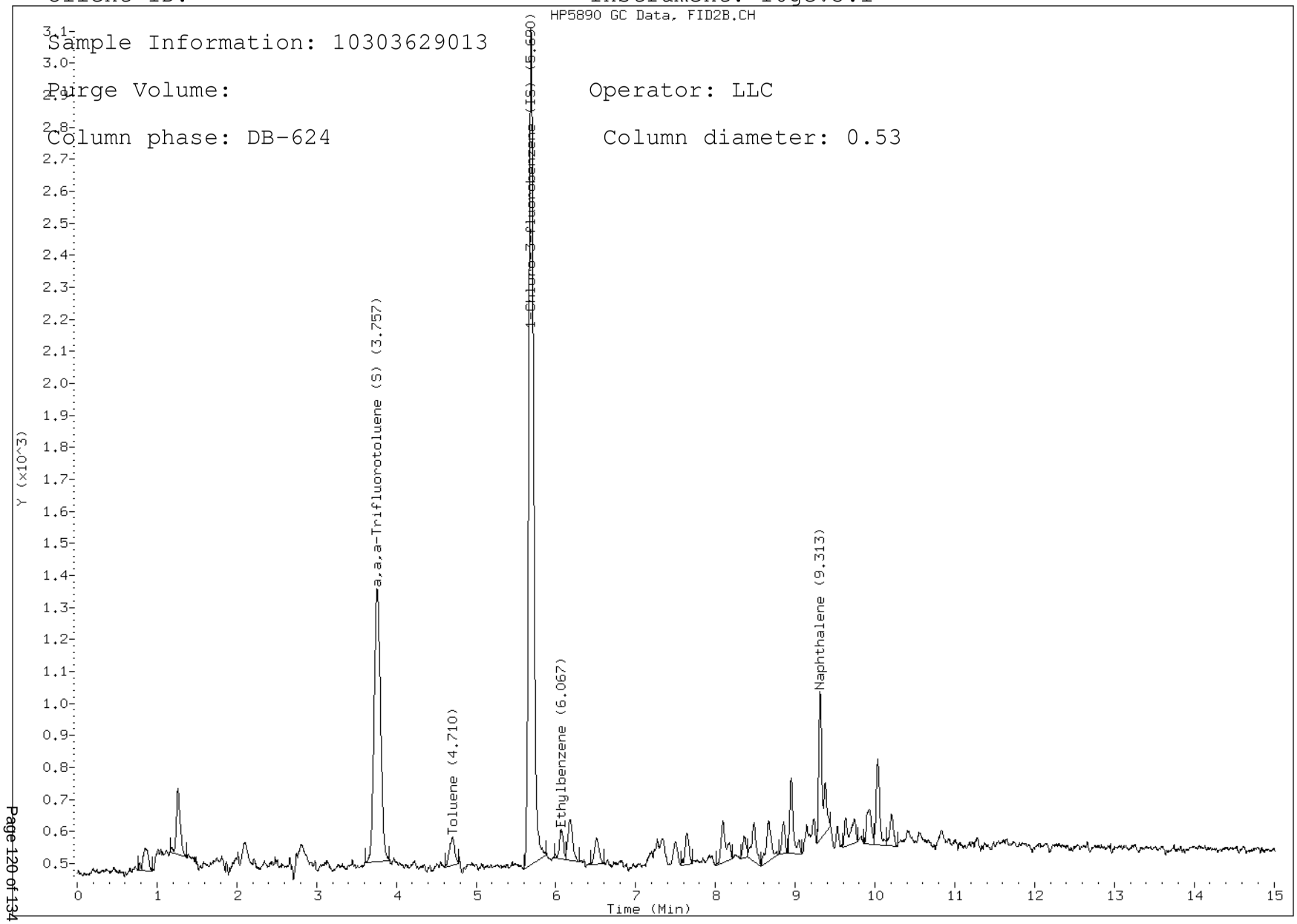
Sample ID: 10303629013

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629013

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042715a-1.b/1-117009.d

Report Date: 04/30/2015

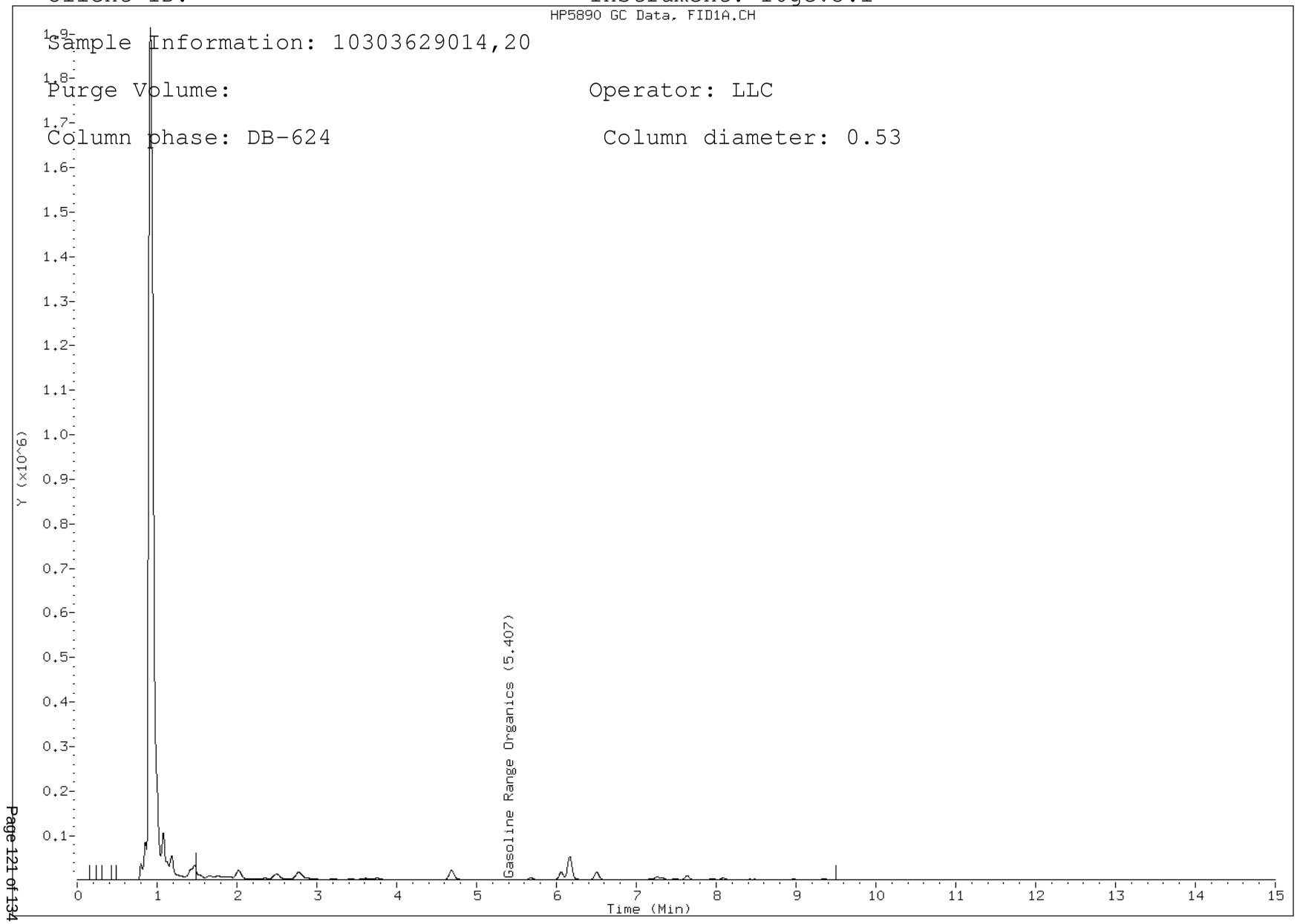
Sample ID: 10303629014

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629014,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042715a-2.b/1-117009.d

Report Date: 04/30/2015

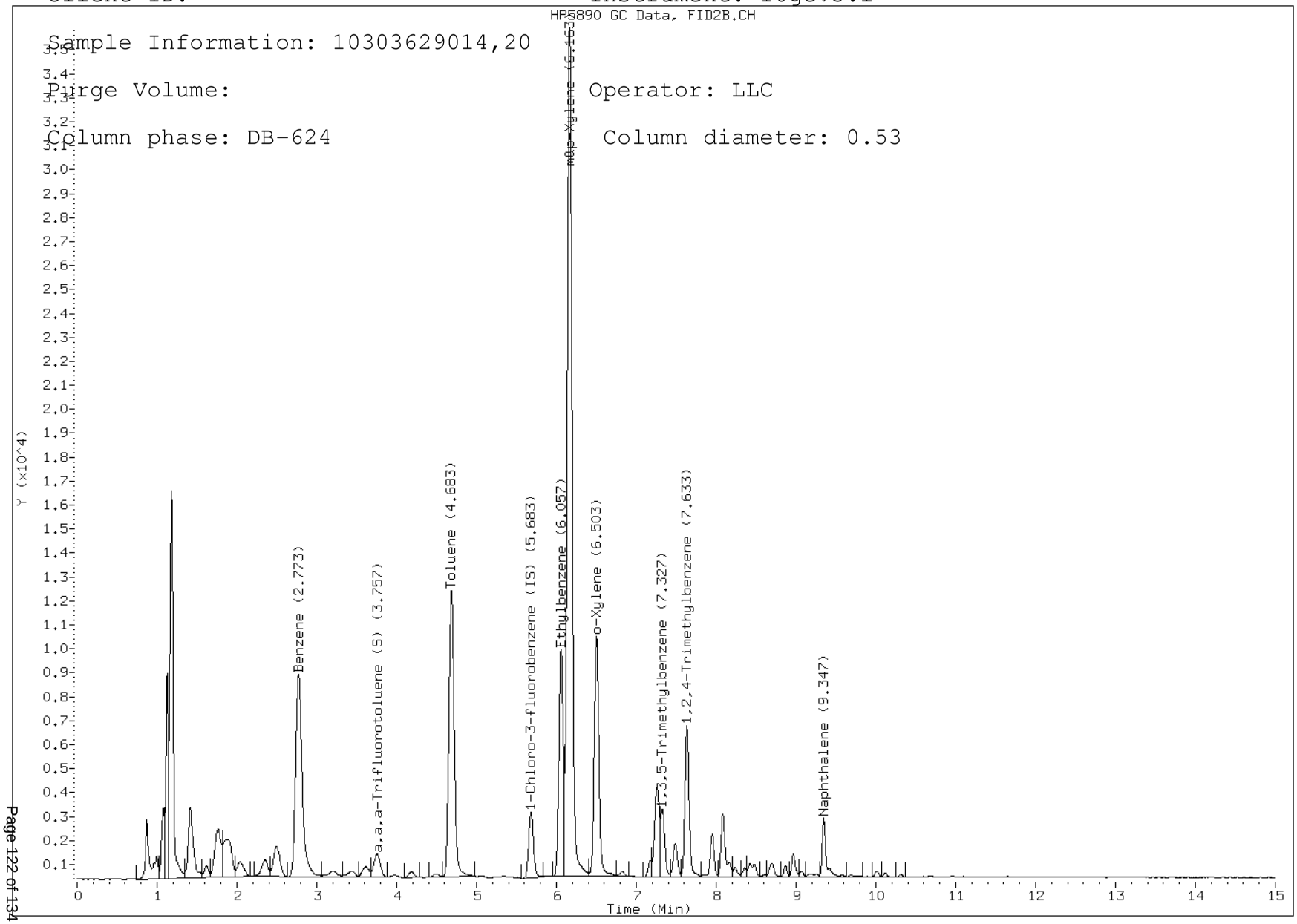
Sample ID: 10303629014

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629014,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042715a-1.b/1-117014.d

Report Date: 04/30/2015

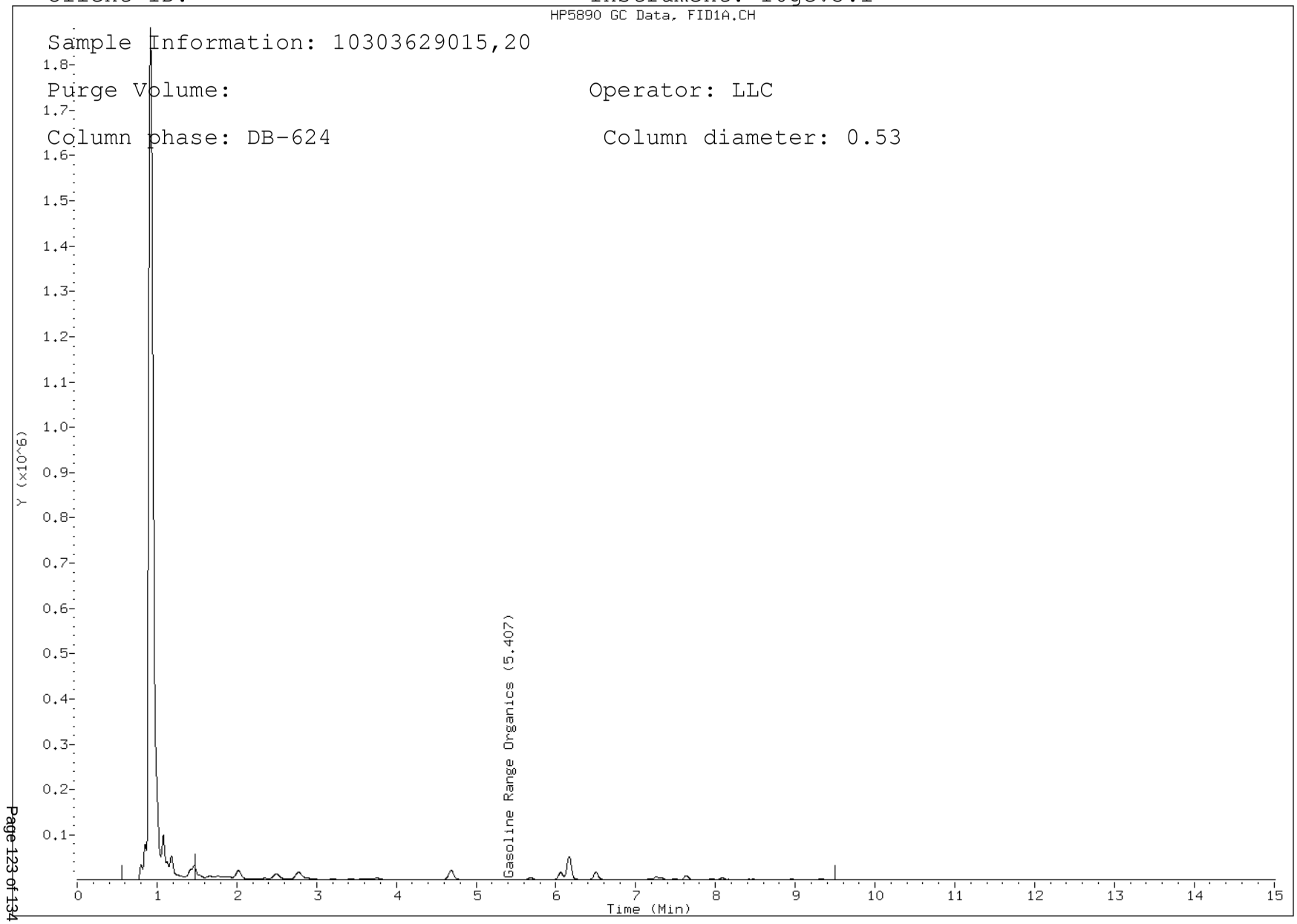
Sample ID: 10303629015

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629015,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042715a-2.b/1-117014.d

Report Date: 04/30/2015

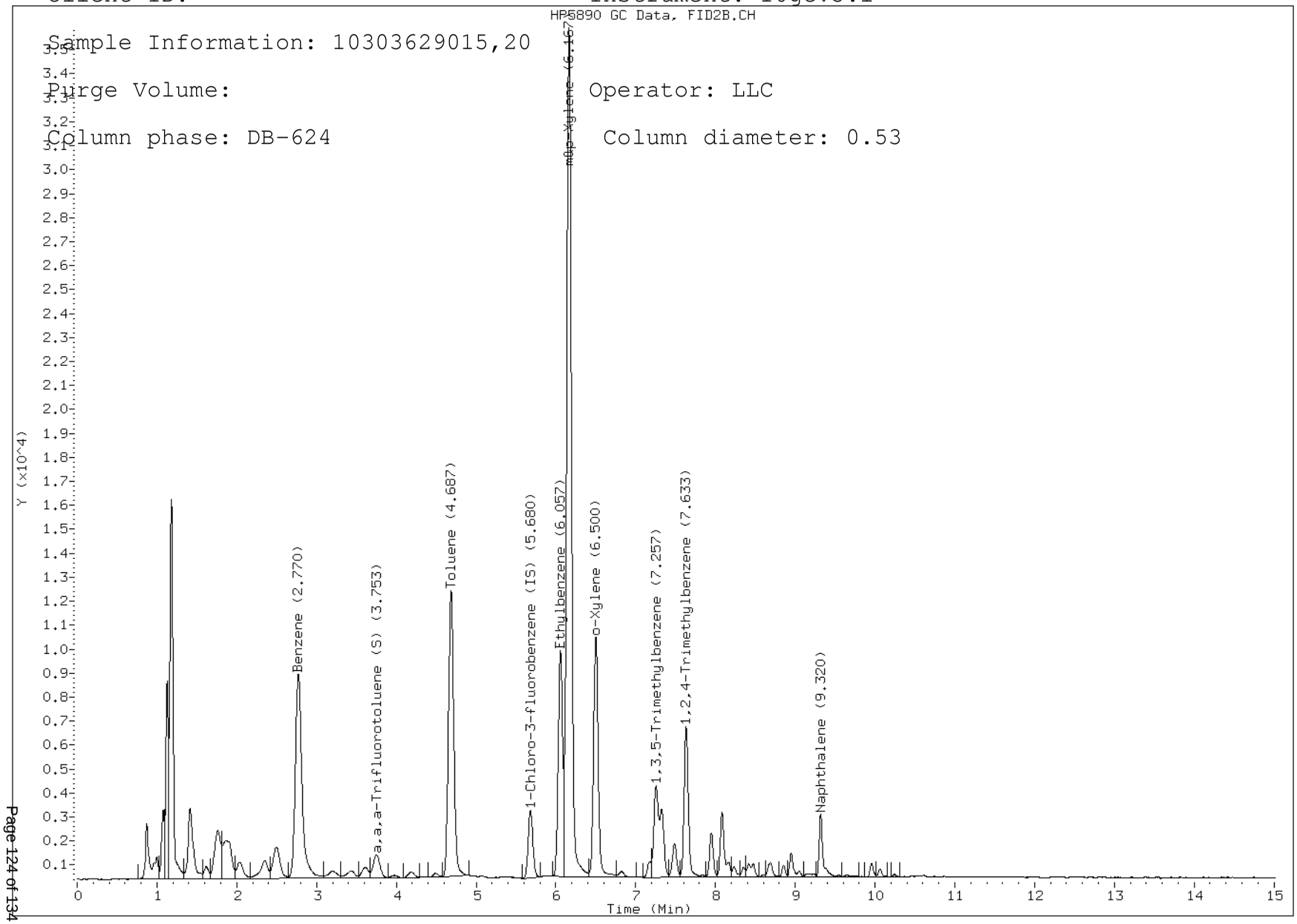
Sample ID: 10303629015

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629015,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042715a-1.b/1-117015.d

Report Date: 04/30/2015

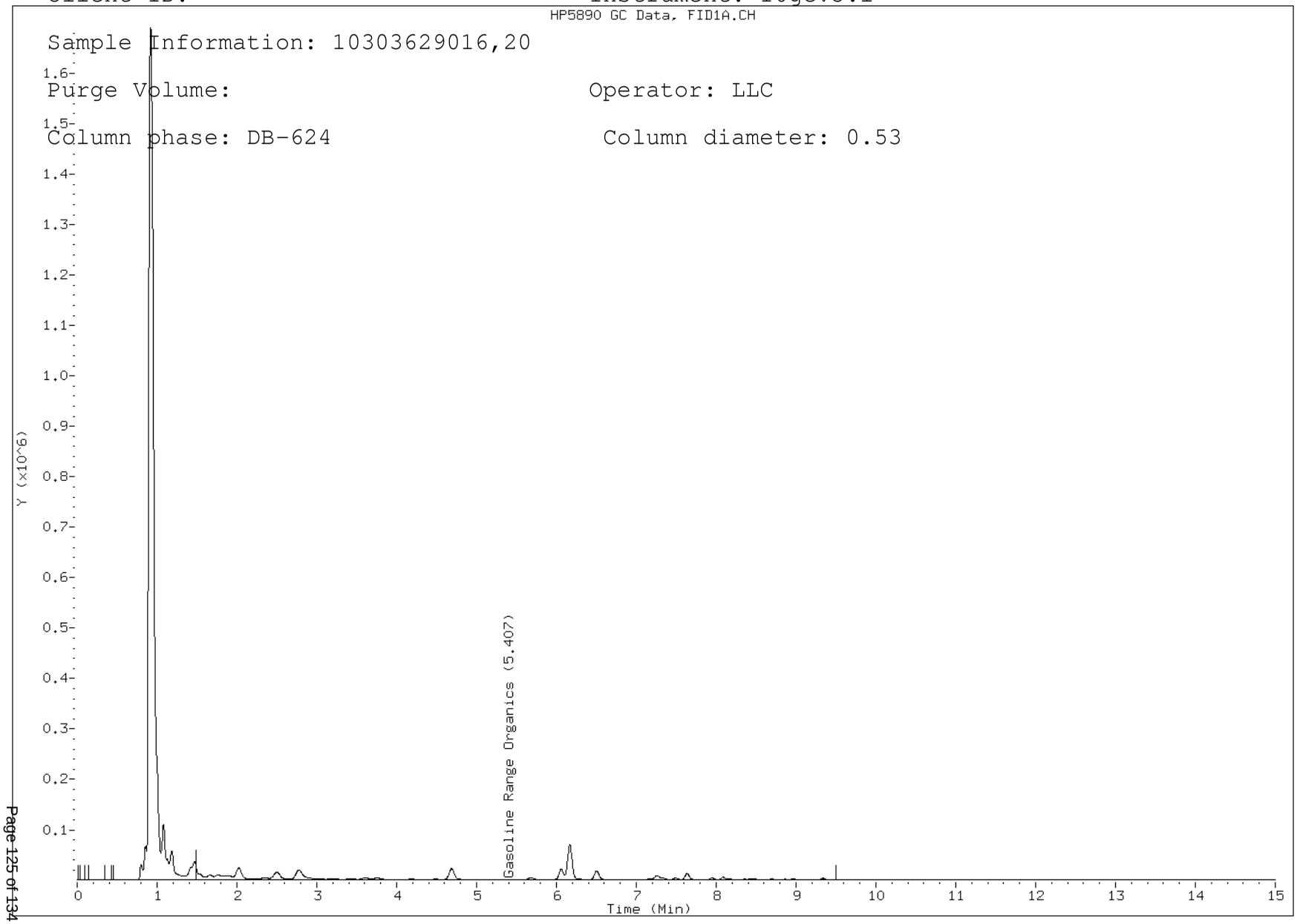
Sample ID: 10303629016

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629016,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042715a-2.b/1-117015.d

Report Date: 04/30/2015

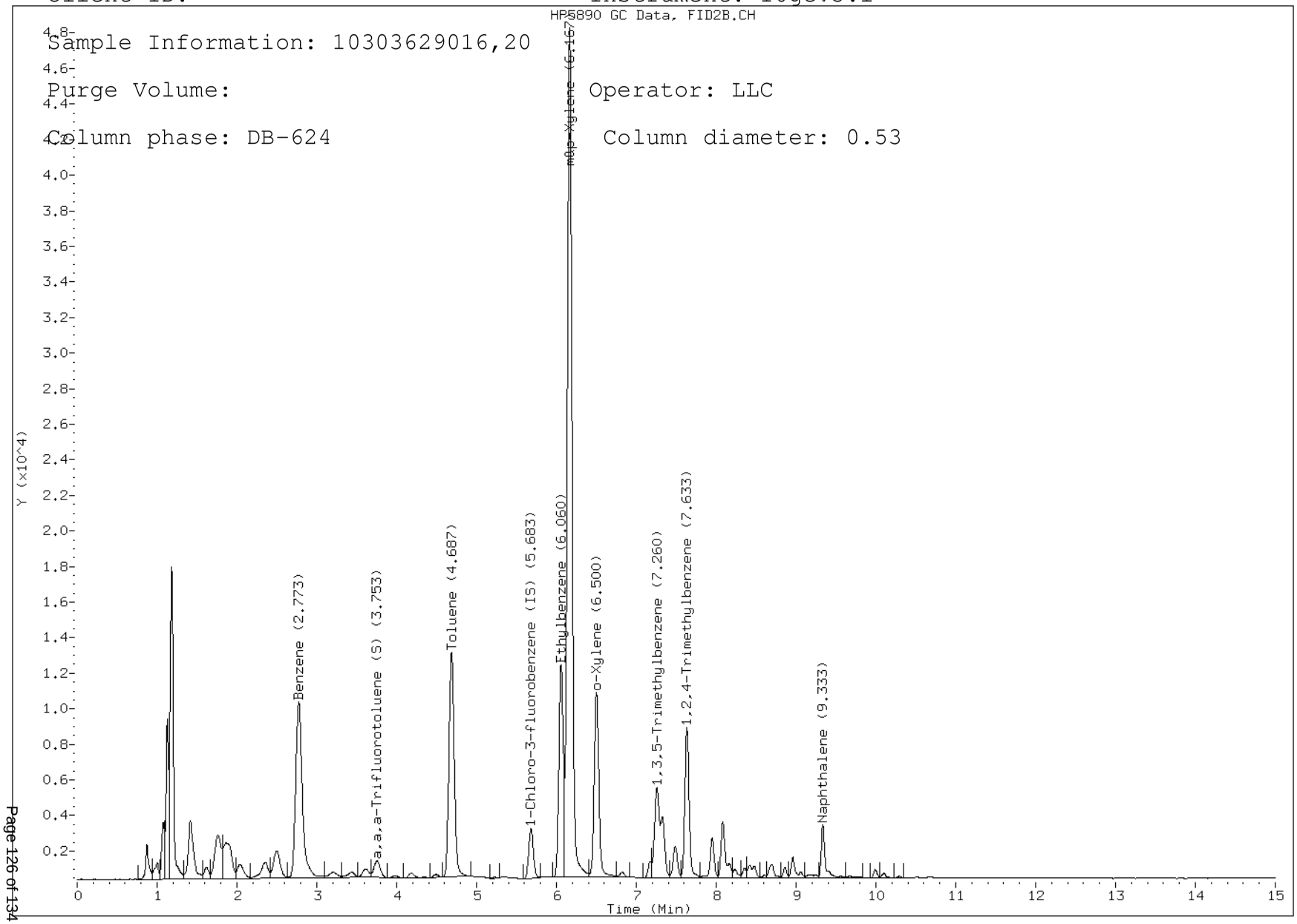
Sample ID: 10303629016

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629016,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042815a-1.b/1-118017.d

Report Date: 04/30/2015

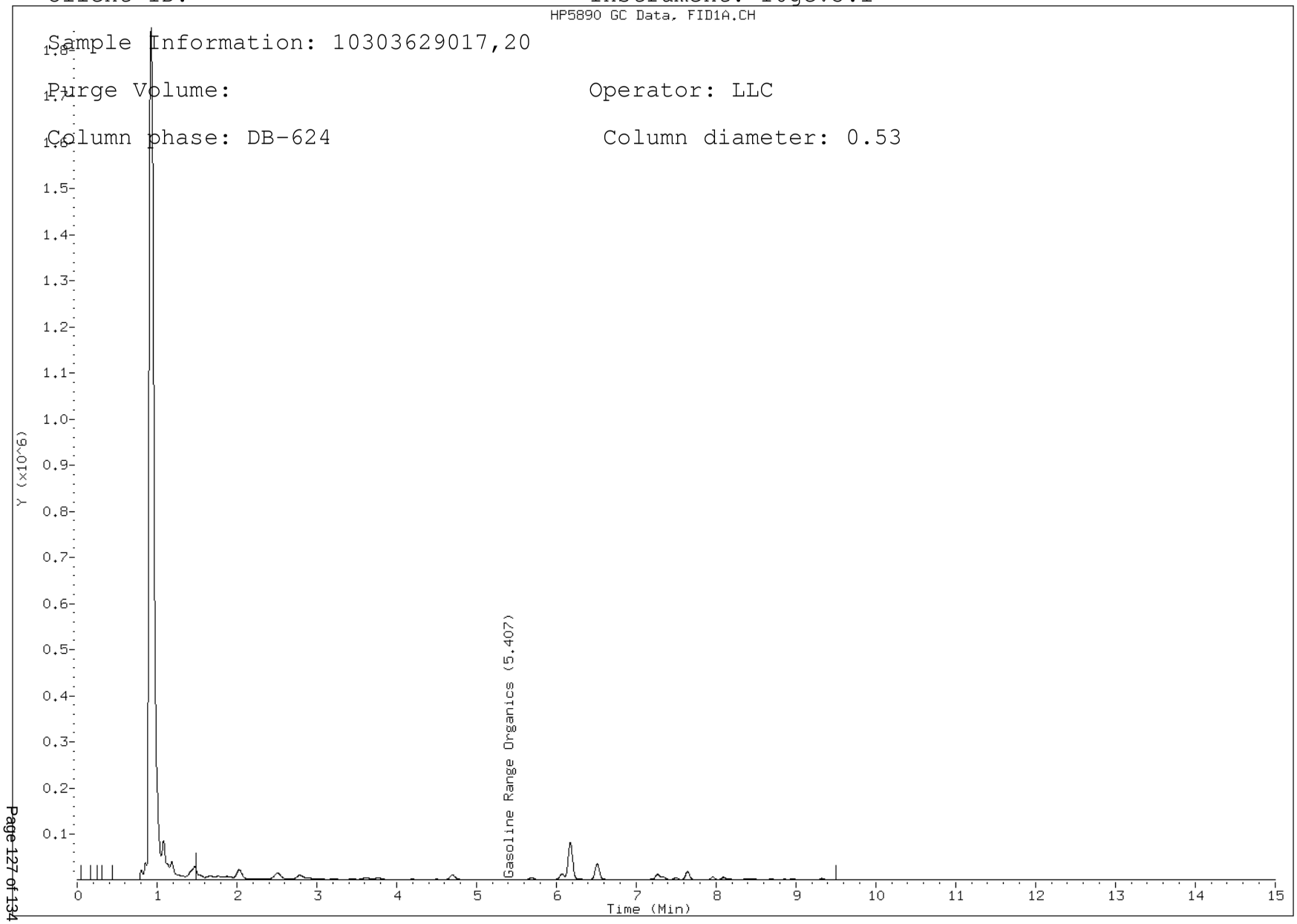
Sample ID: 10303629017

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629017,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042815a-2.b/1-118017.d

Report Date: 04/30/2015

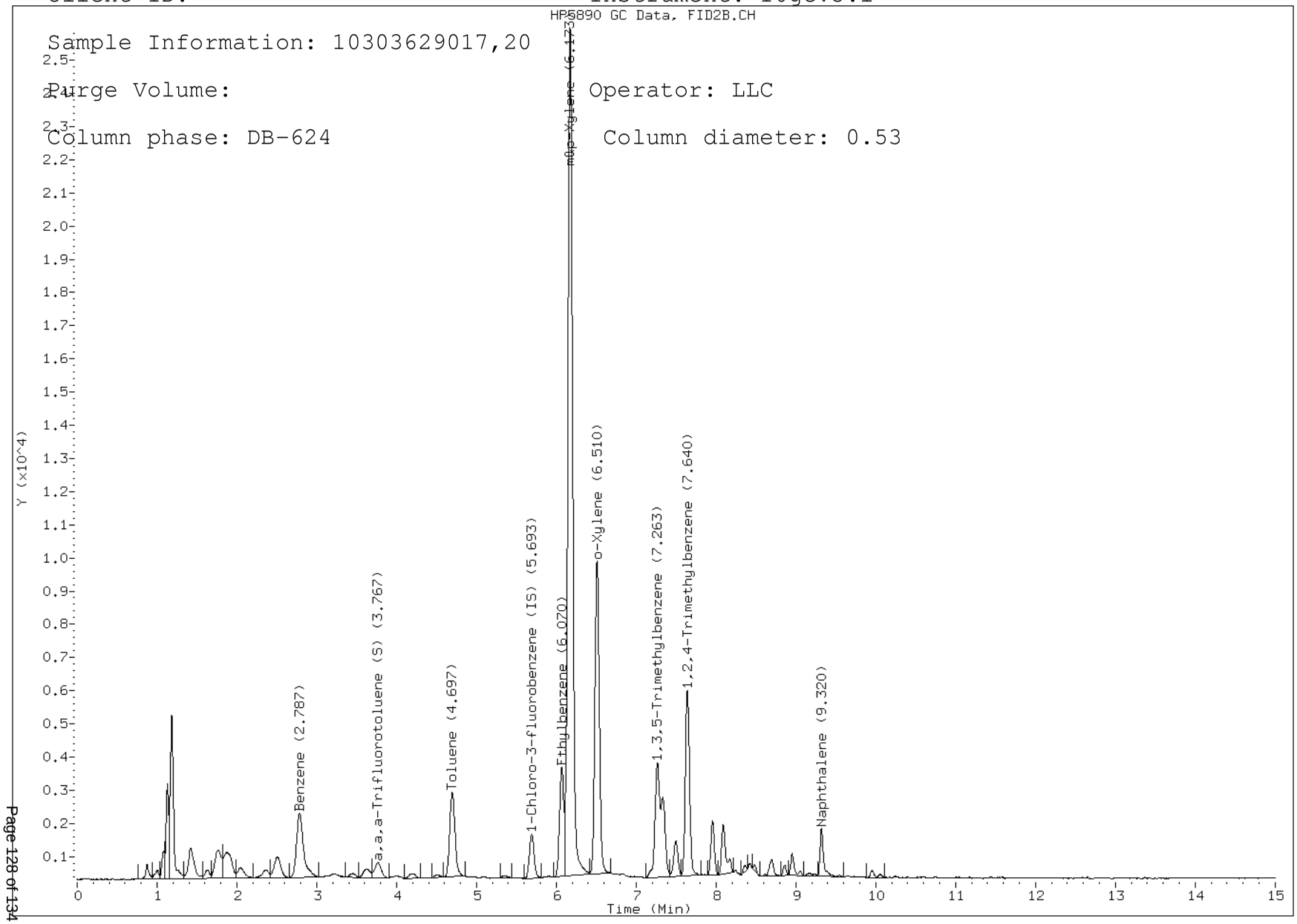
Sample ID: 10303629017

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629017,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53

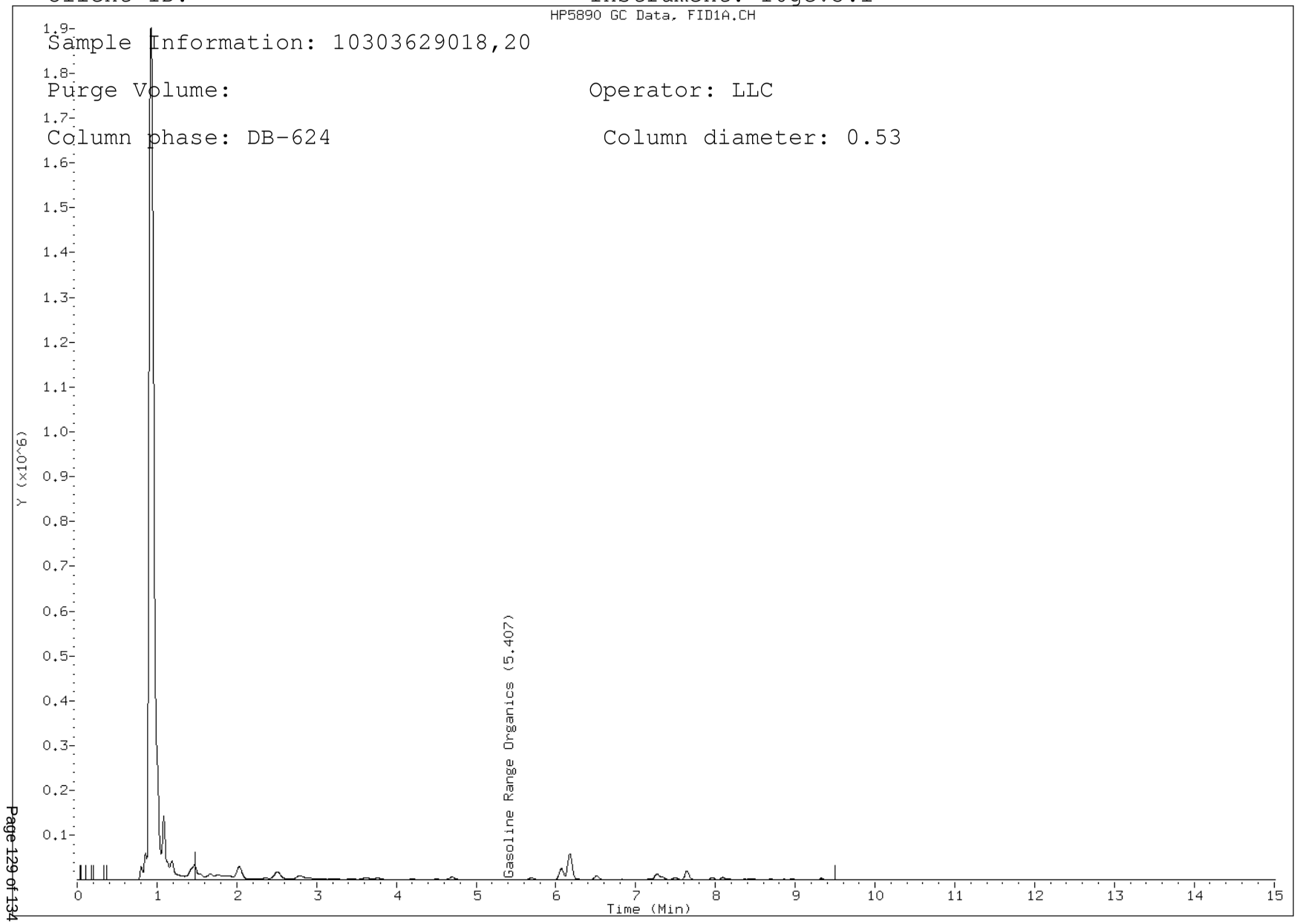


Data File: \\192.168.10.12\chem\10gcv3.i\042815a-1.b/1-118014.d

Report Date: 04/30/2015

Sample ID: 10303629018

Client ID: Instrument: 10gcv3.i



Sample Information: 10303629018,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\042815a-2.b/1-118014.d

Report Date: 04/30/2015

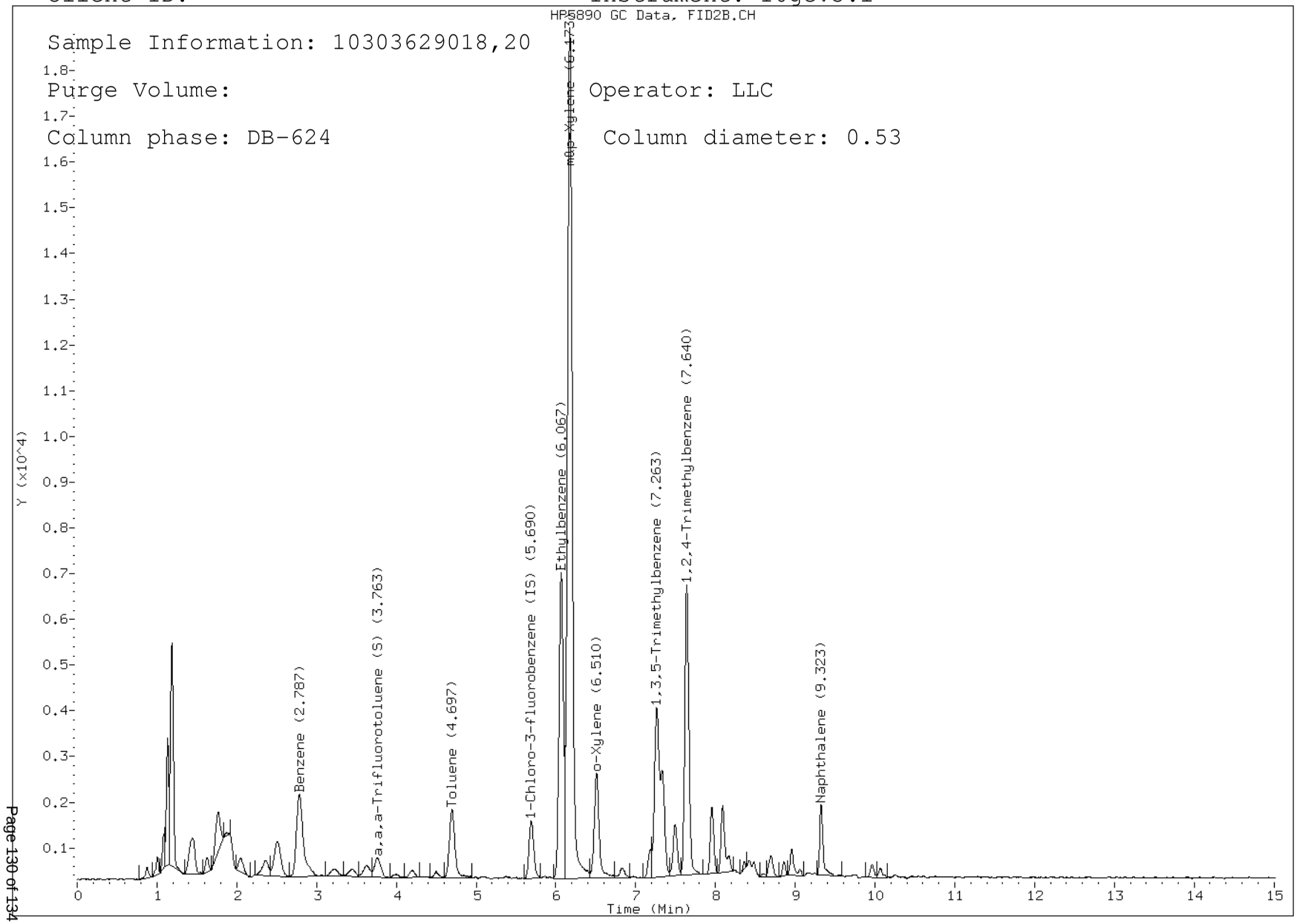
Sample ID: 10303629018

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629018,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042815a-1.b/1-118015.d

Report Date: 04/30/2015

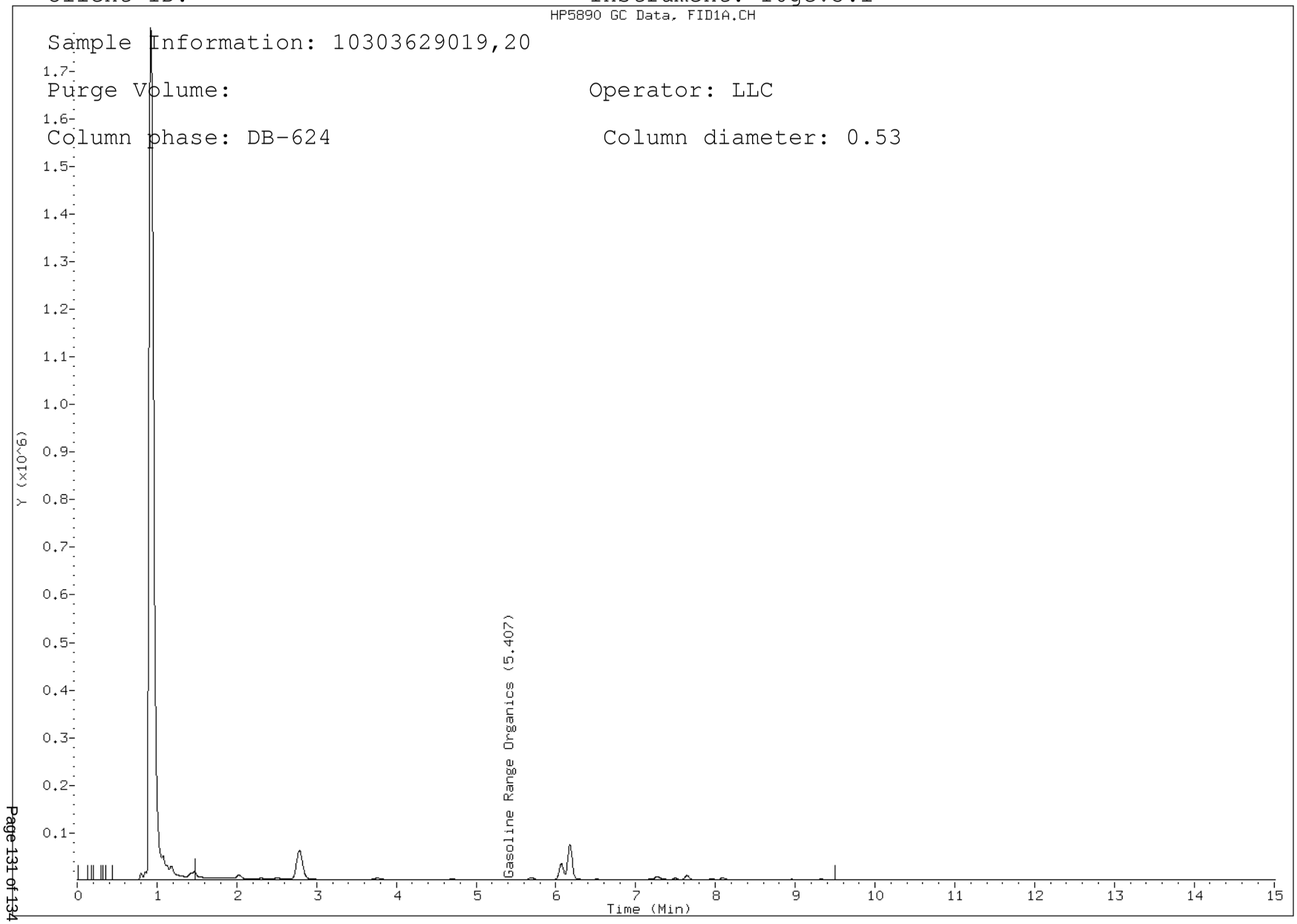
Sample ID: 10303629019

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629019,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042815a-2.b/1-118015.d

Report Date: 04/30/2015

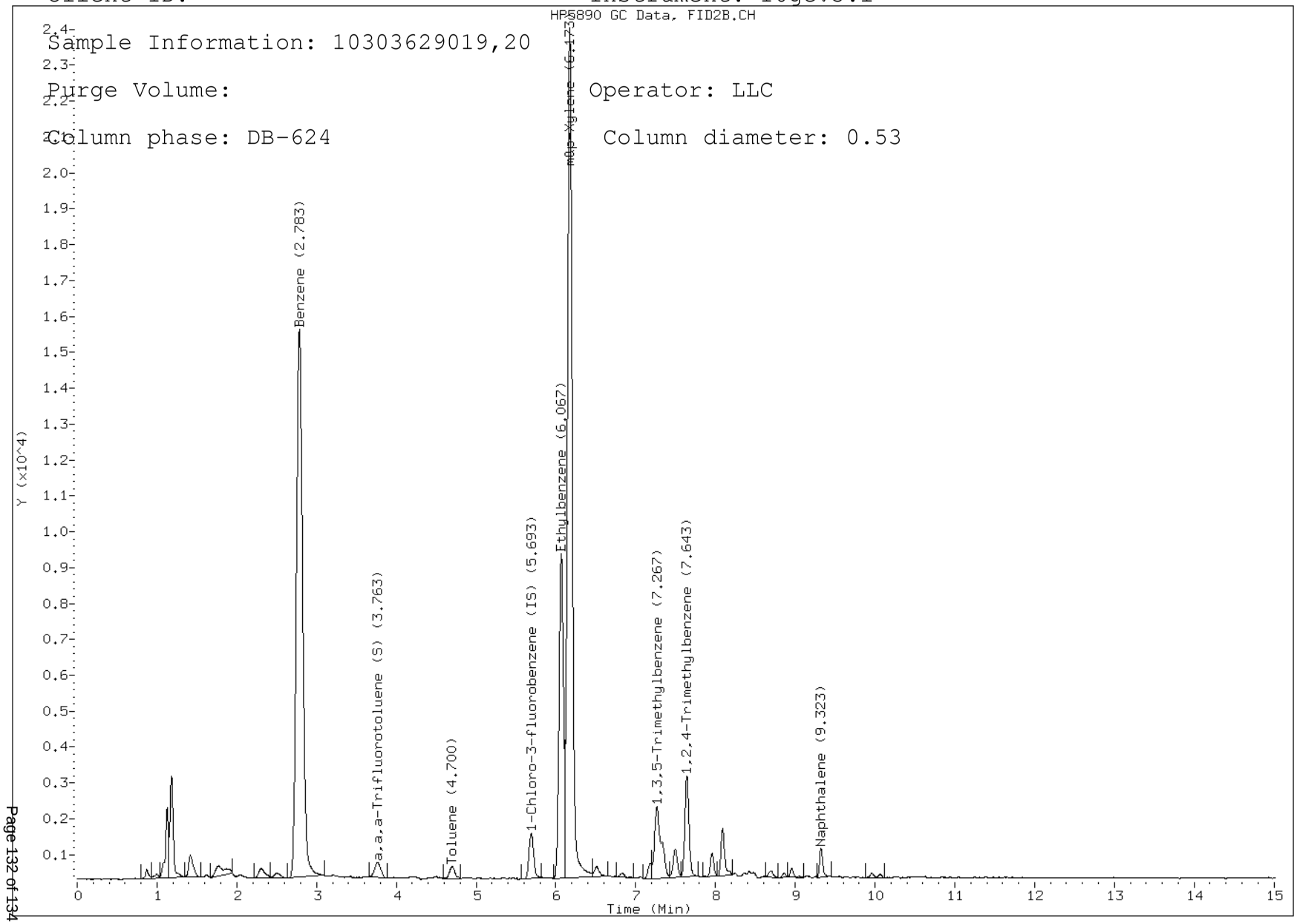
Sample ID: 10303629019

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629019,20

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042415a-1.b/1-114022.d

Report Date: 04/27/2015

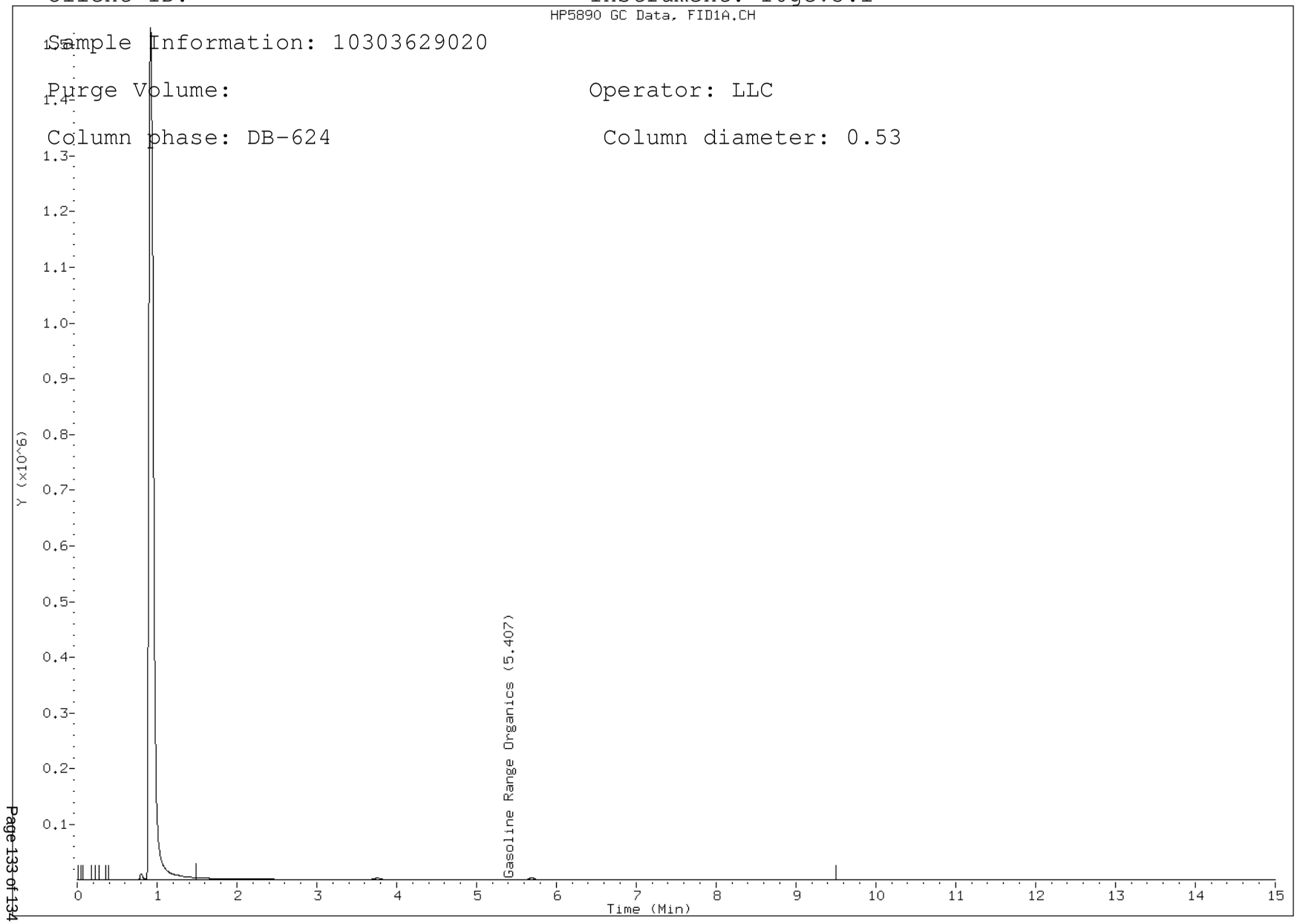
Sample ID: 10303629020

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629020

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\042415a-2.b/1-114022.d

Report Date: 04/27/2015

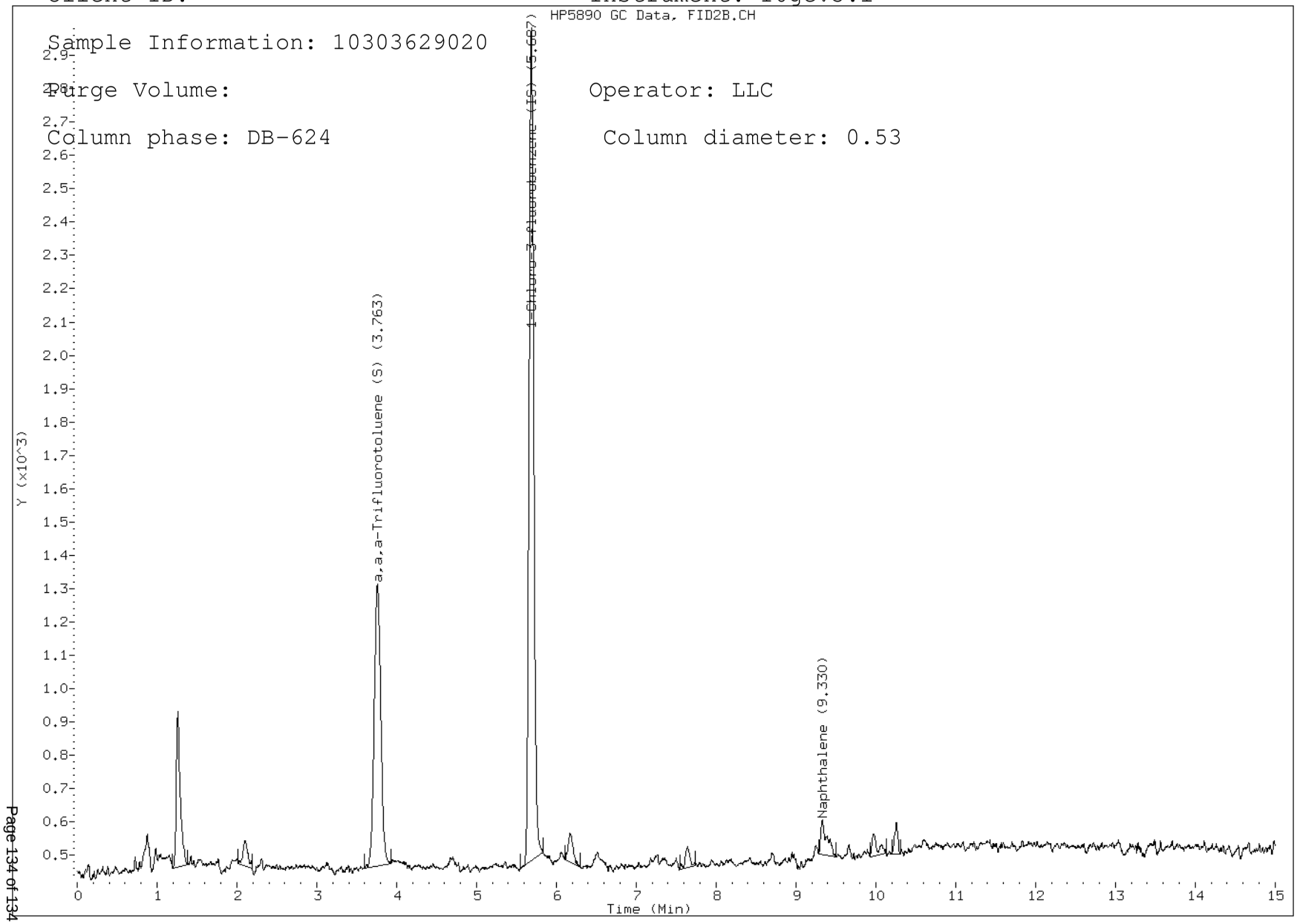
Sample ID: 10303629020

Client ID: Instrument: 10gcv3.i

Sample Information: 10303629020

Purge Volume: Operator: LLC

Column phase: DB-624 Column diameter: 0.53



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

October 23, 2015

Amanda Malaney
Bay West, Inc.
5 Empire Drive
Saint Paul, MN 55103

RE: Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Dear Amanda Malaney:
Enclosed are the analytical results for sample(s) received by the laboratory on September 30, 2015. 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,

Oyeyemi Odujole
oyeyemi.odujole@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Minnesota Certification IDs

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

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

SAMPLE SUMMARY

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10324390001	**MW-21**	Water	09/28/15 12:30	09/30/15 19:08
10324390002	**RW-5**	Water	09/28/15 13:45	09/30/15 19:08
10324390003	**RW-1**	Water	09/28/15 14:50	09/30/15 19:08
10324390004	**MW-22**	Water	09/28/15 15:45	09/30/15 19:08
10324390005	**FB-1**	Water	09/29/15 08:35	09/30/15 19:08
10324390006	**MW-19**	Water	09/29/15 09:25	09/30/15 19:08
10324390007	**MW-17**	Water	09/29/15 10:45	09/30/15 19:08
10324390008	**RW-6**	Water	09/29/15 11:45	09/30/15 19:08
10324390009	**MW-18**	Water	09/29/15 13:00	09/30/15 19:08
10324390010	**MW-20**	Water	09/29/15 14:15	09/30/15 19:08
10324390011	**MW-23**	Water	09/29/15 15:45	09/30/15 19:08
10324390012	**FB-2**	Water	09/30/15 08:30	09/30/15 19:08
10324390013	**RW-2**	Water	09/30/15 09:35	09/30/15 19:08
10324390014	**MW-12**	Water	09/30/15 10:45	09/30/15 19:08
10324390015	**MW-13**	Water	09/30/15 12:05	09/30/15 19:08
10324390016	**RW-3**	Water	09/30/15 14:10	09/30/15 19:08
10324390017	**TRIP BLANK**	Water	09/30/15 00:00	09/30/15 19:08

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10324390001	**MW-21**	WI MOD DRO	JRH	2
		WI MOD GRO	LPM	2
		EPA 8260B	AEJ	8
10324390002	**RW-5**	WI MOD DRO	JRH	2
		WI MOD GRO	AEJ, LPM, RTP	2
		EPA 8260B	AEJ	8
10324390003	**RW-1**	WI MOD DRO	JRH	2
		WI MOD GRO	LPM	2
		EPA 8260B	AEJ	8
10324390004	**MW-22**	WI MOD DRO	JRH	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8
10324390005	**FB-1**	WI MOD DRO	JRH	2
		WI MOD GRO	LPM	2
		EPA 8260B	AEJ	8
10324390006	**MW-19**	WI MOD DRO	JRH	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8
10324390007	**MW-17**	WI MOD DRO	JRH	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8
10324390008	**RW-6**	WI MOD DRO	JRH	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8
10324390009	**MW-18**	WI MOD DRO	JRH	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8
10324390010	**MW-20**	WI MOD DRO	JRH	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8
10324390011	**MW-23**	WI MOD DRO	JRH	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8
10324390012	**FB-2**	WI MOD DRO	MT	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8

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SAMPLE ANALYTE COUNT

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10324390013	**RW-2**	WI MOD DRO	MT	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8
10324390014	**MW-12**	WI MOD DRO	MT	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8
10324390015	**MW-13**	WI MOD DRO	MT	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8
10324390016	**RW-3**	WI MOD DRO	MT	2
		WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AH2	8
10324390017	**TRIP BLANK**	WI MOD GRO	AEJ, RTP	2
		EPA 8260B	AEJ	8

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Method: **WI MOD DRO**
Description: WIDRO GCS
Client: Bay West, Inc.
Date: October 23, 2015

General Information:
16 samples were analyzed for WI MOD DRO. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with WI MOD DRO with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: OEXT/31091

S4: Surrogate recovery not evaluated against control limits due to sample dilution.
- RW-3 (Lab ID: 10324390016)
  - n-Triacontane (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: OEXT/31064

T6: High boiling point hydrocarbons are present in the sample.
- MW-22 (Lab ID: 10324390004)
  - WDRO C10-C28

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Method: **WI MOD DRO**
Description: WIDRO GCS
Client: Bay West, Inc.
Date: October 23, 2015

Analyte Comments:

QC Batch: OEXT/31091

T7: Low boiling point hydrocarbons are present in the sample.

- MW-12 (Lab ID: 10324390014)
  - WDRO C10-C28
- MW-13 (Lab ID: 10324390015)
  - WDRO C10-C28
- RW-3 (Lab ID: 10324390016)
  - WDRO C10-C28

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Method: **WI MOD GRO**
Description: WIGRO GCV
Client: Bay West, Inc.
Date: October 23, 2015

General Information:
17 samples were analyzed for WI MOD GRO. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Method: **EPA 8260B**
Description: 8260B MSV UST
Client: Bay West, Inc.
Date: October 23, 2015

General Information:
17 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/33399

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10323825008

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2104995)
  - Methyl-tert-butyl ether

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: MW-21 **Lab ID: 10324390001** Collected: 09/28/15 12:30 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.037	1	10/02/15 09:33	10/05/15 10:07		
Surrogates									
n-Triacontane (S)	77	%.	50-150		1	10/02/15 09:33	10/05/15 10:07	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	18.0	1		10/05/15 14:23		
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%.	80-150		1		10/05/15 14:23	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	ND	ug/L	1.0	0.21	1		10/09/15 19:32	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		10/09/15 19:32	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/09/15 19:32	1634-04-4	
Toluene	ND	ug/L	1.0	0.13	1		10/09/15 19:32	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/09/15 19:32	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	108	%.	75-125		1		10/09/15 19:32	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1		10/09/15 19:32	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		10/09/15 19:32	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: RW-5 **Lab ID: 10324390002** Collected: 09/28/15 13:45 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.34**	mg/L	0.11	0.037	1	10/02/15 09:33	10/05/15 10:15		
Surrogates									
n-Triacontane (S)	78	%.	50-150		1	10/02/15 09:33	10/05/15 10:15	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**147**	ug/L	100	42.0	1		10/07/15 17:41		
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%.	80-150		1		10/07/15 17:41	98-08-8	
a,a,a-Trifluorotoluene (S)	94	%.	80-150		1		10/05/15 21:29	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**5.4**	ug/L	5.0	1.1	5		10/09/15 21:09	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1.1	5		10/09/15 21:09	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.0	5		10/09/15 21:09	1634-04-4	
Toluene	ND	ug/L	5.0	0.67	5		10/09/15 21:09	108-88-3	
Xylene (Total)	ND	ug/L	15.0	3.0	5		10/09/15 21:09	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	75-125		5		10/09/15 21:09	17060-07-0	
Toluene-d8 (S)	104	%.	75-125		5		10/09/15 21:09	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		5		10/09/15 21:09	460-00-4	

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: RW-1 **Lab ID: 10324390003** Collected: 09/28/15 14:50 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.035	1	10/02/15 09:33	10/05/15 10:23		
Surrogates									
n-Triacontane (S)	77	%.	50-150		1	10/02/15 09:33	10/05/15 10:23	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	18.0	1		10/05/15 15:11		
Surrogates									
a,a,a-Trifluorotoluene (S)	96	%.	80-150		1		10/05/15 15:11	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	ND	ug/L	1.0	0.21	1		10/09/15 20:04	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		10/09/15 20:04	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/09/15 20:04	1634-04-4	
Toluene	ND	ug/L	1.0	0.13	1		10/09/15 20:04	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/09/15 20:04	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%.	75-125		1		10/09/15 20:04	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1		10/09/15 20:04	2037-26-5	
4-Bromofluorobenzene (S)	105	%.	75-125		1		10/09/15 20:04	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: MW-22 **Lab ID: 10324390004** Collected: 09/28/15 15:45 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.96**	mg/L	0.11	0.037	1	10/05/15 15:59	10/12/15 09:15		T6
Surrogates									
n-Triacontane (S)	80	%.	50-150		1	10/05/15 15:59	10/12/15 09:15	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	42.0	1		10/07/15 18:04		
Surrogates									
a,a,a-Trifluorotoluene (S)	100	%.	80-150		1		10/07/15 18:04	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	ND	ug/L	1.0	0.21	1		10/09/15 19:15	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		10/09/15 19:15	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/09/15 19:15	1634-04-4	
Toluene	ND	ug/L	1.0	0.13	1		10/09/15 19:15	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/09/15 19:15	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	109	%.	75-125		1		10/09/15 19:15	17060-07-0	
Toluene-d8 (S)	104	%.	75-125		1		10/09/15 19:15	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		10/09/15 19:15	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: FB-1 **Lab ID: 10324390005** Collected: 09/29/15 08:35 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.036	1	10/06/15 12:00	10/11/15 12:41		
Surrogates									
n-Triacontane (S)	79	%.	50-150		1	10/06/15 12:00	10/11/15 12:41	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	42.0	1		10/05/15 23:09		
Surrogates									
a,a,a-Trifluorotoluene (S)	96	%.	80-150		1		10/05/15 23:09	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	ND	ug/L	1.0	0.21	1		10/13/15 18:19	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		10/13/15 18:19	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/13/15 18:19	1634-04-4	
Toluene	ND	ug/L	1.0	0.13	1		10/13/15 18:19	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/13/15 18:19	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	75-125		1		10/13/15 18:19	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1		10/13/15 18:19	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		10/13/15 18:19	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: MW-19 **Lab ID: 10324390006** Collected: 09/29/15 09:25 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.036	1	10/06/15 12:00	10/11/15 12:49		
Surrogates									
n-Triacontane (S)	75	%.	50-150		1	10/06/15 12:00	10/11/15 12:49	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**122**	ug/L	100	42.0	1		10/07/15 18:48		
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%.	80-150		1		10/07/15 18:48	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**6.6**	ug/L	1.0	0.21	1		10/13/15 18:35	71-43-2	
Ethylbenzene	**5.7**	ug/L	1.0	0.23	1		10/13/15 18:35	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/13/15 18:35	1634-04-4	
Toluene	**1.3**	ug/L	1.0	0.13	1		10/13/15 18:35	108-88-3	
Xylene (Total)	**8.3**	ug/L	3.0	0.60	1		10/13/15 18:35	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	75-125		1		10/13/15 18:35	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		1		10/13/15 18:35	2037-26-5	
4-Bromofluorobenzene (S)	104	%.	75-125		1		10/13/15 18:35	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: MW-17 **Lab ID: 10324390007** Collected: 09/29/15 10:45 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.036	1	10/06/15 12:00	10/11/15 12:57		
Surrogates									
n-Triacontane (S)	78	%.	50-150		1	10/06/15 12:00	10/11/15 12:57	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**309**	ug/L	100	42.0	1		10/07/15 19:12		
Surrogates									
a,a,a-Trifluorotoluene (S)	133	%.	80-150		1		10/07/15 19:12	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**18.7**	ug/L	1.0	0.21	1		10/13/15 18:52	71-43-2	
Ethylbenzene	**3.3**	ug/L	1.0	0.23	1		10/13/15 18:52	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/13/15 18:52	1634-04-4	
Toluene	ND	ug/L	1.0	0.13	1		10/13/15 18:52	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/13/15 18:52	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	75-125		1		10/13/15 18:52	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		1		10/13/15 18:52	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		10/13/15 18:52	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: RW-6 **Lab ID: 10324390008** Collected: 09/29/15 11:45 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.58**	mg/L	0.11	0.036	1	10/06/15 12:00	10/11/15 11:38		
Surrogates									
n-Triacontane (S)	71	%.	50-150		1	10/06/15 12:00	10/11/15 11:38	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**565**	ug/L	100	42.0	1		10/07/15 19:34		
Surrogates									
a,a,a-Trifluorotoluene (S)	106	%.	80-150		1		10/07/15 19:34	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**29.7**	ug/L	1.0	0.21	1		10/13/15 19:08	71-43-2	
Ethylbenzene	**2.5**	ug/L	1.0	0.23	1		10/13/15 19:08	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/13/15 19:08	1634-04-4	
Toluene	ND	ug/L	1.0	0.13	1		10/13/15 19:08	108-88-3	
Xylene (Total)	**48.5**	ug/L	3.0	0.60	1		10/13/15 19:08	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	75-125		1		10/13/15 19:08	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1		10/13/15 19:08	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		10/13/15 19:08	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: MW-18 **Lab ID: 10324390009** Collected: 09/29/15 13:00 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.17**	mg/L	0.11	0.035	1	10/06/15 12:00	10/11/15 13:13		
Surrogates									
n-Triacontane (S)	78	%.	50-150		1	10/06/15 12:00	10/11/15 13:13	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**759**	ug/L	100	42.0	1		10/07/15 19:57		
Surrogates									
a,a,a-Trifluorotoluene (S)	140	%.	80-150		1		10/07/15 19:57	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**1.3**	ug/L	1.0	0.21	1		10/13/15 19:24	71-43-2	
Ethylbenzene	**4.7**	ug/L	1.0	0.23	1		10/13/15 19:24	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/13/15 19:24	1634-04-4	
Toluene	ND	ug/L	1.0	0.13	1		10/13/15 19:24	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/13/15 19:24	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	75-125		1		10/13/15 19:24	17060-07-0	
Toluene-d8 (S)	104	%.	75-125		1		10/13/15 19:24	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		10/13/15 19:24	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: MW-20 **Lab ID: 10324390010** Collected: 09/29/15 14:15 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.035	1	10/06/15 12:00	10/11/15 13:20		
Surrogates									
n-Triacontane (S)	82	%.	50-150		1	10/06/15 12:00	10/11/15 13:20	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**121**	ug/L	100	42.0	1		10/07/15 20:20		
Surrogates									
a,a,a-Trifluorotoluene (S)	145	%.	80-150		1		10/07/15 20:20	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	ND	ug/L	1.0	0.21	1		10/13/15 16:25	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		10/13/15 16:25	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/13/15 16:25	1634-04-4	
Toluene	ND	ug/L	1.0	0.13	1		10/13/15 16:25	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/13/15 16:25	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%.	75-125		1		10/13/15 16:25	17060-07-0	
Toluene-d8 (S)	101	%.	75-125		1		10/13/15 16:25	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		10/13/15 16:25	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: MW-23 **Lab ID: 10324390011** Collected: 09/29/15 15:45 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.036	1	10/06/15 12:00	10/11/15 10:59		
Surrogates									
n-Triacontane (S)	80	%.	50-150		1	10/06/15 12:00	10/11/15 10:59	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	18.0	1		10/07/15 15:49		
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%.	80-150		1		10/07/15 15:49	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	ND	ug/L	1.0	0.21	1		10/12/15 21:18	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		10/12/15 21:18	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/12/15 21:18	1634-04-4	
Toluene	ND	ug/L	1.0	0.13	1		10/12/15 21:18	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/12/15 21:18	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	113	%.	75-125		1		10/12/15 21:18	17060-07-0	
Toluene-d8 (S)	104	%.	75-125		1		10/12/15 21:18	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		10/12/15 21:18	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: FB-2 **Lab ID: 10324390012** Collected: 09/30/15 08:30 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.036	1	10/07/15 10:27	10/08/15 12:34		
Surrogates									
n-Triacontane (S)	77	%.	50-150		1	10/07/15 10:27	10/08/15 12:34	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	18.0	1		10/07/15 21:44		
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%.	80-150		1		10/07/15 21:44	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	ND	ug/L	1.0	0.21	1		10/13/15 16:42	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		10/13/15 16:42	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/13/15 16:42	1634-04-4	
Toluene	ND	ug/L	1.0	0.13	1		10/13/15 16:42	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/13/15 16:42	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	107	%.	75-125		1		10/13/15 16:42	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1		10/13/15 16:42	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		1		10/13/15 16:42	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: RW-2 **Lab ID: 10324390013** Collected: 09/30/15 09:35 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.31**	mg/L	0.11	0.035	1	10/07/15 10:27	10/08/15 11:32		
Surrogates									
n-Triacontane (S)	77	%.	50-150		1	10/07/15 10:27	10/08/15 11:32	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**469**	ug/L	100	18.0	1		10/07/15 16:13		
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%.	80-150		1		10/07/15 16:13	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**66.9**	ug/L	1.0	0.21	1		10/12/15 21:34	71-43-2	
Ethylbenzene	**19.8**	ug/L	1.0	0.23	1		10/12/15 21:34	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/12/15 21:34	1634-04-4	
Toluene	**5.3**	ug/L	1.0	0.13	1		10/12/15 21:34	108-88-3	
Xylene (Total)	**25.4**	ug/L	3.0	0.60	1		10/12/15 21:34	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	112	%.	75-125		1		10/12/15 21:34	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1		10/12/15 21:34	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		10/12/15 21:34	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: MW-12 **Lab ID: 10324390014** Collected: 09/30/15 10:45 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.84**	mg/L	0.11	0.036	1	10/07/15 10:27	10/08/15 12:03		T7
Surrogates									
n-Triacontane (S)	80	%.	50-150		1	10/07/15 10:27	10/08/15 12:03	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**2460**	ug/L	100	18.0	1		10/07/15 16:37		
Surrogates									
a,a,a-Trifluorotoluene (S)	112	%.	80-150		1		10/07/15 16:37	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**535**	ug/L	10.0	2.1	10		10/13/15 15:36	71-43-2	
Ethylbenzene	**46.3**	ug/L	1.0	0.23	1		10/12/15 21:51	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/12/15 21:51	1634-04-4	
Toluene	**48.3**	ug/L	1.0	0.13	1		10/12/15 21:51	108-88-3	
Xylene (Total)	**152**	ug/L	3.0	0.60	1		10/12/15 21:51	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	114	%.	75-125		1		10/12/15 21:51	17060-07-0	
Toluene-d8 (S)	105	%.	75-125		1		10/12/15 21:51	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		10/12/15 21:51	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: MW-13 **Lab ID: 10324390015** Collected: 09/30/15 12:05 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**1.3**	mg/L	0.11	0.035	1	10/07/15 10:27	10/08/15 11:55		T7
Surrogates									
n-Triacontane (S)	80	%.	50-150		1	10/07/15 10:27	10/08/15 11:55	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**10600**	ug/L	2000	840	20		10/07/15 21:28		
Surrogates									
a,a,a-Trifluorotoluene (S)	131	%.	80-150		20		10/07/15 21:28	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**585**	ug/L	10.0	2.1	10		10/13/15 15:53	71-43-2	
Ethylbenzene	**488**	ug/L	10.0	2.3	10		10/13/15 15:53	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	10.0	2.0	10		10/13/15 15:53	1634-04-4	
Toluene	**376**	ug/L	10.0	1.3	10		10/13/15 15:53	108-88-3	
Xylene (Total)	**1900**	ug/L	30.0	6.0	10		10/13/15 15:53	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-125		10		10/13/15 15:53	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		10		10/13/15 15:53	2037-26-5	
4-Bromofluorobenzene (S)	102	%.	75-125		10		10/13/15 15:53	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: RW-3 **Lab ID: 10324390016** Collected: 09/30/15 14:10 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**10.4**	mg/L	2.1	0.68	20	10/07/15 10:27	10/08/15 11:09		T7
Surrogates									
n-Triacontane (S)	0	%.	50-150		20	10/07/15 10:27	10/08/15 11:09	638-68-6	S4
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**61000**	ug/L	10000	4200	100		10/07/15 21:51		
Surrogates									
a,a,a-Trifluorotoluene (S)	119	%.	80-150		100		10/07/15 21:51	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**1320**	ug/L	200	42.8	200		10/14/15 08:45	71-43-2	
Ethylbenzene	**1580**	ug/L	200	45.4	200		10/14/15 08:45	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	200	40.0	200		10/14/15 08:45	1634-04-4	
Toluene	**8450**	ug/L	200	26.8	200		10/14/15 08:45	108-88-3	
Xylene (Total)	**9630**	ug/L	600	121	200		10/14/15 08:45	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	75-125		200		10/14/15 08:45	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		200		10/14/15 08:45	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		200		10/14/15 08:45	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Sample: TRIP BLANK **Lab ID: 10324390017** Collected: 09/30/15 00:00 Received: 09/30/15 19:08 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	18.0	1		10/07/15 22:31		
Surrogates									
a,a,a-Trifluorotoluene (S)	101	%.	80-150		1		10/07/15 22:31	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	ND	ug/L	1.0	0.21	1		10/14/15 06:01	71-43-2	
Ethylbenzene	ND	ug/L	1.0	0.23	1		10/14/15 06:01	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/14/15 06:01	1634-04-4	
Toluene	ND	ug/L	1.0	0.13	1		10/14/15 06:01	108-88-3	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/14/15 06:01	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	104	%.	75-125		1		10/14/15 06:01	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		1		10/14/15 06:01	2037-26-5	
4-Bromofluorobenzene (S)	103	%.	75-125		1		10/14/15 06:01	460-00-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: GCV/14498 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10324390001, 10324390003

METHOD BLANK: 2098863 Matrix: Water
Associated Lab Samples: 10324390001, 10324390003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	18.0	10/05/15 09:34	
a,a,a-Trifluorotoluene (S)	%.	102	80-150		10/05/15 09:34	

LABORATORY CONTROL SAMPLE & LCSD: 2098864 2098865

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	971	1050	97	105	80-120	8	20	
a,a,a-Trifluorotoluene (S)	%.				99	97	80-150			

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: GCV/14499
QC Batch Method: WI MOD GRO
Analysis Method: WI MOD GRO
Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10324390005

METHOD BLANK: 2098866 Matrix: Water
Associated Lab Samples: 10324390005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	42.0	10/05/15 17:03	
a,a,a-Trifluorotoluene (S)	%.	102	80-150		10/05/15 17:03	

LABORATORY CONTROL SAMPLE & LCSD: 2098867 2098868

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	1110	1120	111	112	80-120	0	20	
a,a,a-Trifluorotoluene (S)	%.				106	103	80-150			

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

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: GCV/14505 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10324390002, 10324390004, 10324390006, 10324390007, 10324390008, 10324390009, 10324390010, 10324390015, 10324390016

METHOD BLANK: 2100195 Matrix: Water
Associated Lab Samples: 10324390002, 10324390004, 10324390006, 10324390007, 10324390008, 10324390009, 10324390010, 10324390015, 10324390016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	42.0	10/07/15 16:33	
a,a,a-Trifluorotoluene (S)	%.	91	80-150		10/07/15 16:33	

LABORATORY CONTROL SAMPLE & LCSD: 2100196 2100197

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	1070	1130	107	113	80-120	5	20	
a,a,a-Trifluorotoluene (S)	%.				107	102	80-150			

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: GCV/14507 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10324390011, 10324390012, 10324390013, 10324390014, 10324390017

METHOD BLANK: 2100205 Matrix: Water
Associated Lab Samples: 10324390011, 10324390012, 10324390013, 10324390014, 10324390017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	18.0	10/07/15 15:02	
a,a,a-Trifluorotoluene (S)	%.	99	80-150		10/07/15 15:02	

LABORATORY CONTROL SAMPLE & LCSD: 2100206 2100207

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	891	886	89	89	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%.				97	100	80-150			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: MSV/33399 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV UST-WATER
Associated Lab Samples: 10324390001, 10324390002, 10324390003, 10324390004

METHOD BLANK: 2103725 Matrix: Water
Associated Lab Samples: 10324390001, 10324390002, 10324390003, 10324390004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	0.21	10/09/15 15:26	
Ethylbenzene	ug/L	ND	1.0	0.23	10/09/15 15:26	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.20	10/09/15 15:26	
Toluene	ug/L	ND	1.0	0.13	10/09/15 15:26	
Xylene (Total)	ug/L	ND	3.0	0.60	10/09/15 15:26	
1,2-Dichloroethane-d4 (S)	%.	106	75-125		10/09/15 15:26	
4-Bromofluorobenzene (S)	%.	102	75-125		10/09/15 15:26	
Toluene-d8 (S)	%.	102	75-125		10/09/15 15:26	

LABORATORY CONTROL SAMPLE: 2103726

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.3	101	71-125	
Ethylbenzene	ug/L	20	21.1	105	75-125	
Methyl-tert-butyl ether	ug/L	20	23.0	115	73-125	
Toluene	ug/L	20	21.2	106	74-125	
Xylene (Total)	ug/L	60	65.2	109	75-125	
1,2-Dichloroethane-d4 (S)	%.			107	75-125	
4-Bromofluorobenzene (S)	%.			101	75-125	
Toluene-d8 (S)	%.			106	75-125	

MATRIX SPIKE SAMPLE: 2104995

Parameter	Units	10323825008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	ND	20	19.5	98	53-139	
Ethylbenzene	ug/L	ND	20	20.4	102	55-139	
Methyl-tert-butyl ether	ug/L	70.3	20	101	154	62-129	M1
Toluene	ug/L	ND	20	20.5	102	52-148	
Xylene (Total)	ug/L	ND	60	61.0	102	54-144	
1,2-Dichloroethane-d4 (S)	%.				109	75-125	
4-Bromofluorobenzene (S)	%.				101	75-125	
Toluene-d8 (S)	%.				107	75-125	

SAMPLE DUPLICATE: 2104996

Parameter	Units	10323825011 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

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

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

SAMPLE DUPLICATE: 2104996

Parameter	Units	10323825011 Result	Dup Result	RPD	Max RPD	Qualifiers
Ethylbenzene	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%.	107	109	1		
4-Bromofluorobenzene (S)	%.	103	104	1		
Toluene-d8 (S)	%.	103	103	0		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: MSV/33406 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV UST-WATER
Associated Lab Samples: 10324390011, 10324390013, 10324390014

METHOD BLANK: 2105332 Matrix: Water
Associated Lab Samples: 10324390011, 10324390013, 10324390014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	0.21	10/12/15 16:25	
Ethylbenzene	ug/L	ND	1.0	0.23	10/12/15 16:25	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.20	10/12/15 16:25	
Toluene	ug/L	ND	1.0	0.13	10/12/15 16:25	
Xylene (Total)	ug/L	ND	3.0	0.60	10/12/15 16:25	
1,2-Dichloroethane-d4 (S)	%.	106	75-125		10/12/15 16:25	
4-Bromofluorobenzene (S)	%.	102	75-125		10/12/15 16:25	
Toluene-d8 (S)	%.	103	75-125		10/12/15 16:25	

LABORATORY CONTROL SAMPLE: 2105333

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.5	92	71-125	
Ethylbenzene	ug/L	20	19.2	96	75-125	
Methyl-tert-butyl ether	ug/L	20	21.2	106	73-125	
Toluene	ug/L	20	19.1	95	74-125	
Xylene (Total)	ug/L	60	57.9	97	75-125	
1,2-Dichloroethane-d4 (S)	%.			108	75-125	
4-Bromofluorobenzene (S)	%.			101	75-125	
Toluene-d8 (S)	%.			106	75-125	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: MSV/33412 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV UST-WATER
Associated Lab Samples: 10324390016, 10324390017

METHOD BLANK: 2105913 Matrix: Water
Associated Lab Samples: 10324390016, 10324390017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	0.21	10/14/15 05:28	
Ethylbenzene	ug/L	ND	1.0	0.23	10/14/15 05:28	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.20	10/14/15 05:28	
Toluene	ug/L	ND	1.0	0.13	10/14/15 05:28	
Xylene (Total)	ug/L	ND	3.0	0.60	10/14/15 05:28	
1,2-Dichloroethane-d4 (S)	%.	104	75-125		10/14/15 05:28	
4-Bromofluorobenzene (S)	%.	102	75-125		10/14/15 05:28	
Toluene-d8 (S)	%.	103	75-125		10/14/15 05:28	

LABORATORY CONTROL SAMPLE: 2105914

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	18.9	95	71-125	
Ethylbenzene	ug/L	20	19.7	98	75-125	
Methyl-tert-butyl ether	ug/L	20	22.5	113	73-125	
Toluene	ug/L	20	19.9	99	74-125	
Xylene (Total)	ug/L	60	60.1	100	75-125	
1,2-Dichloroethane-d4 (S)	%.			107	75-125	
4-Bromofluorobenzene (S)	%.			100	75-125	
Toluene-d8 (S)	%.			106	75-125	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: MSV/33414 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV UST-WATER
Associated Lab Samples: 10324390005, 10324390006, 10324390007, 10324390008, 10324390009, 10324390010, 10324390012, 10324390015

METHOD BLANK: 2105995 Matrix: Water
Associated Lab Samples: 10324390005, 10324390006, 10324390007, 10324390008, 10324390009, 10324390010, 10324390012, 10324390015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	0.21	10/13/15 12:05	
Ethylbenzene	ug/L	ND	1.0	0.23	10/13/15 12:05	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.20	10/13/15 12:05	
Toluene	ug/L	ND	1.0	0.13	10/13/15 12:05	
Xylene (Total)	ug/L	ND	3.0	0.60	10/13/15 12:05	
1,2-Dichloroethane-d4 (S)	%.	105	75-125		10/13/15 12:05	
4-Bromofluorobenzene (S)	%.	100	75-125		10/13/15 12:05	
Toluene-d8 (S)	%.	103	75-125		10/13/15 12:05	

LABORATORY CONTROL SAMPLE: 2105996

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	19.0	95	71-125	
Ethylbenzene	ug/L	20	19.3	97	75-125	
Methyl-tert-butyl ether	ug/L	20	21.4	107	73-125	
Toluene	ug/L	20	19.3	97	74-125	
Xylene (Total)	ug/L	60	57.4	96	75-125	
1,2-Dichloroethane-d4 (S)	%.			109	75-125	
4-Bromofluorobenzene (S)	%.			101	75-125	
Toluene-d8 (S)	%.			106	75-125	

SAMPLE DUPLICATE: 2109902

Parameter	Units	10324542001 Result	Dup Result	RPD	Max RPD	Qualifiers
Benzene	ug/L	ND	.24J		30	H5
Ethylbenzene	ug/L	ND	ND		30	H5
Methyl-tert-butyl ether	ug/L	ND	ND		30	H5
Toluene	ug/L	ND	.6J		30	H5
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%.	104	107	2		
4-Bromofluorobenzene (S)	%.	104	102	2		
Toluene-d8 (S)	%.	103	103	0		

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: OEXT/31031 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10324390001, 10324390002, 10324390003

METHOD BLANK: 2097403 Matrix: Water
Associated Lab Samples: 10324390001, 10324390002, 10324390003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	0.033	10/05/15 07:38	
n-Triacontane (S)	%.	69	50-150		10/05/15 07:38	

LABORATORY CONTROL SAMPLE & LCSD: 2097404 2097405

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	2	1.5	1.6	75	78	75-115	5	20	
n-Triacontane (S)	%.				79	82	50-150			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: OEXT/31064 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10324390004

METHOD BLANK: 2099081 Matrix: Water
Associated Lab Samples: 10324390004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	0.033	10/12/15 08:59	
n-Triacontane (S)	%.	70	50-150		10/12/15 08:59	

LABORATORY CONTROL SAMPLE & LCSD: 2099082 2099083

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	2	1.5	1.6	77	82	75-115	7	20	
n-Triacontane (S)	%.				70	70	50-150			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: OEXT/31073 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10324390005, 10324390006, 10324390007, 10324390008, 10324390009, 10324390010, 10324390011

METHOD BLANK: 2099668 Matrix: Water
Associated Lab Samples: 10324390005, 10324390006, 10324390007, 10324390008, 10324390009, 10324390010, 10324390011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	0.033	10/11/15 10:43	
n-Triacontane (S)	%.	82	50-150		10/11/15 10:43	

LABORATORY CONTROL SAMPLE & LCSD: 2099669 2099670

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	2	1.6	1.6	82	80	75-115	3	20	
n-Triacontane (S)	%.				89	84	50-150			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

QC Batch: OEXT/31091 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10324390012, 10324390013, 10324390014, 10324390015, 10324390016

METHOD BLANK: 2101010 Matrix: Water
Associated Lab Samples: 10324390012, 10324390013, 10324390014, 10324390015, 10324390016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	0.033	10/08/15 10:45	
n-Triacontane (S)	%.	75	50-150		10/08/15 10:45	

LABORATORY CONTROL SAMPLE & LCSD: 2101011 2101012

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	2	1.6	1.6	78	80	75-115	2	20	
n-Triacontane (S)	%.				83	82	50-150			

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALIFIERS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

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.

ANALYTE QUALIFIERS

H5	Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
T6	High boiling point hydrocarbons are present in the sample.
T7	Low boiling point hydrocarbons are present in the sample.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10324390001	**MW-21**	WI MOD DRO	OEXT/31031	WI MOD DRO	GCSV/16880
10324390002	**RW-5**	WI MOD DRO	OEXT/31031	WI MOD DRO	GCSV/16880
10324390003	**RW-1**	WI MOD DRO	OEXT/31031	WI MOD DRO	GCSV/16880
10324390004	**MW-22**	WI MOD DRO	OEXT/31064	WI MOD DRO	GCSV/16959
10324390005	**FB-1**	WI MOD DRO	OEXT/31073	WI MOD DRO	GCSV/16950
10324390006	**MW-19**	WI MOD DRO	OEXT/31073	WI MOD DRO	GCSV/16950
10324390007	**MW-17**	WI MOD DRO	OEXT/31073	WI MOD DRO	GCSV/16950
10324390008	**RW-6**	WI MOD DRO	OEXT/31073	WI MOD DRO	GCSV/16950
10324390009	**MW-18**	WI MOD DRO	OEXT/31073	WI MOD DRO	GCSV/16950
10324390010	**MW-20**	WI MOD DRO	OEXT/31073	WI MOD DRO	GCSV/16950
10324390011	**MW-23**	WI MOD DRO	OEXT/31073	WI MOD DRO	GCSV/16950
10324390012	**FB-2**	WI MOD DRO	OEXT/31091	WI MOD DRO	GCSV/16918
10324390013	**RW-2**	WI MOD DRO	OEXT/31091	WI MOD DRO	GCSV/16918
10324390014	**MW-12**	WI MOD DRO	OEXT/31091	WI MOD DRO	GCSV/16918
10324390015	**MW-13**	WI MOD DRO	OEXT/31091	WI MOD DRO	GCSV/16918
10324390016	**RW-3**	WI MOD DRO	OEXT/31091	WI MOD DRO	GCSV/16918
10324390001	**MW-21**	WI MOD GRO	GCV/14498		
10324390002	**RW-5**	WI MOD GRO	GCV/14505		
10324390002	**RW-5**	WI MOD GRO	GCV/		
10324390003	**RW-1**	WI MOD GRO	GCV/14498		
10324390004	**MW-22**	WI MOD GRO	GCV/14505		
10324390005	**FB-1**	WI MOD GRO	GCV/14499		
10324390006	**MW-19**	WI MOD GRO	GCV/14505		
10324390007	**MW-17**	WI MOD GRO	GCV/14505		
10324390008	**RW-6**	WI MOD GRO	GCV/14505		
10324390009	**MW-18**	WI MOD GRO	GCV/14505		
10324390010	**MW-20**	WI MOD GRO	GCV/14505		
10324390011	**MW-23**	WI MOD GRO	GCV/14507		
10324390012	**FB-2**	WI MOD GRO	GCV/14507		
10324390013	**RW-2**	WI MOD GRO	GCV/14507		
10324390014	**MW-12**	WI MOD GRO	GCV/14507		
10324390015	**MW-13**	WI MOD GRO	GCV/14505		
10324390016	**RW-3**	WI MOD GRO	GCV/14505		
10324390017	**TRIP BLANK**	WI MOD GRO	GCV/14507		
10324390001	**MW-21**	EPA 8260B	MSV/33399		
10324390002	**RW-5**	EPA 8260B	MSV/33399		
10324390003	**RW-1**	EPA 8260B	MSV/33399		
10324390004	**MW-22**	EPA 8260B	MSV/33399		
10324390005	**FB-1**	EPA 8260B	MSV/33414		
10324390006	**MW-19**	EPA 8260B	MSV/33414		
10324390007	**MW-17**	EPA 8260B	MSV/33414		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324390

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10324390008	**RW-6**	EPA 8260B	MSV/33414		
10324390009	**MW-18**	EPA 8260B	MSV/33414		
10324390010	**MW-20**	EPA 8260B	MSV/33414		
10324390011	**MW-23**	EPA 8260B	MSV/33406		
10324390012	**FB-2**	EPA 8260B	MSV/33414		
10324390013	**RW-2**	EPA 8260B	MSV/33406		
10324390014	**MW-12**	EPA 8260B	MSV/33406		
10324390015	**MW-13**	EPA 8260B	MSV/33414		
10324390016	**RW-3**	EPA 8260B	MSV/33412		
10324390017	**TRIP BLANK**	EPA 8260B	MSV/33412		

Bay West
Customer-Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTODY / Analytical Request Document

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

10324390

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Report To: Amanda Malaney	Attention: accountspayable@baywest.com	Facility_Name: Current Holiday Station	Page 1 of 2
Address: 5 Empire Drive	Copy To:	Company Name: Bay West LLC	Facility_Code: Holiday Station	
St. Paul, MN 55103		Address: SAME	Facility_ID:	COC# 09282015
Email To: amandam@baywest.com	Purchase Order No.: 105852	Lab Quote Reference:	Subfacility_code:	
Phone: 651-291-3495	Project Name: Current Holiday Station	Lab Project Manager: Yemi Odujole		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J150495.01			

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

ITEM #	Section E Required Client Information: Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection: DATE	Collection: Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO	GRO/BTEX/MTBE	VOCs	Comments
1	MW-21	MW-21	W	G	9/28/15	1230	8				8					X		X		001
2	RW-5	RW-5	W	G	9/28/15	1345	8				8					X		X		002
3	RW-1	RW-1	W	G	9/28/15	1450	8				8					X		X		003
4	MW-22	MW-22	W	G	9/28/15	1545	8				8					X		X		004
5	FB-1	FB-1	W	G	9/29/15	0835	8				8					X		X		005
6	MW-19	MW-19	W	G	9/29/15	0925	8				8					X		X		006
7	MW-17	MW-17	W	G	9/29/15	1045	8				8					X		X		007
8	RW-6	RW-6	W	G	9/29/15	1145	8				8					X		X		008
9	MW-18	MW-18	W	G	9/29/15	1300	8				8					X		X		009
10	MW-20	MW-20	W	G	9/29/15	1415	8				8					X		X		010
11	MW-23	MW-23	W	G	9/29/15	1545	8				8					X		X		011
12	FB-2	FB-2	W	G	9/30/15	0830	8				8					X		X		012

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp (°C)	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
STATE ADMIN CONTRACT PROJECT		9-30-15	1450		9/30/15	1450	2.5 2.4	Y	Y	Y
MPCA WO # 3000014635		9/30/15	1606		9/30/15	1606				
		9/30/15			9/30/15	1908				

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hillary McGowan

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 09/28/15

Bay West
Customer-Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Report To: Amanda Malaney	Attention: accountspayable@baywest.com	Facility_Name: Current Holiday Station	Page 2 of 2
Address: 5 Empire Drive	Copy To:	Company Name: Bay West LLC	Facility_Code: Holiday Station	
St. Paul, MN 55103		Address: SAME	Facility_ID:	COC# 09302015
Email To: amandam@baywest.com	Purchase Order No.: 105852	Lab Quote Reference:	Subfacility_code:	
Phone: 651-291-3495	Project Name: Current Holiday Station	Lab Project Manager: Yemi Odujole		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J150495.01			

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

ITEM #	Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO	GRO/BTEX/MTBE	VOCs	BTEX/MTBE	Comments
1	RW-2	RW-2	W	G	9/30/15	0935	3				3					X		X			013
2	MW-12	MW-12	W	G	9/30/15	1045	3				3					X		X			014
3	MW-13	MW-13	W	G	9/30/15	1205	3				3					X		X			015
4	RW-3	RW-3	W	G	9/30/15	1410	3				3					X		X			016
5	GRO Trip Blank	← LAB PREPARED →					2				2						X				017
6	MBTEX	Trip Blank	← LAB PREPARED →				2				2									X	018 ~~019~~ 10/15/15
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
STATE ADMIN CONTRACT PROJECT		9-30-15	1450		9/30/15	1450
MPCA WO # 3000014635		9/30/15	1606		9/30/15	1606
		9/30/15			9/30/15	1908

SAMPLE CONDITIONS: Temp (°C); Received on Ice (Y/N); Custody Sealed Cooler (Y/N); Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hillary McGown

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 09/30/15

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 23Feb2015 Page 1 of 1
	Document No.: **F-MN-L-213-rev.13**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Bay West LLC

Project #: WO#: 10324390

10324390

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

Tracking Number:

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

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

Thermometer Used: ☐ B88A9130516413 ☐ B88A912167504 ☑ B88A0143310098 **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 2.7 2.5 2.4, 3.3 **Cooler Temp Corrected (°C):** 2.2 2.5 2.4, 3.3, 4.5 **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C **Correction Factor:** +0.1 **Date and Initials of Person Examining Contents:** KK 9/30/15

USDA Regulated Soil (☑ N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)? ☐ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present?	☑ Yes	☐ No	☐ N/A	1.
Chain of Custody Filled Out?	☑ Yes	☐ No	☐ N/A	2.
Chain of Custody Relinquished?	☑ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☑ No	☐ N/A	7.
Sufficient Volume?	☑ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☑ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☑ Yes	☐ No	☐ N/A	
Containers Intact?	☑ Yes	☐ No	☐ N/A	10.
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: WT	☑ Yes	☐ No	☐ N/A	12.
All containers needing acid/base preservation have been checked? All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl<2; NaOH >9 Sulfide, NaOH>12 Cyanide) Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC	☐ Yes ☐ Yes ☑ Yes	☐ No ☐ No ☐ No	☑ N/A ☑ N/A ☐ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl Sample # Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☑ No	☐ N/A	14.
Trip Blank Present?	☑ Yes	☐ No	☐ N/A	15.
Trip Blank Custody Seals Present?	☑ Yes	☐ No	☐ N/A	
Pace Trip Blank Lot # (if purchased): 072315-01				

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

Person Contacted: Date/Time:

Comments/Resolution:

Project Manager Review: Date: Oct 1, 2015

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).

Data File: \\192.168.10.12\chem\10gcs4.i\100515dro.b/10050023.D

Report Date: 10/05/2015

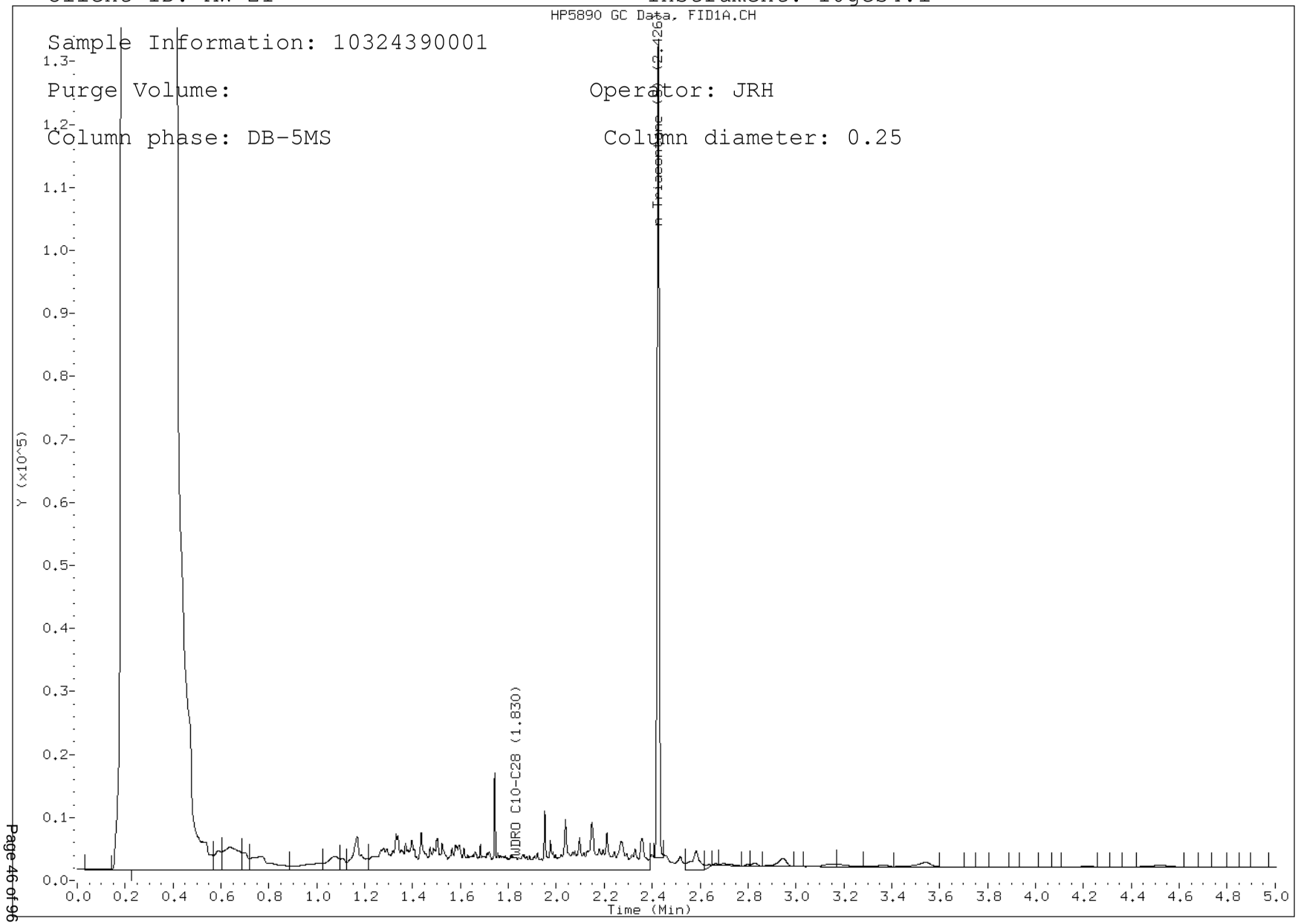
Sample ID: 10324390001

Client ID: MW-21 Instrument: 10gcs4.i

Sample Information: 10324390001

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\100515dro.b/10050024.D

Report Date: 10/05/2015

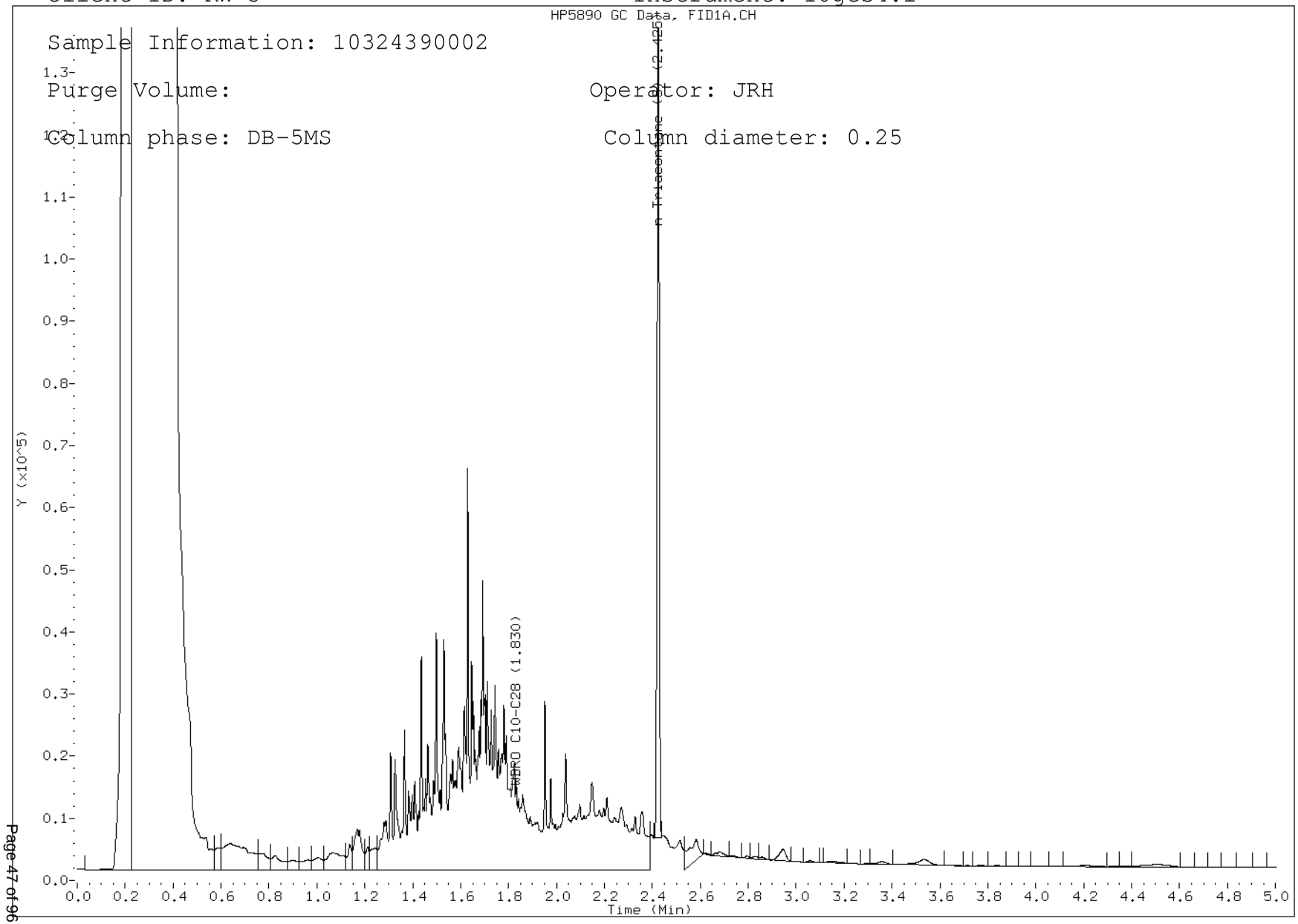
Sample ID: 10324390002

Client ID: RW-5 Instrument: 10gcs4.i

Sample Information: 10324390002

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



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Report Date: 10/05/2015

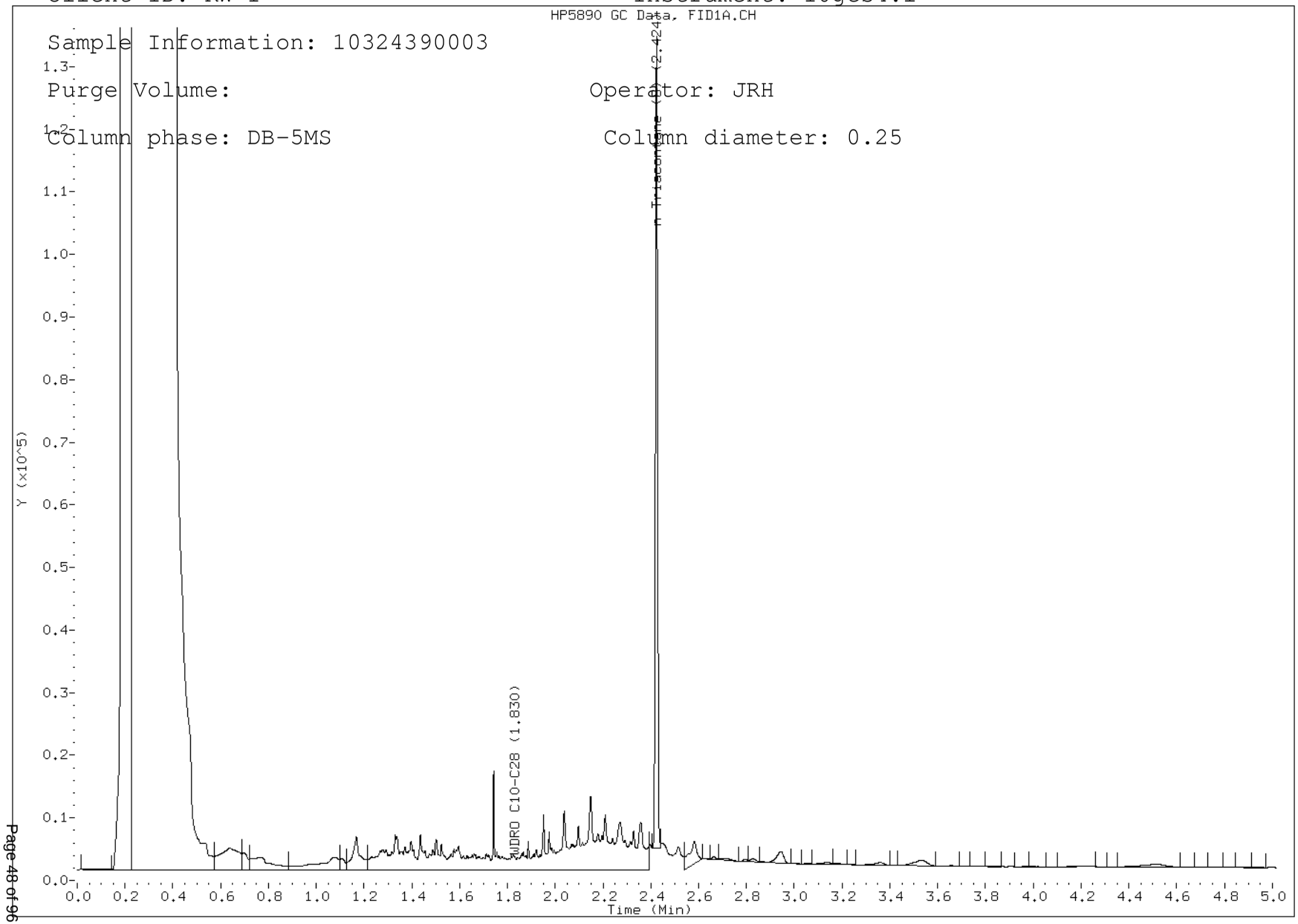
Sample ID: 10324390003

Client ID: RW-1 Instrument: 10gcs4.i

Sample Information: 10324390003

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



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Report Date: 10/12/2015

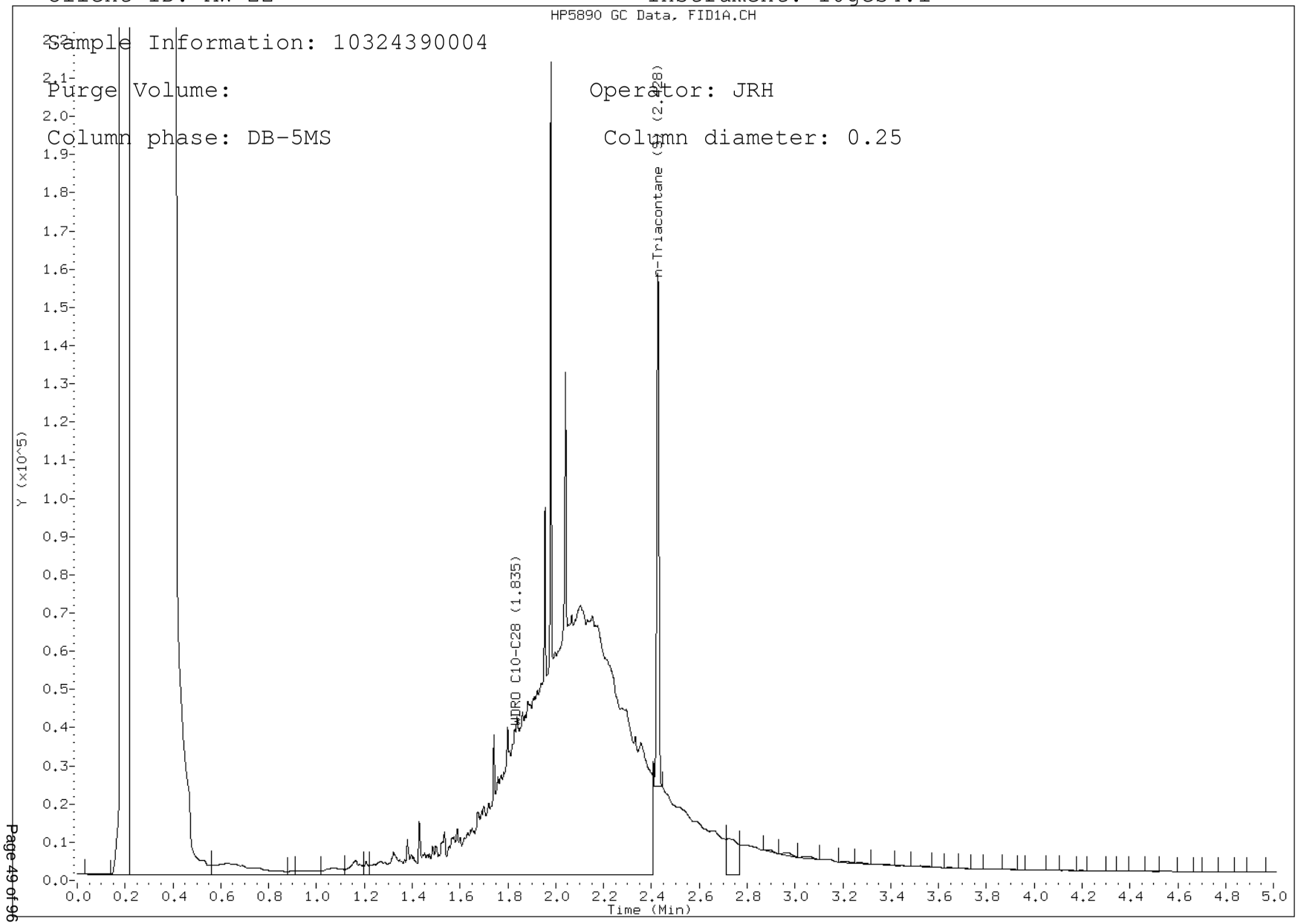
Sample ID: 10324390004

Client ID: MW-22 Instrument: 10gcs4.i

Sample Information: 10324390004

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101115dro.b/10110019.D

Report Date: 10/11/2015

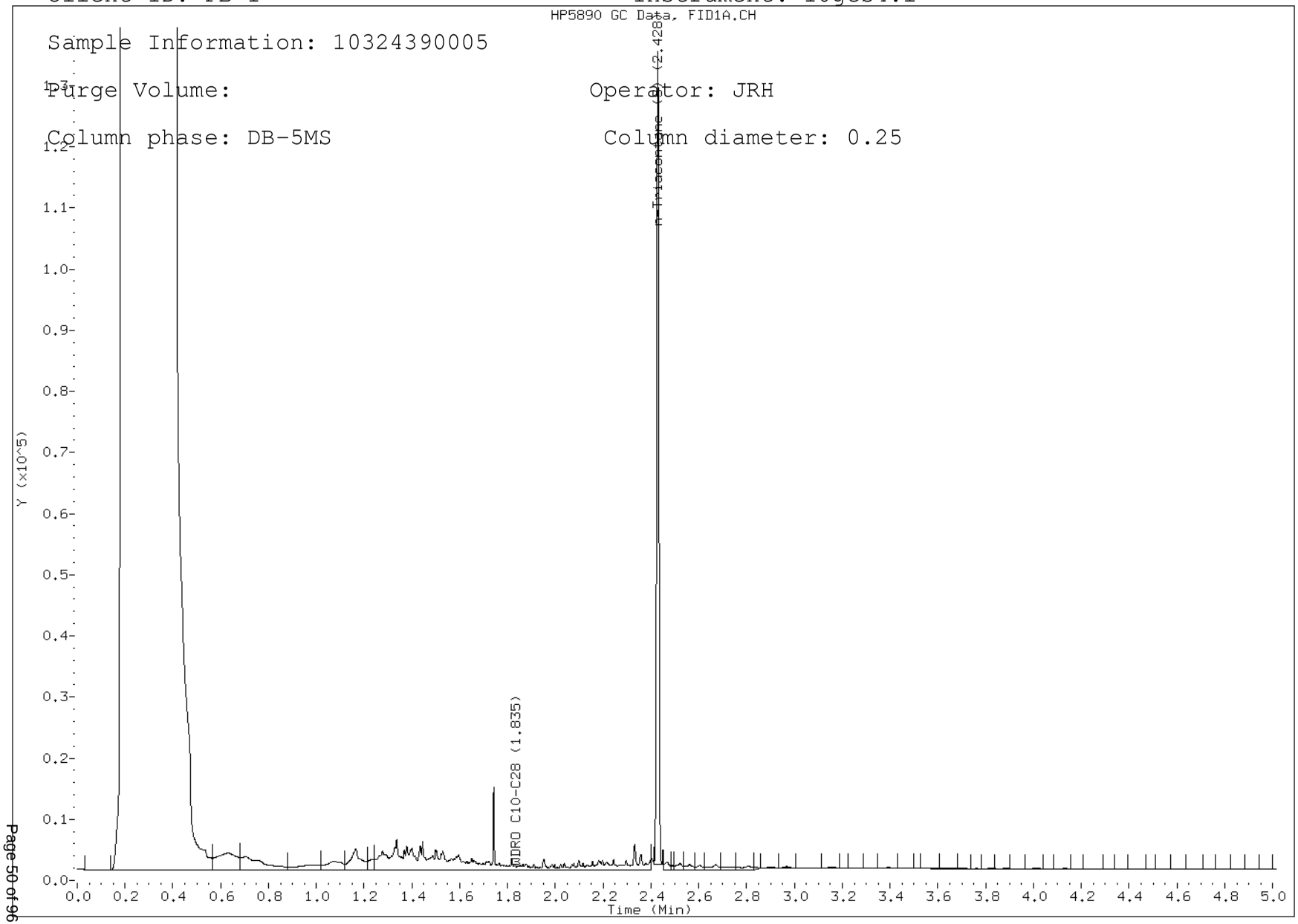
Sample ID: 10324390005

Client ID: FB-1 Instrument: 10gcs4.i

Sample Information: 10324390005

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101115dro.b/10110020.D

Report Date: 10/11/2015

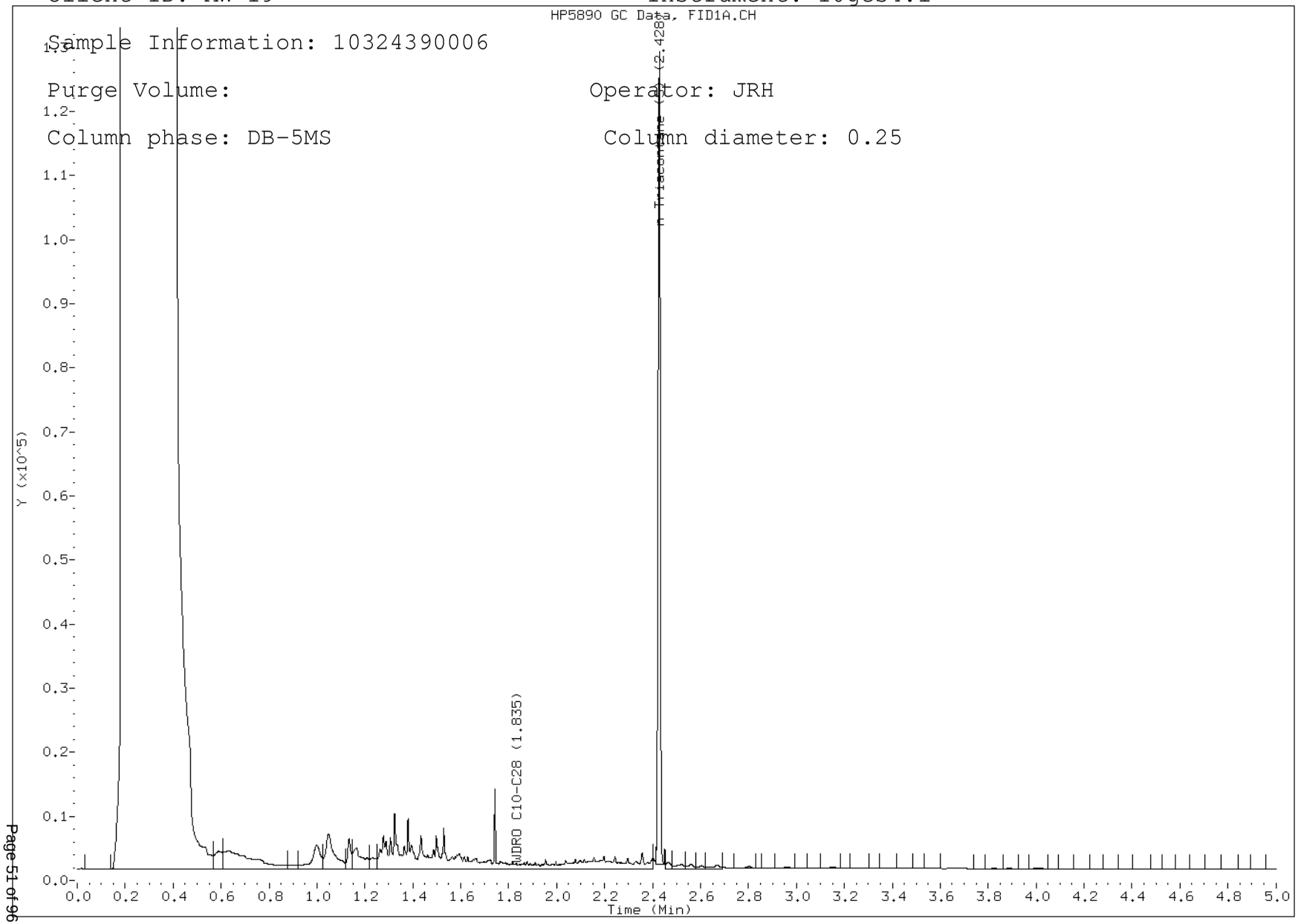
Sample ID: 10324390006

Client ID: MW-19 Instrument: 10gcs4.i

Sample Information: 10324390006

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



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Report Date: 10/11/2015

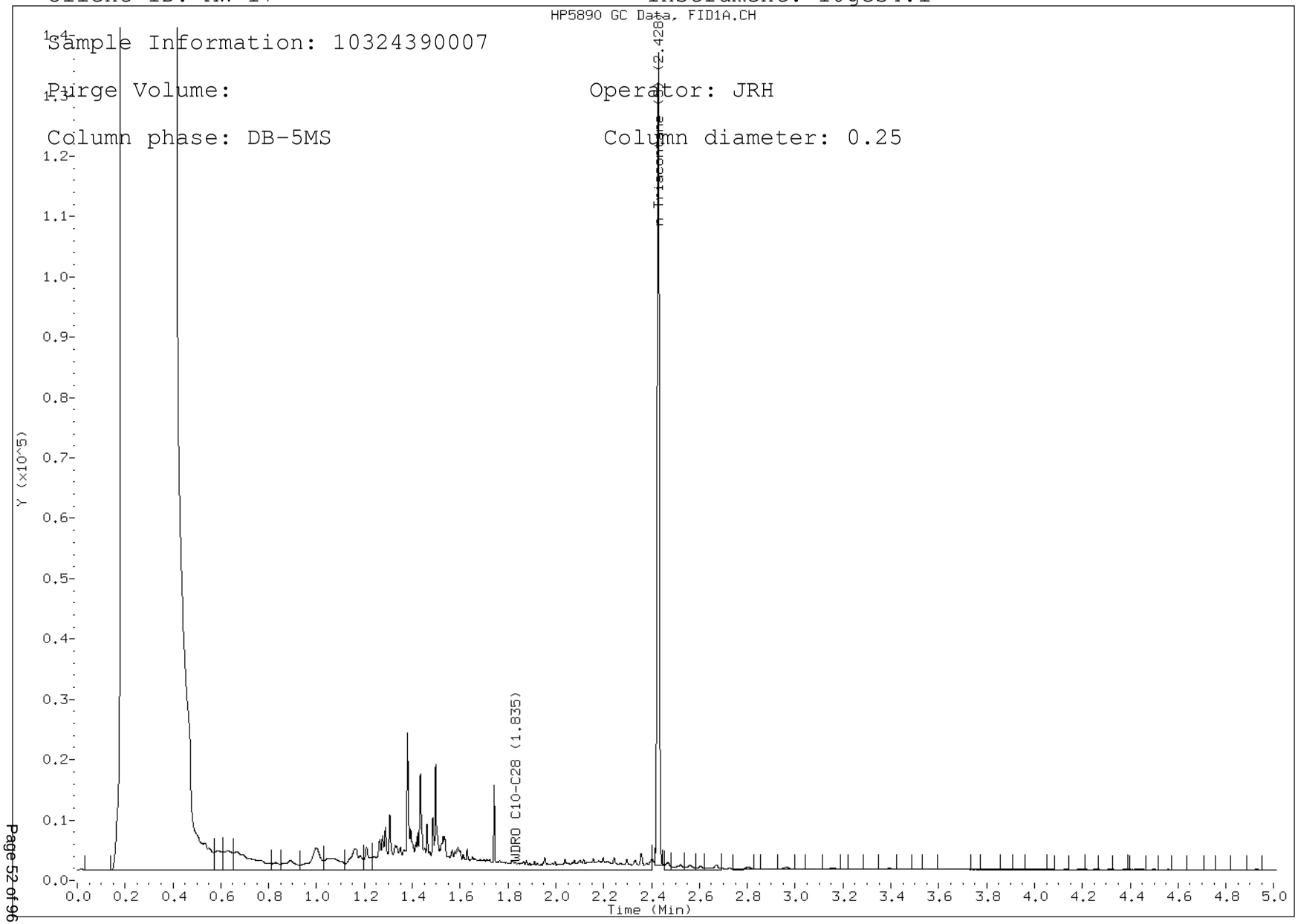
Sample ID: 10324390007

Client ID: MW-17 Instrument: 10gcs4.i

Sample Information: 10324390007

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101115dro.b/10110011.D

Report Date: 10/11/2015

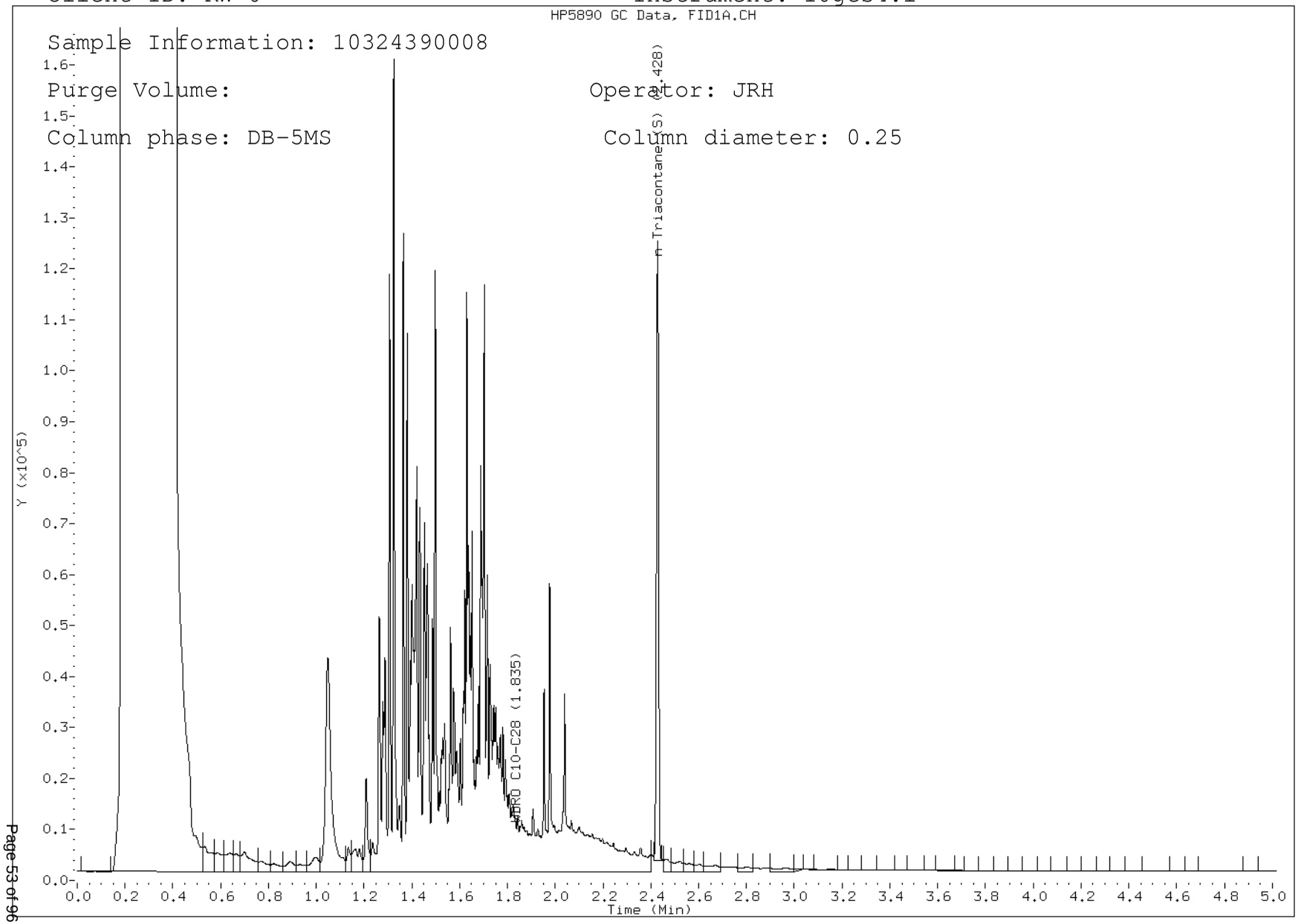
Sample ID: 10324390008

Client ID: RW-6 Instrument: 10gcs4.i

Sample Information: 10324390008

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101115dro.b/10110023.D

Report Date: 10/11/2015

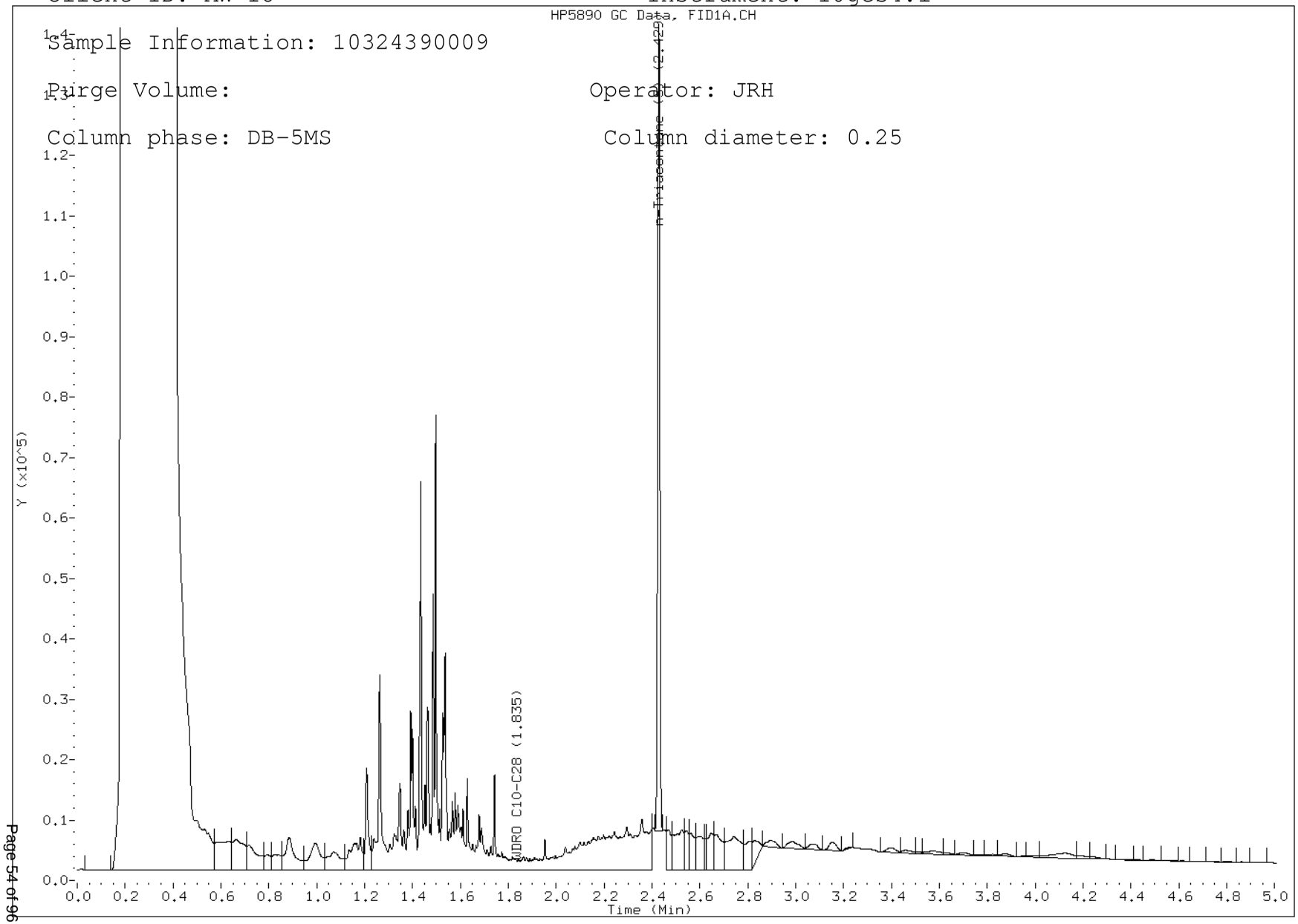
Sample ID: 10324390009

Client ID: MW-18 Instrument: 10gcs4.i

Sample Information: 10324390009

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101115dro.b/10110024.D

Report Date: 10/11/2015

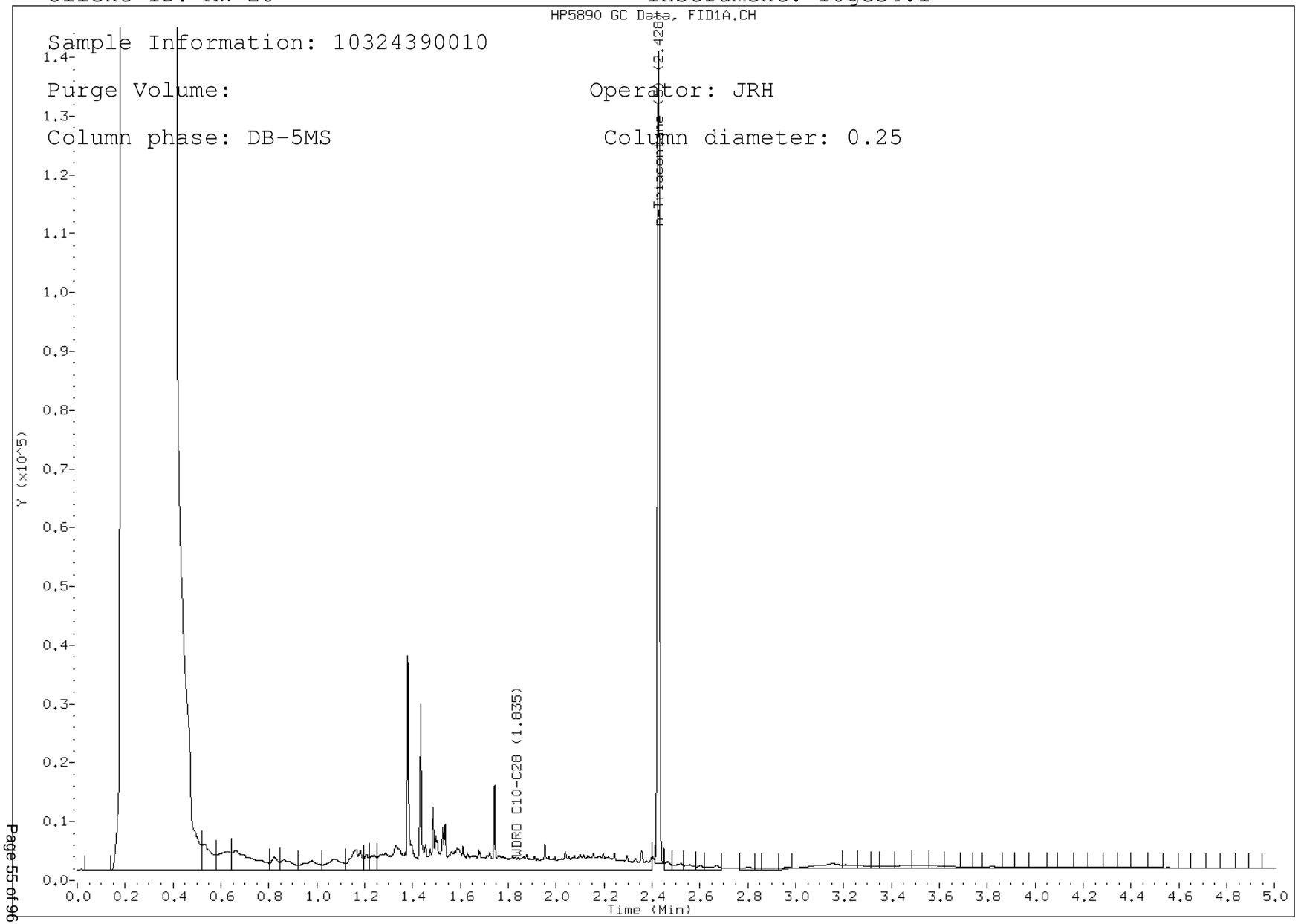
Sample ID: 10324390010

Client ID: MW-20 Instrument: 10gcs4.i

Sample Information: 10324390010

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101115dro.b/10110006.D

Report Date: 10/11/2015

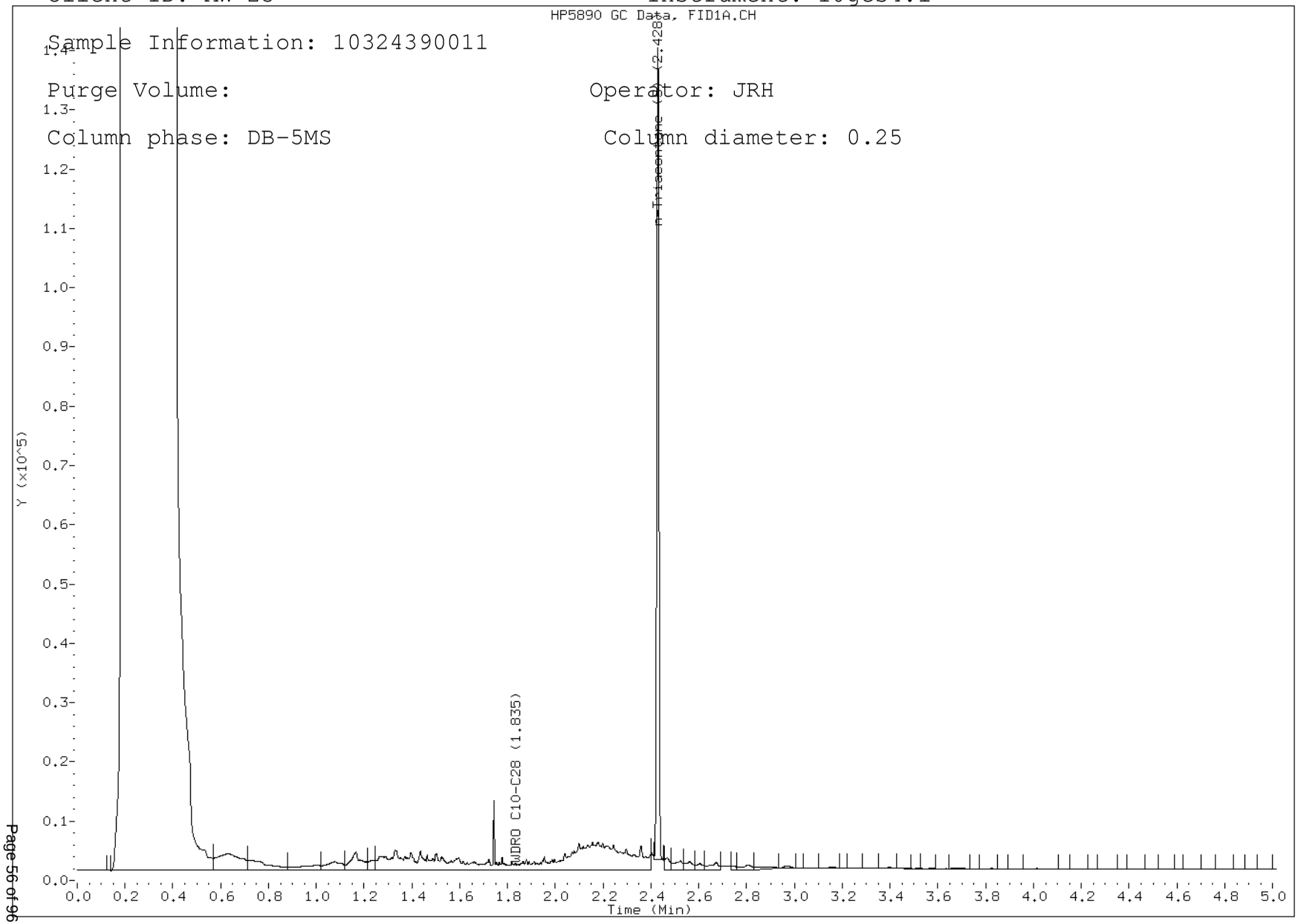
Sample ID: 10324390011

Client ID: MW-23 Instrument: 10gcs4.i

Sample Information: 10324390011

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\100815dro.b/10080019.D

Report Date: 10/08/2015

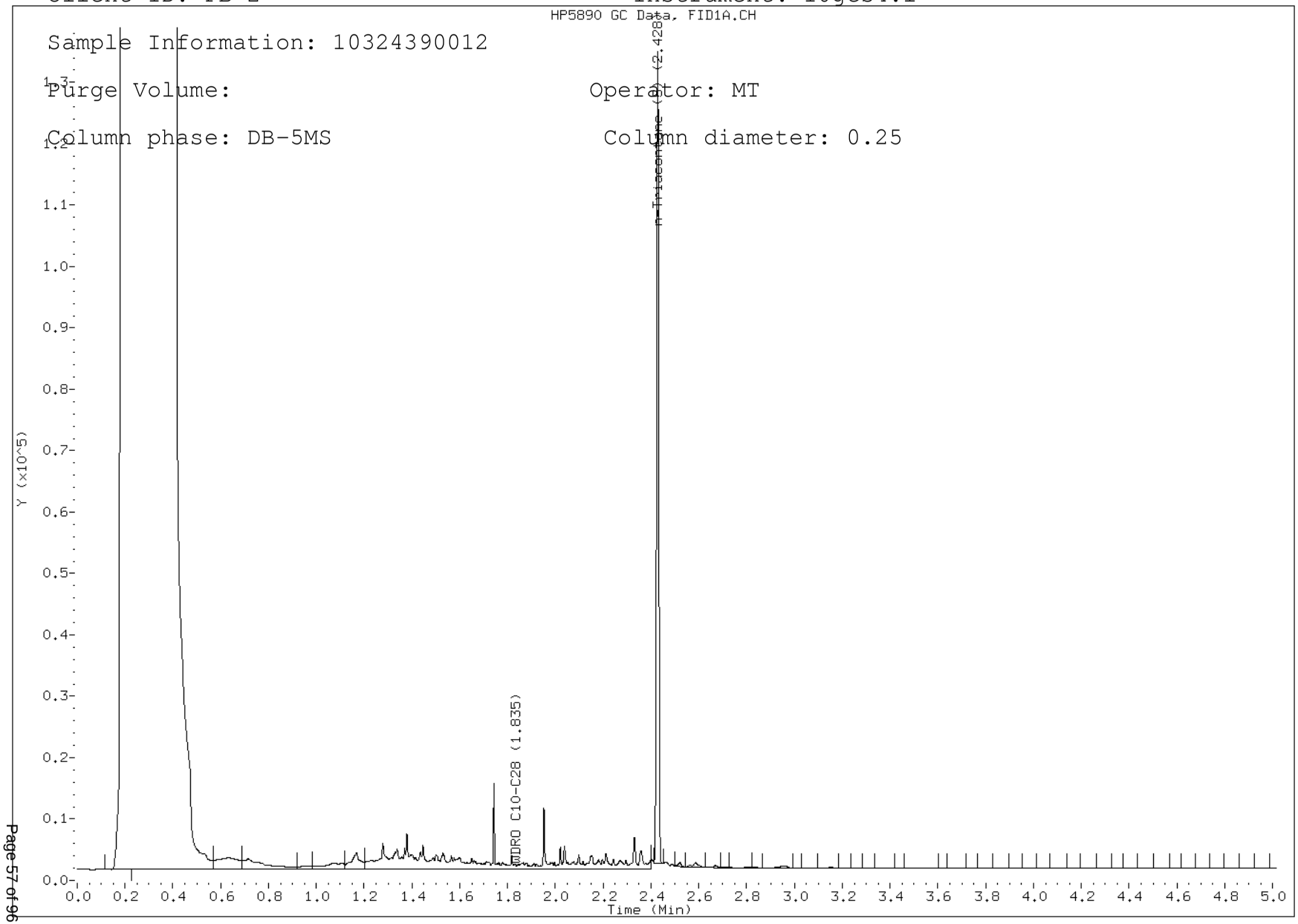
Sample ID: 10324390012

Client ID: FB-2 Instrument: 10gcs4.i

Sample Information: 10324390012

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\100815dro.b/10080011.D

Report Date: 10/08/2015

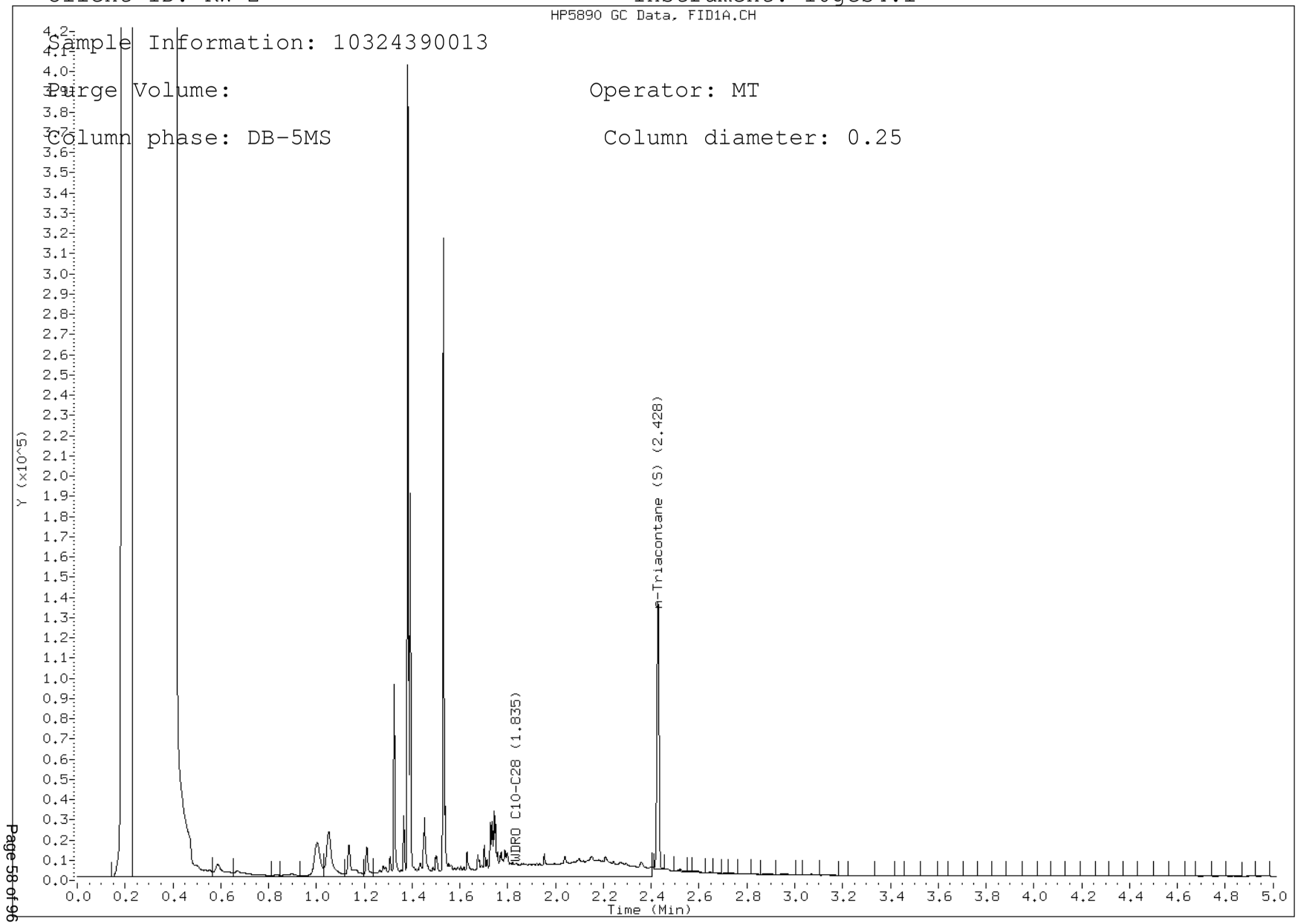
Sample ID: 10324390013

Client ID: RW-2 Instrument: 10gcs4.i

Sample Information: 10324390013

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



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Report Date: 10/08/2015

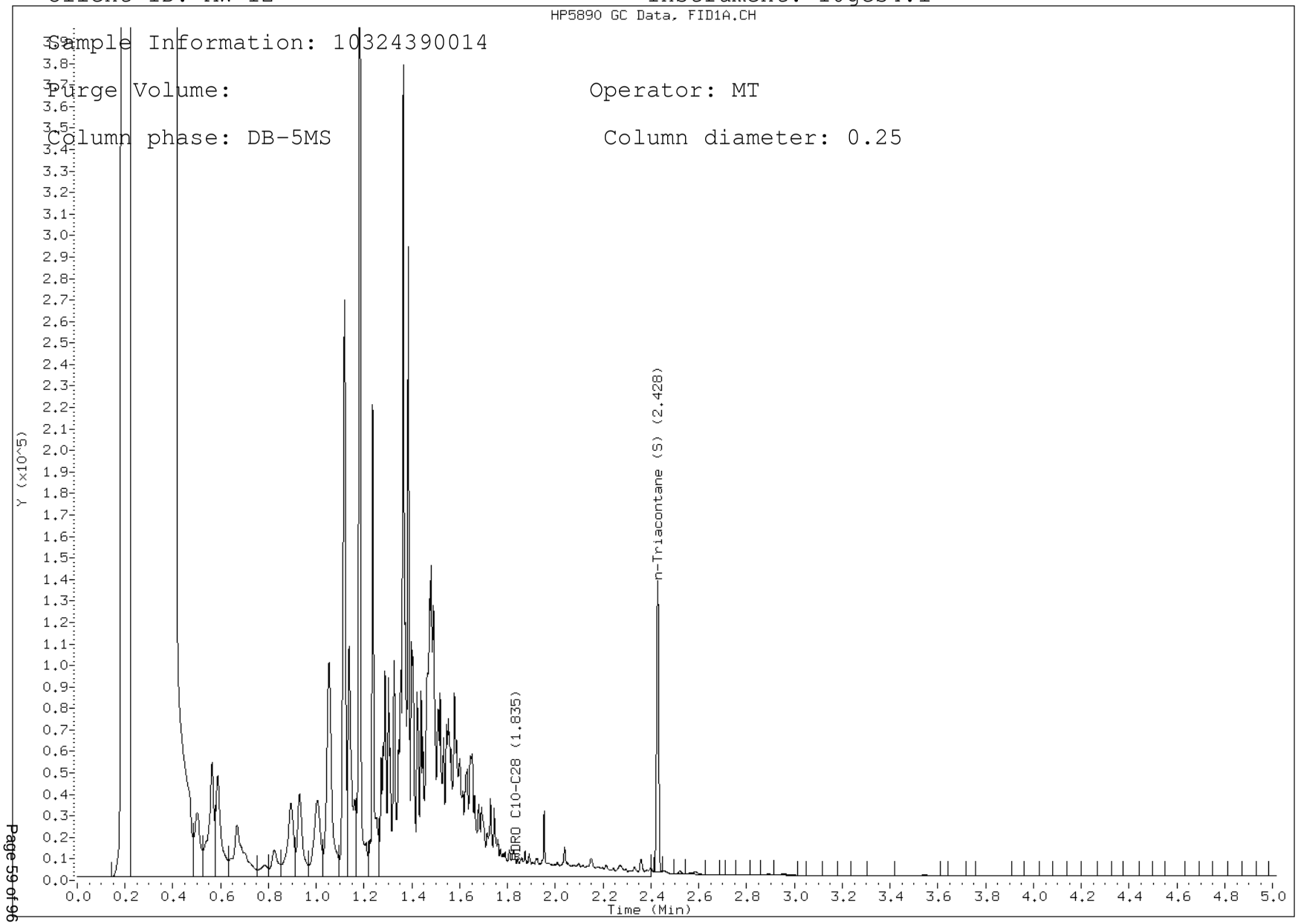
Sample ID: 10324390014

Client ID: MW-12 Instrument: 10gcs4.i

Sample Information: 10324390014

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



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Report Date: 10/08/2015

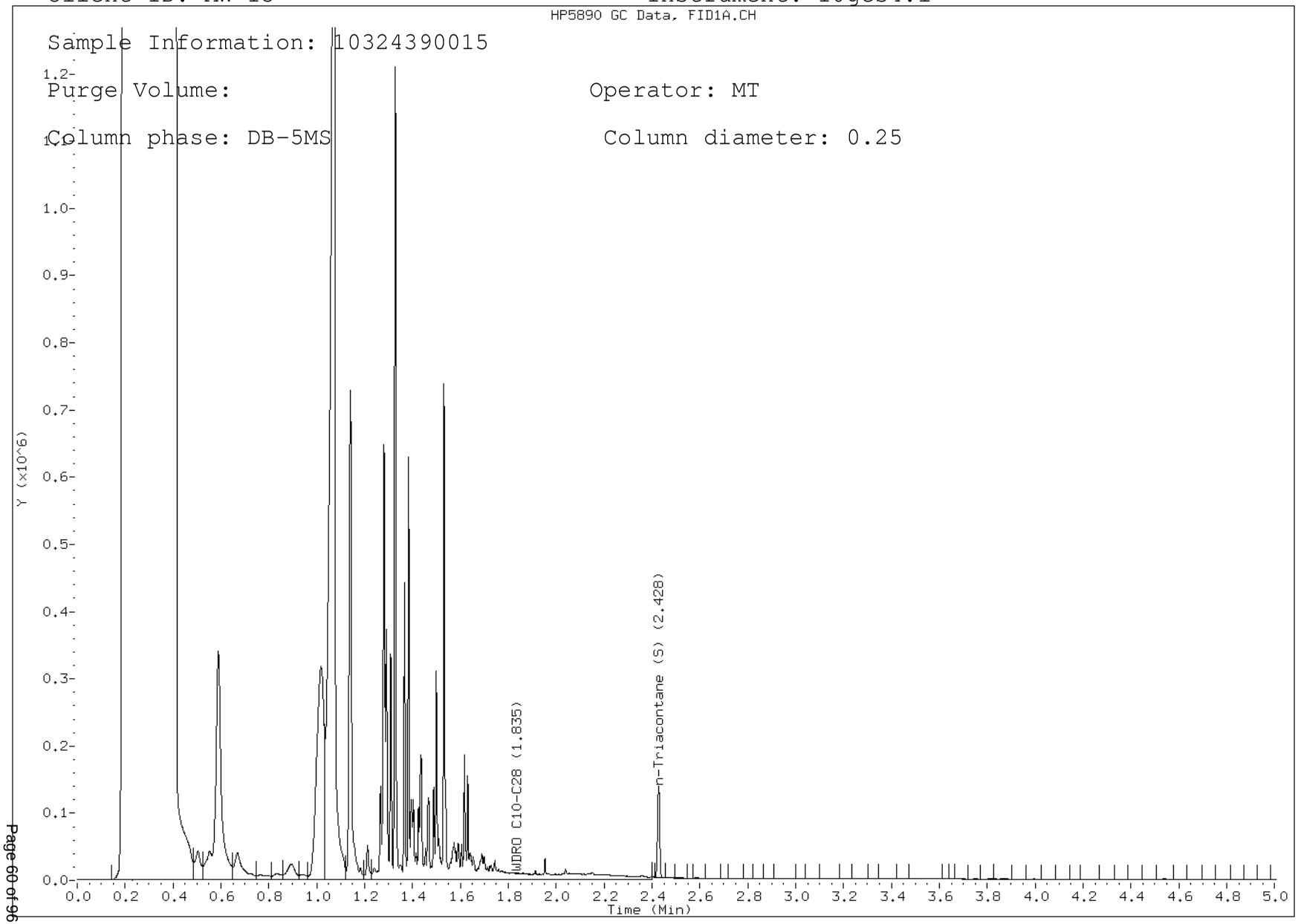
Sample ID: 10324390015

Client ID: MW-13 Instrument: 10gcs4.i

Sample Information: 10324390015

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\100815dro.b/10080008.D

Report Date: 10/08/2015

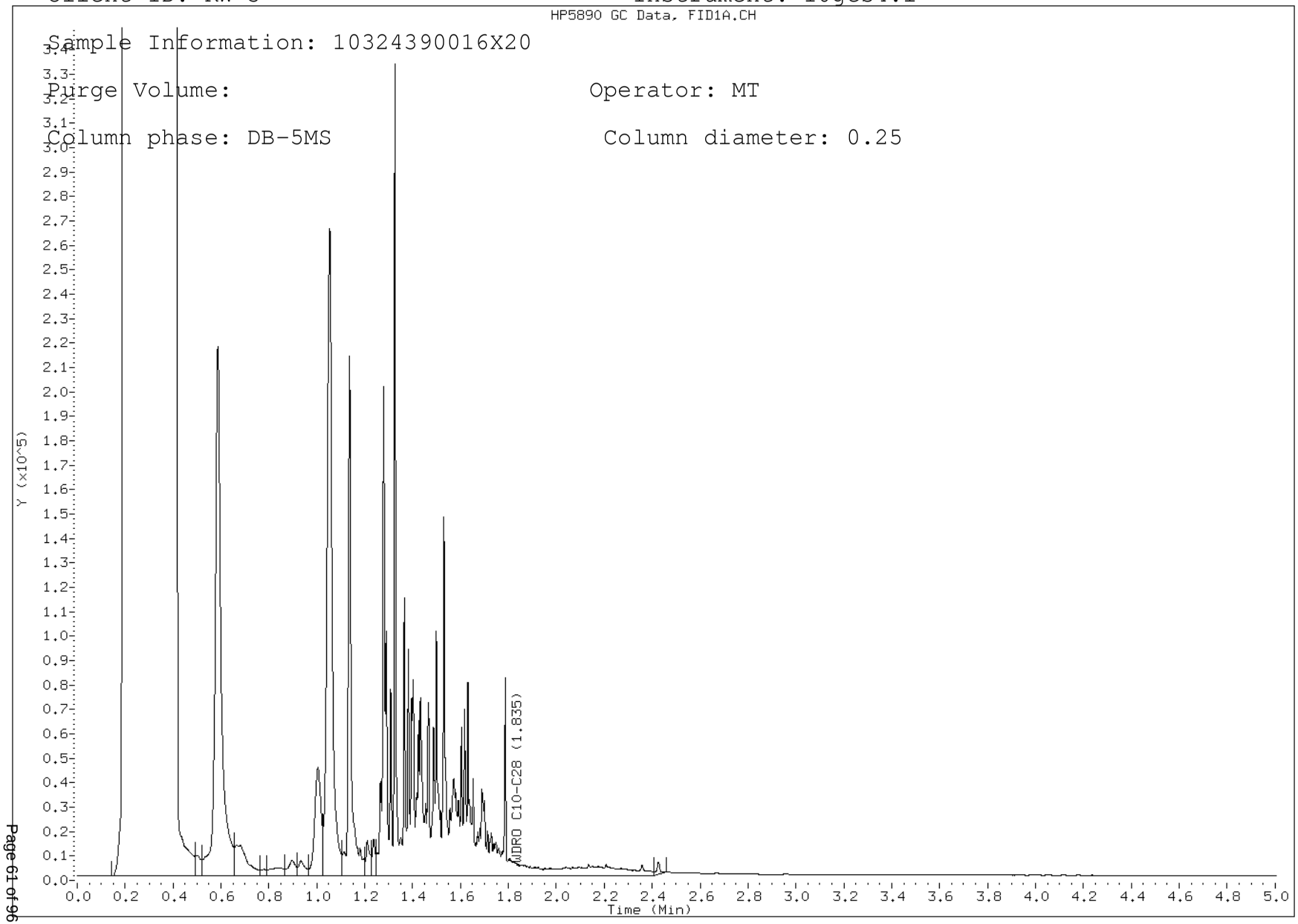
Sample ID: 10324390016

Client ID: RW-3 Instrument: 10gcs4.i

Sample Information: 10324390016X20

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25

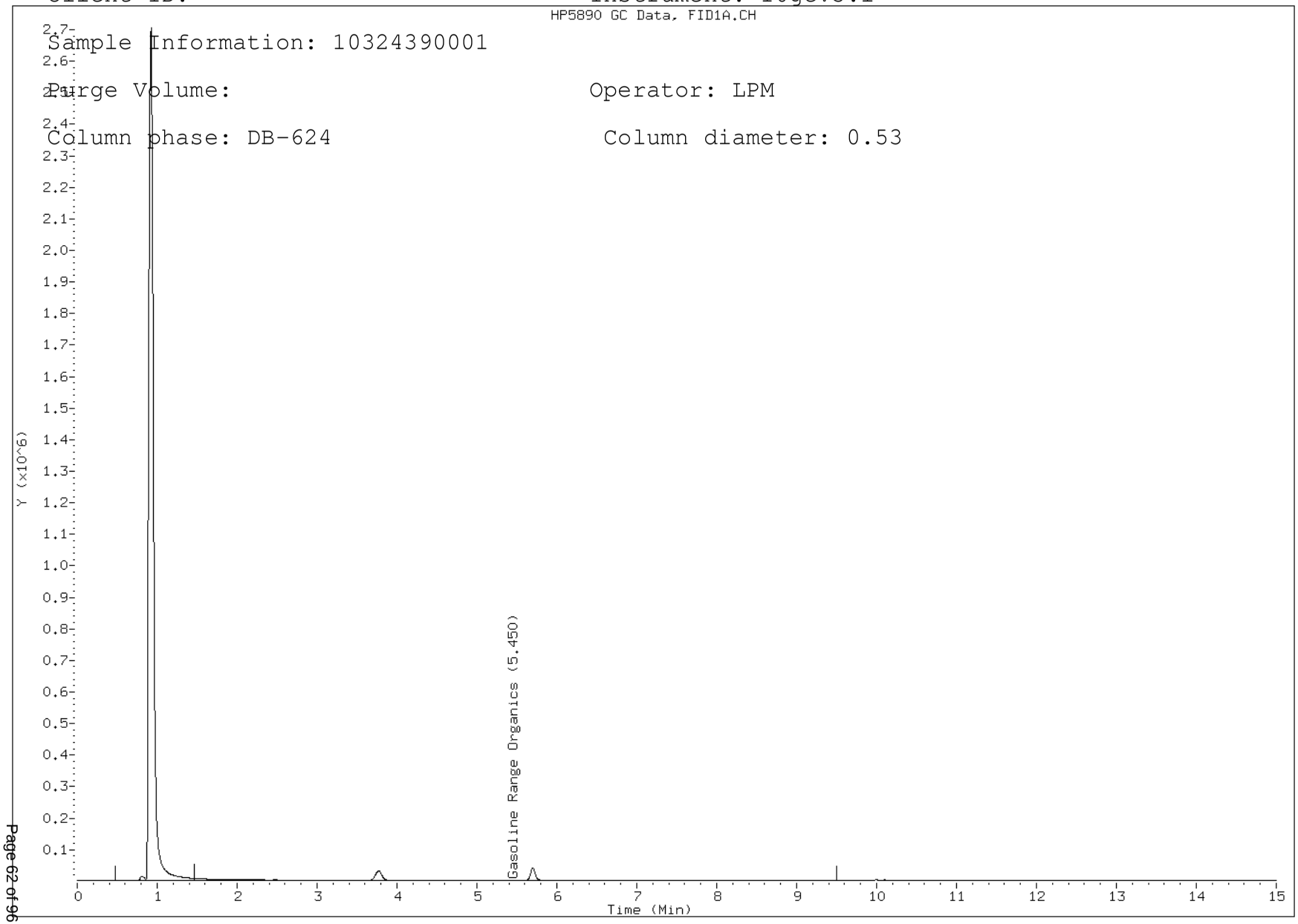


Data File: \\192.168.10.12\chem\10gcv3.i\100515A-1.b/1-278010.d

Report Date: 10/06/2015

Sample ID: 10324390001

Client ID: Instrument: 10gcv3.i



Sample Information: 10324390001

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\100515A-2.b/1-278010.d

Report Date: 10/06/2015

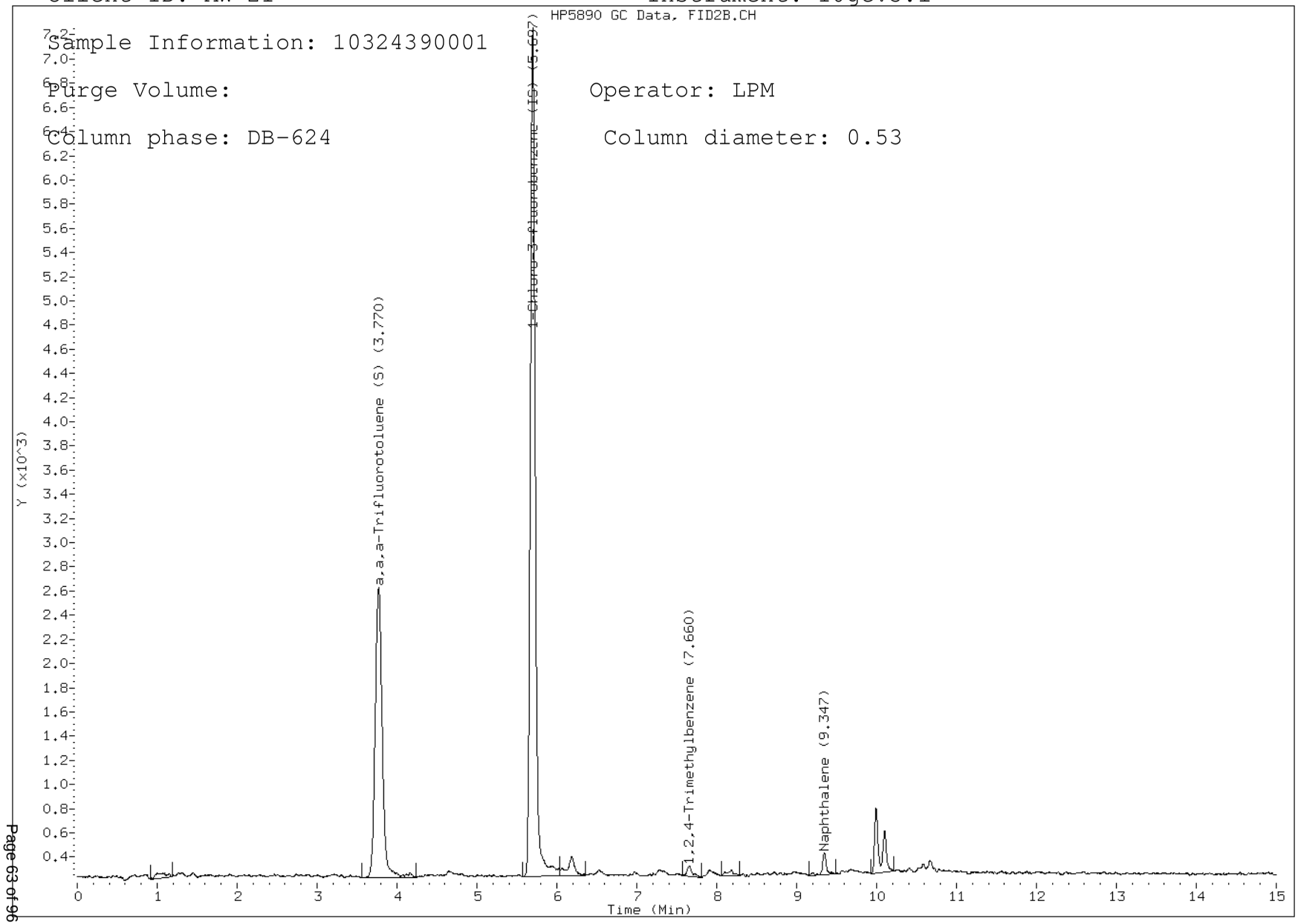
Sample ID: 10324390001

Client ID: MW-21 Instrument: 10gcv3.i

Sample Information: 10324390001

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\100515A-2.b/1-278028.d

Report Date: 10/06/2015

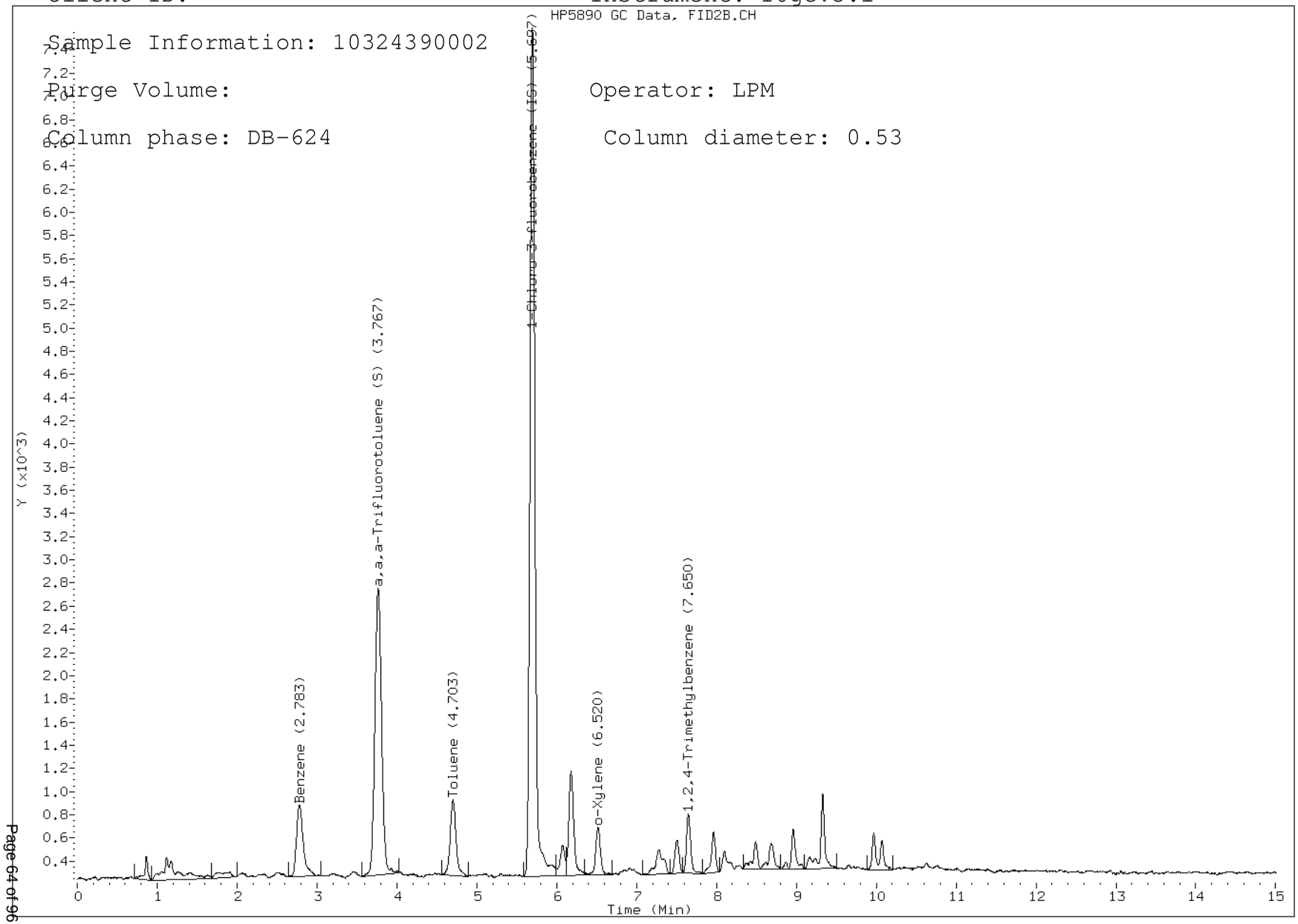
Sample ID: 10324390002

Client ID: Instrument: 10gcv3.i

Sample Information: 10324390002

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-1.b/28007.d

Report Date: 10/08/2015

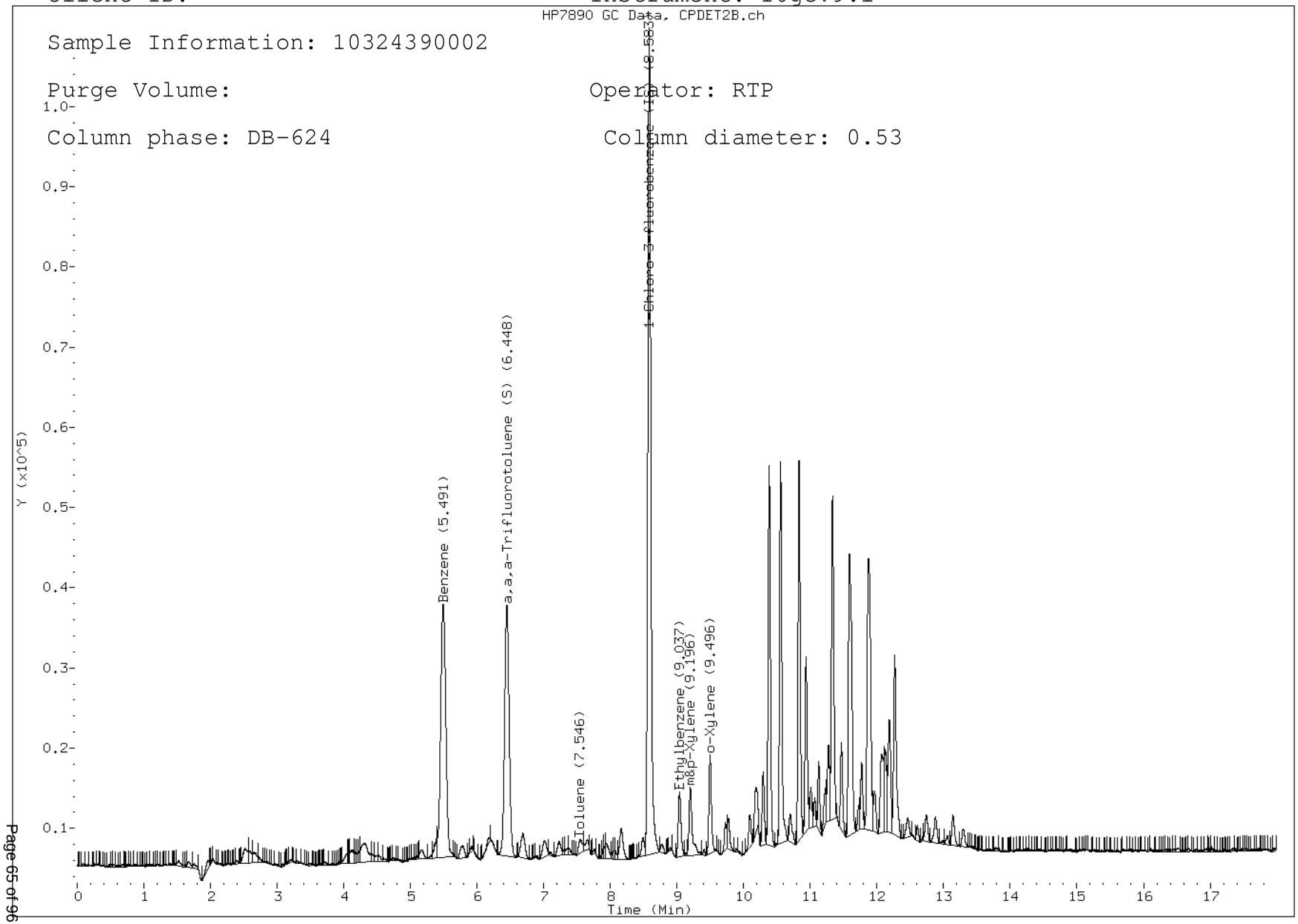
Sample ID: 10324390002

Client ID: Instrument: 10gcv9.i

Sample Information: 10324390002

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-2.b/28007.d

Report Date: 10/08/2015

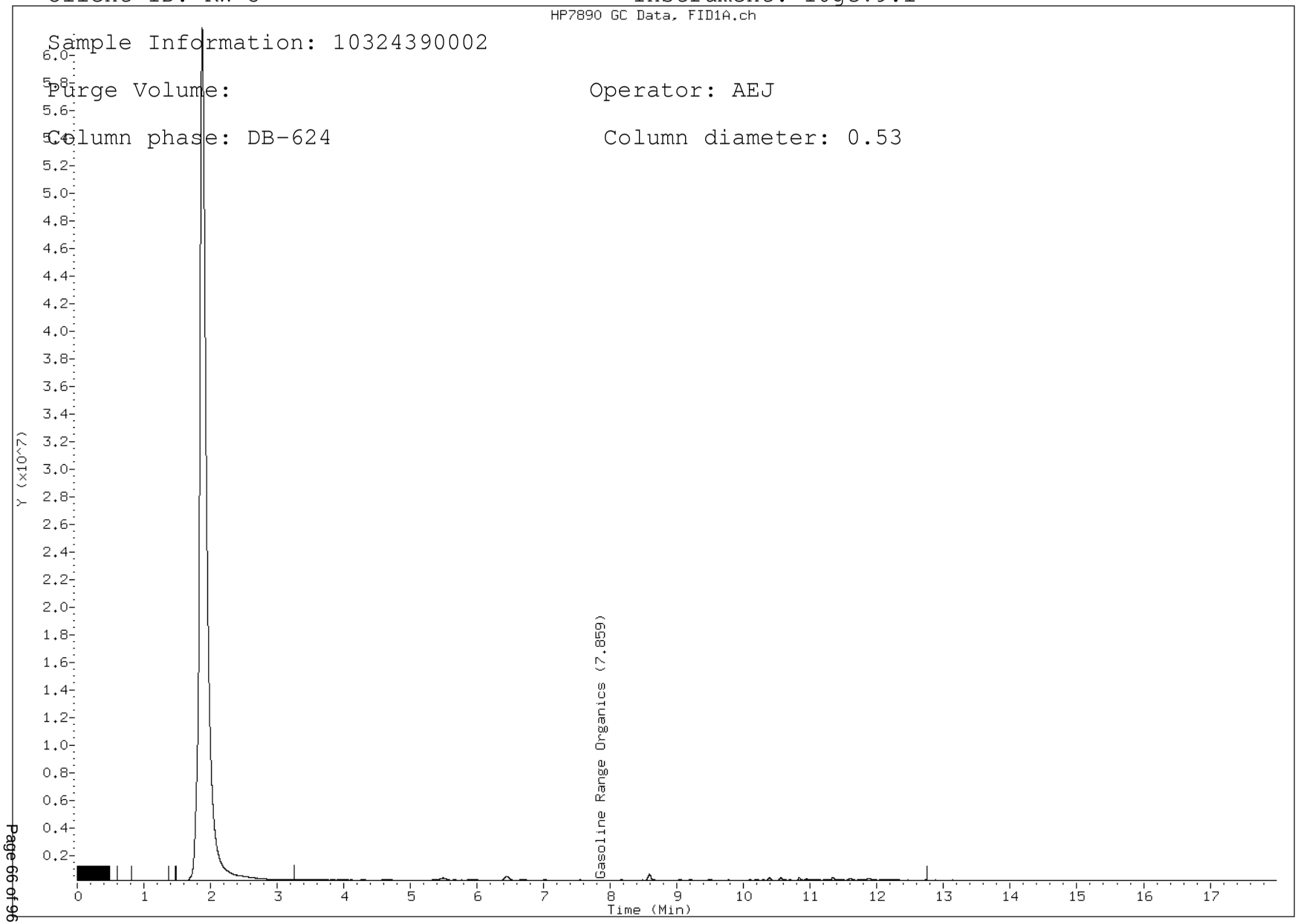
Sample ID: 10324390002

Client ID: RW-5 Instrument: 10gcv9.i

Sample Information: 10324390002

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53

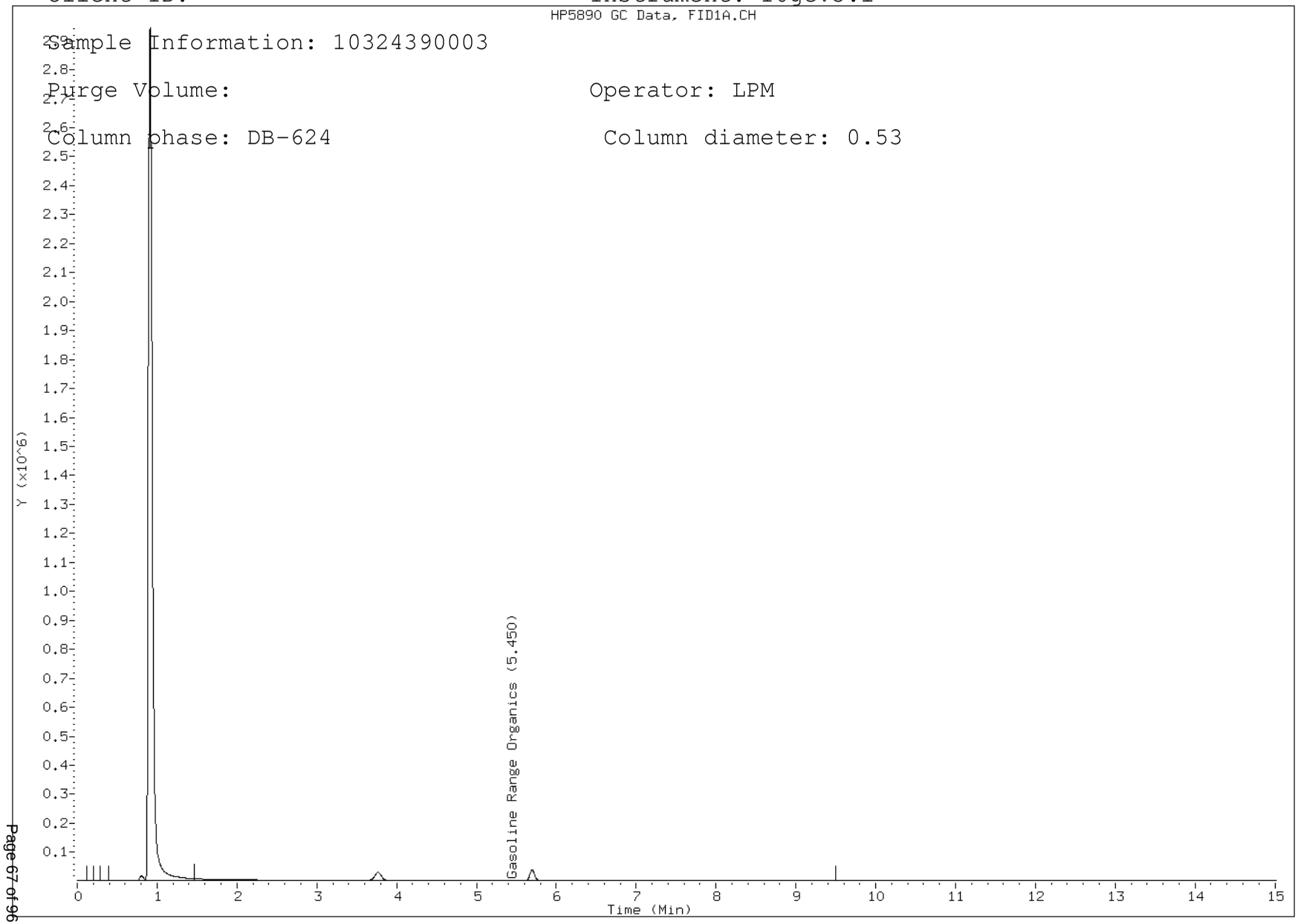


Data File: \\192.168.10.12\chem\10gcv3.i\100515A-1.b/1-278012.d

Report Date: 10/06/2015

Sample ID: 10324390003

Client ID: Instrument: 10gcv3.i



Sample Information: 10324390003

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\100515A-2.b/1-278012.d

Report Date: 10/06/2015

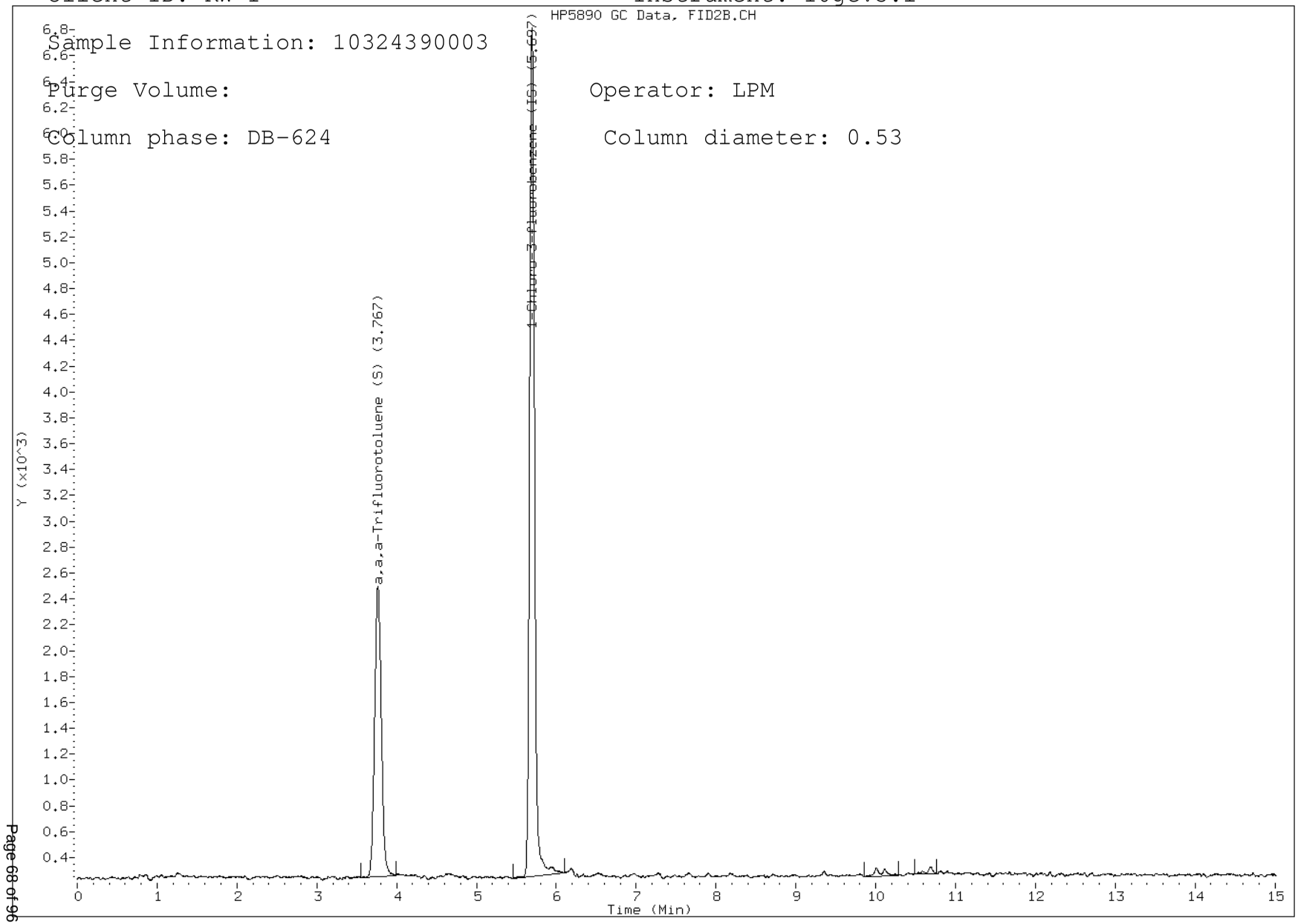
Sample ID: 10324390003

Client ID: RW-1 Instrument: 10gcv3.i

Sample Information: 10324390003

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-1.b/28008.d

Report Date: 10/08/2015

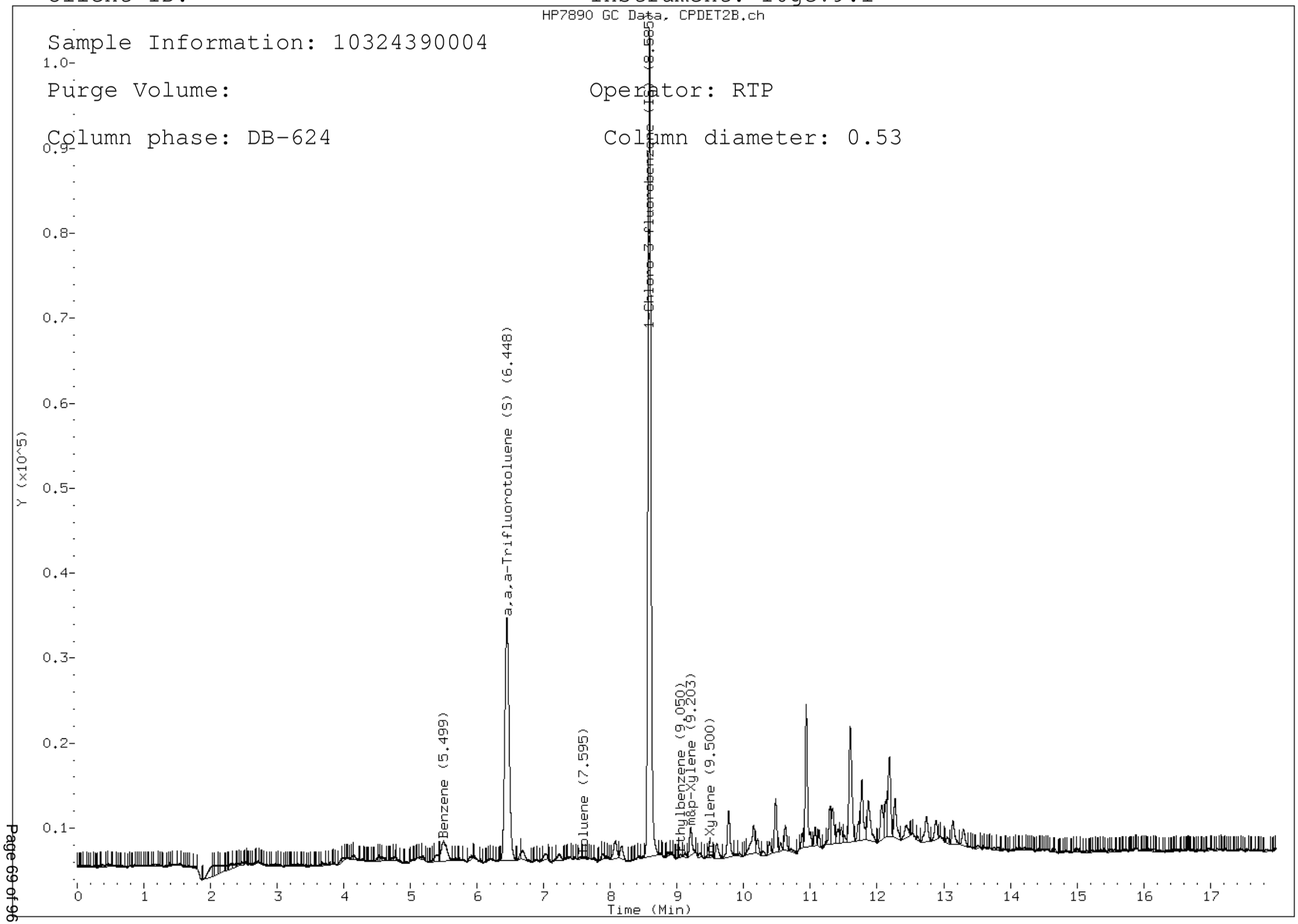
Sample ID: 10324390004

Client ID: Instrument: 10gcv9.i

Sample Information: 10324390004

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53

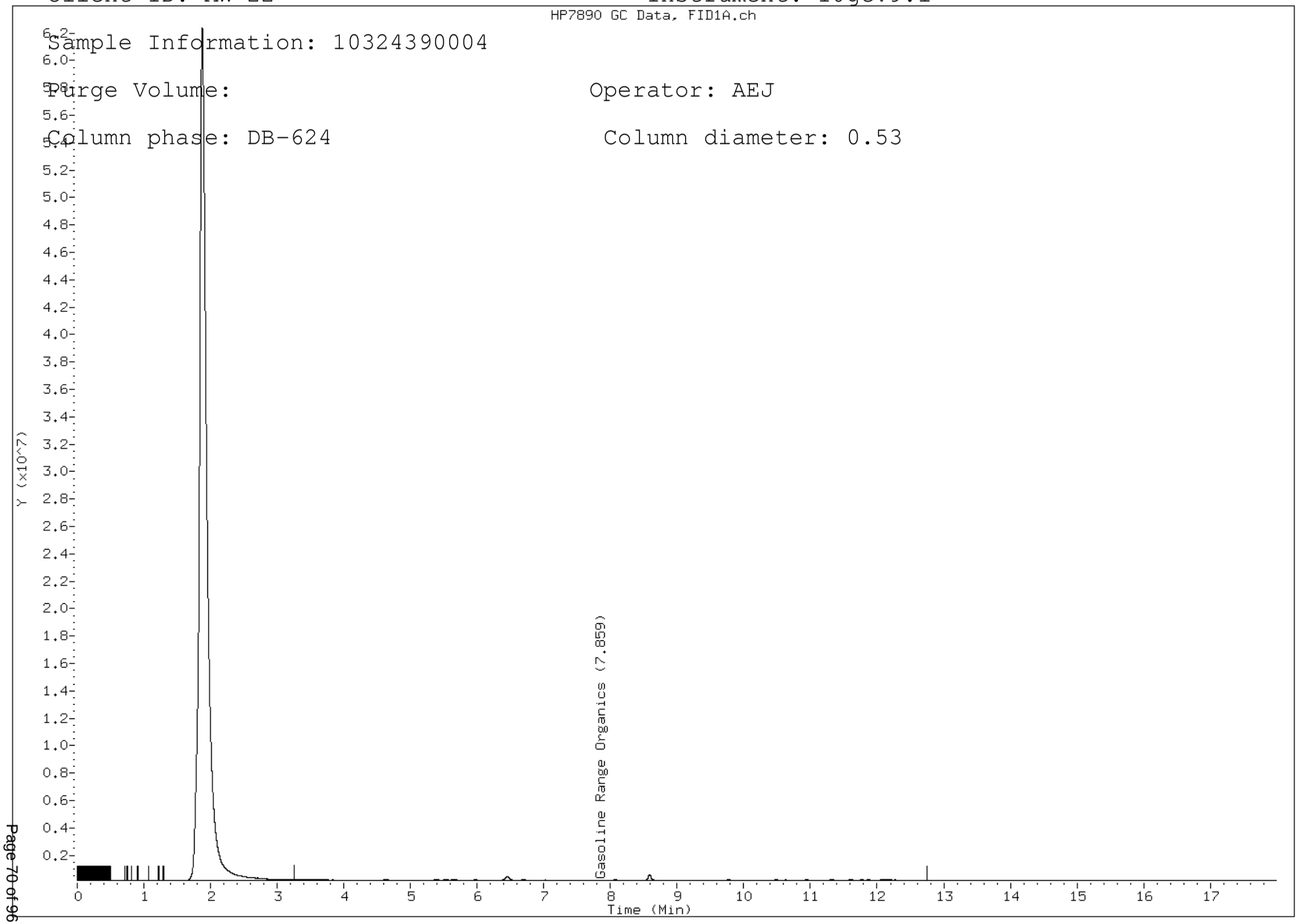


Data File: \\192.168.10.12\chem\10gcv9.i\100715A-2.b/28008.d

Report Date: 10/08/2015

Sample ID: 10324390004

Client ID: MW-22 Instrument: 10gcv9.i



Sample Information: 10324390004

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv9.i\100515b-1.b/27836.d

Report Date: 10/06/2015

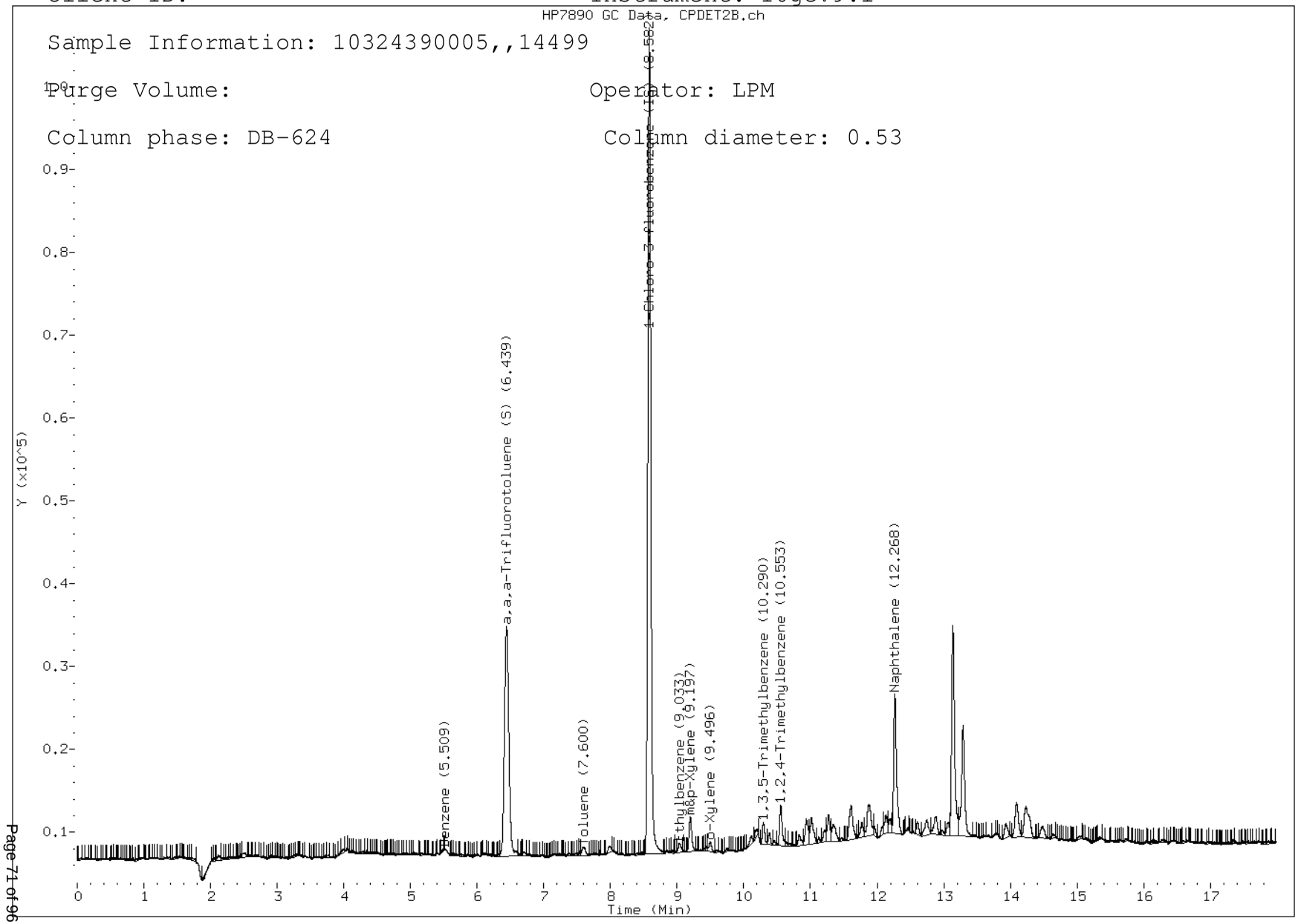
Sample ID: 10324390005

Client ID: Instrument: 10gcv9.i

Sample Information: 10324390005,,14499

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100515b-2.b/27836.d

Report Date: 10/06/2015

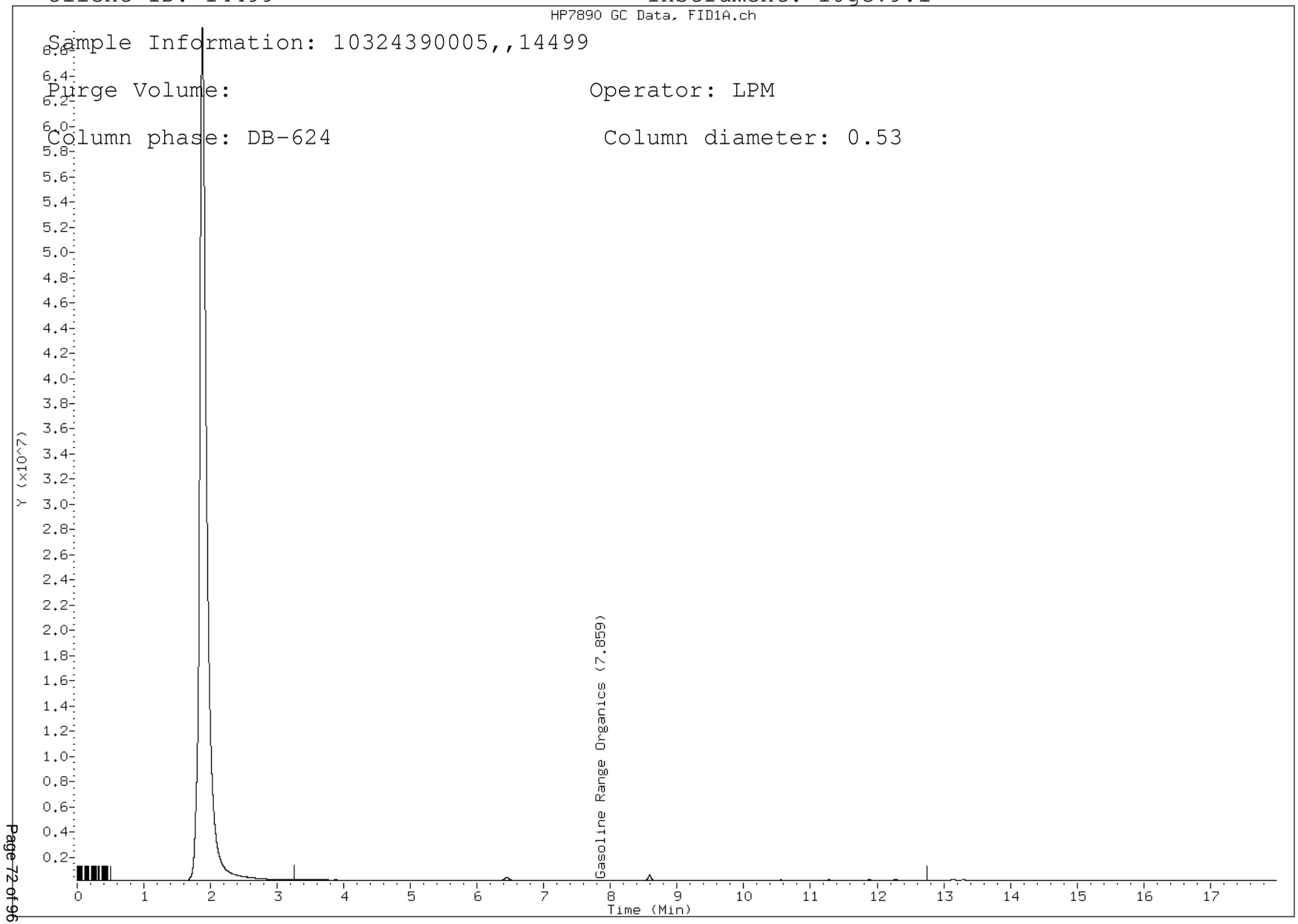
Sample ID: 10324390005

Client ID: 14499 Instrument: 10gcv9.i

Sample Information: 10324390005,,14499

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-1.b/28010.d

Report Date: 10/08/2015

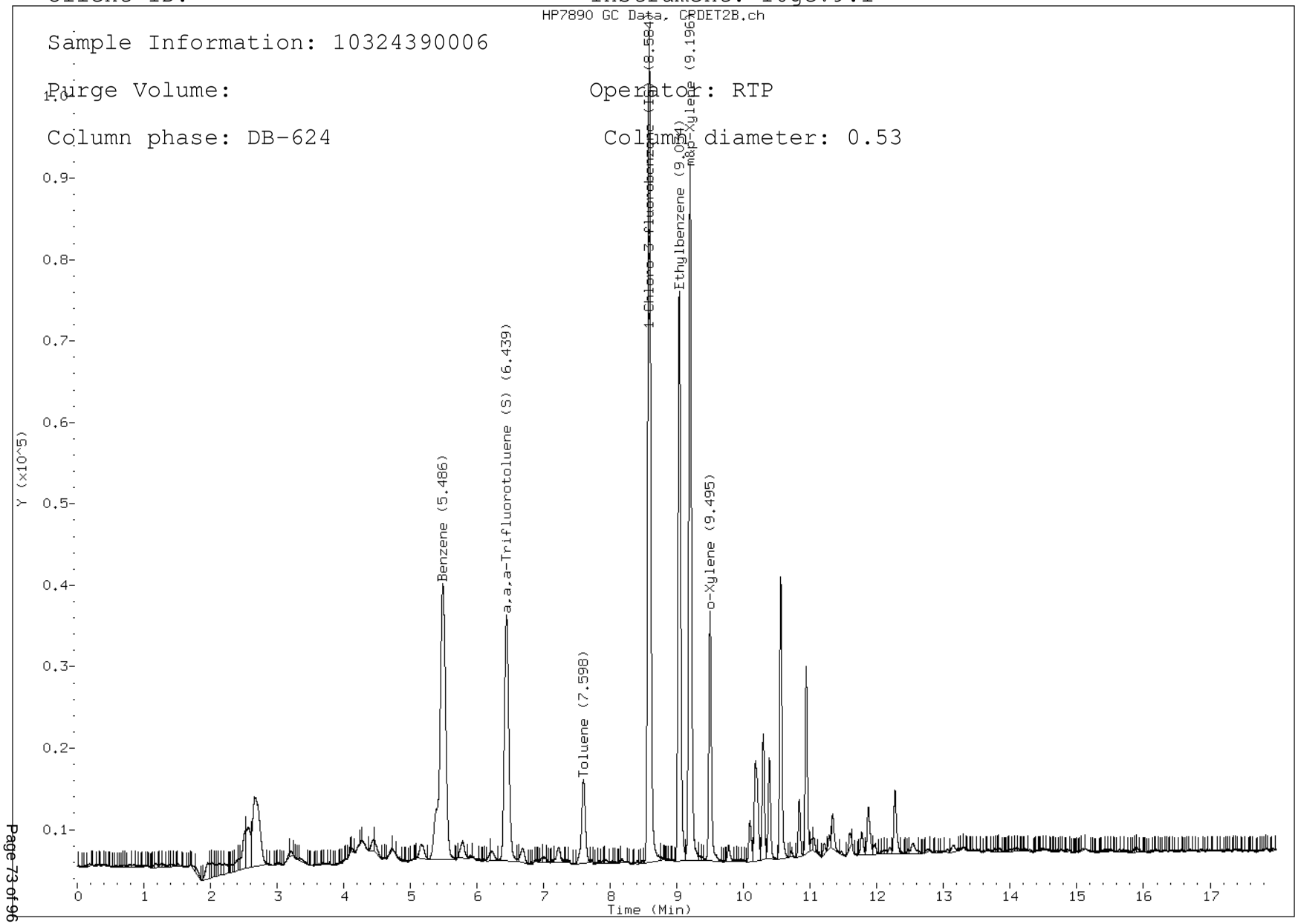
Sample ID: 10324390006

Client ID: Instrument: 10gcv9.i

Sample Information: 10324390006

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-2.b/28010.d

Report Date: 10/08/2015

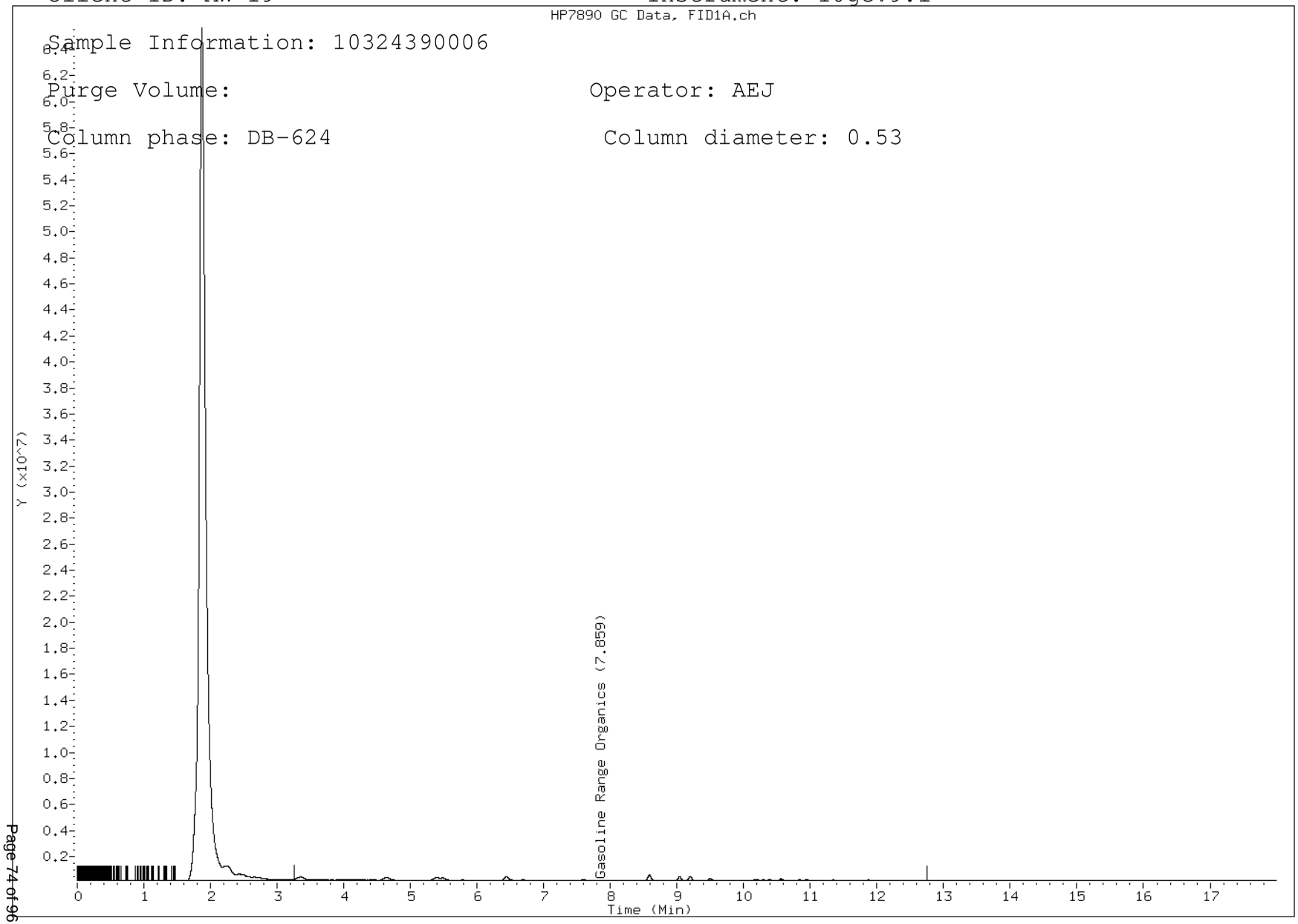
Sample ID: 10324390006

Client ID: MW-19 Instrument: 10gcv9.i

Sample Information: 10324390006

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-1.b/28011.d

Report Date: 10/08/2015

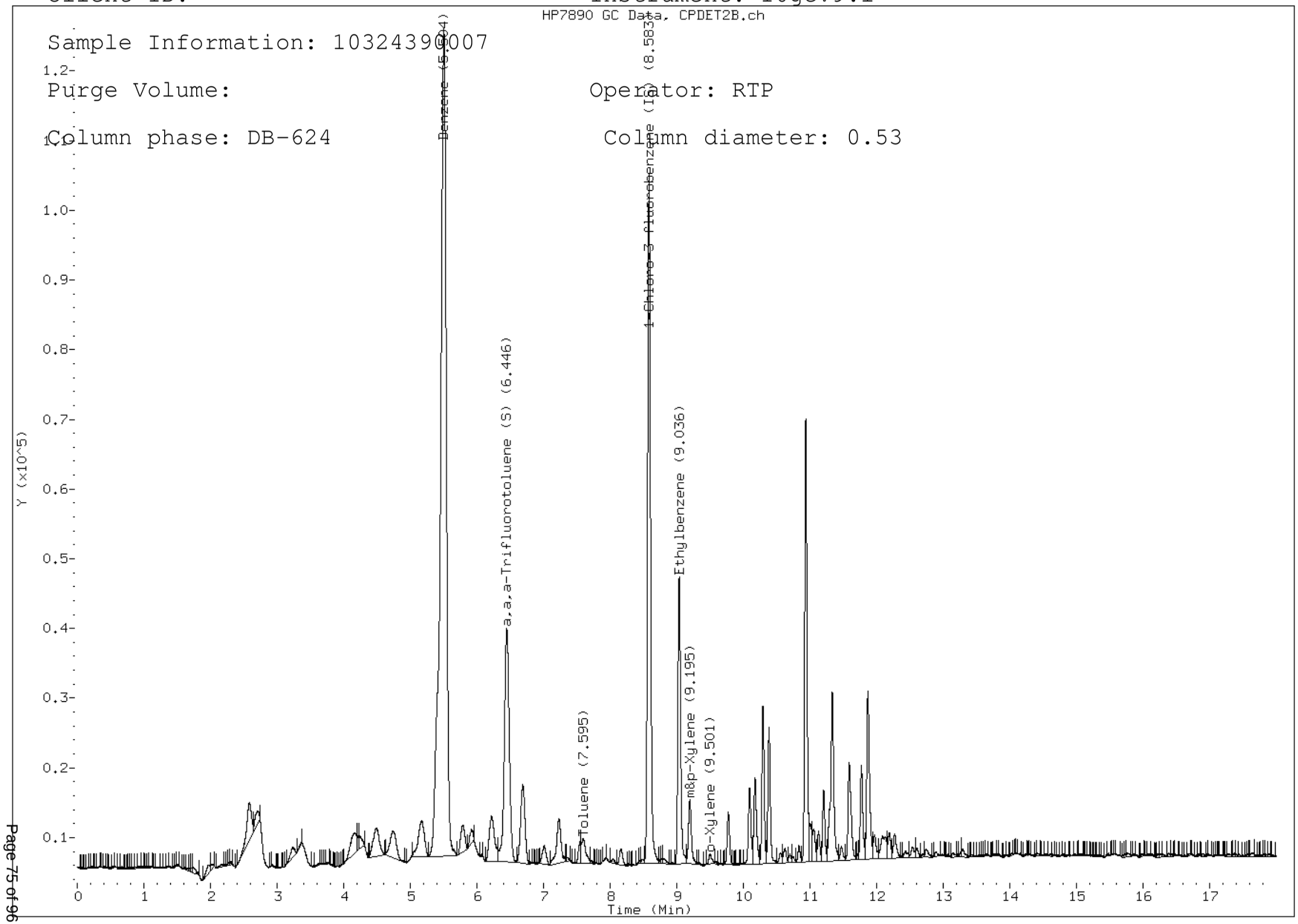
Sample ID: 10324390007

Client ID: Instrument: 10gcv9.i

Sample Information: 10324390007

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-2.b/28011.d

Report Date: 10/08/2015

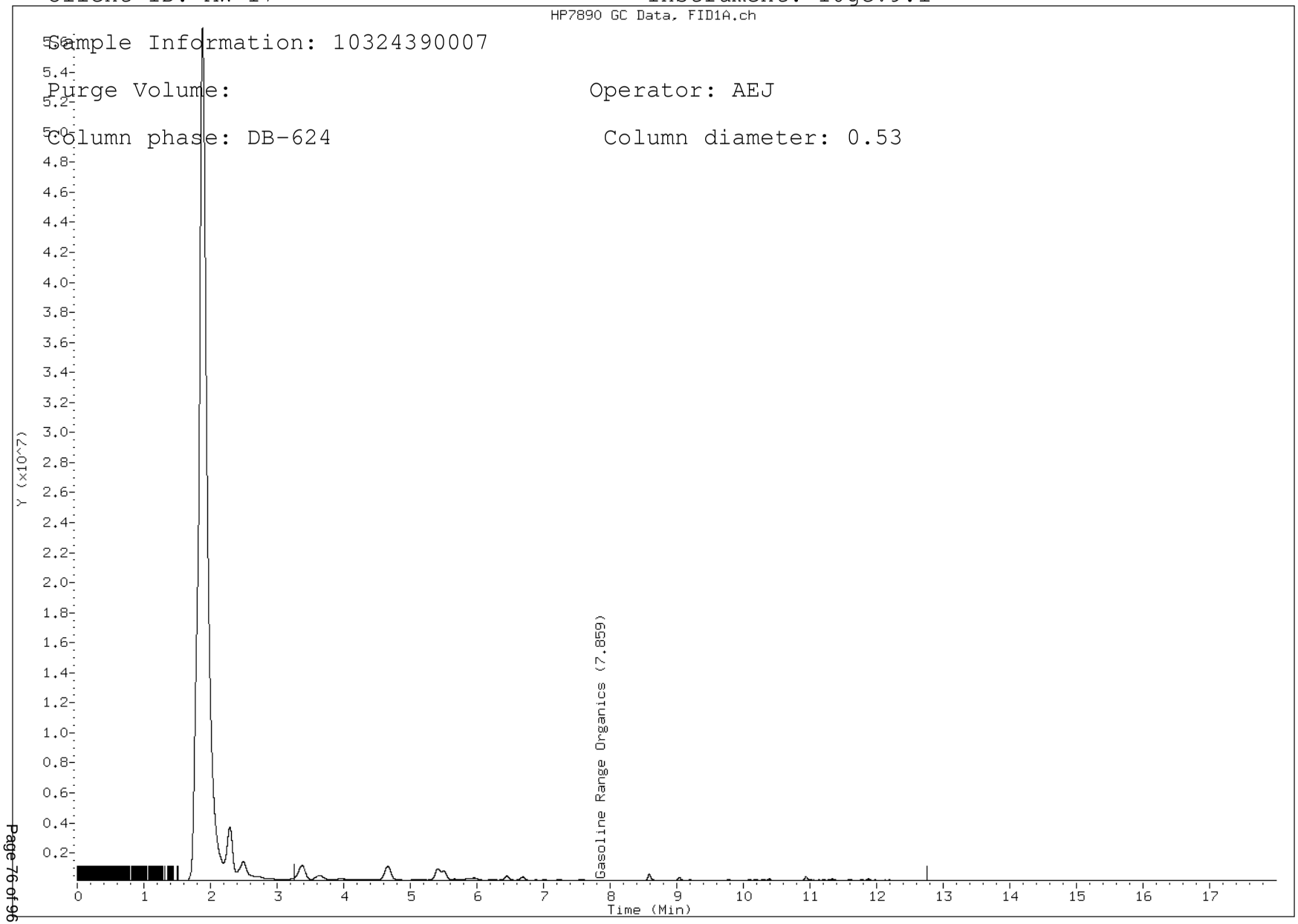
Sample ID: 10324390007

Client ID: MW-17 Instrument: 10gcv9.i

Sample Information: 10324390007

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-1.b/28012.d

Report Date: 10/08/2015

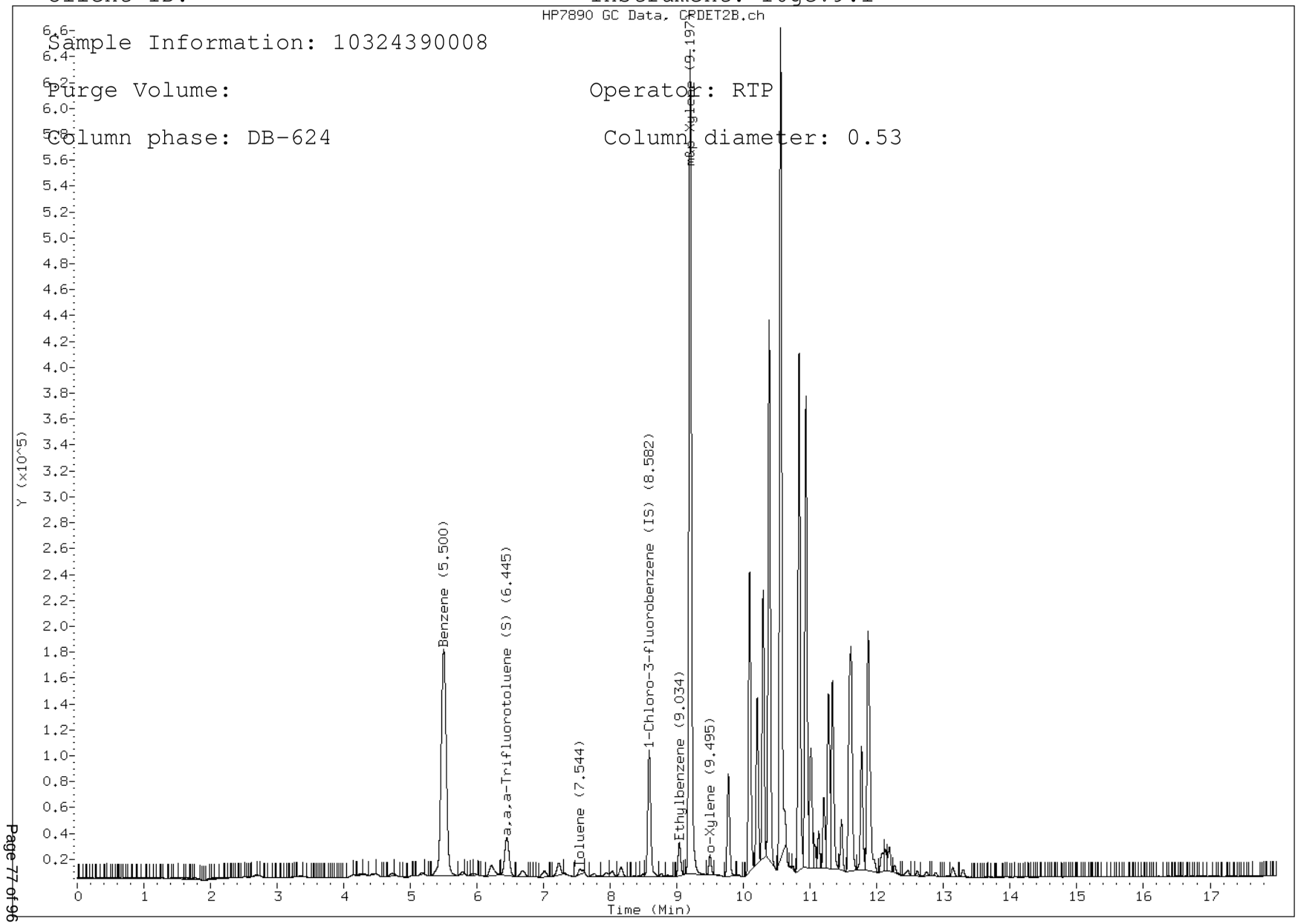
Sample ID: 10324390008

Client ID: Instrument: 10gcv9.i

Sample Information: 10324390008

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-2.b/28012.d

Report Date: 10/08/2015

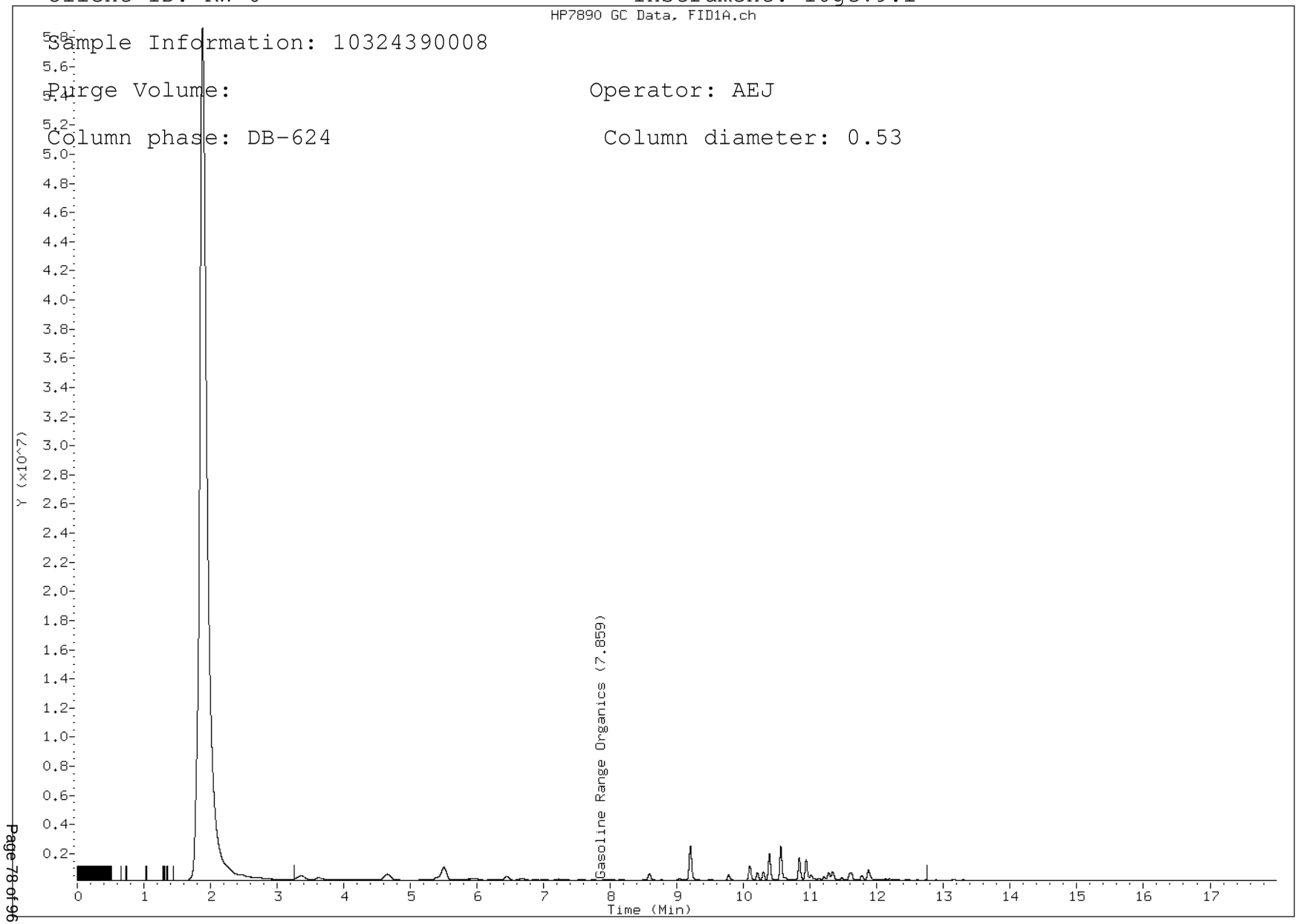
Sample ID: 10324390008

Client ID: RW-6 Instrument: 10gcv9.i

Sample Information: 10324390008

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-1.b/28013.d

Report Date: 10/08/2015

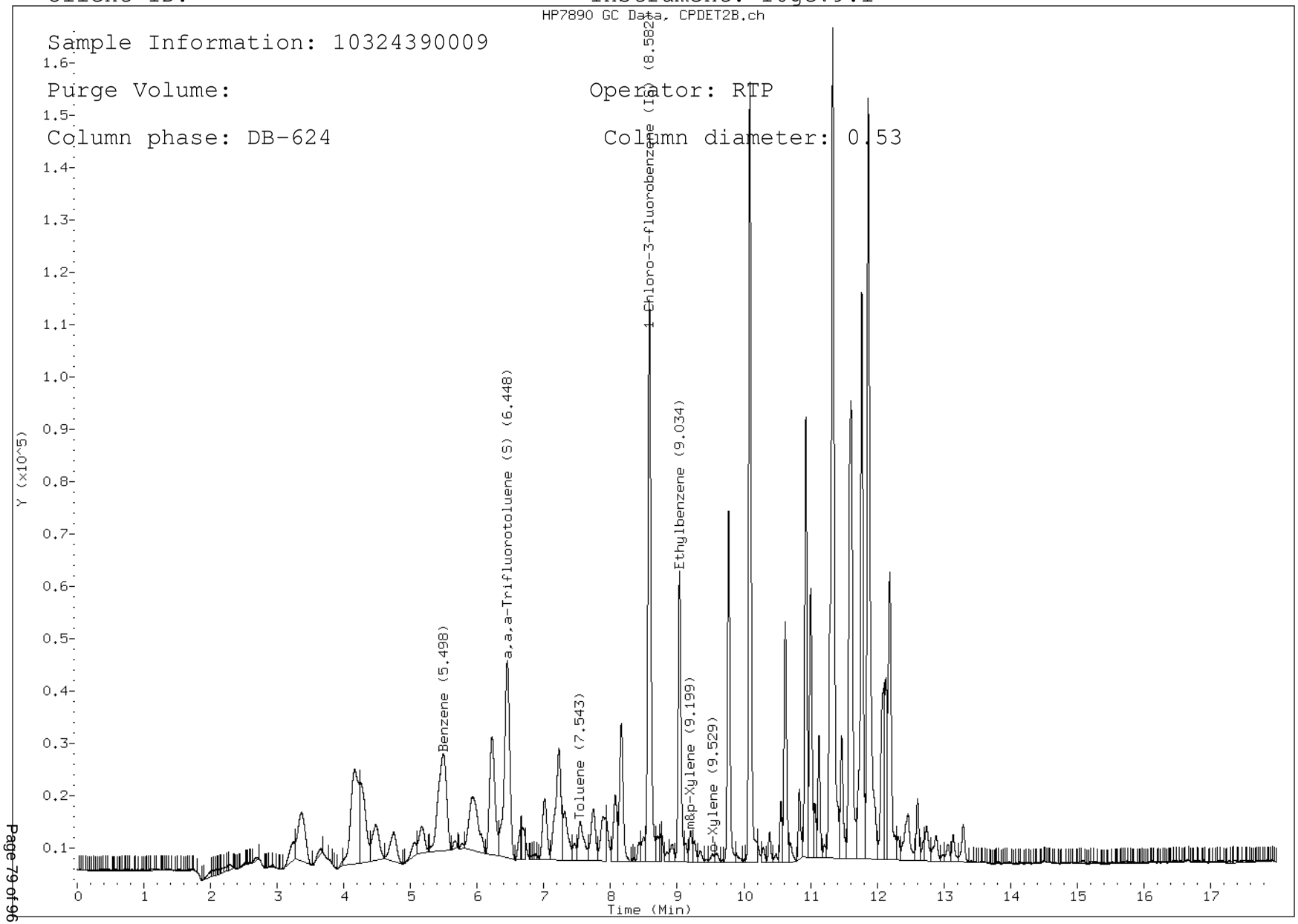
Sample ID: 10324390009

Client ID: Instrument: 10gcv9.i

Sample Information: 10324390009

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-2.b/28013.d

Report Date: 10/08/2015

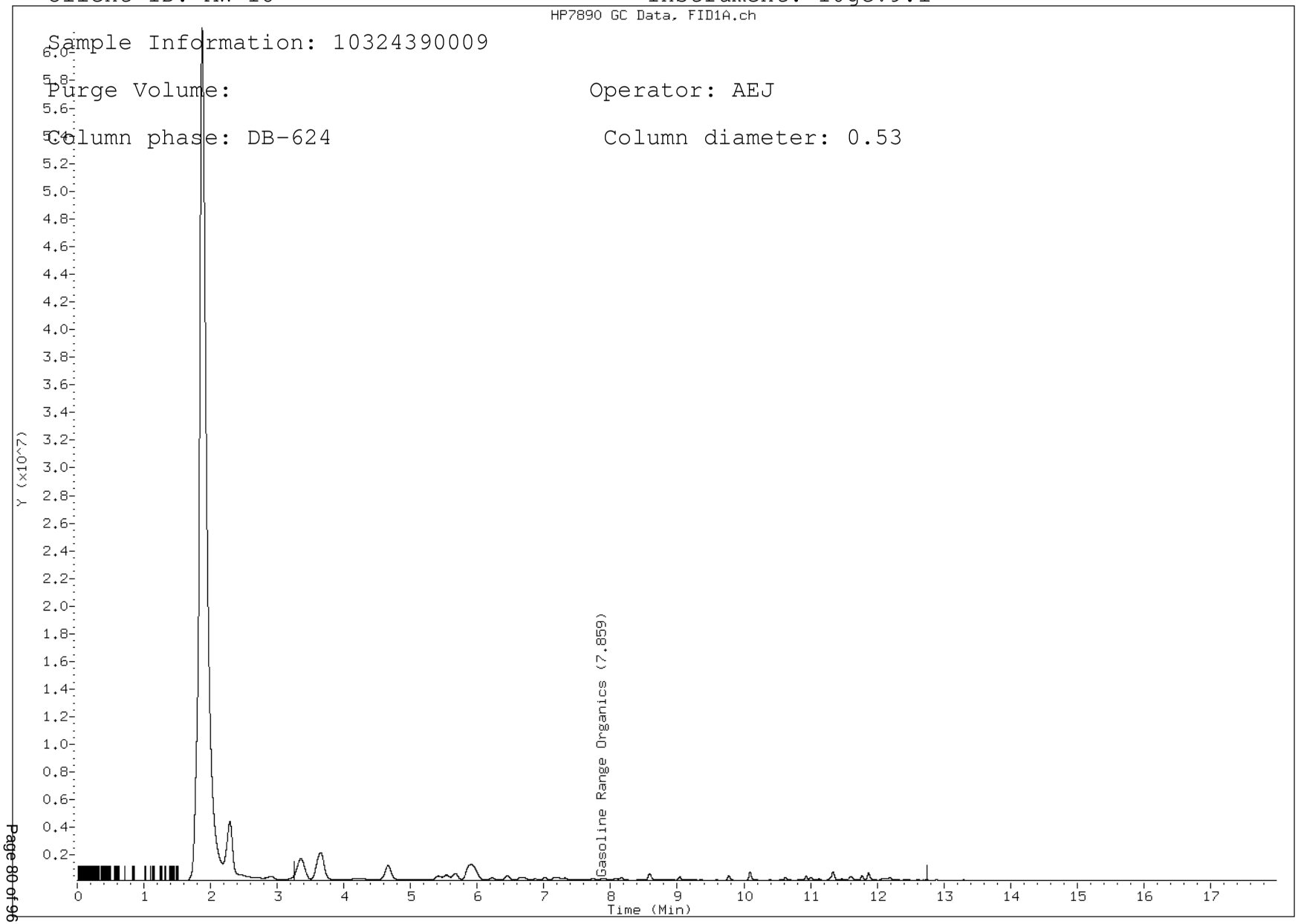
Sample ID: 10324390009

Client ID: MW-18 Instrument: 10gcv9.i

Sample Information: 10324390009

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-1.b/28014.d

Report Date: 10/08/2015

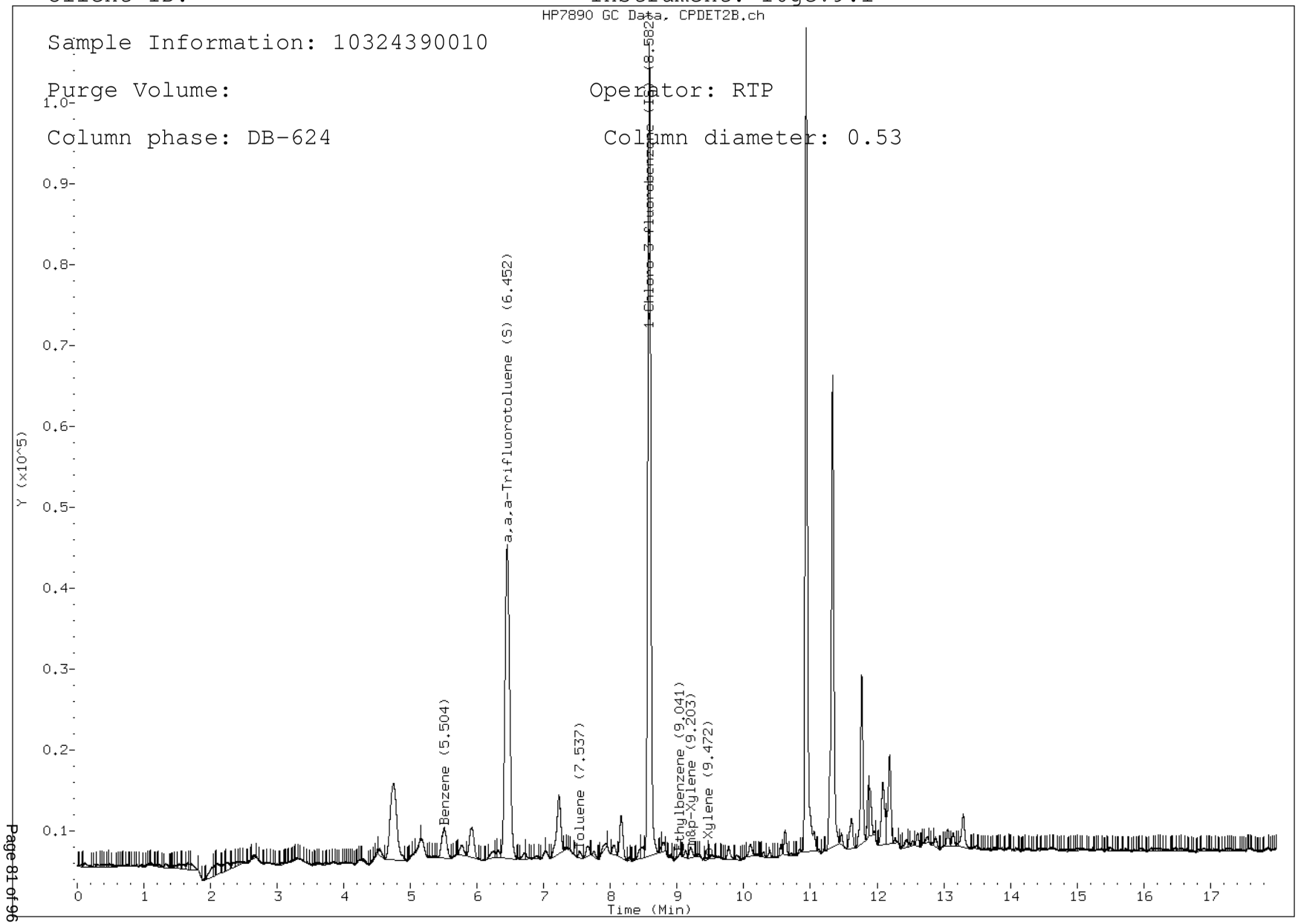
Sample ID: 10324390010

Client ID: Instrument: 10gcv9.i

Sample Information: 10324390010

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-2.b/28014.d

Report Date: 10/08/2015

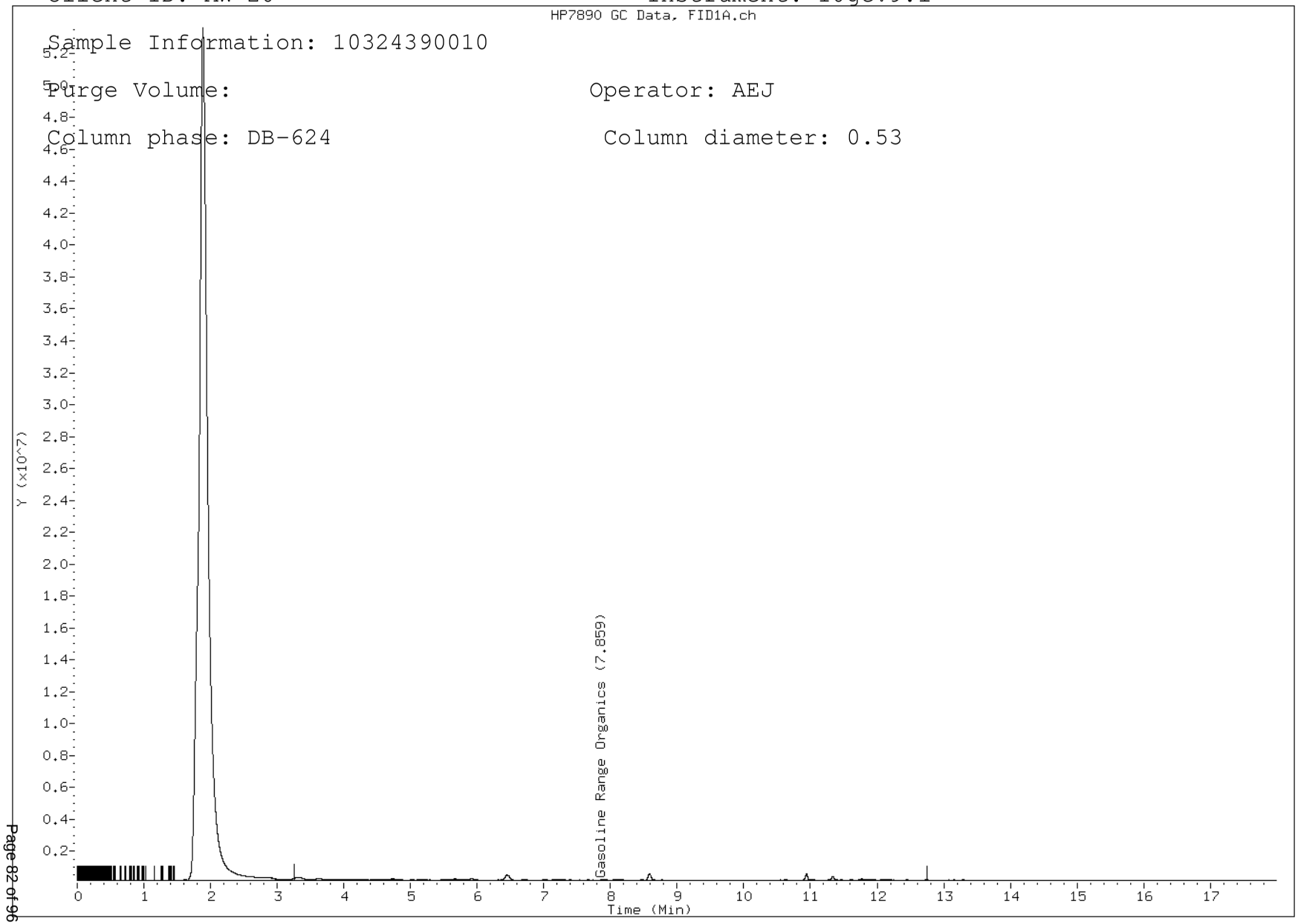
Sample ID: 10324390010

Client ID: MW-20 Instrument: 10gcv9.i

Sample Information: 10324390010

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\100715A-1.b/1-280006.d

Report Date: 10/08/2015

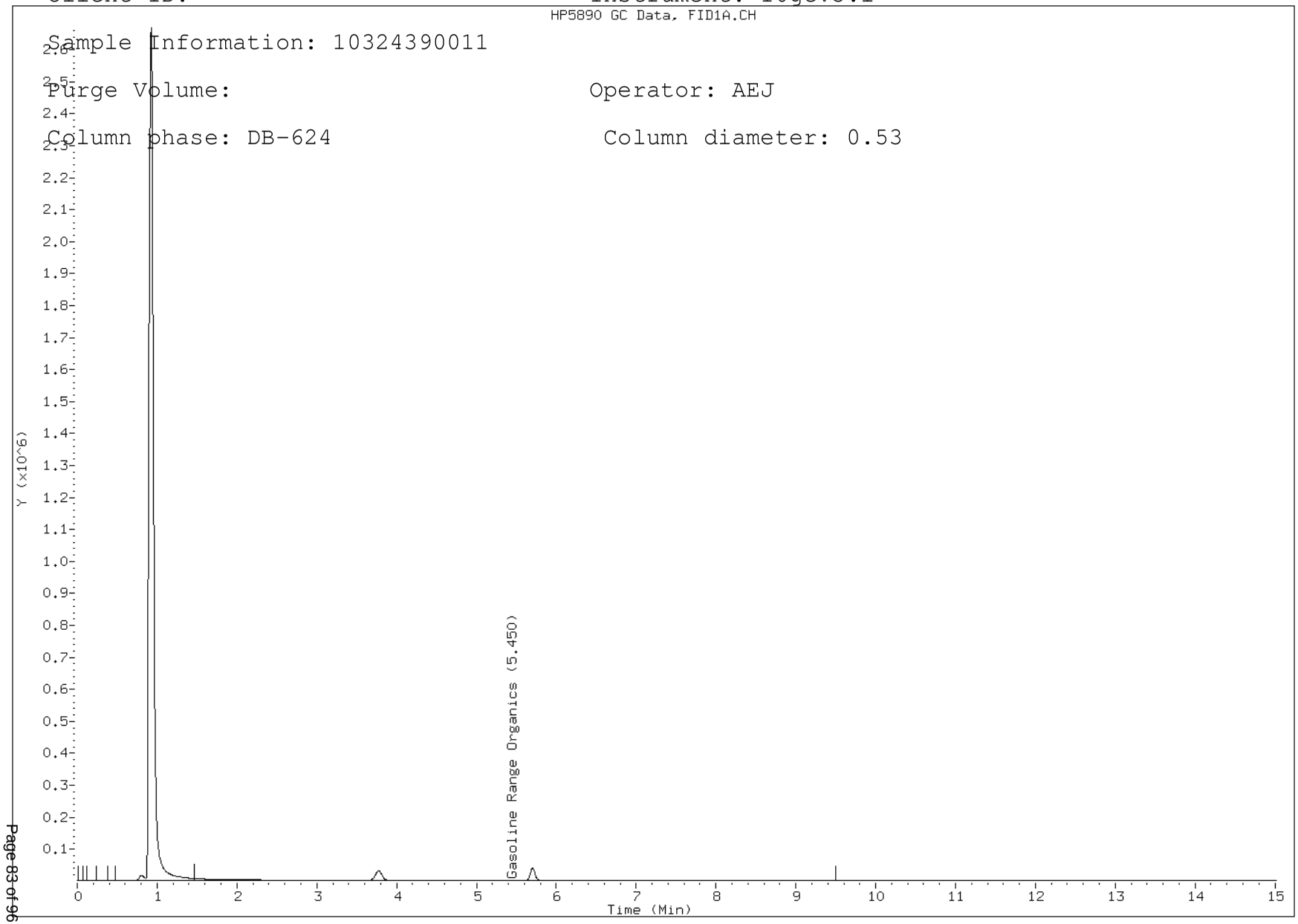
Sample ID: 10324390011

Client ID: Instrument: 10gcv3.i

Sample Information: 10324390011

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\100715A-2.b/1-280006.d

Report Date: 10/08/2015

Sample ID: 10324390011

Client ID:

Instrument: 10gcv3.i

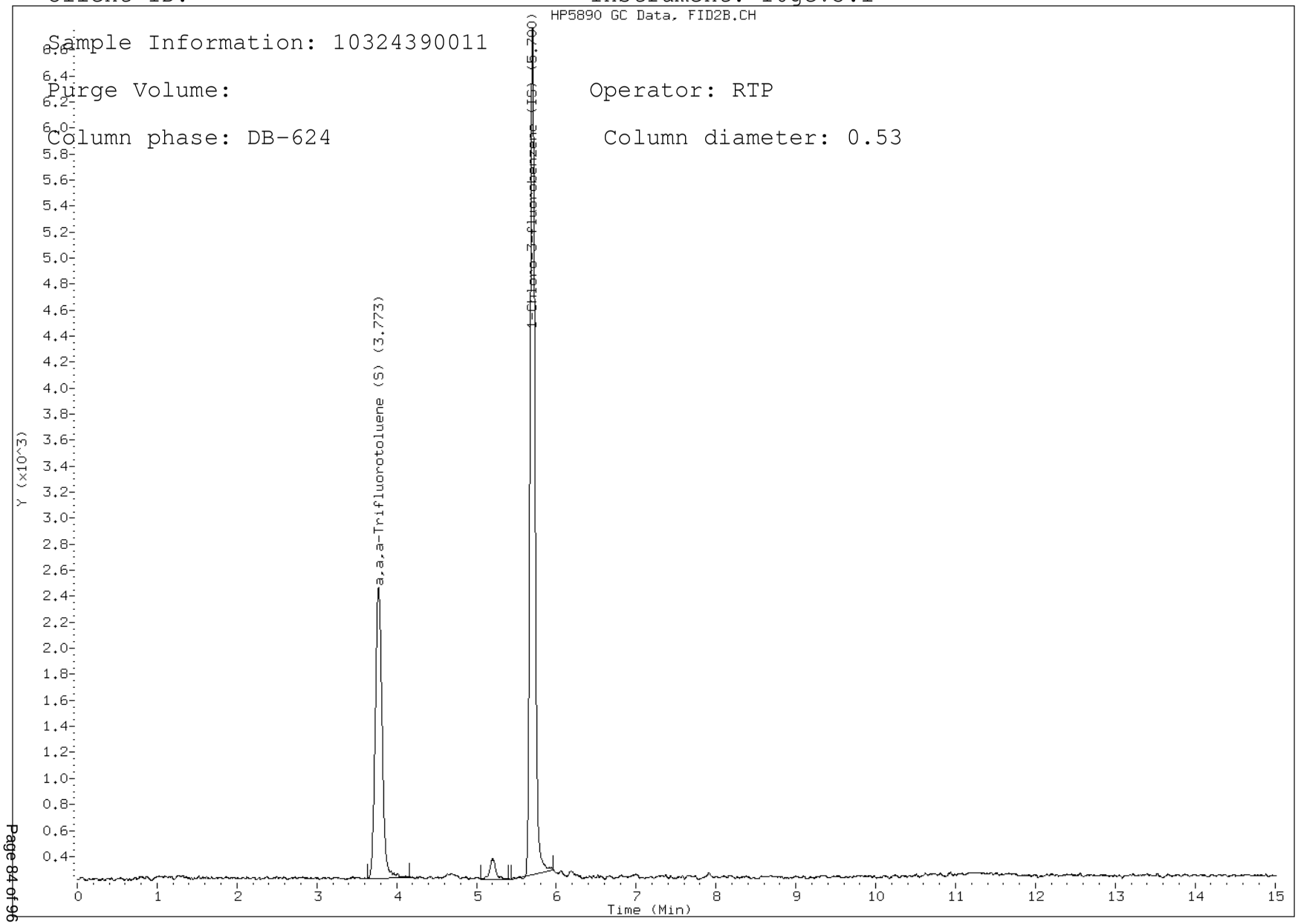
Sample Information: 10324390011

Purge Volume:

Operator: RTP

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\100715A-1.b/1-280021.d

Report Date: 10/08/2015

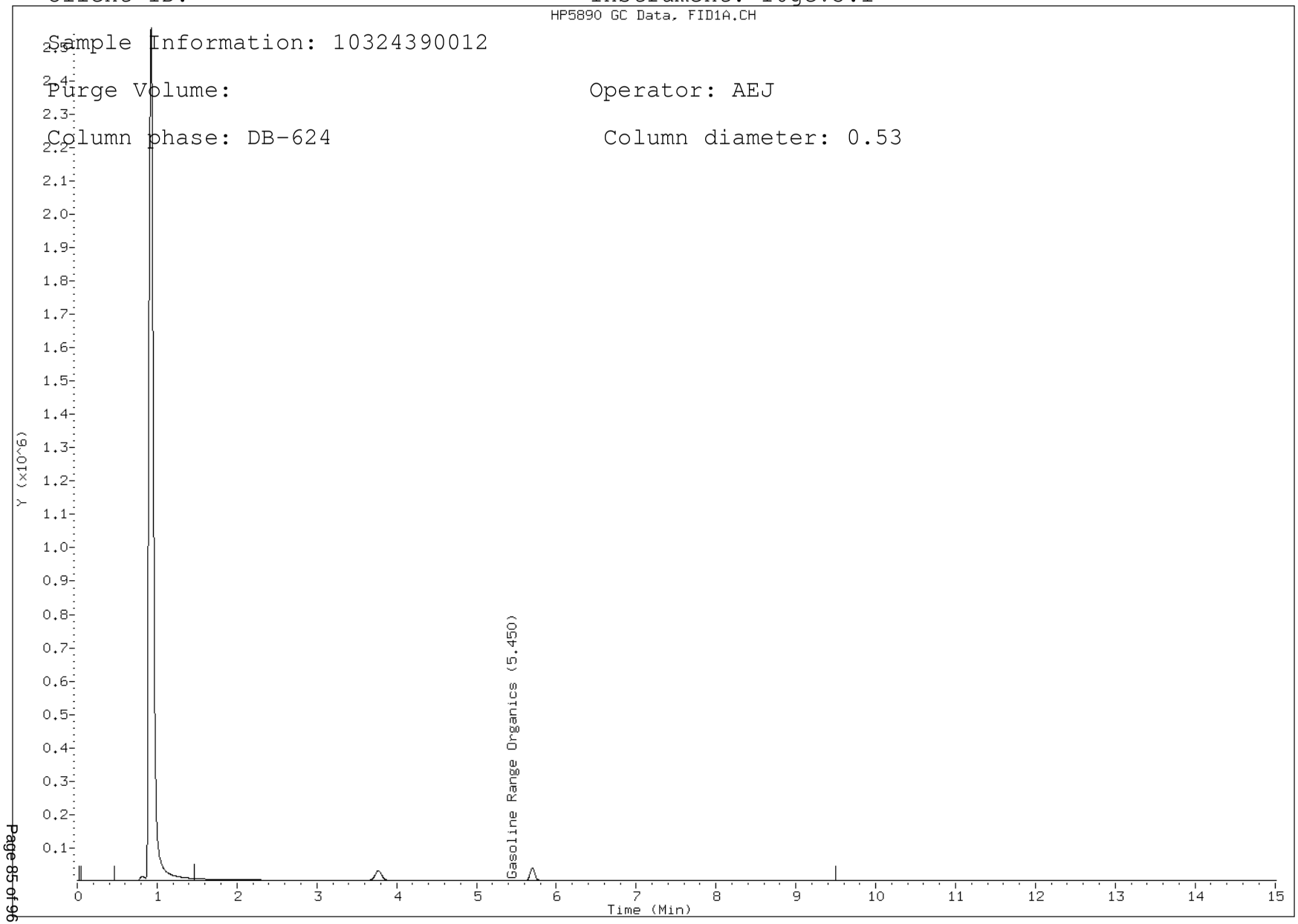
Sample ID: 10324390012

Client ID: Instrument: 10gcv3.i

Sample Information: 10324390012

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\100715A-2.b/1-280021.d

Report Date: 10/08/2015

Sample ID: 10324390012

Client ID:

Instrument: 10gcv3.i

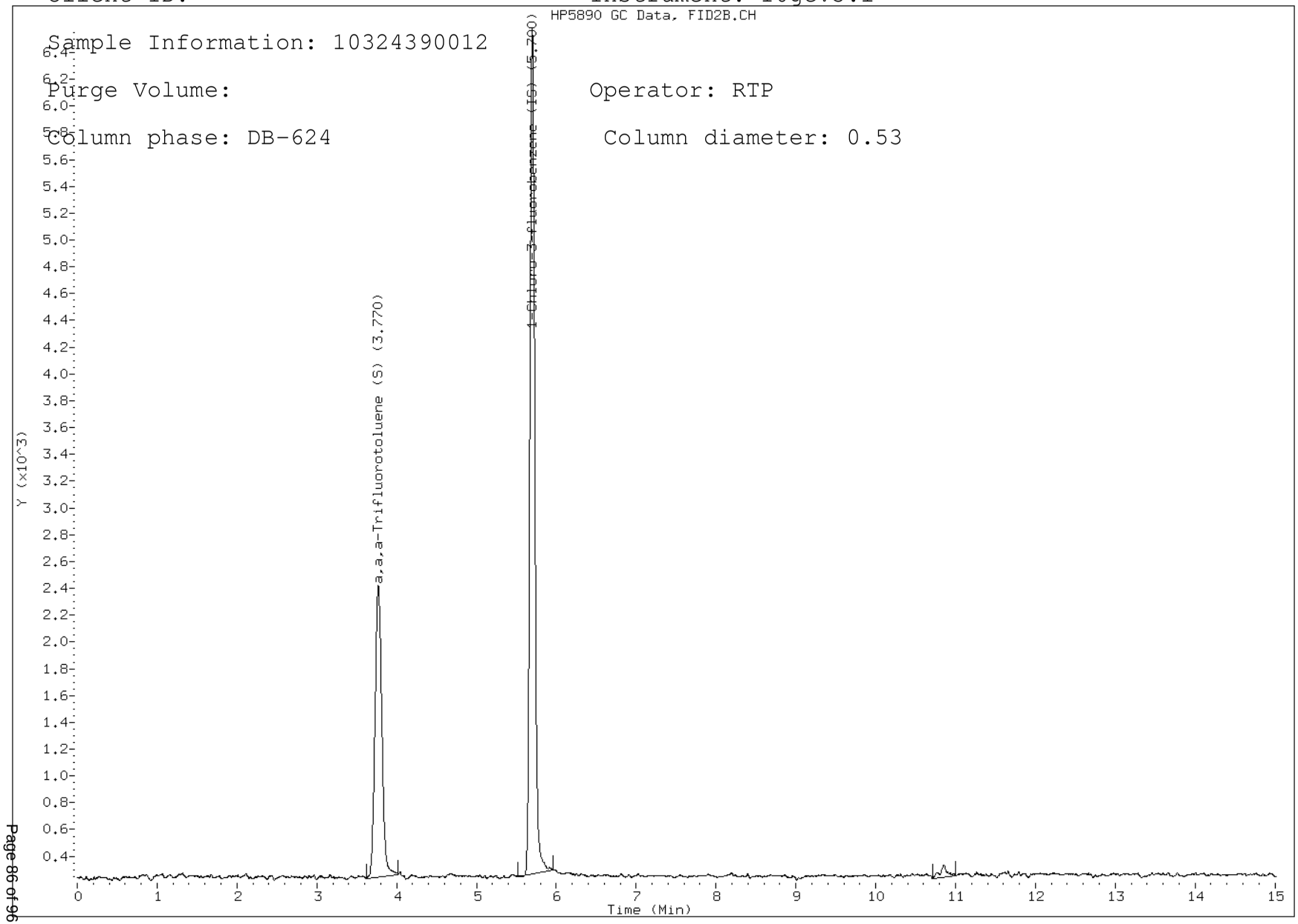
Sample Information: 10324390012

Purge Volume:

Operator: RTP

Column phase: DB-624

Column diameter: 0.53

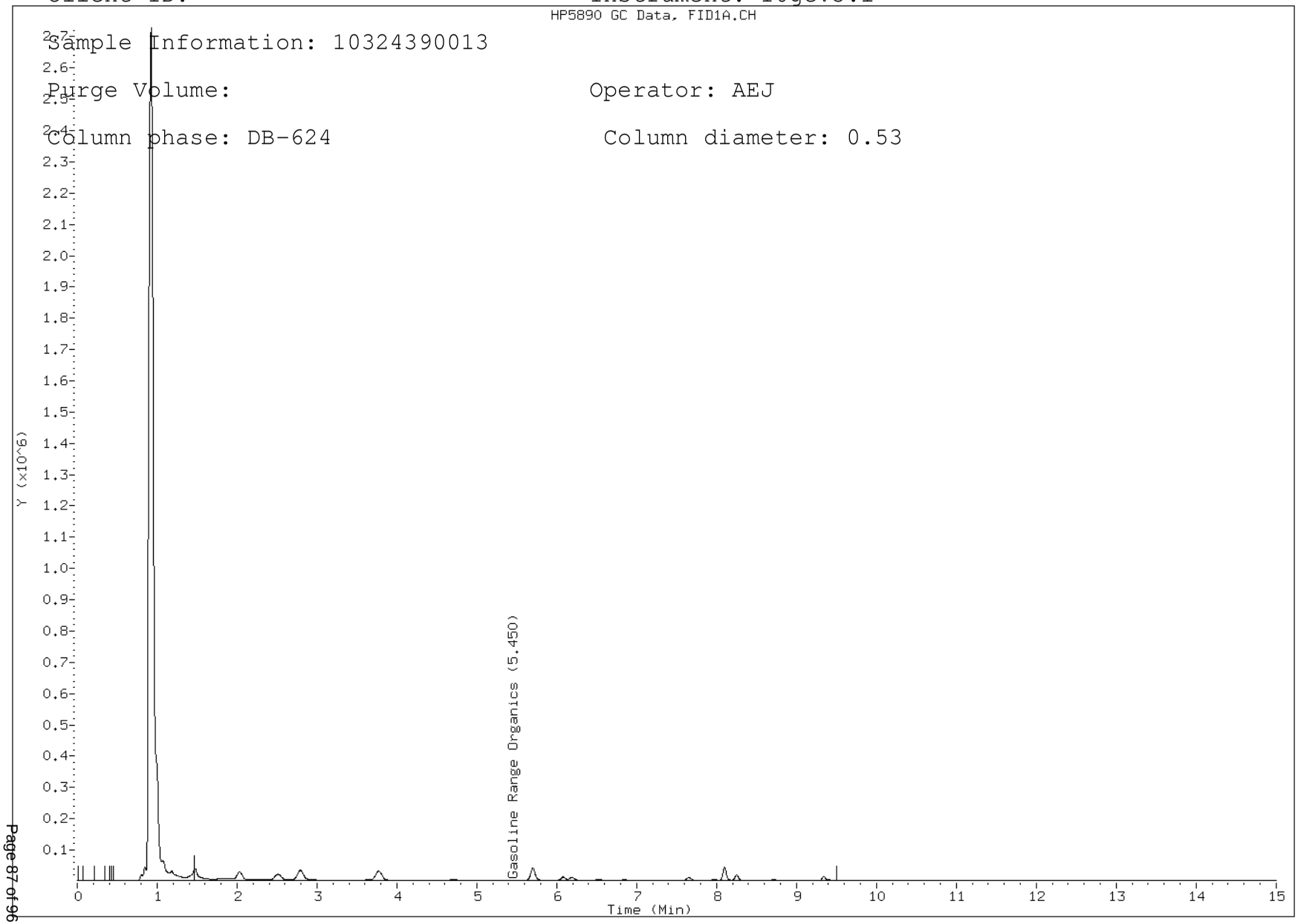


Data File: \\192.168.10.12\chem\10gcv3.i\100715A-1.b/1-280007.d

Report Date: 10/08/2015

Sample ID: 10324390013

Client ID: Instrument: 10gcv3.i



Sample Information: 10324390013

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\100715A-2.b/1-280007.d

Report Date: 10/08/2015

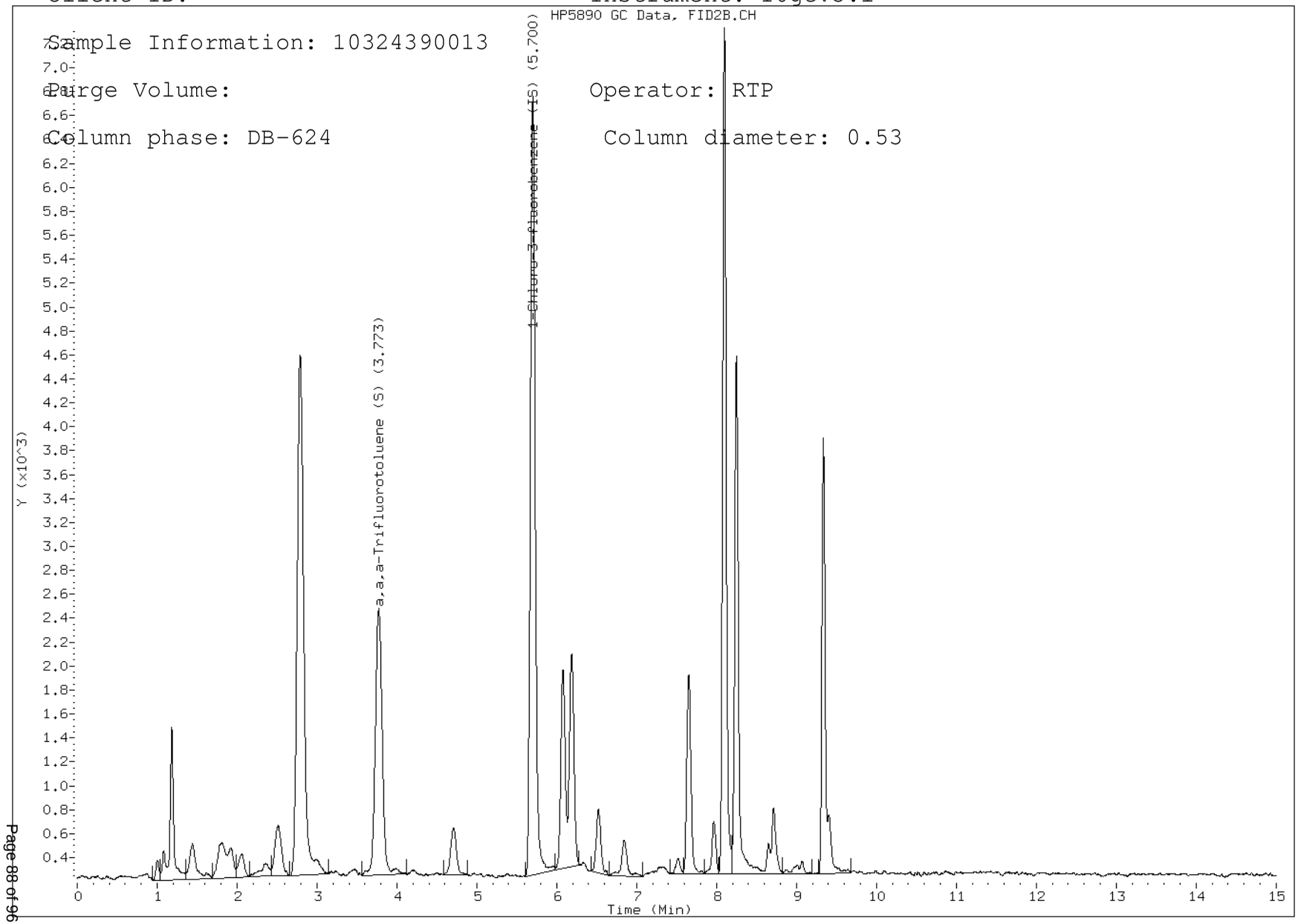
Sample ID: 10324390013

Client ID: Instrument: 10gcv3.i

Sample Information: 10324390013

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\100715A-1.b/1-280008.d

Report Date: 10/08/2015

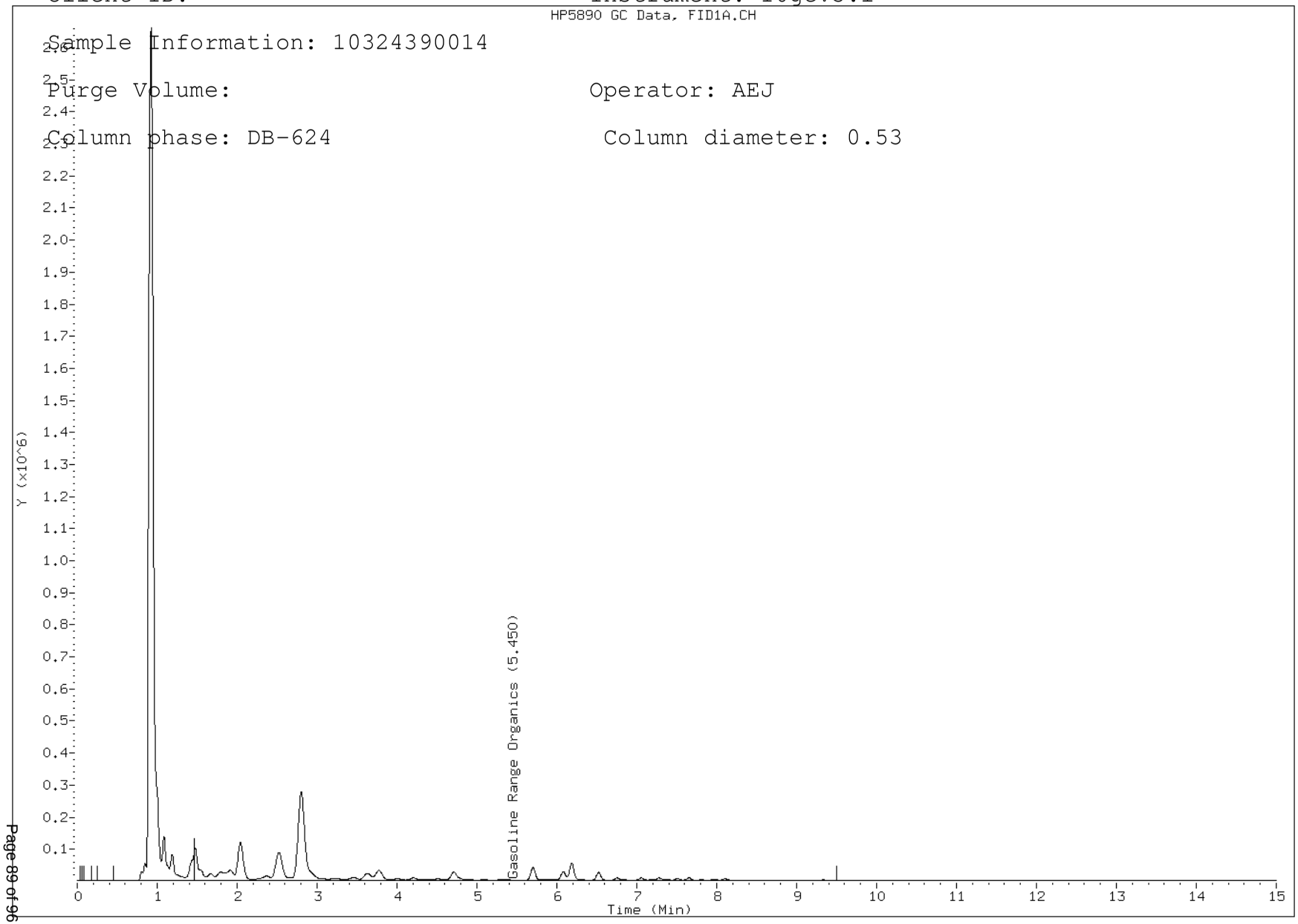
Sample ID: 10324390014

Client ID: Instrument: 10gcv3.i

Sample Information: 10324390014

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\100715A-2.b/1-280008.d

Report Date: 10/08/2015

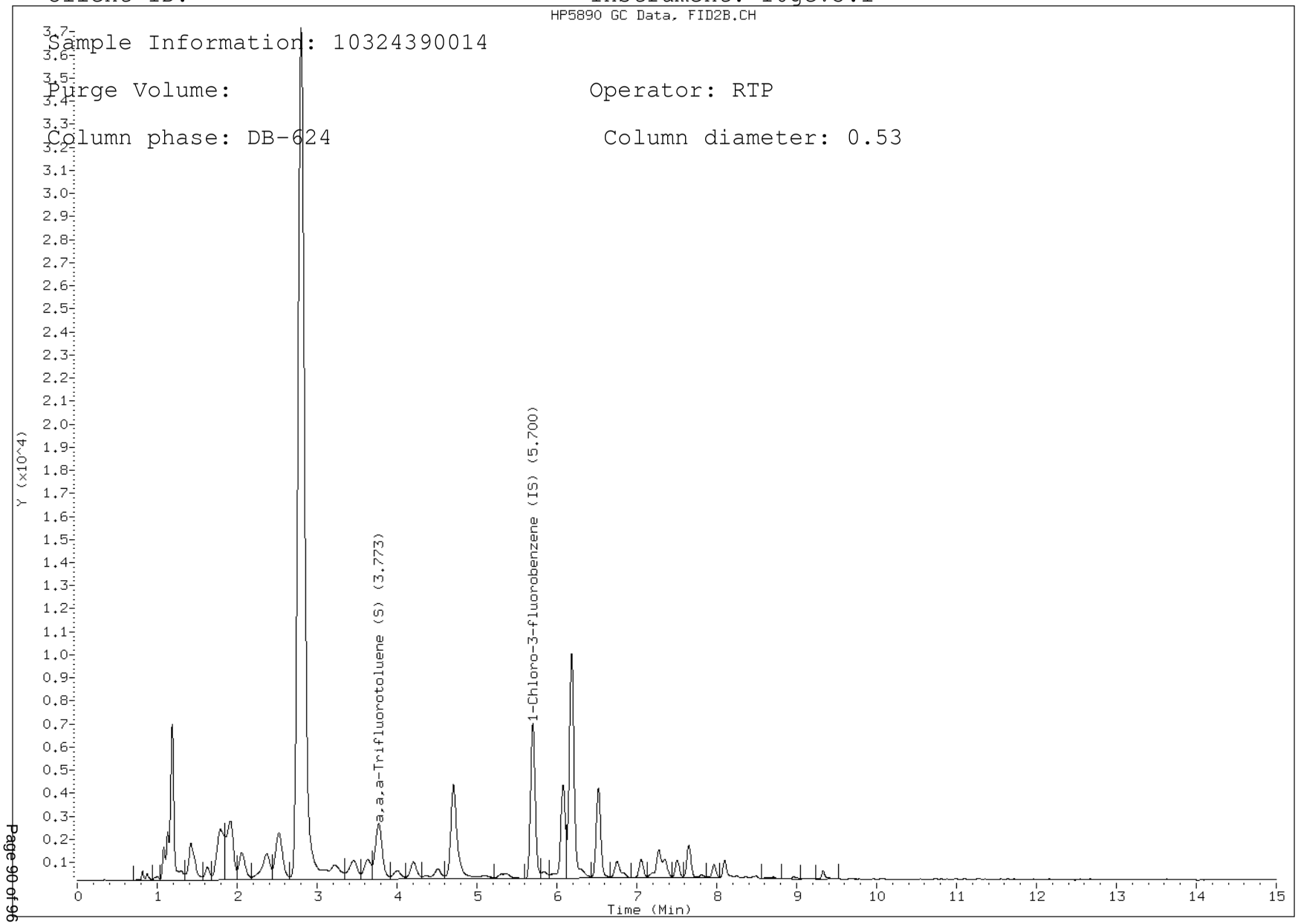
Sample ID: 10324390014

Client ID: Instrument: 10gcv3.i

Sample Information: 10324390014

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-1.b/28017.d

Report Date: 10/08/2015

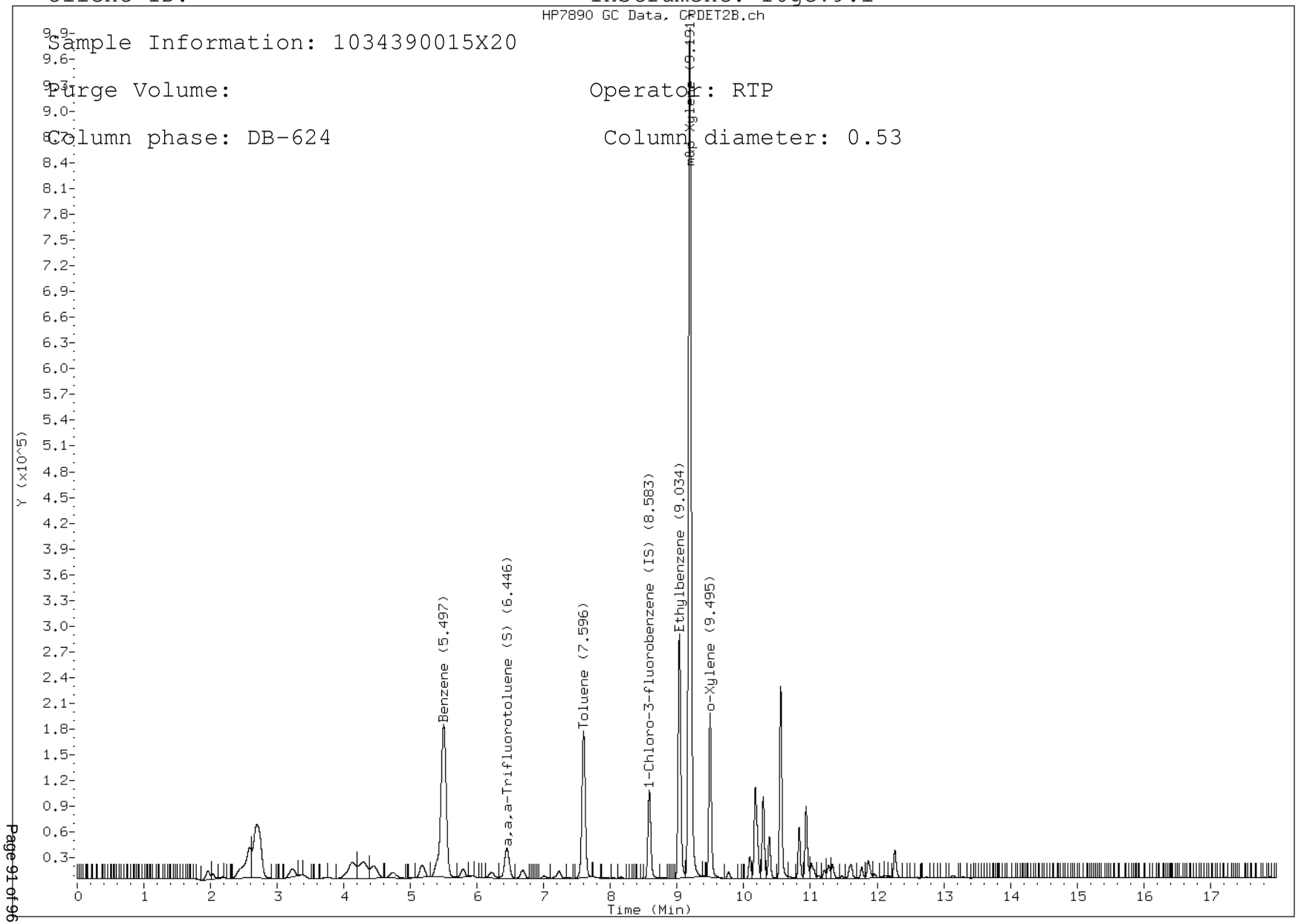
Sample ID: 1034390015

Client ID: Instrument: 10gcv9.i

Sample Information: 1034390015X20

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-2.b/28017.d

Report Date: 10/08/2015

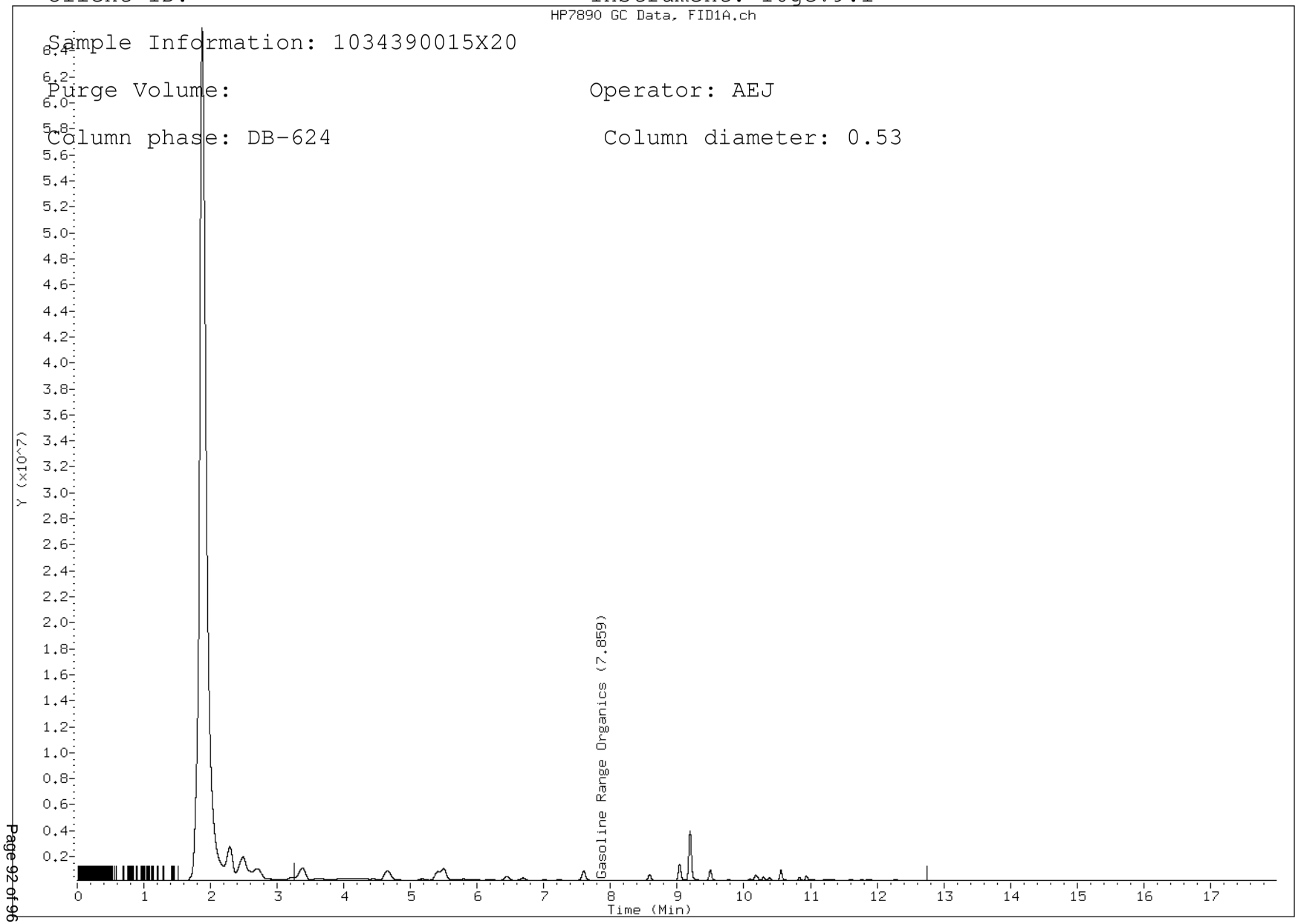
Sample ID: 1034390015

Client ID: Instrument: 10gcv9.i

Sample Information: 1034390015X20

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-1.b/28018.d

Report Date: 10/08/2015

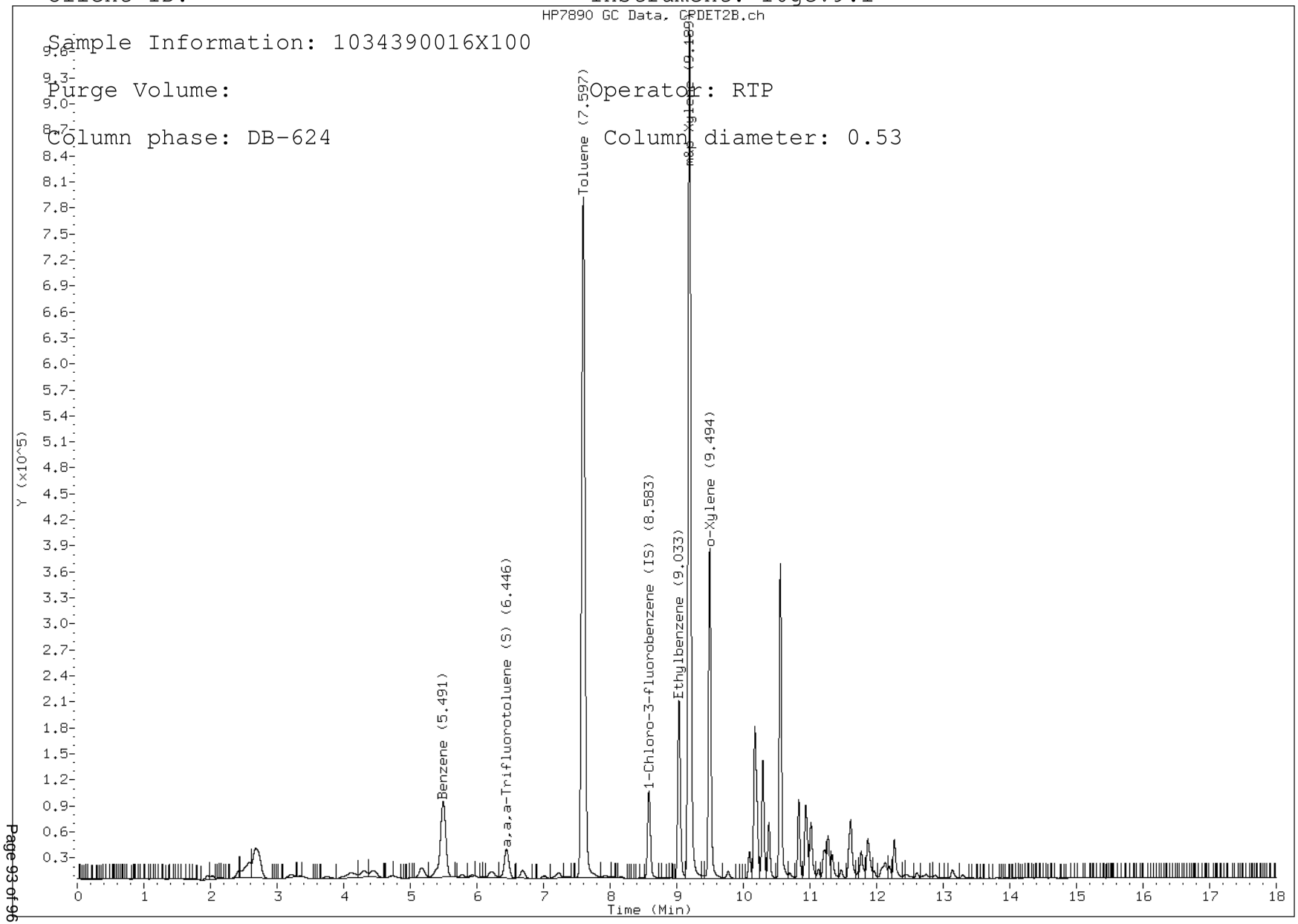
Sample ID: 1034390016

Client ID: Instrument: 10gcv9.i

Sample Information: 1034390016X100

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv9.i\100715A-2.b/28018.d

Report Date: 10/08/2015

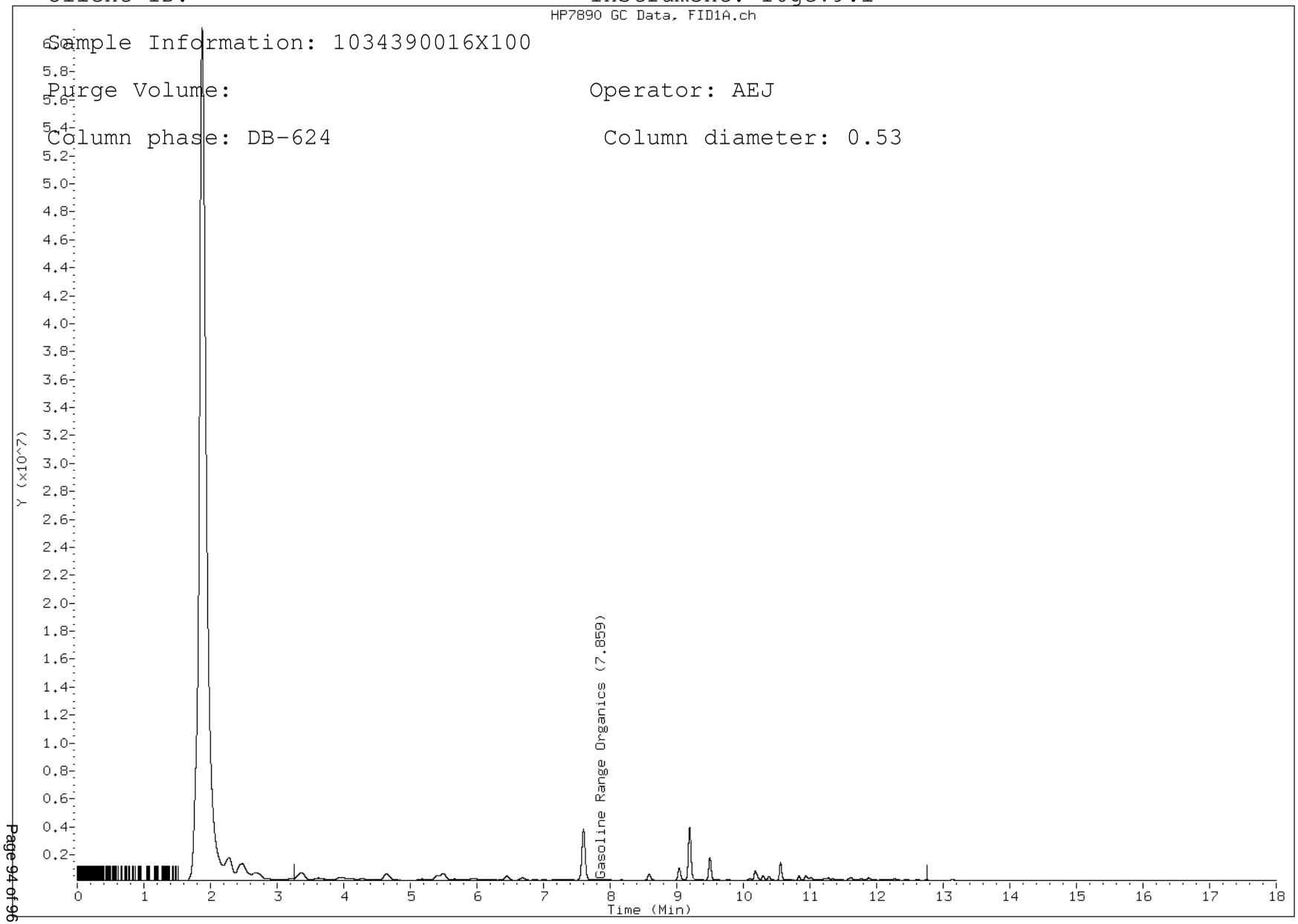
Sample ID: 1034390016

Client ID: Instrument: 10gcv9.i

Sample Information: 1034390016X100

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53

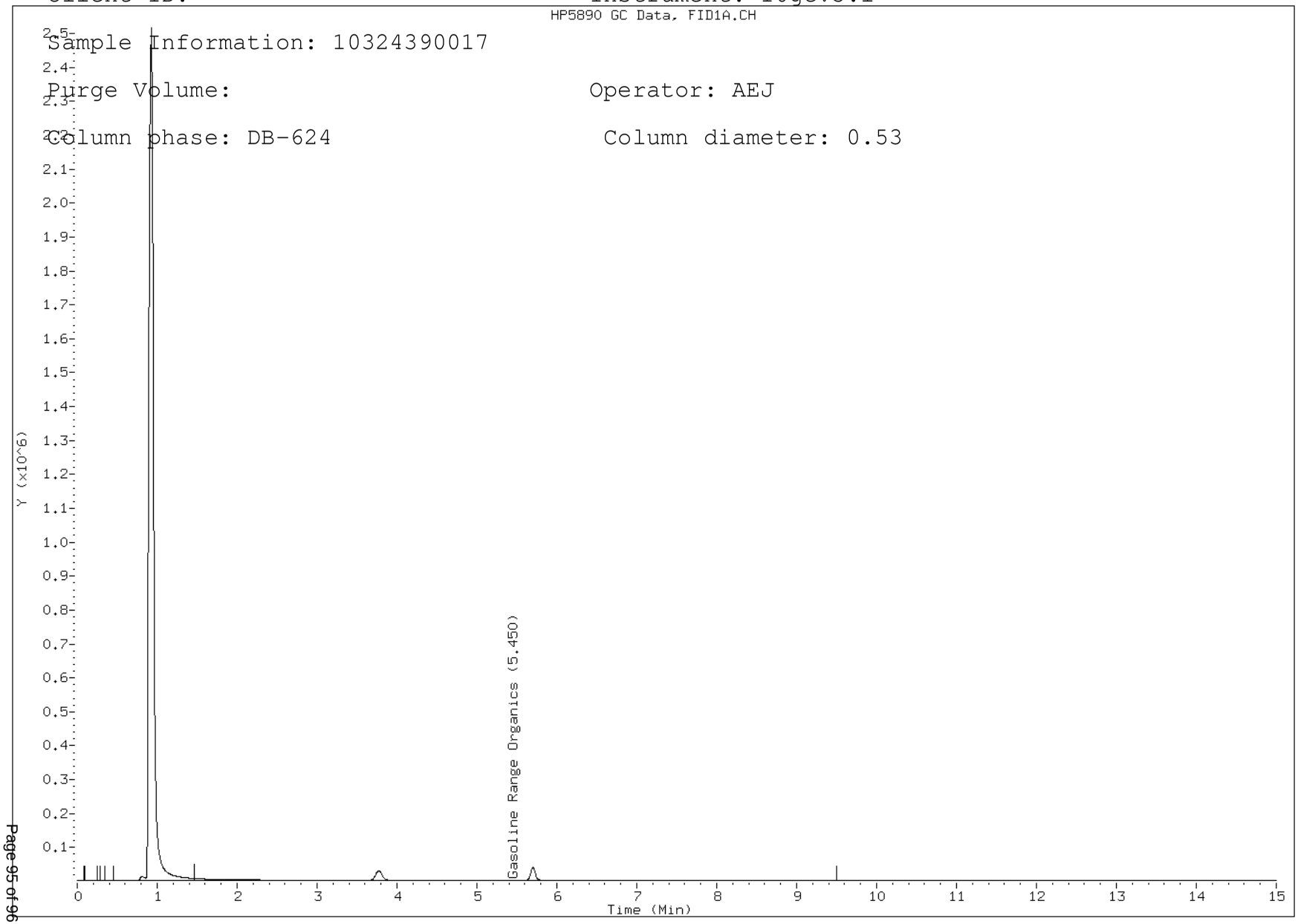


Data File: \\192.168.10.12\chem\10gcv3.i\100715A-1.b/1-280023.d

Report Date: 10/08/2015

Sample ID: 10324390017

Client ID: Instrument: 10gcv3.i



Sample Information: 10324390017

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\100715A-2.b/1-280023.d

Report Date: 10/08/2015

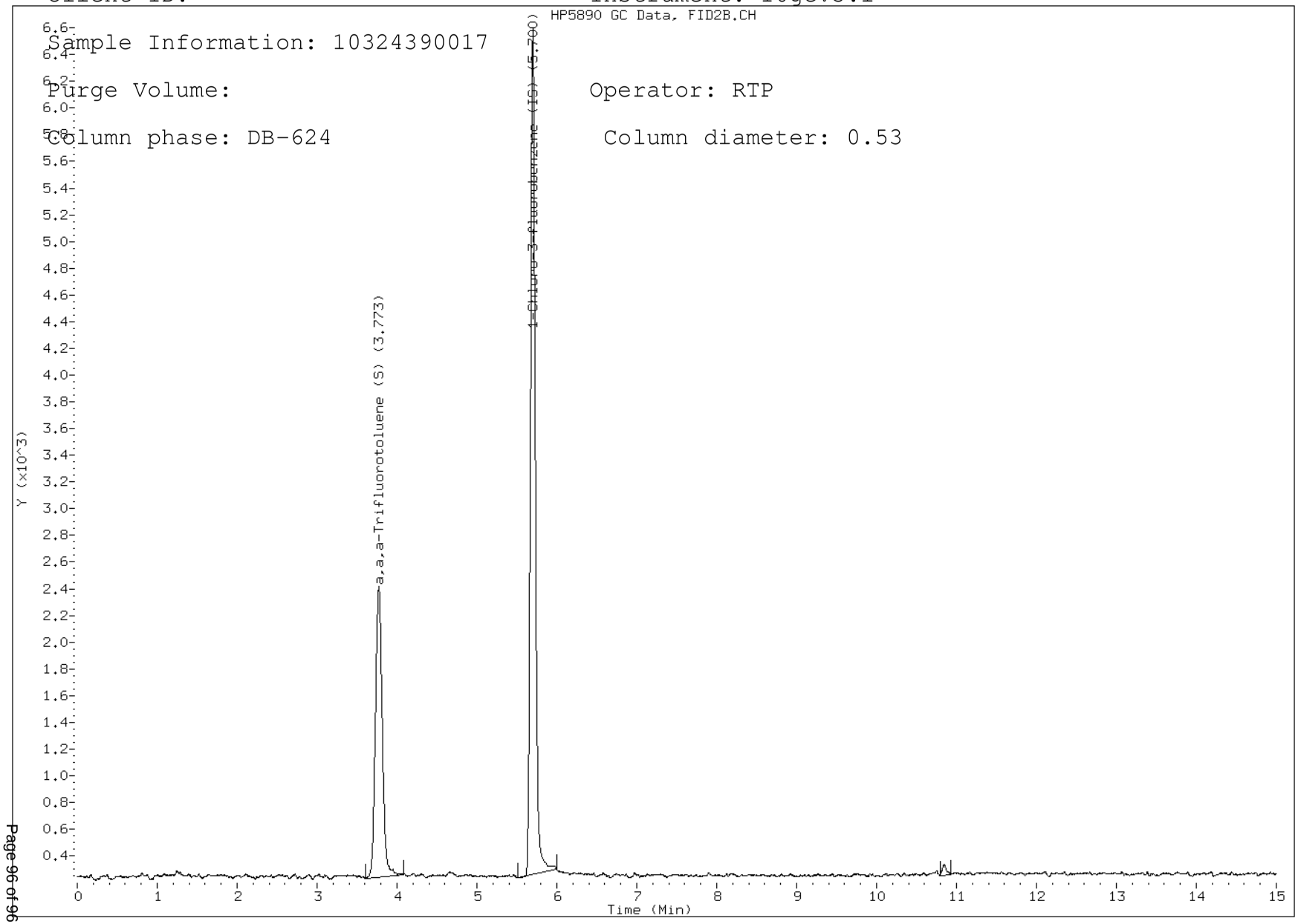
Sample ID: 10324390017

Client ID: Instrument: 10gcv3.i

Sample Information: 10324390017

Purge Volume: Operator: RTP

Column phase: DB-624 Column diameter: 0.53



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

October 22, 2015

Amanda Malaney
Bay West, Inc.
5 Empire Drive
Saint Paul, MN 55103

RE: Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Dear Amanda Malaney:
Enclosed are the analytical results for sample(s) received by the laboratory on October 02, 2015. 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,

Oyeyemi Odujole
oyeyemi.odujole@pacelabs.com
Project Manager

Enclosures

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Minnesota Certification IDs

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

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

SAMPLE SUMMARY

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10324734001	**MW-16**	Water	09/30/15 13:00	10/02/15 19:00
10324734002	**MW-25**	Water	09/30/15 14:15	10/02/15 19:00
10324734003	**MW-28**	Water	09/30/15 15:25	10/02/15 19:00
10324734004	**D-1**	Water	09/30/15 00:00	10/02/15 19:00
10324734005	**D-2**	Water	09/30/15 00:00	10/02/15 19:00
10324734006	**SULLY MW-2**	Water	10/01/15 09:25	10/02/15 19:00
10324734007	**SULLY MW-1**	Water	10/01/15 10:50	10/02/15 19:00
10324734008	**SULLY MW-3**	Water	10/01/15 11:35	10/02/15 19:00
10324734009	**FB-3**	Water	10/01/15 12:05	10/02/15 19:00
10324734010	**MW-15**	Water	10/01/15 13:00	10/02/15 19:00
10324734011	**MW-27**	Water	10/01/15 14:30	10/02/15 19:00
10324734012	**MW-26**	Water	10/01/15 15:45	10/02/15 19:00
10324734013	**D-3**	Water	10/01/15 00:00	10/02/15 19:00
10324734014	**MW-9**	Water	10/02/15 09:10	10/02/15 19:00
10324734015	**MW-8**	Water	10/02/15 10:15	10/02/15 19:00
10324734016	**VOC TRIIP BLANK**	Water	10/02/15 00:00	10/02/15 19:00
10324734017	**GRO TRIIP BLANK**	Water	10/02/15 00:00	10/02/15 19:00

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SAMPLE ANALYTE COUNT

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10324734001	**MW-16**	WI MOD DRO	MT	2
		WI MOD GRO	AEJ	2
		EPA 8260B	AH2	8
10324734002	**MW-25**	WI MOD DRO	MT	2
		WI MOD GRO	AEJ	2
		EPA 8260B	AH2	8
10324734003	**MW-28**	WI MOD DRO	MT	2
		WI MOD GRO	AEJ	2
		EPA 8260B	LPM	70
10324734004	**D-1**	WI MOD DRO	MT	2
		WI MOD GRO	AEJ	2
		EPA 8260B	AH2, LPM	8
10324734005	**D-2**	WI MOD DRO	MT	2
		WI MOD GRO	AEJ	2
		EPA 8260B	LPM	70
10324734006	**SULLY MW-2**	WI MOD DRO	MT	2
		WI MOD GRO	LPM	2
		EPA 8260B	AH2	8
10324734007	**SULLY MW-1**	WI MOD DRO	MT	2
		WI MOD GRO	LPM	2
		EPA 8260B	AH2	8
10324734008	**SULLY MW-3**	WI MOD DRO	MT	2
		WI MOD GRO	LPM	2
		EPA 8260B	AH2	8
10324734009	**FB-3**	WI MOD DRO	MT	2
		WI MOD GRO	LPM	2
		EPA 8260B	LPM	70
10324734010	**MW-15**	WI MOD DRO	MT	2
		WI MOD GRO	LPM	2
		EPA 8260B	AH2	8
10324734011	**MW-27**	WI MOD DRO	MT	2
		WI MOD GRO	LPM	2
		EPA 8260B	AH2	8
10324734012	**MW-26**	WI MOD DRO	MT	2
		WI MOD GRO	LPM	2
		EPA 8260B	AH2	8
10324734013	**D-3**	WI MOD DRO	MT	2

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SAMPLE ANALYTE COUNT

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		WI MOD GRO	LPM	2
		EPA 8260B	AH2	8
10324734014	**MW-9**	WI MOD DRO	JRH	2
		WI MOD GRO	LPM	2
		EPA 8260B	AH2	8
10324734015	**MW-8**	WI MOD DRO	JRH	2
		WI MOD GRO	LPM	2
		EPA 8260B	AH2	8
10324734016	**VOC TRIIP BLANK**	EPA 8260B	LPM	70
10324734017	**GRO TRIIP BLANK**	WI MOD GRO	LPM	2

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Method: **WI MOD DRO**
Description: WIDRO GCS
Client: Bay West, Inc.
Date: October 22, 2015

General Information:
15 samples were analyzed for WI MOD DRO. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with WI MOD DRO with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: OEXT/31099

T7: Low boiling point hydrocarbons are present in the sample.

- D-1 (Lab ID: 10324734004)
  - WDRO C10-C28
- D-2 (Lab ID: 10324734005)
  - WDRO C10-C28
- MW-16 (Lab ID: 10324734001)
  - WDRO C10-C28
- MW-25 (Lab ID: 10324734002)
  - WDRO C10-C28
- MW-28 (Lab ID: 10324734003)
  - WDRO C10-C28

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Method: **WI MOD DRO**
Description: WIDRO GCS
Client: Bay West, Inc.
Date: October 22, 2015

Analyte Comments:

QC Batch: OEXT/31111

T6: High boiling point hydrocarbons are present in the sample.

- D-3 (Lab ID: 10324734013)
  - WDRO C10-C28
- MW-15 (Lab ID: 10324734010)
  - WDRO C10-C28
- SULLY MW-1 (Lab ID: 10324734007)
  - WDRO C10-C28
- SULLY MW-2 (Lab ID: 10324734006)
  - WDRO C10-C28

T7: Low boiling point hydrocarbons are present in the sample.

- D-3 (Lab ID: 10324734013)
  - WDRO C10-C28
- MW-15 (Lab ID: 10324734010)
  - WDRO C10-C28
- MW-26 (Lab ID: 10324734012)
  - WDRO C10-C28
- MW-27 (Lab ID: 10324734011)
  - WDRO C10-C28
- SULLY MW-1 (Lab ID: 10324734007)
  - WDRO C10-C28
- SULLY MW-2 (Lab ID: 10324734006)
  - WDRO C10-C28
- SULLY MW-3 (Lab ID: 10324734008)
  - WDRO C10-C28

QC Batch: OEXT/31138

T7: Low boiling point hydrocarbons are present in the sample.

- MW-8 (Lab ID: 10324734015)
  - WDRO C10-C28
- MW-9 (Lab ID: 10324734014)
  - WDRO C10-C28

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Method: **WI MOD GRO**
Description: WIGRO GCV
Client: Bay West, Inc.
Date: October 22, 2015

General Information:
16 samples were analyzed for WI MOD GRO. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: GCV/14523

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10324714002

P6: Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

- MS (Lab ID: 2105191)
  - Gasoline Range Organics

QC Batch: GCV/14527

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10324755019

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2106121)
  - Gasoline Range Organics

QC Batch: GCV/14533

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10324755027

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2108393)

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Method: **WI MOD GRO**
Description: WIGRO GCV
Client: Bay West, Inc.
Date: October 22, 2015

QC Batch: GCV/14533

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10324755027

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Gasoline Range Organics

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Method: **EPA 8260B**
Description: 8260B VOC
Client: Bay West, Inc.
Date: October 22, 2015

General Information:
4 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
- FB-3 (Lab ID: 10324734009)
- VOC TRIIP BLANK (Lab ID: 10324734016)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H5: Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.
- MW-28 (Lab ID: 10324734003)

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: MSV/33432

CL: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
- BLANK (Lab ID: 2108566)
  - Bromomethane
- DUP (Lab ID: 2110251)
  - Bromomethane
- FB-3 (Lab ID: 10324734009)
  - Bromomethane
- LCS (Lab ID: 2108567)
  - Bromomethane
- MS (Lab ID: 2110250)
  - Bromomethane
- VOC TRIIP BLANK (Lab ID: 10324734016)
  - Bromomethane

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Method: **EPA 8260B**
Description: 8260B VOC
Client: Bay West, Inc.
Date: October 22, 2015

QC Batch: MSV/33432

L0: Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
- LCS (Lab ID: 2108567)
  - Bromomethane

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/33422

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10324548014

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- MS (Lab ID: 2108612)
  - Benzene

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 2108612)
  - Chloromethane

QC Batch: MSV/33432

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10324755007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 2110250)
  - 1,2,4-Trimethylbenzene
  - 2-Chlorotoluene
  - Benzene
  - Chloromethane
  - Ethylbenzene
  - Toluene

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: MSV/33422

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- MS (Lab ID: 2108612)
  - Benzene

QC Batch: MSV/33432

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- MS (Lab ID: 2110250)
  - 1,2,4-Trimethylbenzene
  - Ethylbenzene
  - Toluene

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Method: **EPA 8260B**
Description: 8260B MSV UST
Client: Bay West, Inc.
Date: October 22, 2015

General Information:
12 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H1: Analysis conducted outside the recognized method holding time.
- D-1 (Lab ID: 10324734004)
- MW-16 (Lab ID: 10324734001)
- MW-25 (Lab ID: 10324734002)

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/33426

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10324734007

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 2107727)
  - Benzene
  - Ethylbenzene
- MSD (Lab ID: 2107728)
  - Benzene
  - Ethylbenzene

Additional Comments:

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PROJECT NARRATIVE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Method: **EPA 8260B**
Description: 8260B MSV UST
Client: Bay West, Inc.
Date: October 22, 2015

Analyte Comments:

QC Batch: MSV/33426

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- MS (Lab ID: 2107727)
  - Ethylbenzene
- MSD (Lab ID: 2107728)
  - Ethylbenzene

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: MW-16 **Lab ID: 10324734001** Collected: 09/30/15 13:00 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.46**	mg/L	0.11	0.035	1	10/07/15 13:57	10/13/15 17:07		T7
Surrogates									
n-Triacontane (S)	82	%.	50-150		1	10/07/15 13:57	10/13/15 17:07	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**2850**	ug/L	500	90.0	5		10/12/15 18:44		
Surrogates									
a,a,a-Trifluorotoluene (S)	115	%.	80-150		5		10/12/15 18:44	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**518**	ug/L	10.0	2.1	10		10/15/15 06:00	71-43-2	H1
Ethylbenzene	**47.3**	ug/L	10.0	2.3	10		10/15/15 06:00	100-41-4	H1
Methyl-tert-butyl ether	ND	ug/L	10.0	2.0	10		10/15/15 06:00	1634-04-4	H1
Toluene	ND	ug/L	10.0	1.3	10		10/15/15 06:00	108-88-3	H1
Xylene (Total)	ND	ug/L	30.0	6.0	10		10/15/15 06:00	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-125		10		10/15/15 06:00	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		10		10/15/15 06:00	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		10		10/15/15 06:00	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: MW-25 **Lab ID: 10324734002** Collected: 09/30/15 14:15 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**1.9**	mg/L	0.11	0.035	1	10/07/15 13:57	10/13/15 17:15		T7
Surrogates									
n-Triacontane (S)	65	%.	50-150		1	10/07/15 13:57	10/13/15 17:15	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**12200**	ug/L	2000	360	20		10/12/15 19:08		
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%.	80-150		20		10/12/15 19:08	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**625**	ug/L	10.0	2.1	10		10/15/15 06:16	71-43-2	H1
Ethylbenzene	**705**	ug/L	10.0	2.3	10		10/15/15 06:16	100-41-4	H1
Methyl-tert-butyl ether	ND	ug/L	10.0	2.0	10		10/15/15 06:16	1634-04-4	H1
Toluene	**1420**	ug/L	10.0	1.3	10		10/15/15 06:16	108-88-3	H1
Xylene (Total)	**3640**	ug/L	30.0	6.0	10		10/15/15 06:16	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-125		10		10/15/15 06:16	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		10		10/15/15 06:16	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		10		10/15/15 06:16	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: MW-28 **Lab ID: 10324734003** Collected: 09/30/15 15:25 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**4.7**	mg/L	0.11	0.036	1	10/07/15 13:57	10/13/15 17:23		T7
Surrogates									
n-Triacontane (S)	88	%.	50-150		1	10/07/15 13:57	10/13/15 17:23	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**17600**	ug/L	2000	360	20		10/12/15 19:31		
Surrogates									
a,a,a-Trifluorotoluene (S)	102	%.	80-150		20		10/12/15 19:31	98-08-8	
8260B VOC	Analytical Method: EPA 8260B								
Acetone	**127**	ug/L	20.0	7.1	1		10/14/15 17:21	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.58	1		10/14/15 17:21	107-05-1	
Benzene	**474**	ug/L	20.0	4.3	20		10/15/15 19:24	71-43-2	H5
Bromobenzene	ND	ug/L	1.0	0.25	1		10/14/15 17:21	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.34	1		10/14/15 17:21	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/14/15 17:21	75-27-4	
Bromoform	ND	ug/L	4.0	0.41	1		10/14/15 17:21	75-25-2	
Bromomethane	ND	ug/L	4.0	0.36	1		10/14/15 17:21	74-83-9	
2-Butanone (MEK)	**106**	ug/L	5.0	2.5	1		10/14/15 17:21	78-93-3	
n-Butylbenzene	**4.5**	ug/L	1.0	0.083	1		10/14/15 17:21	104-51-8	
sec-Butylbenzene	**3.0**	ug/L	1.0	0.16	1		10/14/15 17:21	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.18	1		10/14/15 17:21	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.35	1		10/14/15 17:21	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/14/15 17:21	108-90-7	
Chloroethane	ND	ug/L	4.0	0.34	1		10/14/15 17:21	75-00-3	
Chloroform	ND	ug/L	1.0	0.27	1		10/14/15 17:21	67-66-3	
Chloromethane	ND	ug/L	4.0	0.64	1		10/14/15 17:21	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.22	1		10/14/15 17:21	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.24	1		10/14/15 17:21	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	0.70	1		10/14/15 17:21	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.16	1		10/14/15 17:21	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.23	1		10/14/15 17:21	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.31	1		10/14/15 17:21	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.22	1		10/14/15 17:21	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.21	1		10/14/15 17:21	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.16	1		10/14/15 17:21	106-46-7	
Dichlorodifluoromethane	**6.9**	ug/L	1.0	0.49	1		10/14/15 17:21	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.22	1		10/14/15 17:21	75-34-3	
1,2-Dichloroethane	**1.7**	ug/L	1.0	0.17	1		10/14/15 17:21	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/14/15 17:21	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.25	1		10/14/15 17:21	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.21	1		10/14/15 17:21	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.22	1		10/14/15 17:21	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.42	1		10/14/15 17:21	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.24	1		10/14/15 17:21	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.36	1		10/14/15 17:21	594-20-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: MW-28 **Lab ID: 10324734003** Collected: 09/30/15 15:25 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC	Analytical Method: EPA 8260B								
1,1-Dichloropropene	ND	ug/L	1.0	0.16	1		10/14/15 17:21	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.21	1		10/14/15 17:21	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.22	1		10/14/15 17:21	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	0.38	1		10/14/15 17:21	60-29-7	
Ethylbenzene	**679**	ug/L	20.0	4.5	20		10/15/15 19:24	100-41-4	H5
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.48	1		10/14/15 17:21	87-68-3	
Isopropylbenzene (Cumene)	**20.6**	ug/L	1.0	0.17	1		10/14/15 17:21	98-82-8	
p-Isopropyltoluene	**2.3**	ug/L	1.0	0.16	1		10/14/15 17:21	99-87-6	
Methylene Chloride	ND	ug/L	4.0	0.56	1		10/14/15 17:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	**56.7**	ug/L	5.0	2.4	1		10/14/15 17:21	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/14/15 17:21	1634-04-4	
Naphthalene	**255**	ug/L	80.0	2.8	20		10/15/15 19:24	91-20-3	H5
n-Propylbenzene	**50.0**	ug/L	1.0	0.21	1		10/14/15 17:21	103-65-1	
Styrene	**3.3**	ug/L	1.0	0.11	1		10/14/15 17:21	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.20	1		10/14/15 17:21	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.22	1		10/14/15 17:21	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.19	1		10/14/15 17:21	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	4.0	1		10/14/15 17:21	109-99-9	
Toluene	**1180**	ug/L	20.0	2.7	20		10/15/15 19:24	108-88-3	H5
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.23	1		10/14/15 17:21	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.22	1		10/14/15 17:21	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.20	1		10/14/15 17:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.24	1		10/14/15 17:21	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.14	1		10/14/15 17:21	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.18	1		10/14/15 17:21	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	0.50	1		10/14/15 17:21	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.42	1		10/14/15 17:21	76-13-1	
1,2,4-Trimethylbenzene	**940**	ug/L	20.0	3.1	20		10/15/15 19:24	95-63-6	H5
1,3,5-Trimethylbenzene	**277**	ug/L	20.0	3.9	20		10/15/15 19:24	108-67-8	H5
Vinyl chloride	ND	ug/L	0.40	0.15	1		10/14/15 17:21	75-01-4	
Xylene (Total)	**5280**	ug/L	60.0	12.1	20		10/15/15 19:24	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	110	%.	75-125		1		10/14/15 17:21	17060-07-0	
Toluene-d8 (S)	97	%.	75-125		1		10/14/15 17:21	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		1		10/14/15 17:21	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: D-1 **Lab ID: 10324734004** Collected: 09/30/15 00:00 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**0.44**	mg/L	0.11	0.035	1	10/07/15 13:57	10/13/15 17:30		T7
Surrogates									
n-Triacontane (S)	78	%.	50-150		1	10/07/15 13:57	10/13/15 17:30	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**3750**	ug/L	100	18.0	1		10/12/15 19:55		
Surrogates									
a,a,a-Trifluorotoluene (S)	105	%.	80-150		1		10/12/15 19:55	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**550**	ug/L	10.0	2.1	10		10/15/15 06:33	71-43-2	H1
Ethylbenzene	**55.9**	ug/L	1.0	0.23	1		10/16/15 14:35	100-41-4	H1
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/16/15 14:35	1634-04-4	H1
Toluene	**4.9**	ug/L	1.0	0.13	1		10/16/15 14:35	108-88-3	H1
Xylene (Total)	**13.3**	ug/L	3.0	0.60	1		10/16/15 14:35	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%.	75-125		1		10/16/15 14:35	17060-07-0	
Toluene-d8 (S)	101	%.	75-125		1		10/16/15 14:35	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		1		10/16/15 14:35	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: D-2 **Lab ID: 10324734005** Collected: 09/30/15 00:00 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**4.1**	mg/L	0.11	0.036	1	10/07/15 13:57	10/13/15 16:04		T7
Surrogates									
n-Triacontane (S)	79	%.	50-150		1	10/07/15 13:57	10/13/15 16:04	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**18400**	ug/L	2000	360	20		10/12/15 20:19		
Surrogates									
a,a,a-Trifluorotoluene (S)	107	%.	80-150		20		10/12/15 20:19	98-08-8	
8260B VOC	Analytical Method: EPA 8260B								
Acetone	ND	ug/L	1000	353	50		10/14/15 18:33	67-64-1	
Allyl chloride	ND	ug/L	200	29.2	50		10/14/15 18:33	107-05-1	
Benzene	**497**	ug/L	50.0	10.7	50		10/14/15 18:33	71-43-2	
Bromobenzene	ND	ug/L	50.0	12.4	50		10/14/15 18:33	108-86-1	
Bromochloromethane	ND	ug/L	50.0	17.0	50		10/14/15 18:33	74-97-5	
Bromodichloromethane	ND	ug/L	50.0	9.2	50		10/14/15 18:33	75-27-4	
Bromoform	ND	ug/L	200	20.4	50		10/14/15 18:33	75-25-2	
Bromomethane	ND	ug/L	200	17.8	50		10/14/15 18:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	250	124	50		10/14/15 18:33	78-93-3	
n-Butylbenzene	ND	ug/L	50.0	4.2	50		10/14/15 18:33	104-51-8	
sec-Butylbenzene	ND	ug/L	50.0	8.2	50		10/14/15 18:33	135-98-8	
tert-Butylbenzene	ND	ug/L	50.0	9.2	50		10/14/15 18:33	98-06-6	
Carbon tetrachloride	ND	ug/L	50.0	17.6	50		10/14/15 18:33	56-23-5	
Chlorobenzene	ND	ug/L	50.0	11.6	50		10/14/15 18:33	108-90-7	
Chloroethane	ND	ug/L	200	16.9	50		10/14/15 18:33	75-00-3	
Chloroform	ND	ug/L	50.0	13.6	50		10/14/15 18:33	67-66-3	
Chloromethane	ND	ug/L	200	31.8	50		10/14/15 18:33	74-87-3	
2-Chlorotoluene	ND	ug/L	50.0	10.8	50		10/14/15 18:33	95-49-8	
4-Chlorotoluene	ND	ug/L	50.0	11.9	50		10/14/15 18:33	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	200	35.0	50		10/14/15 18:33	96-12-8	
Dibromochloromethane	ND	ug/L	50.0	8.0	50		10/14/15 18:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	50.0	11.6	50		10/14/15 18:33	106-93-4	
Dibromomethane	ND	ug/L	200	15.4	50		10/14/15 18:33	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	50.0	11.2	50		10/14/15 18:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	50.0	10.7	50		10/14/15 18:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	50.0	8.1	50		10/14/15 18:33	106-46-7	
Dichlorodifluoromethane	ND	ug/L	50.0	24.6	50		10/14/15 18:33	75-71-8	
1,1-Dichloroethane	ND	ug/L	50.0	11.2	50		10/14/15 18:33	75-34-3	
1,2-Dichloroethane	ND	ug/L	50.0	8.4	50		10/14/15 18:33	107-06-2	
1,1-Dichloroethene	ND	ug/L	50.0	11.0	50		10/14/15 18:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	50.0	12.5	50		10/14/15 18:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	50.0	10.4	50		10/14/15 18:33	156-60-5	
Dichlorofluoromethane	ND	ug/L	50.0	11.0	50		10/14/15 18:33	75-43-4	
1,2-Dichloropropane	ND	ug/L	200	21.1	50		10/14/15 18:33	78-87-5	
1,3-Dichloropropane	ND	ug/L	50.0	11.9	50		10/14/15 18:33	142-28-9	
2,2-Dichloropropane	ND	ug/L	200	18.0	50		10/14/15 18:33	594-20-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: D-2 **Lab ID: 10324734005** Collected: 09/30/15 00:00 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC	Analytical Method: EPA 8260B								
1,1-Dichloropropene	ND	ug/L	50.0	8.2	50		10/14/15 18:33	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	200	10.4	50		10/14/15 18:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	200	11.0	50		10/14/15 18:33	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	200	18.8	50		10/14/15 18:33	60-29-7	
Ethylbenzene	**733**	ug/L	50.0	11.4	50		10/14/15 18:33	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	50.0	24.0	50		10/14/15 18:33	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	50.0	8.5	50		10/14/15 18:33	98-82-8	
p-Isopropyltoluene	ND	ug/L	50.0	8.0	50		10/14/15 18:33	99-87-6	
Methylene Chloride	ND	ug/L	200	28.2	50		10/14/15 18:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	250	122	50		10/14/15 18:33	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	50.0	10.0	50		10/14/15 18:33	1634-04-4	
Naphthalene	**269**	ug/L	200	7.0	50		10/14/15 18:33	91-20-3	
n-Propylbenzene	ND	ug/L	50.0	10.6	50		10/14/15 18:33	103-65-1	
Styrene	ND	ug/L	50.0	5.5	50		10/14/15 18:33	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	50.0	9.8	50		10/14/15 18:33	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	50.0	11.0	50		10/14/15 18:33	79-34-5	
Tetrachloroethene	ND	ug/L	50.0	9.6	50		10/14/15 18:33	127-18-4	
Tetrahydrofuran	ND	ug/L	500	202	50		10/14/15 18:33	109-99-9	
Toluene	**1280**	ug/L	50.0	6.7	50		10/14/15 18:33	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	50.0	11.5	50		10/14/15 18:33	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	50.0	11.2	50		10/14/15 18:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	50.0	10.2	50		10/14/15 18:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	50.0	12.0	50		10/14/15 18:33	79-00-5	
Trichloroethene	ND	ug/L	20.0	7.0	50		10/14/15 18:33	79-01-6	
Trichlorofluoromethane	ND	ug/L	50.0	9.2	50		10/14/15 18:33	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	200	25.2	50		10/14/15 18:33	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	50.0	21.0	50		10/14/15 18:33	76-13-1	
1,2,4-Trimethylbenzene	**1000**	ug/L	50.0	7.8	50		10/14/15 18:33	95-63-6	
1,3,5-Trimethylbenzene	**292**	ug/L	50.0	9.8	50		10/14/15 18:33	108-67-8	
Vinyl chloride	ND	ug/L	20.0	7.3	50		10/14/15 18:33	75-01-4	
Xylene (Total)	**5690**	ug/L	150	30.2	50		10/14/15 18:33	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	96	%.	75-125		50		10/14/15 18:33	17060-07-0	
Toluene-d8 (S)	98	%.	75-125		50		10/14/15 18:33	2037-26-5	
4-Bromofluorobenzene (S)	97	%.	75-125		50		10/14/15 18:33	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: SULLY MW-2 **Lab ID: 10324734006** Collected: 10/01/15 09:25 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**1.4**	mg/L	0.11	0.037	1	10/08/15 08:45	10/13/15 20:14		T6,T7
Surrogates									
n-Triacontane (S)	92	%.	50-150		1	10/08/15 08:45	10/13/15 20:14	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**905**	ug/L	200	36.0	2		10/14/15 15:58		
Surrogates									
a,a,a-Trifluorotoluene (S)	96	%.	80-150		2		10/14/15 15:58	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	ND	ug/L	5.0	1.1	5		10/14/15 19:09	71-43-2	
Ethylbenzene	**11.9**	ug/L	5.0	1.1	5		10/14/15 19:09	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	5.0	1.0	5		10/14/15 19:09	1634-04-4	
Toluene	ND	ug/L	5.0	0.67	5		10/14/15 19:09	108-88-3	
Xylene (Total)	**124**	ug/L	15.0	3.0	5		10/14/15 19:09	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-125		5		10/14/15 19:09	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		5		10/14/15 19:09	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		5		10/14/15 19:09	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: SULLY MW-1 **Lab ID: 10324734007** Collected: 10/01/15 10:50 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**1.1**	mg/L	0.11	0.036	1	10/08/15 08:45	10/13/15 20:06		T6,T7
Surrogates									
n-Triacontane (S)	89	%.	50-150		1	10/08/15 08:45	10/13/15 20:06	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**2220**	ug/L	100	18.0	1		10/14/15 16:22		
Surrogates									
a,a,a-Trifluorotoluene (S)	96	%.	80-150		1		10/14/15 16:22	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**150**	ug/L	1.0	0.21	1		10/14/15 16:59	71-43-2	
Ethylbenzene	**234**	ug/L	1.0	0.23	1		10/14/15 16:59	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/14/15 16:59	1634-04-4	
Toluene	**21.5**	ug/L	1.0	0.13	1		10/14/15 16:59	108-88-3	
Xylene (Total)	**648**	ug/L	30.0	6.0	10		10/16/15 02:23	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-125		1		10/14/15 16:59	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		1		10/14/15 16:59	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		10/14/15 16:59	460-00-4	

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: SULLY MW-3 **Lab ID: 10324734008** Collected: 10/01/15 11:35 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**9.6**	mg/L	1.1	0.35	10	10/08/15 08:45	10/14/15 11:14		T7
Surrogates									
n-Triacontane (S)	67	%.	50-150		10	10/08/15 08:45	10/14/15 11:14	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**28800**	ug/L	5000	900	50		10/14/15 16:45		
Surrogates									
a,a,a-Trifluorotoluene (S)	98	%.	80-150		50		10/14/15 16:45	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**89.5**	ug/L	50.0	10.7	50		10/14/15 19:25	71-43-2	
Ethylbenzene	**1260**	ug/L	50.0	11.4	50		10/14/15 19:25	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	50.0	10.0	50		10/14/15 19:25	1634-04-4	
Toluene	**170**	ug/L	50.0	6.7	50		10/14/15 19:25	108-88-3	
Xylene (Total)	**15900**	ug/L	150	30.2	50		10/14/15 19:25	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-125		50		10/14/15 19:25	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		50		10/14/15 19:25	2037-26-5	
4-Bromofluorobenzene (S)	99	%.	75-125		50		10/14/15 19:25	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: FB-3 **Lab ID: 10324734009** Collected: 10/01/15 12:05 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	ND	mg/L	0.11	0.035	1	10/08/15 08:45	10/13/15 20:45		
Surrogates									
n-Triacontane (S)	86	%.	50-150		1	10/08/15 08:45	10/13/15 20:45	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	18.0	1		10/13/15 23:04		
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%.	80-150		1		10/13/15 23:04	98-08-8	
8260B VOC	Analytical Method: EPA 8260B								
Acetone	ND	ug/L	20.0	7.1	1		10/15/15 14:37	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.58	1		10/15/15 14:37	107-05-1	
Benzene	ND	ug/L	1.0	0.21	1		10/15/15 14:37	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.25	1		10/15/15 14:37	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.34	1		10/15/15 14:37	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/15/15 14:37	75-27-4	
Bromoform	ND	ug/L	4.0	0.41	1		10/15/15 14:37	75-25-2	
Bromomethane	ND	ug/L	4.0	0.36	1		10/15/15 14:37	74-83-9	CL,L2
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		10/15/15 14:37	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.083	1		10/15/15 14:37	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.16	1		10/15/15 14:37	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.18	1		10/15/15 14:37	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.35	1		10/15/15 14:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/15/15 14:37	108-90-7	
Chloroethane	ND	ug/L	4.0	0.34	1		10/15/15 14:37	75-00-3	
Chloroform	ND	ug/L	1.0	0.27	1		10/15/15 14:37	67-66-3	
Chloromethane	ND	ug/L	4.0	0.64	1		10/15/15 14:37	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.22	1		10/15/15 14:37	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.24	1		10/15/15 14:37	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	0.70	1		10/15/15 14:37	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.16	1		10/15/15 14:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.23	1		10/15/15 14:37	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.31	1		10/15/15 14:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.22	1		10/15/15 14:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.21	1		10/15/15 14:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.16	1		10/15/15 14:37	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.49	1		10/15/15 14:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.22	1		10/15/15 14:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.17	1		10/15/15 14:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/15/15 14:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.25	1		10/15/15 14:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.21	1		10/15/15 14:37	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.22	1		10/15/15 14:37	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.42	1		10/15/15 14:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.24	1		10/15/15 14:37	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.36	1		10/15/15 14:37	594-20-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: FB-3 **Lab ID: 10324734009** Collected: 10/01/15 12:05 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC	Analytical Method: EPA 8260B								
1,1-Dichloropropene	ND	ug/L	1.0	0.16	1		10/15/15 14:37	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.21	1		10/15/15 14:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.22	1		10/15/15 14:37	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	0.38	1		10/15/15 14:37	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.23	1		10/15/15 14:37	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.48	1		10/15/15 14:37	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.17	1		10/15/15 14:37	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.16	1		10/15/15 14:37	99-87-6	
Methylene Chloride	ND	ug/L	4.0	0.56	1		10/15/15 14:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.4	1		10/15/15 14:37	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/15/15 14:37	1634-04-4	
Naphthalene	ND	ug/L	4.0	0.14	1		10/15/15 14:37	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.21	1		10/15/15 14:37	103-65-1	
Styrene	ND	ug/L	1.0	0.11	1		10/15/15 14:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.20	1		10/15/15 14:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.22	1		10/15/15 14:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.19	1		10/15/15 14:37	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	4.0	1		10/15/15 14:37	109-99-9	
Toluene	ND	ug/L	1.0	0.13	1		10/15/15 14:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.23	1		10/15/15 14:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.22	1		10/15/15 14:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.20	1		10/15/15 14:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.24	1		10/15/15 14:37	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.14	1		10/15/15 14:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.18	1		10/15/15 14:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	0.50	1		10/15/15 14:37	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.42	1		10/15/15 14:37	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.16	1		10/15/15 14:37	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.20	1		10/15/15 14:37	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.15	1		10/15/15 14:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/15/15 14:37	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	94	%.	75-125		1		10/15/15 14:37	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		10/15/15 14:37	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		10/15/15 14:37	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: MW-15 **Lab ID: 10324734010** Collected: 10/01/15 13:00 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**2.8**	mg/L	0.11	0.036	1	10/08/15 08:45	10/13/15 19:19		T6,T7
Surrogates									
n-Triacontane (S)	107	%.	50-150		1	10/08/15 08:45	10/13/15 19:19	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**5940**	ug/L	500	90.0	5		10/14/15 17:09		
Surrogates									
a,a,a-Trifluorotoluene (S)	107	%.	80-150		5		10/14/15 17:09	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**1420**	ug/L	20.0	4.3	20		10/14/15 19:42	71-43-2	
Ethylbenzene	**222**	ug/L	20.0	4.5	20		10/14/15 19:42	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	20.0	4.0	20		10/14/15 19:42	1634-04-4	
Toluene	**211**	ug/L	20.0	2.7	20		10/14/15 19:42	108-88-3	
Xylene (Total)	**515**	ug/L	60.0	12.1	20		10/14/15 19:42	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-125		20		10/14/15 19:42	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		20		10/14/15 19:42	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		20		10/14/15 19:42	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: MW-27 **Lab ID: 10324734011** Collected: 10/01/15 14:30 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**3.2**	mg/L	0.11	0.035	1	10/08/15 08:45	10/13/15 20:29		T7
Surrogates									
n-Triacontane (S)	92	%.	50-150		1	10/08/15 08:45	10/13/15 20:29	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**11700**	ug/L	2000	360	20		10/14/15 17:33		
Surrogates									
a,a,a-Trifluorotoluene (S)	104	%.	80-150		20		10/14/15 17:33	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**203**	ug/L	10.0	2.1	10		10/14/15 19:58	71-43-2	
Ethylbenzene	**894**	ug/L	10.0	2.3	10		10/14/15 19:58	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	10.0	2.0	10		10/14/15 19:58	1634-04-4	
Toluene	**198**	ug/L	10.0	1.3	10		10/14/15 19:58	108-88-3	
Xylene (Total)	**2440**	ug/L	30.0	6.0	10		10/14/15 19:58	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-125		10		10/14/15 19:58	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		10		10/14/15 19:58	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		10		10/14/15 19:58	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: MW-26 **Lab ID: 10324734012** Collected: 10/01/15 15:45 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**3.9**	mg/L	0.11	0.038	1	10/08/15 08:45	10/13/15 19:42		T7
Surrogates									
n-Triacontane (S)	89	%.	50-150		1	10/08/15 08:45	10/13/15 19:42	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**19200**	ug/L	2000	360	20		10/14/15 00:15		
Surrogates									
a,a,a-Trifluorotoluene (S)	94	%.	80-150		20		10/14/15 00:15	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**2320**	ug/L	25.0	5.4	25		10/14/15 20:14	71-43-2	
Ethylbenzene	**2450**	ug/L	25.0	5.7	25		10/14/15 20:14	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	25.0	5.0	25		10/14/15 20:14	1634-04-4	
Toluene	**97.9**	ug/L	25.0	3.4	25		10/14/15 20:14	108-88-3	
Xylene (Total)	**7810**	ug/L	75.0	15.1	25		10/14/15 20:14	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%.	75-125		25		10/14/15 20:14	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		25		10/14/15 20:14	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		25		10/14/15 20:14	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: D-3 **Lab ID: 10324734013** Collected: 10/01/15 00:00 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**2.7**	mg/L	0.11	0.036	1	10/08/15 08:45	10/13/15 19:27		T6,T7
Surrogates									
n-Triacontane (S)	101	%.	50-150		1	10/08/15 08:45	10/13/15 19:27	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**5680**	ug/L	2000	360	20		10/14/15 17:57		
Surrogates									
a,a,a-Trifluorotoluene (S)	95	%.	80-150		20		10/14/15 17:57	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**1450**	ug/L	20.0	4.3	20		10/14/15 20:30	71-43-2	
Ethylbenzene	**231**	ug/L	20.0	4.5	20		10/14/15 20:30	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	20.0	4.0	20		10/14/15 20:30	1634-04-4	
Toluene	**215**	ug/L	20.0	2.7	20		10/14/15 20:30	108-88-3	
Xylene (Total)	**524**	ug/L	60.0	12.1	20		10/14/15 20:30	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	101	%.	75-125		20		10/14/15 20:30	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		20		10/14/15 20:30	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		20		10/14/15 20:30	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: MW-9 **Lab ID: 10324734014** Collected: 10/02/15 09:10 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**2.8**	mg/L	0.11	0.036	1	10/09/15 11:16	10/10/15 11:32		T7
Surrogates									
n-Triacontane (S)	67	%.	50-150		1	10/09/15 11:16	10/10/15 11:32	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**24400**	ug/L	2500	450	25		10/15/15 14:27		
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%.	80-150		25		10/15/15 14:27	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**6360**	ug/L	100	21.4	100		10/14/15 20:46	71-43-2	
Ethylbenzene	**1620**	ug/L	100	22.7	100		10/14/15 20:46	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	100	20.0	100		10/14/15 20:46	1634-04-4	
Toluene	**1340**	ug/L	100	13.4	100		10/14/15 20:46	108-88-3	
Xylene (Total)	**8010**	ug/L	300	60.4	100		10/14/15 20:46	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-125		100		10/14/15 20:46	17060-07-0	
Toluene-d8 (S)	103	%.	75-125		100		10/14/15 20:46	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		100		10/14/15 20:46	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: MW-8 **Lab ID: 10324734015** Collected: 10/02/15 10:15 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
WDRO C10-C28	**5.0**	mg/L	0.21	0.067	2	10/09/15 11:16	10/10/15 14:30		T7
Surrogates									
n-Triacontane (S)	69	%.	50-150		2	10/09/15 11:16	10/10/15 14:30	638-68-6	
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**15700**	ug/L	2000	360	20		10/15/15 14:51		
Surrogates									
a,a,a-Trifluorotoluene (S)	97	%.	80-150		20		10/15/15 14:51	98-08-8	
8260B MSV UST	Analytical Method: EPA 8260B								
Benzene	**1570**	ug/L	25.0	5.4	25		10/14/15 21:03	71-43-2	
Ethylbenzene	**655**	ug/L	25.0	5.7	25		10/14/15 21:03	100-41-4	
Methyl-tert-butyl ether	ND	ug/L	25.0	5.0	25		10/14/15 21:03	1634-04-4	
Toluene	**6270**	ug/L	25.0	3.4	25		10/14/15 21:03	108-88-3	
Xylene (Total)	**3730**	ug/L	75.0	15.1	25		10/14/15 21:03	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-125		25		10/14/15 21:03	17060-07-0	
Toluene-d8 (S)	102	%.	75-125		25		10/14/15 21:03	2037-26-5	
4-Bromofluorobenzene (S)	101	%.	75-125		25		10/14/15 21:03	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: VOC TRIIP BLANK **Lab ID: 10324734016** Collected: 10/02/15 00:00 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC	Analytical Method: EPA 8260B								
Acetone	ND	ug/L	20.0	7.1	1		10/15/15 13:10	67-64-1	
Allyl chloride	ND	ug/L	4.0	0.58	1		10/15/15 13:10	107-05-1	
Benzene	ND	ug/L	1.0	0.21	1		10/15/15 13:10	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.25	1		10/15/15 13:10	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.34	1		10/15/15 13:10	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.18	1		10/15/15 13:10	75-27-4	
Bromoform	ND	ug/L	4.0	0.41	1		10/15/15 13:10	75-25-2	
Bromomethane	ND	ug/L	4.0	0.36	1		10/15/15 13:10	74-83-9	CL,L2
2-Butanone (MEK)	ND	ug/L	5.0	2.5	1		10/15/15 13:10	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.083	1		10/15/15 13:10	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.16	1		10/15/15 13:10	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.18	1		10/15/15 13:10	98-06-6	
Carbon tetrachloride	ND	ug/L	1.0	0.35	1		10/15/15 13:10	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.23	1		10/15/15 13:10	108-90-7	
Chloroethane	ND	ug/L	4.0	0.34	1		10/15/15 13:10	75-00-3	
Chloroform	ND	ug/L	1.0	0.27	1		10/15/15 13:10	67-66-3	
Chloromethane	ND	ug/L	4.0	0.64	1		10/15/15 13:10	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.22	1		10/15/15 13:10	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.24	1		10/15/15 13:10	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	0.70	1		10/15/15 13:10	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.16	1		10/15/15 13:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.23	1		10/15/15 13:10	106-93-4	
Dibromomethane	ND	ug/L	4.0	0.31	1		10/15/15 13:10	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.22	1		10/15/15 13:10	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.21	1		10/15/15 13:10	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.16	1		10/15/15 13:10	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.49	1		10/15/15 13:10	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.22	1		10/15/15 13:10	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.17	1		10/15/15 13:10	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.22	1		10/15/15 13:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.25	1		10/15/15 13:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.21	1		10/15/15 13:10	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.22	1		10/15/15 13:10	75-43-4	
1,2-Dichloropropane	ND	ug/L	4.0	0.42	1		10/15/15 13:10	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.24	1		10/15/15 13:10	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.36	1		10/15/15 13:10	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.16	1		10/15/15 13:10	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	0.21	1		10/15/15 13:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	0.22	1		10/15/15 13:10	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	0.38	1		10/15/15 13:10	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.23	1		10/15/15 13:10	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	1.0	0.48	1		10/15/15 13:10	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.17	1		10/15/15 13:10	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.16	1		10/15/15 13:10	99-87-6	
Methylene Chloride	ND	ug/L	4.0	0.56	1		10/15/15 13:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	5.0	2.4	1		10/15/15 13:10	108-10-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: VOC TRIIP BLANK **Lab ID: 10324734016** Collected: 10/02/15 00:00 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B VOC	Analytical Method: EPA 8260B								
Methyl-tert-butyl ether	ND	ug/L	1.0	0.20	1		10/15/15 13:10	1634-04-4	
Naphthalene	ND	ug/L	4.0	0.14	1		10/15/15 13:10	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.21	1		10/15/15 13:10	103-65-1	
Styrene	ND	ug/L	1.0	0.11	1		10/15/15 13:10	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.20	1		10/15/15 13:10	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.22	1		10/15/15 13:10	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.19	1		10/15/15 13:10	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	4.0	1		10/15/15 13:10	109-99-9	
Toluene	ND	ug/L	1.0	0.13	1		10/15/15 13:10	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.23	1		10/15/15 13:10	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.22	1		10/15/15 13:10	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.20	1		10/15/15 13:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.24	1		10/15/15 13:10	79-00-5	
Trichloroethene	ND	ug/L	0.40	0.14	1		10/15/15 13:10	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.18	1		10/15/15 13:10	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	4.0	0.50	1		10/15/15 13:10	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.42	1		10/15/15 13:10	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.16	1		10/15/15 13:10	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.20	1		10/15/15 13:10	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.15	1		10/15/15 13:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.60	1		10/15/15 13:10	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	75-125		1		10/15/15 13:10	17060-07-0	
Toluene-d8 (S)	99	%.	75-125		1		10/15/15 13:10	2037-26-5	
4-Bromofluorobenzene (S)	100	%.	75-125		1		10/15/15 13:10	460-00-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Sample: GRO TRIIP BLANK **Lab ID: 10324734017** Collected: 10/02/15 00:00 Received: 10/02/15 19:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	18.0	1		10/14/15 19:07		
Surrogates									
a,a,a-Trifluorotoluene (S)	99	%.	80-150		1		10/14/15 19:07	98-08-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: GCV/14523 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10324734001, 10324734002, 10324734003, 10324734004, 10324734005

METHOD BLANK: 2105139 Matrix: Water
Associated Lab Samples: 10324734001, 10324734002, 10324734003, 10324734004, 10324734005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	18.0	10/12/15 16:22	
a,a,a-Trifluorotoluene (S)	%.	100	80-150		10/12/15 16:22	

LABORATORY CONTROL SAMPLE & LCSD: 2105140 2105141

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	958	988	96	99	80-120	3	20	
a,a,a-Trifluorotoluene (S)	%.				100	101	80-150			

MATRIX SPIKE SAMPLE: 2105191

Parameter	Units	10324714002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	11100	25000	15100	16	80-120	P6
a,a,a-Trifluorotoluene (S)	%.				94	80-150	

SAMPLE DUPLICATE: 2105192

Parameter	Units	10324755004 Result	Dup Result	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	ND		20	
a,a,a-Trifluorotoluene (S)	%.	100	101	1		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: GCV/14527 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10324734009, 10324734012

METHOD BLANK: 2106118 Matrix: Water
Associated Lab Samples: 10324734009, 10324734012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	18.0	10/13/15 15:35	
a,a,a-Trifluorotoluene (S)	%.	98	80-150		10/13/15 15:35	

LABORATORY CONTROL SAMPLE & LCSD: 2106119 2106120

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	912	924	91	92	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%.				98	95	80-150			

MATRIX SPIKE SAMPLE: 2106121

Parameter	Units	10324755019 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	6550	5000	7850	26	80-120	M1
a,a,a-Trifluorotoluene (S)	%.				97	80-150	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: GCV/14531 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10324734006, 10324734007, 10324734008, 10324734010, 10324734011, 10324734013, 10324734017

METHOD BLANK: 2107335 Matrix: Water
Associated Lab Samples: 10324734006, 10324734007, 10324734008, 10324734010, 10324734011, 10324734013, 10324734017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	18.0	10/14/15 10:52	
a,a,a-Trifluorotoluene (S)	%.	93	80-150		10/14/15 10:52	

LABORATORY CONTROL SAMPLE & LCSD: 2107336 2107337

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	1010	997	101	100	80-120	1	20	
a,a,a-Trifluorotoluene (S)	%.				101	95	80-150			

MATRIX SPIKE SAMPLE: 2107338

Parameter	Units	10324755005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	ND	1000	1070	106	80-120	
a,a,a-Trifluorotoluene (S)	%.				101	80-150	

SAMPLE DUPLICATE: 2107339

Parameter	Units	10324755006 Result	Dup Result	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	ND		20	
a,a,a-Trifluorotoluene (S)	%.	99	95	4		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: GCV/14533 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10324734014, 10324734015

METHOD BLANK: 2108384 Matrix: Water
Associated Lab Samples: 10324734014, 10324734015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	18.0	10/15/15 09:39	
a,a,a-Trifluorotoluene (S)	%.	101	80-150		10/15/15 09:39	

LABORATORY CONTROL SAMPLE & LCSD: 2108385 2108386

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	992	974	99	97	80-120	2	20	
a,a,a-Trifluorotoluene (S)	%.				95	96	80-150			

MATRIX SPIKE SAMPLE: 2108393

Parameter	Units	10324755027 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	ND	1000	453	45	80-120	M1
a,a,a-Trifluorotoluene (S)	%.				97	80-150	

SAMPLE DUPLICATE: 2108394

Parameter	Units	10325404001 Result	Dup Result	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	ND		20	
a,a,a-Trifluorotoluene (S)	%.	106	98	8		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: MSV/33422 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV 465 W
Associated Lab Samples: 10324734003, 10324734005

METHOD BLANK: 2107282 Matrix: Water
Associated Lab Samples: 10324734003, 10324734005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.20	10/14/15 12:20	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.20	10/14/15 12:20	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.22	10/14/15 12:20	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.24	10/14/15 12:20	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.42	10/14/15 12:20	
1,1-Dichloroethane	ug/L	ND	1.0	0.22	10/14/15 12:20	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/14/15 12:20	
1,1-Dichloropropene	ug/L	ND	1.0	0.16	10/14/15 12:20	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.23	10/14/15 12:20	
1,2,3-Trichloropropane	ug/L	ND	4.0	0.50	10/14/15 12:20	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.22	10/14/15 12:20	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	0.16	10/14/15 12:20	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	0.70	10/14/15 12:20	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.23	10/14/15 12:20	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.22	10/14/15 12:20	
1,2-Dichloroethane	ug/L	ND	1.0	0.17	10/14/15 12:20	
1,2-Dichloropropane	ug/L	ND	4.0	0.42	10/14/15 12:20	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	0.20	10/14/15 12:20	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.21	10/14/15 12:20	
1,3-Dichloropropane	ug/L	ND	1.0	0.24	10/14/15 12:20	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.16	10/14/15 12:20	
2,2-Dichloropropane	ug/L	ND	4.0	0.36	10/14/15 12:20	
2-Butanone (MEK)	ug/L	ND	5.0	2.5	10/14/15 12:20	
2-Chlorotoluene	ug/L	ND	1.0	0.22	10/14/15 12:20	
4-Chlorotoluene	ug/L	ND	1.0	0.24	10/14/15 12:20	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	2.4	10/14/15 12:20	
Acetone	ug/L	ND	20.0	7.1	10/14/15 12:20	
Allyl chloride	ug/L	ND	4.0	0.58	10/14/15 12:20	
Benzene	ug/L	ND	1.0	0.21	10/14/15 12:20	
Bromobenzene	ug/L	ND	1.0	0.25	10/14/15 12:20	
Bromochloromethane	ug/L	ND	1.0	0.34	10/14/15 12:20	
Bromodichloromethane	ug/L	ND	1.0	0.18	10/14/15 12:20	
Bromoform	ug/L	ND	4.0	0.41	10/14/15 12:20	
Bromomethane	ug/L	ND	4.0	0.36	10/14/15 12:20	
Carbon tetrachloride	ug/L	ND	1.0	0.35	10/14/15 12:20	
Chlorobenzene	ug/L	ND	1.0	0.23	10/14/15 12:20	
Chloroethane	ug/L	ND	4.0	0.34	10/14/15 12:20	
Chloroform	ug/L	ND	1.0	0.27	10/14/15 12:20	
Chloromethane	ug/L	ND	4.0	0.64	10/14/15 12:20	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.25	10/14/15 12:20	
cis-1,3-Dichloropropene	ug/L	ND	4.0	0.21	10/14/15 12:20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

METHOD BLANK: 2107282 Matrix: Water
Associated Lab Samples: 10324734003, 10324734005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	1.0	0.16	10/14/15 12:20	
Dibromomethane	ug/L	ND	4.0	0.31	10/14/15 12:20	
Dichlorodifluoromethane	ug/L	ND	1.0	0.49	10/14/15 12:20	
Dichlorofluoromethane	ug/L	ND	1.0	0.22	10/14/15 12:20	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	0.38	10/14/15 12:20	
Ethylbenzene	ug/L	ND	1.0	0.23	10/14/15 12:20	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	0.48	10/14/15 12:20	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.17	10/14/15 12:20	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.20	10/14/15 12:20	
Methylene Chloride	ug/L	ND	4.0	0.56	10/14/15 12:20	
n-Butylbenzene	ug/L	ND	1.0	0.083	10/14/15 12:20	
n-Propylbenzene	ug/L	ND	1.0	0.21	10/14/15 12:20	
Naphthalene	ug/L	ND	4.0	0.14	10/14/15 12:20	
p-Isopropyltoluene	ug/L	ND	1.0	0.16	10/14/15 12:20	
sec-Butylbenzene	ug/L	ND	1.0	0.16	10/14/15 12:20	
Styrene	ug/L	ND	1.0	0.11	10/14/15 12:20	
tert-Butylbenzene	ug/L	ND	1.0	0.18	10/14/15 12:20	
Tetrachloroethene	ug/L	ND	1.0	0.19	10/14/15 12:20	
Tetrahydrofuran	ug/L	ND	10.0	4.0	10/14/15 12:20	
Toluene	ug/L	ND	1.0	0.13	10/14/15 12:20	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.21	10/14/15 12:20	
trans-1,3-Dichloropropene	ug/L	ND	4.0	0.22	10/14/15 12:20	
Trichloroethene	ug/L	ND	0.40	0.14	10/14/15 12:20	
Trichlorofluoromethane	ug/L	ND	1.0	0.18	10/14/15 12:20	
Vinyl chloride	ug/L	ND	0.40	0.15	10/14/15 12:20	
Xylene (Total)	ug/L	ND	3.0	0.60	10/14/15 12:20	
1,2-Dichloroethane-d4 (S)	%.	98	75-125		10/14/15 12:20	
4-Bromofluorobenzene (S)	%.	101	75-125		10/14/15 12:20	
Toluene-d8 (S)	%.	99	75-125		10/14/15 12:20	

LABORATORY CONTROL SAMPLE: 2107283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.9	104	75-125	
1,1,1-Trichloroethane	ug/L	20	20.6	103	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	20.0	100	75-125	
1,1,2-Trichloroethane	ug/L	20	20.5	102	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	20	20.8	104	60-135	
1,1-Dichloroethane	ug/L	20	19.5	97	69-125	
1,1-Dichloroethene	ug/L	20	19.0	95	68-125	
1,1-Dichloropropene	ug/L	20	20.3	101	74-125	
1,2,3-Trichlorobenzene	ug/L	20	22.2	111	69-136	
1,2,3-Trichloropropane	ug/L	20	20.0	100	75-125	
1,2,4-Trichlorobenzene	ug/L	20	20.6	103	73-127	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

LABORATORY CONTROL SAMPLE: 2107283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	20.3	101	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	52.8	106	65-145	
1,2-Dibromoethane (EDB)	ug/L	20	19.8	99	75-125	
1,2-Dichlorobenzene	ug/L	20	20.5	103	75-125	
1,2-Dichloroethane	ug/L	20	20.0	100	73-125	
1,2-Dichloropropane	ug/L	20	20.3	101	75-125	
1,3,5-Trimethylbenzene	ug/L	20	20.2	101	75-125	
1,3-Dichlorobenzene	ug/L	20	20.4	102	74-125	
1,3-Dichloropropane	ug/L	20	19.7	99	75-125	
1,4-Dichlorobenzene	ug/L	20	20.3	102	75-125	
2,2-Dichloropropane	ug/L	20	18.4	92	59-139	
2-Butanone (MEK)	ug/L	100	101	101	63-130	
2-Chlorotoluene	ug/L	20	19.6	98	72-125	
4-Chlorotoluene	ug/L	20	19.5	98	73-125	
4-Methyl-2-pentanone (MIBK)	ug/L	100	98.2	98	71-126	
Acetone	ug/L	100	99.7	100	69-131	
Allyl chloride	ug/L	20	20.4	102	67-125	
Benzene	ug/L	20	20.1	101	71-125	
Bromobenzene	ug/L	20	19.2	96	75-125	
Bromochloromethane	ug/L	20	20.5	102	75-125	
Bromodichloromethane	ug/L	20	19.6	98	75-125	
Bromoform	ug/L	20	18.3	92	70-125	
Bromomethane	ug/L	20	22.4	112	30-150	
Carbon tetrachloride	ug/L	20	21.2	106	75-126	
Chlorobenzene	ug/L	20	19.8	99	75-125	
Chloroethane	ug/L	20	20.0	100	65-134	
Chloroform	ug/L	20	19.4	97	75-125	
Chloromethane	ug/L	20	20.6	103	39-150	
cis-1,2-Dichloroethene	ug/L	20	20.1	101	72-125	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	75-125	
Dibromochloromethane	ug/L	20	19.4	97	75-125	
Dibromomethane	ug/L	20	19.4	97	75-125	
Dichlorodifluoromethane	ug/L	20	17.3	87	50-134	
Dichlorofluoromethane	ug/L	20	19.6	98	69-125	
Diethyl ether (Ethyl ether)	ug/L	20	18.2	91	72-125	
Ethylbenzene	ug/L	20	19.9	99	75-125	
Hexachloro-1,3-butadiene	ug/L	20	22.7	113	70-138	
Isopropylbenzene (Cumene)	ug/L	20	22.2	111	75-125	
Methyl-tert-butyl ether	ug/L	20	19.5	98	73-125	
Methylene Chloride	ug/L	20	21.5	108	73-125	
n-Butylbenzene	ug/L	20	20.6	103	72-133	
n-Propylbenzene	ug/L	20	20.9	104	72-126	
Naphthalene	ug/L	20	22.6	113	70-127	
p-Isopropyltoluene	ug/L	20	19.5	97	72-132	
sec-Butylbenzene	ug/L	20	22.0	110	73-132	
Styrene	ug/L	20	21.1	105	75-125	
tert-Butylbenzene	ug/L	20	21.0	105	73-128	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

LABORATORY CONTROL SAMPLE: 2107283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	20	20.9	104	74-125	
Tetrahydrofuran	ug/L	200	190	95	62-133	
Toluene	ug/L	20	20.5	103	74-125	
trans-1,2-Dichloroethene	ug/L	20	21.0	105	69-125	
trans-1,3-Dichloropropene	ug/L	20	19.9	99	75-125	
Trichloroethene	ug/L	20	20.4	102	75-125	
Trichlorofluoromethane	ug/L	20	21.3	107	74-127	
Vinyl chloride	ug/L	20	22.1	110	66-132	
Xylene (Total)	ug/L	60	63.2	105	75-125	
1,2-Dichloroethane-d4 (S)	%.			101	75-125	
4-Bromofluorobenzene (S)	%.			97	75-125	
Toluene-d8 (S)	%.			99	75-125	

MATRIX SPIKE SAMPLE: 2108612

Parameter	Units	10324548014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20.4	102	70-138	
1,1,1-Trichloroethane	ug/L	ND	20	21.5	107	55-150	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20.4	102	64-140	
1,1,2-Trichloroethane	ug/L	ND	20	20.0	100	67-137	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	25.2	126	51-150	
1,1-Dichloroethane	ug/L	ND	20	20.7	104	49-150	
1,1-Dichloroethene	ug/L	ND	20	21.3	107	40-150	
1,1-Dichloropropene	ug/L	ND	20	22.0	110	50-150	
1,2,3-Trichlorobenzene	ug/L	ND	20	19.2	96	59-148	
1,2,3-Trichloropropane	ug/L	ND	20	20.5	102	65-141	
1,2,4-Trichlorobenzene	ug/L	ND	20	18.9	94	61-140	
1,2,4-Trimethylbenzene	ug/L	44.0	20	64.9	104	58-141	
1,2-Dibromo-3-chloropropane	ug/L	ND	50	50.1	100	53-150	
1,2-Dibromoethane (EDB)	ug/L	ND	20	19.4	97	65-137	
1,2-Dichlorobenzene	ug/L	ND	20	18.9	95	66-133	
1,2-Dichloroethane	ug/L	96.7	20	119	111	54-138	
1,2-Dichloropropane	ug/L	ND	20	23.1	100	62-138	
1,3,5-Trimethylbenzene	ug/L	15.3	20	35.4	101	58-140	
1,3-Dichlorobenzene	ug/L	ND	20	19.8	99	66-132	
1,3-Dichloropropane	ug/L	ND	20	19.4	97	66-134	
1,4-Dichlorobenzene	ug/L	ND	20	19.0	95	65-129	
2,2-Dichloropropane	ug/L	ND	20	20.9	104	40-150	
2-Butanone (MEK)	ug/L	ND	100	93.8	94	51-147	
2-Chlorotoluene	ug/L	ND	20	21.3	107	58-147	
4-Chlorotoluene	ug/L	ND	20	19.7	99	64-138	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	95.7	96	59-143	
Acetone	ug/L	ND	100	107	107	63-147	
Allyl chloride	ug/L	ND	20	27.7	138	45-150	
Benzene	ug/L	1980	20	1400	-2890	53-139	E,M0

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

MATRIX SPIKE SAMPLE: 2108612

Parameter	Units	10324548014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromobenzene	ug/L	ND	20	19.7	99	66-136	
Bromochloromethane	ug/L	ND	20	21.4	107	64-136	
Bromodichloromethane	ug/L	ND	20	18.8	94	66-138	
Bromoform	ug/L	ND	20	18.0	90	59-136	
Bromomethane	ug/L	ND	20	21.5	108	30-150	
Carbon tetrachloride	ug/L	ND	20	23.1	116	56-150	
Chlorobenzene	ug/L	ND	20	19.9	99	65-133	
Chloroethane	ug/L	ND	20	21.8	109	48-150	
Chloroform	ug/L	ND	20	20.9	104	57-145	
Chloromethane	ug/L	ND	20	75.2	376	30-150	M1
cis-1,2-Dichloroethene	ug/L	ND	20	21.4	107	49-150	
cis-1,3-Dichloropropene	ug/L	ND	20	20.0	100	64-130	
Dibromochloromethane	ug/L	ND	20	18.8	94	68-138	
Dibromomethane	ug/L	ND	20	19.2	96	67-134	
Dichlorodifluoromethane	ug/L	ND	20	25.6	128	45-150	
Dichlorofluoromethane	ug/L	ND	20	19.7	99	54-150	
Diethyl ether (Ethyl ether)	ug/L	ND	20	20.9	105	50-145	
Ethylbenzene	ug/L	125	20	146	100	55-139	
Hexachloro-1,3-butadiene	ug/L	ND	20	22.6	113	49-150	
Isopropylbenzene (Cumene)	ug/L	6.1	20	28.9	114	64-142	
Methyl-tert-butyl ether	ug/L	5.1	20	24.9	99	62-129	
Methylene Chloride	ug/L	ND	20	21.8	109	57-132	
n-Butylbenzene	ug/L	ND	20	20.6	103	55-150	
n-Propylbenzene	ug/L	6.8	20	28.2	107	59-142	
Naphthalene	ug/L	9.3	20	30.1	104	51-150	
p-Isopropyltoluene	ug/L	ND	20	20.5	101	60-149	
sec-Butylbenzene	ug/L	ND	20	22.8	112	60-150	
Styrene	ug/L	ND	20	20.8	104	68-134	
tert-Butylbenzene	ug/L	ND	20	21.0	105	62-146	
Tetrachloroethene	ug/L	ND	20	21.3	107	50-150	
Tetrahydrofuran	ug/L	ND	200	202	101	59-145	
Toluene	ug/L	ND	20	20.9	102	52-148	
trans-1,2-Dichloroethene	ug/L	ND	20	21.5	108	45-150	
trans-1,3-Dichloropropene	ug/L	ND	20	20.4	100	68-132	
Trichloroethene	ug/L	ND	20	21.1	105	52-150	
Trichlorofluoromethane	ug/L	ND	20	23.6	118	55-150	
Vinyl chloride	ug/L	ND	20	23.4	117	43-150	
Xylene (Total)	ug/L	143	60	211	114	54-144	
1,2-Dichloroethane-d4 (S)	%.				99	75-125	
4-Bromofluorobenzene (S)	%.				101	75-125	
Toluene-d8 (S)	%.				100	75-125	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: MSV/33432 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV 465 W
Associated Lab Samples: 10324734009, 10324734016

METHOD BLANK: 2108566 Matrix: Water
Associated Lab Samples: 10324734009, 10324734016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	0.20	10/15/15 12:56	
1,1,1-Trichloroethane	ug/L	ND	1.0	0.20	10/15/15 12:56	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	0.22	10/15/15 12:56	
1,1,2-Trichloroethane	ug/L	ND	1.0	0.24	10/15/15 12:56	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	0.42	10/15/15 12:56	
1,1-Dichloroethane	ug/L	ND	1.0	0.22	10/15/15 12:56	
1,1-Dichloroethene	ug/L	ND	1.0	0.22	10/15/15 12:56	
1,1-Dichloropropene	ug/L	ND	1.0	0.16	10/15/15 12:56	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	0.23	10/15/15 12:56	
1,2,3-Trichloropropane	ug/L	ND	4.0	0.50	10/15/15 12:56	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	0.22	10/15/15 12:56	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	0.16	10/15/15 12:56	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	0.70	10/15/15 12:56	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	0.23	10/15/15 12:56	
1,2-Dichlorobenzene	ug/L	ND	1.0	0.22	10/15/15 12:56	
1,2-Dichloroethane	ug/L	ND	1.0	0.17	10/15/15 12:56	
1,2-Dichloropropane	ug/L	ND	4.0	0.42	10/15/15 12:56	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	0.20	10/15/15 12:56	
1,3-Dichlorobenzene	ug/L	ND	1.0	0.21	10/15/15 12:56	
1,3-Dichloropropane	ug/L	ND	1.0	0.24	10/15/15 12:56	
1,4-Dichlorobenzene	ug/L	ND	1.0	0.16	10/15/15 12:56	
2,2-Dichloropropane	ug/L	ND	4.0	0.36	10/15/15 12:56	
2-Butanone (MEK)	ug/L	ND	5.0	2.5	10/15/15 12:56	
2-Chlorotoluene	ug/L	ND	1.0	0.22	10/15/15 12:56	
4-Chlorotoluene	ug/L	ND	1.0	0.24	10/15/15 12:56	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	5.0	2.4	10/15/15 12:56	
Acetone	ug/L	ND	20.0	7.1	10/15/15 12:56	
Allyl chloride	ug/L	ND	4.0	0.58	10/15/15 12:56	
Benzene	ug/L	ND	1.0	0.21	10/15/15 12:56	
Bromobenzene	ug/L	ND	1.0	0.25	10/15/15 12:56	
Bromochloromethane	ug/L	ND	1.0	0.34	10/15/15 12:56	
Bromodichloromethane	ug/L	ND	1.0	0.18	10/15/15 12:56	
Bromoform	ug/L	ND	4.0	0.41	10/15/15 12:56	
Bromomethane	ug/L	ND	4.0	0.36	10/15/15 12:56	CL
Carbon tetrachloride	ug/L	ND	1.0	0.35	10/15/15 12:56	
Chlorobenzene	ug/L	ND	1.0	0.23	10/15/15 12:56	
Chloroethane	ug/L	ND	4.0	0.34	10/15/15 12:56	
Chloroform	ug/L	ND	1.0	0.27	10/15/15 12:56	
Chloromethane	ug/L	ND	4.0	0.64	10/15/15 12:56	
cis-1,2-Dichloroethene	ug/L	ND	1.0	0.25	10/15/15 12:56	
cis-1,3-Dichloropropene	ug/L	ND	4.0	0.21	10/15/15 12:56	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

METHOD BLANK: 2108566 Matrix: Water
Associated Lab Samples: 10324734009, 10324734016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromochloromethane	ug/L	ND	1.0	0.16	10/15/15 12:56	
Dibromomethane	ug/L	ND	4.0	0.31	10/15/15 12:56	
Dichlorodifluoromethane	ug/L	ND	1.0	0.49	10/15/15 12:56	
Dichlorofluoromethane	ug/L	ND	1.0	0.22	10/15/15 12:56	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	0.38	10/15/15 12:56	
Ethylbenzene	ug/L	ND	1.0	0.23	10/15/15 12:56	
Hexachloro-1,3-butadiene	ug/L	ND	1.0	0.48	10/15/15 12:56	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	0.17	10/15/15 12:56	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.20	10/15/15 12:56	
Methylene Chloride	ug/L	ND	4.0	0.56	10/15/15 12:56	
n-Butylbenzene	ug/L	ND	1.0	0.083	10/15/15 12:56	
n-Propylbenzene	ug/L	ND	1.0	0.21	10/15/15 12:56	
Naphthalene	ug/L	ND	4.0	0.14	10/15/15 12:56	
p-Isopropyltoluene	ug/L	ND	1.0	0.16	10/15/15 12:56	
sec-Butylbenzene	ug/L	ND	1.0	0.16	10/15/15 12:56	
Styrene	ug/L	ND	1.0	0.11	10/15/15 12:56	
tert-Butylbenzene	ug/L	ND	1.0	0.18	10/15/15 12:56	
Tetrachloroethene	ug/L	ND	1.0	0.19	10/15/15 12:56	
Tetrahydrofuran	ug/L	ND	10.0	4.0	10/15/15 12:56	
Toluene	ug/L	ND	1.0	0.13	10/15/15 12:56	
trans-1,2-Dichloroethene	ug/L	ND	1.0	0.21	10/15/15 12:56	
trans-1,3-Dichloropropene	ug/L	ND	4.0	0.22	10/15/15 12:56	
Trichloroethene	ug/L	ND	0.40	0.14	10/15/15 12:56	
Trichlorofluoromethane	ug/L	ND	1.0	0.18	10/15/15 12:56	
Vinyl chloride	ug/L	ND	0.40	0.15	10/15/15 12:56	
Xylene (Total)	ug/L	ND	3.0	0.60	10/15/15 12:56	
1,2-Dichloroethane-d4 (S)	%.	101	75-125		10/15/15 12:56	
4-Bromofluorobenzene (S)	%.	99	75-125		10/15/15 12:56	
Toluene-d8 (S)	%.	98	75-125		10/15/15 12:56	

LABORATORY CONTROL SAMPLE: 2108567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	19.7	99	75-125	
1,1,1-Trichloroethane	ug/L	20	18.4	92	75-125	
1,1,2,2-Tetrachloroethane	ug/L	20	19.5	98	75-125	
1,1,2-Trichloroethane	ug/L	20	20.2	101	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	20	17.0	85	60-135	
1,1-Dichloroethane	ug/L	20	19.3	96	69-125	
1,1-Dichloroethene	ug/L	20	18.5	92	68-125	
1,1-Dichloropropene	ug/L	20	18.1	91	74-125	
1,2,3-Trichlorobenzene	ug/L	20	18.1	91	69-136	
1,2,3-Trichloropropane	ug/L	20	19.9	99	75-125	
1,2,4-Trichlorobenzene	ug/L	20	18.3	91	73-127	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

LABORATORY CONTROL SAMPLE: 2108567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	20	18.8	94	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	46.8	94	65-145	
1,2-Dibromoethane (EDB)	ug/L	20	19.5	97	75-125	
1,2-Dichlorobenzene	ug/L	20	19.2	96	75-125	
1,2-Dichloroethane	ug/L	20	19.9	100	73-125	
1,2-Dichloropropane	ug/L	20	19.9	99	75-125	
1,3,5-Trimethylbenzene	ug/L	20	19.0	95	75-125	
1,3-Dichlorobenzene	ug/L	20	19.0	95	74-125	
1,3-Dichloropropane	ug/L	20	20.1	100	75-125	
1,4-Dichlorobenzene	ug/L	20	19.1	96	75-125	
2,2-Dichloropropane	ug/L	20	18.5	93	59-139	
2-Butanone (MEK)	ug/L	100	92.7	93	63-130	
2-Chlorotoluene	ug/L	20	18.9	94	72-125	
4-Chlorotoluene	ug/L	20	18.8	94	73-125	
4-Methyl-2-pentanone (MIBK)	ug/L	100	106	106	71-126	
Acetone	ug/L	100	91.9	92	69-131	
Allyl chloride	ug/L	20	18.0	90	67-125	
Benzene	ug/L	20	18.3	92	71-125	
Bromobenzene	ug/L	20	19.7	99	75-125	
Bromochloromethane	ug/L	20	19.4	97	75-125	
Bromodichloromethane	ug/L	20	19.4	97	75-125	
Bromoform	ug/L	20	18.8	94	70-125	
Bromomethane	ug/L	20	4.7	23	30-150	CL,L0
Carbon tetrachloride	ug/L	20	18.0	90	75-126	
Chlorobenzene	ug/L	20	19.7	99	75-125	
Chloroethane	ug/L	20	20.8	104	65-134	
Chloroform	ug/L	20	19.5	98	75-125	
Chloromethane	ug/L	20	16.8	84	39-150	
cis-1,2-Dichloroethene	ug/L	20	19.4	97	72-125	
cis-1,3-Dichloropropene	ug/L	20	19.5	98	75-125	
Dibromochloromethane	ug/L	20	19.4	97	75-125	
Dibromomethane	ug/L	20	19.4	97	75-125	
Dichlorodifluoromethane	ug/L	20	16.1	81	50-134	
Dichlorofluoromethane	ug/L	20	20.0	100	69-125	
Diethyl ether (Ethyl ether)	ug/L	20	19.6	98	72-125	
Ethylbenzene	ug/L	20	18.9	95	75-125	
Hexachloro-1,3-butadiene	ug/L	20	19.6	98	70-138	
Isopropylbenzene (Cumene)	ug/L	20	19.1	96	75-125	
Methyl-tert-butyl ether	ug/L	20	19.6	98	73-125	
Methylene Chloride	ug/L	20	18.4	92	73-125	
n-Butylbenzene	ug/L	20	18.4	92	72-133	
n-Propylbenzene	ug/L	20	18.5	92	72-126	
Naphthalene	ug/L	20	18.3	92	70-127	
p-Isopropyltoluene	ug/L	20	18.6	93	72-132	
sec-Butylbenzene	ug/L	20	18.1	91	73-132	
Styrene	ug/L	20	19.5	98	75-125	
tert-Butylbenzene	ug/L	20	18.5	92	73-128	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

LABORATORY CONTROL SAMPLE: 2108567

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tetrachloroethene	ug/L	20	19.3	97	74-125	
Tetrahydrofuran	ug/L	200	196	98	62-133	
Toluene	ug/L	20	19.2	96	74-125	
trans-1,2-Dichloroethene	ug/L	20	19.1	96	69-125	
trans-1,3-Dichloropropene	ug/L	20	20.4	102	75-125	
Trichloroethene	ug/L	20	20.1	101	75-125	
Trichlorofluoromethane	ug/L	20	18.4	92	74-127	
Vinyl chloride	ug/L	20	18.1	91	66-132	
Xylene (Total)	ug/L	60	58.3	97	75-125	
1,2-Dichloroethane-d4 (S)	%.			101	75-125	
4-Bromofluorobenzene (S)	%.			99	75-125	
Toluene-d8 (S)	%.			101	75-125	

MATRIX SPIKE SAMPLE: 2110250

Parameter	Units	10324755007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	20.8	104	70-138	
1,1,1-Trichloroethane	ug/L	ND	20	21.2	106	55-150	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	21.3	107	64-140	
1,1,2-Trichloroethane	ug/L	ND	20	24.7	123	67-137	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	25.0	125	51-150	
1,1-Dichloroethane	ug/L	ND	20	19.9	100	49-150	
1,1-Dichloroethene	ug/L	ND	20	20.6	103	40-150	
1,1-Dichloropropene	ug/L	ND	20	21.1	105	50-150	
1,2,3-Trichlorobenzene	ug/L	ND	20	19.2	96	59-148	
1,2,3-Trichloropropane	ug/L	ND	20	20.5	103	65-141	
1,2,4-Trichlorobenzene	ug/L	ND	20	19.9	100	61-140	
1,2,4-Trimethylbenzene	ug/L	368	20	408	199	58-141	E,M1
1,2-Dibromo-3-chloropropane	ug/L	ND	50	49.0	98	53-150	
1,2-Dibromoethane (EDB)	ug/L	ND	20	21.1	106	65-137	
1,2-Dichlorobenzene	ug/L	ND	20	20.3	102	66-133	
1,2-Dichloroethane	ug/L	5.7	20	26.7	105	54-138	
1,2-Dichloropropane	ug/L	ND	20	22.9	115	62-138	
1,3,5-Trimethylbenzene	ug/L	124	20	149	125	58-140	
1,3-Dichlorobenzene	ug/L	ND	20	20.1	100	66-132	
1,3-Dichloropropane	ug/L	ND	20	19.9	99	66-134	
1,4-Dichlorobenzene	ug/L	ND	20	20.6	103	65-129	
2,2-Dichloropropane	ug/L	ND	20	21.1	105	40-150	
2-Butanone (MEK)	ug/L	ND	100	134	134	51-147	
2-Chlorotoluene	ug/L	ND	20	33.2	166	58-147	M1
4-Chlorotoluene	ug/L	ND	20	20.2	101	64-138	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	96.4	93	59-143	
Acetone	ug/L	ND	100	119	108	63-147	
Allyl chloride	ug/L	ND	20	20.4	102	45-150	
Benzene	ug/L	157	20	188	156	53-139	M1

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

MATRIX SPIKE SAMPLE: 2110250

Parameter	Units	10324755007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromobenzene	ug/L	ND	20	20.7	103	66-136	
Bromochloromethane	ug/L	ND	20	20.3	102	64-136	
Bromodichloromethane	ug/L	ND	20	20.2	101	66-138	
Bromoform	ug/L	ND	20	18.6	93	59-136	
Bromomethane	ug/L	ND	20	6.3	32	30-150	CL
Carbon tetrachloride	ug/L	ND	20	20.5	102	56-150	
Chlorobenzene	ug/L	ND	20	20.6	103	65-133	
Chloroethane	ug/L	ND	20	23.5	118	48-150	
Chloroform	ug/L	ND	20	21.3	106	57-145	
Chloromethane	ug/L	ND	20	33.0	165	30-150	M1
cis-1,2-Dichloroethene	ug/L	ND	20	22.1	110	49-150	
cis-1,3-Dichloropropene	ug/L	ND	20	20.0	100	64-130	
Dibromochloromethane	ug/L	ND	20	19.7	99	68-138	
Dibromomethane	ug/L	ND	20	20.4	102	67-134	
Dichlorodifluoromethane	ug/L	ND	20	22.7	114	45-150	
Dichlorofluoromethane	ug/L	ND	20	20.4	102	54-150	
Diethyl ether (Ethyl ether)	ug/L	ND	20	19.2	96	50-145	
Ethylbenzene	ug/L	279	20	310	157	55-139	E,M1
Hexachloro-1,3-butadiene	ug/L	ND	20	21.7	108	49-150	
Isopropylbenzene (Cumene)	ug/L	24.9	20	46.9	110	64-142	
Methyl-tert-butyl ether	ug/L	ND	20	19.2	96	62-129	
Methylene Chloride	ug/L	ND	20	20.0	100	57-132	
n-Butylbenzene	ug/L	10	20	31.7	109	55-150	
n-Propylbenzene	ug/L	54.3	20	78.4	120	59-142	
Naphthalene	ug/L	60.4	20	85.2	124	51-150	
p-Isopropyltoluene	ug/L	6.2	20	28.9	114	60-149	
sec-Butylbenzene	ug/L	5.1	20	25.7	103	60-150	
Styrene	ug/L	ND	20	22.3	108	68-134	
tert-Butylbenzene	ug/L	ND	20	20.9	103	62-146	
Tetrachloroethene	ug/L	ND	20	21.8	109	50-150	
Tetrahydrofuran	ug/L	ND	200	195	98	59-145	
Toluene	ug/L	454	20	504	249	52-148	E,M1
trans-1,2-Dichloroethene	ug/L	ND	20	21.0	105	45-150	
trans-1,3-Dichloropropene	ug/L	ND	20	20.5	103	68-132	
Trichloroethene	ug/L	ND	20	21.8	109	52-150	
Trichlorofluoromethane	ug/L	ND	20	22.3	112	55-150	
Vinyl chloride	ug/L	ND	20	21.3	107	43-150	
Xylene (Total)	ug/L	828	60	928	166	54-144	ES,MS
1,2-Dichloroethane-d4 (S)	%.				98	75-125	
4-Bromofluorobenzene (S)	%.				100	75-125	
Toluene-d8 (S)	%.				101	75-125	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

SAMPLE DUPLICATE: 2110251

Parameter	Units	10324755008 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,1-Trichloroethane	ug/L	ND	ND		30	
1,1,2,2-Tetrachloroethane	ug/L	ND	ND		30	
1,1,2-Trichloroethane	ug/L	ND	ND		30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	ND		30	
1,1-Dichloroethane	ug/L	ND	ND		30	
1,1-Dichloroethene	ug/L	ND	ND		30	
1,1-Dichloropropene	ug/L	ND	ND		30	
1,2,3-Trichlorobenzene	ug/L	ND	ND		30	
1,2,3-Trichloropropane	ug/L	ND	ND		30	
1,2,4-Trichlorobenzene	ug/L	ND	ND		30	
1,2,4-Trimethylbenzene	ug/L	ND	.21J		30	
1,2-Dibromo-3-chloropropane	ug/L	ND	ND		30	
1,2-Dibromoethane (EDB)	ug/L	ND	ND		30	
1,2-Dichlorobenzene	ug/L	ND	ND		30	
1,2-Dichloroethane	ug/L	ND	ND		30	
1,2-Dichloropropane	ug/L	ND	ND		30	
1,3,5-Trimethylbenzene	ug/L	ND	ND		30	
1,3-Dichlorobenzene	ug/L	ND	ND		30	
1,3-Dichloropropane	ug/L	ND	ND		30	
1,4-Dichlorobenzene	ug/L	ND	ND		30	
2,2-Dichloropropane	ug/L	ND	ND		30	
2-Butanone (MEK)	ug/L	ND	ND		30	
2-Chlorotoluene	ug/L	ND	ND		30	
4-Chlorotoluene	ug/L	ND	ND		30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	ND		30	
Acetone	ug/L	ND	ND		30	
Allyl chloride	ug/L	ND	ND		30	
Benzene	ug/L	ND	ND		30	
Bromobenzene	ug/L	ND	ND		30	
Bromochloromethane	ug/L	ND	ND		30	
Bromodichloromethane	ug/L	ND	ND		30	
Bromoform	ug/L	ND	ND		30	
Bromomethane	ug/L	ND	ND		30	CL
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	ND	ND		30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	ND	ND		30	
cis-1,3-Dichloropropene	ug/L	ND	ND		30	
Dibromochloromethane	ug/L	ND	ND		30	
Dibromomethane	ug/L	ND	ND		30	
Dichlorodifluoromethane	ug/L	ND	ND		30	
Dichlorofluoromethane	ug/L	ND	ND		30	
Diethyl ether (Ethyl ether)	ug/L	ND	ND		30	
Ethylbenzene	ug/L	ND	ND		30	

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

SAMPLE DUPLICATE: 2110251

Parameter	Units	10324755008 Result	Dup Result	RPD	Max RPD	Qualifiers
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
Methyl-tert-butyl ether	ug/L	ND	ND		30	
Methylene Chloride	ug/L	ND	ND		30	
n-Butylbenzene	ug/L	ND	ND		30	
n-Propylbenzene	ug/L	ND	ND		30	
Naphthalene	ug/L	ND	.17J		30	
p-Isopropyltoluene	ug/L	ND	ND		30	
sec-Butylbenzene	ug/L	ND	ND		30	
Styrene	ug/L	ND	ND		30	
tert-Butylbenzene	ug/L	ND	ND		30	
Tetrachloroethene	ug/L	ND	ND		30	
Tetrahydrofuran	ug/L	ND	ND		30	
Toluene	ug/L	ND	ND		30	
trans-1,2-Dichloroethene	ug/L	ND	ND		30	
trans-1,3-Dichloropropene	ug/L	ND	ND		30	
Trichloroethene	ug/L	ND	ND		30	
Trichlorofluoromethane	ug/L	ND	ND		30	
Vinyl chloride	ug/L	ND	ND		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%.	96	98	3		
4-Bromofluorobenzene (S)	%.	99	101	1		
Toluene-d8 (S)	%.	98	98	0		

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REPORT OF LABORATORY ANALYSIS

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(612)607-1700

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: MSV/33425 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV UST-WATER
Associated Lab Samples: 10324734001, 10324734002

METHOD BLANK: 2107312 Matrix: Water
Associated Lab Samples: 10324734001, 10324734002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	0.21	10/15/15 00:34	
Ethylbenzene	ug/L	ND	1.0	0.23	10/15/15 00:34	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.20	10/15/15 00:34	
Toluene	ug/L	ND	1.0	0.13	10/15/15 00:34	
Xylene (Total)	ug/L	ND	3.0	0.60	10/15/15 00:34	
1,2-Dichloroethane-d4 (S)	%.	105	75-125		10/15/15 00:34	
4-Bromofluorobenzene (S)	%.	101	75-125		10/15/15 00:34	
Toluene-d8 (S)	%.	102	75-125		10/15/15 00:34	

LABORATORY CONTROL SAMPLE: 2107313

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.8	104	71-125	
Ethylbenzene	ug/L	20	21.5	107	75-125	
Methyl-tert-butyl ether	ug/L	20	21.3	106	73-125	
Toluene	ug/L	20	21.4	107	74-125	
Xylene (Total)	ug/L	60	64.7	108	75-125	
1,2-Dichloroethane-d4 (S)	%.			105	75-125	
4-Bromofluorobenzene (S)	%.			100	75-125	
Toluene-d8 (S)	%.			105	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2107314 2107315

Parameter	Units	10324986005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	ND	20	20	21.7	18.9	108	94	53-139	14	30	
Ethylbenzene	ug/L	ND	20	20	22.6	19.9	113	99	55-139	13	30	
Methyl-tert-butyl ether	ug/L	ND	20	20	21.6	19.2	108	96	62-129	11	30	
Toluene	ug/L	ND	20	20	22.3	19.4	111	97	52-148	14	30	
Xylene (Total)	ug/L	ND	60	60	67.4	59.5	112	99	54-144	13	30	
1,2-Dichloroethane-d4 (S)	%.						101	104	75-125			
4-Bromofluorobenzene (S)	%.						98	100	75-125			
Toluene-d8 (S)	%.						105	105	75-125			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: MSV/33426 Analysis Method: EPA 8260B
QC Batch Method: EPA 8260B Analysis Description: 8260B MSV UST-WATER
Associated Lab Samples: 10324734006, 10324734007, 10324734008, 10324734010, 10324734011, 10324734012, 10324734013, 10324734014, 10324734015

METHOD BLANK: 2107331 Matrix: Water
Associated Lab Samples: 10324734006, 10324734007, 10324734008, 10324734010, 10324734011, 10324734012, 10324734013, 10324734014, 10324734015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	0.21	10/14/15 13:32	
Ethylbenzene	ug/L	ND	1.0	0.23	10/14/15 13:32	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.20	10/14/15 13:32	
Toluene	ug/L	ND	1.0	0.13	10/14/15 13:32	
Xylene (Total)	ug/L	ND	3.0	0.60	10/14/15 13:32	
1,2-Dichloroethane-d4 (S)	%.	103	75-125		10/14/15 13:32	
4-Bromofluorobenzene (S)	%.	102	75-125		10/14/15 13:32	
Toluene-d8 (S)	%.	103	75-125		10/14/15 13:32	

LABORATORY CONTROL SAMPLE: 2107332

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/L	20	20.1	100	71-125	
Ethylbenzene	ug/L	20	20.9	105	75-125	
Methyl-tert-butyl ether	ug/L	20	21.1	106	73-125	
Toluene	ug/L	20	20.9	105	74-125	
Xylene (Total)	ug/L	60	63.2	105	75-125	
1,2-Dichloroethane-d4 (S)	%.			104	75-125	
4-Bromofluorobenzene (S)	%.			101	75-125	
Toluene-d8 (S)	%.			107	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2107727 2107728

Parameter	Units	10324734007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	150	20	20	184	192	170	208	53-139	4	30	M1
Ethylbenzene	ug/L	234	20	20	288	301	270	335	55-139	4	30	E,M1
Methyl-tert-butyl ether	ug/L	ND	20	20	17.3	17.1	87	86	62-129	1	30	
Toluene	ug/L	21.5	20	20	42.8	44.1	107	113	52-148	3	30	
Xylene (Total)	ug/L	648	60	60	800	835	253	312	54-144	4	30	ES,MS
1,2-Dichloroethane-d4 (S)	%.						105	104	75-125			
4-Bromofluorobenzene (S)	%.						99	100	75-125			
Toluene-d8 (S)	%.						104	104	75-125			

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: MSV/33441
QC Batch Method: EPA 8260B
Analysis Method: EPA 8260B
Analysis Description: 8260B MSV UST-WATER
Associated Lab Samples: 10324734004

METHOD BLANK: 2109625 Matrix: Water
Associated Lab Samples: 10324734004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Benzene	ug/L	ND	1.0	0.21	10/16/15 12:24	
Ethylbenzene	ug/L	ND	1.0	0.23	10/16/15 12:24	
Methyl-tert-butyl ether	ug/L	ND	1.0	0.20	10/16/15 12:24	
Toluene	ug/L	ND	1.0	0.13	10/16/15 12:24	
Xylene (Total)	ug/L	ND	3.0	0.60	10/16/15 12:24	
1,2-Dichloroethane-d4 (S)	%.	101	75-125		10/16/15 12:24	
4-Bromofluorobenzene (S)	%.	99	75-125		10/16/15 12:24	
Toluene-d8 (S)	%.	102	75-125		10/16/15 12:24	

LABORATORY CONTROL SAMPLE & LCSD: 2109626 2109627

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	ug/L	20	18.2	17.5	91	88	71-125	4	20	
Ethylbenzene	ug/L	20	18.9	17.7	95	88	75-125	7	20	
Methyl-tert-butyl ether	ug/L	20	20.1	22.1	101	110	73-125	9	20	
Toluene	ug/L	20	19.1	18.8	95	94	74-125	2	20	
Xylene (Total)	ug/L	60	58.0	53.3	97	89	75-125	8	20	
1,2-Dichloroethane-d4 (S)	%.				102	103	75-125			
4-Bromofluorobenzene (S)	%.				99	100	75-125			
Toluene-d8 (S)	%.				105	106	75-125			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: OEXT/31099 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10324734001, 10324734002, 10324734003, 10324734004, 10324734005

METHOD BLANK: 2101354 Matrix: Water
Associated Lab Samples: 10324734001, 10324734002, 10324734003, 10324734004, 10324734005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	0.033	10/13/15 15:17	
n-Triacontane (S)	%.	80	50-150		10/13/15 15:17	

LABORATORY CONTROL SAMPLE & LCSD: 2101355 2101356

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	2	1.6	1.8	78	88	75-115	11	20	
n-Triacontane (S)	%.				76	85	50-150			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: OEXT/31111 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10324734006, 10324734007, 10324734008, 10324734009, 10324734010, 10324734011, 10324734012, 10324734013

METHOD BLANK: 2102076 Matrix: Water
Associated Lab Samples: 10324734006, 10324734007, 10324734008, 10324734009, 10324734010, 10324734011, 10324734012, 10324734013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	0.033	10/13/15 19:03	
n-Triacontane (S)	%.	84	50-150		10/13/15 19:03	

LABORATORY CONTROL SAMPLE & LCSD: 2102077 2102078

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	2	1.7	1.6	85	82	75-115	4	20	
n-Triacontane (S)	%.				86	83	50-150			

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

QC Batch: OEXT/31138 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10324734014, 10324734015

METHOD BLANK: 2103370 Matrix: Water
Associated Lab Samples: 10324734014, 10324734015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
WDRO C10-C28	mg/L	ND	0.10	0.033	10/10/15 10:57	
n-Triacontane (S)	%.	67	50-150		10/10/15 10:57	

LABORATORY CONTROL SAMPLE & LCSD: 2103371 2103372

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
WDRO C10-C28	mg/L	2	1.5	1.7	76	83	75-115	9	20	
n-Triacontane (S)	%.				80	86	50-150			

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

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.

ANALYTE QUALIFIERS

CL	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased low.
E	Analyte concentration exceeded the calibration range. The reported result is estimated.
ES	The reported result is estimated because one or more of the constituent results are qualified as such.
H1	Analysis conducted outside the recognized method holding time.
H5	Reanalysis conducted in excess of EPA method holding time. Results confirm original analysis performed in hold time.
L0	Analyte recovery in the laboratory control sample (LCS) was outside QC limits.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
MS	Analyte recovery in the matrix spike was outside QC limits for one or more of the constituent analytes used in the calculated result.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
T6	High boiling point hydrocarbons are present in the sample.
T7	Low boiling point hydrocarbons are present in the sample.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10324734001	**MW-16**	WI MOD DRO	OEXT/31099	WI MOD DRO	GCSV/16978
10324734002	**MW-25**	WI MOD DRO	OEXT/31099	WI MOD DRO	GCSV/16978
10324734003	**MW-28**	WI MOD DRO	OEXT/31099	WI MOD DRO	GCSV/16978
10324734004	**D-1**	WI MOD DRO	OEXT/31099	WI MOD DRO	GCSV/16978
10324734005	**D-2**	WI MOD DRO	OEXT/31099	WI MOD DRO	GCSV/16978
10324734006	**SULLY MW-2**	WI MOD DRO	OEXT/31111	WI MOD DRO	GCSV/16979
10324734007	**SULLY MW-1**	WI MOD DRO	OEXT/31111	WI MOD DRO	GCSV/16979
10324734008	**SULLY MW-3**	WI MOD DRO	OEXT/31111	WI MOD DRO	GCSV/16979
10324734009	**FB-3**	WI MOD DRO	OEXT/31111	WI MOD DRO	GCSV/16979
10324734010	**MW-15**	WI MOD DRO	OEXT/31111	WI MOD DRO	GCSV/16979
10324734011	**MW-27**	WI MOD DRO	OEXT/31111	WI MOD DRO	GCSV/16979
10324734012	**MW-26**	WI MOD DRO	OEXT/31111	WI MOD DRO	GCSV/16979
10324734013	**D-3**	WI MOD DRO	OEXT/31111	WI MOD DRO	GCSV/16979
10324734014	**MW-9**	WI MOD DRO	OEXT/31138	WI MOD DRO	GCSV/16947
10324734015	**MW-8**	WI MOD DRO	OEXT/31138	WI MOD DRO	GCSV/16947
10324734001	**MW-16**	WI MOD GRO	GCV/14523		
10324734002	**MW-25**	WI MOD GRO	GCV/14523		
10324734003	**MW-28**	WI MOD GRO	GCV/14523		
10324734004	**D-1**	WI MOD GRO	GCV/14523		
10324734005	**D-2**	WI MOD GRO	GCV/14523		
10324734006	**SULLY MW-2**	WI MOD GRO	GCV/14531		
10324734007	**SULLY MW-1**	WI MOD GRO	GCV/14531		
10324734008	**SULLY MW-3**	WI MOD GRO	GCV/14531		
10324734009	**FB-3**	WI MOD GRO	GCV/14527		
10324734010	**MW-15**	WI MOD GRO	GCV/14531		
10324734011	**MW-27**	WI MOD GRO	GCV/14531		
10324734012	**MW-26**	WI MOD GRO	GCV/14527		
10324734013	**D-3**	WI MOD GRO	GCV/14531		
10324734014	**MW-9**	WI MOD GRO	GCV/14533		
10324734015	**MW-8**	WI MOD GRO	GCV/14533		
10324734017	**GRO TRIIP BLANK**	WI MOD GRO	GCV/14531		
10324734003	**MW-28**	EPA 8260B	MSV/33422		
10324734005	**D-2**	EPA 8260B	MSV/33422		
10324734009	**FB-3**	EPA 8260B	MSV/33432		
10324734016	**VOC TRIIP BLANK**	EPA 8260B	MSV/33432		
10324734001	**MW-16**	EPA 8260B	MSV/33425		
10324734002	**MW-25**	EPA 8260B	MSV/33425		
10324734004	**D-1**	EPA 8260B	MSV/33441		
10324734006	**SULLY MW-2**	EPA 8260B	MSV/33426		
10324734007	**SULLY MW-1**	EPA 8260B	MSV/33426		
10324734008	**SULLY MW-3**	EPA 8260B	MSV/33426		

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J150495.01 Current Holiday Sta
Pace Project No.: 10324734

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10324734010	**MW-15**	EPA 8260B	MSV/33426		
10324734011	**MW-27**	EPA 8260B	MSV/33426		
10324734012	**MW-26**	EPA 8260B	MSV/33426		
10324734013	**D-3**	EPA 8260B	MSV/33426		
10324734014	**MW-9**	EPA 8260B	MSV/33426		
10324734015	**MW-8**	EPA 8260B	MSV/33426		

Bay West
Customer-Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTODY Analytical Request Document

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

10327739

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Report To: Amanda Malaney	Attention: accountspayable@baywest.com	Facility_Name: Current Holiday Station	Page 1 of 2
Address: 5 Empire Drive	Copy To:	Company Name: Bay West LLC	Facility_Code: Holiday Station	
St. Paul, MN 55103		Address: SAME	Facility_ID:	COC# 0930201502
Email To: amandam@baywest.com	Purchase Order No.: 105852	Lab Quote Reference:	Subfacility_code:	
Phone: 651-291-3495	Project Name: Current Holiday Station	Lab Project Manager: Yemi Odujole		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J150495.01			

ITEM #	Section E Required Client Information: Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO	GRO/BTEX/MTBE	VOCs	Comments
1	MW-16	MW-16	W	G	9/30/15	1300	8				8					X		X		001
2	MW-25	MW-25	W	G	9/30/15	1415	8				8					X		X		002
3	MW-28	MW-28	W	G	9/30/15	1525	8				8					X	X		X	003
4	D-1	D-1	W	G	9/30/15	—	8				8					X		X		004
5	D-2	D-2	W	G	9/30/15	—	8				8					X	X		X	005
6	Sully MW-2	Sully MW-2	W	G	10/1/15	0925	8				8					X		X		006
7	Sully MW-1	Sully MW-1	W	G	10/1/15	1050	8				8					X		X		007
8	Sully MW-3	Sully MW-3	W	G	10/1/15	1135	8				8					X		X		008
9	FB-3	FB-3	W	G	10/1/15	1205	8				8					X	X		X	009
10	MW-15	MW-15	W	G	10/1/15	1300	8				8					X		X		010
11	MW-27	MW-27	W	G	10/1/15	1430	8				8					X		X		011
12	MW-26	MW-26	W	G	10/1/15	1545	8				8					X		X		012

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
STATE ADMIN CONTRACT PROJECT	BW	10/2/15	1100		10/2/15	1100	3.3,2
MPCA WO # 3000014635		10/2/15	1605		10/2/15	1605	1.3
		10/2/15			10/2/15	19:00	3.6, 5.3

Temp (°C) | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hillary McGowan

SIGNATURE of SAMPLER: | DATE Signed (MM/DD/YY): 09/30/15

Bay West
Customer-Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTODY Analytical Request Document

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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Report To: Amanda Malaney	Attention: accountspayable@baywest.com	Facility_Name: Current Holiday Station	Page 2 of 2
Address: 5 Empire Drive	Copy To:	Company Name: Bay West LLC	Facility_Code: Holiday Station	
St. Paul, MN 55103		Address: SAME	Facility_ID:	COC# 10012015
Email To: amandam@baywest.com	Purchase Order No.: 105852	Lab Quote Reference:	Subfacility_code:	
Phone: 651-291-3495	Project Name: Current Holiday Station	Lab Project Manager: Yemi Odujole		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J150495.01			

ITEM #	Section E Required Client Information: Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO	GRO/BTEX/MTBE	VOCs	Comments
1	D-3	D-3	W	G	10/1/15	—	3				3					X		X		QB
2	MW-9	MW-9	W	G	10/2/15	0910	3				3					X		X		014
3	MW-8	MW-8	W	G	10/2/15	1015	3				3					X		X		015
4	VOC Trip Blank	← LAB PREPARED →					2				2								X	016
5	GRO Trip Blank	← LAB PREPARED →					2				2						X			017
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
STATE ADMIN CONTRACT PROJECT		10/2/15	1100		10/2/15	1100	
MPCA WO # 3000014635		10/2/15	1605		10/2/15	1605	-0.3
		10/2/15			10/2/15	19:00	

Temp (°C) | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	Hillary McGown
SIGNATURE of SAMPLER:	DATE Signed (MM/DD/YY): 10/01/15

Pace Analytical®	Document Name: **Sample Condition Upon Receipt Form**	Document Revised: 23Feb2015 Page 1 of 1
	Document No.: **F-MN-L-213-rev.13**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt

Client Name: Bay West

Project #: WO# : 10324734

10324734

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

Tracking Number: _____

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

Optional: Proj. Due Date: Proj. Name:

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

Thermometer Used: ☐B88A9130516413 ☑B88A912167504 ☐B88A0143310098 3.3; 2.1

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

Cooler Temp Read (°C): 0.3, 3.6, 5.3 **Cooler Temp Corrected (°C):** 0.3, 3.6, 5.3 (3.3, 2.1)

Biological Tissue Frozen? ☐Yes ☐No ☑N/A

Temp should be above freezing to 6°C **Correction Factor:** +0.0 **Date and Initials of Person Examining Contents:** RAC 10/21/15

USDA Regulated Soil (☑N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, AZ, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or WA (check maps)? ☐Yes ☐No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐Yes ☐No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

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

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** Oct 5 2015

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).

Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130046.D

Report Date: 10/14/2015

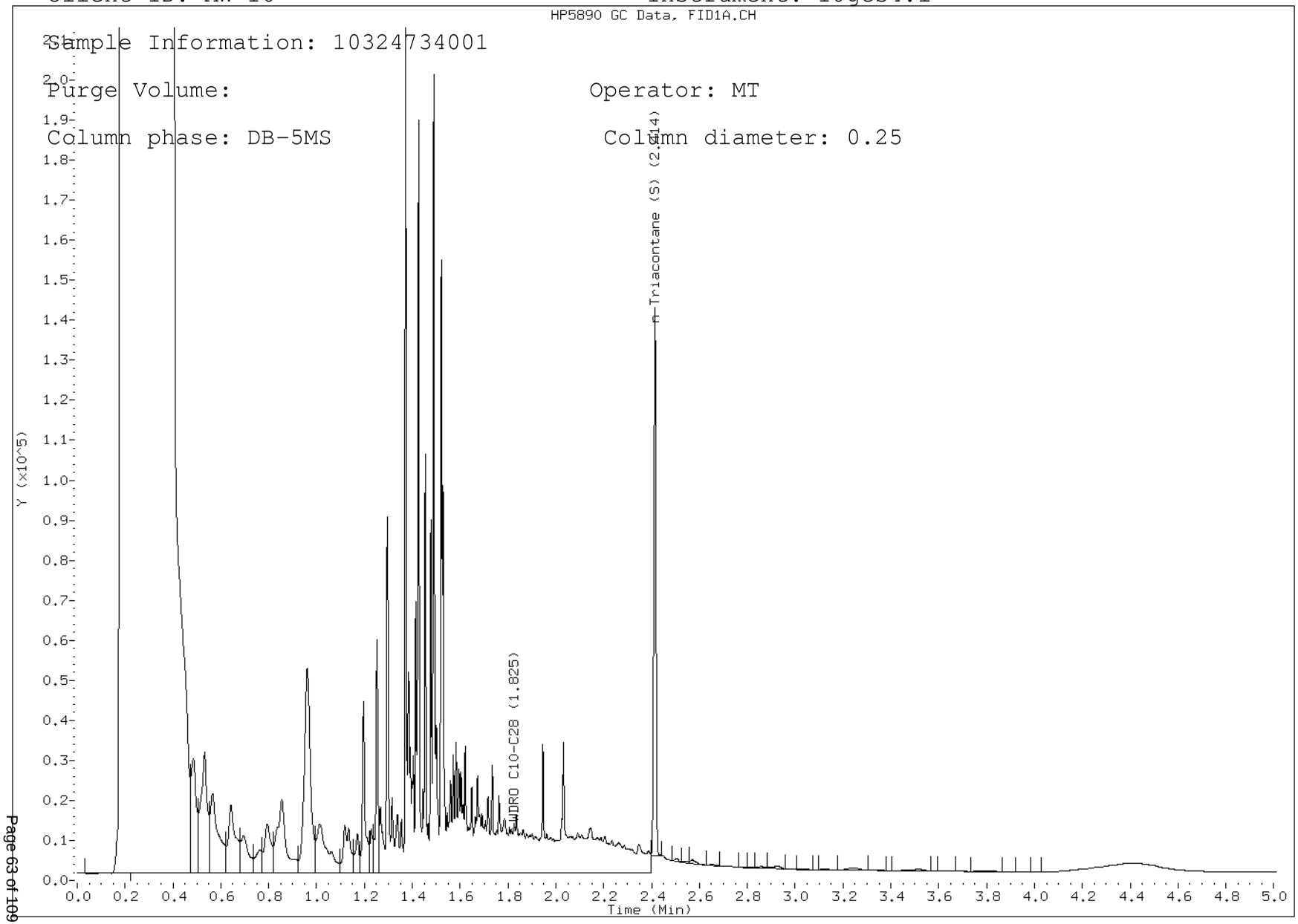
Sample ID: 10324734001

Client ID: MW-16 Instrument: 10gcs4.i

Sample Information: 10324734001

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130047.D

Report Date: 10/14/2015

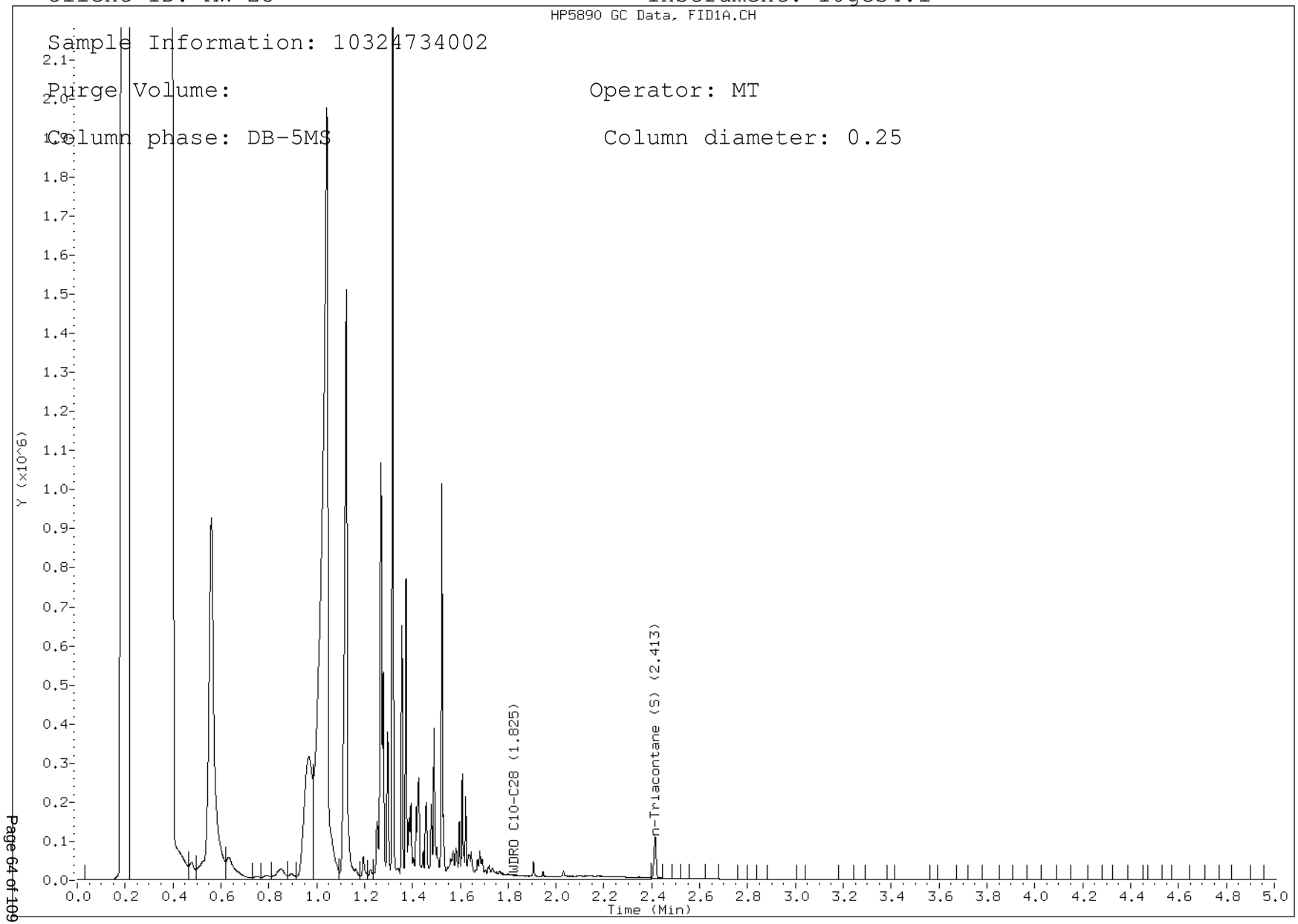
Sample ID: 10324734002

Client ID: MW-25 Instrument: 10gcs4.i

Sample Information: 10324734002

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130048.D

Report Date: 10/14/2015

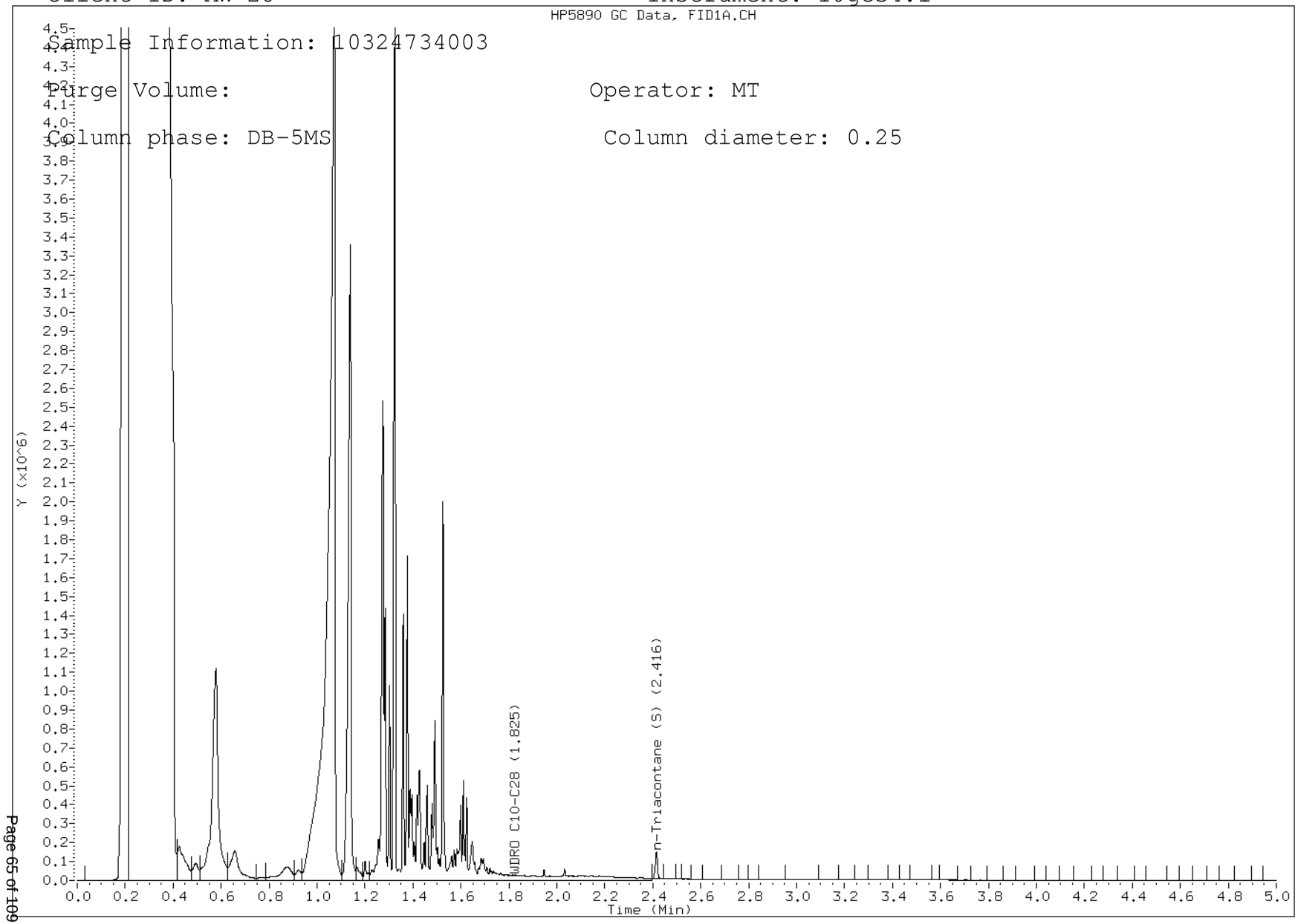
Sample ID: 10324734003

Client ID: MW-28 Instrument: 10gcs4.i

Sample Information: 10324734003

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130049.D

Report Date: 10/14/2015

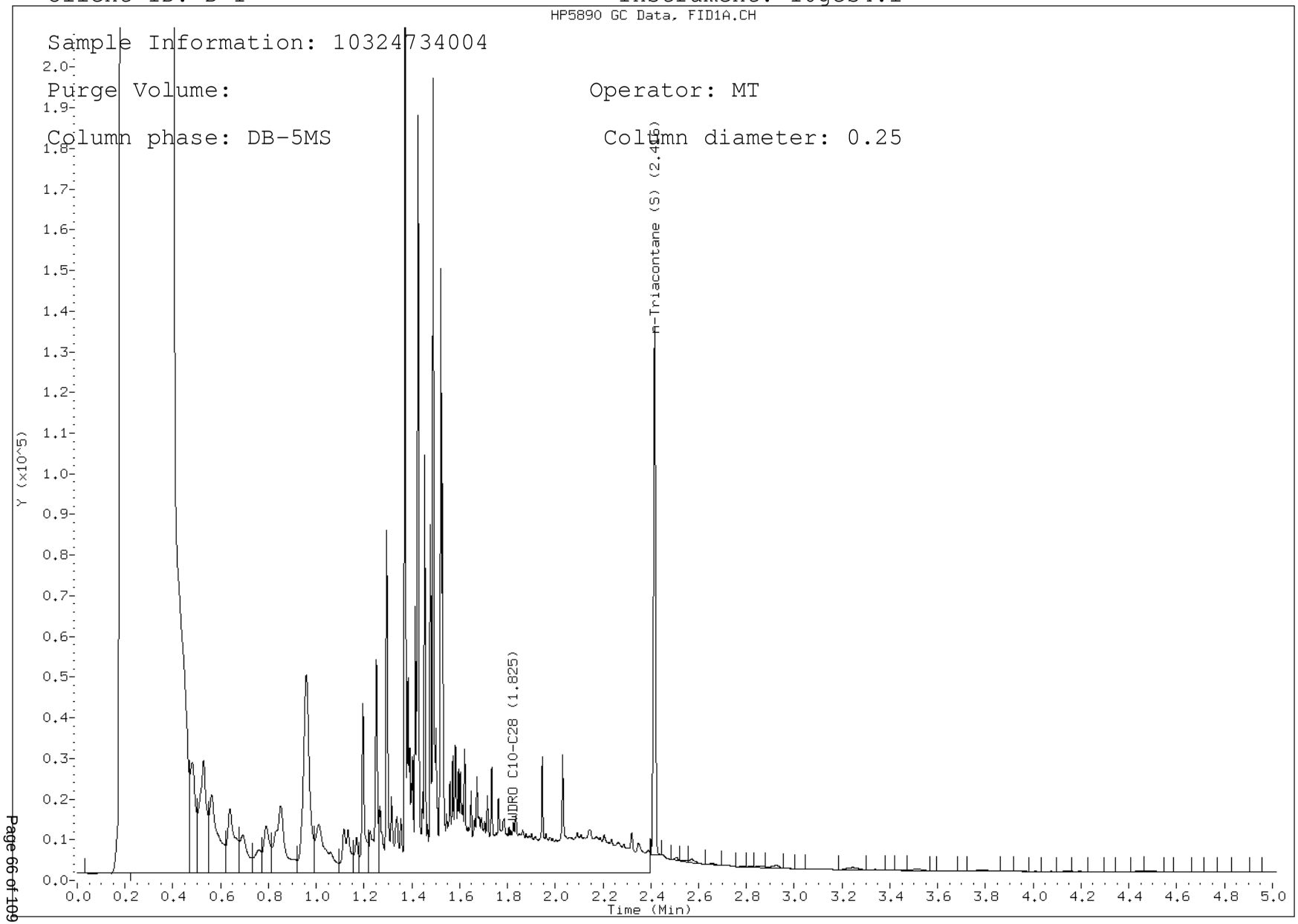
Sample ID: 10324734004

Client ID: D-1 Instrument: 10gcs4.i

Sample Information: 10324734004

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25

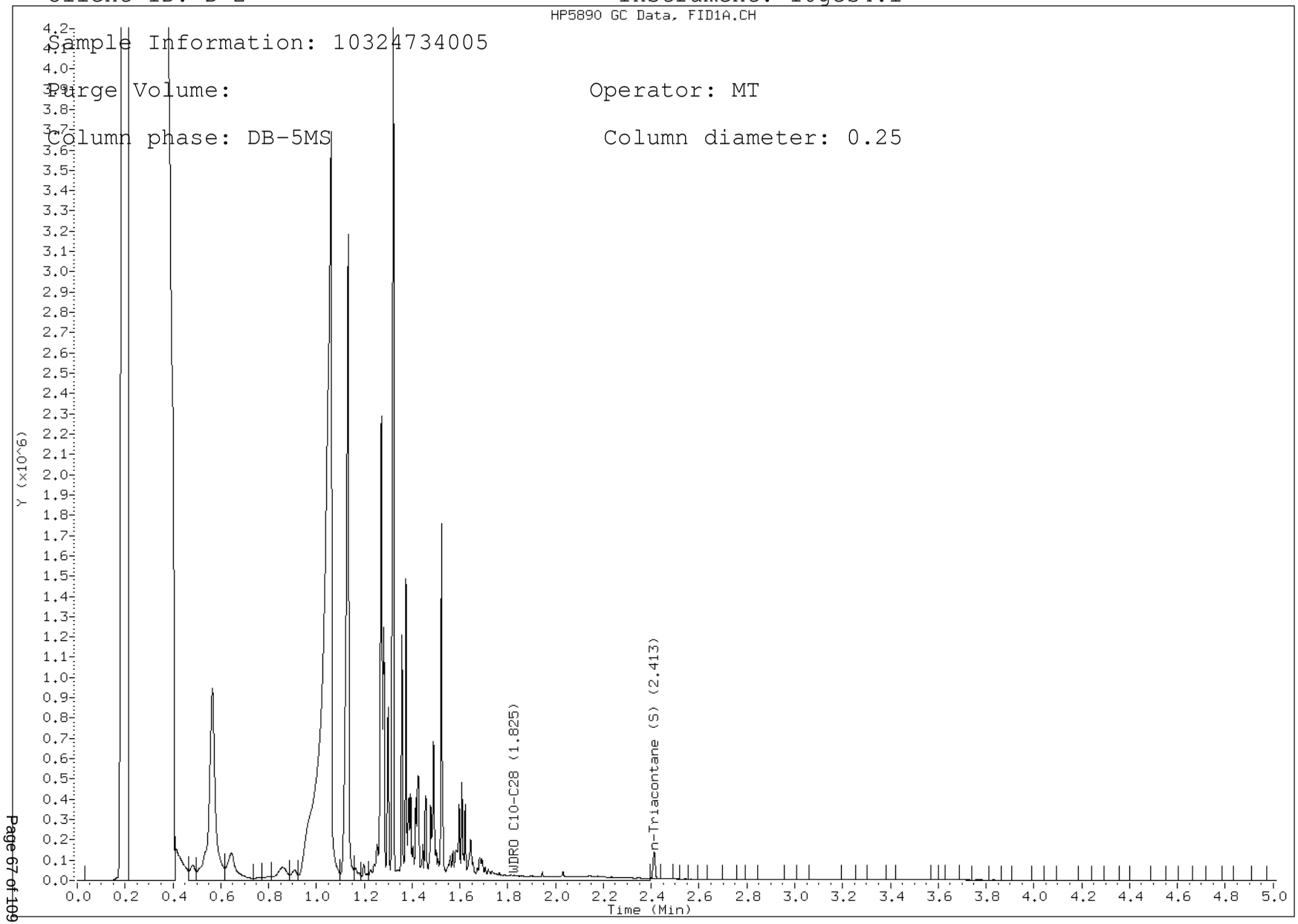


Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130038.D

Report Date: 10/14/2015

Sample ID: 10324734005

Client ID: D-2 Instrument: 10gcs4.i



Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130070.D

Report Date: 10/14/2015

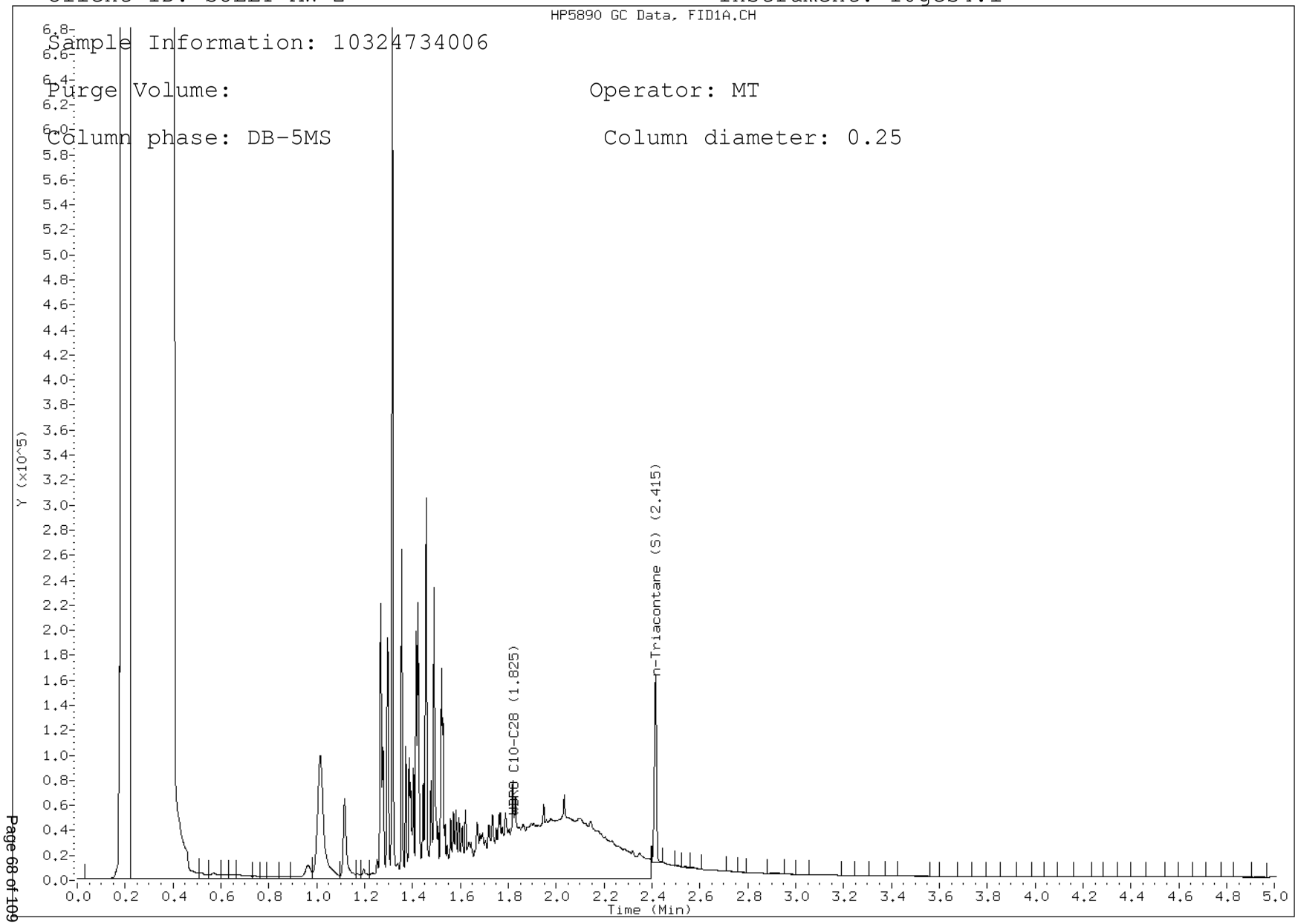
Sample ID: 10324734006

Client ID: SULLY MW-2 Instrument: 10gcs4.i

Sample Information: 10324734006

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130069.D

Report Date: 10/14/2015

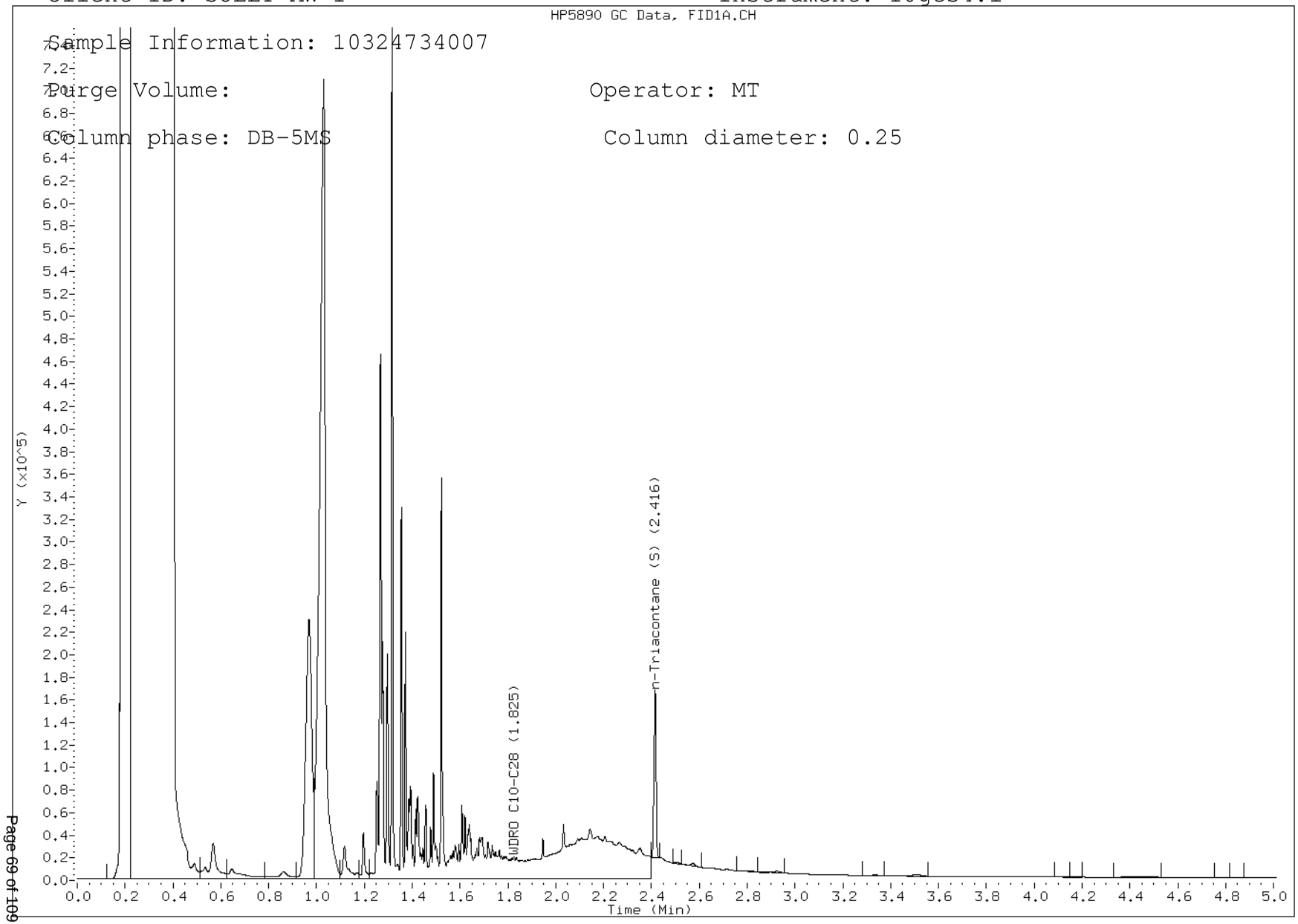
Sample ID: 10324734007

Client ID: SULLY MW-1 Instrument: 10gcs4.i

Sample Information: 10324734007

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101415dro.b/10140006.D

Report Date: 10/14/2015

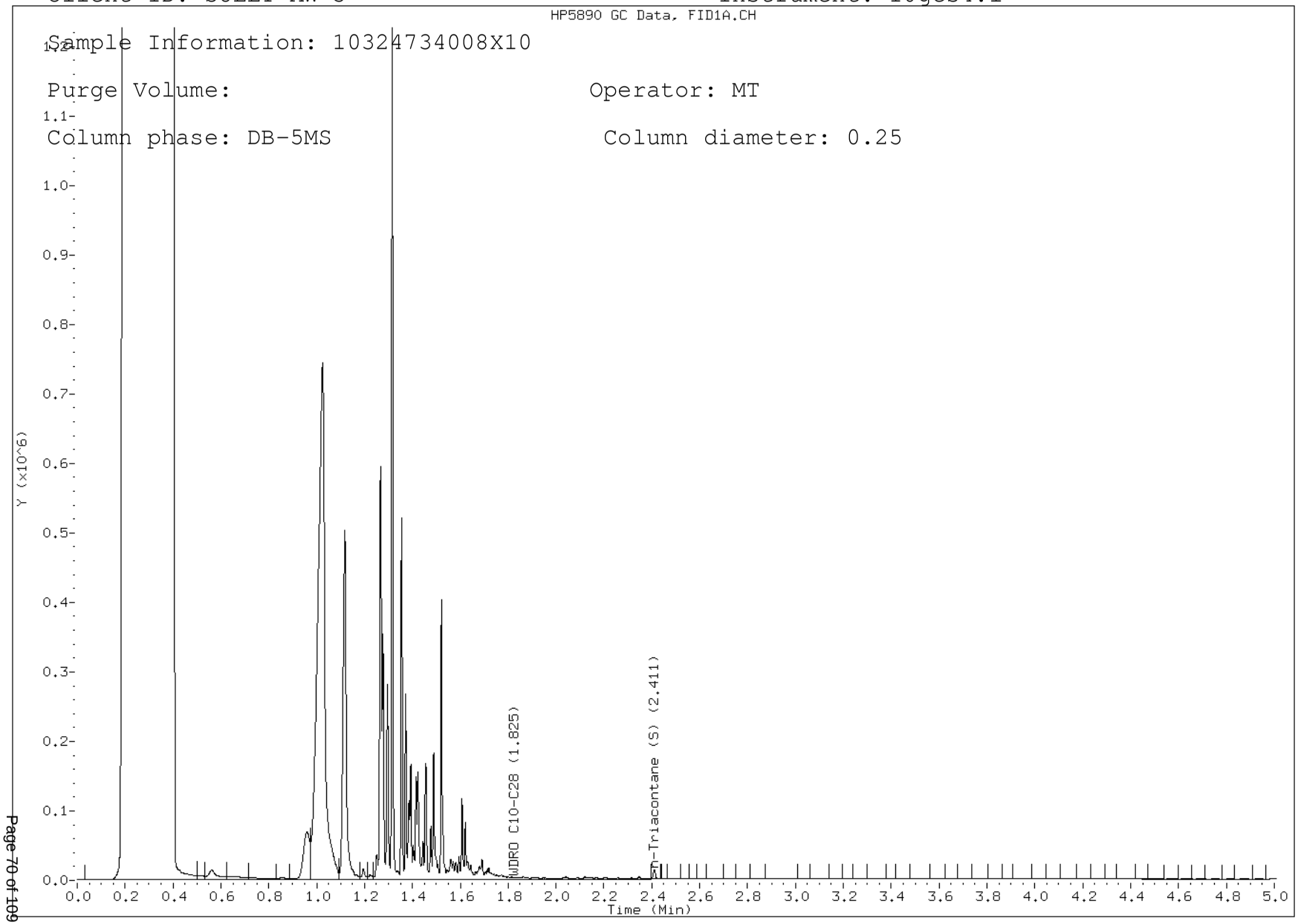
Sample ID: 10324734008

Client ID: SULLY MW-3 Instrument: 10gcs4.i

Sample Information: 10324734008X10

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130074.D

Report Date: 10/14/2015

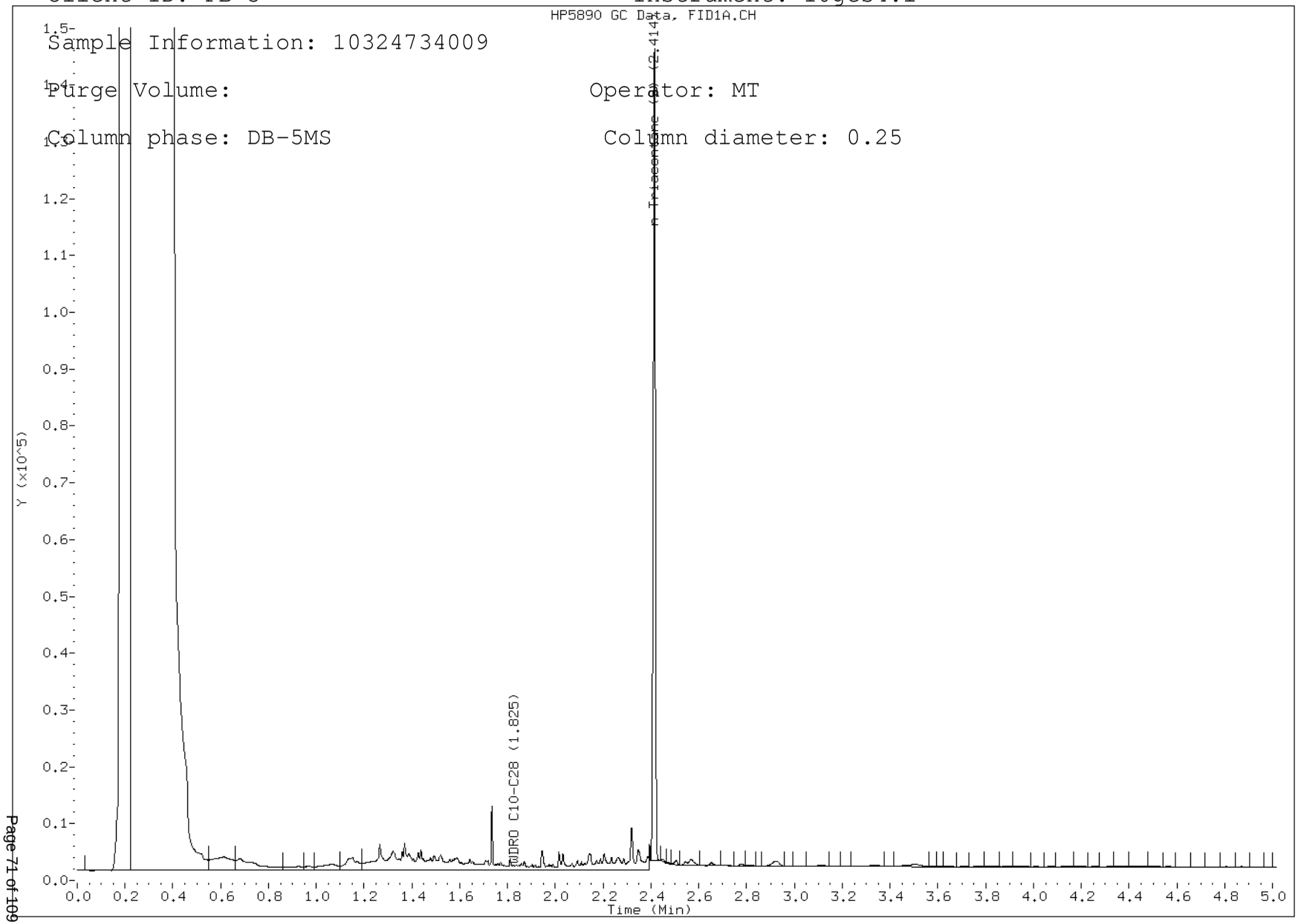
Sample ID: 10324734009

Client ID: FB-3 Instrument: 10gcs4.i

Sample Information: 10324734009

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25

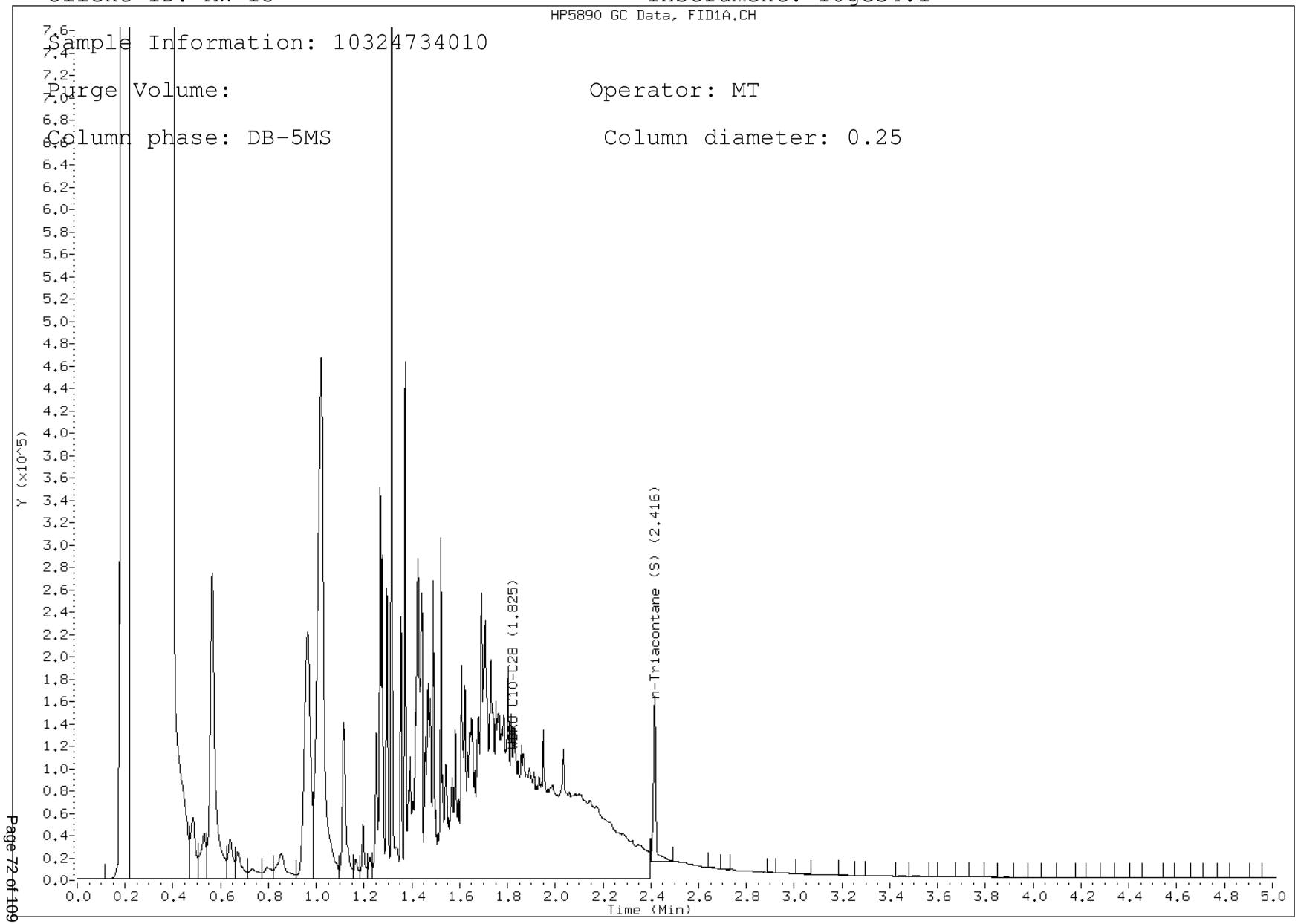


Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130063.D

Report Date: 10/14/2015

Sample ID: 10324734010

Client ID: MW-15 Instrument: 10gcs4.i



Sample Information: 10324734010

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25

Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130072.D

Report Date: 10/14/2015

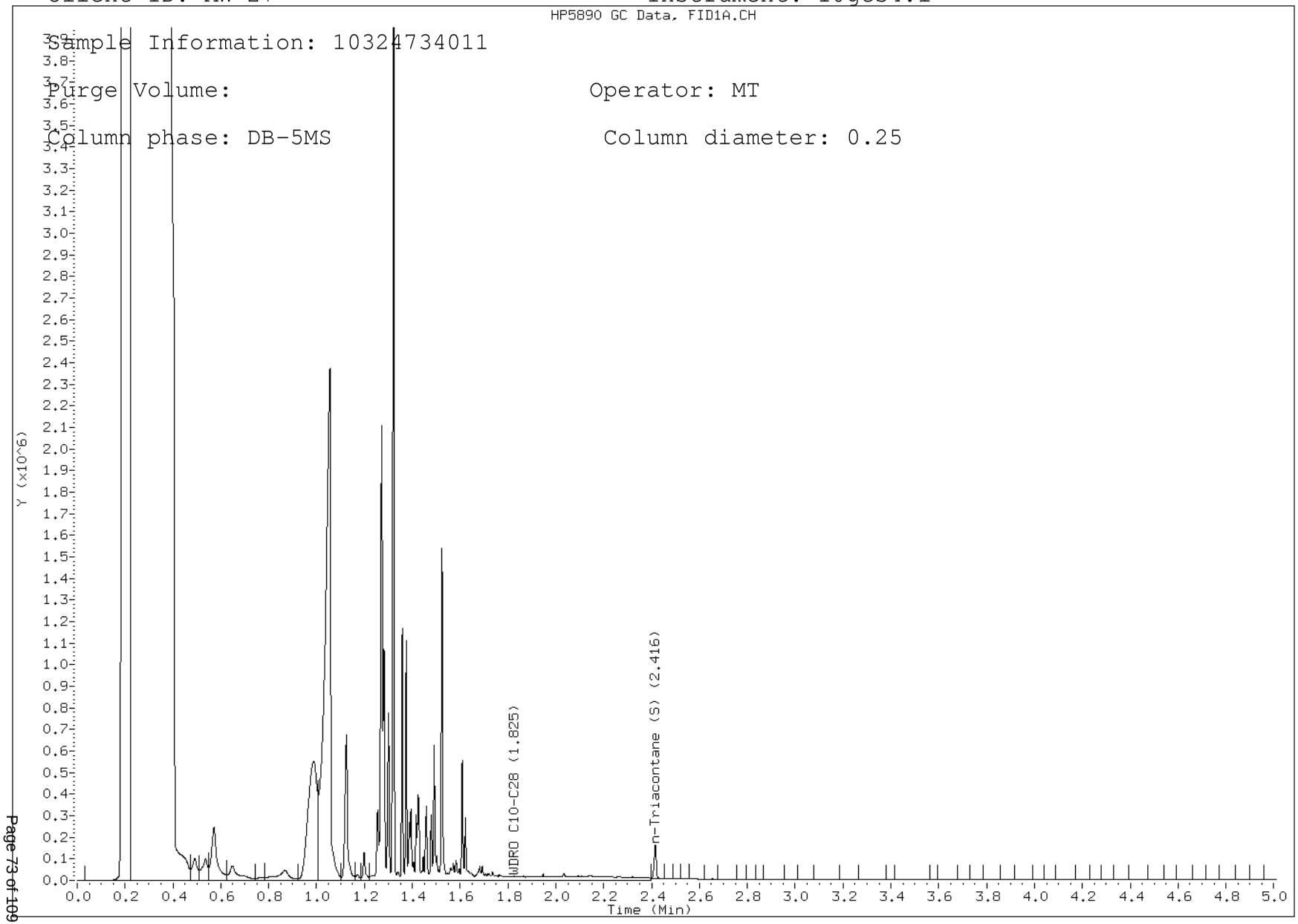
Sample ID: 10324734011

Client ID: MW-27 Instrument: 10gcs4.i

Sample Information: 10324734011

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130066.D

Report Date: 10/14/2015

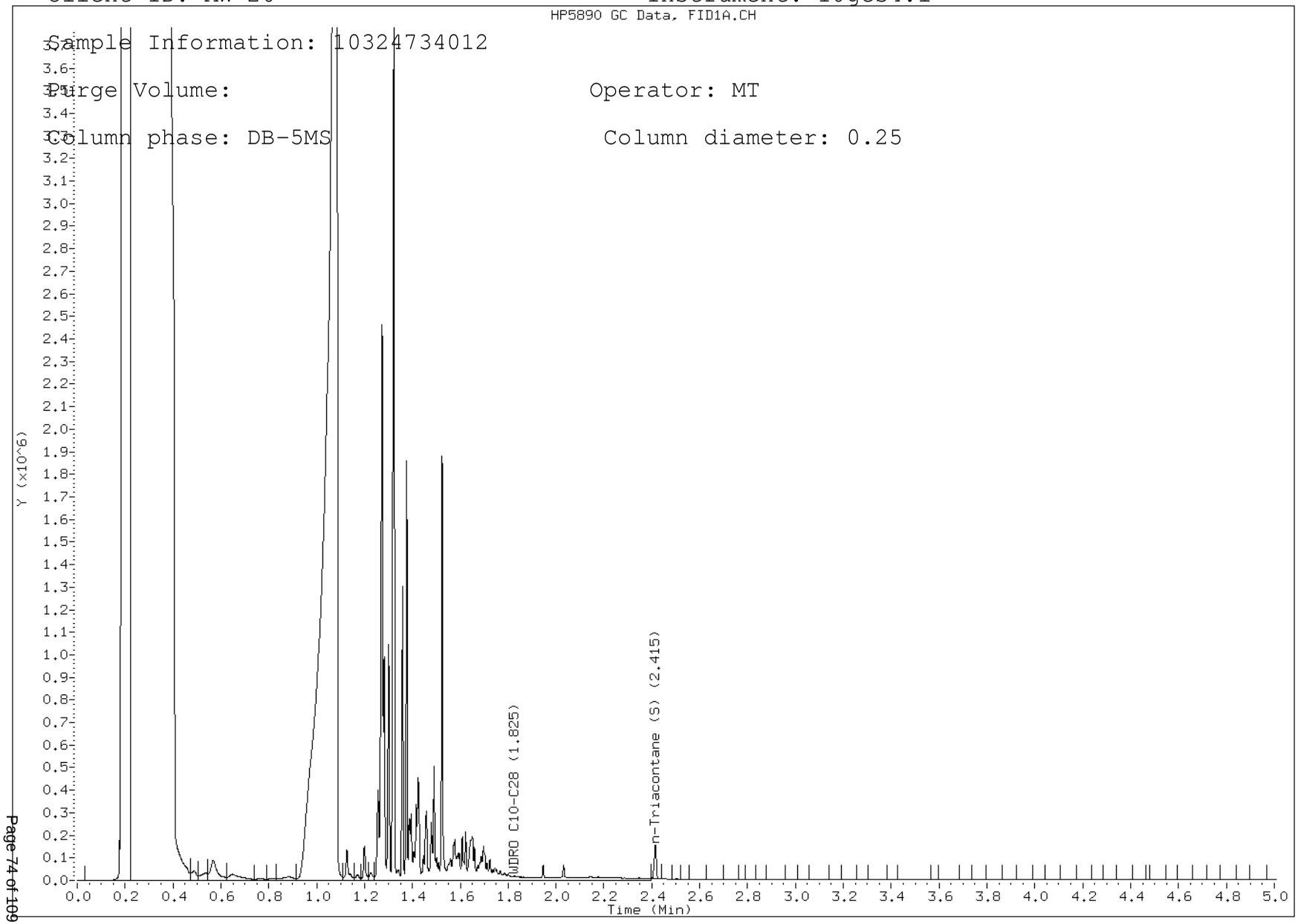
Sample ID: 10324734012

Client ID: MW-26 Instrument: 10gcs4.i

Sample Information: 10324734012

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs4.i\101315dro.b/10130064.D

Report Date: 10/14/2015

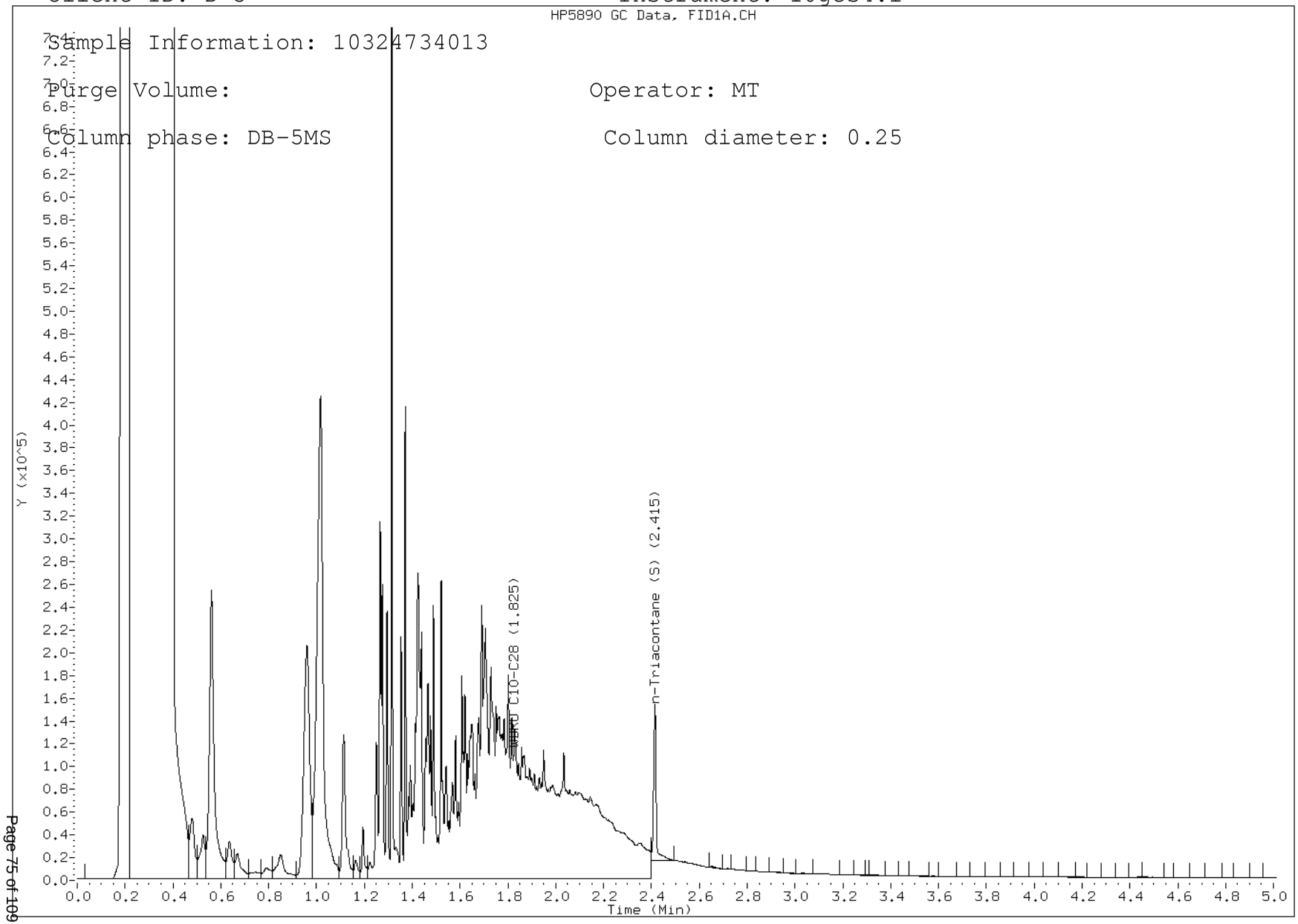
Sample ID: 10324734013

Client ID: D-3 Instrument: 10gcs4.i

Sample Information: 10324734013

Purge Volume: Operator: MT

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs9.i\101015dro.b/101015000015.D

Report Date: 10/11/2015

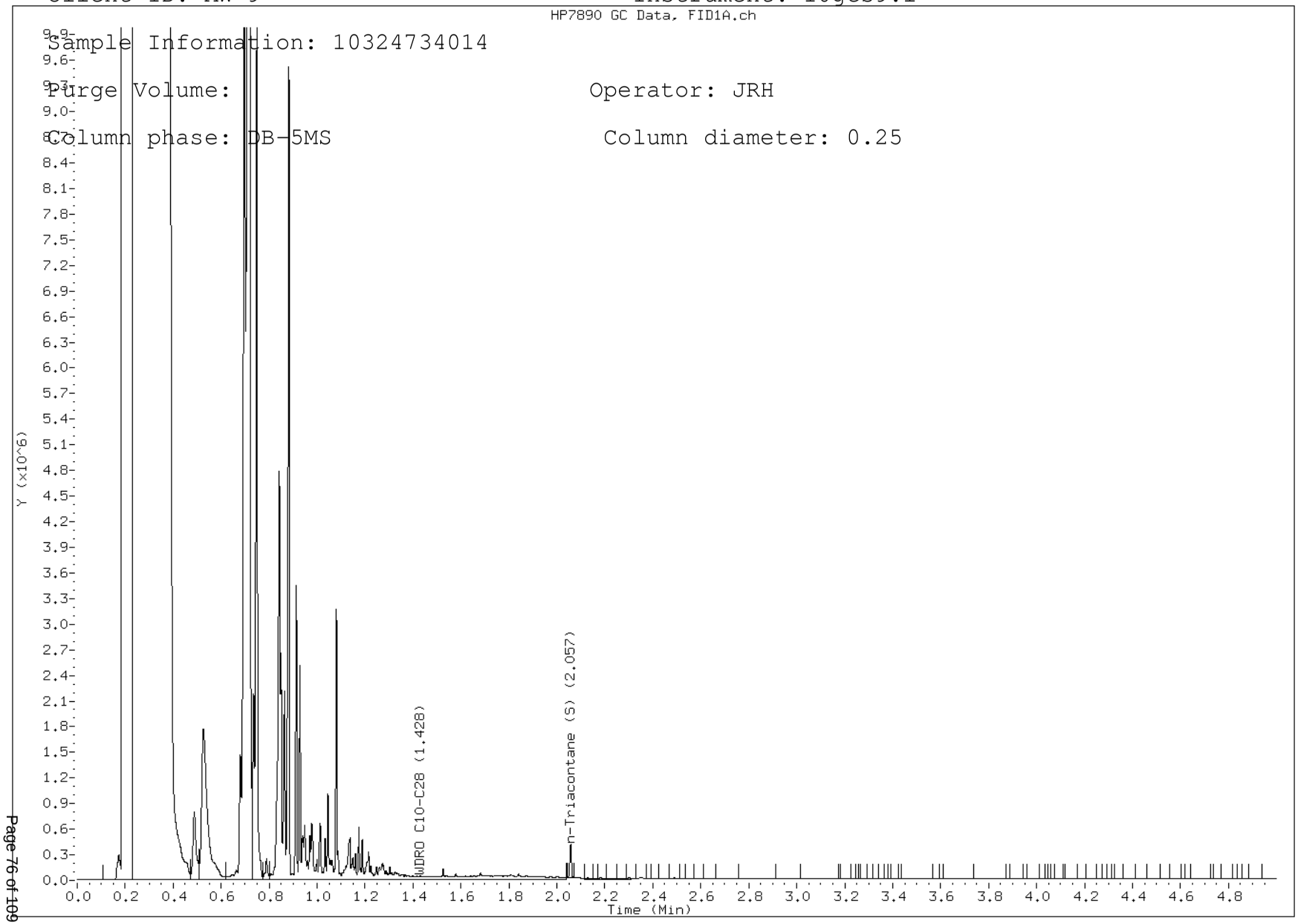
Sample ID: 10324734014

Client ID: MW-9 Instrument: 10gcs9.i

Sample Information: 10324734014

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcs9.i\101015dro.b/101015000036.D

Report Date: 10/11/2015

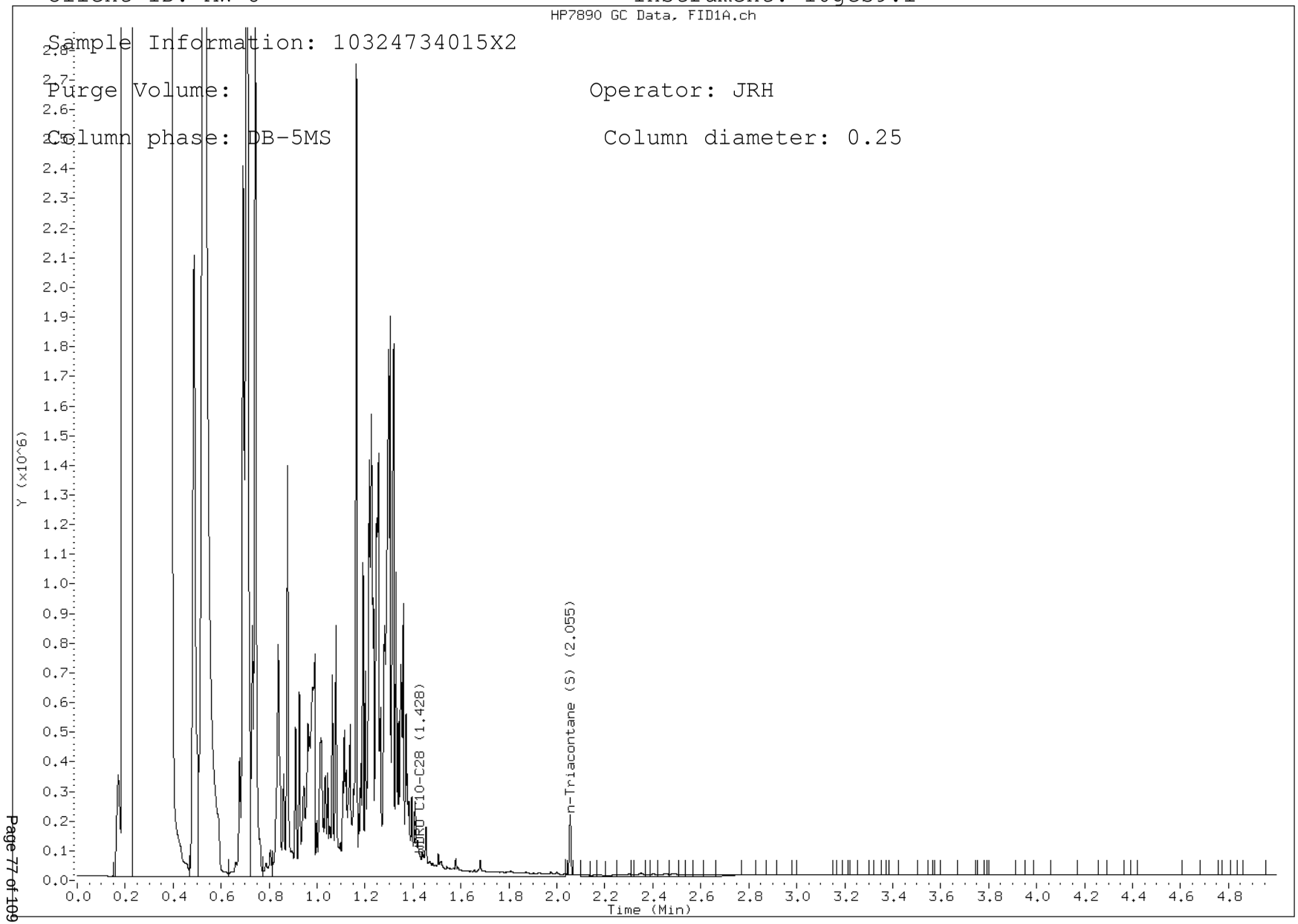
Sample ID: 10324734015

Client ID: MW-8 Instrument: 10gcs9.i

Sample Information: 10324734015X2

Purge Volume: Operator: JRH

Column phase: DB-5MS Column diameter: 0.25



Data File: \\192.168.10.12\chem\10gcv3.i\101215A-1.b/1-285010.d

Report Date: 10/13/2015

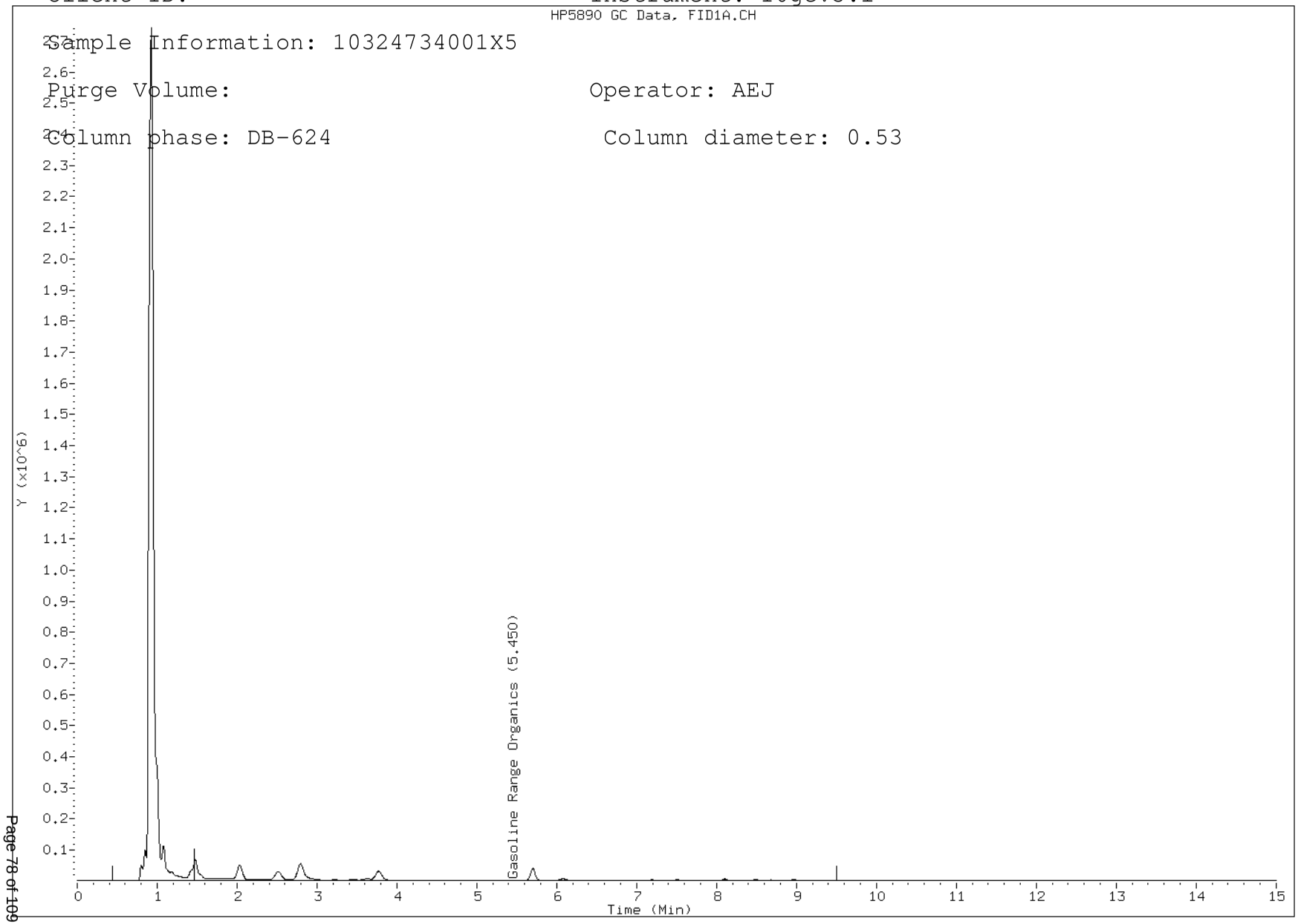
Sample ID: 10324734001

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734001X5

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101215A-2.b/1-285010.d

Report Date: 10/13/2015

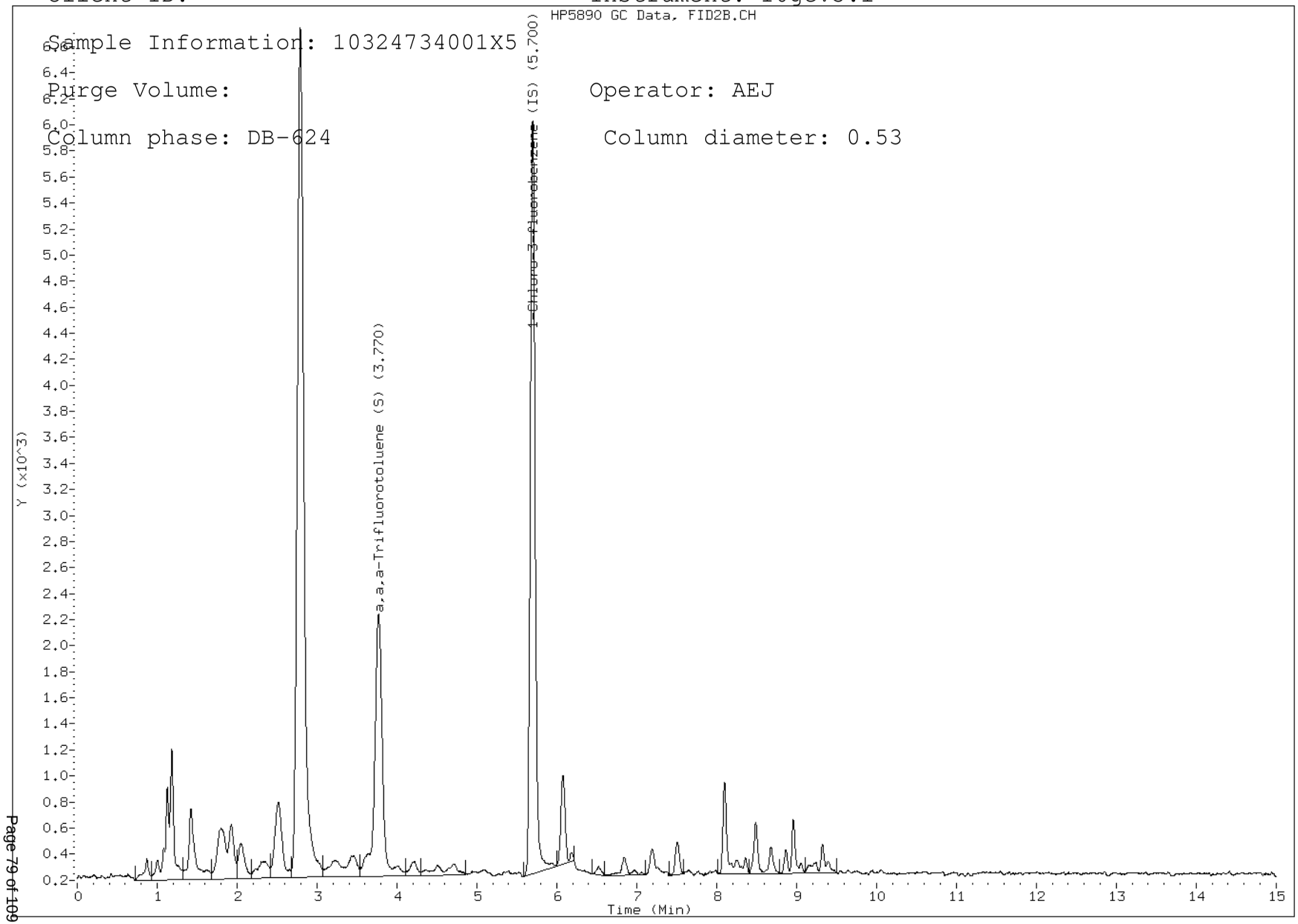
Sample ID: 10324734001

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734001X5

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53

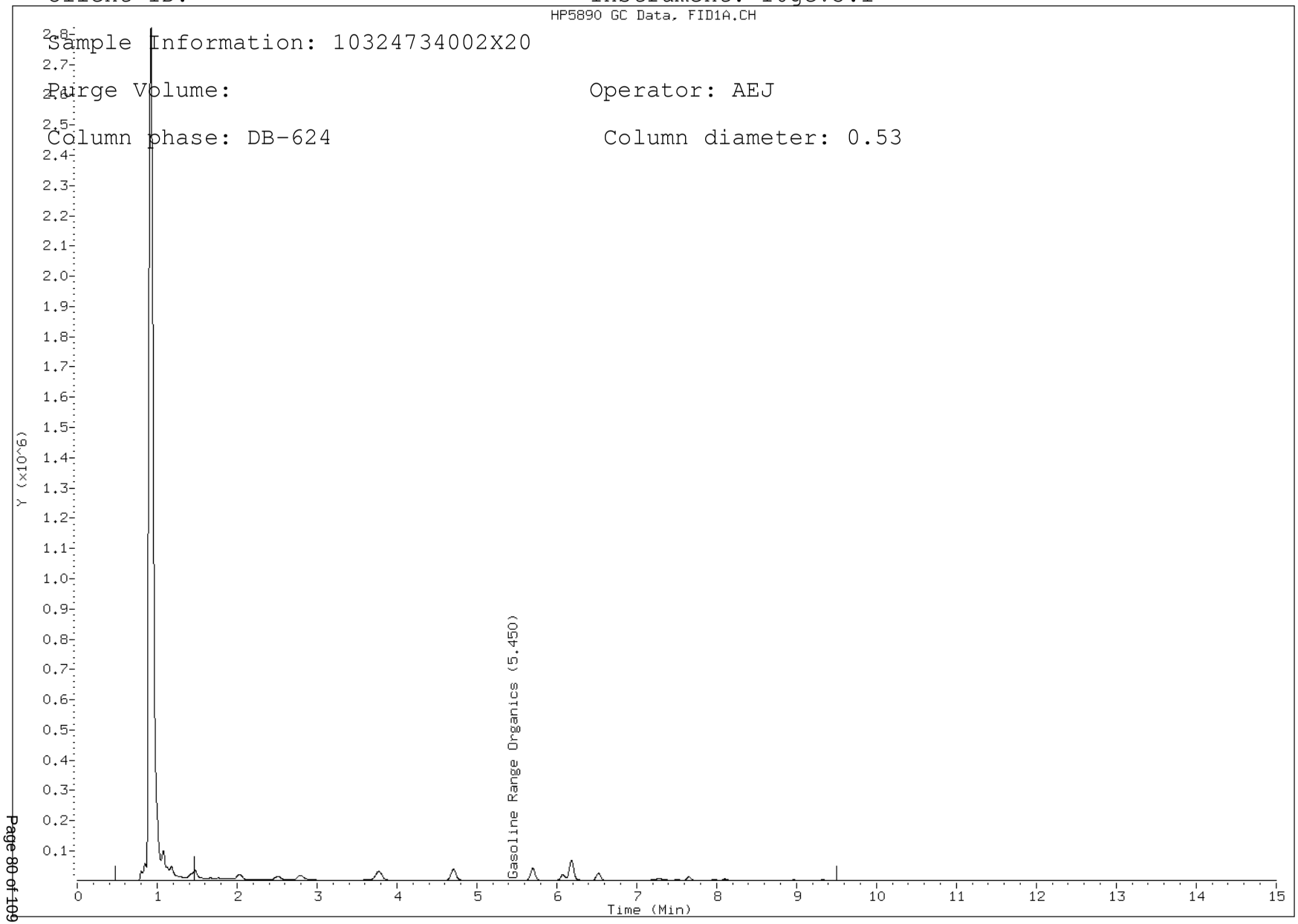


Data File: \\192.168.10.12\chem\10gcv3.i\101215A-1.b/1-285011.d

Report Date: 10/13/2015

Sample ID: 10324734002

Client ID: Instrument: 10gcv3.i



Sample Information: 10324734002X20

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\101215A-2.b/1-285011.d

Report Date: 10/13/2015

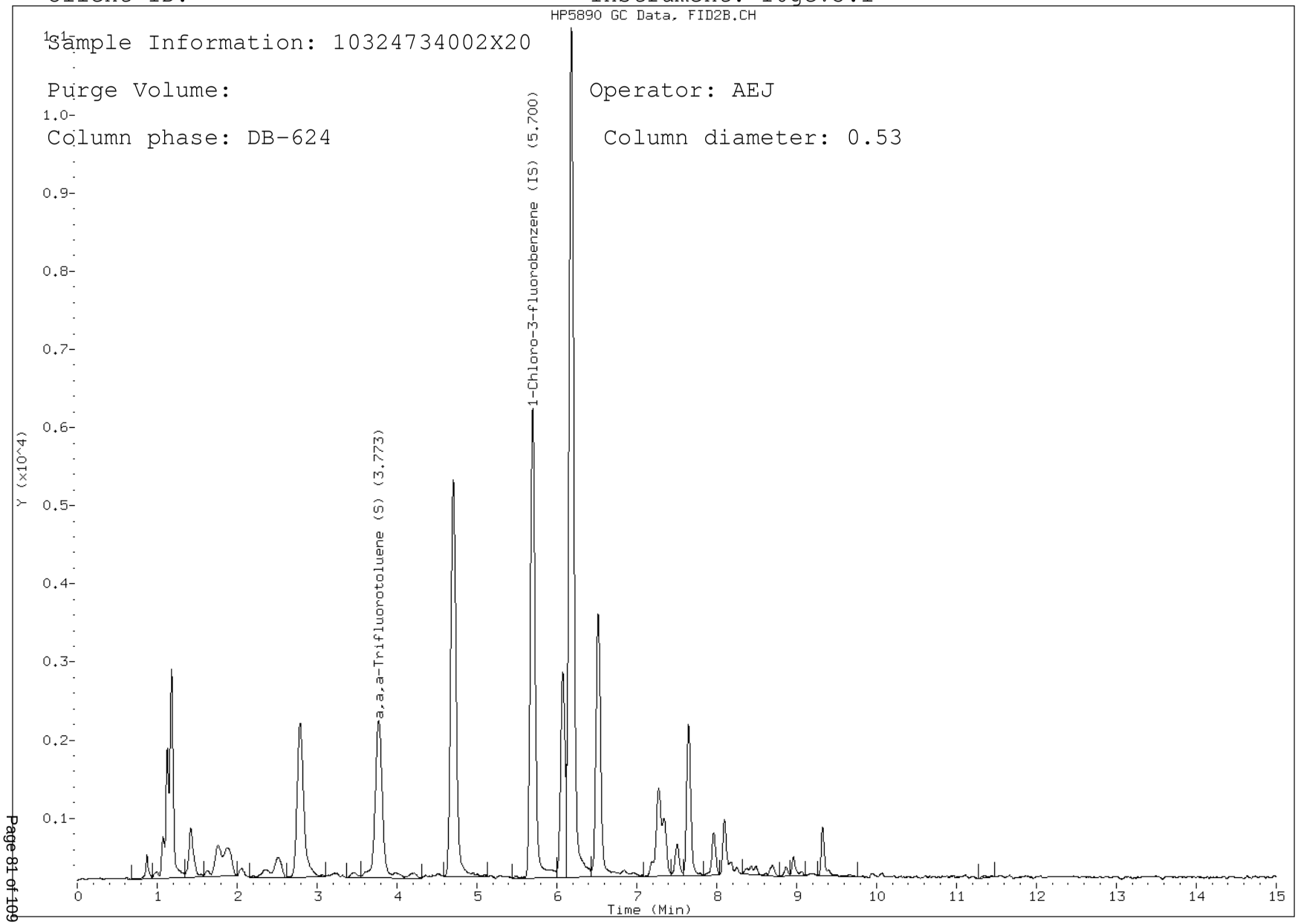
Sample ID: 10324734002

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734002X20

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101215A-1.b/1-285012.d

Report Date: 10/13/2015

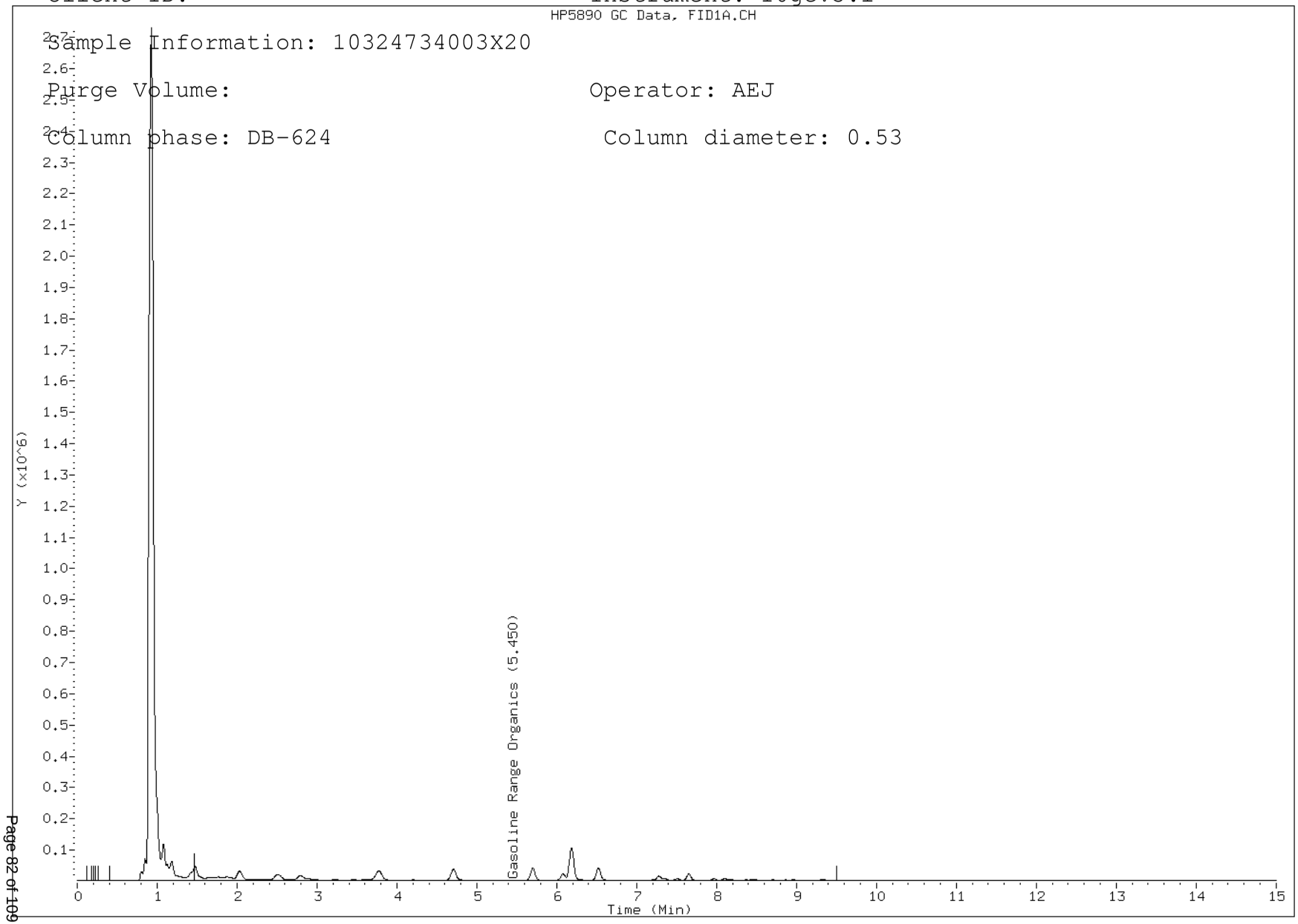
Sample ID: 10324734003

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734003X20

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101215A-2.b/1-285012.d

Report Date: 10/13/2015

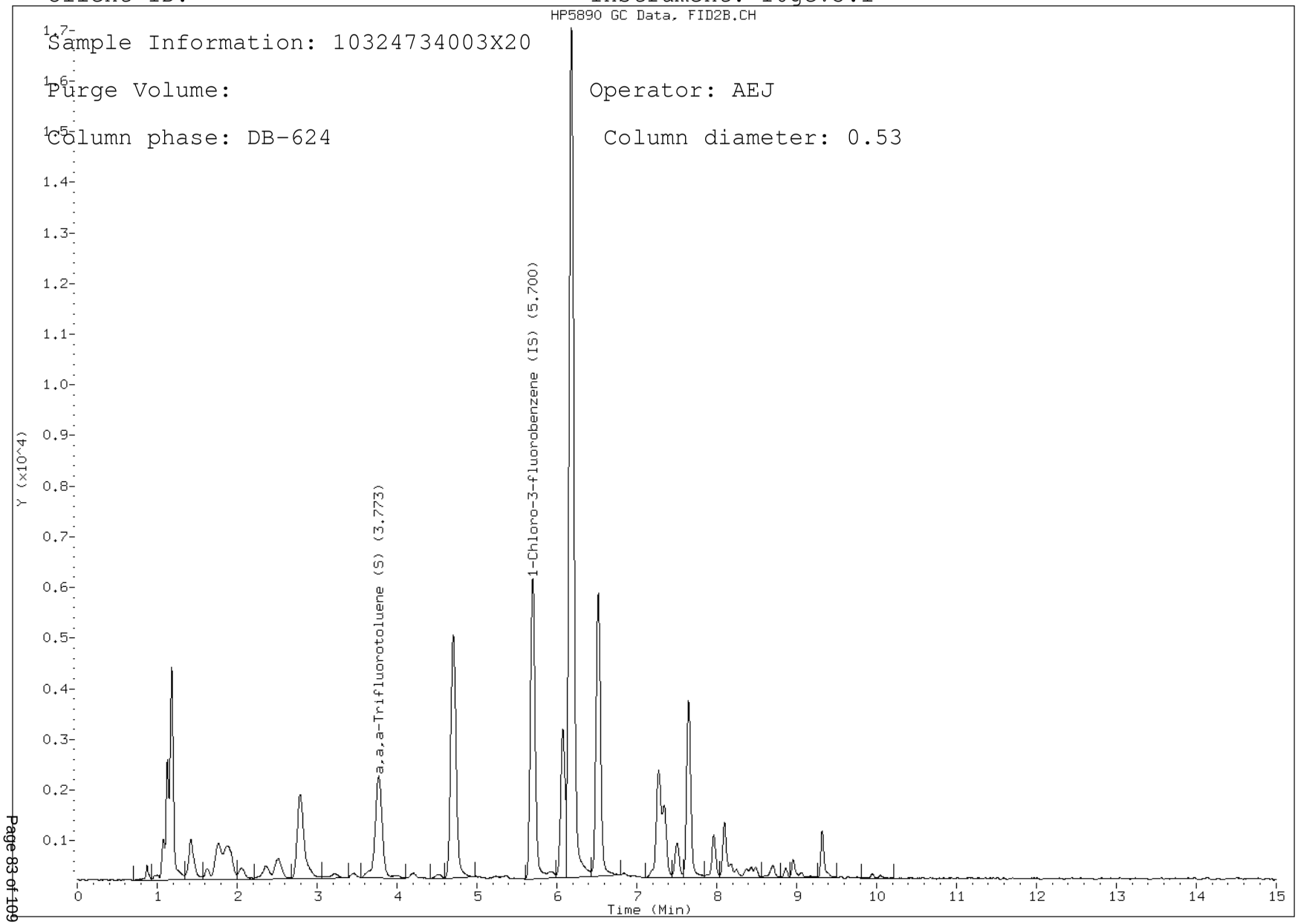
Sample ID: 10324734003

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734003X20

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53

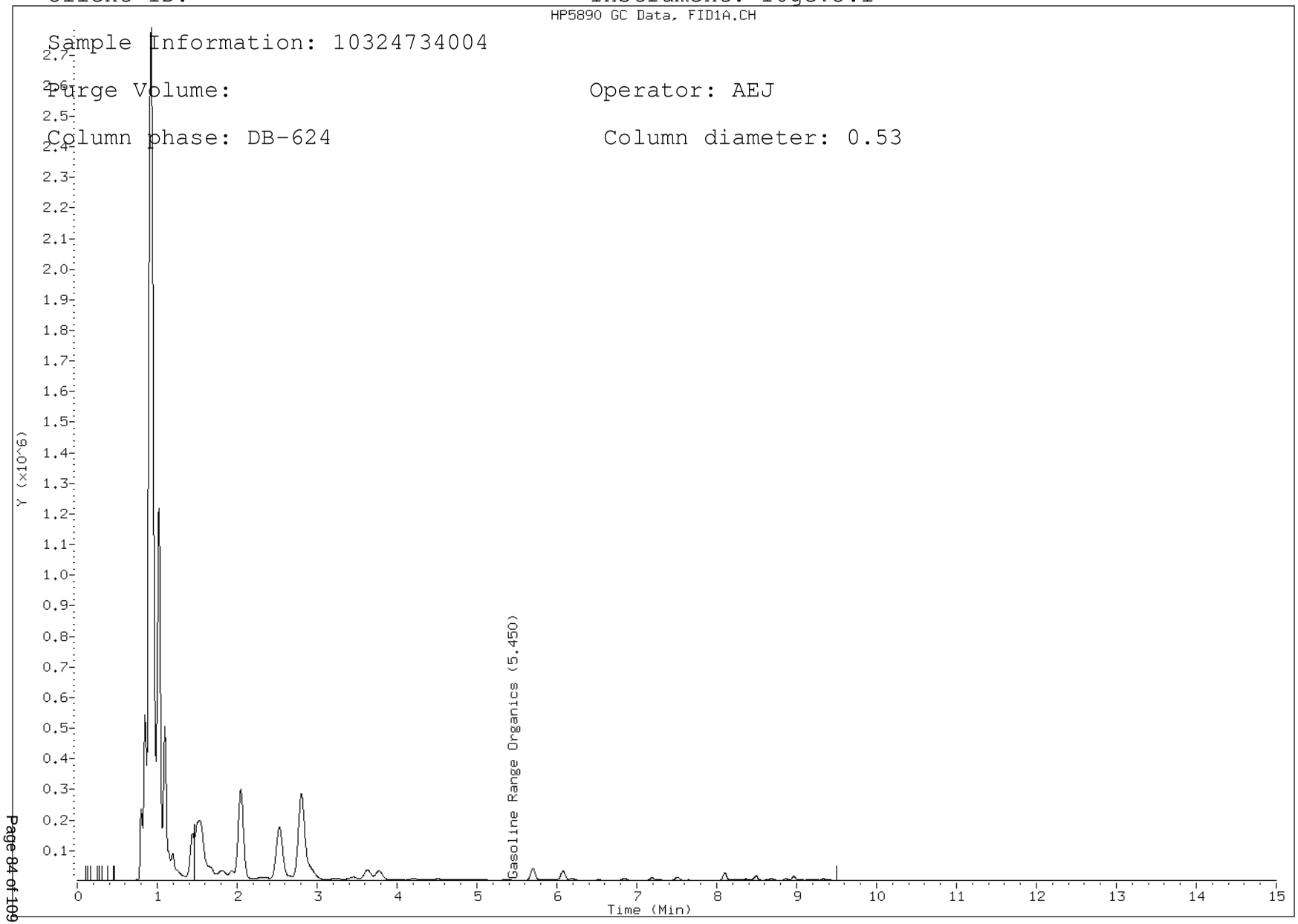


Data File: \\192.168.10.12\chem\10gcv3.i\101215A-1.b/1-285013.d

Report Date: 10/13/2015

Sample ID: 10324734004

Client ID: Instrument: 10gcv3.i



Sample Information: 10324734004

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\101215A-2.b/1-285013.d

Report Date: 10/13/2015

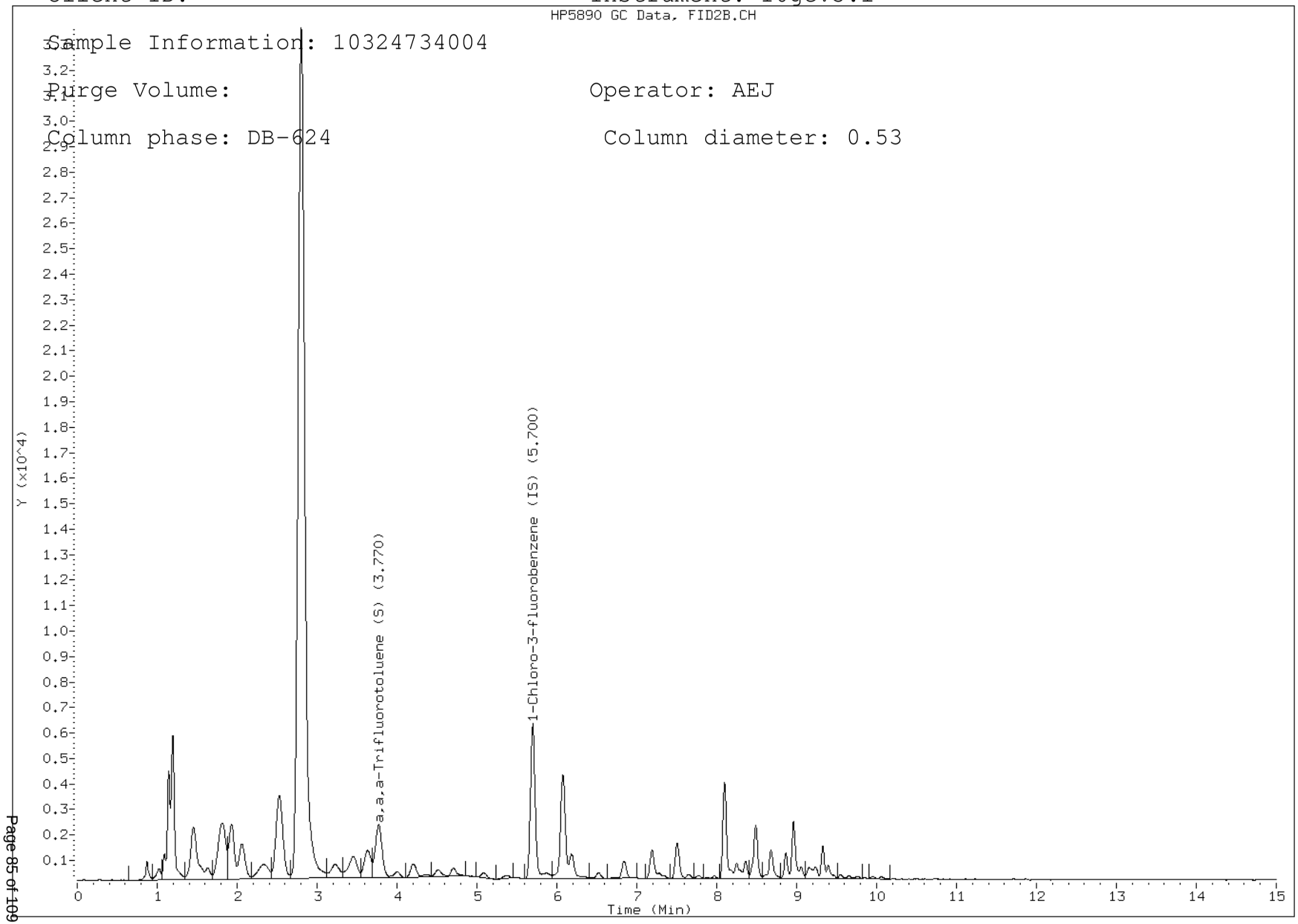
Sample ID: 10324734004

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734004

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101215A-1.b/1-285014.d

Report Date: 10/13/2015

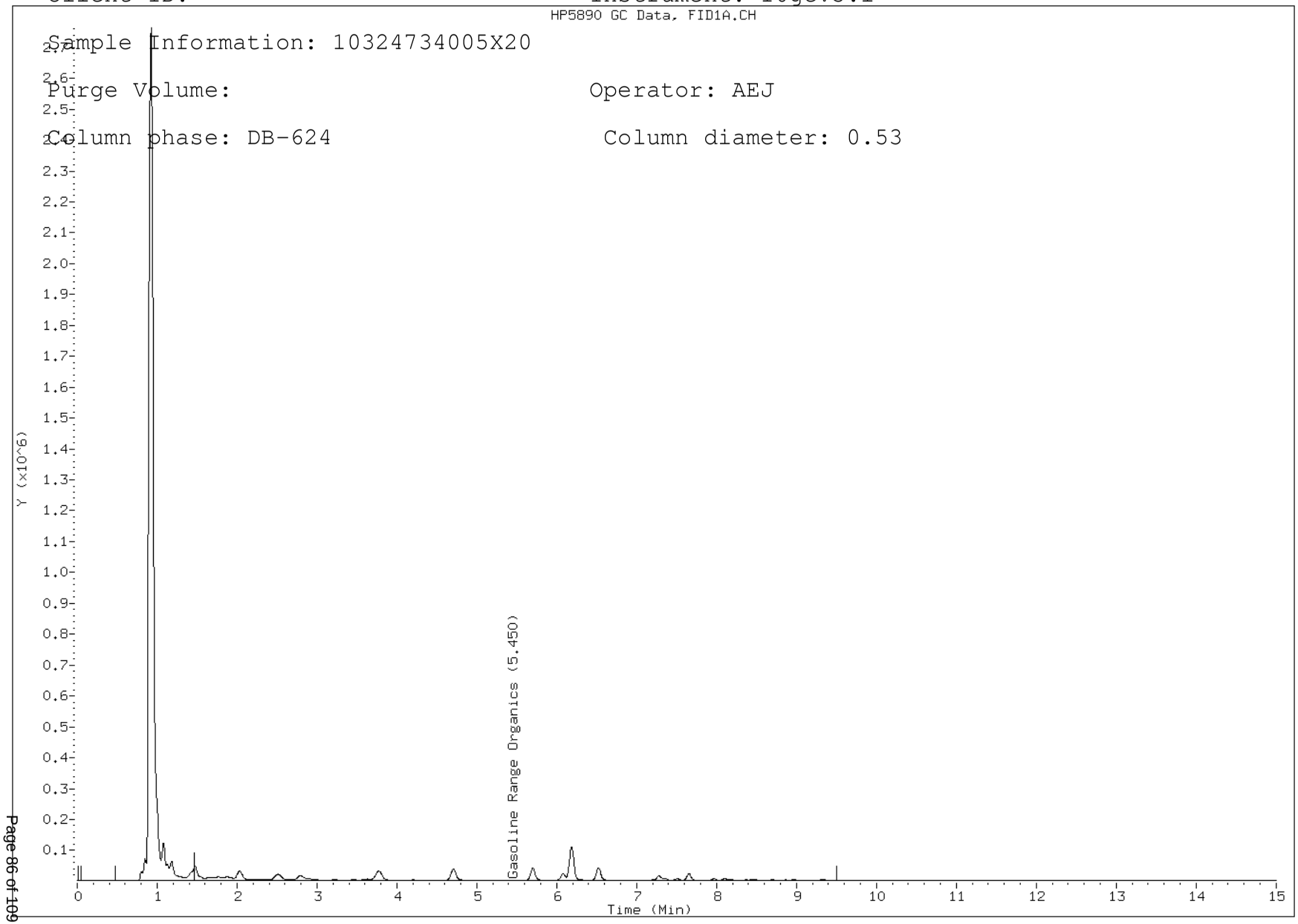
Sample ID: 10324734005

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734005X20

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101215A-2.b/1-285014.d

Report Date: 10/13/2015

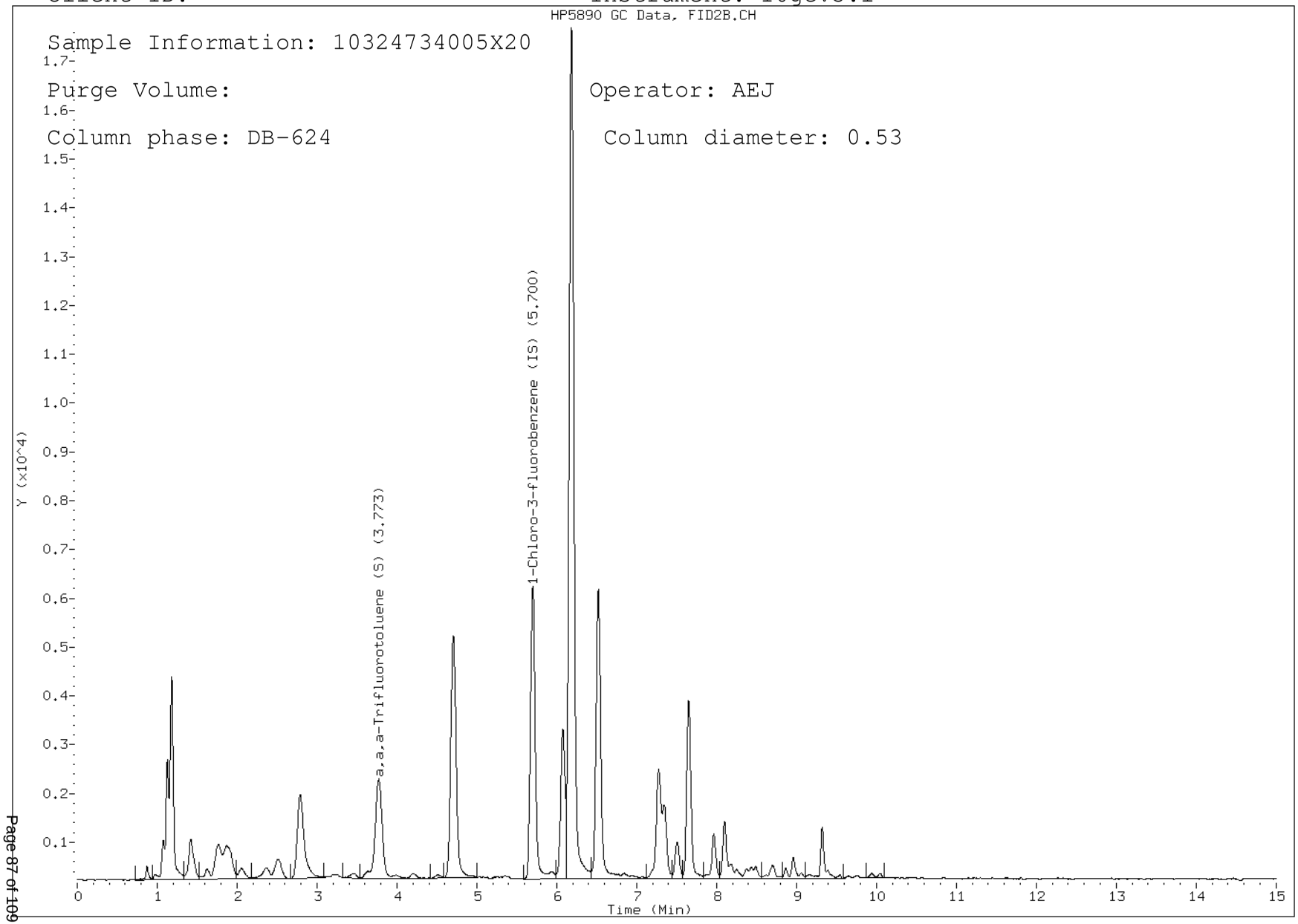
Sample ID: 10324734005

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734005X20

Purge Volume: Operator: AEJ

Column phase: DB-624 Column diameter: 0.53

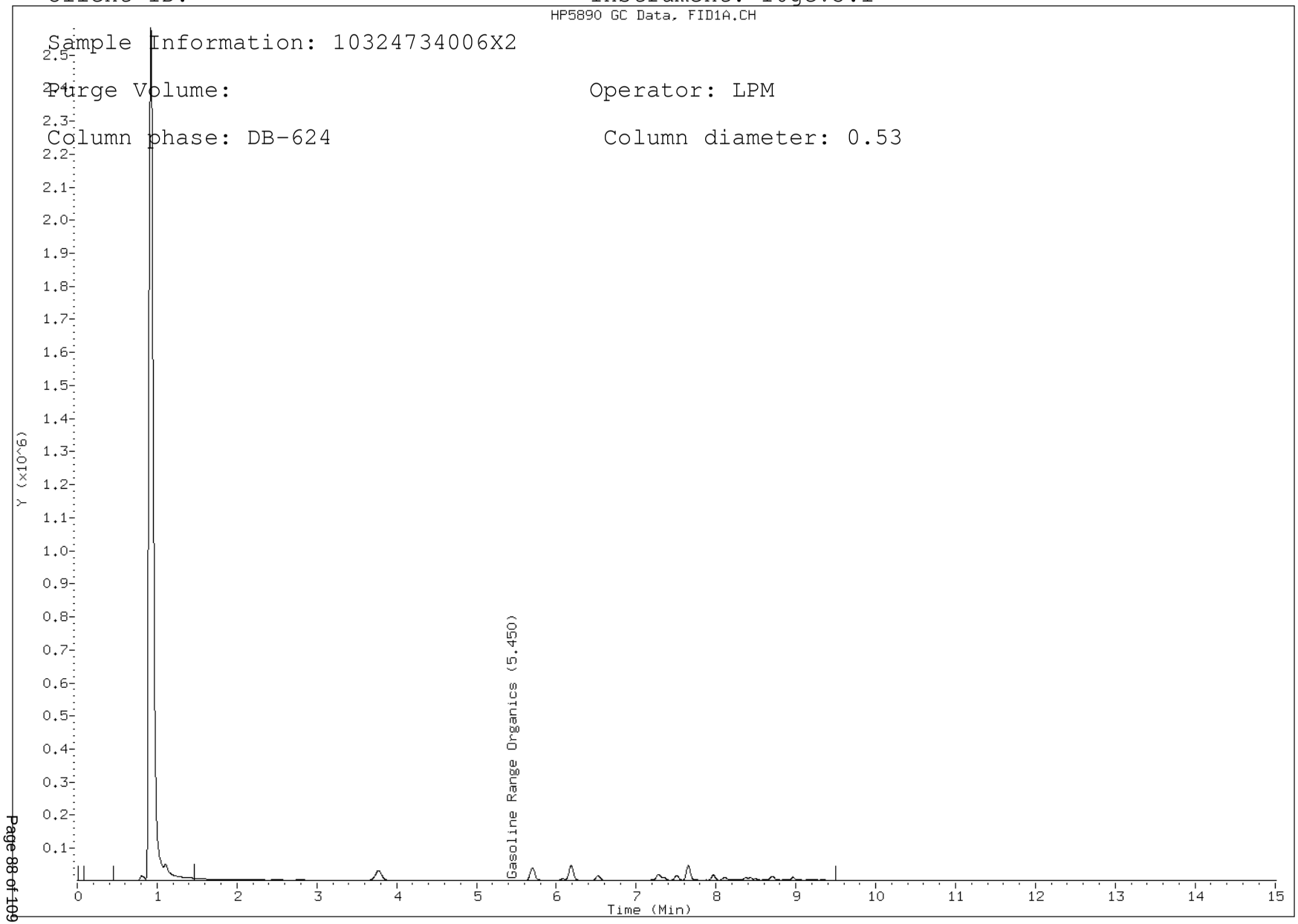


Data File: \\192.168.10.12\chem\10gcv3.i\101415A-1.b/1-287006.d

Report Date: 10/15/2015

Sample ID: 10324734006

Client ID: Instrument: 10gcv3.i



Sample Information: 10324734006X2

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53

Data File: \\192.168.10.12\chem\10gcv3.i\101415A-2.b/1-287006.d

Report Date: 10/15/2015

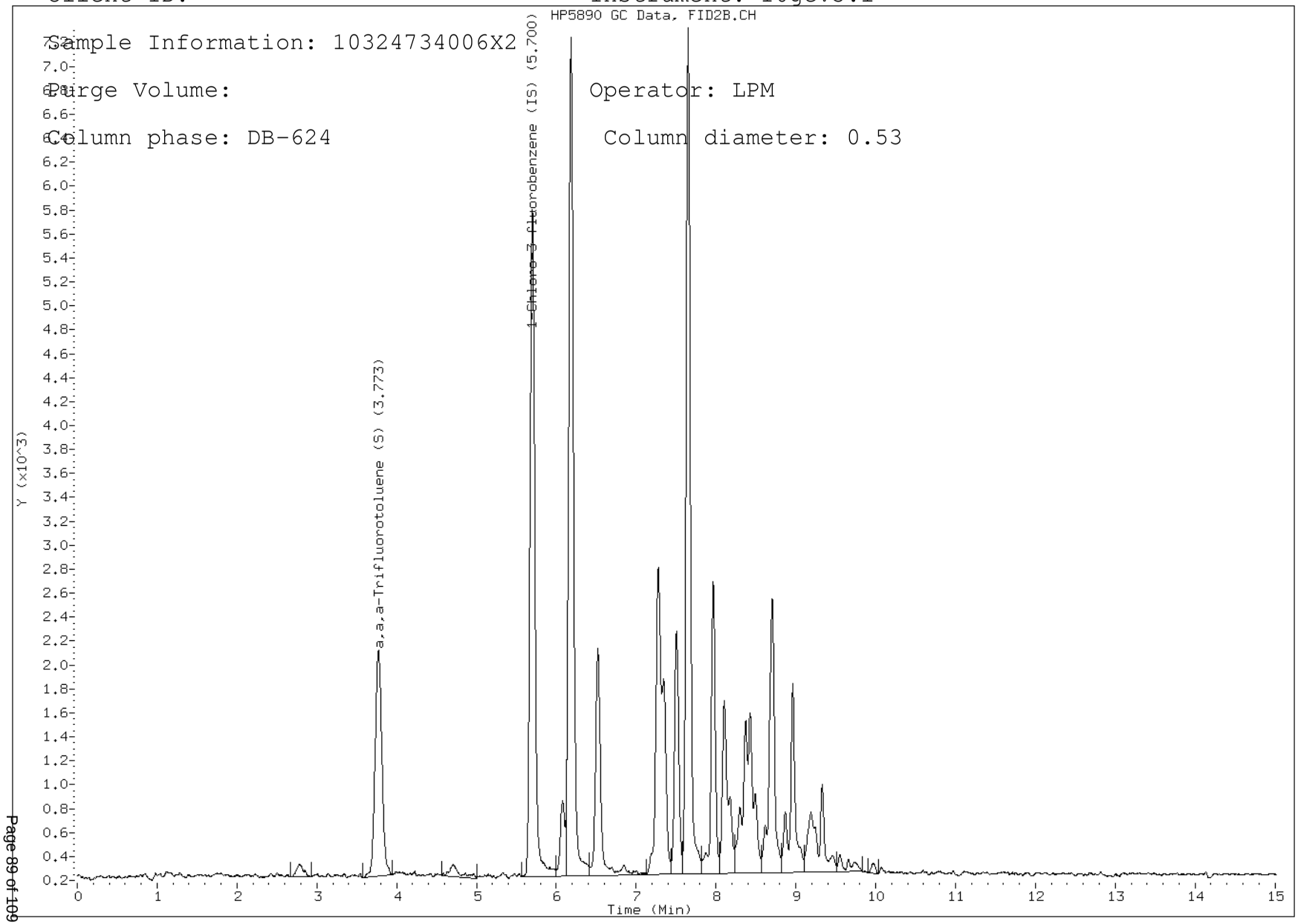
Sample ID: 10324734006

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734006X2

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101415A-1.b/1-287007.d

Report Date: 10/15/2015

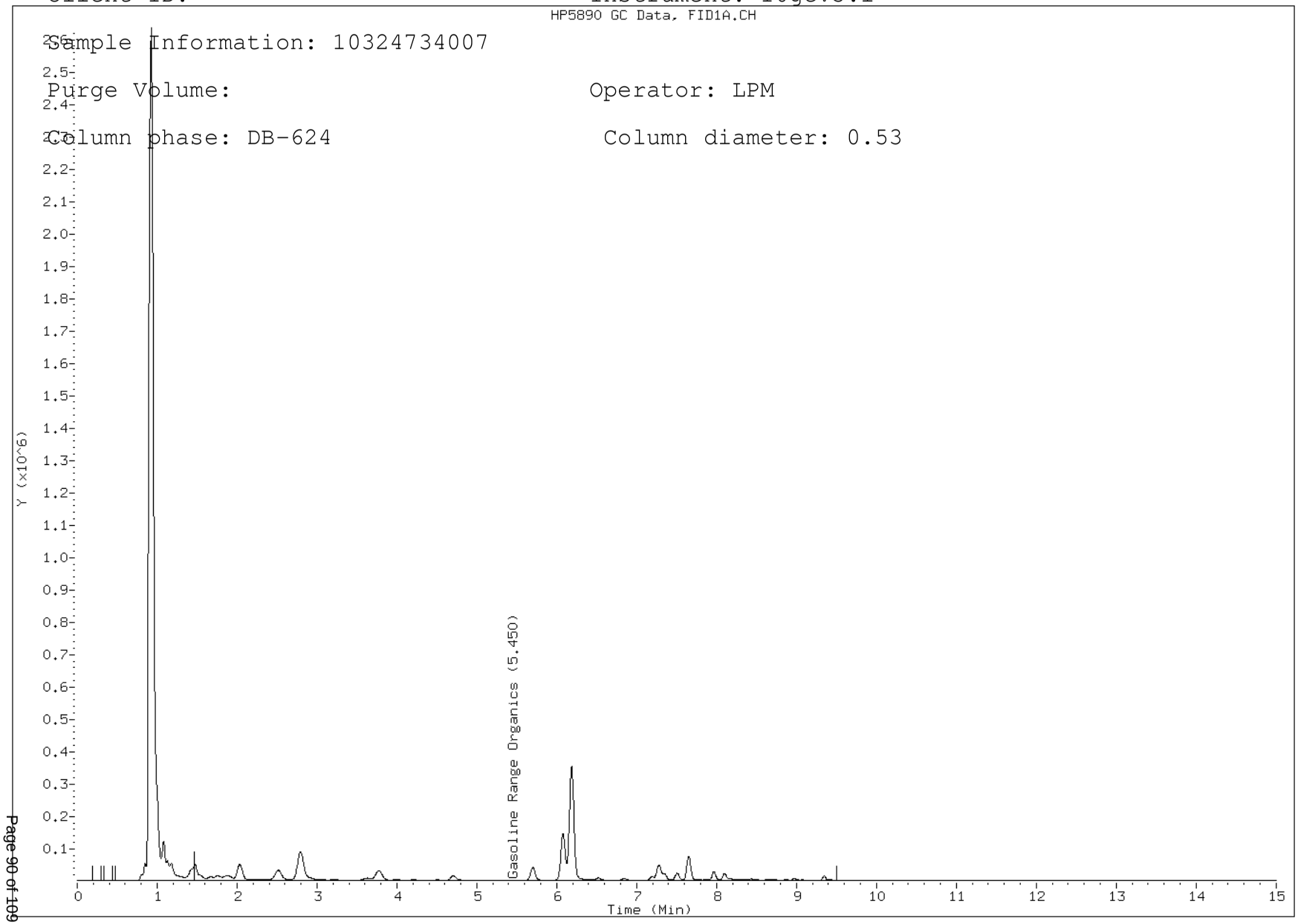
Sample ID: 10324734007

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734007

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101415A-2.b/1-287007.d

Report Date: 10/15/2015

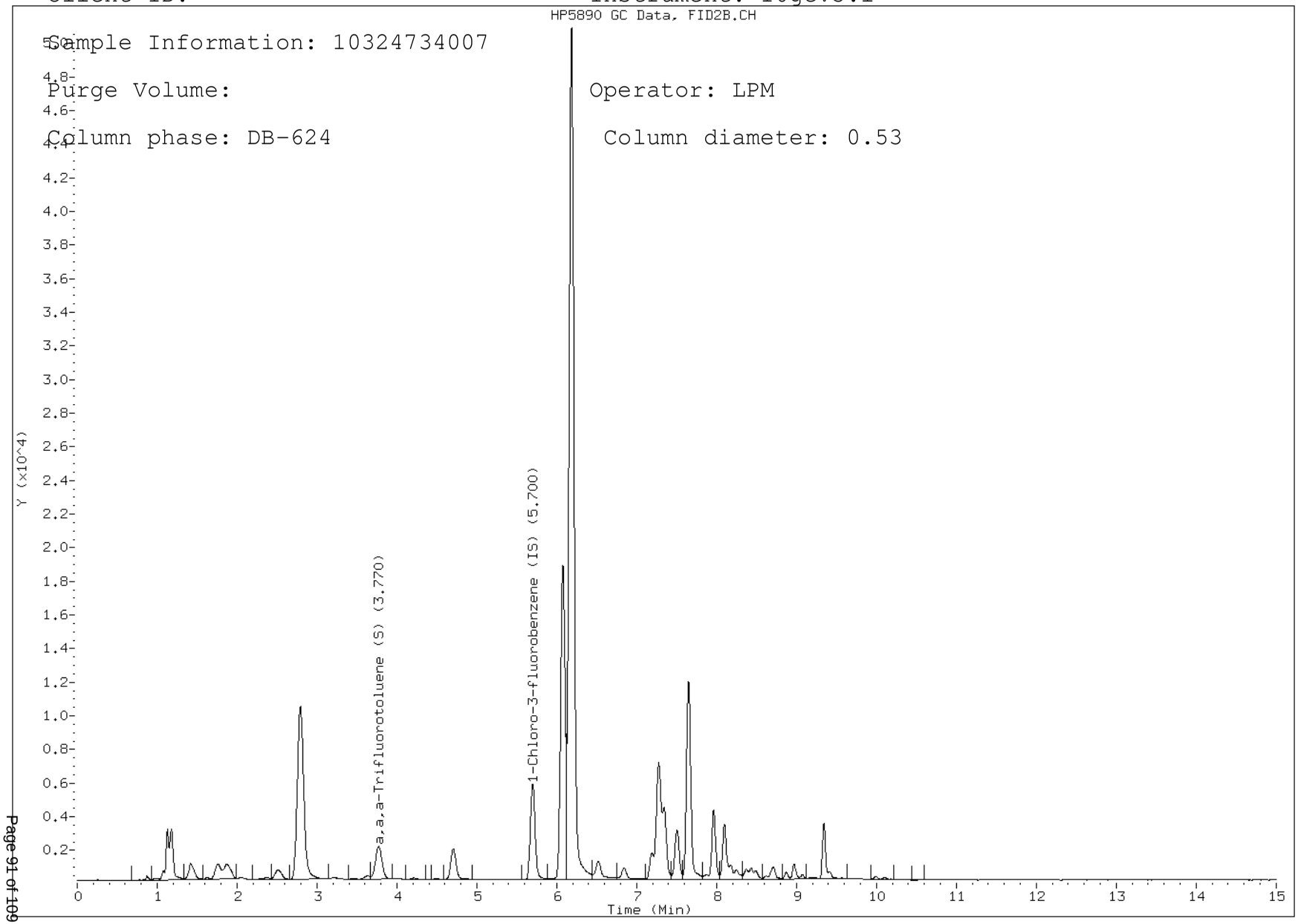
Sample ID: 10324734007

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734007

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101415A-1.b/1-287008.d

Report Date: 10/15/2015

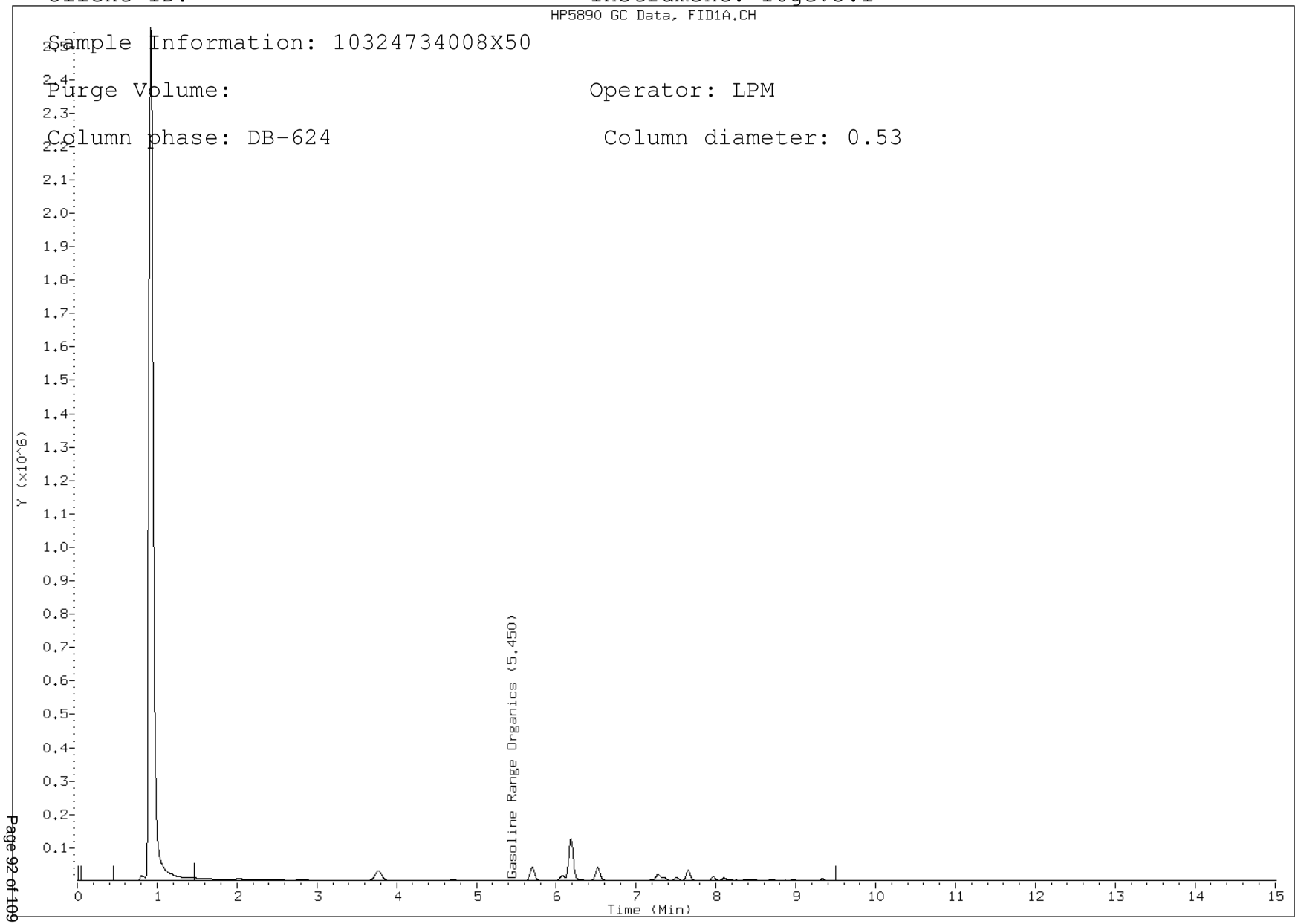
Sample ID: 10324734008

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734008X50

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101415A-2.b/1-287008.d

Report Date: 10/15/2015

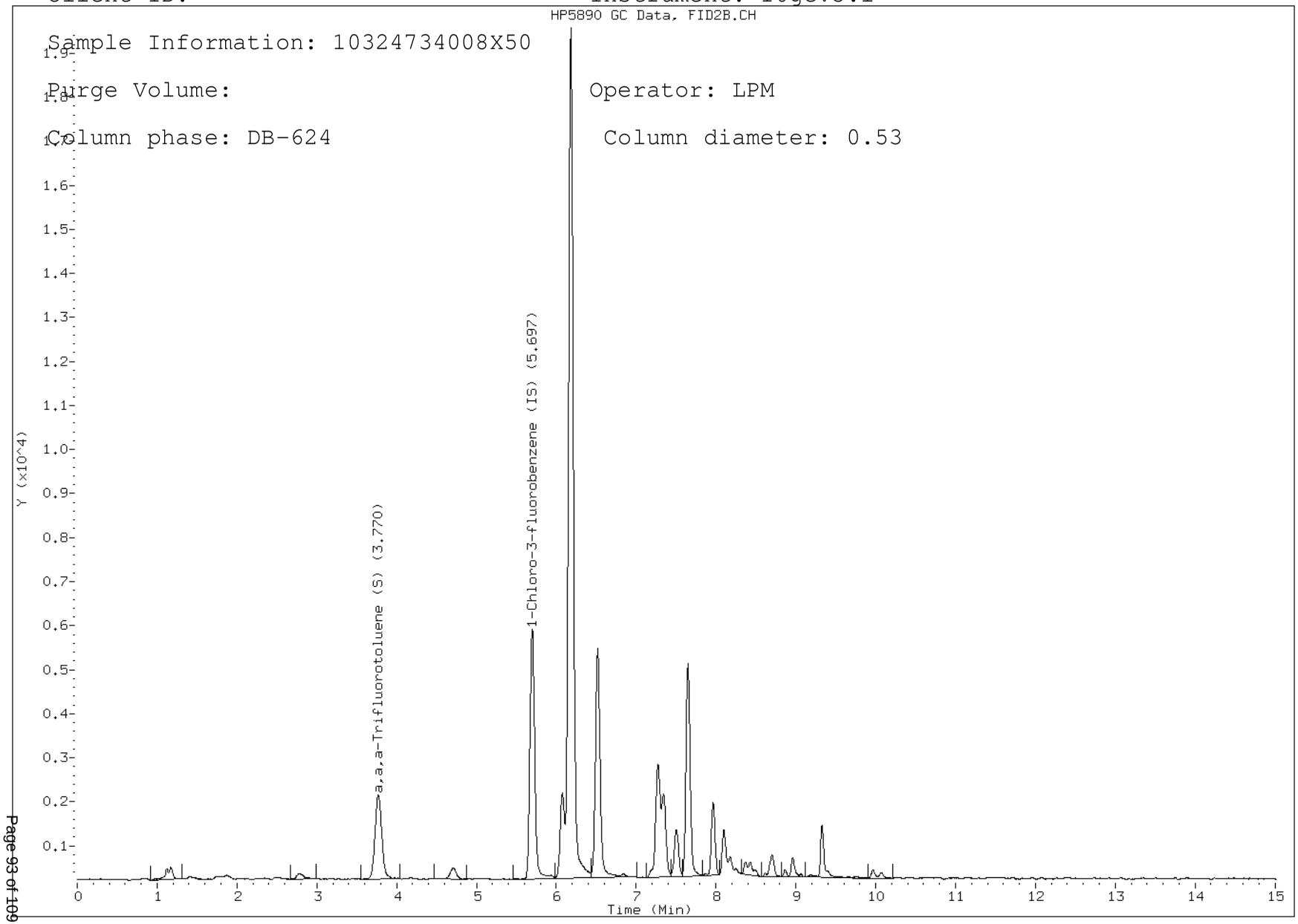
Sample ID: 10324734008

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734008X50

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101315A-1.b/1-286023.d

Report Date: 10/15/2015

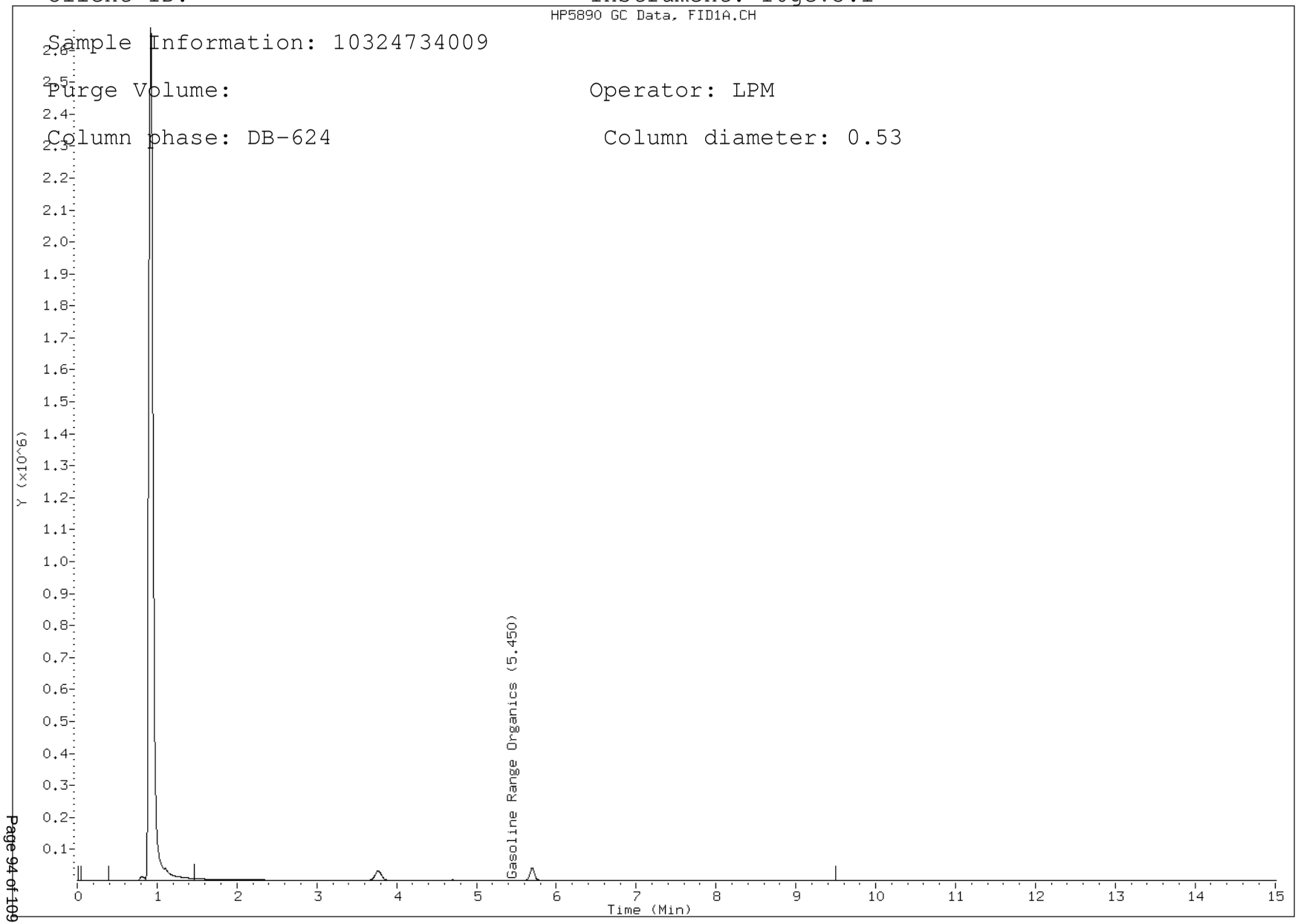
Sample ID: 10324734009

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734009

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101315A-2.b/1-286023.d

Report Date: 10/15/2015

Sample ID: 10324734009

Client ID:

Instrument: 10gcv3.i

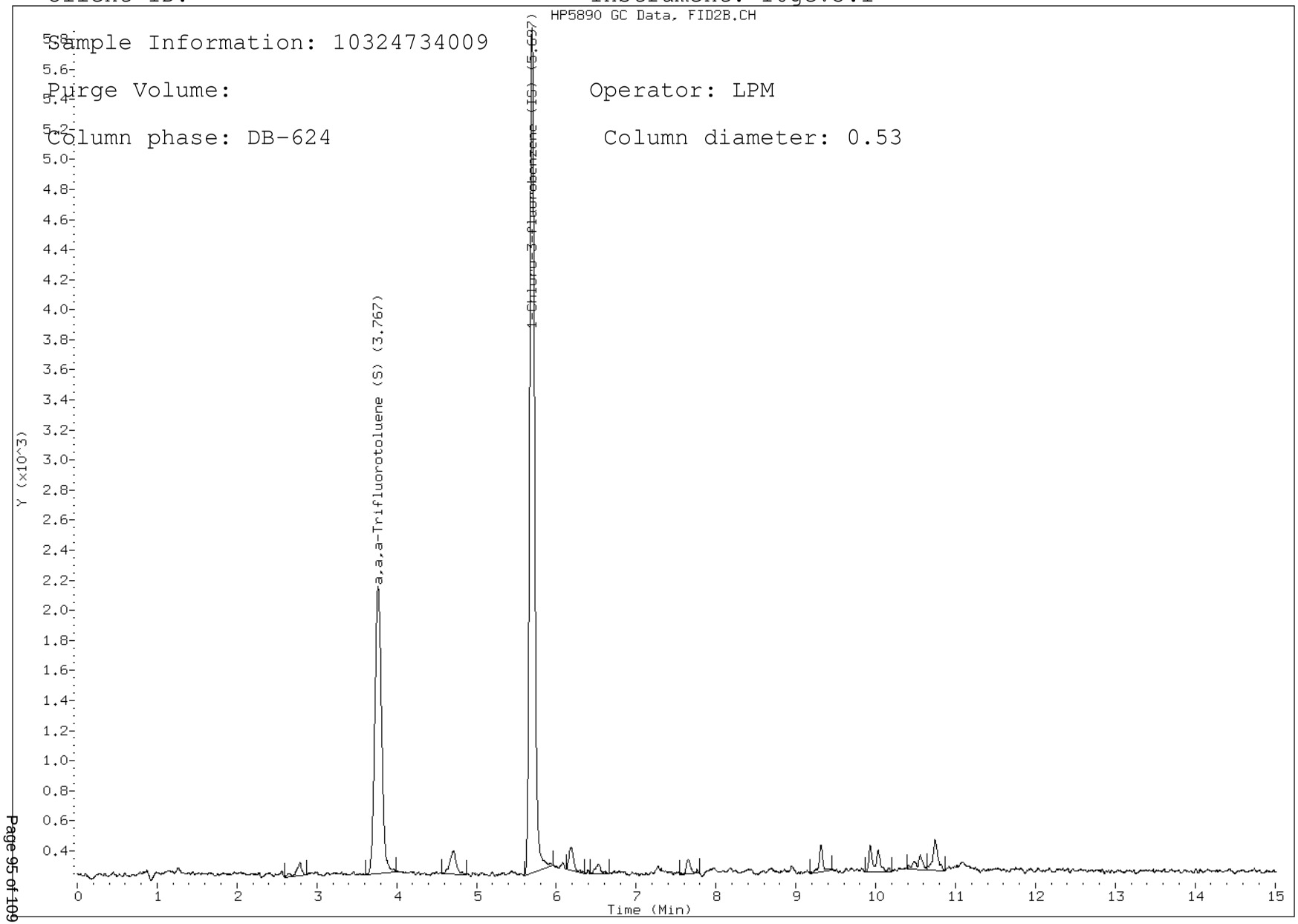
Sample Information: 10324734009

Purge Volume:

Operator: LPM

Column phase: DB-624

Column diameter: 0.53



Data File: \\192.168.10.12\chem\10gcv3.i\101415A-1.b/1-287009.d

Report Date: 10/15/2015

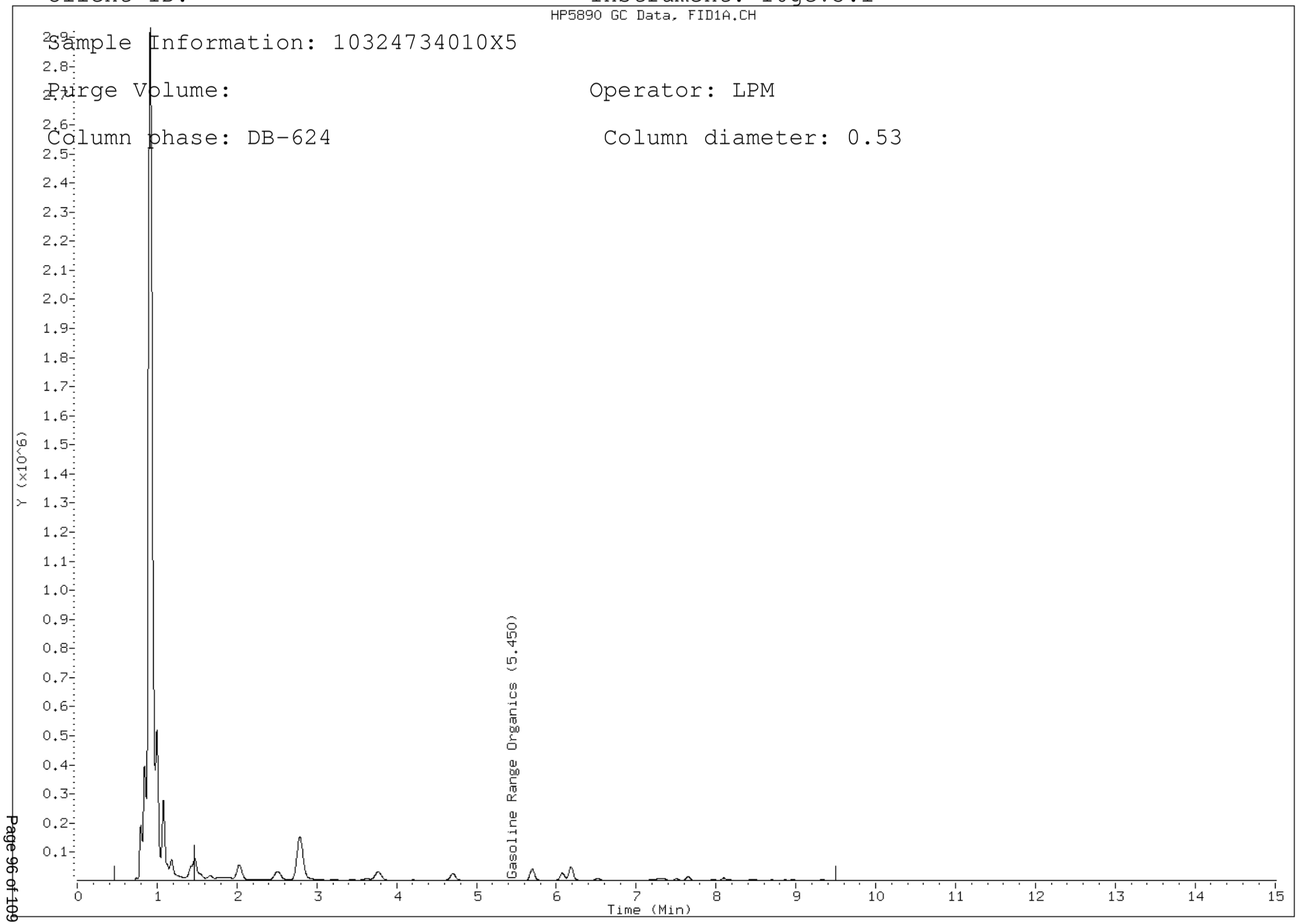
Sample ID: 10324734010

Client ID: Instrument: 10gcv3.i

Sample Information: 10324734010X5

Purge Volume: Operator: LPM

Column phase: DB-624 Column diameter: 0.53



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Report Date: 10/15/2015

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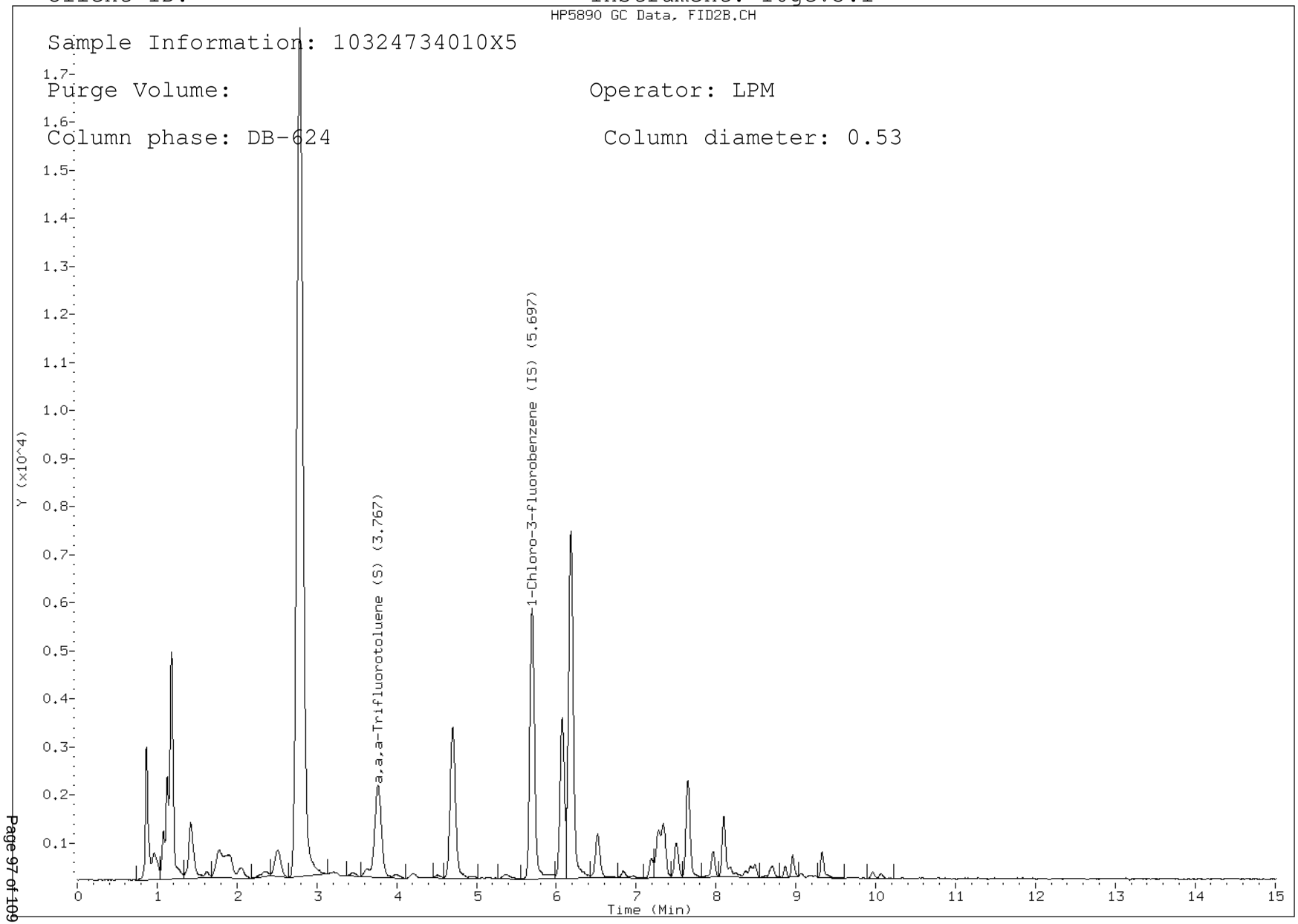

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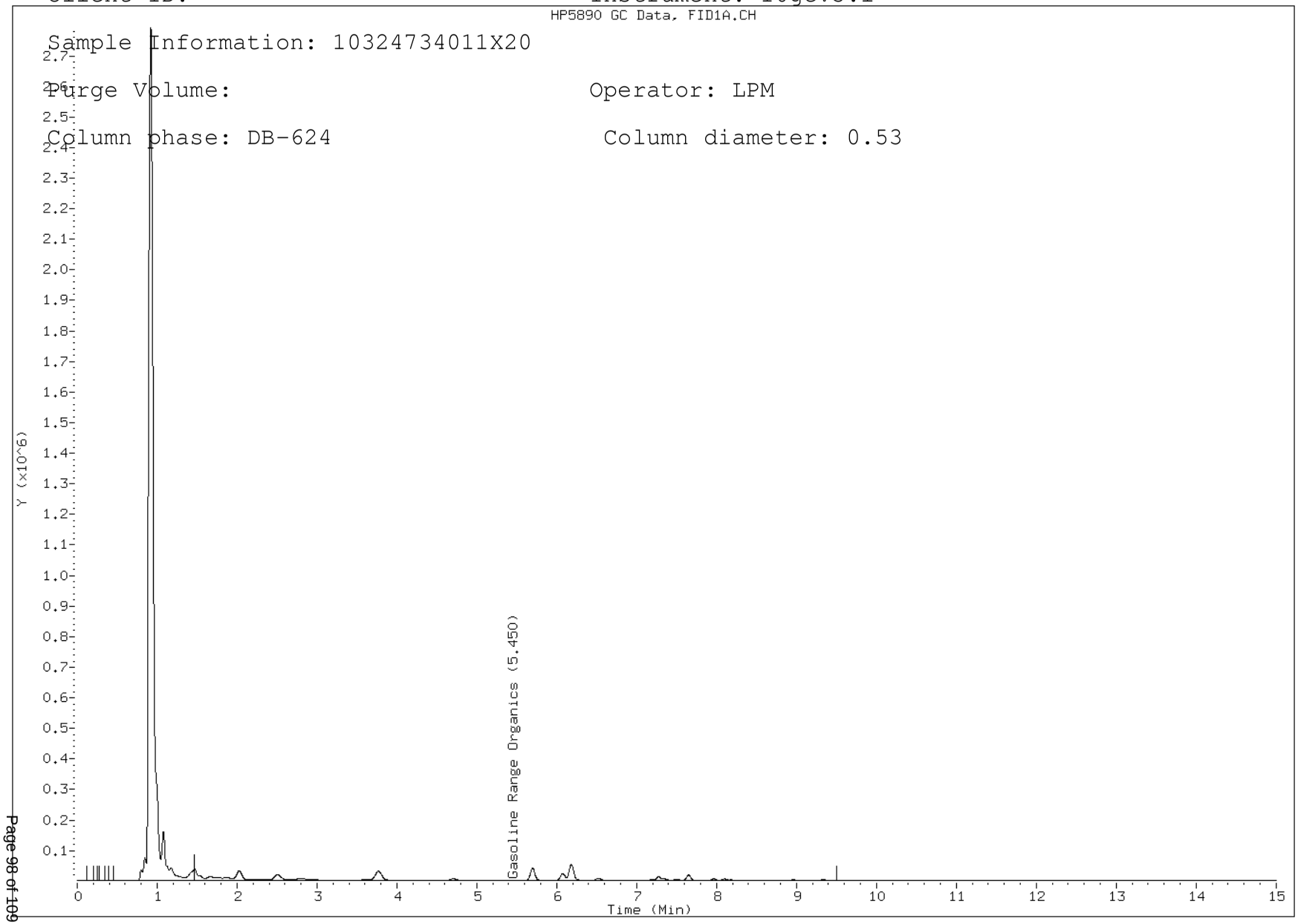

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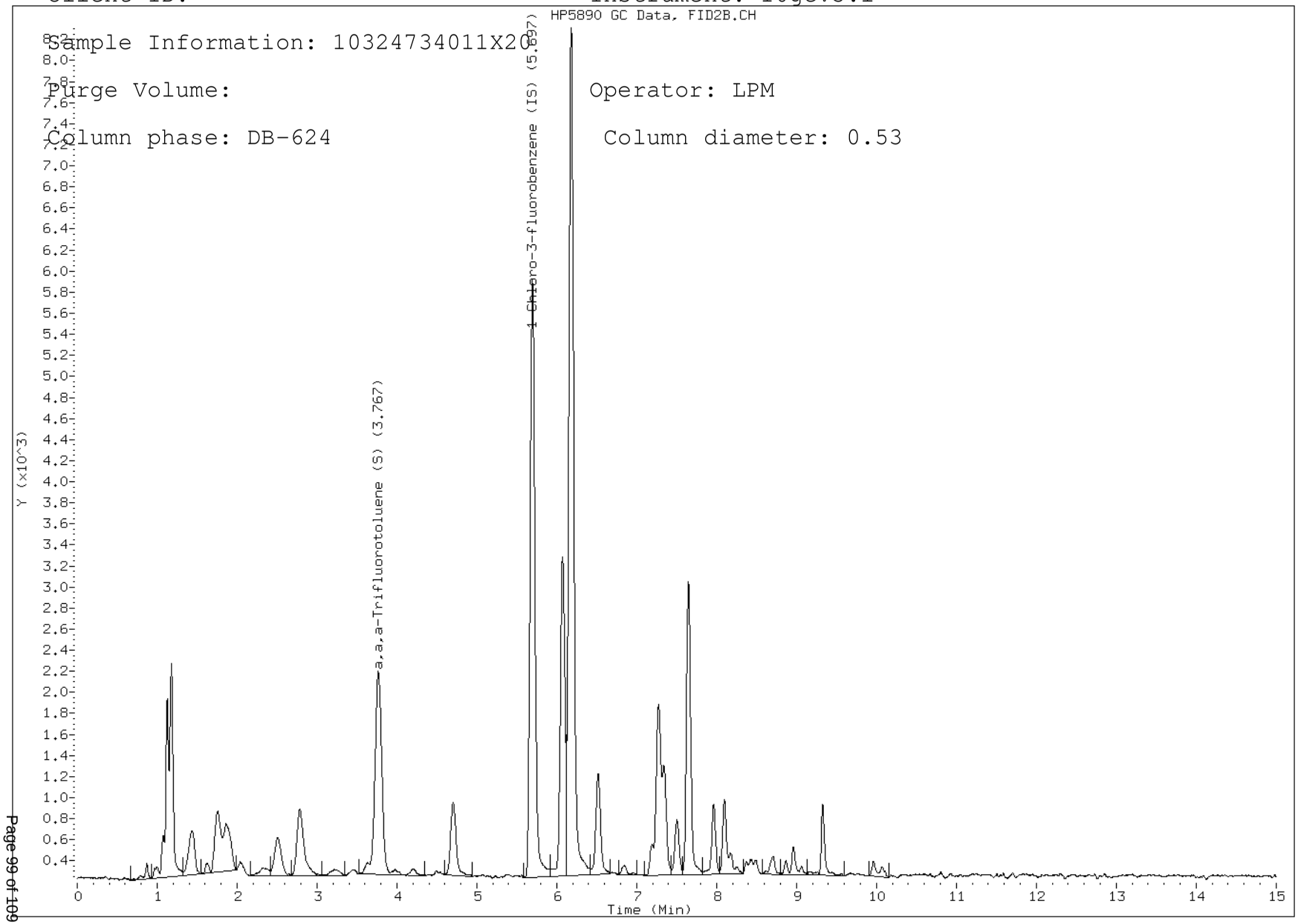

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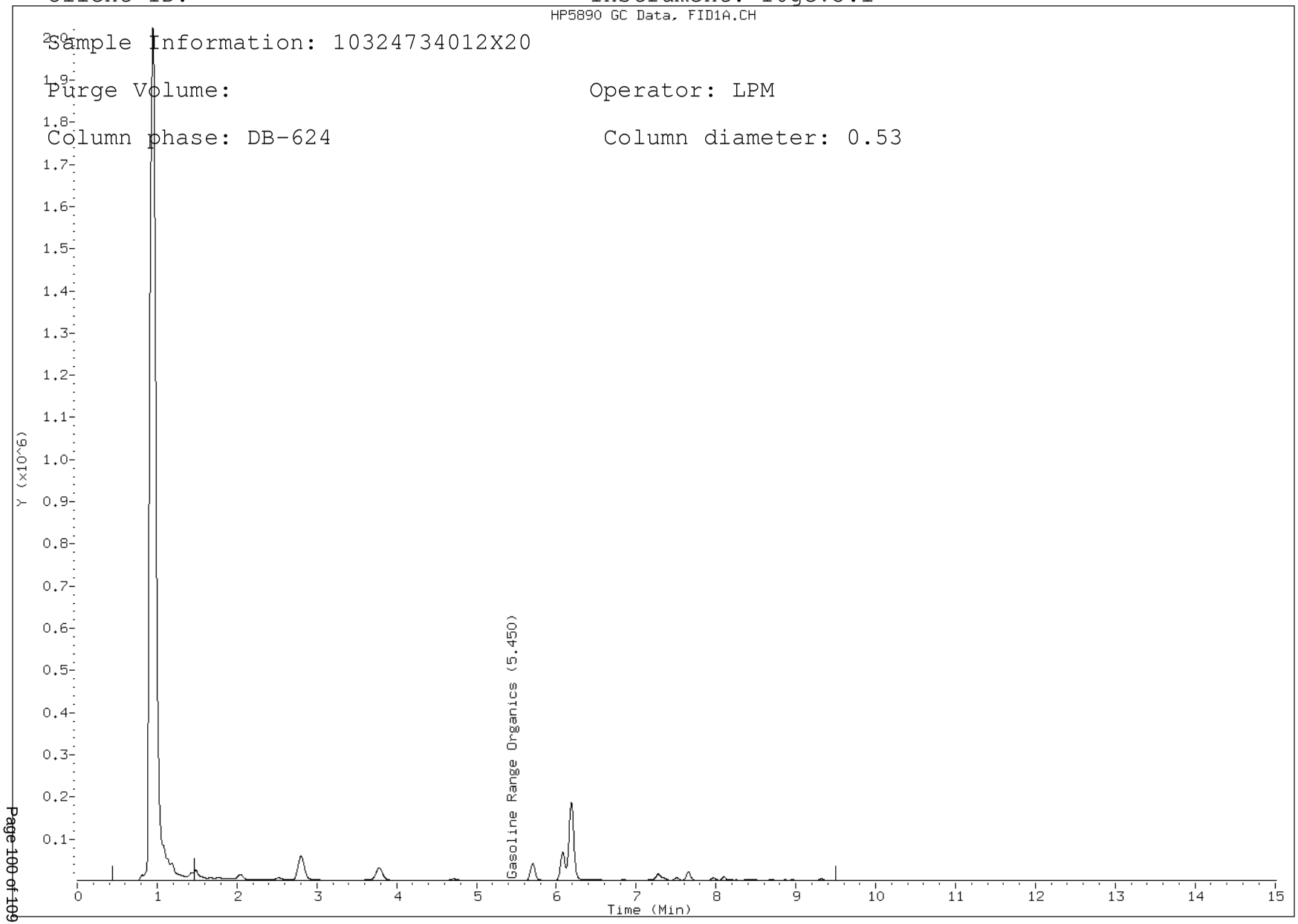

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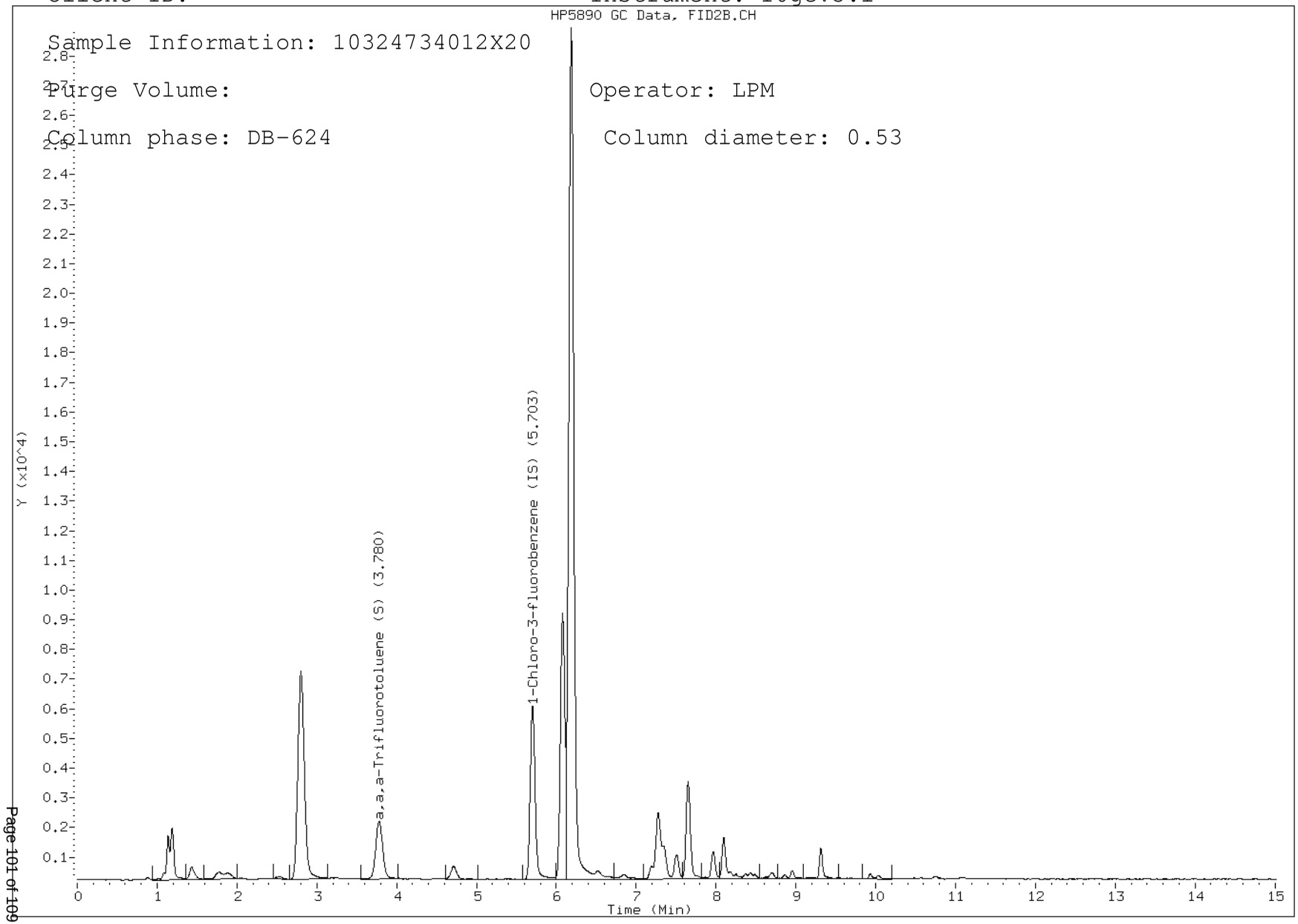

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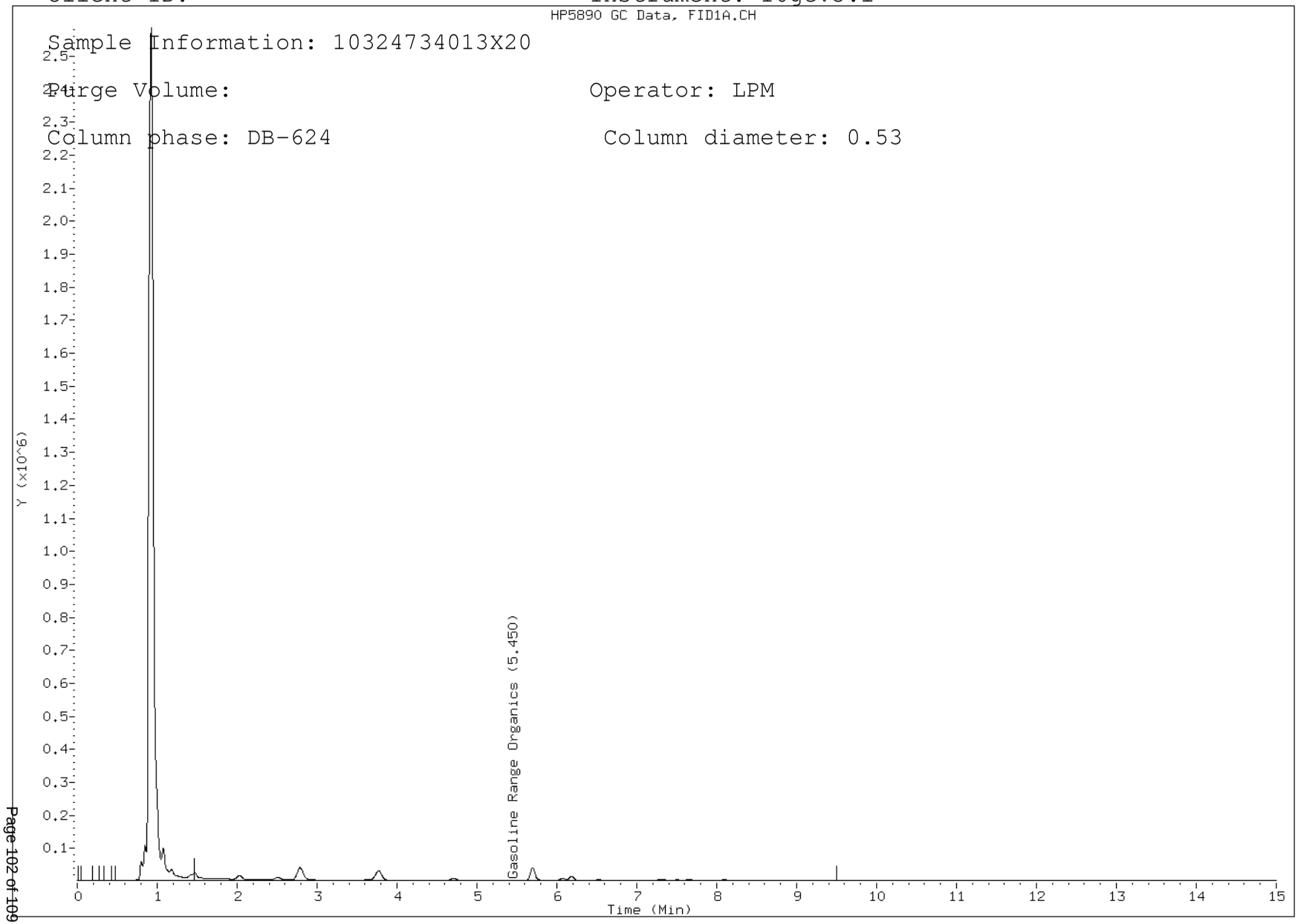

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Report Date: 10/15/2015

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Client ID:

Instrument: 10gcv3.i

Sample Information: 10324734013X20

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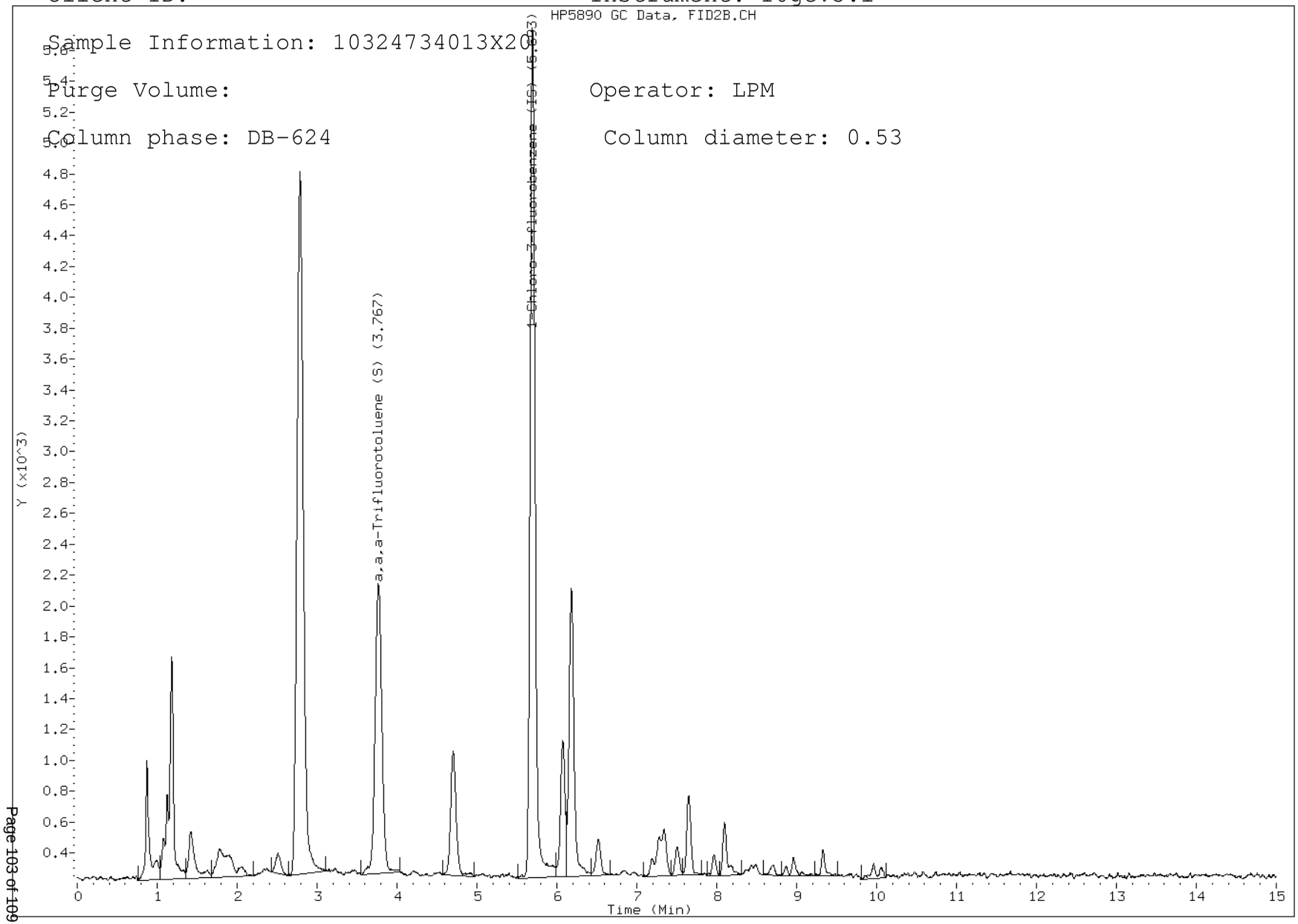

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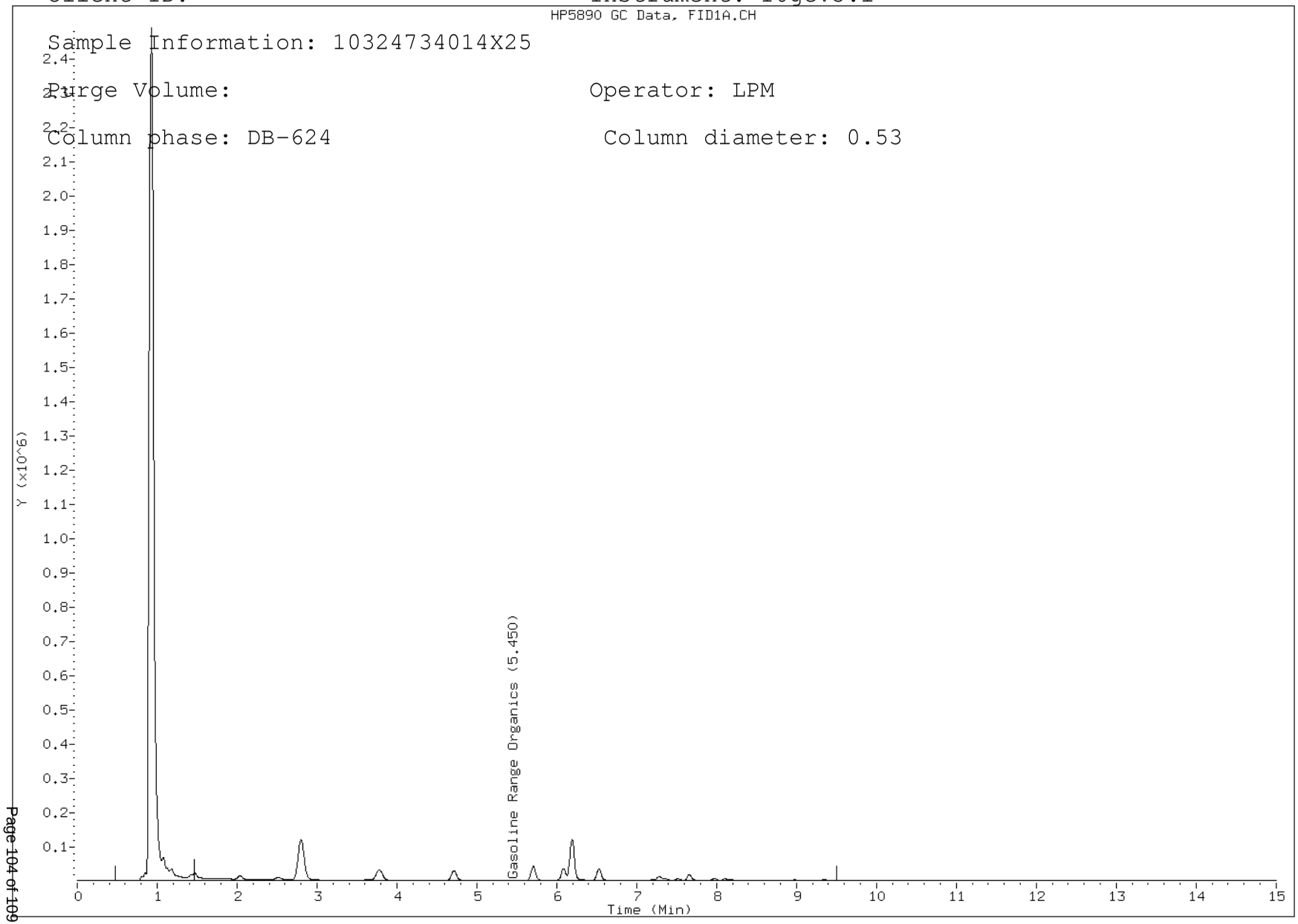

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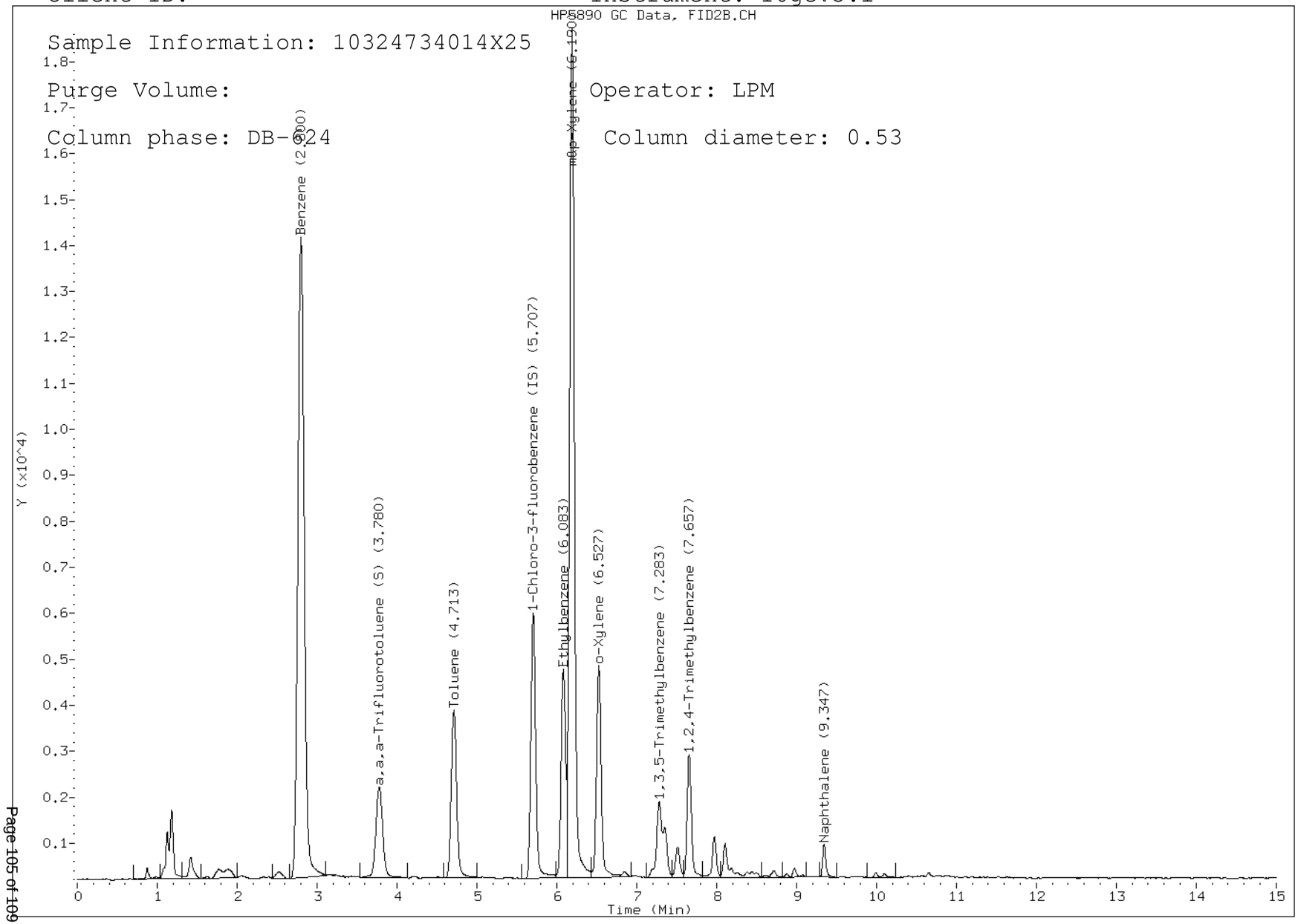

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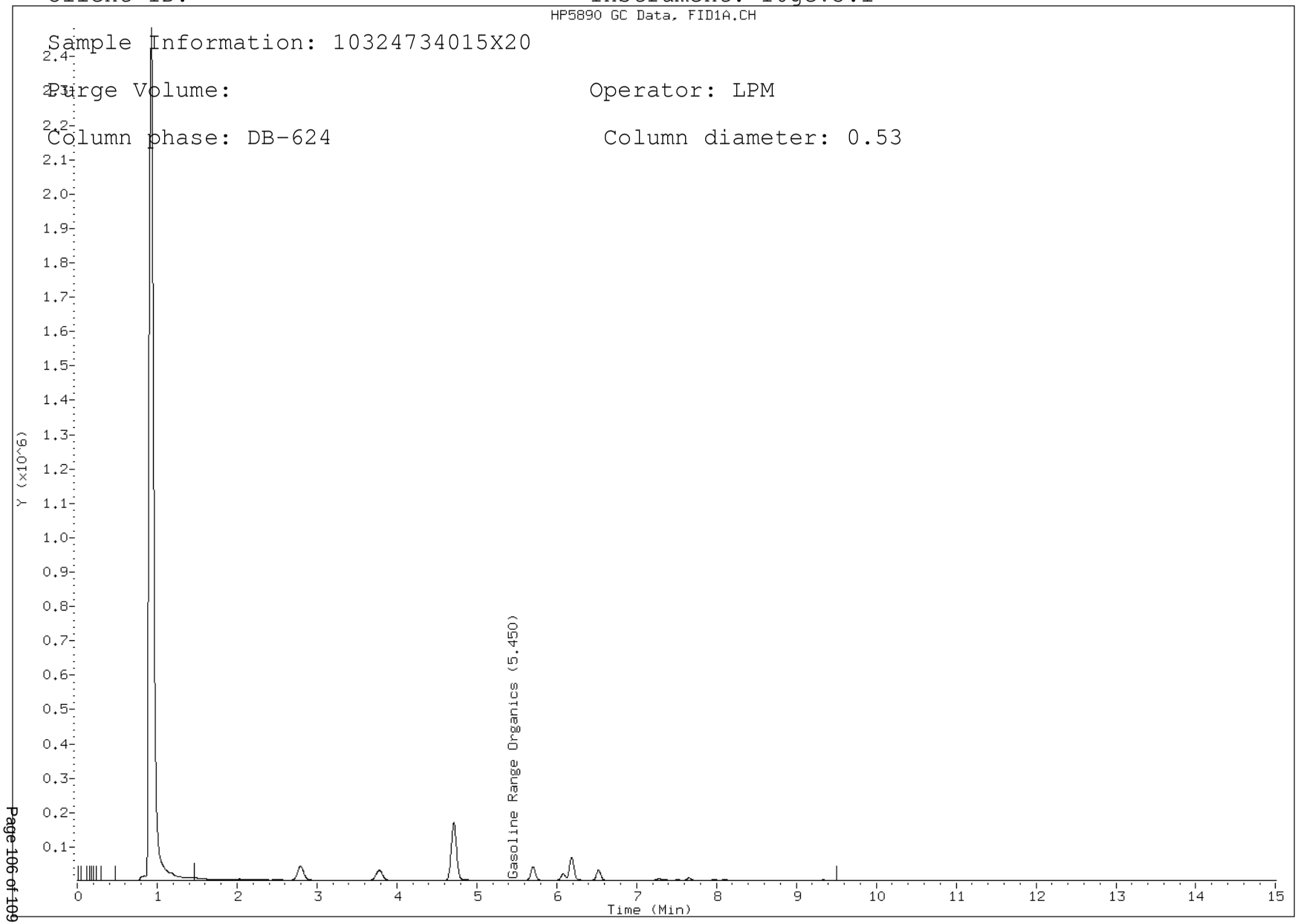

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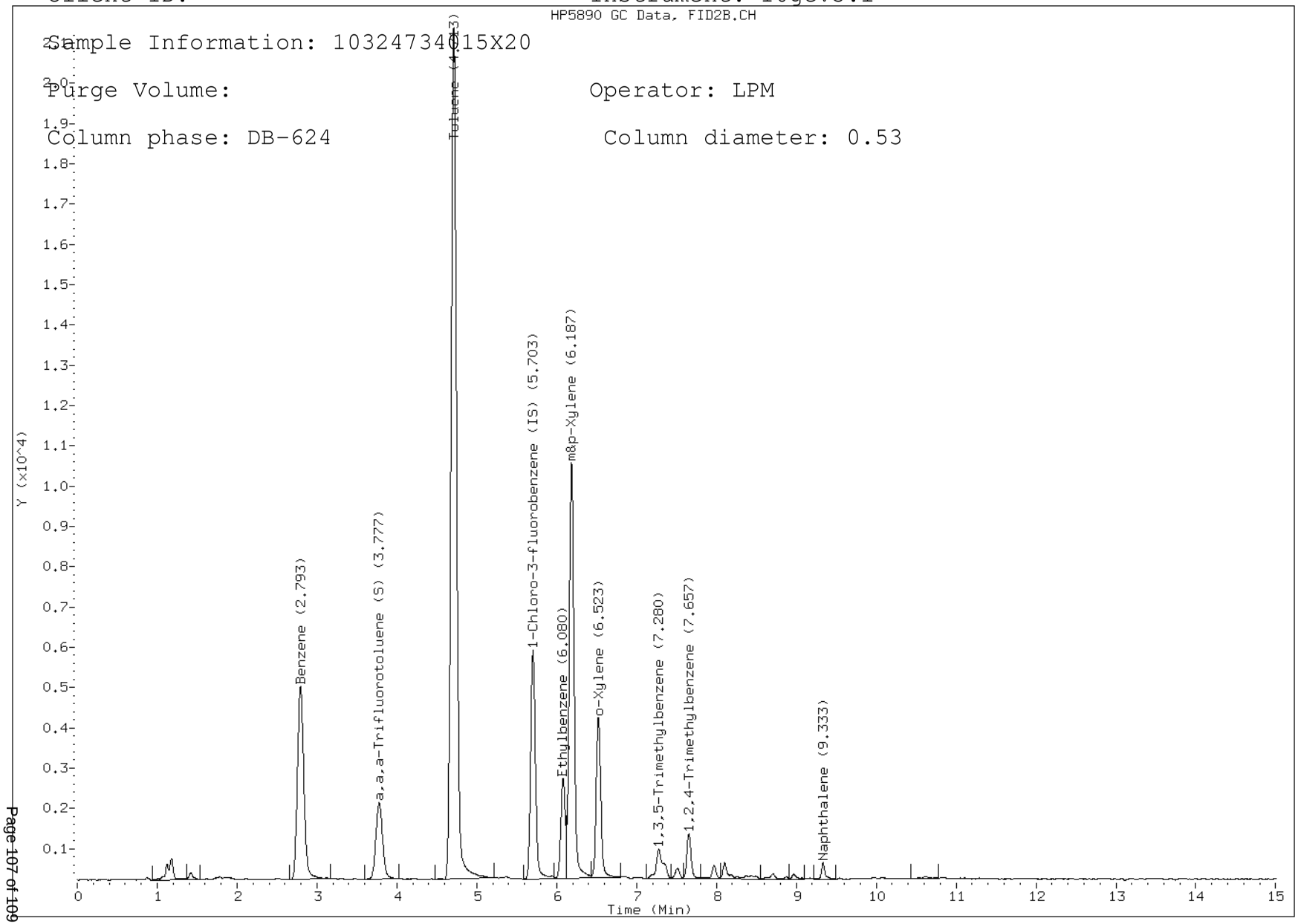

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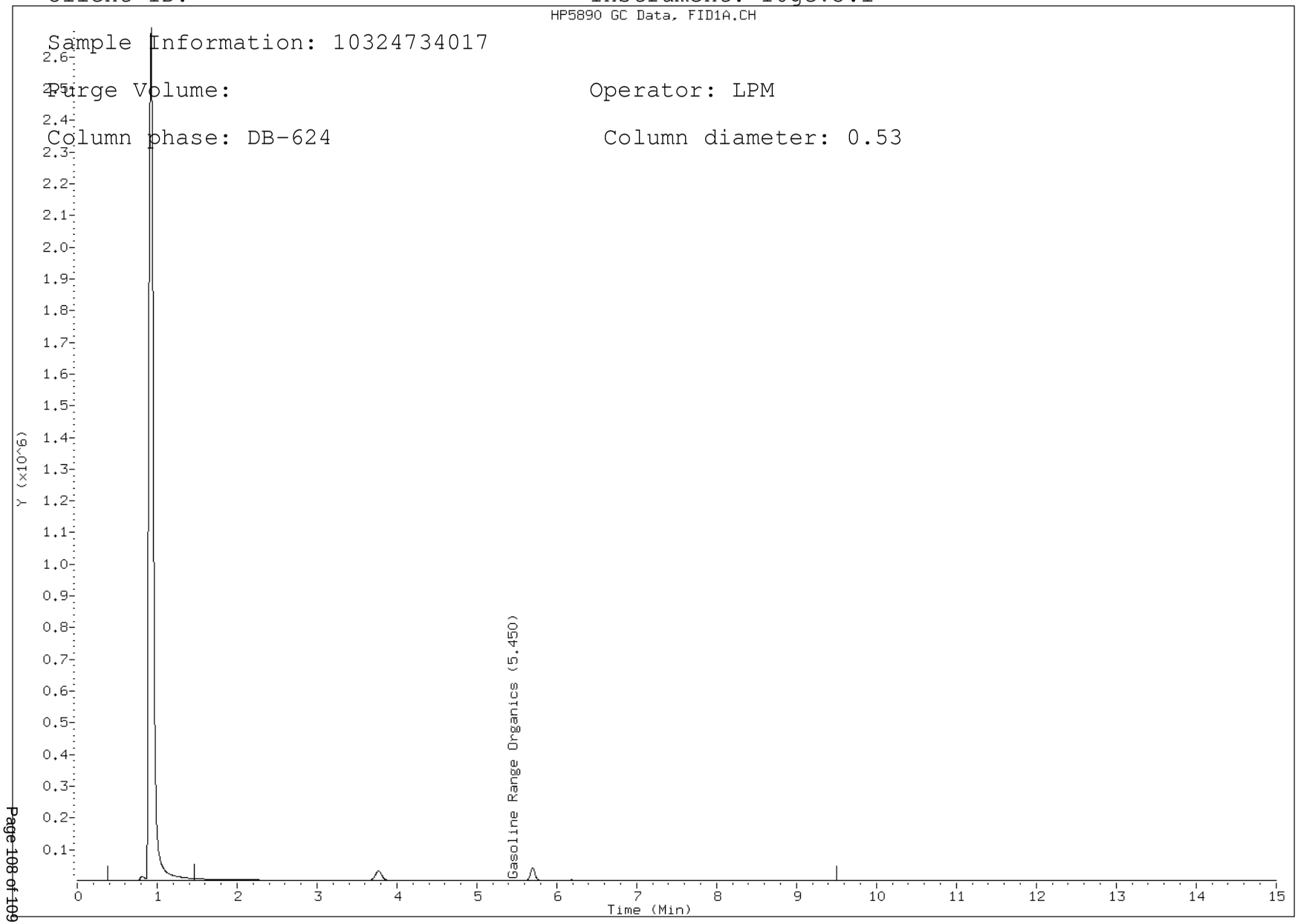

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Report Date: 10/15/2015

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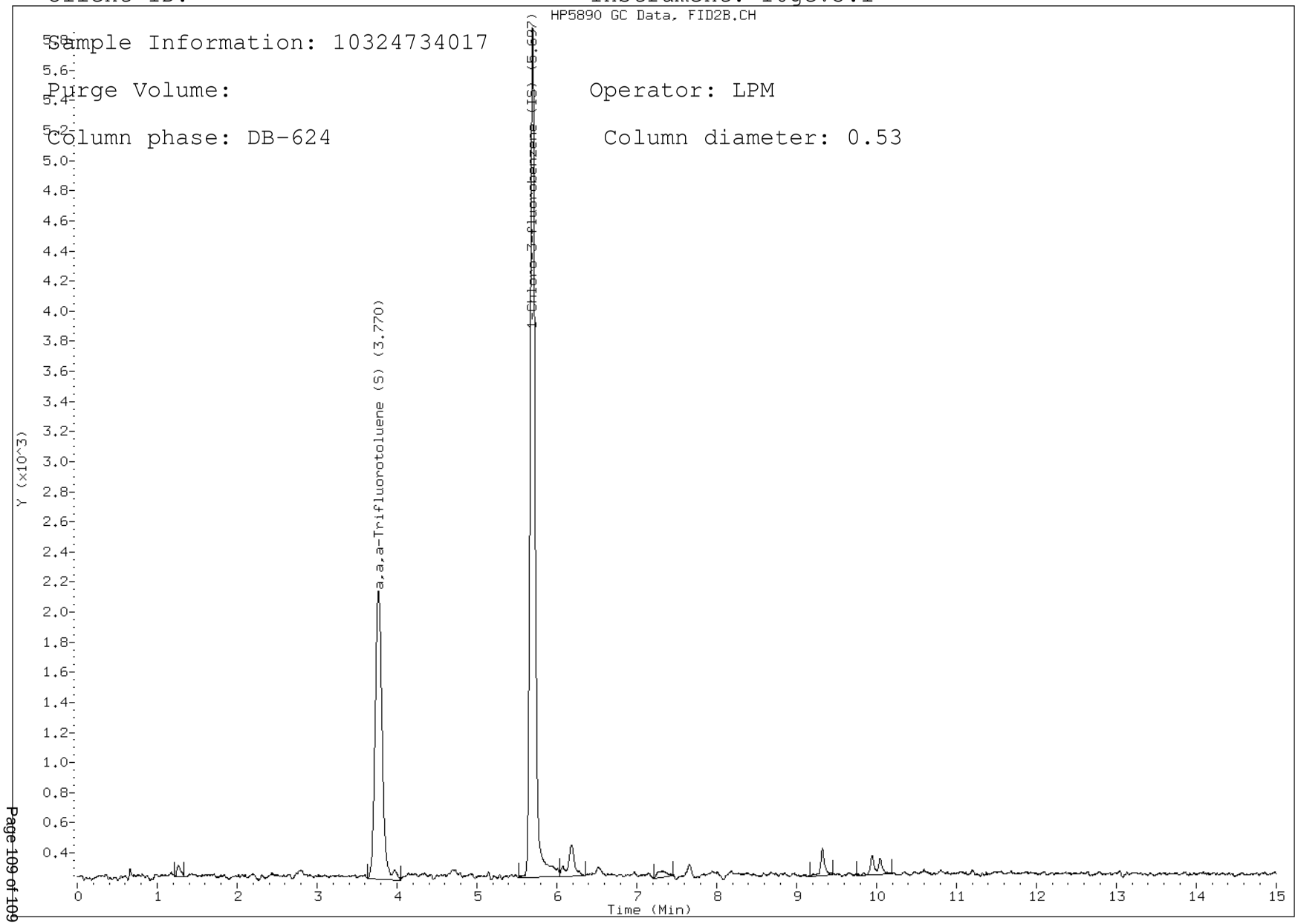

Appendix B

Methodologies and Procedures

Field Methods and Procedures

Revised June 2010
Docs # 130019

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1.0 CONSTITUENT MONITORING

Petroleum chemical soil sampling is done in accordance with the Minnesota Pollution Control Agency (MPCA) *Soil and Ground Water Investigations Performed During Remedial Investigations* (Guidance Document 4.01), *Potential Receptor Surveys and Risk Evaluation Procedures at Petroleum Release Sites* (Guidance Document 4.02), *Assessment of Natural Attenuation at Petroleum Release Sites* (Guidance Document 4.03), *Soil Sample Collection and Analysis Procedures* (Guidance Document 4.04), and *Ground Water Sample Collection and Analysis Procedures* (Guidance Document 4.05).

Non-petroleum soil sampling is performed using the Working Draft MPCA *Draft Guidelines: Risk Based Site Characterization and Sampling Guidance*.

Agricultural chemical soil sampling is done in accordance with the Minnesota Department of Agriculture (MDA) *Soil Sampling Guidance* (Guidance Document 11) and ground water sampling is done in accordance with MDA *Ground Water Sampling Guidance* (Guidance Document 12.) The following is a summary of Bay West's field methods and procedures.

1.1 General Monitoring Procedures

1.1.1 Duplicate Sampling

One duplicate sample is collected for every ten samples or less and submitted to a laboratory for chemical analysis. If requested by the MDA, Bay West will also submit verification duplicate soil samples to a different laboratory for confirmation analysis. Field duplicate samples for agriculture chemical soil samples are created by splitting composite samples that have been thoroughly mixed.

1.1.2 Calibration Procedures

Instruments used to measure field data are calibrated with sufficient frequency and in such a manner that measurement results produced by the instrument are consistent with the manufacturer's specifications. Each field measurement instrument is calibrated daily prior to use, as applicable, and calibration procedures are documented on a *Daily Calibration Record* form or in a field logbook.

1.1.3 Surveying

Elevations are measured using a transit-mounted automatic level. Elevations are recorded to the nearest 0.1 feet for soil boring surface elevations and 0.01 feet for elevations from a monitoring well top-of-riser pipe.

Global positioning system (GPS) locations are collected using Trimble GeoXT submeter GPS unit or Garmin handheld unit. GPS locations are recorded in universal transverse Mercator (UTM) coordinate system.

1.2 Soil Constituent Monitoring

1.2.1 Standard Penetration Soil Sampling

Soil samples are obtained from soil borings advanced with a hollow-stem auger (HSA). Soil sampling is conducted in general accordance with American Society for Testing and Materials (ASTM): D 1586 and in accordance with Bay West Subsurface Soil Sampling SOP (Document # 65551v1). Using these procedures, a two-inch outer diameter (O.D.) split-barrel sampler is lowered down the HSA and driven into the soil by a 140-pound weight falling 30 inches. After an initial set of six inches, the sampler is driven an additional 12 to 18 inches to obtain a representative soil sample and is then retrieved. The number of blows required to drive the sampler the additional 12 inches is known as the penetration resistance or N value. The N value is an index of the relative density of cohesionless soils and the consistency of cohesive soils. The relative density terminology is presented in the Log of Test Boring attachment.

1.2.2 Soil Probe Sampling

Soil probes consist of hydraulically advancing a series of one-inch diameter by two-foot long, two-inch diameter by four-foot long or two-inch diameter by five-foot long, steel tubes into the ground at selected intervals using a truck-mounted rig. Soil samples are collected from dedicated acetate plastic liners placed inside the bottom tube. Soil probe plastic liners are dedicated liners that will be used once and then be discarded.

1.2.3 Decontamination of Drilling Equipment

1.2.3.1 Organic and Inorganic Constituents

Down-hole drilling equipment and associated tools are cleaned prior to the start of project work. Cleaning methods consist of power spray washing, brushing, with appropriate cleaning solution and clean water rinse prior to beginning and before each soil boring as referenced from Soil and MPCA Guidance Document 4.01 to minimize cross-contamination. The split-barrel sampler and direct push sampler are also cleaned between samples to minimize cross-contamination with the same methodology as . The cleaning procedure consists of scrubbing the sampler with a brush in a soap-and-water solution followed by one or two tap-water rinses. The soap/water solution is changed regularly during sampling. Soap/water solution used in on-site cleaning of the split-barrel sampler and drilling equipment are disposed of at the site.

1.2.3.2 Agricultural Constituents

Down-hole drilling equipment and associated tools will be steam cleaned prior to the start of project work. Steam-cleaned drilling equipment is used for each soil boring. The split-barrel sampler also is cleaned between samples to minimize cross-contamination. The cleaning procedure consists of scrubbing the sampler with a brush in a non-phosphate soap-and-water solution followed by an initial rinse in potable water. Washing and rinsing is done in a steel wash basin. The potable water will be obtained from a municipal water supply or offsite water well, and the soap/water solution is changed regularly during sampling. Sampling equipment is rinsed a second time by wiping with a disposable acetone-saturated towel. A final rinse is done with deionized

or distilled water. The sampling equipment is stored on a clean surface until it is used. Water used in on-site cleaning of the split-barrel sampler and drilling equipment is disposed of at the site and acetone wastes are removed from the site.

1.3 Soil Classification

As the samples are obtained in the field, they are visually and manually classified by a field representative in general accordance with ASTM: D 2488 and per Bay West Subsurface Soil Sampling SOP (Document # CORP-ENV-008-65551v1). The classification of soil boring samples, soil boring depths, identification of the various strata, the N value, water level information, and pertinent information regarding the method of maintaining and advancing the drill holes are recorded on boring logs. Charts describing the soil classification procedure, the descriptive terminology, and symbols used on the boring logs are included with the logs.

1.3.1 Soil Organic Vapor Monitoring

Soil samples are screened for organic vapors with a photoionization detector (PID) equipped with either a 10.0, 10.6, or 11.8 eV (resolution) lamp. When in use, the PID is calibrated daily or more frequently if necessary. The PID is first zeroed in ambient air and allowed to warm up for 15 to 20 minutes before being calibrated. The PID is calibrated using a calibration gas consisting of 100 parts per million (ppm) isobutylene. An empty Tedlar Bag if partially filled with the calibration gas. The PID probe is connected to a Tedlar Bag by a flexible tube and after allowing the gas to flow through the instrument until the PID automatically accepts the steady reading. A bump test is performed after calibration to test the accuracy of the calibration. A bump test is conducted by removing the PID from the Tedlar Bag, allowing the PID to read zero, then reconnecting the PID to the Tedlar Bag. The calibration procedure and bump test reading are recorded in the calibration book supplied with the PID case. .

Headspace Analysis Sampling is conducted according to MPCA Soil Sample Collection and Analysis Procedures (Guidnce Document 4.04).

1.3.2 Soil Sampling for Chemical Analysis

Sample containers shipped to the laboratory are labeled with the project name and job number, sample name, date sampled, and initials of the individual sampler. A chain-of-custody form is completed and accompanies the samples to the laboratory. Information on the chain-of-custody form is referenced in Bay West Sample Custody SOP (Document # 65417v 1). Information includes the project name and number, the sampling company, the sampler name and signature, the sample number, the date and time the sample was collected, the sample location, the analyses required, the preservation method, the number of containers, the sample matrix, the date the samples are shipped or delivered, and signatures/dates/times showing by whom and when the samples are relinquished and received. Upon arrival at the laboratory, the samples are checked in and signed over to the appropriate laboratory personnel. A copy of the chain-of-custody form is retained and returned to the Project Manager. For samples delivered to a Contract Laboratory Program (CLP), all CLP requirements are

followed. A map will be prepared in the field that identifies the location that the soil sample was collected and the depth at which the sample was taken.

Generally, for agricultural chemical constituents, the composite soil sample from the 2.0- to 2.5-foot interval is chemically analyzed initially and the shallow composite sample and deep discrete soil samples are frozen. Depending on the results from the 2.0- to 2.5-foot interval analysis, either the shallow composite sample or the deep discrete sample will be analyzed.

1.3.3 Organic Constituents

Soil samples submitted for chemical analysis are collected using dedicated or decontaminated sampling tools. Depending on the laboratory requirements soil samples analyzed for volatile organic compounds (VOC) using EPA Method 8260 are sampled directly from the sample origin (e.g. split spoon sampler, direct push sampler, from the excavation) to the sample container with the use of a disposable syringe. The soil sample collected is transferred directly into a laboratory-prepared container, weighed until sufficient sample is collected in the container, and then preserved in accordance with appropriate state agency analytical procedures. After the sample is preserved, the container is immediately sealed and stored in a cooler chilled to approximately 4 degrees Celsius for shipment to the analytical laboratory. Where required, trip blanks are transported with the samples.

1.3.4 Agricultural Constituents

Composite Soil Samples

Composite soil samples are collected to characterize a large area within the locations where contamination is suspected. Composite soil samples consist of several equal volume sub-samples that are thoroughly mixed together to create one sample for analysis. At each composite sampling location, sets of three to six soil probes are advanced to depths between 2.5 and 6 feet within a 15-foot diameter area. A shallow composite soil sample is collected from the 0- to 6- inch interval, and a mid-depth composite sample is collected from the 2.0- to 2.5-foot interval. If a gravel layer is present, the sample intervals will begin below the base of the gravel layer. Composite samples are designated CS-#. Soil samples are collected using dedicated or decontaminated sampling tools. A new pair of disposable gloves is used while collecting each sub-sample and while mixing the samples. Composite soil samples are created using all of the soil sub- samples from one depth interval at each location. An equal portion of soil is included from each sub-sample. Sub-samples are thoroughly mixed in a disposable aluminum pan and any liquid, stones or organic debris are removed from the composite sample. After the sample has been thoroughly mixed, the composite sample is transferred into an appropriate sample jar. The treads of the jar are wiped clean prior to installing a cap on the jar.

Discrete Soil Samples

At each of the sampling locations, one deep discrete soil sample is collected from the 4.5- to 5-foot interval, generally from a soil probe located near the center of the sample area. Discrete samples are designated DS-#. In addition, one soil probe is advanced to

approximately 25 feet below the ground surface to determine the depth to groundwater and the stratigraphy at the site. Discrete soil samples are collected as the soil probe is advanced. Soil samples are collected using dedicated or decontaminated sampling tools. A new pair of disposable gloves is used while collecting each sample. Discrete soil samples are collected from a six-inch vertical sampling interval at a distinct horizontal and vertical location. After any liquid, stones or organic debris have been removed from the sample, the sample is transferred into an appropriate sample jar. The treads of the jar are wiped clean prior to installing a cap on the jar.

Stockpile Soil Samples

Soil samples are collected using dedicated or decontaminated sampling tools. A new pair of disposable gloves is used while collecting each sub-sample and while mixing the samples. The number of stockpile composite soil samples collected is calculated, based on the volume of soil stockpiled, as described in MDA Guidance Document 11, Section III. For each stockpile composite sample, four to six hand auger borings are advanced into the stockpile and one to three sub-samples are collected at different depths from each boring. Borings are advanced at locations described in MDA Guidance Document 11, Figure 1, and sample locations are marked on a drawing showing the stockpile. All of the sub-samples are combined into one composite sample. An equal portion of soil is included from each sub-sample, all of which are thoroughly mixed together in a disposable aluminum pan. Any liquid, stones, or organic debris are removed from the composite sample, and the mixed, composite sample is transferred into an appropriate sample jar. The treads of the jar are wiped clean prior to installing a cap on the jar.

1.3.5 Petroleum Sheen Test

To determine if soil is saturated with petroleum, a petroleum sheen test is used. The test consists of placing approximately 25 grams of soil into a clean glass jar and submerging the soil with water. If droplets or product or a petroleum sheen is observed on the water surface, the soil is classified as petroleum-saturated.

1.3.6 Bore Hole, Soil Probe, Well Construction, and Abandonment

Soil borings and soil probes not intended for monitoring well construction are abandoned upon completion and in accordance with state regulations. Groundwater monitoring wells are abandoned in accordance with state regulations when they are no longer needed for sampling or monitoring purposes. Abandonment of wells, soil borings, and soil probes in contaminated zones generally involves filling the bore hole or well casing with bentonite chips, granules, or neat cement grout, as outlined in the appropriate state well code regulations. Soil borings in which no contamination is encountered are abandoned by filling with a mixture of drill cuttings and bentonite chips or granules or a neat cement grout, unless otherwise specified by state regulations.

Well logs are submitted to the appropriate state agency for each well installed. The well logs include descriptions and depths of geologic material encountered, the well construction materials including well casing and size, drilling method, measured water levels, screen type and slot size, nature of sand pack and grout material, surveyed

elevation of the top of casing with depths of screen top, bottom, other well materials, and land source referenced to the top of casing elevation, and well location.

1.3.7 Disposal of Drill Cuttings

Contaminated soils removed from the soil borings are disposed of on and/or off the investigation site in a manner that complies with current state agency regulations or guidelines.

1.4 Groundwater Constituent Monitoring

1.4.1 Groundwater Level Measurements

Groundwater level measurements are obtained using a measuring tape equipped with a probe which emits an electronic signal when in contact with water. Measurements are obtained by lowering the probe into a well or sump, and then recording the depth of the probe when an electric signal is emitted. Measurements are referenced to the top of the monitoring well riser pipe, or ground surface at the sump, and recorded to the nearest 0.01 feet. The manufacturer's reported accuracy for the instrument is 0.04 feet.

If free product is expected, an interface probe is used to obtain a groundwater depth. An electric signal is first emitted when the probe encounters free product, a second signal is emitted when the probe encounters water. Measurement is identical to the method described above.

1.4.2 Well Development

Wells are developed after installation and prior to sampling to restore the hydraulic conductivity of the geologic formation around the well, and to reduce well-water turbidity by removing any suspended silt, clay, and/or drilling fluid sediments in the well. Well will be developed according to MPCA Groundwater Sample Collection and Analysis Procedures (Guidance Document 4.05).

1.4.3 Groundwater Sampling for Chemical Analysis

Monitoring wells are sampled according project specific methodology. Monitoring wells are purged using mechanical pump methods (e.g. peristaltic pump, bladder pump, or electric submersible pump) or by bailing. Purging of the monitoring well is conducted until stabilization is achieved as according to MPCA Sample Collection and Analysis Procedures (Guidance Document 4.05)

Just prior to sampling, each monitoring well is stabilized to introduce fresh groundwater from the surrounding geologic formation into the well. During high flow sampling, stabilization is achieved after a minimum of 3 and a maximum of 5 well water volumes are removed and stabilization is achieved. If stabilization is not achieved by 5 well-water volumes samples will be taken regardless. Water level measurements are recorded periodically during purging to monitor water level. During low flow sample, water is purged from the monitoring well at a rate which does not decrease the water level.

Groundwater samples from monitoring wells are obtained using either a dedicated disposable polyethylene bailer equipped with bottom-closing ball-check valve, or by mechanical pumping. For low flow sampling, a submersible pump is used to purge and collect the groundwater samples. During well purging, the well water is pumped through a flow-thru cell and a YSI Model 6820 multi probe meter is connected to the flow-thru cell to record water quality parameters which include temperature, ph, conductivity, dissolved oxygen, and redox. Following well development, the flow-thru cell is disconnected from the low density polyethylene pump tubing and the flow rate is slowed to allow direct filling of the appropriate sample container bottles.

Groundwater samples submitted to a laboratory for chemical analysis are collected in laboratory-cleaned containers. Appropriate preservation techniques are used as specified by the laboratory and/ or state agency analytical procedures. Sample bottles shipped to the laboratory are labeled with the work order number, sample number, date sampled, and initials of the individual sampler. A chain-of-custody form is completed and accompanies the samples to the laboratory. Information on the chain- of-custody form includes the project name and number, the sampling company, the sampler name and signature, the sample number, the date and time the sample was collected, the sample location, the analyses required, the preservation method, the number of containers, the sample matrix, the date the samples are shipped or delivered, and signatures/dates/times showing by whom and when the samples are relinquished and received. Upon arrival at the laboratory, the samples are checked in and signed over to the appropriate laboratory personnel. A copy of the chain-of -custody form is retained and returned to the Project Manager. For samples delivered to a CLP laboratory, all CLP requirements are followed.

1.4.4 Residential Well Sampling for Chemical Analysis

The residential well sample is collected as near the wellhead as possible. If possible, the water sample will be collected prior to the water passing through any pressurized holding tank, water softener, or filtration system. An aerator, if present, will be removed from the tap prior to collecting the water sample. The tap is maintained at a low ("trickle") flow to minimize aeration of the water flow. The well is purged until the pH, temperature, and conductivity stabilizes. If pH, temperature, and conductivity does not stabilize, a minimum of three well volumes (if well dimensions are known) or 10 minutes at full discharge rate is used to purge the well.

1.4.5 Dissolved Oxygen, pH, Redox, Conductivity, Temperature Measurements.

The dissolved oxygen content of the groundwater is measured with a YSI Model 8260 Multi Probe Meter. The meters are calibrated according to the manufacture's specifications. After the well is stabilized, either a dedicated bailer is used to retrieve a water sample or the well water is pumped through a flow-thru cell. For the YSI meter, the sample is either poured into a plastic cup and the probe on the meter is inserted into the sample or the probe is inserted into the flow-thru cell. The measurement is recorded following manufacturer instructions for the meter. The meter records the dissolved oxygen content in mg/l.

Redox (reduction-oxidation) and pH measurements are recorded using a YSI Model 8260 Multi Probe Meter. A sample is collected in plastic cup or pumped through a flow-thru cell and the probes are inserted in the sample and the redox and pH measurement is recorded. The measurement is recorded following manufacturer instructions for the meter. The pH probes are calibrated daily during use using a 3 point calibration. Three buffers (pH 4, pH 7, and pH 10) are used to calibrate the meters.

Conductivity and temperature measurements are made using the YSI Model 8260 Multi Probe Meter. A sample is either collected in a plastic cup or pumped through a flow-thru cell and the probe is inserted in the sample. A conductivity and/or temperature measurement is recorded following manufacturer's instructions for the meter. The meter is calibrated for conductivity during use using a conductivity solution at 1,000 umhos. The probe is inserted in the solution and the meter is calibrated according to the manufacturer's specifications. All probes and sample cups and containers are rinsed several times with distilled water between samples.

1.4.6 Inorganic Biodegradation Parameters

Iron, sulfide, and nitrate concentrations in groundwater that are recorded in the field are measured using a CHEMetrics VVR Water Analysis System. Samples obtained for this measurement method are collected in plastic cups, as described in Section 1.12. Concentrations are measured following the manufacturer's instructions for analysis of each individual inorganic compound. Concentrations are recorded in ppm.

1.4.7 Hydraulic Conductivity Testing

There are a number of test methods used for measuring the hydraulic conductivity of a geologic material and one of the methods commonly employed by Bay West is the slug test. The slug test is an in-situ field method that is used to measure localized hydraulic conductivity characteristics of an aquifer. The test is performed in a monitoring well and measures the near-field hydraulic conductivity property of the surrounding aquifer formation. The slug test involves:

1. Displacing water in the well with a stainless steel rod (the slug);

2. Allowing the displaced water level to equilibrate in the well; and

3. Quickly withdrawing the slug and measuring the subsequent rise of water in the well over a finite period of time as the well is recharged by the surrounding aquifer.

Water levels are measured with a fast response, high precision pressure transducer which measures water levels to 0.01 feet. Water level data is compiled by an automatic data recorder which records water levels as the well is recharging.

Reduction of the slug test data and calculation of a hydraulic conductivity value is performed using the groundwater modeling computer software.

Hydraulic conductivity can also be estimated using the mean grain size. The mean grain size is determined using a dry sieve analysis. A groundwater saturated soil sample is collected and then submitted to a laboratory for the dry sieve analysis. The mean grain size is then compared to published empirical results to determine a hydraulic conductivity for the saturated soils.

1.5 Air Constituent Monitoring

1.5.1 Air Sampling

A sample of the air emissions from a remediation system or field test is obtained using a summa canister. The summa canister is a vacuum filled stainless steel, laboratory cleaned container. The canister vacuum is checked before and after sample collection. The canister is connected to the air sampling port located on an exhaust stack using a new section of tubing. The canister's valve is opened for a period of time which allows the sample air to enter the canister. The canister's valve is then shut and disconnected from the sampling port. The canister is kept from heat and direct sunlight and forwarded with a chain-of-custody to the laboratory for analysis.

Analytical methods performed using the summa canisters are TO-3 (benzene, ethyl-benzene, toluene, xylene, and total petroleum hydrocarbons) and TO-15 (volatile organic compounds). The canister is supplied by the laboratory.

The lower explosive limit and oxygen (LEL/ O_2) is measured using a combustible gas indicator (CGI). Flow rate measurements are made through various sampling ports.

Air flow rates of the emissions from remediation systems and field tests are measured with either a hot-wire anemometer, an ALNOR air-flow meter, or an in-line air flow meter. Flow rate measurements are made through a sampling port on the exhaust stack.

For measurements of vacuum produced at a system manifold or vapor port wellheads, a magnehelic vacuum gauge is used.

1.6 Soil Gas Constituent Monitoring

1.6.1 Soil Gas Sampling

Soil gas sampling from depths are obtained to evaluate the presence of vapor constituents in isolated soil strata. The soil gas sample is collected using hollow steel rods instrumented with an expendable point holder and expendable point driven to the desired depth. The center rod with an expendable point knockout pin attached is lowered through the rod assembly and is used to disengage the expendable point. A threaded adapter end is connected to the polyethylene tubing and inserted down the probe rod; the threaded adapter is then connected to the terminal end of the rod assembly via threads located in the expendable point holder. The rod assembly is pulled up slightly to ensure complete disengagement of the expendable point. Prior to collection of the soil gas sample, approximately two volumes of the tubing air are

extracted using a graduated syringe. The sample is collected by attaching the top end of the tubing to a gas-tight sampling device (i.e., mini-Summa, Summa, or other sealed container) with an in-line vacuum gauge. The sampling device is opened and filled with soil vapor sample. The vacuum gauge is monitored to check progress of canister filling. In clay soils, it may be necessary to further pull up the rod assembly to facilitate air movement through the soil/sampling assembly. The sampling device valve is then closed and submitted for laboratory analysis.

The soil gas will be sampled from the source area and near other potential receptors. The soil gas sample from the source area will be collected from a depth of eight to ten feet. The soil gas samples near potential receptors will be collected from a depth of three to five feet for slab-on-grade construction and eight to ten feet for construction with a basement.

1.7 Other Contaminated Media

1.7.1 X-Ray Fluorescence

An x-ray fluorescence (XRF) is an analytical method used in a portable instrument that can be used to detect metal analytes in the field. The instrument uses a radioactive source to bombard the sample with x-rays, and the resultant emissions (fluorescence) are analyzed to yield a concentration of the target analyte in the sample. Metal analytes (e.g., lead, zinc, and chromium) are detected using a Niton XL t 700 series XRF. If the sample is not composed of uniform sized material, the sample will be sieved using a field kit to obtain a uniform sized material prior to analyzing using the XRF. This unit can also be used to screen for lead paint.

1.7.2 PCB Contaminated Surfaces

Polychlorinated biphyenls (PCB) wipe samples are used to samples mooth and impervious surfaces for the presence of PCBs. The wipe comes saturated with a known volume of hexane in a glass jar. Wipe samples are collected from a 100 square centimeter (cm^2) surface area. The wipe is stored in a glass jar at 4 degrees Celsius for transportation to the analytical laboratory.

1.7.3 Mercury Contaminated Surfaces

Mercury vapor screening is conducted using a Lumex RA 9 15 + Mercury Vapor Analyzer (Lumex). The Lumex records a reading every second and calculates a ten second average. The Lumex records mercury vapors in nanograms per meter cubed (ng/m^3). Room temperature is measured using a digital thermometer and background screening is conducted in the general area. The Lumex is then used to screen a specific object or area. More accurate Lumex screening is obtained by collecting damp wipe samples and placing them in a disposable zip lock bag for one hour. The headspace in the bag is then screened with the Lumex.

Areas previously identified or areas exhibiting elevated Lumex results are selected for mercury wipe samples. Mercury wipe samples are collected using a damp gauze pad.

Surface temperatures are recorded using a noncontact infrared thermometer. Wipe samples are collected from a 100 square centimeter (cm^2) surface area.

2.0 RISK SURVEYS

2.1 Groundwater Receptor Survey

Groundwater receptor surveys are performed to assess the risk of impact to water supplies within a designated radius of the project site. A minimum of 500 feet from the source will be surveyed. The survey includes door-to-door contacts with occupants of properties in the designated survey area, and a water well record search. A "Receptor Survey Checklist" is completed for interviews with home owners that occur during door-to-door contacts. If a home owner is not home, a stamped, self-addressed postcard questionnaire is left at the residence. The water-well search is performed to gather information on the availability of municipal water supplies and the location, construction, depth, and use of public and private water wells in the designated area.

2.2 Surface Water Receptor Survey

A surface waters survey is conducted to identify potential water bodies at risk. The surface water survey includes drainage pathways such as drainage ditches, drain tiles, and sewers. The survey is conducted in the same designated radius of the groundwater receptor survey.

2.3 Vapor Receptor Survey

Investigation results and site conditions are reviewed in order to assess the risk of volatile organic compound (VOC) vapors impacting nearby basements or utilities. If there is a risk of vapor impact, a vapor survey is performed. A vapor survey can entail the following activity:

- LEL and PID readings are recorded in accessible utility manholes up-gradient and down-gradient from the investigation site.
- Water or sewage samples are observed for a petroleum sheen and/or petroleum odors.
- Water or sewage samples are submitted for laboratory analysis if a potential chemical impact is indicated by PID or LEL readings.
- Basements are screened with an LEL and a PID. Basement screening is directed toward sumps, sewer drains, cracks in the foundation, crawl spaces, and any other potential entryways for VOC vapors. The location of the screening is documented on a map of the building.

2.4 Surface Soil Survey

Surface soil surveys are performed to assess the risk of direct dermal contact and contaminated runoff that may reach a surface waterbody. The survey is limited to the top two feet of soils. Corrective action is required at sites where surface soil is visibly contaminated, headspace screening exceeds 10 ppm, or evidence of free product is

present. A site walk-through is used to identify surface soils with visible contamination by visually inspecting assessable areas where storage of petroleum or other chemicals has occurred. Surface soils in the uppermost two feet of soils are screened using a PID in the procedure described in Section 1.2.5, Soil Organic Vapor Monitoring. To determine if the saturated soils are present, the procedure is followed as described in Section 1.2.7, P

Appendix C

Geologic Logs, Well Construction Diagrams and MDH Well Records

Bay West
5 Empire Drive
St. Paul, MN 55103
Telephone: 1-800-279-0456
Fax: 651-291-0099

Customer-Focused Environmental & Industrial Solutions

WELL CONSTRUCTION LOG

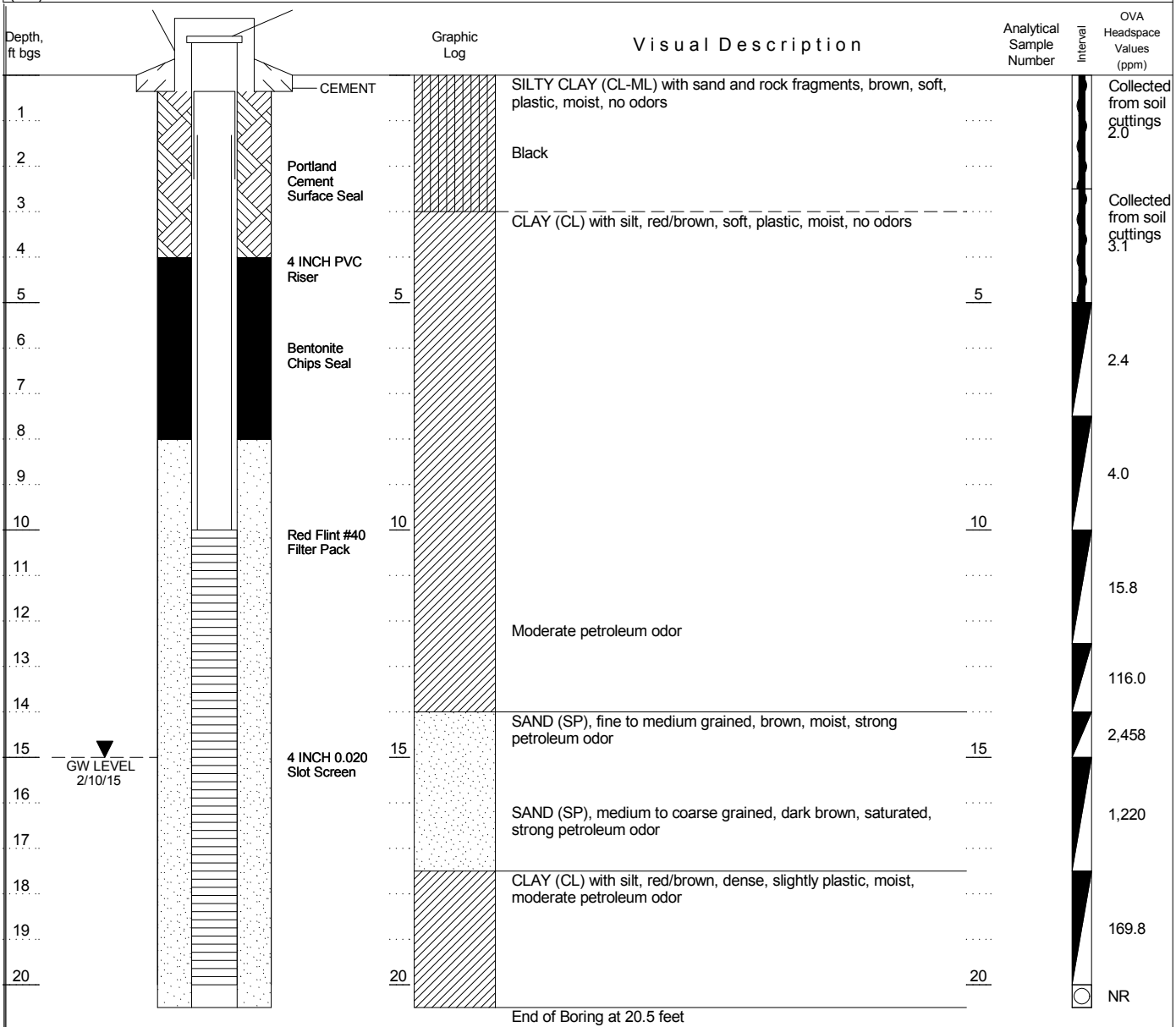
BOREHOLE LOCATION SKETCH MAP

N

See Figure

BOREHOLE NO. **MW-28**	
PROJECT NO. / NAME **J150495 / Current Holiday Station**	LOCATION **5430 Grand Ave, Duluth, MN**
APPROVED BY	
DRILLING CONTRACTOR / DRILLER **Traut / Tammy Wahl**	LOGGED BY **H. McGown**
DRILLING EQUIPMENT / METHOD **Hollow Stem Auger /**	SIZE / TYPE OF BIT **12 INCH**
SAMPLING METHOD **Split Spoon**	START-FINISH DATE **2/9/15-2/10/15**
CASING MAT. / DIA. **PVC / 4 INCH**	SCREEN: TYPE MAT. **PVC** TOTAL LENGTH **10** DIA. **4 INCH** SLOT SIZE **20 SLOT**

ELEVATION OF: (FT.)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GW SURFACE	GW DATE
	636.87	**639.21**	**629.21/619.21**	**624.21**	**2/10/15**



WELL CONSTRUCTION LOG HOLIDAY - J150495.GPJ ENV LOG #1.GDT 12/7/15

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING CONSTRUCTION RECORD

Minnesota Statutes, Chapter 1031

MINNESOTA UNIQUE WELL AND BORING NO.: 810685

WELL OR BORING LOCATION

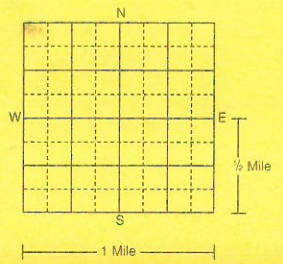
County Name: St. Louis

Township Name	Township No.	Range No.	Section No.	Fraction
Duluth	49	14	7	SE¼ NE¼ SW¼

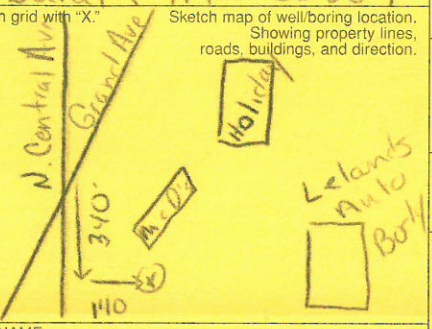
GPS LOCATION — decimal degrees (to four decimal places): Latitude N46.44 23 64 Longitude W92.9.57.24

House Number, Street Name, City, and ZIP Code of Well Location: 5430 Grand Ave. Duluth MN 55807

Show exact location of well/boring in section grid with "X."



Sketch map of well/boring location. Showing property lines, roads, buildings, and direction.



PROPERTY OWNER'S NAME/COMPANY NAME: Holiday Gas

Property owner's mailing address if different than well location address indicated above.
5430 Grand Ave
Duluth, MN 55807

WELL OWNER'S NAME/COMPANY NAME: MPCA

Well/boring owner's mailing address if different than property owner's address indicated above.
525 Lake Ave S. ; Ste 400
Duluth, MN 55802

GEOLOGICAL MATERIALS	COLOR	HARDNESS OF MATERIAL	FROM	TO
Top Soil	Black	S	0	3
Clay w/ Gravel	Red	H	3	14
Silty Sand	Red	M	14	21

Use a second sheet, if needed.

REMARKS, ELEVATION, SOURCE OF DATA, etc.

LOCAL COPY 810685

WELL/BORING DEPTH (completed): 21 ft. DATE WORK COMPLETED: 2-10-15

DRILLING METHOD: ☐ Cable Tool ☐ Driven ☒ Auger ☐ Rotary ☐ Other

DRILLING FLUID: None WELL HYDROFRACTURED? ☐ Yes ☒ No From ft. To ft.

USE: ☐ Domestic ☒ Monitoring ☐ Heating/Cooling ☐ Noncommunity PWS ☐ Environ. Bore Hole ☐ Industry/Commercial ☐ Community PWS ☐ Irrigation ☐ Remedial ☐ Elevator ☐ Dewatering ☐

CASING MATERIAL: ☐ Steel ☒ Plastic Drive Shoe? ☐ Yes ☐ No ☒ Threaded ☐ Welded

HOLE DIAM.

CASING Diameter	Weight	Specifications	HOLE DIAM.
4 in. To 10 ft.	lbs./ft.	Sch 40	10.5 in. To 21 ft.
in. To ft.	lbs./ft.		in. To ft.
in. To ft.	lbs./ft.		in. To ft.

SCREEN: Johnson Make: Type: PVC Diam.: 4" Slot/Gauze: 20 Slot Length: 10' Set between 10 ft. and 20 ft. FITTINGS: FLTH

OPEN HOLE From N/A ft. To ft.

STATIC WATER LEVEL: 15 ft. ☒ Below ☐ Above land surface Measured from Grade Date measured 2-10-15

PUMPING LEVEL (below land surface): ft. after hrs. pumping g.p.m.

WELLHEAD COMPLETION: ☐ Pitless/adapter manufacturer Model ☒ Casing protection 12" ☒ 12 in. above grade ☐ At-grade ☐ Well House ☐ Hand Pump

GROUT INFORMATION (specify bentonite, cement-sand, neat-cement, concrete, cuttings, or other)

Material: Bentonite	From 4	To 12 ft.	2	☐ Yds.	☒ Bags
Material: N1 Cmnt	From 0	To 4 ft.	1	☐ Yds.	☒ Bags
Material:	From	To ft.		☐ Yds.	☐ Bags
Driven casing seal	From	To	Bags		

NEAREST KNOWN SOURCE OF CONTAMINATION: 1 Holiday feet Gas Station direction Petroleum type

Well disinfected upon completion? ☐ Yes ☒ No

PUMP: ☒ Not installed Date installed

Manufacturer's name:

Model Number: HP: Volts:

Length of drop pipe: ft. Capacity: g.p.m.

Type: ☐ Submersible ☐ L.S. Turbine ☐ Reciprocating ☐ Jet ☐

ABANDONED WELLS: Does property have any not in use and not sealed well(s)? ☐ Yes ☒ No

VARIANCE: Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN#

WELL CONTRACTOR CERTIFICATION

This well was drilled under my supervision and in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Mark J. Trautwells, Inc. 1404
Licensee Business Name Lic. or Reg. No.

Dan Trut
Certified Representative Signature

589 2-27-15
Certified Rep. No. Date

Tammy Wahl
Name of Driller

IC 140-0020

HE-01205-15 (Rev. 8/13)

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING SEALING RECORD
Minnesota Statutes, Chapter 103I

Minnesota Well and Boring Sealing No. H 331006
Minnesota Unique Well No. or W-series No. (Leave blank if not known) 796643

WELL OR BORING LOCATION
County Name: ST. LOUIS
Township Name | Township No. 49 | Range No. 14 | Section No. 7 | Fraction (sm. → lg.) SE¼ NE¼ SW

Date Sealed: 7/1/14
Date Well or Boring Constructed: 04/22/2013

GPS LOCATION – decimal degrees (to four decimal places)
Latitude 46.7390 Longitude 92.1655

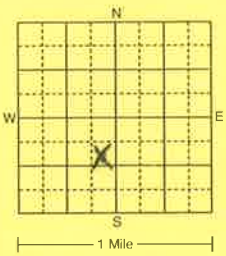
Depth Before Sealing 20 ft. Original Depth 20 ft.

AQUIFER(S): ☐ Single Aquifer ☐ Multiaquifer
WELL/BORING: ☐ Water-Supply Well ☒ Monit. Well ☐ Env. Bore Hole ☐ Other

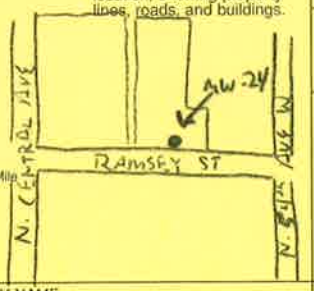
STATIC WATER LEVEL: ☒ Measured ☐ Estimated Date Measured
8 ft. ☒ below ☐ above land surface

Numerical Street Address or Fire Number and City of Well or Boring Location
5405 Ramsey St. W Duluth, MN

Show exact location of well or boring in section grid with "X."



Sketch map of well or boring location, showing property lines, roads, and buildings.



CASING TYPE(S): ☐ Steel ☒ Plastic ☐ Tile ☐ Other

WELLHEAD COMPLETION
Outside: ☐ Well House ☒ At Grade ☐ Pitless Adapter/Unit ☐ Buried ☐ Well Pit ☐ Other
Inside: ☐ Basement Offset ☐ Well Pit ☐ Buried ☐ Other

PROPERTY OWNER'S NAME/COMPANY NAME
[redacted]
Property owner's mailing address if different than well location address indicated above
City of Duluth, MN
411 W 1st St. #1031
Duluth, MN 55802

CASING(S)

Diameter	Depth	Set in oversize hole?	Annular space initially grouted?
2 in. from	to 10 ft.	☒ Yes ☐ No	☒ Yes ☐ No ☐ Unknown
in. from	to ft.	☐ Yes ☐ No	☐ Yes ☐ No ☐ Unknown
in. from	to ft.	☐ Yes ☐ No	☐ Yes ☐ No ☐ Unknown

WELL OWNER'S NAME/COMPANY NAME
Minnesota Pollution Control Agency
Well owner's mailing address if different than property owner's address indicated above
525 Lake Avenue S. #400
Duluth, MN 55802

SCREEN/OPEN HOLE
Screen from 10 to 20 ft. Open Hole from to ft.

OBSTRUCTIONS
☐ Rods/Drop Pipe ☐ Check Valve(s) ☐ Debris ☐ Fill ☒ No Obstruction
Type of Obstructions (Describe)
Obstructions removed? ☐ Yes ☐ No Describe N/A

GEOLOGICAL MATERIAL	COLOR	HARDNESS OR FORMATION	FROM	TO
If not known, indicate estimated formation log from nearby well or boring.				
ASPHALT/SAND/CLAY	BLK/BRN	Medium	0	4
CLAY	Brown	M. HARD	4	12
CLAY SANDY	Brown	M. HARD	12	16
SANDY CLAY	BROWN	M. HARD	16	20

PUMP
Type N/A
☐ Removed ☐ Not Present ☐ Other

METHOD USED TO SEAL ANNULAR SPACE BETWEEN 2 CASINGS, OR CASING AND BORE HOLE:
☒ No Annular Space Exists ☐ Annular Space Grouted with Tremie Pipe ☐ Casing Perforation/Removal
in. from to ft. ☐ Perforated ☐ Removed
in. from to ft. ☐ Perforated ☐ Removed
Type of Perforator

VARIANCE
Was a variance granted from the MDH for this well? ☐ Yes ☒ No TN#

GROUTING MATERIAL(S) (One bag of cement = 94 lbs., one bag of bentonite = 50 lbs.)
Grouting Material quik grout from 0 to 10 ft. yards 2 bags
from to ft. yards bags
from to ft. yards bags

OTHER WELLS AND BORINGS
Other unsealed and unused well or boring on property? ☐ Yes ☒ No How many?

REMARKS, SOURCE OF DATA, DIFFICULTIES IN SEALING
MW-24

LICENSED OR REGISTERED CONTRACTOR CERTIFICATION
This well or boring was sealed in accordance with Minnesota Rules, Chapter 4725. The information contained in this report is true to the best of my knowledge.

Braun Intertec Corp. — Licensee Business Name — 1323 — License or Registration No.
Certified Representative Signature — 2938 — Certified Rep. No. — 9/4/15 — Date
Dale Morrison — Name of Person Sealing Well or Boring

IMPORTANT-FILE WITH PROPERTY PAPERS-WELL OWNER COPY
H 331006

HE-01434-14 IC# 140-0423 5/13R

Appendix D

Field Data Sheets

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY DIARY

To be completed by Crew Leader

Job Name	Job No.	Date
Current Holiday Station	J140399	2/9/15
Project Manager	**Bay West Crew**	
Amanda Maloney	Hillary McGowan	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*
Traut (Tammy, Nate and Kyle)

Detailed description of work performed:

0930 load equipment.
0950 Depart BW Duluth office.
1000 Arrive on-site. Traut personnel arrive shortly after.
-Traut personnel use skid loader to move the hot tub and trailer blocking the well location. Review SSHP & have tailgate meeting.
-Tammy is concerned about utilities - snow has covered all markings. We are drilling 25 feet from a sewer manhole. Tammy leaves a voicemail with the City of Duluth. There are no markings from this manhole.
-open VME-29 - it does not extend north where we are drilling - Traut feels confident with this location.
1040 Traut moves rocks/cobbles from the well location and moves into location
-the way the rig is set up it is a safety hazard if anyone parks in the parking spaces adjacent to the well (within McDonalds) ask McDonalds if we can park a truck there to block the parking spaces - they say ok.
1135 Begin drilling through top layer of rock/cobbles with auger bitting
1230 Traut has augered to 10 feet. Attempt to collect the split spoon from S-7.5 sample but no success. Traut pulls out the augers - there is clay & other sediment stuck inside them - Tammy says this is because of frost - they did not auger deep enough initially.
1240 Attempt to split spoon sample S-7.5
-get a few inches of recovery. Drilling continues

Waste Generated:

Soil cuttings (stored in 55-gal. drums on-site)

Change in Conditions (if any):

~~None~~ Have to overdrill borehole - bentonite below screened interval

Sample Summary:

Samples Taken: ☒ Yes ☐ No	No. of Samples 1 (grainsize)	COC #: 02092015

Sample Destination:
hold to deliver to Pace when complete

Size and Type of Sample:
1 soil sample for grainsize analysis

Signature _____ *Date* 2/9/15

PROJECT MANAGER/FILE

DOCS#9287

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY DIARY

To be completed by Crew Leader

Job Name	Job No.	Date
Current Holiday Station	J140399	2/9/15
Project Manager	**Bay West Crew**	
Amanda Malaney	Tiffany McGrown	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*
Traut (Tammy, Nate and Kyle)

Detailed description of work performed:

1325 Traut takes a short lunch break.
1345 Traut resumes drilling MW-2B (17.5-20 feet remaining)
1405 Done drilling MW-2B to 20 feet bgs.
-Traut sets 10 foot well screen: 4 inch diameter
-Have trouble getting well casing to stay at depth while pulling out augers
1425 Traut cannot get the casing down the augers - heaving has blocked the well casing from getting past 19 feet, when the augers are pulled up the casing moves with. Traut is going to drill to 21 feet in hopes this clears up the problem by overdrilling into the clay and giving the sand (saturated) a place to go rather than inside the augers
1445 Traut attempts to set the well screen again. See monitoring well construction diagram for details.
1515 Traut cannot get augers out without raising the well casing. Set up to tremie water in to help assist getting augers out.
-Traut uses a total of ~100* gallons to flush cuttings away from casing to allow casing to stay still while augers are removed. (see pg 3)
1610 Done setting filter pack. Begin setting bentonite/grout seals.
-Traut pours 4 bags of Hole Plug down the well and then grabs a depth measurement = 11 feet bgs - this means there is at least a couple feet of bentonite in the well screen.
-Traut pulls out well screen and casing. Contact Bay West PM

Waste Generated:

Change in Conditions (if any):

see page 1

Sample Summary:

Samples Taken: ☐ Yes ☐ No	No. of Samples	COC #:

Sample Destination:

Size and Type of Sample:

Signature _____ *Date* 2/9/15

PROJECT MANAGER/FILE

DOCS#9287

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY DIARY

To be completed by Crew Leader

Job Name	Job No.	Date
Current Holiday Sta.	J140399	2/9/15
Project Manager	**Bay West Crew**	
Amanda Malaney	Tiffany McBrown	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*
Traut (Tammy, Nate & Kyle)

Detailed description of work performed:

and discuss options. we can either re-drill or overdrill this same borehole. Amanda is concerned if we re-drill, this abandoned borehole will affect groundwater flow dynamics.
1710 Rob NX (Traut) and Amanda are in agreement - we will overdrill this well and re-install in same borehole.
Traut packs up equipment and places a partially full drum over the open borehole.
1735 All personnel are offsite.
1745 At Br Duluth office. Unload equipment.

*generated 3 full drums of soil cuttings from initial install (and one drum less than 1/4 full)

*the amount of water used to flush the augers is between 50 & 100 gallons. Traut drained the water tank before they checked the volume used to flush the augers.

Waste Generated:

Change in Conditions (if any):

See page 1

Sample Summary:

Samples Taken: ☐ Yes ☐ No	No. of Samples	COC #:

Sample Destination:

Size and Type of Sample:

Signature _____ *Date* 2/9/15

PROJECT MANAGER/FILE

DOCS#9287

Bay West LLC
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY LOG

To be completed by Crew Leader

Job Name: Current Holiday Station	**Job No.** J140399	**Date** 2/10/15
Project Manager Amanda Malaney	**Bay West Crew** Hillary McGowan	

Personnel on Site ***(Client, Visitors, Bay West staff other than listed above)***
Traut (Tammy, Nate & Kyle)

Detailed description of work performed:

0700 At office. Load equipment.
0720 Depart BW Duluth office.
0730 On-site. Traut not on-site yet.
0745 Traut on-site. Have tailgate meeting. Traut gets rig warmed up and sets up to overdrill the borehole.
0825 Three of five five-foot augers are down the well. Setting up to overdrill the entire length of the well.
- augered down to 20 feet. The soil cuttings coming up appear to be a mixture of clay, silt and sand and coarse filter pack.
- discuss conditions with Amanda - decide this is adequate to re-set the well screen.

0900 Traut sends well screen & casing down the borehole & begins pouring filter pack down borehole
0925 Done pouring filter pack; begin bentonite seal.
- Tammy says while cleaning off the last few augers, there were bentonite chunks collected on the blades that did not come off as cuttings.
- use ~3.5 bags of bentonite chips today.

0950 Collect water level. Traut sets up to develope the well with a whaler pump.
1000 Begin developing the well.
1020 Well is dry. Pull pump out to let it recharge. Only have purged maybe 20 gallons. We are going to surge the well & then I'm pumping again.
1033 Begin surging well with a surge block.

Waste Generated:
soil cuttings & development water - containerized in 55-gallon drums

Change in Conditions (if any):
None - heavy snowfall in PM

Sample Summary:

Samples Taken: ☐ Yes ☒ No	No. of Samples N/A	COC # N/A

Sample Destination: N/A

Size and Type of Sample:

Signature [signature] Date 2/10/15

Bay West LLC
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY LOG

To be completed by Crew Leader

Job Name: Current Holiday Station	Job No. J140399	Date 2/10/15
Project Manager Amanda Malaney	Bay West Crew Hillary McBown	

Personnel on Site ***(Client, Visitors, Bay West staff other than listed above)***

Traut (Tammy, Nate & Kyle)

Detailed description of work performed:

1050 Done surging well. Begin developing well again.
1205 Pull pump. Amanda calls to say there is not much we can do - this well is not fast producing.
- Purged a total of ~40 gallons after ~1 hr and 50 minutes.
- Put purge water into 1 BW 55-gallon drum - Take a Traut drum and one BW drum back.
= total of 4 drums of soil and 1 of water
- Traut sets up to set stand pipe in place. It starts to snow pretty heavily.
1230 Traut runs out of water for concrete. Have to go to Holiday and ask if we can use exterior spigot.
1240 Have enough concrete, set protop in place and it sinks lower than the well casing. Traut tries to find something to cut the riser off with.
1310 Traut has finished with the stand pipe and are OFF-site.
1315 I depart the site.
1325 Relinquish grainsize sample to Pace.
1350 At office to unload.

Waste Generated:

Change in Conditions (if any):

See page 1

Sample Summary:

Samples Taken: ☐ Yes ☐ No	No. of Samples	COC #
Sample Destination:		
Size and Type of Sample:		
Signature		Date 2/10/15

Bay West

Customer-Focused Environmental & Industrial Solutions

Safety and Health Meeting Report

Project Name	Current Holiday Sta.	Date	2/9/15
Project Number	J140399	Location	Duluth, MN
Project Manager	Amanda Malaney	SSHO	Hillary McBrown
Today's Forecast	high mid 20's; sun	Duration	5 minutes

Items Discussed

Notifications / PreWork

- ☐ Client
- ☒ Land Owner
- ☐ Fire Dept
- ☐ LOTO
- ☒ Govt. Agency
- ☐ Hot Work
- ☐ Field Supervisor
- ☐ PRCS
- ☒ One Call
- ☐ ESP or ESS
- ☐ Police
- ☐ Work Zones
- ☐ Work Cycles
- ☐ AHAs

MPCA

Tools / Equipment

- ☐ Four-wheeler
- ☐ Ladders
- ☒ Heavy Equip
- ☐ Scaffolding
- ☒ Hand Tools
- ☐ Air Monitoring
- ☐ Vehicle Inspections
- ☐ Ventilation
- ☐ Vacuum Truck
- ☒ Drill Rig
- ☐ Grounding Rod

Contingencies

- ☒ Hospital Map
- ☐ Eye Wash
- ☐ Fire
- ☐ Stop Work
- ☐ Inclement Weather
- ☐ MSDS
- ☐ Spill Kit
- ☐ First Aid Kit

Chemical Hazards

- ☐ Corrosive
- ☐ Particulates
- ☒ VOCs
- ☐ Acute Toxics
- ☐ SVOCs
- ☐ Asphyxiant
- ☐ PCBs
- ☐ Pesticides
- ☐ Heavy Metals

Physical Hazards

- ☐ Confined Space
- ☒ Pinch Points
- ☐ Noise
- ☒ Slips/Trips/Falls
- ☐ Lighting
- ☐ Distractions
- ☐ Overhead Work
- ☐ UXO
- ☐ Heat
- ☐ Flammables
- ☒ Cold
- ☐ Ergonomics

Radiological Hazards

- ☐ XRF
- ☐ DGM
- ☐ DU projectiles
- ☐ Solar Radiation

Biological Hazards

- ☐ Animals/Insects
- ☐ Biological Warfare Agents
- ☐ Infectious Materials

Personnel Requirements

- ☐ Competent Person
- ☐ Decontamination
- ☒ Equipment Operator
- ☐ Incident Reports
- ☒ Eye Protection
- ☐ Medical Clearance
- ☒ Foot Protection

Training

- ☐ Fall Protection
- ☐ HazCom
- ☐ Fire Extinguisher
- ☐ Respirators
- ☐ PPE
- ☐ Excavations
- ☐ Site Specific
- ☐ Safe Lifting

Additional Safety Topics Discussed

Safety Concerns	Corrective Action(s)
proper lifting techniques	lift with 2 people if over 50 lbs; proper lifting form
vehicle/pedestrian traffic	high viz clothing, section off work area
hand tool safety	wear safety glasses; use right tool for the job

Incidents / Near Misses from previous workday	Corrective Action(s)

I certify that to the best of my knowledge the above report is an accurate description of the items discussed at the tailgate safety meeting and that everyone on the *Employee/Subcontractors/Visitor Register* has received the safety brief for the date indicated.

SSHO Signature	

Bay West
Customer-Focused Environmental & Industrial Solutions

Employee/Subcontractor/Visitor Register

Project Name	Current Holiday Sta.	Date	2/9/15
Project Number	J140399	Location	Duluth, MN

Your signature below indicates that you were present, coherent, and responsive during the meeting, that you're aware of site hazards, and agree to stop work when an uncontrolled hazard presents itself.

Site Entry/Exit		Name (Printed)	Signature	Company
Time-in	Time-out			
1000	1735	Hillary McGowan		Bay West
1000	1735	Tammy Wahl	T. Wahl	Trant
"	1735	Nate Stebbins		"
"	1735	Kyle Gratke		"

Bay West

Customer-Focused Environmental & Industrial Solutions

Safety and Health Meeting Report

Project Name	Current Holiday Sta.	Date	2/10/15
Project Number	J140399	Location	Duluth MN
Project Manager	Amanda Maleney	SSHO	Hillary McGown
Today's Forecast	~~high in high teens~~ SNOW 2/10 high mid 20's; snow	Duration	5 minutes

Items Discussed

Notifications / PreWork		Tools / Equipment		Contingencies	
☐ Client	☒ Land Owner	☐ Four-wheeler	☐ Ladders	☑ Hospital Map	☐ Eye Wash
☐ Fire Dept	☐ LOTO	☑ Heavy Equip	☐ Scaffolding	☐ Fire	☐ Stop Work
☒ Govt. Agency (MPCA)	☐ Hot Work	☑ Hand Tools	☐ Air Monitoring	☐ Inclement Weather	
☐ Field Supervisor	☐ PRCS	☐ Vehicle Inspections	☐ Ventilation	☐ MSDS	
☐ One Call	☐ ESP or ESS	☒ Drill Rig	☐ Vacuum Truck	☐ Spill Kit	
☐ Police	☐ Work Zones		☐ Grounding Rod	☐ First Aid Kit	
☐ Work Cycles	☐ AHAs				

Chemical Hazards		Physical Hazards		Radiological Hazards
☐ Corrosive	☐ Particulates	☐ Confined Space	☑ Pinch Points	☐ XRF
☒ VOCs	☐ Acute Toxics	☐ Noise	☑ Slips/Trips/Falls	☐ DGM
☐ SVOCs	☐ Asphyxiant	☐ Lighting	☐ Distractions	☐ DU projectiles
☐ PCBs	☐ Pesticides	☐ Overhead Work	☐ UXO	☐ Solar Radiation
☐ Heavy Metals		☐ Heat	☐ Flammables	
		☒ Cold	☐ Ergonomics	

Biological Hazards	Personnel Requirements		Training	
☐ Animals/Insects	☐ Competent Person	☐ Decontamination	☐ Fall Protection	☐ HazCom
☐ Biological Warfare Agents	☑ Equipment Operator	☐ Incident Reports	☐ Fire Extinguisher	☐ Respirators
☐ Infectious Materials	☐ Medical Clearance	☑ Eye Protection	☐ PPE	☐ Excavations
		☑ Foot Protection	☐ Site Specific	☐ Safe Lifting

Additional Safety Topics Discussed

Safety Concerns	Corrective Action(s)
pinch points / drum lids	use gloves, be aware of ~~tasks~~ at hand
moving / rotating parts	keep your distance, wear hard hat, gloves
slips/trips/falls	watch your footing, avoid icy patches

Incidents / Near Misses from previous workday	Corrective Action(s)

I certify that to the best of my knowledge the above report is an accurate description of the items discussed at the tailgate safety meeting and that everyone on the *Employee/Subcontractors/Visitor Register* has received the safety brief for the date indicated.

SSHO Signature	

DMS\Documents\Admin\Forms & Templates\Safety\

Bay West
Customer-Focused Environmental & Industrial Solutions

Employee/Subcontractor/Visitor Register

Project Name	Current Holiday Sta.	Date	2/10/15
Project Number	J140399	Location	Duluth MN

Your signature below indicates that you were present, coherent, and responsive during the meeting, that you're aware of site hazards, and agree to stop work when an uncontrolled hazard presents itself.

Site Entry/Exit		Name (Printed)	Signature	Company
Time-in	Time-out			
0730		[illegible]	Hillary McGown	Bay West
0730		Tammy Wahl	T. Wahl	Trant
"		Nate Stebbins	N Stebbins	"
"		Kyle Cooke	Kyle Cooke	"

Bay West
Customer-Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Report To: Amanda Malaney	Attention: accountspayable@baywest.com	Facility_Name: Current Holiday Station	Page 1 of 1
Address: 5 Empire Drive	Copy To:	Company Name: Bay West LLC	Facility_Code: Holiday Station	
St. Paul, MN 55103		Address: SAME	Facility_ID:	COC# 02092015
Email To: amandam@baywest.com	Purchase Order No.: 101733	Lab Quote Reference:	Subfacility_code:	
Phone: 651-291-3495	Project Name: Current Holiday Station	Lab Project Manager: Steve Albrecht		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J140399.02			

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

Requested Analysis: DRO; GRO; VOCs; GRO/BTEX/MTBE; grain size - ASTM D422 w/ hydrometer

ITEM #	Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	DRO	GRO	VOCs	GRO/BTEX/MTBE	grain size - ASTM D422 w/ hydrometer	Comments
1	MW-28	MW-28 (14-17.5)	SL	G	02/09/15	1400	1	X												X	
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
STATE ADMIN CONTRACT PROJECT	Hillary McBown/BayWest	02/10/15	1325		2/10/15	1325	
MPCA WO # 3000011808							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hillary McBown

SIGNATURE of SAMPLER: Hillary McBown DATE Signed (MM/DD/YY): 02/09/15

Temp (°C) | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

Bay West LLC
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY LOG

To be completed by Crew Leader — Page 1 of 1

Job Name: Current Holiday Station	Job No. J140399	Date 4/20/15
Project Manager Amanda Malaney	Bay West Crew H. McGowan	

Personnel on Site ***(Client, Visitors, Bay West staff other than listed above)***

None

Detailed description of work performed:

0730 At office. Calibrate YSI except DO; load equipment
0900 Depart BW Duluth office
0910 On-site. Set up decon. station. Collect water level measurements for monitoring well network. See Gauging Sheet. Decon between each well.
1110 Done gauging - goes much quicker due to lack of snow/ice.
- At Sully MW-1 location - I am sampling Sully wells today because the business associated with the property is closed on Mondays - she does not let me park on-site. Also, use the peristaltic pump here so no cross-contamination will occur.
- calibrate DO - have to change DO membrane
1128 Begin purging Sully MW-1 with peristaltic pump.
1210 Collect Sully MW-1 for DRO/GRO/MBTEX - stable after 1.75 gal (~2.3 WV).
1236 Begin purging Sully MW-2 with peristaltic pump
1320 Collect Sully MW-2 for DRO/GRO/MBTEX - stable after 1.75 gal (~1.50 WV)
1331 Begin purging Sully MW-3 with peristaltic.
1410 Collect Sully MW-3 for DRO/GRO/MBTEX - stable after 1.75 gal (~2 WV)
- pack up & mob to MW-23
1448 Begin purging MW-23 with the peristaltic pump
1600 Collect MW-23 for DRO/GRO/VOCs - Stable after 2.96 gal (~3 WV)
turbidity not stable but well is almost dry - decide to sample
- pack up equipment.
1620 Off-site! Stop to purchase ice.
1640 At office to unload.

MBY

Waste Generated:

Sample gloves, small lengths of tubing

Change in Conditions (if any):

None

Sample Summary:

Samples Taken: ☒ Yes ☐ No	No. of Samples 4 sets	COC # 04202015

Sample Destination:

hold to deliver to Pace when completed

Size and Type of Sample:
3 GW sets for DRO/GRO/MBTEX (2 1-liter ambers + 3 40mL vials)
1 GW set for DRO/GRO/VOCs (2 1-liter ambers + 6 40mL vials)

Signature [signature] Date 4/20/15

Bay West

Well Gauging Sheet

Project:	Current Holiday Station	J140399	
Address:	5430 Grand Ave.	Date:	4/20/15
City, State, Zip:	Duluth, MN		

#	Well ID	Water Level (ft BTOC)	Total Well Depth (must be measured) (ft BTOC)	Water Column (ft)	Comments/Condition of Well, etc...
1	MW-8	13.25	23.07	9.82	See Field Sampling Sheet for detailed conditions in good condition
2	MW-9	13.25	20.25	7.00	no functioning bolts, well PVC is bent @ surface
3	MW-10	14.65	NM	NM	DTFP = 14.34
4	MW-11	14.53	NM	NM	well in good condition
5	MW-12	16.93	23.95	7.02	
6	MW-13	15.75	19.49	3.74	
7	MW-14	13.38	NM	NM	well in good condition
8	MW-15	16.74	23.65	6.91	well in good condition
9	MW-16	14.90	20.25	5.35	
10	MW-17	18.18	23.85	5.67	
11	MW-18	16.01	20.25	4.24	
12	MW-19	15.09	22.40	7.31	
13	MW-20	15.82	21.40	5.58	
14	MW-21	15.73	22.65	6.92	well in good condition
15	MW-22	7.59	15.25	7.66	
16	MW-23	16.53	22.60	6.07	
17	MW-25	15.83	21.60	5.77	
18	MW-26	9.91	18.95	9.04	NO FP
19	MW-27	14.81	19.85	5.04	NO FP
20	MW-28	16.83	22.06	5.23	NO FP.
21	RW-1	11.04	18.55	7.51	well in good condition
22	RW-2	10.03	18.97	8.94	well pad cracked; no bolts/eyelets
23	RW-3	8.60	19.56	10.96	NO FP; well in good condition
24	RW-4	10.77	NM	NM	DTFP: 10.71; well in good condition
25	RW-5	12.71	20.70	7.99	well in good condition
26	RW-6	7.63	17.90	10.27	well in good condition
27					
28					
29					
30					
31	Sully MW-1	10.68	15.50	4.82	
32	Sully MW-2	11.84	19.11	7.27	
33	Sully MW-3	12.05	17.56	5.51	NO FP
34					
35					
36					
37					
39					
40					
41					
41					

SULLY

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	Silly MW-1
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/20/15

SAMPLER :	M. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04202015

WELL DATA		PURGE DATA	
WELL ID # :	Silly MW-1	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.05
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	15.50	PURGE START/ END TIME:	1128 / 1203
DEPTH TO WATER (TOC) :	10.68	SAMPLING BEGIN / END TIME:	1203 / 1220
WATER COLUMN HEIGHT :	4.82	YSI ID#:	21700104
WELL VOLUME (GAL) :	0.77	PUMP ID#:	27550101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1133	0.25	4.66	1.273	8.44	7.18	169.0	35.9	10.80
2	1138	0.50	4.02	1.275	7.42	7.20	140.5	9.9	10.83
3	1143	0.75	4.17	1.270	7.22	7.21	118.0	3.3	10.84
4	1148	1.0	4.21	1.267	7.17	7.24	105.1	3.1	10.84
5	1153	1.25	4.23	1.264	7.12	7.25	100.1	3.0	10.84
6	1158	1.50	4.26	1.281	7.13	7.26	98.0	3.3	10.84
7	1203	1.75	4.30	1.290	7.13	7.26	98.3	3.0	10.84
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.75	SAMPLE TIME :	1210
# OF WELL VOLUMES :	~2.3	ANALYTES:	2 1-liter ambers + 3 40 mL vials - all HCl
STAB. TEMP (°C) :	4.30	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.290	PURGED DRY	YES (NO)
STAB. DO:	7.13	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	7.26	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	98.3	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	3.0	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear/slightly red/turbid ODOR: Strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: Strong petro

OTHER : re-use tubing left in well

OBSERVATIONS : well is in good condition

WEATHER DATA TEMP : ~35° SKY : overcast/rain WIND : 5-10 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	Sully MW-2
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/20/15

SAMPLER :	A. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04202015

WELL DATA		PURGE DATA	
WELL ID # :	Sully MW-2	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.05
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	19.11	PURGE START/ END TIME:	1236 / 1311
DEPTH TO WATER (TOC) :	11.84	SAMPLING BEGIN / END TIME:	1311 / 1325
WATER COLUMN HEIGHT :	7.27	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.16	PUMP ID#: 27550101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1241	0.25	6.52	3.749	4.06	6.84	8.6	8.2	12.12
2	1246	0.50	6.43	3.872	2.01	6.74	-20.5	5.5	12.23
3	1251	0.75	6.32	3.919	1.61	6.71	-29.4	3.6	12.30
4	1256	1.0	6.23	3.942	1.55	6.70	-33.8	1.6	12.37
5	1301	1.25	6.21	3.958	1.53	6.70	-37.7	1.0	12.41
6	1306	1.50	6.15	3.959	1.53	6.70	-40.1	1.1	12.44
7	1311	1.75	6.21	3.944	1.55	6.71	-41.0	1.1	12.47
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.75	SAMPLE TIME :	1320
# OF WELL VOLUMES :	~1.50	ANALYTES:	2 1-liter ambers + 3 40 mL vials all HCl
STAB. TEMP (°C) :	6.21	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	3.944	PURGED DRY	YES (NO)
STAB. DO:	1.55	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.71	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-41.0	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	1.1	MS / MSD:	ND

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS : well in good condition

WEATHER DATA TEMP : 35° SKY : overcast/rain WIND : 5-10 MPH

Bay West

FIELD SAMPLING DATA SHEET

Page 1 of 1

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	Sully MW-3
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/20/15

SAMPLER :	H. McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04202015

WELL DATA		PURGE DATA	
WELL ID # :	Sully MW-3	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	0.05
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	GRAB
WELL DEPTH (FT) :	17.56	PURGE START/ END TIME:	1331 / 1406
DEPTH TO WATER (TOC) :	12.05	SAMPLING BEGIN / END TIME:	1406 1420
WATER COLUMN HEIGHT :	5.51	YSI ID#:	21700104
WELL VOLUME (GAL) :	0.88	PUMP ID#: 27550101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1336	0.25	7.14	4.582	1.86	6.87	-47.2	3.7	12.31
2	1341	0.50	7.06	4.616	1.47	6.82	-72.9	4.0	12.36
3	1346	0.75	7.04	4.603	1.44	6.82	-83.5	4.6	12.42
4	1351	1.0	6.99	4.584	1.46	6.82	-88.5	4.0	12.43
5	1356	1.25	6.99	4.560	1.33	6.83	-93.3	3.9	12.45
6	1401	1.50	7.06	4.567	1.33	6.83	-96.7	3.3	12.47
7	1406	1.75	7.04	4.584	1.34	6.84	-99.5	3.7	12.48
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.75	SAMPLE TIME :	1410
# OF WELL VOLUMES :	2.0	ANALYTES:	2 1-liter ambers + 3 40mL vials - all HCl
STAB. TEMP (°C) :	7.04	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	4.584	PURGED DRY	YES (NO)
STAB. DO:	1.34	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.84	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-99.5	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	3.7	MS / MSD:	ND

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS : well in good condition

WEATHER DATA TEMP : 35° SKY : overcast WIND : 5-10 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-23
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/20/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04202015

WELL DATA		PURGE DATA	
WELL ID # :	MW-23	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.05
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	22.60	PURGE START/ END TIME:	1448 / 1553
DEPTH TO WATER (TOC) :	16.53	SAMPLING BEGIN / END TIME:	1553 / 1610
WATER COLUMN HEIGHT :	6.07	YSI ID#:	21700104
WELL VOLUME (GAL) :	0.97	PUMP ID#: 27550101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)	
1	1453	0.25	6.96	1.807	7.21	7.43	-21.3	87.0	16.80	
2	1458	0.50	7.23	1.704	5.61	7.18	-4.2	40.9	16.95	
3	1503	0.75	7.08	1.6816	5.65	7.10	0.8	29.8	17.18	
4	1508	1.0	7.01	1.665	5.69	7.07	7.1	23.2	17.59	
5	1513	1.25	6.93	1.651	5.74	7.05	12.4	17.5	17.87	
6	1518	1.50	6.80	1.633	5.80	7.03	18.8	11.3	18.37	*
7	1523	1.70	6.89	1.624	5.76	7.03	22.3	22.6	18.60	
8	1528	1.90	6.90	1.601	5.54	7.03	25.1	26.4	18.87	
9	1533	2.10	6.92	1.583	4.37	7.04	25.9	28.3	19.08	
10	1538	2.30	6.99	1.568	3.64	7.05	26.8	29.1	19.33	
11	1543	2.50	6.96	1.570	3.67	7.05	27.5	25.6	19.57	
12	1548	2.70	6.95	1.567	3.65	7.05	28.2	29.7	19.83	
13	1553	2.90	6.99	1.561	3.62	7.05	29.5	32.3	20.00	
14										
15										

* HCl

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.90	SAMPLE TIME :	1600
# OF WELL VOLUMES :	~3	ANALYTES:	2 1-liter ambers + 6 40 mLvials-all HCl
STAB. TEMP (°C) :	6.99	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.561	PURGED DRY	(YES) (NO) HCl 4/20/15
STAB. DO:	3.62	ANALYSIS:	DRO/GRO/VOCS
STAB. pH :	7.05	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	29.5	DUPLICATE SAMPLE?	Yes (No) (name/time/comments)
STAB. TURBIDITY:	32.3	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: mostly clear - slight red/brown turbid ODOR : none

SAMPLE DESCRIPTION COLOR: brown & turbid ODOR: none

OTHER : re-use tubing left in well ; well goes dry during sampling attempt to lower purge rate ;

OBSERVATIONS : well standpipe locking cover is broken - well metal cover comes off of standpipe.

WEATHER DATA TEMP : 35° SKY : overcast WIND : 5-10 MPH

Bay West LLC
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY LOG

To be completed by Crew Leader

Job Name: Current Holiday Station	**Job No.** J140399	**Date** 4/21/15
Project Manager Amanda Malaney	**Bay West Crew** H. McGaon	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*

None

Detailed description of work performed:

0720 At office. Calibrate YSI except DO. Load equipment.
0820 Depart BW Duluth office.
0830 On-site at MW-20. Calibrate DO; set up to purge/sample
0837 Begin purging MW-20 with submersible pump
0950 Collect MW-20 for DRO/GRO/VOCs - well stable after 5.0 gal (~5.6 WV)
-also collect D-1 for DRO/GRO/VOCs - no time labeled
-decon pump & pack up.
1023 Begin purging MW-18 with submersible pump
-at first reading water level is lower than pump switch to peristaltic pump
1034 Resume purging with peristaltic pump.
1120 Collect MW-18 for DRO/GRO/VOCs - stable after 1.75 gal (~2.5 WV)
-decon pump & pack up & mob to MW-17
1136 Begin purging MW-17 with submersible pump
1220 Collect MW-17 for DRO/GRO/VOCs - well stable after 2.80 gal (~3.0 WV)
-decon pump, pack up & mob to MW-22.
1241 Begin purging MW-22 with submersible pump.
1320 Collect MW-22 for DRO/GRO/VOCs - well stable after ~1.4 gal (~1.1 WV)
-decon pump, pack up and mob to MW-12.
1336 Begin purging MW-12 with peristaltic pump
1415 Collect MW-12 for DRO/GRO/VOCs - well stable after ~1.20 gal (~1.0 WV)
-pack up & mob to MW-19.
1440 Begin purging MW-19 with peristaltic pump
1530 Collect MW-19 for DRO/GRO/VOCs - stable after ~1.90 gal (~1.6 BWV)
1538 Begin purging MW-16 with submersible pump

Waste Generated:

Sample gloves, small lengths of tubing

Change in Conditions (if any):

None

Sample Summary:

Samples Taken: ☒ Yes ☐ No	No. of Samples 9 sets	COC # 04202015 04212015

Sample Destination:

hold to deliver to Pace when complete

Size and Type of Sample:

9 GW sets for DRO/GRO/VOCs (2 1-liter ambers + 6 40mL vials each)

Signature [signature] Date 4/21/15

Bay West LLC
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY LOG

To be completed by Crew Leader

Job Name: Current Holiday Station	**Job No.** J140399	**Date** 4/21/15
Project Manager Amanda Malaney	**Bay West Crew** H. McGown	

Personnel on Site ***(Client, Visitors, Bay West staff other than listed above)***

None

Detailed description of work performed:

1640 Collect MW-11e for DRO/GRO/VOCs - well stable after ~2.3 gal (~2.7 WV)
- clean pump and set up to collect FB-1.

1705 Collect FB-1 for DRO/GRO/VOCs.
- pack up equipment.

1715 Depart Site.

1725 At office. Unload equipment.

Waste Generated:

Change in Conditions (if any):

see page 1

Sample Summary:

Samples Taken: ☐ Yes ☐ No	No. of Samples	COC #
Sample Destination:		
Size and Type of Sample:		

Signature [signature] Date 4/21/15

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-20
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/21/15

SAMPLER :	H. McGowon	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04202015

WELL DATA		PURGE DATA	
WELL ID # :	MW-20	PURGE METHOD:	submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	20.10
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	21.40	PURGE START/ END TIME:	0852 / 0946
DEPTH TO WATER (TOC) :	15.81	SAMPLING BEGIN / END TIME:	0946 / 1000
WATER COLUMN HEIGHT :	5.59	YSI ID#:	21700104
WELL VOLUME (GAL) :	0.89	PUMP ID#: 27570101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	0901	0.50	8.02	1.829	1.99	6.77	221.6	34.9	16.11
2	0906	1.0	8.25	1.831	1.75	6.67	182.1	8.3	16.22
3	0911	1.50	8.09	1.790	1.71	6.68	140.8	1.2	16.34
4	0916	2.0	8.06	1.803	1.69	6.69	80.8	0.2	16.35
5	0921	2.50	8.07	1.805	1.63	6.69	35.3	0.5	16.35
6	0926	3.0	8.04	1.806	1.62	6.71	18.3	0.6	16.35
7	0931	3.5	8.11	1.800	1.67	6.72	7.2	0.6	16.35
8	0936	4.0	8.08	1.795	1.74	6.73	-0.1	0.7	16.35
9	0941	4.5	8.11	1.799	1.70	6.73	-4.9	0.7	16.35
10	0946	5.0	8.12	1.794	1.72	6.74	-7.7	0.7	16.35
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	5.0	SAMPLE TIME :	0950
# OF WELL VOLUMES :	~5.6	ANALYTES:	2 1-liter ambers + 6 40 mL vials
STAB. TEMP (°C) :	8.12	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.794	PURGED DRY	YES (NO)
STAB. DO:	1.72	ANALYSIS:	DRO/GRO/VOCs
STAB. pH :	6.74	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-7.7	DUPLICATE SAMPLE?	(Yes) / No (name/time/comments) D-1/no time/same analytes
STAB. TURBIDITY:	0.7	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : moderate petro

SAMPLE DESCRIPTION COLOR: clear ODOR: moderate petro

OTHER : re-use tubing left in well

OBSERVATIONS : well in good condition

WEATHER DATA TEMP : ~30° SKY : overcast/flurries WIND : 0-5 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-18
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/21/15

SAMPLER :	H. McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04202015

WELL DATA		PURGE DATA	
WELL ID # :	MW-18	PURGE METHOD:	Submersible / peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.05
WELL DIAMETER (IN) :	2	SAMPLE METHOD:	SAME (peristaltic)
WELL DEPTH (FT) :	20.25	PURGE START/ END TIME:	1023/1041 1112
DEPTH TO WATER (TOC) :	15.93	SAMPLING BEGIN / END TIME:	1112 / 1125
WATER COLUMN HEIGHT :	4.32	YSI ID#:	21700104
WELL VOLUME (GAL) :	0.69	PUMP ID#: 27570101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	~~1028~~								
2	1042	0.25	7.50	2.271	2.73	7.24	-36.3	75.3	17.55
3	1047	0.50	7.06	2.266	2.14	7.13	-57.8	38.6	17.74
4	1052	0.75	7.12	2.271	2.12	7.10	-67.4	22.2	17.96
5	1057	1.0	7.17	2.275	2.22	7.09	-72.1	11.7	18.10
6	1102	1.25	7.19	2.278	2.29	7.09	-73.8	9.8	18.21
7	1107	1.50	7.13	2.270	2.30	7.09	-75.6	7.6	18.43
8	1112	1.75	7.16	2.262	2.32	7.09	-76.8	3.8	18.64
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.75	SAMPLE TIME :	1120
# OF WELL VOLUMES :	2.5	ANALYTES:	2 1-liter ambers + 6 40 mL vials - all HCl
STAB. TEMP (°C) :	7.16	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.262	PURGED DRY	YES (NO)
STAB. DO:	2.32	ANALYSIS:	DRO/GRO/VOCS
STAB. pH :	7.09	FIELD BLANK?	Yes (NO) (name/time/comments)
STAB. ORP :	-76.8	DUPLICATE SAMPLE?	Yes / (NO) (name/time/comments)
STAB. TURBIDITY:	3.8	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: brown tint w/ orange iron flakes ODOR : moderate petro

SAMPLE DESCRIPTION COLOR: clear ODOR: moderate petro

OTHER : Re-use Tubing, left in well
Water level is on top of pump at first reading - Switch to peristaltic pump

OBSERVATIONS : well in good condition

WEATHER DATA TEMP : 235° SKY : overcast / flurries WIND : 5-10 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-17
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/21/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04202015

WELL DATA		PURGE DATA	
WELL ID # :	MW-17	PURGE METHOD:	submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.08
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	~~23.60~~ 23.85	PURGE START/ END TIME:	1136 / 1211
DEPTH TO WATER (TOC) :	18.14	SAMPLING BEGIN / END TIME:	1211 / 1225
WATER COLUMN HEIGHT :	~~5.46~~ 5.71	YSI ID#:	21700104
WELL VOLUME (GAL) :	~~0.87~~ 0.91	PUMP ID#:	27570101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1141	0.50	9.11	1.952	2.79	6.80	3.0	43.4	19.37
2	1146	0.80	9.43	2.040	2.01	6.72	1.0	16.4	19.79
3	1151	1.20	9.41	2.133	1.82	6.69	-4.6	10.7	19.90
4	1156	1.60	9.48	2.194	1.78	6.69	-11.2	9.8	19.91
5	1201	2.0	9.47	2.250	1.74	6.69	-17.1	7.6	19.91
6	1206	2.40	9.50	2.278	1.74	6.70	-22.1	6.6	19.90
7	1211	2.80	9.46	2.289	1.71	6.70	-25.5	6.5	19.90
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.80	SAMPLE TIME :	1220
# OF WELL VOLUMES :	~3.0	ANALYTES:	2 1-liter ambers + 6 40mL vials
STAB. TEMP (°C) :	9.46	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.289	PURGED DRY	YES (NO)
STAB. DO:	1.71	ANALYSIS:	DRO/GRO/VOCS
STAB. pH :	6.70	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-25.5	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	6.5	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: mostly clear ODOR : slight petro

SAMPLE DESCRIPTION COLOR: clear ODOR: slight petro

OTHER : re-use tubing left in well

OBSERVATIONS : well in good condition

WEATHER DATA TEMP : 23.5° SKY : Overcast/flurries WIND : 5-10 MPH

Bay West

FIELD SAMPLING DATA SHEET

Page 1 of 1

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-22
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/21/15

SAMPLER :	H. McBrown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04202015

WELL DATA		PURGE DATA	
WELL ID # :	MW-22	PURGE METHOD:	submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.04-0.06
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	15.25	PURGE START/ END TIME:	1241 / 1311
DEPTH TO WATER (TOC) :	7.55	SAMPLING BEGIN / END TIME:	1311 / 1325
WATER COLUMN HEIGHT :	7.70	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.23	PUMP ID#: 2757010	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1246	0.20	6.76	2.990	3.65	7.05	-80.6	9.2	7.97
2	1251	0.40	6.65	3.001	1.43	7.05	-124.9	3.7	8.08
3	1256	0.60	6.26	2.973	1.35	7.03	-128.4	1.6	8.20
4	1301	0.80	5.94	2.938	1.35	7.00	-123.9	1.7	8.34
5	1306	1.10	5.95	2.907	1.33	6.98	-123.7	2.4	8.45
6	1311	1.40	6.00	2.907	1.33	6.97	-126.4	2.3	8.54
7									
8									
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10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.40	SAMPLE TIME :	1320
# OF WELL VOLUMES :	~1.10	ANALYTES:	2 1-liter ambers + 6 40mL vials
STAB. TEMP (°C) :	6.00	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.907	PURGED DRY	YES (NO)
STAB. DO:	1.33	ANALYSIS:	DRO/GRO/VOCs
STAB. pH :	6.97	~~FIELD BLANK? (Yes) / No (name/time/comments)~~	~~FB-1 / 1320~~ same analytes
STAB. ORP :	-126.4	DUPLICATE SAMPLE? Yes / (No) (name/time/comments)	
STAB. TURBIDITY:	2.3	MS / MSD:	NO

MW 4/21/15

NO field blank

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well; lots of vehicle traffic during purging/sampling

OBSERVATIONS : One eyelet in prop is broken - only one functioning bolt

WEATHER DATA TEMP : 23° SKY : Overcast/flurries WIND : 5-10 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-12
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/21/15

SAMPLER :	H. McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04202015

WELL DATA		PURGE DATA	
WELL ID # :	MW-12	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.04
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	23.95	PURGE START/ END TIME:	1336 / 1406
DEPTH TO WATER (TOC) :	16.93	SAMPLING BEGIN / END TIME:	1406 / 1420
WATER COLUMN HEIGHT :	7.02	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.12	PUMP ID#: 27550101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1341	0.20	7.11	1.200	1.97	7.19	-55.5	2.5	17.89
2	1346	0.40	7.05	1.152	1.47	6.95	-53.8	1.4	18.19
3	1351	0.60	7.01	1.148	1.41	6.87	-56.8	0.5	18.65
4	1356	0.80	7.02	1.151	1.37	6.83	-59.4	0.7	19.13
5	1401	1.0	6.97	1.151	1.33	6.81	-62.2	0.8	19.70
6	1406	1.20	6.98	1.153	1.34	6.80	-64.8	1.2	20.23
7									
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.20	SAMPLE TIME :	1415
# OF WELL VOLUMES :	~1.0	ANALYTES:	2 1-liter ambers + 6 40mL vials-all HCl
STAB. TEMP (°C) :	6.98	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.153	PURGED DRY	YES (NO)
STAB. DO:	1.34	ANALYSIS:	NPO/GPO/VOCS
STAB. pH :	6.80	FIELD BLANK?	Yes / (NO) (name/time/comments)
STAB. ORP :	-64.8	DUPLICATE SAMPLE?	Yes / (NO) (name/time/comments)
STAB. TURBIDITY:	1.2	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : moderate petro

SAMPLE DESCRIPTION COLOR: clear ODOR: moderate petro

OTHER : re-use tubing left in well; well historically has rapid/continual drawdown

OBSERVATIONS : well in good condition

WEATHER DATA TEMP : ~35° SKY : overcast/flurries WIND : 5-10 MPH

Bay West

FIELD SAMPLING DATA SHEET

Page 1 of 1

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-19
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/21/15

SAMPLER :	H McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04202015

WELL DATA		PURGE DATA	
WELL ID # :	MW-19	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.04
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	22.40	PURGE START/ END TIME:	1440 / 1525
DEPTH TO WATER (TOC) :	15.13	SAMPLING BEGIN / END TIME:	1525 / 1540
WATER COLUMN HEIGHT :	7.27	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.16	PUMP ID#:	27550101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1445	0.25	7.03	1.892	5.14	7.00	-31.4	0.4	15.76
2	1450	0.50	6.64	1.254	2.66	7.02	-44.8	0.2	16.18
3	1455	0.70	6.31	1.006	2.51	7.06	-47.2	0.3	16.56
4	1500	0.90	6.43	0.871	2.71	7.07	-43.9	0.1	16.95
5	1505	1.10	6.50	0.799	2.43	7.04	-38.7	0.5	17.25
6	1510	1.30	6.55	0.838	2.31	6.99	-34.2	0.4	17.50
7	1515	1.50	6.62	0.927	2.21	6.95	-31.6	0.4	17.64
8	1520	1.70	6.63	0.977	2.14	6.93	-30.6	0.5	17.81
9	1525	1.90	6.62	1.008	2.08	6.92	-30.2	0.5	18.03
10									
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15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.90	SAMPLE TIME :	1530
# OF WELL VOLUMES :	~1.6	ANALYTES:	2 1-liter ambers + 6 40 mL vials
STAB. TEMP (°C) :	6.62	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.008	PURGED DRY	YES (NO)
STAB. DO:	2.08	ANALYSIS:	DRO/GRO/VOCs
STAB. pH :	6.92	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-30.2	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	0.5	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : moderate petro

SAMPLE DESCRIPTION COLOR: clear ODOR: moderate petro

OTHER : re-use tubing left in well

OBSERVATIONS : well in good condition

WEATHER DATA TEMP : ~35° SKY : overcast/flurries WIND : 5-10 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-16
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/21/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04202015-04212015

WELL DATA		PURGE DATA	
WELL ID # :	MW-16	PURGE METHOD:	submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.06
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	20.25	PURGE START/ END TIME:	1558 / 1633
DEPTH TO WATER (TOC) :	14.87	SAMPLING BEGIN / END TIME:	1633 / 1645
WATER COLUMN HEIGHT :	5.38	YSI ID#:	21700104
WELL VOLUME (GAL) :	0.86	PUMP ID#:	27570101 WATER LEVEL ID# Z3000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1603	0.50	6.19	1.567	1.75	6.91	4.0	32.7	15.39
2	1608	0.80	6.13	1.597	1.28	6.78	-10.2	16.4	16.05
3	1613	1.10	6.25	1.610	1.33	6.74	-24.2	12.5	16.11
4	1618	1.40	6.30	1.607	1.31	6.73	-31.4	7.2	16.15
5	1623	1.70	6.25	1.620	1.42	6.73	-36.0	5.6	16.18
6	1628	2.0	6.26	1.614	1.35	6.73	-37.2	5.1	16.20
7	1633	2.30	6.22	1.613	1.31	6.74	-39.8	4.8	16.22
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15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.30	SAMPLE TIME :	1640
# OF WELL VOLUMES :	~2.7	ANALYTES:	2 1-liter ambers + 6 40 mL vials - all HCl
STAB. TEMP (°C) :	6.22	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.613	PURGED DRY	YES (NO)
STAB. DO:	1.31	ANALYSIS:	DRO/GRO/VOCs
STAB. pH :	6.74	FIELD BLANK?	(Yes) / No (name/time/comments) FB-1 / 1705 / same analytes
STAB. ORP :	-39.8	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	4.8	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR: strong petro

SAMPLE DESCRIPTION COLOR: ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS : well in good condition

WEATHER DATA TEMP : ~35° SKY : overcast/flurries WIND : 5-10 MPH

Bay West LLC
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY LOG

To be completed by Crew Leader Page 1 of 1

Job Name: Current Holiday Station	Job No. J140399	Date 4/22/15
Project Manager Amanda Malaney	Bay West Crew H. McBrown	

Personnel on Site ***(Client, Visitors, Bay West staff other than listed above)***

None

Detailed description of work performed:

0710 At office. Calibrate YSI except DO; load equipment.
0815 Depart BW Duluth office.
0825 On-site. Set up decon station, calibrate DO, set up on MW-13.
0839 Begin purging MW-13 with peristaltic pump
0915 Collect MW-13 for DRO/GRO/VOCs - well stable after ~1.50 gal (~2.5WV)
-also collect D-2 for DRO/GRO/VOCs - no time on label.
-pack up & mob to MW-25.
0948 Begin purging MW-25 with peristaltic pump
1030 Collect MW-25 for DRO/GRO/VOCs - stable after 1.75 gal (~1.9 WV)
-pack up and mob to MW-28.
1103 Begin purging MW-28 with peristaltic pump
1140 Collect MW-28 for DRO/GRO/VOCs - well stable after 1.20 gal (~0.4 WV)
1207 Begin purging MW-27 with peristaltic pump
1255 Collect MW-27 for DRO/GRO/VOCs - well stable after 2.0 gal (~0.6WV)
-pack up and mob to MW-26
1315 Begin purging MW-26 with peristaltic pump
1350 Collect MW-26 for DRO/GRO/VOCs - stable after 1.5 gal (~0.25WV)
-pack up all equipment.
1415 Depart the site. Stop to purchase ice.
1440 Relinquish to coolers to Pace.
1500 At BW Duluth office. Unload all equipment, save notes in DMS, etc.

Waste Generated:

sample gloves, small lengths of tubing

Change in Conditions (if any):

Sample Summary:

Samples Taken: ☒ Yes ☐ No	No. of Samples 6 sets	COC # 04212015

Sample Destination: drop at Duluth Pace office

Size and Type of Sample:

6 ow sets for DRO/GRO/VOCs (2 1-liter ambers + 6 40 mL vials)

Signature [signature] Date 4/22/15

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-13
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/22/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04212015

WELL DATA		PURGE DATA	
WELL ID # :	MW-13	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.05
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	19.49	PURGE START/ END TIME:	0839 / 0909
DEPTH TO WATER (TOC) :	15.69	SAMPLING BEGIN / END TIME:	0909 / 0930
WATER COLUMN HEIGHT :	3.80	YSI ID#:	21700104
WELL VOLUME (GAL) :	0.60	PUMP ID#: 27550101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	0844	0.25	6.91	1.855	1.46	6.77	-14.2	4.8	15.81
2	0849	0.50	6.92	1.867	1.22	6.74	-54.8	2.2	15.81
3	0854	0.75	7.00	1.842	1.34	6.76	-73.7	0.4	15.81
4	0859	1.0	6.87	1.833	1.34	6.78	-80.2	0.2	15.81
5	0904	1.25	6.74	1.829	1.32	6.79	-83.3	0.1	15.81
6	0909	1.50	6.87	1.828	1.31	6.79	-84.7	0.2	15.81
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14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.50	SAMPLE TIME :	0915
# OF WELL VOLUMES :	22.5	ANALYTES:	2 1-liter ambers + 6 40mL vials- HCl
STAB. TEMP (°C) :	6.87	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.828	PURGED DRY	YES (NO)
STAB. DO:	1.31	ANALYSIS:	DRO/GRO/ VOCs
STAB. pH :	6.79	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	-84.7	DUPLICATE SAMPLE?	(Yes) / No (name/time/comments) D-2/ no time/ Same analytes
STAB. TURBIDITY:	0.2	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS : well in good condition- stand pipe is slightly crooked

WEATHER DATA TEMP : ~30° SKY : overcast WIND : 0-5 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-25
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/22/15

SAMPLER :	H. MCGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04212015

WELL DATA		PURGE DATA	
WELL ID # :	MW-25	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.10
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	21.60	PURGE START/ END TIME:	0948 / 1023
DEPTH TO WATER (TOC) :	15.80	SAMPLING BEGIN / END TIME:	1023 / 1040
WATER COLUMN HEIGHT :	5.80	YSI ID#:	2700104
WELL VOLUME (GAL) :	0.93	PUMP ID#: 2755010	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	0953	0.25	6.10	1.998	2.04	6.97	-39.4	6.6	15.98
2	0958	0.50	6.18	2.022	1.36	6.88	-65.5	3.8	16.02
3	1003	0.75	6.35	2.023	1.27	6.85	-77.7	3.3	16.02
4	1008	1.0	6.41	2.025	1.21	6.84	-86.4	1.8	16.02
5	1013	1.25	6.38	2.022	1.17	6.84	-90.4	0.6	16.02
6	1018	1.50	6.31	2.009	1.13	6.84	-92.9	0.3	16.02
7	1023	1.75	6.28	2.000	1.14	6.84	-94.0	0.3	16.02
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15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.75	SAMPLE TIME :	1030
# OF WELL VOLUMES :	2.9	ANALYTES:	2 1-liter ambers + 6 40 mL vials-HCl
STAB. TEMP (°C) :	6.28	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.000	PURGED DRY	YES (NO)
STAB. DO:	1.14	ANALYSIS:	DRO/GRO/VOCs
STAB. pH :	6.84	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	-94.0	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	0.3	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS : well in good condition

WEATHER DATA TEMP : 230° SKY : overcast WIND : 5-10 MPH

Bay West

FIELD SAMPLING DATA SHEET

Page 1 of 1

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-28
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/22/15

SAMPLER :	H. McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04212015

WELL DATA		PURGE DATA	
WELL ID # :	MW-28	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.04
WELL DIAMETER (IN) :	4	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	22.06	PURGE START/ END TIME:	1103 / 1133
DEPTH TO WATER (TOC) :	16.81	SAMPLING BEGIN / END TIME:	1133 / 1150
WATER COLUMN HEIGHT :	5.25	YSI ID#:	21700104
WELL VOLUME (GAL) :	3.41	PUMP ID#: 27550101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1108	0.20	8.55	1.915	1.89	6.94	-4.8	1.7	17.08
2	1113	0.40	8.52	1.916	1.45	6.71	-0.8	0.5	17.15
3	1118	0.60	8.45	1.916	1.44	6.65	1.3	0.5	17.18
4	1123	0.80	8.41	1.896	1.47	6.61	4.4	0.3	17.21
5	1128	1.0	8.41	1.907	1.43	6.60	6.1	0.4	17.23
6	1133	1.20	8.39	1.912	1.44	6.59	8.4	0.1	17.24
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15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.20	SAMPLE TIME :	1140
# OF WELL VOLUMES :	~0.4	ANALYTES:	2 1-liter ambers + 6 40mL vials
STAB. TEMP (°C) :	8.39	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.912	PURGED DRY	YES (NO)
STAB. DO:	1.44	ANALYSIS:	DRO/GRO/VOCs
STAB. pH :	6.59	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	8.4	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	0.1	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR: strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : install new well tubing and leave in

OBSERVATIONS : well in good condition just peristaltic pump due to difficulty developing well due to slow recharge

WEATHER DATA TEMP : ~30° SKY : overcast WIND : 5-10 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-27
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/22/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04212015

WELL DATA		PURGE DATA	
WELL ID # :	MW-27	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.05
WELL DIAMETER (IN) :	4"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	19.85	PURGE START/ END TIME:	1207 / 1247
DEPTH TO WATER (TOC) :	14.80	SAMPLING BEGIN / END TIME:	1247 / 1300
WATER COLUMN HEIGHT :	5.05	YSI ID#:	21700104
WELL VOLUME (GAL) :	3.28	PUMP ID#: 27550101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1212	0.25	8.34	2.791	2.13	6.92	12.0	200.2	14.90
2	1217	0.50	8.47	2.835	1.36	6.84	-51.9	86.3	14.90
3	1222	0.75	8.55	2.837	1.35	6.82	-65.6	32.9	14.91
4	1227	1.0	8.55	2.829	1.41	6.82	-74.9	18.2	14.91
5	1232	1.25	8.57	2.836	1.38	6.81	-79.16	12.7	14.91
6	1237	1.50	8.51	2.830	1.36	6.82	-82.5	9.8	14.91
7	1242	1.75	8.50	2.824	1.34	6.82	-84.4	8.5	14.91
8	1247	2.0	8.47	2.820	1.33	6.82	-86.1	9.3	14.91
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14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.0	SAMPLE TIME :	1255
# OF WELL VOLUMES :	~0.60	ANALYTES:	2 1-liter ambers + 6 40mL vials HCl
STAB. TEMP (°C) :	8.47	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.820	PURGED DRY	YES (NO)
STAB. DO:	1.33	ANALYSIS:	DRO/GRO/VOCs
STAB. pH :	6.82	FIELD BLANK?	Yes / (NO) (name/time/comments)
STAB. ORP :	-86.1	DUPLICATE SAMPLE?	Yes / (NO) (name/time/comments)
STAB. TURBIDITY:	9.3	MS / MSD:	ND

COMMENTS

PURGE START DESCRIP. COLOR: brown & turbid ODOR : strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS : well in good condition

WEATHER DATA TEMP : ~30° SKY : overcast WIND : 5-10 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J140399
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-26
CITY, STATE, ZIP :	Duluth, MN	DATE :	4/22/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	04212015

WELL DATA		PURGE DATA	
WELL ID # :	MW-26	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.05
WELL DIAMETER (IN) :	4	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	18.95	PURGE START/ END TIME:	1315 / 1345
DEPTH TO WATER (TOC) :	9.90	SAMPLING BEGIN / END TIME:	1345 / 1400
WATER COLUMN HEIGHT :	9.05	YSI ID#:	21700104
WELL VOLUME (GAL) :	5.88	PUMP ID#:	27550101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1320	0.25	8.09	1.720	1.91	7.10	-32.4	18.4	10.20
2	1325	0.50	8.03	1.691	1.15	6.94	-46.4	8.1	10.28
3	1330	0.75	8.09	1.682	1.15	6.88	-55.4	4.8	10.35
4	1335	1.0	8.11	1.675	1.16	6.86	-60.3	3.7	10.42
5	1340	1.25	8.06	1.674	1.16	6.85	-62.6	3.5	10.44
6	1345	1.50	8.09	1.665	1.15	6.84	-64.8	2.8	10.47
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15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.50	SAMPLE TIME :	1350
# OF WELL VOLUMES :	~0.25	ANALYTES:	2 1-liter ambers + 6 40mL vials - HCl
STAB. TEMP (°C) :	8.09	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.665	PURGED DRY	YES (NO)
STAB. DO:	1.15	ANALYSIS:	DRO/GRO/VOCS
STAB. pH :	6.84	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-64.8	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	2.8	MS / MSD:	ND

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR: strong petro

SAMPLE DESCRIPTION COLOR: Clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS : well in good condition

WEATHER DATA TEMP: ~35° SKY: mostly cloudy WIND : 5-10 MPH

GROUNDWATER INSTRUMENT CALIBRATION FORM

Bay West
Customer-Focused Environmental & Industrial Solutions

PROJECT: Current Holiday Station
PROJECT #: J140399
PERSONNEL: A. McGoon
STARTING DATE: 4/20/15

DATE	TIME		INSTRUMENT / MODEL #	pH			COND. (mS)	ORP (mV)	TURBIDITY (NTU)		DO (mg/L)	DO (%)	DO charge	Comments
Standard Cal. Concentrations →				7	10	Charge	1.409	240	0	126				
4/20/15		pre	6820 #21700 104	6.94	10.14		1.404	240.3	0.3	123.4	9.11	78.2		BP=729.5; DO calibrated on-site.
↓		post		7.00	10.00		1.409	240.0	0.0	126.0	11.18	96.0		
	Standard Cal. Concentrations →			7	10	Charge	1.409	240	0	126				
4/21/15		pre	6820 #21700 104	6.95	9.93		1.406	248.8	-0.1	125.6	10.66	93.2		BP=730.2; DO calibrated on-site.
↓		post		7.00	10.00		1.409	240.0	0.0	126.0	11.01	96.0		
	Standard Cal. Concentrations →			7	10	Charge	1.409	240	0	126				
4/22/15		pre	6820 #21700 104	7.05	9.96		1.305	216.4	-0.1	125.9	8.93	79.8		BP=739.2; DO calibrated on-site.
↓		post		7.00	10.00		1.409	240.0	0.0	126.0	10.90	97.3		
	Standard Cal. Concentrations →			7	10	Charge			0					
		pre												
		post												
	Standard Cal. Concentrations →			7	10	Charge			0					
		pre												
		post												

Notes:
- "Pre" refers to the instrument readings during calibration right before calibration is entered/accepted.
- "Post" refers to the instrument readings just after calibration has been accepted. "Post" calibration can also refer to instrument readings taken at end of sampling day to document any instrument "drift" in readings.

Bay West
Customer-Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTOD Analytical Request Document

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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Copy To: Amanda Malaney	Attention: Accounts Payable	Facility_Code: Holiday Station	Page 1 of 2
Address: 5 Empire Drive		Company Name: Bay West LLC	Subfacility_code:	
St Paul, MN 55103	Purchase Order No.: 101733	Address: SAME		COC# 04202015
Email To: amandam@baywest.com	Project Name (EQuIS Facility Name):	accountspayable@baywest.com		
Phone: 651-291-3495	Current Holiday Station	Lab Project Manager:		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J140399			

Valid Matrix Codes: Sediment SE; Soil SO; Soil QC SQ; Aqueous W; Groundwater WG; Suface WS

ITEM #	Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO / MBTEX	GRO	VOCs	Comments
1	Sully MW-1	Sully MW-1	WT	G	4/20/15	1210	5				5					X	X			
2	Sully MW-2	Sully MW-2	WT	G	4/20/15	1320	5				5					X	X			
3	Sully MW-3	Sully MW-3	WT	G	4/20/15	1410	5				5					X	X			
4	MW-23	MW-23	WT	G	4/20/15	1600	8				8					X		X	X	
5	D-1	D-1	WT	G	4/21/15	—	8				8					X		X	X	
6	MW-20	MW-20	WT	G	4/21/15	0950	8				8					X		X	X	
7	MW-18	MW-18	WT	G	4/21/15	1120	8				8					X		X	X	
8	MW-17	MW-17	WT	G	4/21/15	1220	8				8					X		X	X	
9	MW-22	MW-22	WT	G	4/21/15	1320	8				8					X		X	X	
10	MW-12	MW-12	WT	G	4/21/15	1415	8				8					X		X	X	
11	MW-19	MW-19	WT	G	4/21/15	1530	8				8					X		X	X	
12	MW-16	MW-16	WT	G	4/21/15	1640	8				8					X		X	X	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
STATE ADMIN. CONTRACT PROJECT	[signature] /Baywest	4/22/15	1440	[signature]	4/22/15	1440	
MPCA WO # 3000011808							

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hillary McGowan

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 04/20/15

Temp (°C)	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Bay West
Customer Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTOD Analytical Request Document

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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Copy To: Amanda Malaney	Attention: Accounts Payable	Facility_Code: Holiday Station	Page 2 of 2
Address: 5 Empire Drive		Company Name: Bay West LLC	Subfacility_code:	
St Paul, MN 55103	Purchase Order No.: 101733	Address: SAME		COC# 04212015
Email To: amandam@baywest.com	Project Name (EQuIS Facility Name):	accountspayable@baywest.com		
Phone: 651-291-3495	Current Holiday Station	Lab Project Manager:		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J140399			

Valid Matrix Codes: Sediment SE; Soil SO; Soil QC SQ; Aqueous W; Groundwater WG; Suface WS

ITEM #	Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO / MBTEX	GRO	VOCs	Comments
1	FB-1	FB-1	WT	G	4/21/15	1705	8				8					X		X	X	
2	D-2	D-2	WT	G	4/22/15	—	8				8					X		X	X	
3	MW-13	MW-13	WT	G	4/22/15	0915	8				8					X		X	X	
4	MW-25	MW-25	WT	G	4/22/15	1030	8				8					X		X	X	
5	MW-28	MW-28	WT	G	4/22/15	1140	8				8					X		X	X	
6	MW-27	MW-27	WT	G	4/22/15	1255	8				8					X		X	X	
7	MW-26	MW-26	WT	G	4/22/15	1350	8				8					X		X	X	
8	Trip Blank	VOC Trip Blank	← LAB PREPARED →				2				2								X	
9	Trip Blank	GRO Trip Blank	← LAB PREPARED →				2				2							X		
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp (°C)	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
STATE ADMIN. CONTRACT PROJECT	[signature]/BayWest	4/22/15	1440	[signature]	4/22/15	1440				
MPCA WO # 3000011808										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hillary McBown

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 04/21/15

Bay West LLC
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY LOG

To be completed by Crew Leader — Page 1 of 1

Job Name: Current Holiday Station	Job No. J150495	Date 9/28/15
Project Manager Amanda Malaney	Bay West Crew H. McGowan	

Personnel on Site ***(Client, Visitors, Bay West staff other than listed above)***

None

Detailed description of work performed:

0700 At BW Duluth office. Calibrate XSI, load equipment, sort coolers.
0840 Depart BW Duluth office.
0850 On-site. Set up decon station.
0905 Begin gauging Site MW network. Decon water level meter between wells
- see Well Gauging Sheet for details.
- no product to bail in any wells

1115 At MW-21. Set up to purge and Sample. Calibrate DO.
1137 Begin purging MW-21 with peristaltic pump
1230 Collect MW-21 for DRO/GRO/MBTEX - well stable after 2.00 gal (~1.60 WV)
- decon, pack up equipment and mob. to RW-5.

1306 Begin purging RW-5 with the Submersible pump.
1345 Collect RW-5 for DRO/GRO/MBTEX - well stable after 2.60 gal (~0.40 WV)
- decon pump pack up and mob to RW-1.

1412 Begin purging RW-1 with submersible pump.
1450 Collect RW-1 for DRO/GRO/MBTEX - well stable after 2.80 gal (~0.45 WV)
- decon pump, pack up and mob to MW-22

1513 ~~1515~~ Begin purging MW-22 with submersible pump
1545 Collect MW-22 for DRO/GRO/MBTEX - well stable after 2.10 gal (~1.30 WV)
- decon pump and pack up equipment

1605 Depart the Site.
1635 Arrive at BW Duluth office. Get stuck in traffic from road construction ~~1635~~ on Grand Ave
- unload equipment

Waste Generated:

sample gloves, small lengths of tubing

Change in Conditions (if any):

none

Sample Summary:

Samples Taken: ☒ Yes ☐ No	No. of Samples 4 sets	COC # 09282015

Sample Destination:

Hold to deliver to Pace at a later date

Size and Type of Sample:

4 GW sets for DRO (2-1-liter HCl ambers); GRO (3 40mL HCl VOAs) and MBTEX (3 40mL HCl VOAs)

Signature H. McGowan Date 9/28/15

Bay West

Well Gauging Sheet

Bay West

Project:	Current Holiday Station	J150495	
Address:	5430 Grand Ave.	Date:	9/28/15
City, State, Zip:	Duluth, MN		

#	Well ID	Water Level (ft BTOC)	Total Well Depth (must be measured) (ft BTOC)	Water Column (ft)	Comments/Condition of Well, etc...
1	MW-8	11.48	23.12	11.64	well in good condition
2	MW-9	11.87	20.19	8.32	NO FP; well in good condition
3	MW-10	12.63	NM	NM	DTFP=12.63; well in good condition
4	MW-11	12.78	NM	NM	well in good condition
5	MW-12	13.92	24.00	10.08	well in good condition
6	MW-13	14.07	19.48	5.41	standpipe slightly corroded but sturdy/functional
7	MW-14	11.55	NM	NM	well in good condition
8	MW-15	15.81	23.62	7.81	well in good condition
9	MW-16	12.91	20.26	~~6.66~~ 7.35	well in good condition
10	MW-17	17.09	23.85	6.76	well in good condition
11	MW-18	14.17	20.15	5.98	well in good condition
12	MW-19	13.80	22.50	8.70	well in good condition
13	MW-20	14.19	21.32	7.13	well in good condition
14	MW-21	14.90	22.65	7.75	well in good condition
15	MW-22	5.46	15.28	9.82	well in good condition
16	MW-23	14.85	22.77	7.92	steel cover is broken/cracked
17	MW-25	14.58	21.60	7.02	well in good condition
18	MW-26	8.81	19.05	10.24	NO FP; well in good condition
19	MW-27	13.69	19.86	6.17	NO FP; well in good condition
20	MW-28	15.67	22.10	6.43	NO FP; well in good condition
21	RW-1	9.21	18.55	9.34	well in good condition
22	RW-2	8.23	19.10	10.87	no well plug; pad in good condition
23	RW-3	6.60	19.56	12.96	NO FP; bolts will not thread
24	RW-4	8.74	NM	NM	DTFP=8.70; well in good condition
25	RW-5	10.09	20.72	10.63	well in good condition
26	RW-6	5.25	17.90	12.65	well pad cracked in several locations, well vault is loose
27					
28					
29					
30					
31	MW-1	10.15	15.51	5.36	well in good condition
32	MW-2	11.08	19.10	8.02	well in good condition
33	MW-3	10.83	17.51	6.68	NO FP; well in good condition
34					
35					
36					
37					
39					
40					
41					
41					

SULLYS

NM = not measured - well not sampled

FIELD SAMPLING DATA SHEET

Bay West

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-21
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/28/15

SAMPLER :	H. McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09282015

WELL DATA		PURGE DATA	
WELL ID # :	MW-21	PURGE METHOD:	Penstaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	20.04
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	22.65	PURGE START/ END TIME:	1137 / 1227
DEPTH TO WATER (TOC) :	14.90	SAMPLING BEGIN / END TIME:	1227 / 1240
WATER COLUMN HEIGHT :	7.75	YSI ID#:	21700103
WELL VOLUME (GAL) :	1.24	PUMP ID#:	27550101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB.* (NTU)	Water Lev (ft BTOC)
1	1142	0.20	13.00	1.349	2.88	6.98	-132.1	70.1	15.86
2	1147	0.40	12.24	1.363	2.02	7.02	-133.2	26.2	16.12
3	1152	0.60	12.48	1.370	1.76	7.05	-131.2	19.8	16.51
4	1157	0.80	12.60	1.371	1.34	7.08	-126.8	7.6	16.87
5	1202	1.0	12.62	1.371	1.17	7.09	-123.4	5.5	17.20
6	1207	1.20	12.69	1.372	1.04	7.13	-124.7	3.5	17.42
7	1212	1.40	12.66	1.375	1.07	7.12	-129.2	2.9	17.60
8	1217	1.60	12.64	1.376	0.86	7.14	-126.4	3.2	17.83
9	1222	1.80	12.64	1.373	0.85	7.14	-133.1	3.7	18.09
10	1227	2.0	12.60	1.372	0.84	7.14	-132.0	1.0	18.36
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.0	SAMPLE TIME :	1230
# OF WELL VOLUMES :	~1.60	ANALYTES:	6 40 mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	12.60	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.372	PURGED DRY	YES (NO)
STAB. DO:	0.84	ANALYSIS:	MBTEX/GRO/DRO
STAB. pH :	7.14	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-132.0	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	1.0	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear w/ orange iron flakes ODOR : none

SAMPLE DESCRIPTION COLOR: clear ODOR: none

OTHER : Purge and sample with penstaltic due to historic water level drop during low-flow purging

OBSERVATIONS : reuse tubing left in well
*turbidity would not calibrate this AM although it appears to be reading fine. See calibration log for details

WEATHER DATA TEMP : ~60°F SKY : partly cloudy WIND : 0-5MPH

FIELD SAMPLING DATA SHEET

Bay West

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	RW-5
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/28/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09282015

WELL DATA		PURGE DATA	
WELL ID # :	RW-5	PURGE METHOD:	Submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.08
WELL DIAMETER (IN) :	4"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	20.72	PURGE START/ END TIME:	1306 / 1341
DEPTH TO WATER (TOC) :	10.09	SAMPLING BEGIN / END TIME:	1341 / 1348
WATER COLUMN HEIGHT :	10.63	YSI ID#:	21700103
WELL VOLUME (GAL) :	6.90	PUMP ID#: 27570101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB* (NTU)	Water Lev (ft BTOC)
1	1311	0.25	14.88	2.592	0.54	7.00	-20.2	12.2	10.10
2	1316	0.60	15.80	2.599	0.59	6.99	-44.2	5.4	10.10
3	1321	1.0	16.09	2.582	0.62	7.00	-51.9	4.1	10.10
4	1326	1.40	16.09	2.539	0.59	6.99	-57.1	3.9	10.10
5	1331	1.80	16.11	2.530	0.57	6.99	-63.9	5.4	10.10
6	1336	2.20	16.19	2.524	0.57	6.98	-68.2	4.5	10.10
7	1341	2.60	16.08	2.520	0.60	6.98	-72.3	2.6	10.10
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.60	SAMPLE TIME :	1345
# OF WELL VOLUMES :	20.40	ANALYTES:	6 40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	16.08	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.520	PURGED DRY	YES (NO)
STAB. DO:	0.60	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.98	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-72.3	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	2.6	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : none noticeable

SAMPLE DESCRIPTION COLOR: clear ODOR: none noticeable

OTHER : reuse tubing left in well

OBSERVATIONS :

*turbidity would not calibrate this AM but appears to be reading OK. See calibration log for details.

WEATHER DATA TEMP : ~67° SKY : partly cloudy WIND : 0-5 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	RW-1
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/28/15

SAMPLER :	H. McBrown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09282015

WELL DATA		PURGE DATA	
WELL ID # :	RW-1	PURGE METHOD:	Submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.08
WELL DIAMETER (IN) :	4"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	18.55	PURGE START/ END TIME:	1412 / 1447
DEPTH TO WATER (TOC) :	9.21	SAMPLING BEGIN / END TIME:	1447 / 1455
WATER COLUMN HEIGHT :	9.34	YSI ID#:	21700103
WELL VOLUME (GAL) :	6.07	PUMP ID#:	27570101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU) *	Water Lev (ft BTOC)
1	1417	0.40	17.12	1.595	3.71	6.79	71.0	28.9	9.58
2	1422	0.80	17.58	1.6260	3.66	6.79	74.3	21.0	9.67
3	1427	1.20	18.00	1.634	3.56	6.79	77.7	16.2	9.72
4	1432	1.60	18.33	1.631	3.49	6.79	81.7	10.8	9.73
5	1437	2.0	18.43	1.638	3.49	6.79	86.0	6.2	9.73
6	1442	2.40	18.50	1.644	3.50	6.79	89.8	3.7	9.74
7	1447	2.80	18.51	1.647	3.49	6.79	92.5	3.1	9.74
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.80	SAMPLE TIME :	1450
# OF WELL VOLUMES :	~0.45	ANALYTES:	6 40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	18.51	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.647	PURGED DRY	YES (NO)
STAB. DO:	3.49	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.79	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	92.5	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	3.1	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : very slight

SAMPLE DESCRIPTION COLOR: clear ODOR: very slight

OTHER : reuse tubing left in well

OBSERVATIONS: *turbidity would not calibrate this AM although turbidity appears to be reading OK - see calibration log for details.

WEATHER DATA TEMP : ~69° SKY : partly cloudy WIND : 0-5MPH

FIELD SAMPLING DATA SHEET

Bay West

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-22
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/28/15

SAMPLER :	H. McDaldon	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09282015

WELL DATA		PURGE DATA	
WELL ID # :	MW-22	PURGE METHOD:	submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	0.06 - 0.08
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	15.28	PURGE START/ END TIME:	1513 / 1543
DEPTH TO WATER (TOC) :	5.46	SAMPLING BEGIN / END TIME:	1543 / 1550
WATER COLUMN HEIGHT :	9.82	YSI ID#:	21700103
WELL VOLUME (GAL) :	1.57	PUMP ID#: 27570101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB.* (NTU)	Water Lev (ft BTOC)
1	1518	0.30	18.71	1.415	0.71	6.90	-157.6	31.2	5.61
2	1523	0.60	19.21	1.436	0.50	6.91	-147.1	14.2	5.66
3	1528	1.0	19.56	1.435	0.49	6.92	-145.9	11.8	5.70
4	1533	1.40	19.52	1.425	0.47	6.91	-160.5	8.8	5.78
5	1538	1.80	19.47	1.441	0.45	6.90	-158.8	4.7	5.82
6	1543	2.10	19.43	1.451	0.43	6.90	-159.1	4.16	5.85
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15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.10	SAMPLE TIME :	1545
# OF WELL VOLUMES :	1.30	ANALYTES:	6 40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	19.43	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.451	PURGED DRY	YES (NO)
STAB. DO:	0.43	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.90	FIELD BLANK?	(Yes) / (NO) (name/time/comments) FB-1/0835/same analytes
STAB. ORP :	-159.1	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	4.16	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : reuse tubing left in well
-field blank collected first thing morning of 9/29

OBSERVATIONS :
*turbidity would not calibrate this AM but it appears to be reading OK - see calibration log for details.

WEATHER DATA TEMP : ~70° SKY : partly cloudy WIND : 2-5 MPH

Bay West LLC
Five Empire Drive
St. Paul, Minnesota 55103-1867

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DAILY LOG

To be completed by Crew Leader — *Page 1 of 1*

Job Name: Current Holiday Station	**Job No.** J150495	**Date** 9/29/15
Project Manager Amanda Malaney	**Bay West Crew** H. McGown	

Personnel on Site ***(Client, Visitors, Bay West staff other than listed above)***

None

Detailed description of work performed:

0700 At BW Duluth office. Calibrate YSI; load equipment
0800 Depart BW Duluth office. Stop to purchase ice.
0815 On-site at MW-19. Set up to collect FB-1. Calibrate DO.
0835 Collect FB-1 for DRO/GRO/MBTEX.
- Set up to purge and sample MW-19.
0848 Begin purging MW-19 with the peristaltic pump
0925 Collect MW-19 for DRO/GRO/MBTEX - well stable after 1.40 gal (~1.0 WV)
- have to purchase batteries for YSI
- decon and mob to MW-17.
1013 Begin purging MW-17 with submersible pump
1045 Collect MW-17 for DRO/GRO/MBTEX - well stable after 1.50 gal (~1.40 WV)
- decon pump, pack up and mob to MW-6.
1116 Begin purging MW-6 with submersible pump
1145 Collect MW-6 for DRO/GRO/MBTEX - well stable after ~1.90 gal (~0.10 WV)
- decon pump, pack up and mob to MW-18.
1223 Begin purging MW-18 with submersible pump
1300 Collect MW-18 for DRO/GRO/MBTEX - well stable after 2.10 gal (~2.20 WV)
- decon pump pack up and mob to MW-20.
1337 Begin purging MW-20 with submersible pump
1415 Collect MW-20 for DRO/GRO/MBTEX - well stable after 2.10 gal (~1.85 WV)
- decon pump, pack up and mob to MW-23.
1503 Begin purging MW-23 with peristaltic pump
1545 Collect MW-23 for DRO/GRO/MBTEX - well stable after 1.50 gal (~1.20 WV)
- decon and pack up.
1610 Off-site.
1625 At BW Duluth office. Unload, fix YSI flow-through cell.

Waste Generated:

sample gloves, small lengths of tubing

Change in Conditions (if any):

None

Sample Summary:

Samples Taken: ☒ Yes ☐ No	No. of Samples 7 sets	COC # 09282015

Sample Destination:

Hold to deliver to Pace at a later date

Size and Type of Sample:

7 BW sets for DRO (2 1-liter HCl ambers); GRO (3 40 mL HCl VOAs) and MBTEX (3 40 mL HCl VOAs)

Signature [signature] Date 09/29/15

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-19
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/29/15

SAMPLER :	H. McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09282015

WELL DATA		PURGE DATA	
WELL ID # :	MW-19	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.04
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	22.50	PURGE START/ END TIME:	0848 / 0923
DEPTH TO WATER (TOC) :	13.80 9/29 = 13.87	SAMPLING BEGIN / END TIME:	0923/ 0938
WATER COLUMN HEIGHT :	8.70	YSI ID#:	21700103
WELL VOLUME (GAL) :	1.39	PUMP ID#:	27552101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB (NTU)	Water Lev (ft BTOC)
1	0853	0.20	9.79	0.704	2.22	6.65	136.4	0.3	14.21
2	0858	0.40	10.19	0.6669	0.88	6.67	97.7	0.1	14.45
3	0903	0.60	10.38	0.6667	0.80	6.71	96.6	0.2	14.47
4	0908	0.80	10.56	0.663	0.71	6.73	97.9	0.4	14.48
5	0913	1.0	10.55	0.6661	0.68	6.77	99.9	0.1	14.50
6	0918	1.20	10.61	0.6661	0.64	6.79	102.7	0.1	14.51
7	0923	1.40	10.58	0.6662	0.64	6.81	105.4	0.3	14.52
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14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.40	SAMPLE TIME :	0925
# OF WELL VOLUMES :	~1.0	ANALYTES:	6 40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	10.58	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	0.6662	PURGED DRY	YES (NO)
STAB. DO:	0.64	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.81	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	105.4	DUPLICATE SAMPLE?	Yes (No) (name/time/comments)
STAB. TURBIDITY:	0.3	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : moderate petro

SAMPLE DESCRIPTION COLOR: clear ODOR: moderate petro

OTHER : reuse tubing left in well

*turbidity would not calebrate this AM although it appears to be recording accurately. See calibration log for details

OBSERVATIONS :

WEATHER DATA TEMP : 240° SKY : clear/sunny WIND : 0-5 MPH

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-17
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/29/15

SAMPLER :	H. McGoon	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09282015

WELL DATA		PURGE DATA	
WELL ID # :	MW-17	PURGE METHOD:	Submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.05
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	23.85	PURGE START/ END TIME:	1013 / 1043
DEPTH TO WATER (TOC) :	17.09 9/29=17.20	SAMPLING BEGIN / END TIME:	1043 / 1050
WATER COLUMN HEIGHT :	6.76	YSI ID#:	21700103
WELL VOLUME (GAL) :	1.08	PUMP ID#:	27570101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU) *	Water Lev (ft BTOC)
1	1018	0.25	11.36	1.984	1.75	6.71	119.4	24.3	17.51
2	1023	0.50	11.19	2.034	0.94	6.63	104.5	6.9	17.65
3	1028	0.75	11.38	2.066	0.86	6.65	103.8	5.7	17.65
4	1033	1.0	11.26	2.097	0.80	6.65	105.9	3.3	17.66
5	1038	1.25	11.27	2.113	0.79	6.66	108.2	2.1	17.68
6	1043	1.50	11.20	2.130	0.76	6.666	110.3	0.7	17.70
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15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.50	SAMPLE TIME :	1045
# OF WELL VOLUMES :	~1.40	ANALYTES:	10-40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	11.20	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.130	PURGED DRY	YES (NO)
STAB. DO:	0.76	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.66	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	110.3	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	0.7	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : Slight petro

SAMPLE DESCRIPTION COLOR: clear ODOR: slight petro

OTHER : reuse tubing left in well

*Turbidity would not calibrate this AM although it appears to be reading accurately - See Calibration Log for details.

OBSERVATIONS :

WEATHER DATA TEMP : ~45° SKY : Clear/Sunny WIND : 0-5MPH

FIELD SAMPLING DATA SHEET

Bay West

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	RW-6
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/29/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09282015

WELL DATA		PURGE DATA	
WELL ID # :	RW-6	PURGE METHOD:	Submersible
CASING MATERIAL :	Steel	PURGE RATE (GPM):	~0.08
WELL DIAMETER (IN) :	6	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	17.90	PURGE START/ END TIME:	1116 / 1141
DEPTH TO WATER (TOC) :	5.25 9/29 = 5.31	SAMPLING BEGIN / END TIME:	1141 / 1150
WATER COLUMN HEIGHT :	12.65	YSI ID#:	21700103
WELL VOLUME (GAL) :	18.60	PUMP ID#:	27570101 WATER LEVEL ID# 230008/14

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU) *	Water Lev (ft BTOC)
1	1121	0.30	18.33	4.463	0.74	7.00	-107.6	30.3	5.65
2	1126	0.70	18.50	4.487	0.70	6.98	-101.4	15.1	5.70
3	1131	1.10	18.68	4.501	0.73	6.99	-101.0	9.1	5.70
4	1136	1.50	18.74	4.495	0.72	6.99	-101.2	7.8	5.70
5	1141	1.90	18.72	4.494	0.71	6.99	-101.8	6.2	5.71
6									
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14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.90	SAMPLE TIME :	1145
# OF WELL VOLUMES :	~0.10	ANALYTES:	6-40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	18.72	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	4.494	PURGED DRY	YES (NO)
STAB. DO:	0.71	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.99	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-101.8	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	6.2	MS / MSD:	ND

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR: moderate - strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: moderate - strong petro

OTHER : reuse tubing left in well

*Turbidity would not calibrate this AM although it appears to be reading accurately - See calibration log for details.

OBSERVATIONS :

WEATHER DATA TEMP : ~50° SKY : clear / sunny WIND : 0-5 MPH

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-18
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/29/15

SAMPLER :	A. McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09282015

WELL DATA		PURGE DATA	
WELL ID # :	MW-18	PURGE METHOD:	Submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.06
WELL DIAMETER (IN) :	2	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	20.15	PURGE START/ END TIME:	1223 / 1258
DEPTH TO WATER (TOC) :	14.17 9/29=14.18	SAMPLING BEGIN / END TIME:	1258 / 1306
WATER COLUMN HEIGHT :	5.98	YSI ID#:	21700103
WELL VOLUME (GAL) :	0.96	PUMP ID#:	27570101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU) *	Water Lev (ft BTOC)
1	1228	0.30	12.67	1.939	1.39	7.32	-150.6	27.0	14.22
2	1233	0.60	12.47	1.923	0.70	7.18	-146.5	18.0	14.24
3	1238	0.90	12.28	1.907	0.49	7.15	-147.4	12.1	14.25
4	1243	1.20	12.61	1.907	0.43	7.15	-144.8	9.8	14.25
5	1248	1.50	12.74	1.915	0.41	7.14	-141.2	8.5	14.25
6	1253	1.80	12.81	1.915	0.39	7.13	-137.1	6.6	14.25
7	1258	2.10	12.79	1.921	0.37	7.12	-136.7	6.6	14.25
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15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.10	SAMPLE TIME :	1300
# OF WELL VOLUMES :	2.2.20	ANALYTES:	6-40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	12.79	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.921	PURGED DRY	YES (NO)
STAB. DO:	0.37	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	7.12	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	-136.7	DUPLICATE SAMPLE?	Yes (No) (name/time/comments)
STAB. TURBIDITY:	6.6	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear w/ slight brown tint ODOR : moderate petro

SAMPLE DESCRIPTION COLOR: clear ODOR: moderate petro

OTHER : reuse tubing left in well

*turbidity meter not calibrate this AM but appears to be reading accurately - see calibration log for details

OBSERVATIONS :

WEATHER DATA TEMP : ~53° SKY : clear/sunny WIND : 0-5 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-20
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/29/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09282015

WELL DATA		PURGE DATA	
WELL ID # :	MW-20	PURGE METHOD:	Submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	0.06
WELL DIAMETER (IN) :	2	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	21.32	PURGE START/ END TIME:	1337 / 1412
DEPTH TO WATER (TOC) :	14.19 9/29=14.21	SAMPLING BEGIN / END TIME:	1412/ 1420
WATER COLUMN HEIGHT :	7.13	YSI ID#:	21700103
WELL VOLUME (GAL) :	1.14	PUMP ID#: 27570101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB (NTU)*	Water Lev (ft BTOC)
1	1342	0.30	11.30	1.977	2.04	6.75	81.0	36.6	14.21
2	1347	0.60	11.46	1.877	2.00	6.82	69.4	18.7	14.21
3	1352	0.90	11.51	1.811	1.98	6.81	64.5	12.3	14.21
4	1357	1.20	11.35	1.727	1.93	6.85	57.9	7.6	14.21
5	1402	1.50	11.55	1.705	2.89	6.85	51.5	5.9	14.21
6	1407	1.80	11.61	1.678	2.89	6.84	48.4	5.0	14.22
7	1412	2.10	11.71	1.647	2.96	6.83	44.2	4.6	14.22
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14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.10	SAMPLE TIME :	1415
# OF WELL VOLUMES :	21.85	ANALYTES:	6 40 mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	11.71	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.647	PURGED DRY	YES (NO)
STAB. DO:	2.96	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.83	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	44.2	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	4.6	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear w/ slight brwn tint ODOR : moderate petro

SAMPLE DESCRIPTION COLOR: clear ODOR: moderate petro

OTHER : reuse tubing left in well

*turbidity would not calibrate this AM although it appears to be reading accurately - see calibration log for details

OBSERVATIONS :

WEATHER DATA TEMP : 75° SKY : clear/sunny WIND : 0-5 MPH

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-23
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/29/15

SAMPLER :	H. McGowen	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09282015

WELL DATA		PURGE DATA	
WELL ID # :	MW-23	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.04
WELL DIAMETER (IN) :	2	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	22.77	PURGE START/ END TIME:	1503 / 1543
DEPTH TO WATER (TOC) :	14.85 9/29=14.94	SAMPLING BEGIN / END TIME:	1543 / 1558
WATER COLUMN HEIGHT :	7.92	YSI ID#:	21700103
WELL VOLUME (GAL) :	1.27	PUMP ID#: 27550101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1508	0.20	17.52	1.622	3.21	7.45	82.4	46.3	15.25
2	1513	0.40	15.13	1.432	3.12	7.17	75.7	20.7	15.30
3	1518	0.60	14.92	1.176	3.98	7.14	73.6	12.0	15.36
~~4~~	~~1523~~	~~0.80~~							
5	1528	0.90	15.02	0.810	4.33	7.28	75.9	4.6	15.45
6	1533	1.10	14.64	0.789	4.23	7.11	84.2	3.2	15.51
7	1538	1.30	14.61	0.794	4.25	7.11	85.6	3.9	15.57
8	1543	1.50	14.70	0.791	4.30	7.12	86.4	4.3	15.65
9									
10									
11									
12									
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14									
15									

* **

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.50	SAMPLE TIME :	1545
# OF WELL VOLUMES :	1.20	ANALYTES:	6 40mL HCl vOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	14.70	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	0.791	PURGED DRY	YES (NO)
STAB. DO:	4.30	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	7.12	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	86.4	DUPLICATE SAMPLE?	Yes (No) (name/time/comments)
STAB. TURBIDITY:	4.3	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : none

SAMPLE DESCRIPTION COLOR: clear ODOR: none

OTHER : reuse tubing left in well
*Turbidity wouldn't calibrate this AM but appears to be reading accurately - see calibration log for details !!

OBSERVATIONS :
** flow through cell was leaking - wouldn't fill to top - have to empty flow through cell and check "o" rings

WEATHER DATA TEMP : ~53° SKY : clear/sunny WIND : 0-5 MPH

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St. Paul, Minnesota 55103-1867

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1-800-279-0456

DAILY LOG

To be completed by Crew Leader — Page 1 of 2

Job Name: Current Holiday Station	Job No. J150495	Date 9/30/15
Project Manager Amanda Malaney	Bay West Crew H. McGown	

Personnel on Site ***(Client, Visitors, Bay West staff other than listed above)***
Sam Cook (BW - to learn site sampling)

Detailed description of work performed:

0700 At BW Duluth office. Calibrate YSI, load equipment.
0800 Depart BW Duluth office.
0815 On site. Set up to collect FB-2. Calibrate DO; set up decon station.
0830 Collect FB-2 for DRO/GRO/MBTEX. Set up around RW-2.
0835 Begin purging RW-2 with submersible pump
0935 Collect RW-2 for DRO/GRO/MBTEX - well stable after 2.30 gal (~0.30 WV)
- decon pump, pack up and mob to MW-12.
1007 Begin purging MW-12 with the peristaltic pump. Sam Cook (BW) on-site
1045 Collect MW-12 for DRO/GRO/MBTEX - well stable after 1.40 gal (~0.85 WV)
- decon, pack up and mob to MW-13.
1126 Begin purging MW-13 with peristaltic pump
1205 Collect MW-13 for DRO/GRO/MBTEX - well stable after 1.75 gal (~2.0 WV)
- decon, pack up and mob to MW-16.
1229 Begin purging MW-16 with submersible pump
1300 Collect MW-16 for DRO/GRO/MBTEX - well stable after 1.80 gal (~1.50 WV)
- decon pump, pack up & mob to MW-25
- also collected MW-16 dup (D-1) for same analytes with no time labeled
- Sam Cook mobs to RW-3 to sample with a hand bailer
1343 Begin purging MW-25 with peristaltic pump
1410 Same (collects RW-3 for DRO/GRO/MBTEX - well bailed dry at 13.50 gal.
1415 Collect MW-25 for DRO/GRO/MBTEX - well stable after 1.20 gal (~1.10 WV)
- decon, pack up and mob to MW-28
- Sam Cook departs the site to relinquish 5 coolers to Pace
1451 Begin purging MW-28 with submersible pump
1525 Collect MW-28 for DRO/GRO/VOCs - well stable after 1.70 gal (~
- also collect MW-28 duplicate (D-2) for same analytes (no time on label)

Waste Generated:
Sample gloves, disposable bailers, small lengths of tubing

Change in Conditions (if any):
None

Sample Summary:

Samples Taken: ☒ Yes ☐ No	No. of Samples 10 sets	COC # 09282015 + 09302015 + 09302015 02

Sample Destination:
Deliver most samples to Pace, hold 2nd half of days' samples to deliver to Pace at later date

Size and Type of Sample: 8 GW sets for DRO/GRO/MBTEX (2 1-liter HCl ambers + 6 40 mL HCl VOAs) and 2 GW sets for DRO/GRO/VOCs (2 1 liter HCl ambers and 6 40 mL HCl VOAs)

Signature [signature] Date 9/30/15

Bay West LLC
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
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1-800-279-0456

DAILY LOG

To be completed by Crew Leader

Job Name: Current Holiday Station	**Job No.** J150495	**Date** 9/30/15
Project Manager Amanda Malaney	**Bay West Crew** H. McGown	

Personnel on Site ***(Client, Visitors, Bay West staff other than listed above)***

S. Cook (BW)

Detailed description of work performed:

-decon pump pack up.
1550 Depart the Site. Stop for ice
1610 At BW Duluth office. Unpack equipment. Update paperwork.

Waste Generated:

Change in Conditions (if any):

Sample Summary:

Samples Taken: ☑ Yes ☐ No	No. of Samples	COC #
Sample Destination: see page 1		
Size and Type of Sample:		
Signature H. McGown	Date 9/30/15	

FIELD SAMPLING DATA SHEET

Bay West

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	RW-2
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/30/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09282015 + 09302015

WELL DATA		PURGE DATA	
WELL ID # :	RW-2	PURGE METHOD:	Submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.06-0.08
WELL DIAMETER (IN) :	4"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	19.10	PURGE START/ END TIME:	0855 / 0930
DEPTH TO WATER (TOC) :	8.23 9/30 = 8.40	SAMPLING BEGIN / END TIME:	0930 / 0937
WATER COLUMN HEIGHT :	10.87	YSI ID#:	21700104
WELL VOLUME (GAL) :	7.06	PUMP ID#:	27570101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	0900	0.40	11.50	4.987	0.74	6.73	-114.7	58.4	8.86
2	0905	0.80	12.02	5.037	0.70	6.63	-121.6	37.9	8.86
3	0910	1.10	12.44	5.093	0.606	6.58	-125.7	22.6	8.85
4	0915	1.40	12.57	5.136	0.64	6.54	-121.6	14.4	8.85
5	0920	1.70	12.61	5.176	0.606	6.53	-124.0	8.2	8.86
6	0925	2.0	12.54	5.130	0.71	6.52	-125.9	6.0	8.86
7	0930	2.30	12.58	5.124	0.69	6.52	-126.3	4.9	8.86
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.30	SAMPLE TIME :	0935
# OF WELL VOLUMES :	~0.30	ANALYTES:	6 40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	12.58	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	5.124	PURGED DRY	YES (NO)
STAB. DO:	0.69	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.52	FIELD BLANK?	(Yes) / No (name/time/comments) FB-2/0830/same analytes
STAB. ORP :	-126.3	DUPLICATE SAMPLE?	Yes (No) (name/time/comments)
STAB. TURBIDITY:	4.9	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear w/ yellow tint ODOR: moderate petro

SAMPLE DESCRIPTION COLOR: clear ODOR: moderate petro

OTHER : reuse tubing left in well

OBSERVATIONS :

WEATHER DATA TEMP : ~32° SKY : clear/sunny WIND : 0-5 MPH

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-12
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/30/15

SAMPLER :	H.McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09302015

WELL DATA		PURGE DATA	
WELL ID # :	MW-12	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.04
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	24.00	PURGE START/ END TIME:	1007 / 1042
DEPTH TO WATER (TOC) :	13.92 9/30=14.20	SAMPLING BEGIN / END TIME:	1042 / 1100
WATER COLUMN HEIGHT :	10.08	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.61	PUMP ID#:	27550101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1012	0.20	11.51	1.354	1.08	6.91	-58.3	1.1	15.45
2	1017	0.40	11.69	1.322	0.80	6.72	-76.4	0.8	15.87
3	1022	0.60	12.15	1.315	0.99	6.64	-83.4	0.4	16.30
4	1027	0.80	12.35	1.327	0.91	6.62	-89.3	0.1	16.70
5	1032	1.0	12.46	1.330	0.81	6.61	-92.5	0.5	17.00
6	1037	1.20	12.49	1.332	0.75	6.59	-94.1	0.1	17.32
7	1042	1.40	12.42	1.339	0.77	6.59	-95.5	1.0	17.51
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.40	SAMPLE TIME :	1045
# OF WELL VOLUMES :	~0.85	ANALYTES:	6-40mL HCl VOAs+ 2 1-liter HCl ambers
STAB. TEMP (°C) :	12.42	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.339	PURGED DRY	YES (NO)
STAB. DO:	0.77	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.59	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	-95.5	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	1.0	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : moderate petro

SAMPLE DESCRIPTION COLOR: clear ODOR: moderate petro

OTHER : reuse tubing left in well

OBSERVATIONS :

WEATHER DATA TEMP : ~38° SKY : clear/sunny WIND : 0-5MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-13
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/30/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09302015

WELL DATA		PURGE DATA	
WELL ID # :	MW-13	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.05
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	19.48	PURGE START/ END TIME:	1126 / 1201
DEPTH TO WATER (TOC) :	14.07 9/30=14.05	SAMPLING BEGIN / END TIME:	1201 / 1210
WATER COLUMN HEIGHT :	5.41	YSI ID#:	21700104
WELL VOLUME (GAL) :	0.87	PUMP ID#: 27550101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1131	0.25	13.63	2.458	2.08	7.32	-148.9	5.7	14.10
2	1136	0.50	13.03	2.362	1.03	7.05	-140.3	1.5	14.10
3	1141	0.75	12.88	2.228	1.11	6.92	-133.6	0.8	14.10
4	1146	1.0	12.90	2.171	1.05	6.85	-128.9	1.5	14.11
5	1151	1.25	12.98	2.158	0.90	6.81	-128.3	1.6	14.11
6	1156	1.50	12.92	2.144	0.87	6.78	-128.6	1.7	14.11
7	1201	1.75	12.92	2.138	0.91	6.77	-127.9	1.7	14.11
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.75	SAMPLE TIME :	1205
# OF WELL VOLUMES :	~2.0	ANALYTES:	(6-40mL HCl vOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	12.92	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.138	PURGED DRY	YES (NO)
STAB. DO:	0.91	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.77	FIELD BLANK?	Yes / ~~No~~ (name/time/comments)
STAB. ORP :	-127.9	DUPLICATE SAMPLE?	Yes / ~~NO~~ (name/time/comments)
STAB. TURBIDITY:	1.7	MS / MSD:	ND

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS :

WEATHER DATA TEMP : 75° SKY : clear / sunny WIND : 0-5 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-16
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/30/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09302201502

WELL DATA		PURGE DATA	
WELL ID # :	MW-16	PURGE METHOD:	Submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.06
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	20.26	PURGE START/ END TIME:	1229 / 1259
DEPTH TO WATER (TOC) :	12.91 9/30 = 13.05	SAMPLING BEGIN / END TIME:	1259 / 1313
WATER COLUMN HEIGHT :	7.35	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.18	PUMP ID#: 2757010	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1234	0.30	9.98	1.913	1.18	6.93	-46.6	40.9	13.28
2	1239	0.60	9.91	1.871	1.15	6.86	-56.7	4.1	13.53
3	1244	0.90	10.03	1.872	1.16	6.76	-61.0	0.8	13.52
4	1249	1.20	10.06	1.884	1.21	6.71	-65.1	0.3	13.54
5	1254	1.50	9.99	1.857	1.27	6.69	-70.2	0.6	13.56
6	1259	1.80	9.96	1.824	1.26	6.67	-73.8	0.8	13.60
7									
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.80	SAMPLE TIME :	1300
# OF WELL VOLUMES :	~1.50	ANALYTES:	6-40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	9.96	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.824	PURGED DRY	YES (NO)
STAB. DO:	1.26	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.67	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-73.8	DUPLICATE SAMPLE?	(Yes) / No (name/time/comments) D-1/no time/same analytes
STAB. TURBIDITY:	0.8	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR: strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS :

WEATHER DATA TEMP : ~60° SKY : clear/sunny WIND : 0-5 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-25
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/30/15

SAMPLER :	A. McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	093020150 2

WELL DATA		PURGE DATA	
WELL ID # :	MW-25	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	0.04
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	21.60	PURGE START/ END TIME:	1343 / 1413
DEPTH TO WATER (TOC) :	14.58 9/30=14.58	SAMPLING BEGIN / END TIME:	1413/ 1430
WATER COLUMN HEIGHT :	7.02	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.12	PUMP ID#: 27550101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1348	0.20	10.91	2.475	1.94	7.07	-108.9	9.0	14.72
2	1353	0.40	10.02	2.433	0.53	6.95	-132.3	0.5	14.72
3	1358	0.60	10.12	2.425	0.27	6.88	-137.2	1.0	14.73
4	1403	0.80	10.01	2.399	0.24	6.86	-138.3	1.2	14.73
5	1408	1.0	10.02	2.341	0.26	6.86	-141.5	1.3	14.75
6	1413	1.20	10.04	2.297	0.23	6.85	-143.3	1.5	14.75
7									
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.20	SAMPLE TIME :	1415
# OF WELL VOLUMES :	2/1.10	ANALYTES:	6 40 mL HCl VOAS + 2 1-liter HCl ambers
STAB. TEMP (°C) :	10.04	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.297	PURGED DRY	YES (NO)
STAB. DO:	0.23	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.85	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	-143.3	DUPLICATE SAMPLE?	Yes (No) (name/time/comments)
STAB. TURBIDITY:	1.5	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : moderate - strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: moderate - strong petro

OTHER : re-use tubing left in well

OBSERVATIONS :

WEATHER DATA TEMP : 260° SKY : clear / sunny WIND : 0-5 MPH

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	RW-3
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/30/15

SAMPLER :	S. Cook	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09302015

WELL DATA		PURGE DATA	
WELL ID # :	RW-3	PURGE METHOD:	hand bail
CASING MATERIAL :	PVC	PURGE RATE (GPM):	N/A
WELL DIAMETER (IN) :	4"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	19.56	PURGE START/ END TIME:	1340 / 1407
DEPTH TO WATER (TOC) :	6.60 9/30=6.71	SAMPLING BEGIN / END TIME:	1407 / 1417
WATER COLUMN HEIGHT :	12.96	YSI ID#:	N/A
WELL VOLUME (GAL) :	8.42	PUMP ID#: N/A	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1									
2									
3									
4									
5	Purge well dry at 13.50 gallons								
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA
TOTAL VOLUME (Gal) :	13.5	SAMPLE TIME : 1410
# OF WELL VOLUMES :	~1.60	ANALYTES: 6 40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	N/A	SAMPLE FILTERED: YES (NO)
STAB. CONDUCTANCE :		PURGED DRY (YES) NO
STAB. DO:		ANALYSIS: DRO/GRO/MBTEX
STAB. pH :		FIELD BLANK? Yes (No) (name/time/comments)
STAB. ORP :		DUPLICATE SAMPLE? Yes / (No) (name/time/comments)
STAB. TURBIDITY:		MS / MSD: NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR: strong petro

SAMPLE DESCRIPTION COLOR: clear - slightly yellow and turbid ODOR: strong petro

OTHER : low flow sampling completed at this well in the past has drawn free product into the well

OBSERVATIONS :

WEATHER DATA TEMP : ~60° SKY : clear/sunny WIND : 0-5 MPH

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-28
CITY, STATE, ZIP :	Duluth, MN	DATE :	9/30/15

SAMPLER :	H. McDown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	09302015D2

WELL DATA		PURGE DATA	
WELL ID # :	MW-28	PURGE METHOD:	Submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.06
WELL DIAMETER (IN) :	4	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	~~20.00~~ 22.10	PURGE START/ END TIME:	1451 / 1521
DEPTH TO WATER (TOC) :	15.67 9/30=15.70	SAMPLING BEGIN / END TIME:	1521 / 1535
WATER COLUMN HEIGHT :	6.43	YSI ID#:	21700104
WELL VOLUME (GAL) :	4.18	PUMP ID#: 27570101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1456	0.30	12.00	2.1634	0.60	6.80	-20.7	4.2	16.04
2	1501	0.50	12.19	2.1651	0.52	6.69	-28.6	4.0	16.21
3	1506	0.80	12.18	2.1658	0.49	6.60	-37.8	5.2	16.34
4	1511	1.10	12.07	2.1662	0.45	6.58	-40.8	5.4	16.40
5	1516	1.40	12.06	2.1660	0.43	6.56	-43.1	5.4	16.45
6	1521	1.70	12.00	2.1658	0.43	6.55	-43.5	5.4	16.50
7									
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.70	SAMPLE TIME :	1525
# OF WELL VOLUMES :	~0.40	ANALYTES:	6-40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	12.00	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.1658	PURGED DRY	YES (NO)
STAB. DO:	0.43	ANALYSIS:	DRO/GRO/VOCs
STAB. pH :	6.55	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	-43.5	DUPLICATE SAMPLE?	(Yes) No (name/time/comments) D-2/no time/same analytes
STAB. TURBIDITY:	5.4	MS / MSD:	ND

COMMENTS

PURGE START DESCRIP. COLOR: clear	ODOR : strong petro
SAMPLE DESCRIPTION COLOR: clear	ODOR: strong petro
OTHER : re-use tubing left in well	
OBSERVATIONS :	
WEATHER DATA TEMP : ~60° SKY : clear/sunny	WIND : 0-5 MPH

Bay West LLC
Five Empire Drive
St. Paul, Minnesota 55103-1867

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1-800-279-0456

DAILY LOG

To be completed by Crew Leader — Page 1 of 1

Job Name: Current Holiday Station	Job No. J150495	Date 10/01/15
Project Manager Amanda Malaney	Bay West Crew H. McGown	

Personnel on Site ***(Client, Visitors, Bay West staff other than listed above)***

None

Detailed description of work performed:

0715 At BW Duluth office. Calibrate YSI; load equipment
0810 Depart BW Duluth office.
0825 On-site. Set up on Sully MW-2; calibrate DO.
0840 Begin purging Sully MW-2 with peristaltic pump
0925 Collect Sully MW-2 for DRO/GRO/MBTEX - well stable after 1.60 gal (~1.25WV)
-decon, pack up and mob to Sully MW-1
0950 Begin purging Sully MW-1 with peristaltic pump
1050 Collect Sully MW-1 for DRO/GRO/MBTEX - well stable after 2.90 gal (~3.40 WV)
-decon and mob To Sully MW-3.
1106 Begin purging Sully MW-3 with peristaltic pump
1135 Collect Sully MW-3 for DRO/GRO/MBTEX - well stable after 1.25 gal (~1.15WV)
-decon, pack up and mob to MW-15.
-set up to collect FB-3
1205 Collect FB-3 for DRO/GRO/VOCs. Set up to purge MW-15.
1224 Begin purging MW-15 with submersible pump
1300 Collect MW-15 for DRO/GRO/MBTEX - well stable after 2.80 gal (~2.25WV)
-also collect MW-15 duplicate (D-3) for GRO/DRO/MBTEX (no time labeled)
-decon pump, pack up and mob to MW-27.
1350 Begin purging MW-27 with peristaltic pump
1430 Collect MW-27 for DRO/GRO/MBTEX - well stable after 2.10 gal (~0.50 WV)
-decon, pack up and mob to MW-26.
1501 Begin purging MW-26 with peristaltic pump
1545 Collect MW-26 for DRO/GRO/MBTEX - well stable after 2.40 gal (~1.45WV)
-decon, pack up equipment
1605 Depart the site
1625 At office. Unload equipment.

Waste Generated:

sample gloves, small lengths of tubing

Change in Conditions (if any):

None

Sample Summary:

Samples Taken: ☒ Yes ☐ No	No. of Samples 8 sets	COC # 093020152 + 10012015

Sample Destination:
hold to deliver to Pace tomorrow (10/2)

Size and Type of Sample:
7 GW sets for DRO/GRO/MBTEX and 1 GW set for DRO/GRO/VOCs (2 1-liter HCl ambers + 6 40 mL HCl VOAs for each)

Signature [signature] Date 10/01/15

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	Sully MW-2
CITY, STATE, ZIP :	Duluth, MN	DATE :	10/1/15

SAMPLER :	H. McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	093020150Z

WELL DATA		PURGE DATA	
WELL ID # :	Sully MW-2	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.04
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	19.10	PURGE START/ END TIME:	0840 / 0920
DEPTH TO WATER (TOC) :	11.08 10/1=11.15	SAMPLING BEGIN / END TIME:	0920 / 0935
WATER COLUMN HEIGHT :	8.02	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.28	PUMP ID#: 2755010	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	0845	0.20	14.80	3.352	2.36	6.90	156.2	2.4	11.34
2	0850	0.40	14.91	3.456	0.40	6.65	60.8	1.1	11.38
3	0855	0.60	14.90	3.518	0.30	6.54	-5.4	1.2	11.44
4	0900	0.80	15.31	3.650	0.24	6.49	-39.8	2.2	11.52
5	0905	1.0	15.19	3.702	0.21	6.47	-50.5	2.2	11.51
6	0910	1.20	14.99	3.741	0.23	6.47	-57.7	2.0	11.51
7	0915	1.40	14.93	3.779	0.24	6.47	-63.7	2.2	11.52
8	0920	1.60	14.88	3.791	0.23	6.47	-65.8	2.1	11.51
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.60	SAMPLE TIME :	0925
# OF WELL VOLUMES :	~1.25	ANALYTES:	6 40 mL ttel vOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	14.88	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	3.791	PURGED DRY	YES (NO)
STAB. DO:	0.23	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.47	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-65.8	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	2.1	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : Strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: Strong petro

OTHER : re-use tubing left in well

OBSERVATIONS :

WEATHER DATA TEMP : ~ 38° SKY : partly cloudy WIND : 0-5 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	Sully MW-1
CITY, STATE, ZIP :	Duluth, MN	DATE :	10/1/15

SAMPLER :	T. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	093020150 2

WELL DATA		PURGE DATA	
WELL ID # :	Sully MW-1	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.06
WELL DIAMETER (IN) :	2	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	15.51	PURGE START/ END TIME:	0930 / 1046
DEPTH TO WATER (TOC) :	10.15 10/1=10.22	SAMPLING BEGIN / END TIME:	1046 / 1057
WATER COLUMN HEIGHT :	5.36	YSI ID#:	21700104
WELL VOLUME (GAL) :	~0.86	PUMP ID#: 2755D101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1001	0.20	14.48	1.693	3.19	7.33	-16.1	102.3	10.31
2	1006	0.50	14.76	1.499	3.88	7.20	-31.4	47.1	10.35
3	1011	0.80	14.86	1.379	3.92	7.16	-24.6	12.8	10.35
4	1016	1.10	14.95	1.285	3.98	7.12	-15.4	8.2	10.35
5	1021	1.40	14.94	1.316	3.89	7.07	-6.1	2.3	10.36
6	1026	1.70	15.01	1.364	3.81	7.03	2.1	1.1	10.36
7	1031	2.0	15.04	1.406	3.73	6.99	9.6	2.4	10.37
8	1036	2.30	15.07	1.463	3.69	6.96	15.0	0.3	10.37
9	1041	2.60	15.02	1.489	3.62	6.94	17.9	0.8	10.38
10	1046	2.90	15.07	1.499	3.60	6.92	20.2	0.2	10.38
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.90	SAMPLE TIME :	1050
# OF WELL VOLUMES :	~3.40	ANALYTES:	6-40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	15.07	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.499	PURGED DRY	YES (NO)
STAB. DO:	3.60	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.92	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	20.2	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	0.2	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: slightly brown/turbid ODOR: strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS :

WEATHER DATA TEMP : ~45° SKY : clear-partly cloudy WIND : 0-5 MPH

FIELD SAMPLING DATA SHEET

Bay West

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	Sully MW-3
CITY, STATE, ZIP :	Duluth, MN	DATE :	10/1/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	093020150202

WELL DATA		PURGE DATA	
WELL ID # :	Sully MW-3	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	0.05
WELL DIAMETER (IN) :	2"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	17.51	PURGE START/ END TIME:	1106 / 1131
DEPTH TO WATER (TOC) :	10.83 10/1 = 11.10	SAMPLING BEGIN / END TIME:	1131 / 1145
WATER COLUMN HEIGHT :	6.68	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.07	PUMP ID#: 27530101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1111	0.25	14.76	4.649	0.34	6.85	-134.5	2.5	11.39
2	1116	0.50	14.77	4.713	0.30	6.81	-142.0	1.3	11.41
3	1121	0.75	14.75	4.751	0.29	6.79	-145.7	0.9	11.42
4	1126	1.0	14.76	4.774	0.25	6.78	-145.9	1.8	11.43
5	1131	1.25	14.75	4.763	0.25	6.77	-146.1	2.9	11.44
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.25	SAMPLE TIME :	1135
# OF WELL VOLUMES :	1.15	ANALYTES:	6-40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	14.75	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	4.763	PURGED DRY	YES (NO)
STAB. DO:	0.25	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.77	FIELD BLANK?	Yes / ~~No~~ (name/time/comments)
STAB. ORP :	-146.1	DUPLICATE SAMPLE?	Yes / ~~No~~ (name/time/comments)
STAB. TURBIDITY:	2.9	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR: strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS :

WEATHER DATA TEMP : ~52° SKY : clear WIND : 0-5 MPH

FIELD SAMPLING DATA SHEET

Bay West

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-15
CITY, STATE, ZIP :	Duluth, MN	DATE :	10/1/15

SAMPLER :	T. McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	0930201502 + 6100120015 (DUP)

WELL DATA		PURGE DATA	
WELL ID # :	MW-15	PURGE METHOD:	submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.08
WELL DIAMETER (IN) :	2	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	23.62	PURGE START/ END TIME:	1224 / 1259
DEPTH TO WATER (TOC) :	15.81 10/1=15.716	SAMPLING BEGIN / END TIME:	1259 / 1310
WATER COLUMN HEIGHT :	7.81	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.25	PUMP ID#:	27570101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1229	0.40	11.12	3.547	0.92	7.19	-135.2	4.0	16.50
2	1234	0.80	11.30	3.698	0.84	7.00	-134.5	3.2	16.55
3	1239	1.20	11.56	3.768	0.72	6.81	-157.6	1.8	16.61
4	1244	1.60	11.87	3.803	0.71	6.77	-161.2	2.1	16.65
5	1249	2.00	11.94	3.797	0.65	6.73	-165.0	2.0	16.67
6	1254	2.40	11.97	3.780	0.62	6.70	-164.0	2.3	16.70
7	1259	2.80	11.90	3.769	0.60	6.69	-162.9	2.2	16.72
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.80	SAMPLE TIME :	1300
# OF WELL VOLUMES :	~2.25	ANALYTES:	6 40 mL HCl VOAs + 2 1-liter ambers
STAB. TEMP (°C) :	11.90	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	3.769	PURGED DRY	YES (NO)
STAB. DO:	0.60	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.69	FIELD BLANK?	(Yes) No (name/time/comments) FB-3/1205/DRO,GRO VOCs
STAB. ORP :	-162.9	DUPLICATE SAMPLE?	(Yes) / No (name/time/comments) D-3/no time/same analytes
STAB. TURBIDITY:	2.2	MS / MSD:	ND

COMMENTS

PURGE START DESCRIP. COLOR:	clear ODOR : strong petro
SAMPLE DESCRIPTION COLOR:	clear ODOR: strong petro
OTHER :	reuse tubing left in well
OBSERVATIONS :	
WEATHER DATA TEMP :	25° SKY : clear/sunny WIND : 0-5 MPH

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-27
CITY, STATE, ZIP :	Duluth, MN	DATE :	10/1/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	0930201502

WELL DATA		PURGE DATA	
WELL ID # :	MW-27	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.06
WELL DIAMETER (IN) :	4"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	19.86	PURGE START/ END TIME:	1350 / 1425
DEPTH TO WATER (TOC) :	13.69 10/1=13.65	SAMPLING BEGIN / END TIME:	1425 1438
WATER COLUMN HEIGHT :	6.17	YSI ID#:	21700104
WELL VOLUME (GAL) :	4.01	PUMP ID#: 27550101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1355	0.30	12.45	2.861	0.44	7.34	-102.0	3.4	13.73
2	1400	0.60	12.27	2.791	0.28	7.07	-125.4	2.0	13.73
3	1405	0.90	12.20	2.775	0.26	7.00	-131.2	0.9	13.74
4	1410	1.20	12.29	2.765	0.24	6.89	-134.5	1.4	13.74
5	1415	1.50	12.20	2.763	0.23	6.84	-135.8	1.5	13.75
6	1420	1.80	12.18	2.754	0.25	6.80	-136.4	1.3	13.75
7	1425	2.10	12.13	2.733	0.27	6.77	-136.3	1.3	13.75
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.10	SAMPLE TIME :	1430
# OF WELL VOLUMES :	~0.50	ANALYTES:	6-40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	12.13	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.733	PURGED DRY	YES (NO)
STAB. DO:	0.27	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.77	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-136.3	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	1.3	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS :

WEATHER DATA TEMP : ~55° SKY : clear/sunny WIND : 0-5 MPH

Bay West

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-26
CITY, STATE, ZIP :	Duluth, MN	DATE :	10/1/15

SAMPLER :	H. McGowan	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	0930201502

WELL DATA		PURGE DATA	
WELL ID # :	MW-26	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.06
WELL DIAMETER (IN) :	4"	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	19.05	PURGE START/ END TIME:	1501 / 1541
DEPTH TO WATER (TOC) :	8.81 10/1 = 8.67	SAMPLING BEGIN / END TIME:	1541 / 1555
WATER COLUMN HEIGHT :	10.24	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.64	PUMP ID#:	27550101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	1506	0.30	13.44	1.953	0.84	6.91	-80.1	12.4	9.02
2	1511	0.60	13.54	1.934	0.40	6.77	-102.0	2.4	9.06
3	1516	0.90	13.50	1.931	0.36	6.71	-108.4	1.8	9.11
4	1521	1.20	13.49	1.929	0.31	6.67	-112.3	0.7	9.14
5	1526	1.50	13.46	1.930	0.27	6.65	-114.5	0.6	9.17
6	1531	1.80	13.39	1.931	0.25	6.63	-116.2	0.7	9.18
7	1536	2.10	13.39	1.930	0.24	6.62	-117.5	0.6	9.19
8	1541	2.40	13.41	1.931	0.22	6.61	-117.9	0.8	9.20
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.40	SAMPLE TIME :	1545
# OF WELL VOLUMES :	1.45	ANALYTES:	6-40 mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	13.41	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	1.931	PURGED DRY	YES (NO)
STAB. DO:	0.22	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.61	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	-117.9	DUPLICATE SAMPLE?	Yes (No) (name/time/comments)
STAB. TURBIDITY:	0.8	MS / MSD:	ND

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR : strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: strong petro

OTHER : re-use tubing left in well

OBSERVATIONS :

WEATHER DATA TEMP : ~50° SKY : clear/sunny WIND : 5-10 MPH

Bay West LLC
Five Empire Drive
St. Paul, Minnesota 55103-1867

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DAILY LOG

To be completed by Crew Leader Page 1 of 1

Job Name: Current Holiday Station	Job No. J150495	Date 10/2/15
Project Manager Amanda Malaney	Bay West Crew H. McGown	

Personnel on Site ***(Client, Visitors, Bay West staff other than listed above)***

None

Detailed description of work performed:

0715 At BW Duluth office. Calibrate YSI, load equipment
0805 Depart BW Duluth office.
0815 On-site. Calibrate DO while set up on MW-9.
0830 Begin purging MW-9 with peristaltic pump
0910 Collect MW-9 for DRO/GRO/MBTEX - well stable after 1.40 gal (~1.05 WV)
-decon, pack up and mob to MW-8
0930 Begin purging MW-8 with ~~peristaltic~~ submersible pump
1015 Collect MW-8 for DRO/GRO/MBTEX - well stable after 2.80 gal (~1.50WV)
-decon pump and pack up.
1030 Depart the site. Stop to purchase ice to top off all coolers
1100 Relinquish 5 coolers to Pace.
1125 At BW Duluth office - unload and put away equipment.

Waste Generated:

Sample gloves, small lengths of tubing

Change in Conditions (if any):

None

Sample Summary:

Samples Taken: ☒ Yes ☐ No	No. of Samples 2 sets	COC # 10012015

Sample Destination:

Deliver all samples to Duluth Pace

Size and Type of Sample:

2 BW sets for DRO/GRO/MBTEX (2 1-liter HCl ambers & 16 40mL HCl VOAs each)

Signature _____ Date 10/2/15

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-9
CITY, STATE, ZIP :	Duluth, MN	DATE :	10/2/15

SAMPLER :	H. MCGOWN	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	10012015

WELL DATA		PURGE DATA	
WELL ID # :	MW9	PURGE METHOD:	peristaltic
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.04
WELL DIAMETER (IN) :	2	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	20.19	PURGE START/ END TIME:	0830 / 0905
DEPTH TO WATER (TOC) :	11.87 10/2=11.94	SAMPLING BEGIN / END TIME:	0905T 0920
WATER COLUMN HEIGHT :	8.32	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.33	PUMP ID#:	2755D101 WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	0835	0.25	12.25	2.486	1.25	6.91	-97.4	6.9	12.72
2	0840	0.40	12.37	2.491	0.98	6.74	-131.2	7.7	13.01
3	0845	0.60	12.64	2.496	0.92	6.68	-139.6	1.7	13.10
4	0850	0.80	12.83	2.505	0.96	6.65	-143.9	2.5	13.13
5	0855	1.0	12.73	2.508	0.91	6.64	-147.3	2.5	13.17
6	0900	1.20	12.78	2.505	0.95	6.63	-148.9	2.1	13.20
7	0905	1.40	12.81	2.506	0.93	6.62	-149.7	1.4	13.22
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	1.40	SAMPLE TIME :	0910
# OF WELL VOLUMES :	1.05	ANALYTES:	6 - 40mL HCl VOAs + 2 1-liter HCl ambers
STAB. TEMP (°C) :	12.81	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	2.506	PURGED DRY	YES (NO)
STAB. DO:	0.93	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.62	FIELD BLANK?	Yes / (No) (name/time/comments)
STAB. ORP :	-149.7	DUPLICATE SAMPLE?	Yes / (No) (name/time/comments)
STAB. TURBIDITY:	1.4	MS / MSD:	ND

COMMENTS

PURGE START DESCRIP. COLOR: clear ODOR: Strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: Strong petro

OTHER : re-use tubing left in well

OBSERVATIONS : Well historically has had rapid water level drop throughout purging

WEATHER DATA TEMP : ~30° SKY : clear/sunny WIND : 0-5 MPH

FIELD SAMPLING DATA SHEET

PROJECT NAME :	Holiday Station	PROJECT # :	J150495
ADDRESS :	5430 Grand Ave.	SAMPLE # :	MW-8
CITY, STATE, ZIP :	Duluth, MN	DATE :	10/2/15

SAMPLER :	H. McGown	ANALYTICAL LABORATORY :	Pace
COMPANY :	BAY WEST	CHAIN OF CUSTODY # :	10012015

WELL DATA		PURGE DATA	
WELL ID # :	MW-8	PURGE METHOD:	Submersible
CASING MATERIAL :	PVC	PURGE RATE (GPM):	~0.08
WELL DIAMETER (IN) :	2	SAMPLE METHOD:	SAME
WELL DEPTH (FT) :	23.12	PURGE START/ END TIME:	0936 / 1011
DEPTH TO WATER (TOC) :	11.48 10/2=11.84	SAMPLING BEGIN / END TIME:	1011 / 1020
WATER COLUMN HEIGHT :	11.64	YSI ID#:	21700104
WELL VOLUME (GAL) :	1.86	PUMP ID#: 27570101	WATER LEVEL ID# 23000814

VOLUME CONVERSION FACTOR : .16 - 2" .65 - 4" 1.47 - 6" 2.61 - 8"

STABILIZATION PARAMETERS

READING #	TIME	VOLUME (gal)	TEMP (°C)	COND (umhos/cm)	D.O. (mg/L)	pH	Eh/ORP (mV)	TURB. (NTU)	Water Lev (ft BTOC)
1	0941	0.40	14.08	0.766	0.82	7.08	-58.8	28.2	11.98
2	0946	0.80	15.36	0.861	0.76	6.78	-70.4	8.4	12.10
3	0951	1.20	15.52	0.909	0.71	6.70	-74.0	4.2	12.15
4	0956	1.60	15.666	0.949	0.69	6.62	-78.5	1.1	12.19
5	1001	2.0	15.67	0.976	0.68	6.59	-81.5	1.2	12.22
6	1006	2.40	15.76	0.971	0.666	6.58	-84.1	0.8	12.25
7	1011	2.80	15.71	0.982	0.65	6.56	-85.5	0.4	12.28
8									
9									
10									
11									
12									
13									
14									
15									

STABILIZATION DATA		SAMPLING DATA	
TOTAL VOLUME (Gal) :	2.80	SAMPLE TIME :	1015
# OF WELL VOLUMES :	1.50	ANALYTES:	6-40 mL Hcl vials + 2 1-liter Hcl ambers
STAB. TEMP (°C) :	15.71	SAMPLE FILTERED:	YES (NO)
STAB. CONDUCTANCE :	0.982	PURGED DRY	YES (NO)
STAB. DO:	0.65	ANALYSIS:	DRO/GRO/MBTEX
STAB. pH :	6.56	FIELD BLANK?	Yes (No) (name/time/comments)
STAB. ORP :	-85.5	DUPLICATE SAMPLE?	Yes (No) (name/time/comments)
STAB. TURBIDITY:	0.4	MS / MSD:	NO

COMMENTS

PURGE START DESCRIP. COLOR: black ODOR : Strong petro

SAMPLE DESCRIPTION COLOR: clear ODOR: Strong petro

OTHER : reuse tubing left in well

OBSERVATIONS :

WEATHER DATA TEMP : 238° SKY : clear/sunny WIND : 0-5 MPH

Bay West
Customer-Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Report To: Amanda Malaney	Attention: accountspayable@baywest.com	Facility_Name: Current Holiday Station	Page 1 of 2
Address: 5 Empire Drive	Copy To:	Company Name: Bay West LLC	Facility_Code: Holiday Station	
St. Paul, MN 55103		Address: SAME	Facility_ID:	COC# 09282015
Email To: amandam@baywest.com	Purchase Order No.: 105852	Lab Quote Reference:	Subfacility_code:	
Phone: 651-291-3495	Project Name: Current Holiday Station	Lab Project Manager: Yemi Odujole		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J150495.01			

ITEM #	Section E Required Client Information: Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	Codes MATRIX CODE: Drinking Water DW, Water ST, Waste Water W, Product W, Soil/Solid P, Oil SL, Wipe OL, Air WP, Tissue AR, Other TS, OT	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO	GRO/BTEX/MTBE	VOCs	Comments
1	MW-21	MW-21		W	G	9/28/15	1230	8				8					X		X		
2	RW-5	RW-5		W	G	9/28/15	1345	8				8					X		X		
3	RW-1	RW-1		W	G	9/28/15	1450	8				8					X		X		
4	MW-22	MW-22		W	G	9/28/15	1545	8				8					X		X		
5	FB-1	FB-1		W	G	9/29/15	0835	8				8					X		X		
6	MW-19	MW-19		W	G	9/29/15	0925	8				8					X		X		
7	MW-17	MW-17		W	G	9/29/15	1045	8				8					X		X		
8	RW-6	RW-6		W	G	9/29/15	1145	8				8					X		X		
9	MW-18	MW-18		W	G	9/29/15	1300	8				8					X		X		
10	MW-20	MW-20		W	G	9/29/15	1415	8				8					X		X		
11	MW-23	MW-23		W	G	9/29/15	1545	8				8					X		X		
12	FB-2	FB-2		W	G	9/30/15	0830	3				8					X		X		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp (°C)	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
STATE ADMIN CONTRACT PROJECT		9-30-15	1450		9/30/15	1450				
MPCA WO # 3000014635										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hillary McGown

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 09/28/15

CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	Section D EQuIS Information:	
Company: Bay West LLC	Report To: Amanda Malaney	Attention: accountspayable@baywest.com	Facility_Name: Current Holiday Station	Page 2 of 2
Address: 5 Empire Drive	Copy To:	Company Name: Bay West LLC	Facility_Code: Holiday Station	
St. Paul, MN 55103		Address: SAME	Facility_ID:	COC# 09302015
Email To: amandam@baywest.com	Purchase Order No.: 105852	Lab Quote Reference:	Subfacility_code:	
Phone: 651-291-3495	Project Name: Current Holiday Station	Lab Project Manager: Yemi Odujole		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J150495.01			

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

ITEM #	Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO	GRO/BTEX/MTBE	VOCs	BTEX/MTBE							Comments
1	RW-2	RW-2	W	G	9/30/15	0935	8				8					X		X									
2	MW-12	MW-12	W	G	9/30/15	1045	8				8					X		X									
3	MW-13	MW-13	W	G	9/30/15	1205	8				8					X		X									
4	RW-3	RW-3	W	G	9/30/15	1410	8				8					X		X									
5	GRO Trip Blank	← LAB PREPARED →					2				2						X										
6	MBTEX Trip Blank	← LAB PREPARED →					2				2									X							
7																											
8																											
9																											
10																											
11																											
12																											

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
STATE ADMIN CONTRACT PROJECT		9-30-15	1450		9/30/15	1450	
MPCA WO # 3000014635							

SAMPLE CONDITIONS: Temp (°C); Received on Ice (Y/N); Custody Sealed Cooler (Y/N); Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hilary McGown

SIGNATURE of SAMPLER:

DATE Signed (MM/DD/YY): 09/30/15

Bay West
Customer-Focused Environmental & Natural Solutions

CHAIN-OF-CUSTODY / Analytical Request Document

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Address: 5 Empire Drive	Copy To:	Company Name: Bay West LLC	Facility_Code: Holiday Station	
St. Paul, MN 55103		Address: SAME	Facility_ID:	COC# 0930201502
Email To: amandam@baywest.com	Purchase Order No.: 105852	Lab Quote Reference:	Subfacility_code:	
Phone: 651-291-3495	Project Name: Current Holiday Station	Lab Project Manager: Yemi Odujole		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J150495.01			

ITEM #	Section E Required Client Information: Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	Codes MATRIX CODE	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO	GRO/BTEX/MTBE	VOCs	Comments
1	MW-16	MW-16	W	G	9/30/15	1300	8					8					X		X		
2	MW-25	MW-25	W	G	9/30/15	1415	8					8					X		X		
3	MW-28	MW-28	W	G	9/30/15	1525	8					8					X	X		X	
4	D-1	D-1	W	G	9/30/15	—	8					8					X		X		
5	D-2	D-2	W	G	9/30/15	—	8					8					X	X		X	
6	Sully MW-2	Sully MW-2	W	G	10/1/15	0925	8					8					X		X		
7	Sully MW-1	Sully MW-1	W	G	10/1/15	1050	8					8					X		X		
8	Sully MW-3	Sully MW-3	W	G	10/1/15	1135	8					8					X		X		
9	FB-3	FB-3	W	G	10/1/15	1205	8					8					X	X		X	
10	MW-15	MW-15	W	G	10/1/15	1300	8					8					X		X		
11	MW-27	MW-27	W	G	10/1/15	1430	8					8					X		X		
12	MW-26	MW-26	W	G	10/1/15	1545	8					8					X		X		

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
STATE ADMIN CONTRACT PROJECT	[signature] / BW	10/2/15	1100	[signature]	10/2/15	1100	
MPCA WO # 3000014635							

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Hillary McGowan		
SIGNATURE of SAMPLER:	[signature]	DATE Signed (MM/DD/YY):	09/30/15

Temp (°C)	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

Bay West
Customer-Focused Environmental & Industrial Solutions

CHAIN-OF-CUSTODY / Analytical Request Document

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St. Paul, MN 55103		Address: SAME	Facility_ID:	COC# 10012015
Email To: amandam@baywest.com	Purchase Order No.: 105852	Lab Quote Reference:	Subfacility_code:	
Phone: 651-291-3495	Project Name: Current Holiday Station	Lab Project Manager: Yemi Odujole		Site Location STATE: MN
Requested Due Date/TAT: standard	Project Number: J150495.01			

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

ITEM #	Sample Location ID (sys_loc_code)	Sample ID (sys_sample_code)	MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	Collection DATE	Collection Time	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Requested Analysis: DRO	GRO	GRO/BTEX/MTBE	VOCs	Comments
1	D-3	D-3	W	G	10/1/15	—	8				8					X		X		
2	MW-9	MW-9	W	G	10/2/15	0910	8				8					X		X		
3	MW-8	MW-8	W	G	10/2/15	1015	8				8					X		X		
4	VOC Trip Blank	← LAB PREPARED →					2				2								X	
5	GRO Trip Blank	← LAB PREPARED →					2				2						X			
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
STATE ADMIN CONTRACT PROJECT	BW	10/2/15	1100		10/2/15	1100	
MPCA WO # 3000014635							

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	Hillary McBown		
SIGNATURE of SAMPLER:		DATE Signed (MM/DD/YY):	10/01/15

Temp (°C)	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

GROUNDWATER INSTRUMENT CALIBRATION FORM

Bay West
Customer-Focused Environmental & Industrial Solutions

PROJECT: Holiday Station
PROJECT #: J150495
PERSONNEL: H. McBown
STARTING DATE: 9/28/15

DATE	TIME		INSTRUMENT / MODEL #	pH			COND. (mS)	ORP (mV)	TURBIDITY (NTU)		DO (mg/L)	DO (%)	DO charge	Comments
Standard Cal. Concentrations →				7	10	Charge	1.000	240	0	126				
9/28/15	—	pre	6820 21700103	6.99	10.05		0.901	246.2	-3.5	*	8.78	97.0		BP = 745.10
9/28/15	—	post		7.00	10.00		1.000	240.0	0.0	*	8.87	98.0		
	Standard Cal. Concentrations →			7	10	Charge	1.000	240	0	126				
9/29/15	—	pre	6820 21700103	6.98	10.02		0.917	238.7	-2.1	*	10.90	103.4		BP = 752.7
9/29/15	—	post		7.00	10.00		1.000	240.0	0.0	*	10.45	99.0		
	Standard Cal. Concentrations →			7	10	Charge	1.000	240	0	126				
9/30/15	—	pre	6820	7.12	9.82		0.966	250.5	1.3	118.5	11.80	111.2		BP = 752.5
9/30/15	—	post	21700104	7.00	10.00		1.000	240.0	0.0	126.0	10.81	99.0		DO membrane was changed prior to calibration
	Standard Cal. Concentrations →			7	10	Charge	1.000	240	0	126				
10/1/15	—	pre	6820	7.05	9.88		0.984	247.7	0.6	122.0	10.59	104.6		BP = 756.7
10/1/15	—	post	21700104	7.00	10.00		1.000	240.0	0.0	126.0	10.07	99.6		
	Standard Cal. Concentrations →			7	10	Charge	1.000	240	0	126				
10/2/15	—	pre	6820	6.95	9.93		0.989	230.1	-0.2	118.9	11.12	109.9		BP = 759.0
10/2/15	—	post	21700104	7.00	10.00		1.000	240.0	0.0	126.0	10.11	99.9		

Notes:
- "Pre" refers to the instrument readings during calibration right before calibration is entered/accepted.
- "Post" refers to the instrument readings just after calibration has been accepted. "Post" calibration can also refer to instrument readings taken at end of sampling day to document any instrument "drift" in readings.

*turbidity will not read the 126 solution, a new wiper was installed, the probe was removed and re-installed but still would not read the 126 solution. The sensor appears to be reading accurately although it would not calibrate

-All DO calibrations are done on-site.

Docs# 76050

Bay West LLC
5 Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY DIARY

To be completed by Crew Leader *page 1of1*

Job Name	Job No.	Date
Current Holiday Station	J140399	6/8/2015
Project Manager Amanda Malaney	**Bay West Crew** Sam Cook	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*

Traut personnel (1) Arrowhead Concrete Personel (1)

Detailed description of work performed:

1015 load truck & leave Bay West
1037 on-site @ Holiday
1135 Traut arrives, hold tailgate safety meeting, walk site & Discuss plan
1200 Start work at RW-2
1220 Traut worker leaves site to rent new jack hammer because the rental compressor is not powerfull enough to run their jack hammer
1310 Traut back on site and resumes work on RW-2
1325 Finished breaking up pad @ RW-2 move to MW-9
1330 start breaking up pad @ MW-9
1410 Finished @ MW-9, starting to break up pad @ MW-22
1430 SG-15's Pad coming apart as MW-9 is removed. made field call to pull SG-15's pad as well. Concrete came out by hand
1445 Pads completely broken up, Concrete on its way
1534 Concrete truck arrives, pouring pad @ MW-9 (Arrowhead Concrete)
1542 Pouring pad @ MW-2/SB-15
1552 Pouring RW-2

Waste Generated:

Change in Conditions (if any):

Sample Summary:

Samples Taken: ☐ Yes ☐ No	No. of Samples:	COC #:

Sample Destination:

Size and Type of Sample:

Signature _____ *Date* _____

Docs # PROJECT MANAGER/FILE template: Docs #116796

Bay West LLC
5 Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY DIARY

To be completed by Crew Leader *page 1of1*

Job Name	Job No.	Date
Current Holiday Store	J140399	6/8/2015
Project Manager	**Bay West Crew**	
Amanda Malaney	Sam Cook	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*

Detailed description of work performed:

1600 All pouring is done. Arrowhead Concrete off-site. Trant finishing work on all 3 pads
1625 Trant is done with pads. Loading up / cleaning up gear
1630 Trant off site. tape off pads with caution tape
1645 Bay West off-site
1700 at Bay West office. Unload

SC

Waste Generated:

Concrete chuncks, well casings/tops

Change in Conditions (if any):

3 new pads

Sample Summary:

Samples Taken: ☐ Yes ☒ No	No. of Samples: N/A	COC #: N/A

Sample ~~Destination~~:

Size and Type of Sample:

Signature Sam Cook *Date* 6/8/15

Docs # PROJECT MANAGER/FILE template: Docs #116796

ELEVATION SURVEY FIELD NOTES

Job No. 3140399.4 Date: 6/9/15 Checked By: _____

Surveyor: BWF Rod Person: Sam C.

Note: T.B.M description and sketch on other side

Remarks: TBM is RW-4 (TOC)

No. of Turning Points: 1 Error of closure 0.01 ft.

Station	B.S. +	H.I.	F.S. —	Elevation	Contour Elevation	Explanation
RW-4 (TOC)	6.17	643.14		636.97		
MW-22g			5.64	637.50		
MW-22 TOC			5.83	637.31		
MW-9g			5.23	637.91		
MW-9 TOC			5.33	637.81		
TP-1						
MW-9 (TP-1)	5.40	643.21				
RW-2g			6.78	636.43		
RW-2 TOC			6.84	636.37		
BM (RW-4)			6.23	636.98		

Bay West
Customer-Focused Environmental & Industrial Solutions

ELEVATION SURVEY FIELD NOTES

Job No. J150495 Date: 11/18/15 Checked By: _____

Surveyor: H. McGowan Rod Person: S. Cook

Note: T.B.M. description and sketch on other side

Remarks: BM is MW-17 TOC

No. of Turning Points: 1 Error of Closure 0.01 ft.

Station	B.S.	H.I.	F.S.	Elevation	Contour Elevation	Explanation
BM/MW-17	2.61	643.27		640.66		
MW-28toc			4.06	639.21		
MW-28g			6.40	636.87		
TP-1	5.89	642.76				
BM/MW-17			2.09	640.67		

DAILY LOG

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Holiday Station **Job No.: J140399.1** **Date: 3/5/15**

Project Manager	**Amanda Malaney**	Site Supervisor:	**Hillary McGown**

Other Personnel on Site (Other Bay West Staff, Client, Regulators, Visitors) **None**

Detailed chronology and description of work performed:

0945: Preparation/loading.
1000: Leave Bay West office for the Site.
1010: On-site to collect depth to product/water levels:

Well ID	Depth to LNAPL (BTOC)	Depth to Water (BTOC)
MW-9	NA	13.35
MW-10	14.52	15.43
MW-26	*	*
MW-27	NA	14.76
MW-28	NA	16.91
RW-3	NA	10.60
RW-4	11.20	11.27

*** = well is frozen above well plug; cannot chisel through ice to access well for product levels**

- Do not recovery LNAPL from any wells.

1100: Leave the Site for Bay West office.
1110: Back at office to unload, update LNAPL table in 2015 AMR Tables file, complete mileage log, and daily log.

Waste Generated:

Sample gloves

Change in Conditions (if any):

None.

Sample Summary:

Samples Taken: ☐Yes ☒No	No. of Samples:	COC #:
Sample Destination:		
Preparer Signature: Hillary McGown	Date: **03/05/15**	

Docs # 1682282

DAILY LOG

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Holiday Station **Job No.: J140399.1** **Date: 4/02/15**

Project Manager	**Amanda Malaney**	Site Supervisor:	**Hillary McGown**

Other Personnel on Site (Other Bay West Staff, Client, Regulators, Visitors) **None**

Detailed chronology and description of work performed:

0845: Preparation/loading.
0900: Leave Bay West office for the Site.
0910: On-site to collect depth to product/water levels:

Well ID	Depth to LNAPL (BTOC)	Depth to Water (BTOC)
MW-9	NA	13.41
MW-10	14.52	15.47
MW-26	NA	10.75
MW-27	NA	14.88
MW-28	NA	16.98
RW-3	NA	7.70
RW-4	11.15	11.17

0955: Begin LNAPL removal phase by hand-bailing MW-10. This is being done to calculate an LNAPL recharge rate to determine if a LNAPL Pilot Test is feasible.
1040: Begin LNAPL recharge phase – monitor depth to LNAPL and GW until mostly recharged.
1220: Begin LNAPL removal phase by hand-bailing MW-10 again to verify the recharge rate.
1235: Begin LNAPL recharge phase again – monitor depth to LNAPL and GW until mostly recharged.
1405: LNAPL has mostly recharged to initial volume. Pack up equipment. Place approximately 1.70 gallons of LNAPL bailed from MW-10 in the 55-gallon drum on-site. See LNAPL Recovery Test tables for details.
1415: Leave the Site for Bay West office.
1425: Back at office to unload.

Waste Generated:

Sample gloves.

Change in Conditions (if any):

None.

Sample Summary:

Samples Taken: ☐Yes ☒No	No. of Samples:	COC #:
Sample Destination:		
Preparer Signature: Hillary McGown	Date: **4/02/15**	

Docs # 1682282

DAILY LOG

Page 1 of 1

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Holiday Station **Job No.: J140497.5** **Date: 5/7/2015**

Project Manager	**Amanda Malaney**	Site Supervisor:	**Sam Cook**

Other Personnel on Site (Other Bay West Staff, Client, Regulators, Visitors) **None**

Detailed chronology and description of work performed:

0845: Preparation/loading.
1015: Leave Bay West office for the Site.
1025: On-site to collect depth to product/water levels:

Well ID	Depth to LNAPL (BTOC)	Depth to Water (BTOC)
MW-9	NA	12.95
MW-10	NA	14.05
MW-26	NA	10.21
MW-27	NA	14.82
MW-28	NA	17.05
RW-3	NA	8.82
RW-4	10.39	10.43

*** = well is frozen above well plug; cannot chisel through ice to access well for product levels**

- Do not recovery LNAPL from any wells.

1100: Leave the Site for Bay West office.
1110: Back at office to unload, update LNAPL table in 2015 AMR Tables file, complete mileage log, and daily log.

Waste Generated:

Sample gloves

Change in Conditions (if any):

None.

Sample Summary:

Samples Taken: ☐Yes ☒No	No. of Samples:	COC #:
Sample Destination:		
Preparer Signature: *Sam Cook*	Date: **5/7/2015**	

Docs # 1682282

DAILY LOG

Page 1 of 1

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Holiday Station **Job No.: J140399** **Date: 6/2/2015**

Project Manager	**Amanda Malaney**	Site Supervisor:	**Sam Cook**

Other Personnel on Site (Other Bay West Staff, Client, Regulators, Visitors) **None**

Detailed chronology and description of work performed:

0900: Preparation/loading.
0945: Leave Bay West office for the Site.
1000: On-site to collect depth to product/water levels:

Well ID	Depth to LNAPL (BTOC)	Depth to Water (BTOC)
MW-9	NA	12.46
MW-10	NA	12.89
MW-26	NA	8.65
MW-27	NA	14.14
MW-28	NA	16.14
RW-3	NA	7.85
RW-4	9.11	9.69

- Did not recover LNAPL from any wells.

1100: Leave the Site for Bay West office.
1115: Back at office to unload, update LNAPL table in 2015 AMR Tables file, complete mileage log, and daily log.

Waste Generated:

Sample gloves

Change in Conditions (if any):

None.

Sample Summary:

Samples Taken: ☐Yes ☒No	No. of Samples:	COC #:
Sample Destination:		
Preparer Signature: *Sam Cook*	Date: **6/2/2015**	

Docs # 1682282

DAILY LOG

Page 1 of 1

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Holiday Station **Job No.: J150495** **Date: 9/11/2015**

Project Manager	**Amanda Malaney**	Site Supervisor:	**Sam Cook**

Other Personnel on Site (Other Bay West Staff, Client, Regulators, Visitors) **None**

Detailed chronology and description of work performed:

0900: Preparation/loading.
0930: Leave Bay West office for the Site.
0950: On-site to collect depth to product/water levels:

Well ID	Depth to LNAPL (BTOC)	Depth to Water (BTOC)
MW-9	NA	11.91
MW-10	NA	13.91
MW-26	NA	8.76
MW-27	NA	13.81
MW-28	NA	15.88
RW-3	NA	6.49
RW-4	9.30	10.03

- Did not recover LNAPL from any wells.

1130: Leave the Site for Bay West office.
1145: Back at office to unload, update LNAPL table in 2015 AMR Tables file, complete mileage log, and daily log.

Waste Generated:

Sample gloves

Change in Conditions (if any):

None.

Sample Summary:

Samples Taken: ☐Yes ☒No	No. of Samples:	COC #:
Sample Destination:		
Preparer Signature: *Sam Cook*	Date: **9/11/2015**	

Docs # 1682282

DAILY LOG

Page 1 of 1

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Holiday Station **Job No.: J150495** **Date: 10/16/2015**

Project Manager	**Amanda Malaney**	Site Supervisor:	**Sam Cook**

Other Personnel on Site (Other Bay West Staff, Client, Regulators, Visitors) **None**

Detailed chronology and description of work performed:

1000: Preparation/loading.
1030: Leave Bay West office for the Site.
1045: On-site to collect depth to product/water levels:

Well ID	Depth to LNAPL (BTOC)	Depth to Water (BTOC)
MW-9	NA	12.02
MW-10	NA	13.58
MW-26	NA	9.11
MW-27	NA	13.81
MW-28	NA	16.00
RW-3	NA	9.08
RW-4	9.84	10.57

- Did not recover LNAPL from any wells.

1130: Leave the Site for Bay West office.
1145: Back at office to unload, update LNAPL table in 2015 AMR Tables file, complete mileage log, and daily log.

Waste Generated:

Sample gloves

Change in Conditions (if any):

None.

Sample Summary:

Samples Taken: ☐Yes ☒No	No. of Samples:	COC #:
Sample Destination:		
Preparer Signature: *Sam Cook*	Date: **10/16/2015**	

Docs # 1682282

DAILY LOG

Page 1 of 1

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Holiday Station **Job No.: J150495** **Date: 11/18/2015**

Project Manager	**Amanda Malaney**	Site Supervisor:	**Sam Cook**

Other Personnel on Site (Other Bay West Staff, Client, Regulators, Visitors) **Hillary McGown**

Detailed chronology and description of work performed:

1100: Preparation/loading.
1130: Leave Bay West office for the Site.
1145: On-site to survey MW-28.
1215: Collect depth to product/water levels:

Well ID	Depth to LNAPL (BTOC)	Depth to Water (BTOC)
MW-9	NA	12.07
MW-10	NA	12.12
MW-26	NA	9.91
MW-27	NA	13.71
MW-28	NA	15.73
RW-3	NA	7.83
RW-4	8.07	8.76

- Did not recover LNAPL from any wells.

1240: Leave the Site for Bay West office.
1250: Back at office to unload, update LNAPL table in 2015 AMR Tables file, complete mileage log, and daily log.

Waste Generated:

Sample gloves

Change in Conditions (if any):

None.

Sample Summary:

Samples Taken: ☐Yes ☒No	No. of Samples:	COC #:
Sample Destination:		
Preparer Signature: *Sam Cook*	Date: **11/18/2015**	

Docs # 1682282

MW-10 DRAWDOWN TEST
FREE PRODUCT RECOVERY - REMOVAL PHASE

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Recovery Location ID	Recovery Date	Time (HH:mm)	Elapsed Time (min)	Depth to LNAPL[1] (ft)	Depth to GW[2] (ft)	LNAPL Thickness (ft)	LNAPL Volume in well (gal)	Total LNAPL Removed (gal)	Total GW Removed (gal)	LNAPL Removal Rate (gal/min)	LNAPL Removal Rate (gal/day)	Removal Method	Comments
MW-10	04/02/15	0955	0	14.52	15.47	0.95	0.152	0	0	0.00	0.00	Hand Bail	
MW-10	04/02/15	1000	5	14.82	15.37	0.55	0.088	0.50	0	0.10	144.00	Hand Bail	
MW-10	04/02/15	1005	10	14.84	15.10	0.26	0.042	0.60	0	0.06	86.40	Hand Bail	
MW-10	04/02/15	1010	15	14.78	15.00	0.22	0.035	0.70	0	0.05	67.20	Hand Bail	
MW-10	04/02/15	1020	25	14.78	14.98	0.20	0.032	0.80	0	0.03	46.08	Hand Bail	
MW-10	04/02/15	1030	35	14.84	15.04	0.20	0.032	0.90	0	0.03	37.03	Hand Bail	
MW-10	04/02/15	1040	45	14.84	15.06	0.22	0.035	0.95	0	0.02	30.40	Hand Bail	
MW-10	04/02/15	1220	0	14.54	15.41	0.87	0.139	0	0.00		0.00	Hand Bail	
MW-10	04/02/15	1225	5	14.91	15.11	0.20	0.032	0.50	0.00	0.10	144.00	Hand Bail	
MW-10	04/02/15	1230	10	14.85	15.03	0.18	0.029	0.65	0.00	0.07	93.60	Hand Bail	
MW-10	04/02/15	1235	15	14.84	15.02	0.18	0.029	0.75	0.00	0.05	72.00	Hand Bail	

Notes:
[1] LNAPL = Light Non-Aqueous Phase Liquid
[2] GW = Ground Water

MW-10 DRAWDOWN TEST
FREE PRODUCT RECOVERY - RECHARGE PHASE

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Recovery Location ID	Recovery Date	Time (HH:mm)	Elapsed Time (min)	Depth to LNAPL[1] (ft)	Depth to GW[2] (ft)	LNAPL Thickness (ft)	LNAPL Volume in well (gal)	Incremental LNAPL Recharge Rate[3] (gal/min)	Incremental LNAPL Recharge Rate[3] (gal/day)	Cumulative LNAPL Recharge Rate[4] (gal/day)	Comments
MW-10	04/02/15	1040	0	14.84	15.06	0.22	0.035	0.000	0	0	
MW-10	04/02/15	1045	5	14.70	14.95	0.25	0.040	0.001	1.38	1.38	
MW-10	04/02/15	1050	10	14.75	15.00	0.25	0.040	0.000	0.00	0.69	
MW-10	04/02/15	1055	15	14.61	15.09	0.48	0.077	0.007	10.60	3.99	
MW-10	04/02/15	1100	20	14.60	15.16	0.56	0.090	0.003	3.69	3.92	
MW-10	04/02/15	1110	30	14.60	15.22	0.62	0.099	0.001	1.38	3.07	
MW-10	04/02/15	1120	40	14.56	15.36	0.80	0.128	0.003	4.15	3.34	
MW-10	04/02/15	1130	50	14.55	15.36	0.81	0.130	0.000	0.23	2.72	
MW-10	04/02/15	1140	60	14.55	15.40	0.85	0.136	0.001	0.92	2.42	
MW-10	04/02/15	1150	70	14.54	15.41	0.87	0.139	0.000	0.46	2.14	
MW-10	04/02/15	1200	80	14.54	15.41	0.87	0.139	0.000	0	1.87	
MW-10	04/02/15	1210	90	14.54	15.41	0.87	0.139	0.000	0	1.66	
MW-10	04/02/15	1220	100	14.54	15.41	0.87	0.139	0.000	0	1.50	
MW-10	04/02/15	1235	0	14.84	15.03	0.19	0.030	0.006	0	0	
MW-10	04/02/15	1240	5	14.69	15.04	0.35	0.056	0.005	7.37	7.37	
MW-10	04/02/15	1245	10	14.65	15.03	0.38	0.061	0.001	1.38	4.38	
MW-10	04/02/15	1255	20	14.61	15.07	0.46	0.074	0.001	1.84	3.11	
MW-10	04/02/15	1305	30	14.60	15.15	0.55	0.088	0.001	2.07	2.76	
MW-10	04/02/15	1315	40	14.57	15.21	0.64	0.102	0.001	2.07	2.59	
MW-10	04/02/15	1325	50	14.56	15.28	0.72	0.115	0.001	1.84	2.44	
MW-10	04/02/15	1335	60	14.55	15.34	0.79	0.126	0.001	1.61	2.30	
MW-10	04/02/15	1345	70	14.54	15.36	0.82	0.131	0.000	0.69	2.07	
MW-10	04/02/15	1355	80	14.54	15.37	0.83	0.133	0.000	0.23	1.84	
MW-10	04/02/15	1405	90	14.54	15.37	0.83	0.133	0.000	0	1.64	

Notes:

[1] FP = Free Product

[2] GW = Ground Water

[3] Incremental recharge rate is calculated using the volume recharged between two consecutive measurements and the elapsed time between those two measurements.

[4] Cumulative recharge rate is calculated using the total recharged volume and the total elapsed time at that measurement. If LNAPL is present in the well at the start time (i.e. time zero), remember to subtract this initial volume from the subsequent volumes to determine the total recharged volume.

Appendix E

Spatial Data Reporting Spreadsheet

Spatial Data Reporting Spreadsheet

Holiday Station (former Spur #4576)
5430 Grand Avenue, Duluth, MN
MPCA Leak #17591

Well Number	Unique Well Number	Well Location (UTM) Spatial Data		Collection Method	Date Installed	Surface Elevation	Top of Casing Elevation	Bottom of Well Elevation	Screen Interval (Elev. - Elev.)	Total Well Depth from Surface (ft)	Depth to top of screen from surface	Depth to bottom of screen from surface
		x coordinate	y coordinate									
MW-8	574387	563687.4618	5176676.452	MI	6/18/1996	638.38	641.07	618.38	618.38 - 628.38	20.00	10.00	20.00
MW-9	574388	563712.0502	5176678.361	MI	6/20/1996	638.09	637.82	618.09	618.09 - 628.09	20.00	10.00	20.00
MW-10	574389	563721.4816	5176727.629	MI	6/22/1996	637.49	640.38	617.49	617.49 - 627.49	20.00	10.00	20.00
MW-11	574390	563760.4568	5176728.666	MI	6/24/1996	637.20	640.54	617.20	617.20 - 627.20	20.00	10.00	20.00
MW-12	574391	563770.6692	5176656.264	MI	6/26/1996	637.21	639.78	617.21	617.21 - 627.21	20.00	10.00	20.00
MW-13	671197	563766.2728	5176541.913	MI	4/16/2002	633.85	635.78	615.85	616.85 - 626.85	18.00	7.00	17.00
MW-14	720628	563692.3848	5176746.442	MI	12/7/2004	637.54	639.58	615.64	615.64 - 630.64	21.90	6.90	21.90
MW-15	747670	563729.4565	5176677.694	MI	11/1/2006	638.92	640.85	617.42	617.92 - 627.92	21.50	11.00	21.00
MW-16	747671	563785.0305	5176602.041	MI	10/31/2006	634.48	636.32	616.48	616.48 - 626.48	18.00	8.00	18.00
MW-17	747669	563713.1127	5176589.856	MI	11/1/2006	638.68	640.66	616.68	616.68 - 626.68	22.00	12.00	22.00
MW-18	747672	563785.1376	5176477.125	MI	10/31/2006	632.59	634.73	614.59	614.59 - 624.59	18.00	8.00	18.00
MW-19	747696	563757.0201	5176613.947	MI	1/29/2007	638.98	641.02	616.57	616.57 - 626.57	22.41	12.41	22.41
MW-20	756056	563824.3964	5176503.283	MI	10/2/2007	637.77	639.55	617.77	617.77 - 627.77	20.00	10.00	20.00
MW-21	756057	563850.3511	5176344.818	MI	10/2/2007	635.53	635.53	615.53	615.53 - 625.53	20.00	10.00	20.00
MW-22	783615	563720.523	5176686.454	MI	4/5/2011	637.45	637.22	617.45	621.45 - 630.45	20.00	7.00	16.00
MW-23	796642	563742.5626	5176538.607	GPS Unit	4/22/2013	635.06	637.46	614.51	614.51 - 624.51	20.55	10.55	20.55
MW-24	796643	563744.1945	5176499.921	GPS Unit	4/23/2013	633.63	633.35	612.86	613.86 - 623.86	20.77	9.77	19.77
MW-25	796641	563749.4315	5176558.39	GPS Unit	4/22/2013	634.91	637.35	614.75	614.75 - 624.75	20.16	10.16	20.16
MW-26	803453	563695.5148	5176661.196	GPS Unit	11/19/2013	638.16	637.58	618.16	618.66 - 628.66	20.00	9.50	19.50
MW-27	803452	563725.5231	5176627.573	GPS Unit	11/18/2013	637.93	637.57	617.93	617.93 - 627.93	20.00	10.00	20.00
MW-28	810685	563725.5396	5176597.385	GPS Unit	2/10/2015	636.87	639.21	616.37	616.87 - 626.87	20.50	10.00	20.00
RW-1	688479	563731.2936	5176722.015	MI	4/8/2003	637.36	637.13	617.08	617.08 - 632.08	20.28	5.28	20.28
RW-2	688480	563706.7171	5176719.021	MI	4/8/2003	636.55	636.28	616.22	616.22 - 631.22	20.33	5.33	20.33
RW-3	688481	563718.8325	5176709.182	MI	4/9/2003	636.99	636.62	616.76	616.76 - 631.76	20.23	5.23	20.23
RW-4	688482	563728.6236	5176691.737	MI	4/9/2003	637.61	636.97	617.10	617.10 - 632.10	20.51	5.51	20.51
RW-5	720629	563735.8913	5176685.711	MI	12/6/2004	638.63	640.53	617.73	617.73 - 632.73	20.90	5.90	20.90
RW-6	720629	563725.345	5176692.201	MI	4/5/2011	637.23	637.18	617.23	618.73 - 628.73	20.00	8.50	18.50
Sully MW-1	691821	563639.6319	5176650.439	MI	6/16/2004	638.11	637.83	619.96	620.26 - 630.26	18.15	7.85	17.85
Sully MW-2	691822	563652.9263	5176663.699	MI	6/16/2004	637.62	639.37	620.29	620.59 - 630.59	17.33	7.03	17.03
Sully MW-3	691823	563661.2976	5176660.699	MI	6/15/2004	637.72	639.77	622.41	622.71 - 632.71	15.31	5.01	15.01

Notes: MI = Map Interpolation

Appendix F

Hydraulic Conductivity Calculations

HYDRAULIC CONDUCTIVITY ESTIMATE

GRAIN SIEVE ANALYSIS

PROJECT DATA INPUT

Project Site Name:	Current Holiday Station		
Project Location:	Duluth, MN		
Project No.:	J150495		
Soil Sample Label/Number:	MW-28 (14-17.5)		
Depth of Soil Sample:	14 to 17.5 ft bgs		
Data Collected By:	Hilary McGown	Date:	2/9/2015
Data Analyzed By:	Pace Analytical Services, Virginia, MN	Date:	2/13/2015

GRAIN SIZE INPUT

Grain Size of Percent Finer (mm)

d10 Percentile:	0.0069	d50Percentile:	0.1955
d15 Percentile:	0.0630	d60 Percentile:	0.2281
d30 Percentile:	0.1358	d85 Percentile:	0.3355

Porosity Estimate: 0.30 percent

STATISTICAL CALCULATIONS

Geometric Mean:	0.16	Uniformity Coefficient (Cu):	33.06
Sorting:	2.88	Coefficient of Curvature (Cc):	11.72

RESULTS

HAZEN

K= 0.135 ft/day

K= 4.761E-05 cm/sec

REFERENCES

Freeze, R.A. and Cherry, J.A. 1979. Groundwater. Prentice-Hall. pp 550-551

Appendix G

Manifests

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number: MNS000191411
2. Page 1 of: 1
3. Emergency Response Phone: 3E: 800-451-8346
4. Manifest Tracking Number: 013029487 JJK

GENERATOR

5. Generator's Name and Mailing Address
MPCA
525 Lake Avenue South
Duluth, MN 55802
Generator's Phone: 218-302-6639

Generator's Site Address (if different than mailing address)
MPCA-Holiday Station Duluth
5430 Grand Avenue
Duluth, MN 55802

6. Transporter 1 Company Name: BAY WEST LLC
U.S. EPA ID Number: MND982205437

7. Transporter 2 Company Name: Veolia ES Technical Solutions-NJ
U.S. EPA ID Number: NJD080631369

8. Designated Facility Name and Site Address: Veolia ES Technical Solutions-CWD
W124 N9451 Boundary Road
Menomonee Falls, WI 53051
Facility's Phone: 800-255-5092
U.S. EPA ID Number: WID003967148

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes		
X	1. NA3082, Hazardous waste, liquid, n.o.s. (benzene), 9, PG III	1	DM	400	P	D018		
	2. Non DOT, Non RCRA Hazardous Waste, ,	4	DM	1400	P			
	3.							
	4.							

14. Special Handling Instructions and Additional Information
1)524633 - IDW purge water; ERG 171
2)524651 - IDW soil cuttings
Job#: J140399.1
ER phone # is contracted by Bay West with 3E (contract #5567)

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Sarah Leisen — Signature: Sarah Leisen — Month: 12 — Day: 12 — Year: 15

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Sam Cook — Signature: Sam Cook — Month: 12 — Day: 12 — Year: 15

Transporter 2 Printed/Typed Name: — Signature: — Month: — Day: — Year:

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month: Day: Year:

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: — Signature: — Month: — Day: — Year:

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

GENERATOR'S INITIAL COPY

LAND DISPOSAL RESTRICTION & CERTIFICATION FORM

Generator Name MPCA-Holiday Station Duluth	Shipped To Veolia ES Technical Solutions-C
Generator Address 5430 Grand Avenue	Address W124 N9451 Boundary Road
Duluth, MN 55802	Menomonee Falls, WI 53051
Generator EPA ID No. MNS000191411	EPA ID No. WID003967148

Manifest Document. No. 013029487JJK

Manifest Page # 1
Line Item # 1

[X] Non-Wastewater [ ] Wastewater [ ] RCRA Non-Regulated

EPA Waste Codes D018

Waste Stream Profile 524633

Hazardous Constituents Contained in the Waste — Avg % — Min % — Max %

Sub-Category
TC waste managed in non-CWA system

Certification Statements
This waste must be treated to the applicable performance based treatment set forth in 40CFR 268 Subpart C, Subpart D, 268.40 or RCRA Section 3004 (d) prior to land disposal.

Manifest Page # 1
Line Item # 2

[ ] Non-Wastewater [ ] Wastewater [ ] RCRA Non-Regulated

EPA Waste Codes

Waste Stream Profile 524651

Hazardous Constituents Contained in the Waste — Avg % — Min % — Max %

Sub-Category

Certification Statements
This waste must be treated to the applicable performance based treatment set forth in 40CFR 268 Subpart C, Subpart D, 268.40 or RCRA Section 3004 (d) prior to land disposal.

I hereby certify that all information submitted on this and all associated documents is complete and accurate to the best of my knowledge and information.

Generator Signature Sarah Larsen
Printed Name Sarah Larsen
Title State Program Admin
Date 2-12-2015

12092202 Published by J. J. KELLER & ASSOCIATES, INC.®, Neenah, WI • USA • (800) 327-6868 • www.jjkeller.com • Printed in the United States 167-BLS-C 6 10495

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MNS000191411	1	3E: 800-451-8346	014281492 JJK

GENERATOR

5. Generator's Name and Mailing Address
MPCA-Duluth
525 Lake Ave S.
Duluth, MN 55802 Attn: Lauralin Kania
Generator's Phone: 218-302-6639

Generator's Site Address (if different than mailing address)
MPCA-Holiday Station Duluth
5430 Grand Avenue
Duluth, MN 55802

6. Transporter 1 Company Name: BAY WEST LLC — U.S. EPA ID Number: MND982205437

7. Transporter 2 Company Name: Veolia ES Technical Solutions-NJ — U.S. EPA ID Number: NJD080631369

8. Designated Facility Name and Site Address
Veolia ES Technical Solutions-CWD
W124 N9451 Boundary Road
Menomonee Falls, WI 53051
Facility's Phone: 800-255-5092
U.S. EPA ID Number: WID003967148

9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
X	1. RQ, UN1203, WASTE Gasoline, 3, PG II	1	DM	30	P	~~D001~~
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1) Gasoline; ERG 128
Job#: J150495.3 W475322
ER phone # is contracted by Bay West with 3E (contract #5567)

15. **GENERATOR'S/OFFEROR'S CERTIFICATION:** I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Sarah Larsen — Signature: Sarah Larsen — Month: 11 Day: 16 Year: 15

INT'L

16. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Sam Cook — Signature: [signature] — Month: 11 Day: 16 Year: 15

Transporter 2 Printed/Typed Name: Chris Shellum — Signature: [signature] — Month: 11 Day: 25 Year: 15

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) U.S. EPA ID Number

Facility's Phone:

18c. Signature of Alternate Facility (or Generator) Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name Signature Month Day Year

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

Appendix H

Ramsey Street Site (SA#4563) Letter Report

Bay West
Customer-Focused Environmental & Industrial Solutions

Bay West LLC
5 Empire Drive, St. Paul, MN 55103
651-291-0456 * FAX 651-291-0099
www.baywest.com • info@baywest.com

June 30, 2015

Mr. Wayne Sarappo
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

RE: Letter Report for Additional Vapor Intrusion Activities
5405 West Ramsey Street
Duluth, Minnesota 55807
MPCA Regulatory Number: SA#4563
Bay West Job Number: J140472

Dear Mr. Sarappo:

Bay West LLC (Bay West) has prepared this letter report to present the results of vapor mitigation activities conducted at the commercial property located at 406 N. Central Avenue in Duluth, Minnesota, and also to present findings of a recent vapor intrusion evaluation at 412 N. Central Avenue in Duluth, Minnesota.

1.0 BACKGROUND INFORMATION

The site was referred to the Minnesota Pollution Control Agency (MPCA) Site Assessment (SA) program after chlorinated volatile organic compounds (CVOCs) such as tetrachloroethene (PCE), trichloroethene (TCE) and vinyl chloride were detected in several soil-gas probes in the site vicinity during a separate petroleum release investigation (L# 17591). A potential PCE source investigation was performed in December of 2012 and determined that the funeral home, formerly located at 5405 Ramsey Street, could be the potential source of CVOC contamination in the vicinity of the site.

Additional subsurface investigation was conducted at the site between July 2012 and June 2014. PCE was detected at a concentration of 6.11 milligrams per kilogram (mg/kg) in a soil sample near 406 and 408 N. Central Avenue. The nature and extent of solvent-impacted soil and groundwater was generally defined by the work completed in 2013. Soil and groundwater contamination do not appear to represent a significant risk. Figures depicting soil and groundwater sampling results are provided as **Figure 1** and **Figure 2**, respectively.

Also between July 2012 and June 2014, the vapor intrusion risk to 5405 Ramsey Street and surrounding properties was evaluated. Eight temporary soil-gas points (SG-1 through SG-8) were advanced surrounding 5405 Ramsey Street and eight permanent sub-slab sampling points (SS-01 through SS-08) were installed in the basement of the site and surrounding buildings. PCE was detected in the soil-gas samples at concentrations of 21,500 micrograms per cubic meter ($\mu g/m^3$) in soil-gas point SG-8 (east of 406/406 N. Central Avenue) and at a concentration of 13,900 $\mu g/m^3$ in soil-gas point SG-5 (east of 5405 Ramsey Street). In a sub-slab sample collected from 406 N. Central Avenue, PCE was detected at a concentration of 3,310 $\mu g/m^3$,

exceeding 100 times the Industrial Intrusion Screening Value (ISV). CVOCs were not detected at concentrations exceeding 10 times their respective ISVs in any of the other sub-slab samples collected during this time.

Soil-gas sample results are summarized in **Table 1** and sub-slab and indoor air sample results, collected from properties in the vicinity of the site, are summarized in **Table 2** through **Table 6**. Figures depicting soil-gas and sub-slab sampling results are provided as **Figure 3A**, **Figure 3B**, and **Figure 4**, respectively.

In 2014, the funeral home at 5405 Ramsey Street was demolished and was redeveloped into three housing complexes. The sub-slab sampling points installed at 5405 Ramsey Street (SS-01 through SS-04) no longer exist.

In October 2014, the MPCA requested that Bay West prepare a work plan and cost proposal to complete additional vapor intrusion activities at the site.

In February 2015, during discussions with the property owner during a pre-bid walkthrough of 408 N. Central Avenue, it was discovered that a dry cleaning facility formerly operated in the now vacant lot between 408 and 412 N. Central Avenue. The dry cleaning facility was in operation for approximately five years and may have relocated across Central Avenue. After a discussion with the property owner, the City Directories were re-reviewed and it was confirmed that Fashion Dry Cleaners was present at 410 N. Central Avenue in 1951. The City Directory referencing to Fashion Dry Cleaners is included in **Appendix E**.

2.0 SCOPE OF WORK

2.1 406 N. Central Avenue

2.1.1 SSD System Installation

In January 2015, Bay West prepared detailed specifications for sub-slab depressurization (SSD) system installations using the most recent MPCA vapor intrusion and mitigation guidance available at the time. Upon approval of the specifications by the MPCA, bid solicitations were sent to Minnesota-certified radon contractors. On February 4, 2015, Bay West conducted a pre-bid meeting and walkthrough of 406 N. Central Avenue and 408 N. Central Avenue. The bidding was completed in accordance with the most recent version of the MPCA Contracting and Subcontracting Purchasing Manual. Based on the results of the bidding, Home Safety Solutions (HSS) was selected to perform the SSD system installation.

The bidding results were higher than Bay West anticipated and exceeded the amount of money available in the work order budget. Because there appeared to be a greater vapor intrusion risk to 406 N. Central Avenue, Bay West recommended that the system at 406 N. Central be installed and the installation of the system at 408 N. Central be postponed until next fiscal year. The MPCA agreed with this recommendation.

Between February 24 and February 27, 2015, Bay West oversaw HSS install an SSD system at 406 N. Central Avenue The property is a commercial property with businesses on the first and second floors. The basement of the property is unfinished with more than half of the basement consisting of a dirt floor crawlspace extending under the portion of the property closest to Central Avenue. During the pre-bid walkthrough, it was determined that the crawlspace would have to be sealed off from the rest of the unfinished basement due to the inaccessibility and low ceiling (less than 6 inches in some locations) of the crawlspace. The crawlspace is a dirt floor with utility piping running throughout. The openings into the crawlspace where utility piping enter the crawlspace were sealed off from the unfinished portion of the basement. Cracks and other

openings into the crawlspace from the first floor were also sealed. A suction point was installed in the crawlspace area and manifolded into the other suction points installed in the basement. The remaining portion of the basement is unfinished with a slab floor.

Diagnostic testing at 406 N. Central Avenue was completed by HSS throughout SSD system installation. As suction points were installed during the SSD installation process, diagnostic testing was completed at various pressure field extension (PFE) test points. The final SSD system consisted of four suction points in the unfinished portion of the basement. The suction points are located in the corners of the basement exterior walls. A site map is included in **Appendix A** as part of the Vapor Intrusion Mitigation System Inspection Checklist. Through the diagnostic testing, as additional suction points were installed, it was determined that a larger suction fan was required to increase differential pressure at the various PFE test points.

On February 27, 2015, following SSD system installation, PFE testing was conducted. Since the PFE testing was conducted during the winter (November to March), the PFE target differential pressure was 3 pascals (Pa). The differential pressures between the sub-slab and indoor air were measured at six PFE test points. During final testing, all test points except TP-02 and TP-09 had a differential pressure greater than 3 Pa. The differential pressure at TP-02 was 2.988 Pa. Test point TP-09 was installed from the first floor into the crawlspace. The differential pressure at TP-09 was 0 Pa. The system had not had time prior to PFE testing to create a negative pressure within the expansive crawlspace. It was anticipated that after allowing the system time to create the negative pressure within the crawlspace, the readings would be closer to the target of 3 Pa. The differential pressure at the other PFE test points ranged from 3.237 to 97.857 Pa.

PFE test point locations and measurements, and the SSD installation checklist, are included in the field notes, which are included as **Appendix A**. The system design drawing and fan specifications are included as **Appendix B**.

2.1.2 Post SSD System Installation Air Sampling and PFE Testing

Between March 24 and March 25, 2015, Bay West collected post-mitigation confirmation samples. A 24-hour indoor air sample was collected from the basement of 406 N. Central Avenue in order to assess the effectiveness of the system. At the same time, a 24-hour outdoor ambient air sample was collected to serve as a baseline against which the basement indoor air sample will be compared. Additionally, a sub-slab sample was collected using a 200 - milliliters/minute (mL/min) flow controller from the permanent sub-slab point installed in the basement (SS-05). The samples were collected in individually certified Summa canisters submitted to Pace Analytical Services, Inc. (Pace Analytical) for analysis by Method TO-15.

The 1,2,4-trimethylbenzene (TMB) concentration in the indoor air sample was 40.5 µg/m^3, which is greater than the Industrial ISV of 20 µg/m^3. 1,2,4-TMB was also detected in the sub-slab sample at a concentration of 195 µg/m^3. There may be an indoor air source of 1,2,4-TMB because a nail salon operates on the first floor of the building and chemical storage occurs in the basement. 1,2,4-TMB is present in paint thinner, oil-based stain and paint, mineral spirits, and furniture polish. The 1,2,4-TMB detected in the sub-slab sample may be from the nearby petroleum release associated with MPCA L# 17591. The PCE concentration in the sub-slab sample was 90.1 µg/m^3, but PCE was not detected at a concentration greater than the laboratory reporting limit in the indoor air sample. No other VOCs were detected at concentrations greater than the Industrial ISVs inside the building. VOCs were not detected at concentrations greater than the laboratory reporting limits in the outdoor air sample.

On June 26, 2015, Bay West re-measured the differential pressure in the PFE test points to determine if the SSD system was still operating effectively. The differential pressures in PFE test points TP-02, TP-04, TP-07, and TP-08 ranged from 3.237 to 131.223 Pa, which is greater than 3 Pa, the target differential pressure when the SSD system was installed.

The differential pressure in PFE test point TP-09 was 0 Pa. This test point was installed from the first floor into the crawlspace. The crawlspace was depressurized in accordance with the Midwest Universities Radon Consortium mitigation guidelines and sealed as well as possible. According to HSS, additional work to depressurize the crawlspace would be expensive.

Based on the PFE measurements in the basement and the post-mitigation confirmation sampling, the SSD system appears to be effectively preventing vapor intrusion.

The laboratory analytical results are summarized in **Table 4**. The laboratory analytical report is included as **Appendix C**.

2.2 412 N. Central Avenue

2.2.1 Sub-slab and indoor air sampling

To further evaluate the vapor intrusion risk to the structures immediately adjacent to the solvent-contaminated soil previously detected east of 406/408 N. Central Avenue, Bay West conducted vapor sampling in the basement of 412 N. Central Avenue. The first floor of the building is used as a dentist office. The second floor is a residential apartment with a full-time tenant. The basement serves as a break room for employees and also as storage for patient records. The basement is unfinished with slab floors. A crawlspace with exposed dirt floors exists below the eastern portion of the building, immediately adjacent to the alley. A Vapor Intrusion Interior Building Survey Form was completed for the property in August of 2012. A copy of the form is included in **Appendix A**.

Between February 26 and 27, 2015, a 24-hour air sample was collected from the basement of 412 N. Central Avenue in the unfinished crawlspace. In addition, a sub-slab sampling point was installed in the basement, adjacent to the opening of the crawlspace, and an air sample was collected from this sampling port. Both samples were submitted to Pace Analytical for analysis by Method TO-15.

Several VOCs were detected at concentrations greater than the laboratory detection limit in both the crawlspace and sub-slab samples. The results were compared to Residential ISVs because the second floor of the property is residential. 1,2,4-TMB and 1,3,5-TMB were detected in the crawlspace air sample at concentrations of 10.1 µg/m^3 and 7.8 µg/m^3, respectively. PCE was also detected in the crawlspace air sample at a concentration of 7.2 µg/m^3. PCE is the only VOC detected in the sub-slab sample at a concentration greater than 10 times the Residential ISV. The PCE concentration in the sub-slab was 329 µg/m^3.

The laboratory analytical results are summarized in **Table 6**. The laboratory analytical report is included as **Appendix C**.

2.3 IDW Management

A drum containing soil cuttings from the subsurface investigation activities completed in spring of 2014 were disposed of as part of this scope of work. The drum was stored on-site at 5405 West Ramsey Street until it was removed from the site on December 11, 2014. The drum was received by Veolia Environmental Services on December 22, 2014. Copies of the waste profile and manifest are included as **Appendix D**.

3.0 CONCLUSIONS AND RECOMMENDATIONS

Based upon the results of the additional vapor intrusion activities, Bay West has reached the following conclusions:

- A potential source area at 410 N. Central Avenue has been identified.
- Based on the results of the post-SSD system installation, air sampling, and PFE testing conducted at 406 N. Central Avenue, the SSD system appears to be operating effectively.
- A vapor intrusion risk is present at 412 N. Central Avenue.

Based upon the results of the vapor mitigation and evaluation activities, Bay West has the following recommendations:

- Conduct investigation activities at 410 N. Central Avenue, the recently discovered potential source area, to evaluate site remediation options.
- Collect an indoor air sample from the first floor of the 406 N. Central Avenue to verify that the SSD system is preventing vapor intrusion to the first floor of the building.
- Collect additional post-installation confirmation samples at 406 N. Central Avenue in the winter of 2015 to verify the effectiveness of the system when the stack effect is present and comply with the MPCA's Vapor Intrusion Best Management Practices published in March 2015.
- Install SSD systems in 408 N. Central Avenue and 412 N. Central Avenue.

If you have any additional questions or concerns regarding this vapor intrusion investigation or anything else about this site, please contact Amanda Malaney using the information provided below.

Respectfully,

Amanda Malaney, PG
Project Manager/Geologist
(651) 291-3495
amandam@baywest.com

Hillary McGown
Geologist
(651) 216-2637
hmcgown@baywest.com

Figures
Figure 1 – Soil Analytical Map
Figure 2 – Groundwater Analytical Map
Figure 3A – Historical Soil Gas Analytical Map
Figure 3B – Soil Gas Analytical Map
Figure 4 – Sub-slab Analytical Map

Tables
Table 1 – Soil-Gas Analytical Results
Table 2 – Analytical Results (5405 Ramsey St)
Table 3 – Analytical Results (402 N Central Ave)
Table 4 – Analytical Results (406 N Central Ave)
Table 5 – Analytical Results (408 N Central Ave)
Table 6 – Analytical Results (412 N Central Ave)

Appendices

Appendix A – Field Notes and Photographic Log
Appendix B – SSD Design and Specifications
Appendix C – Laboratory Analytical Reports
Appendix D – Disposal Documentation
Appendix E – City Directories

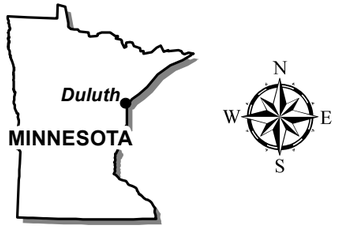
Figures

Figure 1

Soil Analytical Map

Ramsey Street SA# 4563

5405 West Ramsey Street
Duluth, MN



Map Projection: NAD 1983 UTM Zone 15 N
Basemap: Google Earth Aerial Imagery 2015

0 100 200 Feet
0 30 60 Meters

Soil Probe

Parcel Boundaries

Location	Depth	PCE	TCE
Date Sampled	ft bgs	mg/kg	mg/kg

Notes:
ft bgs - feet below ground surface
mg/kg - milligrams per killogram
PCE - Tetrachloroethylene
TCE - Trichloroethylene
< - Less than laboratory reporting limit
Shaded - Result exceeds the laboratory reporting limit

Bay West
Customer-Focused Environmental & Industrial Solutions

Drawn By: SG Date Drawn/Revised:6/26/2015 Project No.J140472

Central Avenue

Ramsey Street

SP-7	Depth	PCE	TCE
04/23/13	2-4	<0.067	<0.0671
04/23/13	14-16	<0.062	<0.0615

SP-11	Depth	PCE	TCE
5/19/2014	4-6	<0.065	<0.065
5/19/2014	10-12	0.164	<0.0688

SP-8	Depth	PCE	TCE
04/24/13	2-4	<0.066	<0.0659
04/24/13	10-12	6.11	0.18

SP-14	Depth	PCE	TCE
5/21/2014	14-16	<0.061	<0.061

SP-13	Depth	PCE	TCE
5/20/2014	6-8	<0.0712	<0.0712
5/20/2014	12-14	0.36	0.0884

SP-15	Depth	PCE	TCE
5/21/2014	14-16	<0.0647	<0.0647

SP-12	Depth	PCE	TCE
5/20/2014	4-6	<0.0669	<0.0669
5/20/2014	14-16	<0.0576	<0.0576

SP-10	Depth	PCE	TCE
5/19/2014	4-6	<0.062	<0.062
5/19/2014	10-12	<0.062	<0.062

SP-9	Depth	PCE	TCE
04/24/13	2-4	<0.066	<0.0661
04/24/13	12-14	<0.062	<0.0619

SP-16	Depth	PCE	TCE
5/21/2014	10-12	<0.0589	<0.0589

SP-2	Depth	PCE	TCE
04/19/13	1-2	<0.061	<0.0612
04/19/13	12-14	<0.062	<0.0624

SP-3	Depth	PCE	TCE
04/22/13	2-4	<0.065	<0.0645
04/22/13	14-16	<0.064	<0.0637

SP-5	Depth	PCE	TCE
4/23/2013	2-4	<0.064	<0.0637
4/23/2013	12-14	0.062	<0.057

SP-6	Depth	PCE	TCE
04/23/13	1-2	<0.066	<0.0655
04/23/13	14-16	<0.056	<0.056

SP-1	Depth	PCE	TCE
04/19/13	1-2	<0.064	<0.0644
04/19/13	12-14	0.0636	<0.052

SP-4	Depth	PCE	TCE
04/22/13	0-2	<0.067	<0.0669
04/22/13	12-14	<0.058	<0.0578

SP-18	Depth	PCE	TCE
5/22/2014	10-12	<0.0596	<0.0596

SP-17	Depth	PCE	TCE
5/21/2014	12-14	<0.0594	<0.0594

SP-14 SP-13 SP-15 SP-12 SP-10 SP-16 SP-11 SP-8 SP-9 SP-7 SP-2 SP-3 SP-5 SP-6 SP-1 SP-4 SP-18 SP-17

Y:\Clients\MPCA\SA_4563_5405 West Ramsey St\MapDocs\J140472 FIG 1 Soil Analytical Map.mxd

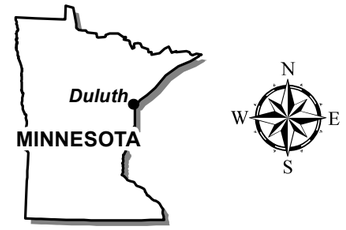
Y:\Clients\MPCA\SA_4563_5405 West Ramsey St\MapDocs\J140472 FIG 2 Groundwater Analytical Map.mxd

Figure 2

Groundwater Analytical Map

Ramsey Street SA# 4563

5405 West Ramsey Street
Duluth, MN



Map Projection: NAD 1983 UTM Zone 15 N
Basemap: Google Earth Aerial Imagery 2015

0 100 200 Feet
0 30 60 Meters

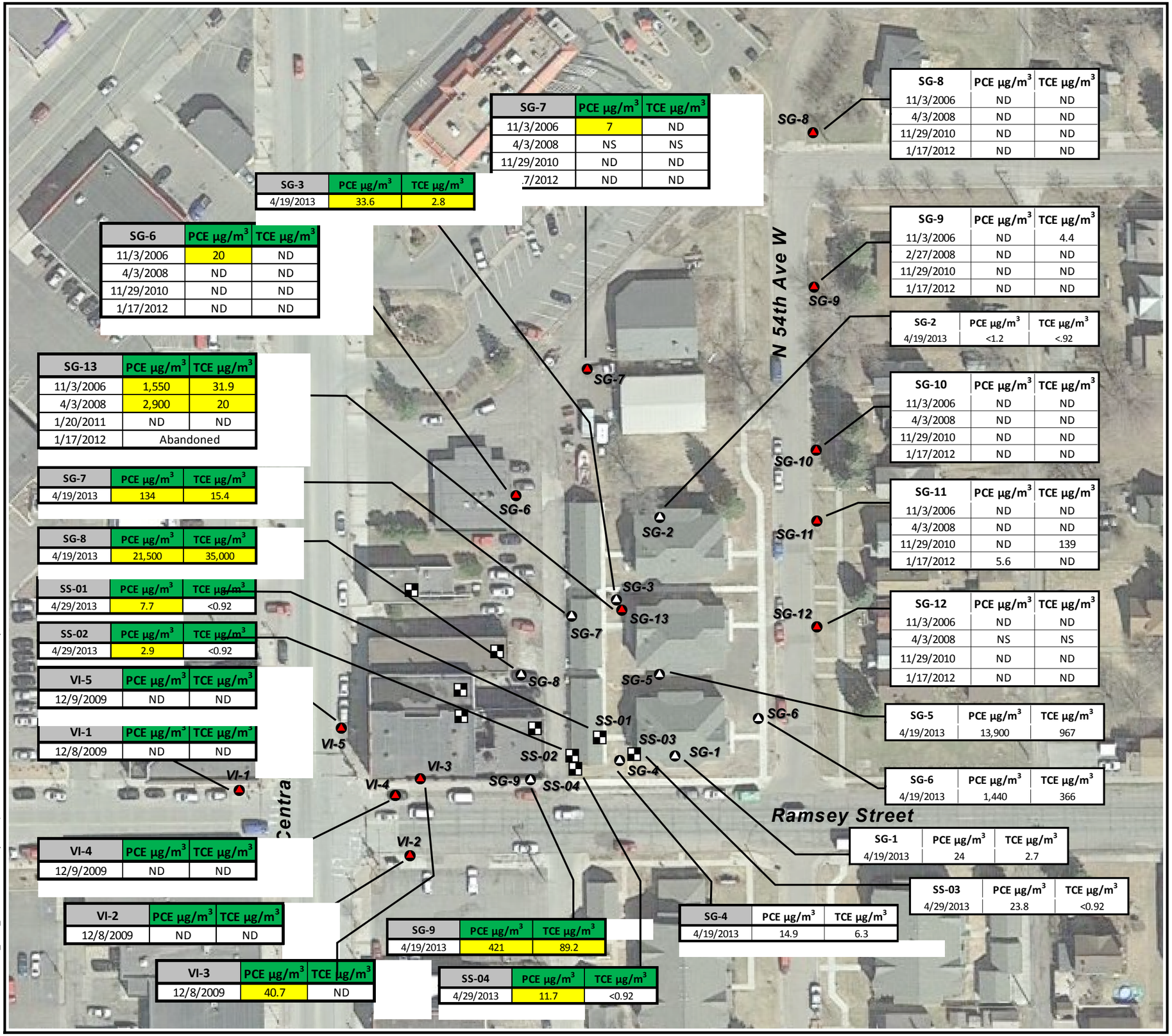
Monitoring Well
Soil Probe
Parcel Boundaries

Location	PCE	TCE
Date Sampled	µg/L	µg/L

Notes:
µg/L - micrograms per liter
PCE - Tetrachloroethylene
TCE - Trichloroethylene
< - Less than Report Limt
Bold - Result exceeds the MDH HRL
Shaded - Result exceeds the laboratory reporting limit

Bay West
Customer-Focused Environmental & Industrial Solutions

Drawn By: SG Date Drawn/Revised:6/26/2015 Project No.J140472



SG-7	PCE µg/m³	TCE µg/m³
11/3/2006	7	ND
4/3/2008	NS	NS
11/29/2010	ND	ND
.7/2012	ND	ND

SG-3	PCE µg/m³	TCE µg/m³
4/19/2013	33.6	2.8

SG-6	PCE µg/m³	TCE µg/m³
11/3/2006	20	ND
4/3/2008	ND	ND
11/29/2010	ND	ND
1/17/2012	ND	ND

SG-13	PCE µg/m³	TCE µg/m³
11/3/2006	1,550	31.9
4/3/2008	2,900	20
1/20/2011	ND	ND
1/17/2012	Abandoned	

SG-7	PCE µg/m³	TCE µg/m³
4/19/2013	134	15.4

SG-8	PCE µg/m³	TCE µg/m³
4/19/2013	21,500	35,000

SS-01	PCE µg/m³	TCE µg/m³
4/29/2013	7.7	<0.92

SS-02	PCE µg/m³	TCE µg/m³
4/29/2013	2.9	<0.92

VI-5	PCE µg/m³	TCE µg/m³
12/9/2009	ND	ND

VI-1	PCE µg/m³	TCE µg/m³
12/8/2009	ND	ND

VI-4	PCE µg/m³	TCE µg/m³
12/9/2009	ND	ND

VI-2	PCE µg/m³	TCE µg/m³
12/8/2009	ND	ND

VI-3	PCE µg/m³	TCE µg/m³
12/8/2009	40.7	ND

SG-9	PCE µg/m³	TCE µg/m³
4/19/2013	421	89.2

SS-04	PCE µg/m³	TCE µg/m³
4/29/2013	11.7	<0.92

SG-4	PCE µg/m³	TCE µg/m³
4/19/2013	14.9	6.3

SG-8	PCE µg/m³	TCE µg/m³
11/3/2006	ND	ND
4/3/2008	ND	ND
11/29/2010	ND	ND
1/17/2012	ND	ND

SG-9	PCE µg/m³	TCE µg/m³
11/3/2006	ND	4.4
2/27/2008	ND	ND
11/29/2010	ND	ND
1/17/2012	ND	ND

SG-2	PCE µg/m³	TCE µg/m³
4/19/2013	<1.2	<.92

SG-10	PCE µg/m³	TCE µg/m³
11/3/2006	ND	ND
4/3/2008	ND	ND
11/29/2010	ND	ND
1/17/2012	ND	ND

SG-11	PCE µg/m³	TCE µg/m³
11/3/2006	ND	ND
4/3/2008	ND	ND
11/29/2010	ND	139
1/17/2012	5.6	ND

SG-12	PCE µg/m³	TCE µg/m³
11/3/2006	ND	ND
4/3/2008	NS	NS
11/29/2010	ND	ND
1/17/2012	ND	ND

SG-5	PCE µg/m³	TCE µg/m³
4/19/2013	13,900	967

SG-6	PCE µg/m³	TCE µg/m³
4/19/2013	1,440	366

SG-1	PCE µg/m³	TCE µg/m³
4/19/2013	24	2.7

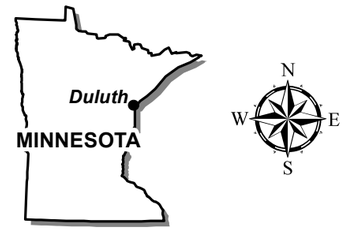
SS-03	PCE µg/m³	TCE µg/m³
4/29/2013	23.8	<0.92

Figure 3A

Historical Soil Gas Analytical Map

Ramsey Street SA# 4563

5405 West Ramsey Street
Duluth, MN



Map Projection: NAD 1983 UTM Zone 15 N
Basemap: Google Earth Aerial Imagery 2015

0 70 140 Feet
0 20 40 Meters
1 inch = 70 feet

- Soil Gas Sample (Leak #17591 & #16619)
- Soil Gas Sample
- Sub-Slab Sample
- µg/m3 — Micrograms Per Cubic Meter in Soil Gas
- PCE/TCE Detection

Notes:

PCE = tetrachloroethene

TCE = trichloroethene

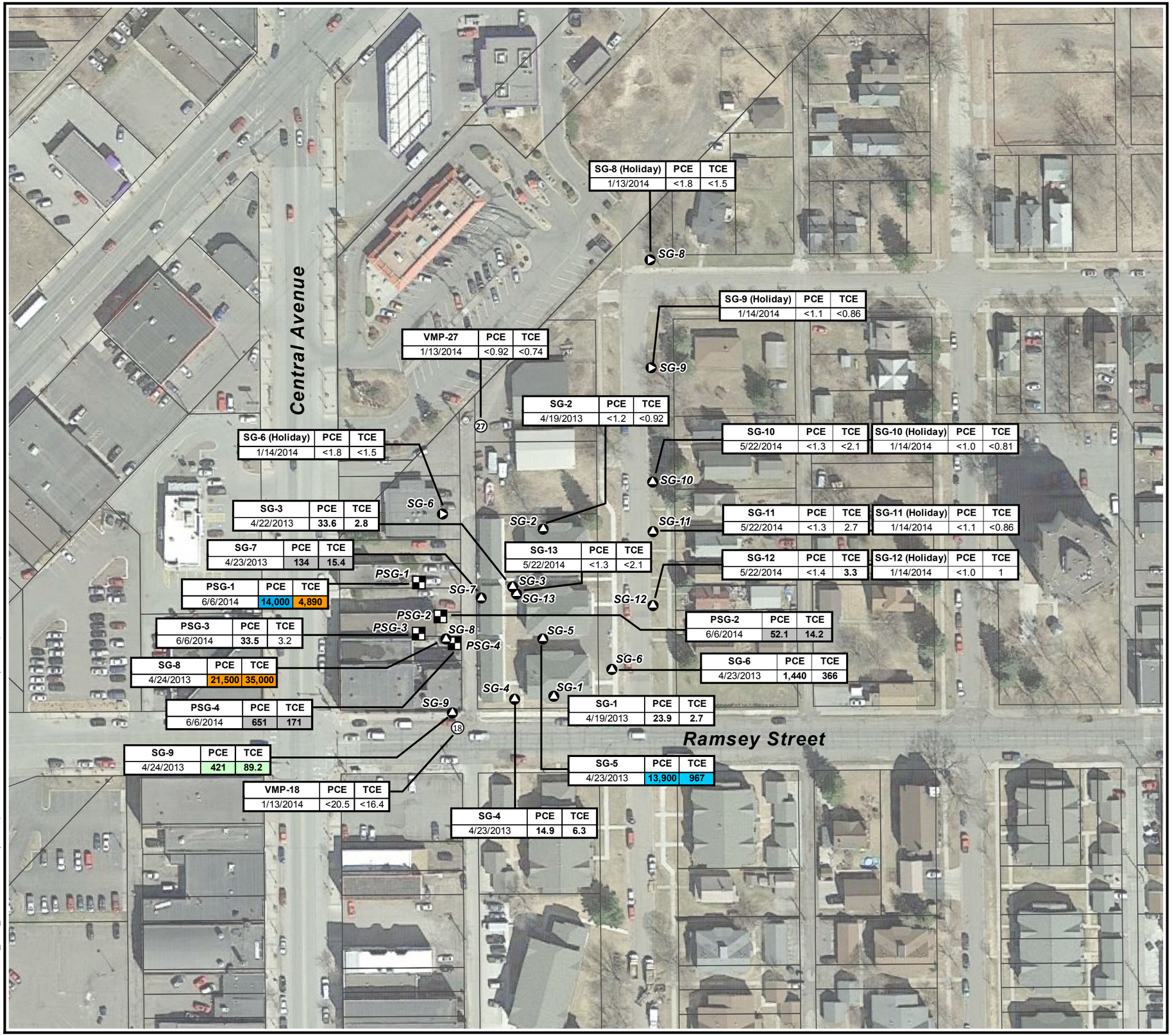
Concentrations exceeding the Residential 10x ISVs (sub-slab, soil gas) or Residential ISVs (indoor air) are shaded as noted below:

PCE	TCE	
200	30	Concentration exceeds the 10x Res. ISV
2,000	300	Concentration exceeds the 100x Res. ISV
20,000	2,000	Concentration exceeds the Acute ISV

Bay West
Customer-Focused Environmental & Industrial Solutions

Drawn By: SG Date Drawn/Revised:6/26/2015 Project No.J140472

Y:\Clients\MPCA\SA_4563_5405 West Ramsey St\MapDocs\J140472 FIG 3A Historical Soil Gas Analytical.mxd



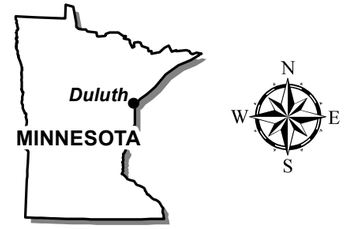
Y:\Clients\MPCA\SA_4563_5405 West Ramsey St\MapDocs\J140472 FIG 3B Soil Gas Analytical Map.mxd

Figure 3B

Soil Gas Analytical Map

Ramsey Street SA# 4563

5405 West Ramsey Street
Duluth, MN



Map Projection: NAD 1983 UTM Zone 15 N
Basemap: Google Earth Aerial Imagery 2015

0 100 200 Feet
0 30 60 Meters

- Permanent Soil Gas Location
- 27 Vapor Monitoring Port
- Soil Gas Probe
- Parcel Boundaries

Location	PCE	TCE
Date Sampled	µg/m^3	µg/m^3

Notes:
µg/m3 - micrograms per cubic meter
< - Less than the laboratory Reporting Limit (RL)
PCE - Tetrachloroethylene
TCE - Trichloroethylene
Bold - Exceeds laboratory report limit
Grey Shading - Result exceeds the Industrial ISV
Green Shading - Result exceed 10 times the Industrial ISV
Blue Shading - Result exceeds 100 times the Industrial ISV
Orange Shading - Result exceeds Acute ISV

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Drawn By: SG Date Drawn/Revised:6/26/2015 Project No.J140472

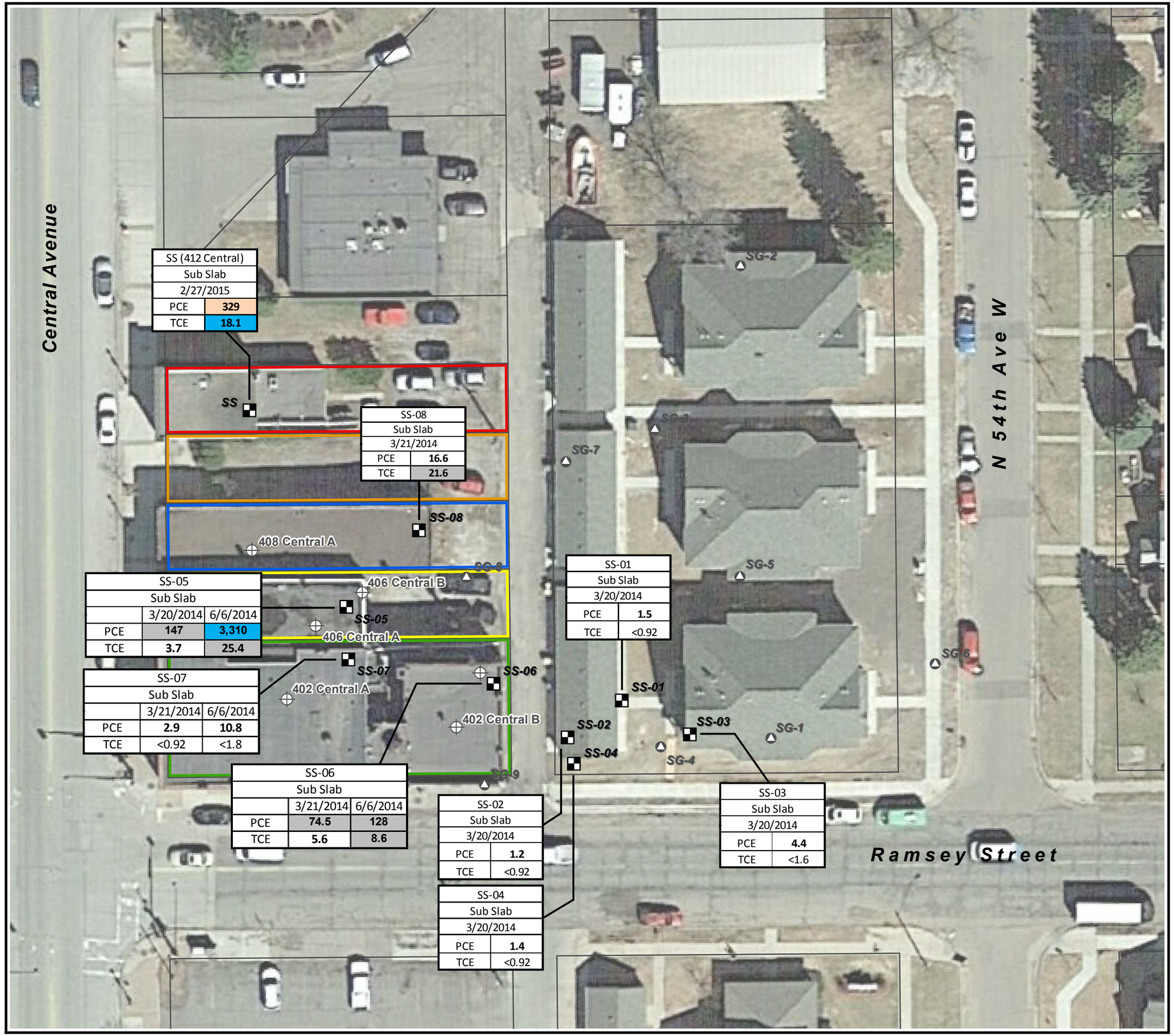
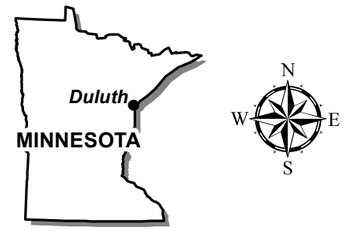


Figure 4

Sub-slab Analytical Results

Ramsey Street SA# 4563

5405 West Ramsey Street
Duluth, MN



Map Projection: NAD 1983 UTM Zone 15 N
Basemap: Google Earth Aerial Imagery 2015

0 35 70 Feet
0 10 20 Meters

1 inch = 35 feet

- Indoor Air Sample
- Soil Gas Sample
- Sub-Slab Sample
- Parcel Boundary
- 402 N. Central Ave Parcel Boundary
- 406 N. Central Ave Parcel Boundary
- 408 N. Central Ave Parcel Boundary
- 410 N. Central Ave Parcel Boundary
- 412 N. Central Ave Parcel Boundary

Sample ID	
Depth	
Date Sampled	
PCE	ug/m^3
TCE	ug/m^3

Notes:

PCE - Tetrachloroethene
TCE - Trichloroethene
µg/m3 - micrograms/cubic meter
< - Less than Report Limit
BOLD results exceed the laboratory reporting limit
Grey Shading - Result exceeds the Industrial ISV
Green Shading - Result exceed 10 times the Industrial ISV
Blue Shading - Result exceeds 100 times the Industrial ISV
Orange Shading - Result exceeds 100x the Residential ISV

Bay West
Customer-Focused Environmental & Industrial Solutions

Drawn By: SG Date Drawn/Revised:6/26/2015 Project No.J140472

Tables

TABLE 1
SOIL GAS ANALYTICAL RESULTS

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		SG-1	SG-2	SG-3	SG-4	SG-5	SG-6	SG-7	SG-8	SG-9	SG-10	SG-11	SG-12	SG-13	PSG-1	PSG-2	PSG-3	PSG-4	Industrial ISVs ($\mu g/m^3$)	Industrial 10X ISVs ($\mu g/m^3$)	Industrial 100X ISVs ($\mu g/m^3$)	Acute ISVs ($\mu g/m^3$)	Lab Type
Date		4/19/13	4/19/13	4/22/13	4/23/13	4/23/13	4/23/13	4/23/13	4/24/13	4/24/13	5/22/14	5/22/14	5/22/14	5/22/14	6/6/14	6/6/14	6/6/14	6/6/14					
Depth		8	8	8	11(1)	8	11(1)	11(1)	10(1)	10(1)	8-9	5-6	8-9	8-9									
Parameter	Units	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result					
1,1,1-Trichloroethane	ug/m^3	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<2.2	<2.1	<2.3	<2.2	<3.1	<7.0	<1.9	<2.0	10,000	100,000	1,000,000	140,000	Fixed
1,1,2,2-Tetrachloroethane	ug/m^3	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.4	<1.3	<1.5	<1.4	<3.9	<8.9	<2.4	<2.5	1	10	100	NA	Fixed
1,1,2-Trichloroethane	ug/m^3	<0.92	<0.92	<0.92	<0.92	<0.92	<0.92	<0.96	<0.92	<0.92	<1.1	<1.0	<1.2	<1.1	<1.5	<3.5	<0.96	<0.99	2	20	200	NA	Fixed
1,1,2-Trichlorotrifluoroethane	ug/m^3	<2.7	<2.7	<2.7	<2.7	<2.7	<2.7	<2.8	<2.7	<2.7	<3.1	<3.0	<3.4	<3.1	<4.5	<10.1	<2.8	<2.9	80,000	800,000	8,000,000	NA	Fixed
1,1-Dichloroethane	ug/m^3	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.6	<1.5	<1.7	<1.6	<2.3	<5.2	<1.4	<1.5	1,000	10,000	100,000	NA	Fixed
1,1-Dichloroethene (DCE)	ug/m^3	<1.4	<1.4	<1.4	<1.4	**6.6**	**2.8**	<1.4	**21.2**	<1.4	<1.6	<1.5	<1.7	<1.6	4.3	<5.1	<1.4	<1.5	600	6,000	60,000	NA	Fixed
1,2,4-Trichlorobenzene	ug/m^3	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.6	<2.5	<2.5	<2.9	<2.8	<3.2	<2.9	<4.2	<9.6	<2.6	<2.7	10	100	1,000	NA	Fixed
1,2,4-Trimethylbenzene	ug/m^3	**4.2**	**2.1**	**92.1**	**3.1**	**59.3**	**40.4**	**23.8**	**3**	**10**	**12.5**	**38.3**	**3.5**	**3.5**	**155**	**48.3**	**37.3**	**58.9**	20	200	2,000	NA	Fixed
1,2-Dibromoethane (EDB)	ug/m^3	<2.6	<2.6	<2.6	<2.6	<2.6	<2.6	<2.7	<2.6	<2.6	<3.0	<2.9	<3.3	<3.0	<4.4	<9.9	<2.7	<2.8	0.06	1	6	NA	Fixed
1,2-Dichlorobenzene	ug/m^3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.4	<2.3	<2.6	<2.4	<3.4	<7.7	<2.1	<2.2	600	6,000	60,000	NA	Fixed
1,2-Dichloroethane	ug/m^3	<0.69	<0.69	<0.69	<0.69	<0.69	<0.69	<0.71	<0.69	<0.69	<0.80	<0.77	<0.86	<0.80	<1.1	<2.6	<0.71	<0.74	1	10	100	NA	Fixed
1,2-Dichloropropane	ug/m^3	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.8	<1.8	<2.0	<1.8	<2.6	<6.0	<1.6	<1.7	10	100	1,000	235	Fixed
1,3,5-Trimethylbenzene	ug/m^3	<1.7	<1.7	**20.2**	<1.7	**14.9**	**9.8**	**5.3**	<1.7	<1.7	**6.1**	**11**	<2.1	<1.9	**35.5**	**12**	**8.6**	**13.8**	20	200	2,000	NA	Fixed
1,3-Butadiene	ug/m^3	<0.76	<0.76	<0.76	<0.76	<0.76	<0.76	<0.78	<0.76	<0.76	<0.87	<0.84	<0.94	<0.87	<3.1	<7.1	<2.0	<2.0	1	10	100	NA	Fixed
1,3-Dichlorobenzene	ug/m^3	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.1	<2.0	<2.0	<2.4	<2.3	<2.6	<2.4	<3.4	<7.7	<2.1	<2.2	NA	NA	NA	NA	Fixed
1,4-Dichlorobenzene	ug/m^3	<2.0	<2.0	<2.0	<2.0	**2.1**	<2.0	<2.1	<2.0	**3.7**	<2.4	<2.3	3.2	<2.4	**110**	**32.9**	**28.6**	**32.3**	200	2,000	20,000	12,000	Fixed
2-Butanone (MEK)	ug/m^3	**24.2**	**6**	**8.2**	**8.8**	**15.8**	**22.5**	**17.2**	**15.3**	**35.7**	**14**	**23**	**21.8**	**18.1**	**46.2**	**90.2**	**43.7**	**42.6**	10,000	100,000	1,000,000	10,000	Fixed
2-Hexanone	ug/m^3	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<2.9	<2.8	<3.1	<2.9	<4.2	<9.5	<2.6	<2.7	NA	NA	NA	NA	Fixed
2-Propanol (isopropyl alcohol)	ug/m^3	<0.84	<0.84	<0.84	<0.84	<0.84	<0.84	<0.87	<0.84	**454**	**11.7**	**11.8**	<2.6	<2.4	<3.5	**252**	**11.5**	**13.4**	20,000	200,000	2,000,000	3,200	Fixed
4-Ethyltoluene	ug/m^3	**3.4**	<1.7	**19.5**	<1.7	**22.7**	**13.5**	**8**	**1.9**	**4.8**	**8.2**	**10.3**	<2.1	<1.9	**51.2**	**22.7**	**12.6**	**20.6**	NA	NA	NA	NA	Fixed
4-Methyl-2-pentanone (MIBK)	ug/m^3	<1.4	<1.4	**3.4**	<1.4	**1.9**	**2.3**	**1.8**	<1.4	<1.4	<1.6	<1.6	<1.7	<1.6	<5.8	<13.2	<3.6	<3.7	8,000	80,000	800,000	NA	Fixed
Acetone	ug/m^3	**87.7**	**64.9**	**47.9**	**54.2**	**40.4**	**64.7**	**44.7**	**45.9**	**212**	23.8	23.3	29.2	23.8	**74.3**	**112**	**60**	**49.2**	87,000	870,000	8,700,000	63,000	Fixed
Benzene	ug/m^3	**12.3**	**3.7**	**6.8**	**1.9**	**4.4**	**7.8**	**6.9**	**11.3**	**21**	**38.1**	**6.4**	**5**	**2.2**	**39**	**11.7**	**3**	**5.4**	13	130	1,300	1,000	Fixed
Benzyl chloride	ug/m^3	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<2.0	<2.0	<2.2	<2.0	<7.4	<16.7	<4.6	<4.7	3	30	300	240	Fixed
Bromodichloromethane	ug/m^3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.3	<2.4	<2.3	<2.3	<2.6	<2.5	<2.9	<2.6	<3.8	<8.6	<2.4	<2.4	NA	NA	NA	NA	Fixed
Bromoform	ug/m^3	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.7	<3.5	<3.5	<10.2	<9.8	<11.0	<10.2	<5.9	<13.3	<3.7	<3.8	30	300	3,000	NA	Fixed
Bromomethane (Methyl Bromide)	ug/m^3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.3	<1.4	<1.3	<1.3	<1.5	<1.5	<1.7	<1.5	<2.2	<5.0	<1.4	<1.4	10	100	1,000	2,000	Fixed
Carbon disulfide	ug/m^3	**6.4**	**2.5**	**3.8**	**4.2**	**5.6**	**4.7**	**5.4**	**4.1**	**45.3**	**9.1**	**19.6**	**36.8**	**7.2**	**30.3**	**12.2**	**9.7**	**11.2**	2,000	20,000	200,000	6,000	Fixed
Carbon tetrachloride	ug/m^3	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.1	<1.2	<1.2	<1.3	<1.2	<9.0	<20.3	<5.6	<5.8	2	20	200	1,900	Fixed
Chlorobenzene	ug/m^3	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.6	<1.8	<1.8	**4.5**	<1.8	<2.6	<6.0	<1.6	<1.7	100	1,000	10,000	NA	Fixed
Chloroethane (Ethyl chloride)	ug/m^3	<0.91	<0.91	<0.91	<0.91	<0.91	<0.91	<0.94	<0.91	<0.91	<1.0	<1.0	<1.1	<1.0	<3.8	<8.5	<2.3	<2.4	30,000	300,000	3,000,000	100,000	Fixed
Chloroform	ug/m^3	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.7	<1.9	<1.9	<2.1	<1.9	**4.9**	<6.3	<1.7	<1.8	300	3,000	30,000	150	Fixed
Chloromethane (Methyl chloride)	ug/m^3	<0.71	<0.71	<0.71	<0.71	<0.71	<0.71	<0.73	<0.71	<0.71	**1.5**	**1.2**	**1.6**	**0.93**	**16.9**	<2.7	<0.73	<0.76	300	3,000	30,000	1,000	Fixed
cis-1,2-Dichloroethene	ug/m^3	<1.4	<1.4	<1.4	**3.8**	**919**	**228**	<1.4	**20,500**	**11.9**	<1.6	<1.5	<1.7	<1.6	**2780**	**11.6**	<1.4	<1.5	NA	NA	NA	NA	Fixed
cis-1,3-Dichloropropene	ug/m^3	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.6	<1.5	<1.5	<1.8	<1.7	<1.9	<1.8	<2.6	<5.8	<1.6	<1.7	60	600	6,000	NA	Fixed
Cyclohexane	ug/m^3	**7.3**	**2.6**	**10.9**	<1.2	**1.8**	**4.3**	**5.2**	**9.2**	**8.3**	**8.4**	**4.7**	**3.4**	**1.7**	**34.7**	**55.5**	**6.3**	**13.9**	20,000	200,000	2,000,000	NA	Fixed
Dibromochloromethane	ug/m^3	<2.9	<2.9	<2.9	<2.9	<2.9	<2.9	<3.0	<2.9	<2.9	<3.4	<3.2	<3.6	<3.4	<4.8	<11.0	<3.0	<3.1	NA	NA	NA	NA	Fixed
Dichlorodifluoromethane (Freon 12)	ug/m^3	**1.9**	**2.3**	**106**	**3.7**	**115**	**77.8**	**128**	<1.7	<1.7	<2.0	1.9	<2.1	2.1	<2.8	<6.4	2.1	2.3	600	6,000	60,000	NA	Fixed
Dichlorotetrafluoroethane	ug/m^3	<2.4	<2.4	<2.4	<2.4	<2.4	<2.4	<2.5	<2.4	<2.4	<2.8	<2.7	<3.0	<2.8	<4.0	<9.0	<2.5	<2.6	NA	NA	NA	NA	Fixed
Ethanol	ug/m^3	**14.1**	**12.1**	**12.3**	**20.6**	**13.9**	**13.8**	**18.4**	**17.1**	**50.4**	30.4	77.8	25.6	16.5	**364**	**106**	**52.6**	**72.7**	42,000	420,000	4,200,000	180,000	Fixed
Ethyl acetate	ug/m^3	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.3	<1.2	<1.2	<1.4	<1.4	<1.5	<1.4	<2.0	<4.6	<1.3	<1.3	8,000	80,000	800,000	40,000	Fixed
Ethylbenzene	ug/m^3	**10.5**	<1.5	**9.7**	**1.6**	**10.8**	**8.7**	**9.3**	**4.7**	**13.6**	20.7	3.8	2.7	2.1	**63.1**	<14.0	<3.8	<4.0	3,000	30,000	300,000	10,000	Fixed
Hexachloro-1,3-butadiene	ug/m^3	<3.7	<3.7	<3.7	<3.7	<3.7	<3.7	<3.8	<3.7	<3.7	<4.3	<4.1	<4.6	<4.3	<15.2	<34.4	<9.4	<9.8	1	10	100	NA	Fixed
m&p-Xylene	ug/m^3	**27.3**	**5.2**	**31.2**	**5.9**	**41.5**	**31.9**	**33.5**	**15.3**	**51.3**	98.2	18.6	5.3	4.8	**259**	**66.1**	**39.4**	**57.1**	300	3,000	30,000	43,000	Fixed
Methylene Chloride (Dichloromethane)	ug/m^3	**1.6**	**112**	**248**	**230**	**8.9**	**6.7**	**5.5**	**4.4**	**4**	<6.8	**23.2**	<7.4	<6.8	**65.7**	**114**	**20.2**	**11.3**	60	600	6,000	10,000	Fixed
Methyl-tert-butyl ether (MTBE)	ug/m^3	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.3	<1.2	<1.2	<1.4	<1.4	<1.5	<1.4	<2.0	<4.6	<1.3	<1.3	8,000	80,000	800,000	7,000	Fixed
Naphthalene	ug/m^3	<1.8	<1.8	<1.8	<1.8	<1.8	<1.8	<1.9	<1.8	**6.7**	<5.2	**54.6**	<5.6	<5.2	**46.4**	**28.8**	**6.9**	<4.8	30	300	3,000	NA	Fixed
n-Heptane	ug/m^3	**10.1**	**2.4**	**18.3**	**1.9**	**3.2**	**5.1**	**7.3**	**8.2**	**9.3**	13	11.4	9.7	4.3	**58.8**	**37.7**	**12.3**	**17.4**	NA	NA	NA	NA	Fixed

TABLE 1
SOIL GAS ANALYTICAL RESULTS

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		SG-1	SG-2	SG-3	SG-4	SG-5	SG-6	SG-7	SG-8	SG-9	SG-10	SG-11	SG-12	SG-13	PSG-1	PSG-2	PSG-3	PSG-4	Industrial ISVs ($\mu g/m^3$)	Industrial 10X ISVs ($\mu g/m^3$)	Industrial 100X ISVs ($\mu g/m^3$)	Acute ISVs ($\mu g/m^3$)	Lab Type
Date		4/19/13	4/19/13	4/22/13	4/23/13	4/23/13	4/23/13	4/23/13	4/24/13	4/24/13	5/22/14	5/22/14	5/22/14	5/22/14	6/6/14	6/6/14	6/6/14	6/6/14					
Depth		8	8	8	11(1)	8	11(1)	11(1)	10(1)	10(1)	8-9	5-6	8-9	8-9									
Parameter	**Units**	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result					
n-Hexane	ug/m^3	**24.1**	**174**	**45.8**	**34.9**	**4.6**	**10**	**23.7**	**21**	**16.6**	23.6	<1.3	12.6	<1.4	**63.5**	**45.2**	**12**	**25.2**	**6,000**	**60,000**	**600,000**	**NA**	Fixed
o-Xylene	ug/m^3	**6.2**	<1.5	**15.3**	**1.7**	**18.4**	**11.7**	**9.3**	**3.5**	**12.9**	**31**	**9.1**	**2.5**	**2.1**	**72.2**	**24.7**	**14.3**	**20.7**	**300**	**3,000**	**30,000**	**43000**	Fixed
Propylene (Methylethylene)	ug/m^3	**260**	<0.59	<0.59	**19.1**	**47.6**	**154**	**129**	**699**	**179**	**76.3**	**51.2**	**114**	**22.3**	**337**	**77.6**	<3.0	<3.2	**8,000**	**80,000**	**800,000**	**NA**	Fixed
Styrene	ug/m^3	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<4.2	<4.0	<4.5	<4.2	<6.1	<13.7	<3.8	<3.9	**3,000**	**30,000**	**300,000**	**21,000**	Fixed
Tetrachloroethylene (PCE)	ug/m^3	**23.9**	<1.2	**33.6**	**14.9**	**13,900**	**1,440**	**134***	**21,500**	**421***	<1.3	<1.3	<1.4	<1.3	**14,000**	**52.1***	**33.5***	**651**	**30**	**300**	**3,000**	**20,000**	Fixed
Tetrahydrofuran	ug/m^3	<1.0	<1.0	<1.0	<1.0	**2.1**	**3.8**	<1.0	<1.0	<1.0	<1.2	**8.8**	**4.4**	**3.1**	**50.7**	**48.2**	**13.3**	**18.4**	**NA**	**NA**	**NA**	**NA**	Fixed
Toluene	ug/m^3	**31.3**	**8.7**	**47**	**23**	**44.6**	**65.8**	**83.3**	**65.3**	**308**	**528**	**61.3**	**86.7**	**10.1**	**889**	**474**	**137**	**250**	**10,000**	**100,000**	**1,000,000**	**37,000**	Fixed
trans-1,2-Dichloroethene	ug/m^3	<1.4	<1.4	**<1.4**	<1.4	**5.3**	<1.4	<1.4	**35.9**	<1.4	<1.6	<1.5	<1.7	<1.6	**249**	<5.1	<1.4	<1.5	**200**	**2,000**	**20,000**	**800**	Fixed
trans-1,3-Dichloropropene	ug/m^3	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.6	<1.5	<1.5	<4.5	<4.3	<4.8	<4.5	<6.5	<14.6	<4.0	<4.2	**60**	**600**	**6,000**	**NA**	Fixed
Trichloroethylene (TCE)	ug/m^3	**2.7**	<0.92	**2.8**	**6.3**	**967**	**366**	**15.4***	**35,000**	**89.2**	<2.1	**2.7**	**3.3**	<2.1	**4,890**	**14.2**	3.2	**171**	**6**	**60**	**600**	**2,000**	Fixed
Trichlorofluoromethane	ug/m^3	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<2.0	<1.9	<1.9	<2.2	<2.1	<2.4	<2.2	<3.2	<7.2	**9.2**	2.1	**2,000**	**20,000**	**200,000**	**NA**	Fixed
Vinyl acetate	ug/m^3	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.2	<1.4	<1.3	<1.5	<1.4	**15.5**	**22.4**	**15.8**	**13.2**	**600**	**6,000**	**60,000**	**NA**	Fixed
Vinyl chloride	ug/m^3	<0.44	<0.44	<0.44	<0.44	<0.44	<0.44	<0.45	<0.44	<0.44	**1.8**	<0.49	<0.55	<0.50	<1.5	<3.3	<0.90	<0.94	**3**	**30**	**300**	**180,000**	Fixed

Notes:
NA = Not Applicable
ISV - Intrusion Screening Value
< - Less than the laboratory Reporting Limit (RL)
Bold - Exceeds laboratory report limit
Grey Shading - Result exceeds the Industrial ISV
Green Shading - Result exceed 10 times the Industrial ISV
Blue Shading - Result exceeds 100 times the Industrial ISV
Orange Shading - Result exceeds Acute ISV
(1) - samples were attempted to be collected at a depth of 8 ft bgs but insufficient accumulation of vapors dictated that the sample be collected deeper where soils were less tight and vapors could be drawn into the canister.
*Greater than new Industrial ISV's

TABLE 2
ANALYTICAL RESULTS - 5405 RAMSEY ST

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		SS-01			SS-02			SS-03			SS-04			Industrial ISVs (µg/m3)	Industrial 10X ISVs (µg/m3)	Industrial 100X ISVs (µg/m^3)	Acute ISVs (µg/m^3)	Lab Type
Date		4/29/13	5/31/13	3/20/14	4/29/13	5/31/13	3/20/14	4/29/13	5/31/13	3/20/14	4/29/13	5/31/13	3/20/14					
Type		sub-slab			sub-slab			sub-slab			sub-slab							
Parameter	Units	Result			Result			Result			Result							
1,1,1-Trichloroethane	ug/m^3	<1.9	<4.9	<1.9	<1.9	<5.3	<1.9	<1.9	<3.8	<3.2	<1.9	<4.9	<1.9	10,000	100,000	1,000,000	140,000	Fixed
1,1,2,2-Tetrachloroethane	ug/m^3	<1.2	<3.1	<1.2	<1.2	<3.3	<1.2	<1.2	<2.4	<2.0	<1.2	<3.1	<1.2	1	10	100	NA	Fixed
1,1,2-Trichloroethane	ug/m^3	<0.92	<2.4	<0.92	<0.92	<2.6	<0.92	<0.92	<1.9	<1.6	<0.92	<2.4	<0.92	2	20	200	NA	Fixed
1,1,2-Trichlorotrifluoroethane	ug/m^3	<2.7	<7.1	<2.7	<2.7	<7.6	<2.7	<2.7	<5.4	<4.7	<2.7	<7.1	<2.7	80,000	800,000	8,000,000	NA	Fixed
1,1-Dichloroethane	ug/m^3	<1.4	<3.6	<1.4	<1.4	<3.9	<1.4	<1.4	<2.8	<2.4	<1.4	<3.6	<1.4	1,000	10,000	100,000	NA	Fixed
1,1-Dichloroethene (DCE)	ug/m^3	<1.4	<3.6	<1.4	<1.4	<3.8	<1.4	<1.4	<2.7	<2.4	<1.4	<3.6	<1.4	600	6,000	60,000	NA	Fixed
1,2,4-Trichlorobenzene	ug/m^3	<2.5	<6.7	<2.5	<2.5	<7.2	<2.5	<2.5	<5.1	<4.4	<2.5	<6.7	<2.5	10	100	1,000	NA	Fixed
1,2,4-Trimethylbenzene	ug/m^3	**14.2**	<4.4	**6.9**	**3.1**	<4.7	**11.8**	**6**	**4.5**	**11.8**	**7**	<4.4	**11.1**	20	200	2,000	NA	Fixed
1,2-Dibromoethane (EDB)	ug/m^3	<2.6	<6.9	<2.6	<2.6	<7.4	<2.6	<2.6	<5.3	<4.6	<2.6	<6.9	<2.6	0.06	1	6	NA	Fixed
1,2-Dichlorobenzene	ug/m^3	<2.0	<5.4	<2.0	<2.0	<5.8	<2.0	<2.0	<4.1	<3.6	<2.0	<5.4	<2.0	600	6,000	60,000	NA	Fixed
1,2-Dichloroethane	ug/m^3	<0.69	<1.8	<0.69	<0.69	<1.9	<0.69	<0.69	<1.4	<1.2	<0.69	<1.8	<0.69	1	10	100	NA	Fixed
1,2-Dichloropropane	ug/m^3	<1.6	<4.2	<1.6	<1.6	<4.5	<1.6	<1.6	<3.2	<2.7	<1.6	<4.2	<1.6	10	100	1,000	235	Fixed
1,3,5-Trimethylbenzene	ug/m^3	**4.7**	<4.4	**2.2**	<1.7	<4.7	**2.6**	**2.5**	<3.4	**3.7**	<1.7	<4.4	**2.8**	20	200	2,000	NA	Fixed
1,3-Butadiene	ug/m^3	<0.76	<2.0	<0.76	<0.76	<2.1	<0.76	<0.76	<1.5	<1.3	<0.76	<2.0	<0.76	1	10	100	NA	Fixed
1,3-Dichlorobenzene	ug/m^3	<2.0	<5.4	<2.0	<2.0	<5.8	<2.0	<2.0	<4.1	<3.6	<2.0	<5.4	<2.0	NA	NA	NA	NA	Fixed
1,4-Dichlorobenzene	ug/m^3	**7.4**	<5.4	<2.0	**3.2**	<5.8	**3**	**6.7**	<4.1	<3.6	**7.3**	<5.4	**3.7**	200	2,000	20,000	12,000	Fixed
2-Butanone (MEK)	ug/m^3	**7.9**	**3.9**	**50.6**	**3.1**	**9.3**	**3.7**	**1.6**	**6.6**	**3**	**15.4**	**10.4**	**3.7**	10,000	100,000	1,000,000	10,000	Fixed
2-Hexanone	ug/m^3	<1.4	<3.7	<1.4	<1.4	<3.9	<1.4	<1.4	<2.8	<2.4	<1.4	<3.7	<1.4	NA	NA	NA	NA	Fixed
2-Propanol (isopropyl alcohol)	ug/m^3	**3.4**	<2.2	**7.5**	**2.2**	<2.4	**7.4**	**2.7**	<1.7	**10**	**10.1**	<2.2	**8.8**	20,000	200,000	2,000,000	3,200	Fixed
4-Ethyltoluene	ug/m^3	**5.5**	<4.4	**2.3**	<1.7	<4.7	**3.1**	**3.4**	<3.4	**4**	**3.4**	<4.4	**3.7**	NA	NA	NA	NA	Fixed
4-Methyl-2-pentanone (MIBK)	ug/m^3	<1.4	<3.7	<1.4	<1.4	<3.9	<1.4	<1.4	<2.8	<2.4	<1.4	<3.7	<1.4	8,000	80,000	800,000	NA	Fixed
Acetone	ug/m^3	**11.7**	**21.6**	<40.6	**29.4**	**34.2**	<40.6	**11.6**	**17.9**	<70.5	**267**	**53.1**	<40.6	87,000	870,000	8,700,000	63,000	Fixed
Benzene	ug/m^3	**1.4**	**4.6**	**6.6**	**1.3**	**36.2**	**6.1**	**1.3**	**303**	**8**	**1.7**	**10.1**	**3.9**	13	130	1,300	1,000	Fixed
Benzyl chloride	ug/m^3	<1.8	<4.7	<1.8	<1.8	<5.0	<1.8	<1.8	<3.6	<3.1	<1.8	<4.7	<1.8	3	30	300	240	Fixed
Bromodichloromethane	ug/m^3	<2.3	<6.0	<2.3	<2.3	<6.4	<2.3	<2.3	<4.6	<4.0	<2.3	<6.0	<2.3	NA	NA	NA	NA	Fixed
Bromoform	ug/m^3	<3.5	<9.3	<3.5	<3.5	<10	<3.5	<3.5	<7.1	<6.1	<3.5	<9.3	<3.5	30	300	3,000	NA	Fixed
Bromomethane (Methyl Bromide)	ug/m^3	<1.3	<3.5	<1.3	<1.3	<3.7	<1.3	<1.3	<2.7	<2.3	<1.3	<3.5	<1.3	10	100	1,000	2,000	Fixed
Carbon disulfide	ug/m^3	**35.3**	<2.8	**2.6**	<1.1	<3.0	<1.1	**4.5**	<2.1	**2.5**	**1.1**	<2.8	<1.1	2,000	20,000	200,000	6,000	Fixed
Carbon tetrachloride	ug/m^3	<1.1	<2.8	<1.1	<1.1	<3.0	<1.1	<1.1	<2.2	<1.9	<1.1	<2.8	<1.1	2	20	200	1,900	Fixed
Chlorobenzene	ug/m^3	<1.6	<4.2	<1.6	<1.6	<4.5	<1.6	<1.6	<3.2	<2.7	<1.6	<4.2	<1.6	100	1,000	10,000	NA	Fixed
Chloroethane (Ethyl chloride)	ug/m^3	<0.91	<2.4	<0.91	<0.91	<2.6	<0.91	<0.91	<1.8	<1.6	<0.91	<2.4	<0.91	30,000	300,000	3,000,000	100,000	Fixed
Chloroform	ug/m^3	<1.7	<4.4	<1.7	<1.7	<4.7	<1.7	<1.7	<3.4	<2.9	<1.7	<4.4	<1.7	300	3,000	30,000	150	Fixed
Chloromethane (Methyl chloride)	ug/m^3	<0.71	<1.9	<0.71	**1**	<2.0	<0.71	<0.71	<1.4	<1.2	<0.71	<1.9	<0.71	300	3,000	30,000	1,000	Fixed
cis-1,2-Dichloroethene	ug/m^3	<1.4	<3.6	<1.4	<1.4	<3.8	<1.4	<1.4	<2.7	<2.4	<1.4	<3.6	<1.4	NA	NA	NA	NA	Fixed
cis-1,3-Dichloropropene	ug/m^3	<1.5	<4.1	<1.5	<1.5	<4.4	<1.5	<1.5	<3.1	<2.7	<1.5	<4.1	<1.5	60	600	6,000	NA	Fixed
Cyclohexane	ug/m^3	<1.2	<3.1	**4.6**	<1.2	<3.3	**4.6**	<1.2	<2.4	**5.6**	<1.2	<3.1	**4**	20,000	200,000	2,000,000	NA	Fixed
Dibromochloromethane	ug/m^3	<2.9	<7.7	<2.9	<2.9	<8.2	<2.9	<2.9	<5.9	<5.1	<2.9	<7.7	<2.9	NA	NA	NA	NA	Fixed
Dichlorodifluoromethane (Freon 12)	ug/m^3	**2.5**	<4.5	**1.8**	**3.7**	<4.8	**2.5**	**3.4**	<3.4	**3.4**	**2.8**	<4.5	**2.5**	600	6,000	60,000	NA	Fixed

TABLE 2
ANALYTICAL RESULTS - 5405 RAMSEY ST

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		SS-01			SS-02			SS-03			SS-04			Industrial ISVs (µg/m3)	Industrial 10X ISVs (µg/m3)	Industrial 100X ISVs (µg/m^3)	Acute ISVs (µg/m^3)	Lab Type
Date		4/29/13	5/31/13	3/20/14	4/29/13	5/31/13	3/20/14	4/29/13	5/31/13	3/20/14	4/29/13	5/31/13	3/20/14					
Type		sub-slab			sub-slab			sub-slab			sub-slab							
Parameter	Units	Result			Result			Result			Result							
Dichlorotetrafluoroethane	ug/m^3	<2.4	<6.3	<2.4	<2.4	<6.7	<2.4	<2.4	<4.8	<4.1	<2.4	<6.3	<2.4	NA	NA	NA	NA	Fixed
Ethanol	ug/m^3	**7.1**	**20.6**	**123**	**7.3**	**23**	**132**	**10.2**	**27.5**	**149**	**23.2**	**30.7**	**131**	42,000	420,000	4,200,000	180,000	Fixed
Ethyl acetate	ug/m^3	<1.2	<3.2	<1.2	<1.2	<3.5	<1.2	<1.2	<2.5	<2.1	<1.2	<3.2	<1.2	8,000	80,000	800,000	40,000	Fixed
Ethylbenzene	ug/m^3	**3.5**	<3.9	**6.2**	<1.5	<4.2	**6.9**	**2.4**	**6.3**	**8.3**	**3.1**	<3.9	**7.4**	3,000	30,000	300,000	10,000	Fixed
Hexachloro-1,3-butadiene	ug/m^3	<3.7	<9.7	<3.7	<3.7	<10.4	<3.7	<3.7	<7.5	<6.4	<3.7	<9.7	<3.7	1	10	100	NA	Fixed
m&p-Xylene	ug/m^3	**13.5**	<7.8	**20.6**	<3.0	**20.7**	**23.9**	**6.2**	**95.9**	**27**	**9.6**	**17.9**	**25.1**	300	3,000	30,000	43,000	Fixed
Methylene Chloride (Dichloromethane)	ug/m^3	**4.7**	**257**	**23.2**	**385**	**212**	**13.9**	**35.6**	**2.9**	**55.5**	**2.7**	**6**	**11.6**	60	600	6,000	10,000	Fixed
Methyl-tert-butyl ether (MTBE)	ug/m^3	<1.2	<3.2	<1.2	<1.2	<3.5	<1.2	<1.2	<2.5	<2.1	<1.2	<3.2	<1.2	8,000	80,000	800,000	7,000	Fixed
Naphthalene	ug/m^3	**2.0**	**6.2**	<1.8	<1.8	**10.9**	<1.8	**2.1**	**30.2**	<3.1	**2.6**	**8.3**	<1.8	30	300	3,000	NA	Fixed
n-Heptane	ug/m^3	**3.7**	<3.7	**6.7**	<1.4	<3.9	**6.8**	**3.6**	<2.8	**7.8**	**4**	<3.7	**5**	NA	NA	NA	NA	Fixed
n-Hexane	ug/m^3	**3.3**	**27**	**18.4**	**12.9**	**112**	**15.6**	**2.9**	**4.9**	**20.2**	**3.3**	**6.5**	**9.5**	6,000	60,000	600,000	NA	Fixed
o-Xylene	ug/m^3	**6.6**	<3.9	**6.9**	**1.8**	<4.2	**7.6**	**3.1**	**13.9**	**10.1**	**4.5**	<3.9	**8.2**	300	3,000	30,000	43000	Fixed
Propylene (Methylethylene)	ug/m^3	<0.59	<1.6	<0.59	<0.59	<1.7	**1.3**	<0.59	<1.2	<1.0	<0.59	<1.6	<0.59	8,000	80,000	800,000	NA	Fixed
Styrene	ug/m^3	<1.5	<3.9	<1.5	<1.5	**15.3**	<1.5	<1.5	**92.5**	<2.5	<1.5	**5.5**	<1.5	3,000	30,000	300,000	21,000	Fixed
Tetrachloroethylene (PCE)	ug/m^3	**7.7**	<3.1	**1.5**	**2.9**	<3.3	**1.2**	**23.8**	**10**	**4.4**	**11.7**	<3.1	**1.4**	30	300	3,000	20,000	Fixed
Tetrahydrofuran	ug/m^3	**9.1**	<2.7	<1.0	<1.0	**3.2**	<1.0	<1.0	<2.0	<1.8	<1.0	<2.7	<1.0	NA	NA	NA	NA	Fixed
Toluene	ug/m^3	**8.1**	**23.5**	**31.3**	**6**	**67.1**	**31.7**	**7.1**	**310**	**38.5**	**9**	**43.2**	**29**	10,000	100,000	1,000,000	37,000	Fixed
trans-1,2-Dichloroethene	ug/m^3	<1.4	<3.6	<1.4	<1.4	<3.8	<1.4	<1.4	<2.7	<2.4	<1.4	<3.6	<1.4	200	2,000	20,000	800	Fixed
trans-1,3-Dichloropropene	ug/m^3	<1.5	<4.1	<1.5	<1.5	<4.4	<1.5	<1.5	<3.1	<2.7	<1.5	<4.1	<1.5	60	600	6,000	NA	Fixed
Trichloroethylene (TCE)	ug/m^3	<0.92	<2.4	<0.92	<0.92	<2.6	<0.92	<0.92	<1.9	<1.6	<0.92	<2.4	<0.92	6	60	600	2,000	Fixed
Trichlorofluoromethane	ug/m^3	<1.9	<5.1	<1.9	**1.9**	<5.4	<1.9	<1.9	<3.9	<3.3	<1.9	<5.1	<1.9	2,000	20,000	200,000	NA	Fixed
Vinyl acetate	ug/m^3	<1.2	<3.2	**5**	<1.2	<3.4	**6**	<1.2	<2.4	**4.7**	<1.2	<3.2	**3.3**	600	6,000	60,000	NA	Fixed
Vinyl chloride	ug/m^3	<0.44	<1.2	<0.44	<0.44	<1.2	<0.44	<0.44	<0.88	<0.76	<0.44	<1.2	<0.44	3	30	300	180,000	Fixed

Notes:
NA = Not Applicable
ISV - Intrusion Screening Value
< - Less than the laboratory Reporting Limit (RL)
Bold - Exceeds laboratory report limit
Grey Shading - Result exceeds the Industrial ISV
Green Shading - Result exceed 10 times the Industrial ISV
Blue Shading - Result exceeds 100 times the Industrial ISV
Orange Shading - Result exceeds Acute ISV

TABLE 3
ANALYTICAL RESULTS - 402 N CENTRAL AVE

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		402 Central-A	402 Central-B	402 Central-C	SS-06 (402 Central)		SS-07 (402 Central)		**Industrial ISVs (µg/m3)**	**Industrial 10X ISVs (µg/m3)**	**Industrial 100X ISVs (µg/m3)**	**Acute ISVs (µg/m^3)**	**Lab Type**
Date		3/21/14	3/21/14	3/21/14	3/21/14	6/6/14	3/21/14	6/6/2014					
Type		24-hour Indoor Air	24-hour Indoor Air	24-hour Indoor Air	Sub-slab		Sub-slab						
Parameter	**Units**	Result	Result	Result	Result		Result						
1,1,1-Trichloroethane	ug/m^3	<1.6	<2.1	<1.6	<1.9	<1.9	<1.9	<1.9	10,000	100,000	1,000,000	140,000	Fixed
1,1,2,2-Tetrachloroethane	ug/m^3	<1.0	<1.3	<1.0	<1.2	<2.4	<1.2	<2.4	1	10	100	NA	Fixed
1,1,2-Trichloroethane	ug/m^3	<0.79	<1.0	<0.79	<0.92	<0.96	<0.92	<0.92	2	20	200	NA	Fixed
1,1,2-Trichlorotrifluoroethane	ug/m^3	<2.3	<3.0	<2.3	<2.7	<2.8	<2.7	<2.7	80,000	800,000	8,000,000	NA	Fixed
1,1-Dichloroethane	ug/m^3	<1.2	<1.5	<1.2	<1.4	<1.4	<1.4	<1.4	1,000	10,000	100,000	NA	Fixed
1,1-Dichloroethene (DCE)	ug/m^3	<1.2	<1.5	<1.2	<1.4	<1.4	<1.4	<1.4	600	6,000	60,000	NA	Fixed
1,2,4-Trichlorobenzene	ug/m^3	<2.2	<2.8	<2.2	<2.5	<2.6	<2.5	<2.5	10	100	1,000	NA	Fixed
1,2,4-Trimethylbenzene	ug/m^3	**3.1**	**2.3**	**2.3**	**21.8**	**34.3**	**23.5**	**21.4**	20	200	2,000	NA	Fixed
1,2-Dibromoethane (EDB)	ug/m^3	<2.2	<2.9	<2.2	<2.6	<2.7	<2.6	<2.6	0.06	1	6	NA	Fixed
1,2-Dichlorobenzene	ug/m^3	<1.8	<2.3	<1.8	<2.0	<2.1	<2.0	<2.0	600	6,000	60,000	NA	Fixed
1,2-Dichloroethane	ug/m^3	<0.59	<0.76	<0.59	<0.69	<0.71	<0.69	<0.69	1	10	100	NA	Fixed
1,2-Dichloropropane	ug/m^3	<1.4	<1.7	<1.4	<1.6	<1.6	<1.6	<1.6	10	100	1,000	235	Fixed
1,3,5-Trimethylbenzene	ug/m^3	<1.4	<1.9	<1.4	<1.7	**7.8**	<1.7	**6.7**	20	200	2,000	NA	Fixed
1,3-Butadiene	ug/m^3	<0.65	<0.84	<0.65	<0.76	<2.0	<0.76	<1.9	1	10	100	NA	Fixed
1,3-Dichlorobenzene	ug/m^3	<1.8	<2.3	<1.8	<2.0	<2.1	<2.0	<2.0	NA	NA	NA	NA	Fixed
1,4-Dichlorobenzene	ug/m^3	<1.8	<2.3	<1.8	**5.5**	**25.8**	**5.1**	**18.3**	200	2,000	20,000	12,000	Fixed
2-Butanone (MEK)	ug/m^3	**6.9**	**7.8**	**4.9**	**20.7**	**7.4**	**12.5**	**82.3**	10,000	100,000	1,000,000	10,000	Fixed
2-Hexanone	ug/m^3	<2.2	<2.8	<2.2	**4.2**	<2.6	**2.7**	**5**	NA	NA	NA	NA	Fixed
2-Propanol (isopropyl alcohol)	ug/m^3	**168**	**55.1**	**61**	<2.1	**10.9**	<2.1	**18.1**	20,000	200,000	2,000,000	3,200	Fixed
4-Ethyltoluene	ug/m^3	**2.5**	<1.9	<1.4	**7.9**	**11.6**	**8.7**	**11.7**	NA	NA	NA	NA	Fixed
4-Methyl-2-pentanone (MIBK)	ug/m^3	<1.2	**2**	<1.2	**1.8**	<3.6	<1.4	<3.5	8,000	80,000	800,000	NA	Fixed
Acetone	ug/m^3	**644**	**257**	**271**	**111**	**39.6**	**73**	**90**	87,000	870,000	8,700,000	63,000	Fixed
Benzene	ug/m^3	**1.8**	**1.1**	**1.2**	**2.2**	**9**	**1.9**	**10**	13	130	1,300	1,000	Fixed
Benzyl chloride	ug/m^3	<3.8	<4.9	<3.8	<4.4	<4.6	<4.4	<4.4	3	30	300	240	Fixed
Bromodichloromethane	ug/m^3	<2.0	<2.5	<2.0	<2.3	<2.4	<2.3	<2.3	NA	NA	NA	NA	Fixed
Bromoform	ug/m^3	<3.0	<3.9	<3.0	<3.5	<3.7	<3.5	<3.5	30	300	3,000	NA	Fixed
Bromomethane (Methyl Bromide)	ug/m^3	<1.1	<1.5	<1.1	<1.3	<1.4	<1.3	<1.3	10	100	1,000	2,000	Fixed
Carbon disulfide	ug/m^3	<0.91	<1.2	<0.91	**1.3**	**3.2**	**11.4**	**2.1**	2,000	20,000	200,000	6,000	Fixed
Carbon tetrachloride	ug/m^3	<0.92	<1.2	<0.92	<1.1	<5.6	<1.1	<5.4	2	20	200	1,900	Fixed
Chlorobenzene	ug/m^3	<1.4	<1.7	<1.4	<1.6	<1.6	<1.6	<1.6	100	1,000	10,000	NA	Fixed
Chloroethane (Ethyl chloride)	ug/m^3	<0.78	<1.0	<0.78	<0.91	<2.3	<0.91	<2.3	30,000	300,000	3,000,000	100,000	Fixed
Chloroform	ug/m^3	<1.4	<1.8	<1.4	**14**	**4.8**	<1.7	<1.7	300	3,000	30,000	150	Fixed
Chloromethane (Methyl chloride)	ug/m^3	<0.60	**1.1**	**0.96**	<0.71	<0.73	<0.71	<0.71	300	3,000	30,000	1,000	Fixed
cis-1,2-Dichloroethene	ug/m^3	<1.2	<1.5	<1.2	<1.4	<1.4	<1.4	<1.4	NA	NA	NA	NA	Fixed
cis-1,3-Dichloropropene	ug/m^3	<1.3	<1.7	<1.3	<1.5	<1.6	<1.5	<1.5	60	600	6,000	NA	Fixed
Cyclohexane	ug/m^3	<1.0	<1.3	<1.0	<1.2	**6.2**	**2.6**	**7.5**	20,000	200,000	2,000,000	NA	Fixed
Dibromochloromethane	ug/m^3	<2.5	<3.2	<2.5	<2.9	<3.0	<2.9	<2.9	NA	NA	NA	NA	Fixed
Dichlorodifluoromethane (Freon 12)	ug/m^3	**3.4**	**10**	**8.7**	**4.9**	**3.2**	**5.3**	**2.8**	600	6,000	60,000	NA	Fixed

TABLE 3
ANALYTICAL RESULTS - 402 N CENTRAL AVE

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		402 Central-A	402 Central-B	402 Central-C	SS-06 (402 Central)		SS-07 (402 Central)		**Industrial ISVs (µg/m3)**	**Industrial 10X ISVs (µg/m3)**	**Industrial 100X ISVs (µg/m3)**	**Acute ISVs (µg/m^3)**	**Lab Type**
Date		3/21/14	3/21/14	3/21/14	3/21/14	6/6/14	3/21/14	6/6/2014					
Type		24-hour Indoor Air	24-hour Indoor Air	24-hour Indoor Air	Sub-slab		Sub-slab						
Parameter	**Units**	Result	Result	Result	Result		Result						
Dichlorotetrafluoroethane	ug/m^3	<2.0	<2.6	<2.0	<2.4	<2.5	<2.4	<2.4	NA	NA	NA	NA	Fixed
Ethanol	ug/m^3	**3500**	**1090**	**1010**	**191**	**80.9**	**266**	**209**	42,000	420,000	4,200,000	180,000	Fixed
Ethyl acetate	ug/m^3	**20.1**	**7.5**	**7.6**	<1.2	<1.3	<1.2	<1.2	8,000	80,000	800,000	40,000	Fixed
Ethylbenzene	ug/m^3	**2.2**	<1.6	<1.3	**8.4**	**19.1**	**8.1**	<3.7	3,000	30,000	300,000	10,000	Fixed
Hexachloro-1,3-butadiene	ug/m^3	<3.2	<4.1	<3.2	<3.7	<9.4	<3.7	<9.1	1	10	100	NA	Fixed
m&p-Xylene	ug/m^3	**6.6**	**4.6**	**4.4**	**28.6**	**78.3**	**26.1**	**51**	300	3,000	30,000	43,000	Fixed
Methylene Chloride (Dichloromethane)	ug/m^3	**7.5**	**3.7**	**5.2**	**10.9**	**8.3**	**8.4**	**8.4**	60	600	6,000	10,000	Fixed
Methyl-tert-butyl ether (MTBE)	ug/m^3	<1.1	<1.4	<1.1	<1.2	<1.3	<1.2	<1.2	8,000	80,000	800,000	7,000	Fixed
Naphthalene	ug/m^3	<3.8	<5.0	<3.8	<4.5	<4.6	**6.2**	<4.5	30	300	3,000	NA	Fixed
n-Heptane	ug/m^3	**2.1**	<1.5	**1.6**	**5.9**	**13.7**	**5.5**	**13.5**	NA	NA	NA	NA	Fixed
n-Hexane	ug/m^3	**5.9**	**2.9**	**2.9**	<1.2	**11.6**	**3.5**	**12.1**	6,000	60,000	600,000	NA	Fixed
o-Xylene	ug/m^3	**2.6**	**1.9**	**1.7**	**11**	**23.7**	**10.2**	**18.7**	300	3,000	30,000	43000	Fixed
Propylene (Methylethylene)	ug/m^3	<0.50	<0.65	<0.50	**2.4**	<3.0	**3.3**	<2.9	8,000	80,000	800,000	NA	Fixed
Styrene	ug/m^3	<3.1	<4.0	<3.1	<3.6	<3.8	<3.6	<3.6	3,000	30,000	300,000	21,000	Fixed
Tetrachloroethylene (PCE)	ug/m^3	<0.99	<1.3	<0.99	**74.5**	**128**	**2.9**	**10.8**	30	300	3,000	20,000	Fixed
Tetrahydrofuran	ug/m^3	<0.86	<1.1	<0.86	**5.8**	<3.0	**4.8**	<2.9	NA	NA	NA	NA	Fixed
Toluene	ug/m^3	**11.8**	**6.9**	**7.2**	**20.8**	**116**	**23.5**	**110**	10,000	100,000	1,000,000	37,000	Fixed
trans-1,2-Dichloroethene	ug/m^3	<1.2	<1.5	<1.2	<1.4	<1.4	<1.4	<1.4	200	2,000	20,000	800	Fixed
trans-1,3-Dichloropropene	ug/m^3	<1.3	<1.7	<1.3	<1.5	<4.0	<1.5	<3.9	60	600	6,000	NA	Fixed
Trichloroethylene (TCE)	ug/m^3	<0.79	<1.0	<0.79	**5.6**	**8.6**	<0.92	<1.8	6	60	600	2,000	Fixed
Trichlorofluoromethane	ug/m^3	<1.6	<2.1	<1.6	<1.9	<2.0	**1.9**	<1.9	2,000	20,000	200,000	NA	Fixed
Vinyl acetate	ug/m^3	<1.0	<1.3	<1.0	<1.2	<3.1	<1.2	**8.7**	600	6,000	60,000	NA	Fixed
Vinyl chloride	ug/m^3	<0.37	<0.48	<0.37	<0.44	<0.90	<0.44	<0.87	3	30	300	180,000	Fixed

Notes:
NA = Not Applicable
ISV - Intrusion Screening Value
< - Less than the laboratory Reporting Limit (RL)
Bold - Exceeds laboratory report limit
Grey Shading - Result exceeds the Industrial ISV
Green Shading - Result exceed 10 times the Industrial ISV
Blue Shading - Result exceeds 100 times the Industrial ISV
Orange Shading - Result exceeds Acute ISV

TABLE 4
ANALYTICAL RESULTS - 406 N CENTRAL AVE

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		406 Central-A	406 Central-B	406 Indoor 24-hr	406 Outdoor 24-hr	SS-05 (406 Central)			Industrial ISVs (µg/m3)	Industrial 10X ISVs (µg/m3)	Industrial 100X ISVs (µg/m3)	Acute ISVs (µg/m^3)	Lab Type
Date		3/20/14	3/20/14	3/25/15	3/25/15	3/20/14	6/6/2014	3/24/2015					
Type		24-hour Indoor Air	24-hour Indoor Air	24-hour Indoor Air	24-hour Outdoor Air	Sub-slab							
Parameter	Units	Result	Result	Result	Result	Result							
1,1,1-Trichloroethane	ug/m^3	<1.7	**2.2**	**4.7**	<1.4	<3.1	<2.0	**2.3**	10,000	100,000	1,000,000	140,000	Fixed
1,1,2,2-Tetrachloroethane	ug/m^3	<1.0	<1.0	<1.5	<1.4	<2.0	<2.5	<0.94	1	10	100	NA	Fixed
1,1,2-Trichloroethane	ug/m^3	<0.82	<0.79	<1.2	<1.1	<1.6	<0.99	<0.74	2	20	200	NA	Fixed
1,1,2-Trichlorotrifluoroethane	ug/m^3	<2.4	<2.3	<3.4	<3.2	<4.5	<2.9	<2.1	80,000	800,000	8,000,000	NA	Fixed
1,1-Dichloroethane	ug/m^3	<1.2	<1.2	<1.7	<1.6	<2.3	<1.5	<1.1	1,000	10,000	100,000	NA	Fixed
1,1-Dichloroethene (DCE)	ug/m^3	<1.2	<1.2	<1.7	<1.6	<2.3	<1.5	<1.1	600	6,000	60,000	NA	Fixed
1,2,4-Trichlorobenzene	ug/m^3	<2.2	<2.2	<3.2	<3.0	<4.3	<2.7	<2.0	10	100	1,000	NA	Fixed
1,2,4-Trimethylbenzene	ug/m^3	**2.1**	**1.9**	**40.5**	<2.0	**32**	**31.7**	**195**	20	200	2,000	NA	Fixed
1,2-Dibromoethane (EDB)	ug/m^3	<2.3	<2.2	<3.3	<3.1	<4.4	<2.8	<2.1	0.06	1	6	NA	Fixed
1,2-Dichlorobenzene	ug/m^3	<1.8	<1.8	<2.6	<2.5	<3.4	<2.2	<1.6	600	6,000	60,000	NA	Fixed
1,2-Dichloroethane	ug/m^3	<0.61	<0.59	<0.87	<0.83	<1.2	<0.74	<0.55	1	10	100	NA	Fixed
1,2-Dichloropropane	ug/m^3	<1.4	<1.4	<2.0	<1.9	<2.7	<1.7	<1.3	10	100	1,000	235	Fixed
1,3,5-Trimethylbenzene	ug/m^3	<1.5	<1.4	**11.8**	<2.0	**7.6**	**7.6**	**44.7**	20	200	2,000	NA	Fixed
1,3-Butadiene	ug/m^3	<0.67	<0.65	<0.95	<0.90	<1.3	<2.0	<0.60	1	10	100	NA	Fixed
1,3-Dichlorobenzene	ug/m^3	<1.8	<1.8	<2.6	<2.5	<3.4	<2.2	<1.6	NA	NA	NA	NA	Fixed
1,4-Dichlorobenzene	ug/m^3	<1.8	<1.8	<2.6	<2.5	**4**	**8.1**	<1.6	200	2,000	20,000	12,000	Fixed
2-Butanone (MEK)	ug/m^3	**1.8**	**3**	**21**	**2.8**	**10.2**	**4.3**	**13**	10,000	100,000	1,000,000	10,000	Fixed
2-Hexanone	ug/m^3	<2.2	<2.2	<1.8	<1.7	<2.3	<2.7	<1.1	NA	NA	NA	NA	Fixed
2-Propanol (isopropyl alcohol)	ug/m^3	<1.9	<1.8	**126**	<2.5	**42.9**	**6.6**	<1.7	20,000	200,000	2,000,000	3,200	Fixed
4-Ethyltoluene	ug/m^3	<1.5	<1.4	**14.7**	<2.0	**9.5**	**12.7**	**77**	NA	NA	NA	NA	Fixed
4-Methyl-2-pentanone (MIBK)	ug/m^3	<1.2	<1.2	**8.9**	<4.2	<2.3	<3.7	<2.8	8,000	80,000	800,000	NA	Fixed
Acetone	ug/m^3	**991**	**1930**	**351**	**14.4**	**307**	**22.8**	<3.2	87,000	870,000	8,700,000	63,000	Fixed
Benzene	ug/m^3	**1.3**	**0.75**	<0.69	<0.65	**13.3**	**7.7**	**4.6**	13	130	1,300	1,000	Fixed
Benzyl chloride	ug/m^3	<3.9	<3.8	<2.2	<2.1	<3.0	<4.7	<1.4	3	30	300	240	Fixed
Bromodichloromethane	ug/m^3	<2.0	<2.0	<2.9	<2.7	<3.8	<2.4	<1.8	NA	NA	NA	NA	Fixed
Bromoform	ug/m^3	<3.1	<3.0	<4.5	<4.2	<5.9	<3.8	<2.8	30	300	3,000	NA	Fixed
Bromomethane (Methyl Bromide)	ug/m^3	<1.2	<1.1	<1.7	<1.6	<2.2	<1.4	<1.1	10	100	1,000	2,000	Fixed
Carbon disulfide	ug/m^3	**1.7**	<0.91	<1.3	<1.3	**7.8**	<1.1	**1.2**	2,000	20,000	200,000	6,000	Fixed
Carbon tetrachloride	ug/m^3	<0.95	<0.92	<1.4	<1.3	<1.8	<5.8	<0.86	2	20	200	1,900	Fixed
Chlorobenzene	ug/m^3	<1.4	<1.4	<2.0	<1.9	<2.7	<1.7	<1.3	100	1,000	10,000	NA	Fixed
Chloroethane (Ethyl chloride)	ug/m^3	<0.80	<0.78	<1.1	<1.1	<1.5	<2.4	<0.72	30,000	300,000	3,000,000	100,000	Fixed
Chloroform	ug/m^3	<1.5	<1.4	<1.1	<1.0	<2.8	<1.8	<0.66	300	3,000	30,000	150	Fixed
Chloromethane (Methyl chloride)	ug/m^3	**0.88**	**0.98**	**1.1**	<0.84	<1.2	<0.76	<0.56	300	3,000	30,000	1,000	Fixed
cis-1,2-Dichloroethene	ug/m^3	<1.2	<1.2	<4.3	<4.1	<2.3	<1.5	<2.7	NA	NA	NA	NA	Fixed
cis-1,3-Dichloropropene	ug/m^3	<1.4	<1.3	<2.0	<1.8	<2.6	<1.7	<1.2	60	600	6,000	NA	Fixed
Cyclohexane	ug/m^3	<1.0	<1.0	<1.5	<1.4	**9.1**	**4.9**	**29.7**	20,000	200,000	2,000,000	NA	Fixed
Dibromochloromethane	ug/m^3	<2.6	<2.5	<3.7	<3.5	<4.9	<3.1	<2.3	NA	NA	NA	NA	Fixed
Dichlorodifluoromethane (Freon 12)	ug/m^3	**3.5**	**3.4**	<2.1	<2.0	**3.3**	**2**	<1.4	600	6,000	60,000	NA	Fixed
Dichlorotetrafluoroethane	ug/m^3	<2.1	<2.0	<3.0	<2.9	<4.0	<2.6	<1.9	NA	NA	NA	NA	Fixed
Ethanol	ug/m^3	**38.9**	**37**	**107**	**5.4**	**207**	**36.8**	**6.1**	42,000	420,000	4,200,000	180,000	Fixed

TABLE 4
ANALYTICAL RESULTS - 406 N CENTRAL AVE

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		406 Central-A	406 Central-B	406 Indoor 24-hr	406 Outdoor 24-hr	SS-05 (406 Central)			**Industrial ISVs (µg/m3)**	**Industrial 10X ISVs (µg/m3)**	**Industrial 100X ISVs (µg/m3)**	**Acute ISVs (µg/m^3)**	**Lab Type**
Date		3/20/14	3/20/14	3/25/15	3/25/15	3/20/14	6/6/2014	3/24/2015					
Type		24-hour Indoor Air	24-hour Indoor Air	24-hour Indoor Air	24-hour Outdoor Air	Sub-slab							
Parameter	**Units**	Result	Result	Result	Result	Result							
Ethyl acetate	ug/m^3	**4.1**	**10.3**	**23.1**	<1.5	<2.1	<1.3	**1.2**	8,000	80,000	800,000	40,000	Fixed
Ethylbenzene	ug/m^3	**1.4**	<1.3	<1.9	<1.8	**16.4**	**15**	**88.6**	3,000	30,000	300,000	10,000	Fixed
Hexachloro-1,3-butadiene	ug/m^3	<3.3	<3.2	<4.7	<4.4	<6.2	<9.8	<2.9	1	10	100	NA	Fixed
m&p-Xylene	ug/m^3	**3**	<2.5	<3.7	<3.5	**56.4**	**63.5**	**118**	300	3,000	30,000	43,000	Fixed
Methylene Chloride (Dichloromethane)	ug/m^3	**41.7**	<2.5	<7.5	<7.1	**462**	**23.8**	<4.7	60	600	6,000	10,000	Fixed
Methyl-tert-butyl ether (MTBE)	ug/m^3	<1.1	<1.1	<1.5	<1.5	<2.1	<1.3	<0.98	8,000	80,000	800,000	7,000	Fixed
Naphthalene	ug/m^3	<4.0	<3.8	<5.6	<5.3	**6.7**	**10.4**	<3.6	30	300	3,000	NA	Fixed
n-Heptane	ug/m^3	<1.2	<1.2	<1.8	<1.7	**13.6**	**11**	**30.8**	NA	NA	NA	NA	Fixed
n-Hexane	ug/m^3	**43.4**	**1.2**	**2.5**	<1.4	**50.9**	**9.5**	**38.5**	6,000	60,000	600,000	NA	Fixed
o-Xylene	ug/m^3	**1.5**	<1.3	<1.9	<1.8	**19.3**	**20.4**	**4.3**	300	3,000	30,000	43000	Fixed
Propylene (Methylethylene)	ug/m^3	**2.6**	**2.1**	**3.9**	**1**	**5.4**	<3.2	**1.6**	8,000	80,000	800,000	NA	Fixed
Styrene	ug/m^3	<3.2	<3.1	<1.8	<1.7	<2.5	<3.9	<1.2	3,000	30,000	300,000	21,000	Fixed
Tetrachloroethylene (PCE)	ug/m^3	**1.3**	**4.6**	<1.5	<1.4	**147**	**3,310**	**90.1**	30	300	3,000	20,000	Fixed
Tetrahydrofuran	ug/m^3	<0.89	<0.86	**13**	<1.2	<1.7	<3.1	**26.6**	NA	NA	NA	NA	Fixed
Toluene	ug/m^3	**25.2**	**2.3**	**3.8**	<1.5	**93.8**	**127**	**1.7**	10,000	100,000	1,000,000	37,000	Fixed
trans-1,2-Dichloroethene	ug/m^3	<1.2	<1.2	<1.7	<1.6	<2.3	<1.5	<1.1	200	2,000	20,000	800	Fixed
trans-1,3-Dichloropropene	ug/m^3	<1.4	<1.3	<2.0	<1.8	<2.6	<4.2	<1.2	60	600	6,000	NA	Fixed
Trichloroethylene (TCE)	ug/m^3	<0.82	<0.79	<1.2	<1.1	**3.7**	**25.4**	<0.73	6	60	600	2,000	Fixed
Trichlorofluoromethane	ug/m^3	**2.1**	**2.3**	<2.4	<2.3	<3.2	<2.1	<1.5	2,000	20,000	200,000	NA	Fixed
Vinyl acetate	ug/m^3	<1.1	**2.3**	<1.5	<1.4	**9**	<3.2	<0.96	600	6,000	60,000	NA	Fixed
Vinyl chloride	ug/m^3	<0.39	<0.37	<0.55	<0.52	<0.73	<0.94	<0.35	3	30	300	180,000	Fixed

Notes:
NA = Not Applicable
ISV - Intrusion Screening Value
< - Less than the laboratory Reporting Limit (RL)
Bold - Exceeds laboratory report limit
Grey Shading - Result exceeds the Industrial ISV
Green Shading - Result exceed 10 times the Industrial ISV
Blue Shading - Result exceeds 100 times the Industrial ISV
Orange Shading - Result exceeds Acute ISV

TABLE 5
ANALYTICAL RESULTS - 408 N CENTRAL AVE

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		408 Central-A	SS-08 (408 Central)	Industrial ISVs (µg/m3)	Industrial 10X ISVs (µg/m3)	Industrial 100X ISVs (µg/m3)	Acute ISVs (µg/m^3)	Lab Type
Date		3/21/14	3/21/14					
Type		24-hour Indoor Air	Sub-slab					
Parameter	**Units**	Result	Result					
1,1,1-Trichloroethane	ug/m^3	<1.5	<1.9	10,000	100,000	1,000,000	140,000	Fixed
1,1,2,2-Tetrachloroethane	ug/m^3	<0.97	<1.2	1	10	100	NA	Fixed
1,1,2-Trichloroethane	ug/m^3	<0.76	<0.92	2	20	200	NA	Fixed
1,1,2-Trichlorotrifluoroethane	ug/m^3	<2.2	<2.7	80,000	800,000	8,000,000	NA	Fixed
1,1-Dichloroethane	ug/m^3	<1.1	<1.4	1,000	10,000	100,000	NA	Fixed
1,1-Dichloroethene (DCE)	ug/m^3	<1.1	<1.4	600	6,000	60,000	NA	Fixed
1,2,4-Trichlorobenzene	ug/m^3	<2.1	<2.5	10	100	1,000	NA	Fixed
1,2,4-Trimethylbenzene	ug/m^3	**1.9**	**19.7**	20	200	2,000	NA	Fixed
1,2-Dibromoethane (EDB)	ug/m^3	<2.2	<2.6	0.06	1	6	NA	Fixed
1,2-Dichlorobenzene	ug/m^3	<1.7	<2.0	600	6,000	60,000	NA	Fixed
1,2-Dichloroethane	ug/m^3	<0.57	<0.69	1	10	100	NA	Fixed
1,2-Dichloropropane	ug/m^3	<1.3	<1.6	10	100	1,000	235	Fixed
1,3,5-Trimethylbenzene	ug/m^3	<1.4	<1.7	20	200	2,000	NA	Fixed
1,3-Butadiene	ug/m^3	<0.63	<0.76	1	10	100	NA	Fixed
1,3-Dichlorobenzene	ug/m^3	<1.7	<2.0	NA	NA	NA	NA	Fixed
1,4-Dichlorobenzene	ug/m^3	<1.7	**4.4**	200	2,000	20,000	12,000	Fixed
2-Butanone (MEK)	ug/m^3	**4.7**	**11.7**	10,000	100,000	1,000,000	10,000	Fixed
2-Hexanone	ug/m^3	<2.1	**2.7**	NA	NA	NA	NA	Fixed
2-Propanol (isopropyl alcohol)	ug/m^3	<1.7	<2.1	20,000	200,000	2,000,000	3,200	Fixed
4-Ethyltoluene	ug/m^3	<1.4	**9.6**	NA	NA	NA	NA	Fixed
4-Methyl-2-pentanone (MIBK)	ug/m^3	<1.2	<1.4	8,000	80,000	800,000	NA	Fixed
Acetone	ug/m^3	**9.4**	**76.1**	87,000	870,000	8,700,000	63,000	Fixed
Benzene	ug/m^3	**0.59**	**5.1**	13	130	1,300	1,000	Fixed
Benzyl chloride	ug/m^3	<3.7	<4.4	3	30	300	240	Fixed
Bromodichloromethane	ug/m^3	<1.9	<2.3	NA	NA	NA	NA	Fixed
Bromoform	ug/m^3	<2.9	<3.5	30	300	3,000	NA	Fixed
Bromomethane (Methyl Bromide)	ug/m^3	<1.1	<1.3	10	100	1,000	2,000	Fixed
Carbon disulfide	ug/m^3	<0.88	**2.6**	2,000	20,000	200,000	6,000	Fixed
Carbon tetrachloride	ug/m^3	<0.89	<1.1	2	20	200	1,900	Fixed
Chlorobenzene	ug/m^3	<1.3	<1.6	100	1,000	10,000	NA	Fixed
Chloroethane (Ethyl chloride)	ug/m^3	<0.75	<0.91	30,000	300,000	3,000,000	100,000	Fixed
Chloroform	ug/m^3	<1.4	<1.7	300	3,000	30,000	150	Fixed
Chloromethane (Methyl chloride)	ug/m^3	**0.73**	<0.71	300	3,000	30,000	1,000	Fixed
cis-1,2-Dichloroethene	ug/m^3	<1.1	**10.1**	NA	NA	NA	NA	Fixed
cis-1,3-Dichloropropene	ug/m^3	<1.3	<1.5	60	600	6,000	NA	Fixed
Cyclohexane	ug/m^3	<0.97	<1.2	20,000	200,000	2,000,000	NA	Fixed
Dibromochloromethane	ug/m^3	<2.4	<2.9	NA	NA	NA	NA	Fixed

TABLE 5
ANALYTICAL RESULTS - 408 N CENTRAL AVE

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		408 Central-A	SS-08 (408 Central)	Industrial ISVs (µg/m3)	Industrial 10X ISVs (µg/m3)	Industrial 100X ISVs (µg/m3)	Acute ISVs (µg/m^3)	Lab Type
Date		3/21/14	3/21/14					
Type		24-hour Indoor Air	Sub-slab					
Parameter	**Units**	Result	Result					
Dichlorodifluoromethane (Freon 12)	ug/m^3	**9.3**	**3.4**	600	6,000	60,000	NA	Fixed
Dichlorotetrafluoroethane	ug/m^3	<2.0	<2.4	NA	NA	NA	NA	Fixed
Ethanol	ug/m^3	**5**	**243**	42,000	420,000	4,200,000	180,000	Fixed
Ethyl acetate	ug/m^3	<1.0	<1.2	8,000	80,000	800,000	40,000	Fixed
Ethylbenzene	ug/m^3	<1.2	**10.1**	3,000	30,000	300,000	10,000	Fixed
Hexachloro-1,3-butadiene	ug/m^3	<3.1	<3.7	1	10	100	NA	Fixed
m&p-Xylene	ug/m^3	<2.4	**33.6**	300	3,000	30,000	43,000	Fixed
Methylene Chloride (Dichloromethane)	ug/m^3	<2.5	<3.0	60	600	6,000	10,000	Fixed
Methyl-tert-butyl ether (MTBE)	ug/m^3	<1.0	<1.2	8,000	80,000	800,000	7,000	Fixed
Naphthalene	ug/m^3	**3.8**	<4.5	30	300	3,000	NA	Fixed
n-Heptane	ug/m^3	<1.2	**9.2**	NA	NA	NA	NA	Fixed
n-Hexane	ug/m^3	**1.3**	**10.2**	6,000	60,000	600,000	NA	Fixed
o-Xylene	ug/m^3	<1.2	**12.6**	300	3,000	30,000	43000	Fixed
Propylene (Methylethylene)	ug/m^3	<0.49	**6.3**	8,000	80,000	800,000	NA	Fixed
Styrene	ug/m^3	<3.0	<3.6	3,000	30,000	300,000	21,000	Fixed
Tetrachloroethylene (PCE)	ug/m^3	**4.3**	**16.6**	30	300	3,000	20,000	Fixed
Tetrahydrofuran	ug/m^3	**10.9**	**7.9**	NA	NA	NA	NA	Fixed
Toluene	ug/m^3	**1.4**	**45.4**	10,000	100,000	1,000,000	37,000	Fixed
trans-1,2-Dichloroethene	ug/m^3	<1.1	<1.4	200	2,000	20,000	800	Fixed
trans-1,3-Dichloropropene	ug/m^3	<1.3	<1.5	60	600	6,000	NA	Fixed
Trichloroethylene (TCE)	ug/m^3	<0.76	**21.6**	6	60	600	2,000	Fixed
Trichlorofluoromethane	ug/m^3	<1.6	<1.9	2,000	20,000	200,000	NA	Fixed
Vinyl acetate	ug/m^3	<1.0	<1.2	600	6,000	60,000	NA	Fixed
Vinyl chloride	ug/m^3	<0.36	<0.44	3	30	300	180,000	Fixed

Notes:
NA = Not Applicable
ISV - Intrusion Screening Value
< - Less than the laboratory Reporting Limit (RL)
Bold - Exceeds laboratory report limit
Grey Shading - Result exceeds the Industrial ISV
Green Shading - Result exceed 10 times the Industrial ISV
Blue Shading - Result exceeds 100 times the Industrial ISV
Orange Shading - Result exceeds Acute ISV

TABLE 6
ANALYTICAL RESULTS - 412 N CENTRAL AVE

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		412 Central	SS (412 Central)	Residential ISVs ($\mu g/m^3$)	Residential 10x ISVs ($\mu g/m^3$)	Residential 100X ISVs ($\mu g/m3$)	Acute ISVs ($\mu g/m^3$)
Date		2/27/15	2/27/15				
Type		Ambient air in crawl space with exposed soil	Sub-slab				
Parameter	**Units**	Result	Result				
1,1,1-Trichloroethane	ug/m^3	<1.3	<1.1	**5,000**	50,000	500,000	140,000
1,1,2,2-Tetrachloroethane	ug/m^3	<1.3	<1.1	**0.2**	2	20	NA
1,1,2-Trichloroethane	ug/m^3	<1.0	<0.87	**0.6**	6	60	NA
1,1,2-Trichlorotrifluoroethane	ug/m^3	<2.9	<2.5	**30,000**	300,000	3,000,000	NA
1,1-Dichloroethane	ug/m^3	<1.5	<1.3	**500**	5,000	50,000	NA
1,1-Dichloroethene (DCE)	ug/m^3	<1.5	<1.3	**200**	2,000	20,000	NA
1,2,4-Trichlorobenzene	ug/m^3	<6.9	<5.9	**4**	40	400	NA
1,2,4-Trimethylbenzene	ug/m^3	**10.1**	**3.3**	**7**	70	700	NA
1,2-Dibromoethane (EDB)	ug/m^3	<2.9	<2.4	**0.02**	0.20	2	NA
1,2-Dichlorobenzene	ug/m^3	<2.2	<1.9	**200**	2,000	20,000	NA
1,2-Dichloroethane	ug/m^3	<0.75	<0.65	**0.4**	4	40	NA
1,2-Dichloropropane	ug/m^3	<1.7	<1.5	**4**	40	400	235
1,3,5-Trimethylbenzene	ug/m^3	**7.8**	<1.6	**6**	60	600	NA
1,3-Butadiene	ug/m^3	<0.82	<0.71	**0.3**	3	30	NA
1,3-Dichlorobenzene	ug/m^3	<2.2	<1.9	**NA**	NA	NA	NA
1,4-Dichlorobenzene	ug/m^3	<2.2	**3**	**60**	600	6,000	12,000
2-Butanone (MEK)	ug/m^3	<1.1	**8**	**5,000**	50,000	500,000	10,000
2-Hexanone	ug/m^3	<1.5	**2.1**	**NA**	NA	NA	NA
2-Propanol (isopropyl alcohol)	ug/m^3	**24.4**	**62.4**	**7,000**	70,000	700,000	3,200
4-Ethyltoluene	ug/m^3	**4.9**	<1.6	**NA**	NA	NA	NA
4-Methyl-2-pentanone (MIBK)	ug/m^3	<3.8	<3.3	**3,000**	30,000	300,000	NA
Acetone	ug/m^3	<4.4	**147**	**31,000**	310,000	3,100,000	63,000
Benzene	ug/m^3	**1.6**	<0.51	**4.5**	45	450	1,000
Benzyl chloride	ug/m^3	<1.9	<1.6	**1**	10	100	240
Bromodichloromethane	ug/m^3	<2.5	<2.1	**NA**	NA	NA	NA
Bromoform	ug/m^3	<3.8	<3.3	**9**	90	900	NA
Bromomethane (Methyl Bromide)	ug/m^3	<1.4	<1.2	**5**	50	500	2,000
Carbon disulfide	ug/m^3	<1.2	<0.99	**700**	7,000	70,000	6,000
Carbon tetrachloride	ug/m^3	<1.2	<1.0	**0.7**	7	70	1,900
Chlorobenzene	ug/m^3	<1.7	<1.5	**50**	500	5,000	NA
Chloroethane (Ethyl chloride)	ug/m^3	**4.5**	<0.85	**10,000**	100,000	1,000,000	100,000
Chloroform	ug/m^3	<0.91	<0.78	**100**	1,000	10,000	150
Chloromethane (Methyl chloride)	ug/m^3	<0.77	<0.66	**90**	900	9,000	1,000
cis-1,2-Dichloroethene	ug/m^3	<3.7	**50.6**	**NA**	NA	NA	NA
cis-1,3-Dichloropropene	ug/m^3	<1.7	<1.4	**20**	200	2,000	NA

TABLE 6
ANALYTICAL RESULTS - 412 N CENTRAL AVE

Ramsey Street Site Assessment SA #4563
5405 West Ramsey Street
Duluth, MN 55807

Sample ID		412 Central	SS (412 Central)	Residential ISVs ($\mu g/m^3$)	Residential 10x ISVs ($\mu g/m^3$)	Residential 100X ISVs ($\mu g/m3$)	Acute ISVs ($\mu g/m^3$)
Date		2/27/15	2/27/15				
Type		Ambient air in crawl space with exposed soil	Sub-slab				
Parameter	**Units**	Result	Result				
Cyclohexane	ug/m^3	<1.3	<1.1	**6,000**	60,000	600,000	NA
Dibromochloromethane	ug/m^3	<3.2	<2.7	**NA**	NA	NA	NA
Dichlorodifluoromethane (Freon 12)	ug/m^3	**7.1**	**2**	**200**	2,000	20,000	NA
Dichlorotetrafluoroethane	ug/m^3	<2.6	<2.2	**NA**	NA	NA	NA
Ethanol	ug/m^3	**35.5**	**63.8**	**15,000**	150,000	1,500,000	180,000
Ethyl acetate	ug/m^3	<1.3	<1.2	**3,000**	30,000	300,000	40,000
Ethylbenzene	ug/m^3	**7.2**	**1.5**	**1,000**	10,000	100,000	10,000
Hexachloro-1,3-butadiene	ug/m^3	<9.9	<8.5	**0.5**	5	50	NA
m&p-Xylene	ug/m^3	**31.7**	**6.5**	**100**	1,000	10,000	43,000
Methylene Chloride (Dichloromethane)	ug/m^3	<6.5	<5.5	**20**	200	2,000	10,000
Methyl-tert-butyl ether (MTBE)	ug/m^3	<1.3	<1.1	**3,000**	30,000	300,000	7,000
Naphthalene	ug/m^3	<4.9	<4.2	**9**	90	900	NA
n-Heptane	ug/m^3	**179**	**2.4**	**NA**	NA	NA	NA
n-Hexane	ug/m^3	**9.3**	<2.8	**2,000**	20,000	200,000	NA
o-Xylene	ug/m^3	<1.6	**2.2**	**100**	1,000	10,000	43000
Propylene (Methylethylene)	ug/m^3	<0.64	**1.3**	**3,000**	30,000	300,000	NA
Styrene	ug/m^3	<1.6	<1.4	**1,000**	10,000	100,000	21,000
Tetrachloroethylene (PCE)	ug/m^3	**7.2**	**329**	**2**	20	200	20,000
Tetrahydrofuran	ug/m^3	<1.1	<0.94	**NA**	NA	NA	NA
Toluene	ug/m^3	**5**	**6.2**	**5,000**	50,000	500,000	37,000
trans-1,2-Dichloroethene	ug/m^3	<1.5	<1.3	**60**	600	6,000	800
trans-1,3-Dichloropropene	ug/m^3	<1.7	<1.4	**20**	200	2,000	NA
Trichloroethylene (TCE)	ug/m^3	<1.0	**18.1**	**2**	20	200	2,000
Trichlorofluoromethane	ug/m^3	<2.1	<1.8	**700**	7,000	70,000	NA
Vinyl acetate	ug/m^3	<1.3	<1.1	**200**	2,000	20,000	NA
Vinyl chloride	ug/m^3	<0.48	<0.41	**1**	10	100	180,000

Notes:
NA = Not Applicable
ISV - Intrusion Screening Value
< - Less than the laboratory Reporting Limit (RL)
Blue shading - Exceeds Residential ISV
Orange Shading - Result exceeds 100X Residential ISV

Appendix A

Field Notes and Photographic Log

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY DIARY

To be completed by Crew Leader

Job Name	Job No.	Date
Ramsey Street	J140472	2/24/15
Project Manager	**Bay West Crew**	
Amanda Maloney	H. McGown	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*
HSS (Walt, Randy, Don); Jim Aird and Mai (property owners)

Detailed description of work performed:

0950 Arrive on-site HSS personell on-site. Meet with Mai and discuss if someone can let us in at 0900 tomorrow, She says yes.
- renew SSTHP and have short health and safety meeting.
- Don gets to work on coring through basement corner by bathroom
- Randy gets to work on finding the best path for exhaust piping to vent up stairs by the roof.

1115 Don has first suction point drilled. Set up fan and install additional test points to determine the influence from this first suction point.
- Walt has removed paneling along stairwell to allow for vapor barrier install along this wall adjacent to alley.
- previous vapor pin installed is 6.5 feet from SP-1.
- Using fan #2 ~~lost~~, the SS point previously installed reads -0.012 ~~000~~" at 6.5 feet from fan.
- tests another point in front of furnace and gives a positive reading means fan is not causing much influence? (#1)
- checks another test point half way between SP-1 and larger crawlspace opening = -0.005 - fluctuating greatly. (#2)
- Checks another test point directly in front of crawl space opening is -0.005. (#3)
- switch out to larger fan model AMS Force - pulls 5 inches of w.c. and check test points again: SS point = -0.016, #1 = 0.003 (positive); ~~#2~~ #2 = 0.060; #3 = 0.060. Walt is thinking this larger fan found an easier route to pull air from.

Waste Generated:

None

Change in Conditions (if any):

None

Sample Summary:

Samples Taken: ☐ Yes ☒ No	No. of Samples N/A	COC #: N/A

Sample Destination: N/A

Size and Type of Sample:

Signature _____ *Date* 2/24/15

PROJECT MANAGER/FILE

DOCS#9287

Bay West
Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY DIARY

To be completed by Crew Leader

Job Name	Job No.	Date
Ramsey Street	J140472	2/24/15
Project Manager	**Bay West Crew**	
Amanda Maloney	H. McBrown	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*
HSS (Walt, Randy, Don); Jim and Mai (owners)

Detailed description of work performed:

1200 Walts next step is digging out/installing a second suction point adjacent to the furnace; exposing the back wall within the bathroom and checking the slab and crawlspace/slab interface for cracks.
- Randy continues on finding/making route for exhaust pipe to reach the 2nd floor.

1250 Install SP-2 adjacent to furnace. Walt installed a U-tube on the fan and its reading what it should (-5) so it is functional.
- Don foamed gaps in crawlspace wall.
- The fan is not influencing the far corners - Walt is thinking we need 2 additional suction points due to tight soils and lack of piping beneath the slab.

1430 All three suction points are drilled and dug out. Workers prep wall adjacent to alley for vapor barrier install.
- pack up equipment no longer needed
- Randy cleans up areas dirtied while installing exhaust pipe
- Walt ran floor protection along the stairs to prevent damage/dirtying
- Don caps the suction points

1500 All personnel offsite.

Waste Generated:

Change in Conditions (if any):

See Page 1

Sample Summary:

Samples Taken: ☐ Yes ☐ No	No. of Samples	COC #:

Sample Destination:

Size and Type of Sample:

Signature _____ *Date* 2/24/15

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DAILY DIARY

To be completed by Crew Leader

Job Name	Job No.	Date
Ramsey Street	J140472	2/25/15
Project Manager	**Bay West Crew**	
Amanda Maloney	Tiffany McGowan	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*
HSS (Randy + Steve); Schlafer Electric (Gerry + Stan)

Detailed description of work performed:

0830 Load equipment.
0845 Arrive on-site.
0900 HSS personnel on-site. Begin carrying in equipment. Have short health + safety meeting and discuss plan for today, an electrician will be on-site around 0930 to install electricity to the exterior fan. The plan is to install the fan first and finish running piping in the basement and essentially get the system running.
1000 Electrician on-site. Discuss scope of work - They discuss their plan for getting electricity to the roof.
1100 Work continues on connecting piping from suction points and running electrical conduits to the roof.
1300 Work continues: HSS continues running exhaust pipe to roof, installing fan and manifolding all piping from suction points, electrician continues to run conduit to fan on roof exterior.
1500 HSS personnel off-site. Piping is installed, fan is installed. Electricians just have to finish hooking up to electrical panel.
1540 Electricians are off-site. Fan is running.
1545 I am offsite.

Waste Generated:

None.

Change in Conditions (if any):

None.

Sample Summary:

Samples Taken: ☐ Yes ☒ No	No. of Samples N/A	COC #: N/A

Sample Destination:

Size and Type of Sample: N/A

Signature _____ *Date* 2/25/15

PROJECT MANAGER/FILE

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DAILY DIARY

To be completed by Crew Leader

Job Name	Job No.	Date
Ramsey Street	J140472	2/26/15
Project Manager	**Bay West Crew**	
Amanda Maloney	H. McGowan	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*
HSS (Steve & Randy) Wall) ; Electricians' inspector

Detailed description of work performed:

0850 On-site. HSS personnel on-site. Have short health & safety meeting. Discuss plan for today:
- wanted to get in to Mark Nail Salon To check for openings in floor. Cannot get access - do not have key.
- Steve seals up openings on first floor with caulk.
- Randy sets up To seal the crawlspace from the basement.

0930 Wall on-site. Installs some test points To check influence of the three suction points.
- See Vapor Intrusion Mitigation checklist for details.
- One corner of the basement is not receiving influence.
- Contact MPCA PM to discuss potential To instal a 4th suction point.
- Electrician brings inspector on-site To inspect wiring for fan - everything is OK

1015 Wall off-site to purchase supplies. Randy & Steve work in basement along alley wall to install vapor barrier.

1145 Wall inspects the main floor for openings / holes through the floor above the crawlspace To seal it off
- Randy replaces the wall he removed to install the piping on the 2nd floor.
- Steve continues on installing the vapor barrier along the bluestone wall adjacent to the alley.
- There are some penetrations To seal within the nail salon, Mai will let us in at 9 tomorrow - she does not want the work done today while she has customers.

Waste Generated:

None.

Change in Conditions (if any):

None.

Sample Summary:

Samples Taken: ☐ Yes ☒ No,	No. of Samples N/A	COC #: N/A

Sample Destination: N/A

Size and Type of Sample:

Signature _____ *Date* 2/26/15

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1-800-279-0456

DAILY DIARY

To be completed by Crew Leader

Job Name	Job No.	Date
Ramsey Street	J140472	2/26/15
Project Manager	**Bay West Crew**	
Amanda Malaney	H. McGown	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*
HSS (Walt, Randy & Steve)

Detailed description of work performed:

-Steve uses sealing foam to seal the space between the bluestone wall and the floor joists before installing the poly vapor barrier.
1300 Amanda calls to say the fourth suction point is approved.
-Walt & Steve continue to work on the bluestone wall vapor barrier.
-Randy is working on sealing up the crawlspace openings.
1335 workers begin packing up/loading equipment
1505 All personnel are off-site. Work will resume tomorrow.

Waste Generated:

Change in Conditions (if any):

Sample Summary:

Samples Taken: ☐ Yes ☒ No	No. of Samples	COC #:

Sample Destination: see page 1

Size and Type of Sample:

Signature _____ *Date* 2/26/15

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DAILY DIARY

To be completed by Crew Leader

Job Name	Job No.	Date
Ramsey Street	140472	2/27/15
Project Manager	**Bay West Crew**	
Amanda Malaney	H. McGown	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*
HSS (Randy, Don, Walt)

Detailed description of work performed:

0835
0700 At office to load.
0710 Depart BW Duluth office.
0720 Arrive at 412 central. Carry in equipment
- collect 24-hr indoor air sample for TO-15 analysis
- install sub slab vapor port (412central-SS) and collect subslab sample 412central-SS-022714 for TO-15 analysis
0835 At 406 central. HSS personnel on-site.
- seal penetrations in nail salon above crawlspace.
0930 Don gets to work on installing 4th suction point
- Randy continues working on sealing openings to crawlspace
- Walt off site for more supplies
1100 work continues. SP-04 is fully plumbed.
- Don works on finishing sealing the vapor barrier along the bluestone wall
- Randy is working on sealing off the crawlspace from the basement.
1230 workers begin packing up to final mitigation test point readings.
- See Vapor Intrusion Mitigation Checklist for details.
- The crawlspace is reading zero - the system just got finished being sealed and is a very large area, the system may not have pulled all the air out yet
- everything is looking good with final numbers.
1300 Randy & Don off site. Run through checklist, finalize site map take final photos. Walt installs CO meter and runs everything by Mai so she understands what to look for & the systems

Waste Generated:

None

Change in Conditions (if any):

None

Sample Summary:

Samples Taken: ☒ Yes ☐ No	No. of Samples 2 air	COC #: 14024

Sample Destination:
Duluth Pace

Size and Type of Sample:
2 air samples (1 6-liter 24-hr & 1 1-liter subslab) for TO-15

Signature _____ *Date* 2/27/15

PROJECT MANAGER/FILE

DOCS#9287

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867

651/291-0456
FAX 651/291-0099
1-800-279-0456

DAILY DIARY

To be completed by Crew Leader

Job Name	Job No.	Date
Ramsey Street	J140472	2/27/15
Project Manager	**Bay West Crew**	
Amanda Malaney	Hillary McCrown	

Personnel on Site *(Client, Visitors, Bay West staff other than listed above)*
HSS (Randy, Walt & Don)

Detailed description of work performed:

IS not operating correct. Make sure she is okay with how everything looks.
1355 Walt & Hillary off site.
1415 Relinquish our samples to Pace.
1435 At BW Duluth office. Unload equipment.

Waste Generated:

Change in Conditions (if any):

Sample Summary:

Samples Taken: ☐ Yes ☐ No	No. of Samples	COC #:

Sample Destination: see page 1

Size and Type of Sample:

Signature _____ *Date* 2/27/15

PROJECT MANAGER/FILE

DOCS#9287

Bay West
Customer-Focused Environmental & Industrial Solutions

Vapor Intrusion Mitigation System Inspection Checklist

Site/Project Name: 5405 West Ramsey Street

Property Owner: Jim Aird

Address Inspected: 406 N. Central Ave

City: Duluth State: MN Zip: 55807

Inspector: Hillary McGaon

Date of Inspection: 2/24/15 - 2/27/15 Time of Inspection From: 1000 To: 1300

Installer Name(s): H.S.S. NRPP RMT#: 104321 RMT

Make and Model of Fan: AMG Force Date System Installed: 2/24/15 - 2/27/15

Vent Size: 3" - 4" Number of Suction Points: 4 Number of Test Points: 6

1.0 Systems Installation and Interior Piping Requirements

1.1 Are all manifold and suction point piping solid, rigid pipe not less than 3 in. inside diameter?	☒ Yes	○ No	○ NA
1.2 Vent pipe and fittings are Schedule 40 PVC, appear to be air tight and properly joined / sealed.	☒ Yes	○ No	○ NA
1.3 Are all pipe interior joints and connections in mitigation systems sealed permanently? (Exceptions include installation of fans and sump covers)	☒ Yes	○ No	○ NA
1.4 Does the system piping avoid attachment to or support by existing pipes, ducts, conduits or any kind of equipment?	☒ Yes	○ No	○ NA
1.5 Does the system piping avoid blocking window and doors or access to installed equipment?	☒ Yes	○ No	○ NA
1.6 Are supports for system piping installed at least every six (6) feet on horizontal runs?	☒ Yes	○ No	○ NA
1.7 Are vertical runs secured above or below the points of penetration through floors, ceilings and roofs, or at least every (8) feet on runs that do not penetrate floors, ceilings or roofs?	☒ Yes	○ No	○ NA
1.8 Are suction point pipes supported and secured in a permanent manner that prevents their downward movement to the bottom of suction pits or sump pits, or into the soil beneath a soil-gas-retarder membrane?	☒ Yes	○ No	○ NA
1.9 Vent pipes are installed in a configuration that ensures that any rain water or condensation drains downward into the ground beneath the slab or soil gas retarder membrane.	☒ Yes	○ No	○ NA
1.10 A fire collar is installed around piping that penetrates a firewall.	○ Yes	○ No	☒ NA
1.11 A ½" by ½" rodent screen installed?	○ Yes	○ No	☒ NA

2.0 General Sealing Requirements

2.1 Are openings around the suction point piping penetrations of the slab properly sealed using methods and materials that are permanent \ durable and pass the smoke stick check?	☒ Yes	○ No	○ NA
2.2 Are accessible openings around utility penetrations of the foundation walls and slab, test holes, wells and other openings in slabs properly sealed using methods and materials that are permanent / durable and pass the smoke stick check?	☒ Yes	○ No	○ NA
2.3 Are openings / cracks sealed where the slab meets the foundation wall if accessible (if appropriate)?	☒ Yes	○ No	○ NA
2.4 At the point where vent pipe and electric conduit exits the building, is urethane caulk or equivalent material used, and when the joint is greater than ½ inch in width, is a foam backer rod or other comparable filler material inserted into the joint before the application of the sealant (principally from the outside)?	☒ Yes	○ No	○ NA
2.5 Are all utility and other penetrations through a soil-gas-retarder membrane sealed?	☒ Yes	○ No	○ NA
2.6 Did all cracks or openings in the slab or wall pass the smoke test? If not, identify the location of failed cracks or openings in the Notes & Comments Section below.	○ Yes	○ No	☒ NA

2.7 Was there a pressure field extension (PFE) to the furthest point away from the fan at least reaching the Target Differential Pressure (in. of H20/Pascal)? ● Yes ○ No ○ NA

3.0 Electrical Requirements

3.1 Is the plugged cord used to supply power to the fan no more than 6 feet in length? ○ Yes ○ No ● NA

3.2 Does the plugged cord avoid penetrating a wall or being sealed within a wall? ○ Yes ○ No ● NA

3.3 Is the power supply to the fan hard-wired with an electrical disconnect within line of sight and feet of the fan? ● Yes ○ No ○ NA

3.4 Does the power supply have a seal to determine if access has occurred? ○ Yes ○ No ● NA

3.5 Is the electrical service panel labeled to indicate the circuit breaker powering the SSDS fan? ● Yes ○ No ○ NA

3.6 Have the electrical connections been installed by a certified electrician? ● Yes ○ No ○ NA

3.7 Total circuit load <80% of capacity (12 amps for 15 amp circuit, 16 for 20 amp circuit)) ● Yes ○ No ○ NA

3.8 On dedicated circuit if load is >50% of capacity ● Yes ○ No ○ NA

4.0 Sub-Membrane Depressurization Requirements

4.1 Is a sub-membrane depressurization system part of the mitigation system? ○ Yes ○ No ● NA

4.2 If yes, did the sub-membrane depressurization system pass the smoke test? ○ Yes ○ No ● NA

5.0 Sump Pit Requirements

5.1 Is there a sump pit in basement? ○ Yes ○ No ● NA

If yes: ○ Yes ○ No ● NA

5.2 Is the sump pit installed with an impermeable cover and sealed with O-ring or silicone caulking? ○ Yes ○ No ● NA

5.3 Is the sump pit cover designed to facilitate removal for sump pit maintenance? ○ Yes ○ No ● NA

5.4 Is there a mitigation system designed to draw soil-gas from the sump pit? ○ Yes ○ No ● NA

6.0 Monitors and Labeling Requirements

6.1 Does each suction point have a mechanism to measure vacuum? ○ Yes ● No ○ NA

6.2 Is the mechanical mitigation system's monitor, such as manometer type pressure gauges, clearly marked to indicate the initial pressure readings? ● Yes ○ No ○ NA

6.3 Is the current vacuum reading within 0.25" water of the initial reading for low vacuum fans and within 5% of the commissioned vacuum for high vacuum fans? ● Yes ○ No ○ NA

6.4 Is a system description label placed on the mitigation system or other prominent location? ● Yes ○ No ○ NA

6.5 Vent pipes are labeled on each level where pipe is visible, including flow direction arrows. ● Yes ○ No ○ NA

6.6 The circuit breaker controlling the circuit on which the vent fan operates is labeled? ● Yes ○ No ○ NA

6.7 A manometer is installed and clearly marked indicating the initial system differential pressure readings. U-Tube Manometer Initial reading (inches of water): 2.7 ● Yes ○ No ○ NA

6.8 Is the label legible from a distance of at least three feet and does it display the following information: Purpose of the system ("Vapor Intrusion Mitigation"), name and phone number of the contact person. ● Yes ○ No ○ NA

6.9 Does the mitigation system prevent back drafting of combustion products into the structure? ● Yes ○ No ○ NA

6.10 Was the system tested in the worst case scenario (e.g. all fans/dryers/vents, exchangers in operation? ● Yes ○ No ○ NA

6.11 CO detector present and operable? ● Yes ○ No ○ NA

6.12 Were the vacuum readings in the system stable during the backdraft test? ● Yes ○ No ○ NA

6.13 Does the mitigation system include an audible alarm to inform occupants of a system malfunction? ○ Yes ● No ○ NA

6.14 Is the audible alarm operational? ○ Yes ○ No ● NA

7.0 System Vent Discharge Point Requirements

7.1 Is the vent pipe vertical and upward, outside the structure, at least 10 feet above ground level, and above the edge of the roof? (Req. A)	☒ Yes	☐ No	☐ NA
7.2 Is the discharge of the vent pipe ten feet or more away from any window, door, or other opening into conditioned or otherwise occupiable spaces of the structure, if the vapor discharge point is not at least 2 feet above the top of such openings? (Req. B)	☒ Yes	☐ No	☐ NA
7.3 Is the discharge of the vent pipe ten feet or more away from any opening into the conditioned or other occupiable spaces of an adjacent building? Chimney flues shall be considered openings. (Req. C)	☒ Yes	☐ No	☐ NA
7.4 For vent stack pipes that penetrate the roof, is the point of discharge at least 12 in. above the surface of the roof? (Req. D)	☐ Yes	☐ No	☒ NA
7.5 For vent stack pipes attached to or penetrating the sides of the buildings, is the point of discharge vertical and a minimum of 12 inches above the surface of the roof.	☒ Yes	☐ No	☐ NA
7.6 Does the horizontal run of vent stack pipe penetrate the gable end walls? (Req. E)	☐ Yes	☒ No	☐ NA
7.7 If yes, does the piping outside the structure routed to a vertical position so that the discharge point meets the requirements of (A), (B), (C), and (D)?	☐ Yes	☐ No	☒ NA
7.8 Do points of discharge that are not in a direct line of sight from openings into conditioned or otherwise occupiable space because of intervening objects, such as dormers, chimneys, windows around the corner, etc. meet the separation requirements of (A), (B), (C), (D) and (E)?	☐ Yes	☐ No	☒ NA
7.9 Is the outside vent piping fastened to the structure of the building with hangers, strapping or other supports that will secure it adequately (every 8 feet)?	☒ Yes	☐ No	☐ NA
7.10 Is vent stack piping's ID at least as large as the largest used in the manifold piping (including flow direction arrows)? Manifold piping to which two or more suction points are connected shall be at least 4 inch ID.	☒ Yes	☐ No	☐ NA
7.11 If system piping is installed on the exterior of a building, is piping and electric conduit sealed from the outside at point of entry to the building?	☐ Yes	☐ No	☒ NA
7.12 If system piping is installed on the exterior of a building, is piping chased and insulated to reduce the potential for condensation and frost build-up?			

8.0 Fan Installation Requirements

8.1 Is the fan installed in a configuration that avoids condensation buildup in the fan housing?	☒ Yes	☐ No	☐ NA
8.2 The vent fan is installed in a vertical run of the vent pipe.	☒ Yes	☐ No	☐ NA
8.3 The vent fan is mounted to the vent pipe with removable or flexible connections? Are the connections white if the fan is located outside?	☒ Yes	☐ No	☐ NA
8.4 Is the fan installed in the attic, in garages that are not beneath conditioned spaces?	☐ Yes	☐ No	☒ NA
8.5 Is the fan installed on the exterior of the building?	☒ Yes	☐ No	☐ NA
8.6 Is the fan mounted on the exterior of buildings rated for outdoor use or installed in a weather proof protective housing?	☒ Yes	☐ No	☐ NA
8.7 Is the fan mounted and secured in a manner that minimizes transfer of vibration to the structural framing of the building?	☒ Yes	☐ No	☐ NA
8.8 Does the system operate without noise or vibration above normal conditions?	☒ Yes	☐ No	☐ NA

9.0 Soil Gas Retarder Requirements

9.1 A soil gas retarder membrane is installed in crawlspace areas without a concrete floor.	☐ Yes	☐ No	☒ NA
If Yes:			
9.2 The soil gas retarder membrane is a minimum of 6 mil (3 mil cross-laminated) polyethylene.	☐ Yes	☐ No	☒ NA
9.3 Seams are overlapped at least 12 inches and sealed using compatible glues.	☐ Yes	☐ No	☒ NA
9.4 The soil gas retarder is secured to the wall using furring strips or appropriate caulks.	☐ Yes	☐ No	☒ NA

10.0 Notes and Comments

Property Address: 406 N. Central Ave

02/26/15

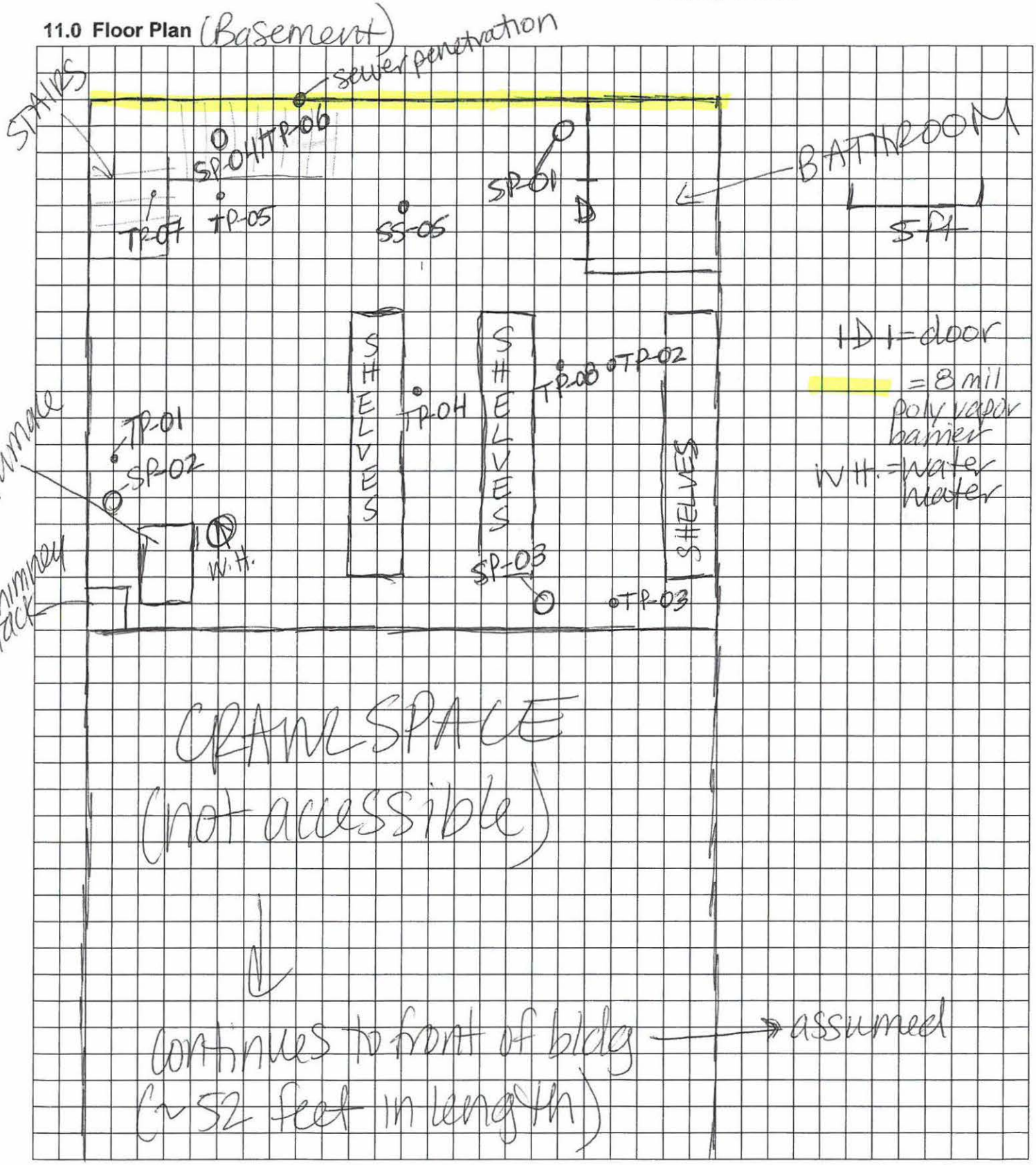
Temp: -8° F
Wind: 8 MPH NW
64% humidity
BP: ~~29.92~~ HPY 2/26 30.48 in Hg

02/27/15

Temp: 12° F
WIND: ~~02 NW~~ 9 MPH WNW
45% humidity
BP: 30.51 in Hg

+ basement slab is in good condition; do not have to seal any cracks.

11.0 Floor Plan (Basement)



Square Footage: Basement = 480
crawlspace = ~1,000
(assuming extends to front of bldg)

Bay West
Customer-Focused Environmental & Industrial Solutions

Vapor Intrusion Mitigation System Inspection Checklist

Property Address: 406 N. Central Ave Duluth, MN 55807

Brand/Type of Manometer Used: Alnor (TSI Inc.) model # AXD620

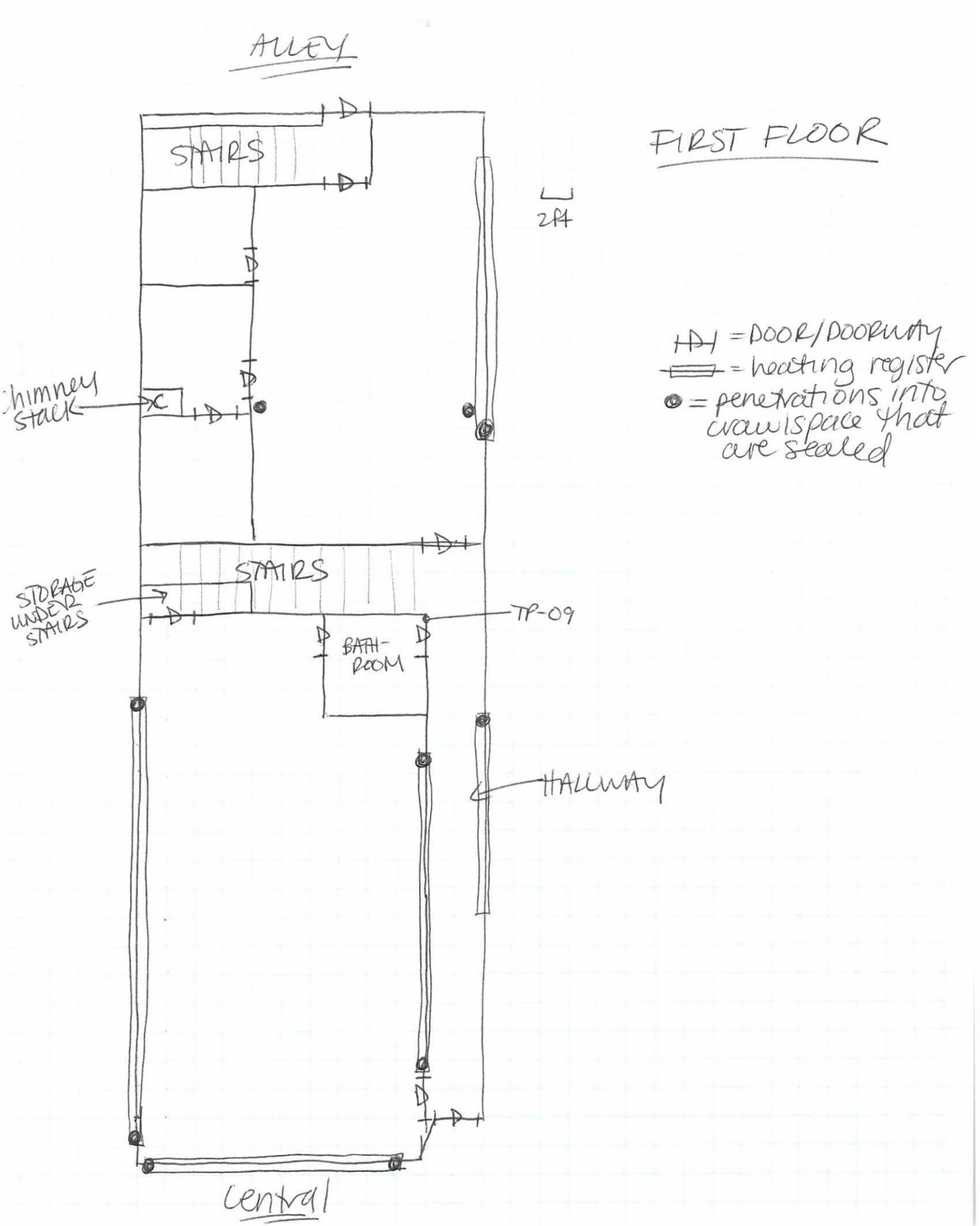
Property Address: 406 N. Central Ave, Duluth, MN

Test Location ID*	Sub-Slab Pressure (-inches of H_2O)	Sub-Slab Pressure (Pascal)	Date	Time	
SS-05	-0.012	-2.988	2/24/15	1135	
TP-01	+0.003	+0.747	2/24/15	1138	
TP-02	-0.005	-1.245	2/24/15	1140	
TP-03	-0.005	-1.245	2/24/15	1143	
SS-05	-0.016	-3.984	2/24/15	1150	larger fan
TP-01	+0.003	+0.747	2/24/15	1152	
TP-02	0.000	0	2/24/15	1155	
TP-03	0.000	0	2/24/15	1157	
SS-05	-0.026	-6.474	2/26/15	0952	
TP-05	-0.004	-0.996	2/26/15	0946	
TP-04	-0.099	-24.651	2/26/15	0948	
TP-02	-0.015	-3.735	2/26/15	0950	
TP-06	-0.004	-0.996	2/26/15	0954	
TP-07	-0.004	-0.996	2/26/15	0957	
~~TP-05~~			~~2/27/15~~	~~1233~~	NRM 2/27
TP-07	-0.393	-97.857	2/27/15	1233	
SS-05	-0.132	-32.868	2/27/15	1235	
TP-04	-0.103	-25.647	2/27/15	1237	
TP-02	-0.012	-2.988	2/27/15	1239	
TP-08	-0.013	-3.237	2/27/15	1254	
TP-09	0.000	0	2/27/15	1258	

Notes: *Multiply inches of water by 249 to convert to Pascal.

*Must correspond with ID on Site Sketch-pg. 5

*3 pascals (0.012 inches of water) = Winter Conditions; 5 pascals (0.020 inches of water) = Non-Winter Conditions


ALLEY
FIRST FLOOR
STAIRS
2ft
= DOOR/DOORWAY
= heating register
= penetrations into crawlspace that are sealed
chimney stack
STAIRS
STORAGE UNDER STAIRS
TP-09
BATH-ROOM
HALLWAY
central

Bay West
Customer-Focused Environmental & Industrial Solutions
5 Empire Drive
St. Paul, MN 55103
(651) 291-0456

AIR SAMPLING DATA SHEET

Site Information

PROJECT NAME: 5405 W Ramsey Street - Addt'l Investigation
PROJECT NUMBER: 3140472

Site Name: Dentist
Site Address: 412 N Central Ave
Property Owner: Jacob Noble
Property Phone # : (218) 628-1270
Add'l Instructions: COC # 14024

Sample Description

	# 1	# 2
Sample Name:	~~412 Central RA~~ 412Central-CS-022715	~~SS-DUP~~ 412Central-SS-022715
Start up (or Grab) Sample		
Date:	2/26/15	2/27/15
Time:	0730	0811
Vacuum Reading (in. of water) :	-28	-30
End Sample		
Date:	2/27/15	2/27/15
Time:	0800	0920
Vacuum Reading (in. of water) :	-7	0
Sampler:	H. McGown	H. McGown
Canister # :	0523	22316
Regulator # :	FC0348	FC 06607
Duration of Test:	~24hrs	9 minutes
Analysis:	TO-15	TO-15
Laboratory:	Pace	Pace

Location of Sample

Area of Residence	Description
# 1 :	~~412Central RA~~ 412Central-CS-022715
	set up inside crawlspace
# 2 :	~~SS-DUP~~ 412Central-SS-022715
	in corner of basement near crawlspace opening

Photo 1: Close-up view of suction point SP-01 and the suction pit dug out into the soils beneath the slab.

Photo 2: View of areas requiring sealing on the stonewall separating the basement from the crawlspace.

Photo 3: View of the gaps in the crawlspace wall following sealing.

Photo 4: View of the area sealed above the stone wall and the overhead floor joists separating the basement from the crawlspace.

Photo 5: View of the openings into the crawlspace that required sealing to allow for negative pressure within the crawlspace.

Photo 6: Attempting to depict the openings into the crawlspace that required sealing along the stone wall separating the basement from the crawlspace.

Photo 7: View of one of the openings into the crawlspace following sealing.

Photo 8: View of one of the two openings into the crawlspace following sealing.

Photo 9: View of penetrations into the crawlspace from the first floor following sealing.

Photo 10: View of penetration into the crawlspace from the first floor following sealing. Two penetrations were present associated with each heating unit along the first floor.

Photo 11: View of the area between the stone wall and the overhead floor joists associated with the wall along the east perimeter of the basement. A vapor barrier was installed along this wall.

Photo 12: View of the installed vapor barrier consisting of 8 mil poly sheeting in-place along the eastern basement stone wall.

Photo 13: View of the installed vapor barrier along the eastern wall within the SE corner of the basement.

Photo 14: View of SP-01 following final piping installation and system set-up. SP-01 is located in the SE corner of the basement.

Photo 15: View of SP-02 following final piping installation and system set-up. SP-02 is located in the NW corner of the basement.

Photo 16: View of SP-03 following final piping installation and system set-up. SP-03 is located in the SW corner of the basement.

Photo 17: View of SP-04 following final piping installation and system set-up. SP-04 is located in the NE corner of the basement.

Photo 18: View of the system label and U-Tube manometer following final system set-up.

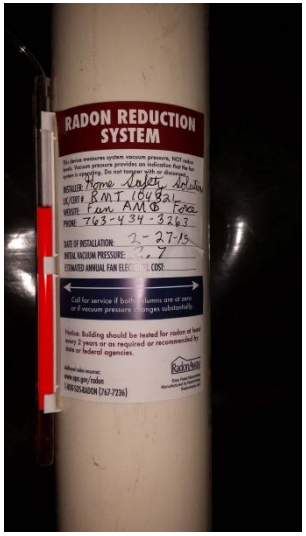


Photo 19: View of the system description label installed adjacent to the U-Tube manometer.

Photo 20: View of the exterior electrical conduit feeding electricity to the exterior fan.

Photo 21: View of the fan mounted on the building exterior and the stack pipe venting above the exterior of the roof.

Photo 22: View of final mitigation system test point readings: TP-07 reading.

Photo 23: View of final mitigation system test point readings: SS-05 reading.

Photo 24: View of final mitigation system test point readings: TP-04 reading.

Bay West

Photo 25: View of final mitigation system test point readings: TP-02 reading.

Photo 26: View of final mitigation system test point readings: TP-08 reading.

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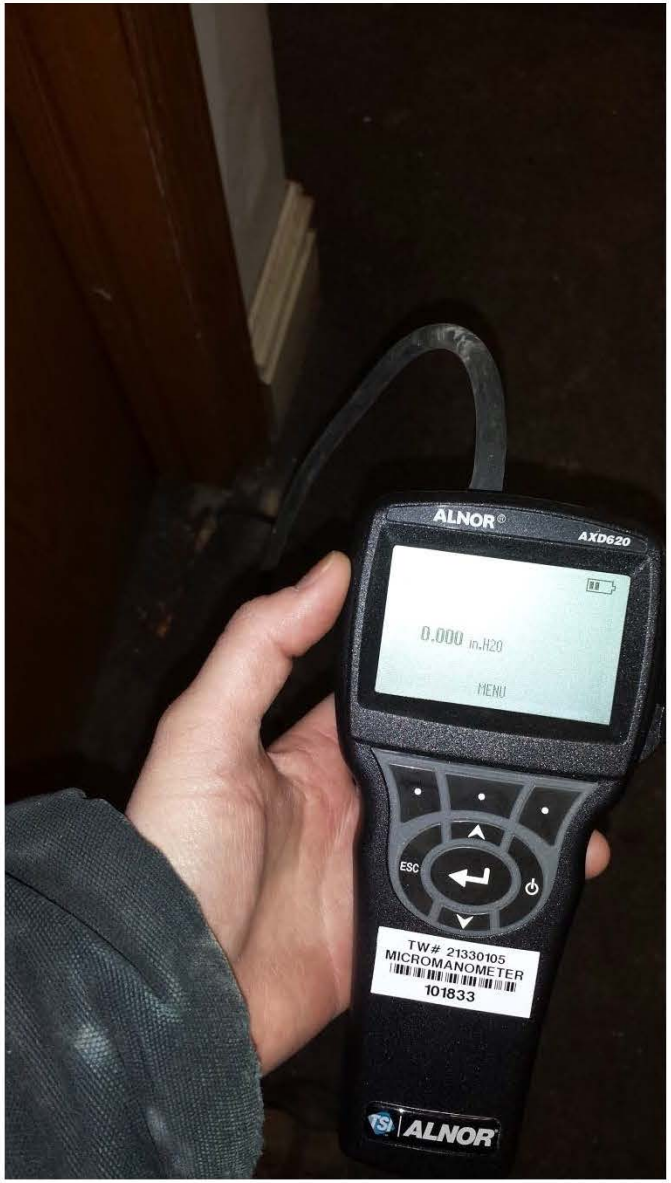

Photo 27: View of final mitigation system test point readings: TP-09 reading.

DAILY LOG

Page 1 of 4

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Ramsey Street **Job No.:** J140472.01 **Date:** 3/24/15

Project Manager	Amanda Malaney	Site Supervisor:	Brandon Flaada

Other Personnel on Site (Other Bay West Staff, Client, Regulators, Visitors)

Detailed chronology and description of work performed:

- Coordinated with property owner of 406 Central Avenue (Mai Kim) for accessing the building
- preparation and loading for field work
- mobilized to site and gained access from property owner
- assessed inside and outside 24-hour air sample locations
- found subslab location SS-05 in basement of 406 Central Avenue (nail salon)
- set up Suma canisters for sampling
- calibrated PID
- got indoor air sample (406 Indoor 24-hr) set up and opened valve to start sample collection; See attached Indoor/Ambient Air Sampling Data Sheet for more sample details; Also see photos of sample location
- while downstairs in basement, I also collected subslab sample SS-05; See attached Sub-Slab Vapor Sampling Data Sheet for more sample details
- got outdoor air sample (406 Outdoor 24-hr) set up and opened valve to start sample collection; See attached Indoor/Ambient Air Sampling Data Sheet for more sample details; Also see photos of sample location
- coordinated with property owner that I would be back tomorrow to pick up the canisters
- left business cards and notes by both canisters to notify people not to move the canisters
- demobilized back to office, unloaded, toolwatch

Preparer Signature:	Brandon Flaada	Date:	3-24-15

Docs #

Bay West
Customer-Focused Environmental & Industrial Solutions
5 Empire Drive
St. Paul, MN 55103
(651) 291-0456

SUB-SLAB VAPOR SAMPLING DATA SHEET

Site Information

PROJECT NAME: Ramsey St.
PROJECT NUMBER: 3140472

Property Address: 406 Central
Property Owner Name: Mai Km (Nail Salon)
Property Owner Phone # : 218-628-4991
Property Type: Commercial

Installation Information

Concrete Slab Thickness: _____ inches Soil Type Beneath Slab: _____

Type of Sub-slab vapor point installed: Stainless Steel Vapor Pin (Cox Colvin®)

Time of Sub-Slab Vapor Point Installation: _____.

Time for Sub-Slab Vapor Point 20-Minute Equilibration _____ to _____.

Pressure Test Time: _____to_____ Pressure (in. of Hg): _____.

Water based leak test performed and passed?: Y or N

Sample Train Volume Purged: _____ Purge Method: Syringe

(2.41 ml/ft of 1/8" OD tubing, 9.65 mL/ft of 1/4" OD tubing, 38.61 ml/ft of 3/8' OD tubing)

Sample Description

	#1	#2
Sample ID:	SS-05	
Flow Gauge/Restrictor:	200 ml/min	200 ml/min
Canister Volume:	6 Liter	1 Liter
Start up (or Grab) Sample		
Date:	3/24/15	
Time:	1424	
Vacuum Reading (in. of Hg) :	24 in Hg	
End Sample		
Date:	3/24/15	
Time:	1515	
Vacuum Reading (in. of Hg) :	0	
Sampler(s):	BWF	
Canister # :	1072	
Regulator # :	FC1026	
Duration of Test:	51 minutes	
Analysis:		
Laboratory:	PACE	

PID reading on Sub-slab vapor point after sample collection: 0.0 ppm
Ambient Air PID Reading: 0.0 ppm

Location of Sample Point (include a field sketch of location)

Area of Residence	Description

2.41 mL per foot of 1/8" OD tubing
9.65 mL per foot of 1/4" OD tubing
38.61 mL per foot of 3/8" OD tubing

Bay West
Customer-Focused Environmental & Industrial Solutions

Indoor/Ambient Air Sampling Data Sheet

Site Information

Project Name	Ramsey St.	Address	406 Central
Project Number	J1404172	Owner	Mai Kim (Nail Salon)
Client	MPCA	Phone	218-628-4991
Sampler	BWF	Property Type	Commercial

Sample Description

Sample Name:	406 Indoor 24 hr		Sample Name:	406 Outdoor 24 hr	
	Start (Grab)	End		Start (Grab)	End
Date	3/24/15	3/25/15	Date	3/24/15	3/25/15
Time	1410	1440	Time	1435	1445
Vacuum (in Hg)	28 ~~In~~ Hg	10 In Hg	Vacuum (in Hg)	27 In Hg	10 In Hg
Canister#	1283		Canister#	2292	
Regulator#	FC0751		Regulator#	FC0749	
Regulator rate	24 hr		Regulator rate	24 hr	
Duration of Test	24 hours		Duration of Test	24 hours	
Analysis	TO-15		Analysis	TO-15	
Laboratory	PACE		Laboratory	PACE	

Sample Location

	☒ Indoors	☐ Outdoors	☐ Indoors	☒ Outdoors
Floor/Level	Basement		N/A	
Room	Basement storage room		N/A	
Position w/in Room	Near SS-05		on wall of 408 Central	
Height above floor	2.5 feet (on table)		~~floor~~ ground N3 feet	

Notes: Ambient PID = 0.0ppm

Ambient PID = 0.0ppm

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Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Ramsey Street **Job No.:** J140472.01 **Date:** 3/24/15

Date:	3/24/15
View of:	Location of 406 Indoor 24-hour air sample

Date:	3/24/15
View of:	Left a business card and a note asking people not to disturb the canister

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Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Ramsey Street **Job No.:** J140472.01 **Date:** 3/24/15

Date:	3/24/15
View of:	Location of 406 Outdoor 24-hr air sample

Date:	3/24/15
View of:	406 Outdoor 24-hr air sample attached to a brick wall behind the building near the alley

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St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Ramsey Street **Job No.:** J140472.01 **Date:** 3/24/15

Date:	3/24/15
View of:	Left a business card on the canister incase people had questions

Docs #

DAILY LOG

Page 1 of 2

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Ramsey Street **Job No.:** J140472.01 **Date:** 3/25/15

Project Manager	Amanda Malaney	Site Supervisor:	Brandon Flaada

Other Personnel on Site (Other Bay West Staff, Client, Regulators, Visitors)

Detailed chronology and description of work performed:

- mobilized to site and gained access from property owner
- assessed inside and outside 24-hour air sample canisters
- I arrived at the site about 15 minutes before the indoor 24-hr sample was due to be shut off. Upon arrival I observed that the pressure gauges on both of the 24-hr samples were still at 10 Inches Mercury rather than being down to about zero. I tried getting in touch with Amanda to ask her opinion on if I should wait and see if they changed much, or just call it good enough. Without being able to discuss it with Amanda, I also contacted Hillary to see if she had run across that before. She thought she remembered seeing that before too and that we just submitted the samples anyway.
- while waiting to see if Amanda would get back to me, I also checked out the manometer for the system in the basement. I observed the gauge on the manometer showed both columns of liquid at "0". A label on the gauge said if that ever happens the system was not working correctly and to contact the service provider. I took photos of the gauge and the label and sent those to Amanda too.
- That extra bit of site work allowed me to wait a little before deciding to shut off the air samples and call them good enough since the gauges hadn't moved since my arrival. It was apparent that to wait for them to get down closer to zero would take a long time.
- coordinated with property owner that I was done and they could lock the door for the basement.
- delivered samples to Pace
- demobilized back to office, unloaded, toolwatch

- The sample sheets and the Pace COC attached to the daily log for 3/24/15 (previous day) shows additional sample details.

- Photos attached to this daily log show the system gauge.

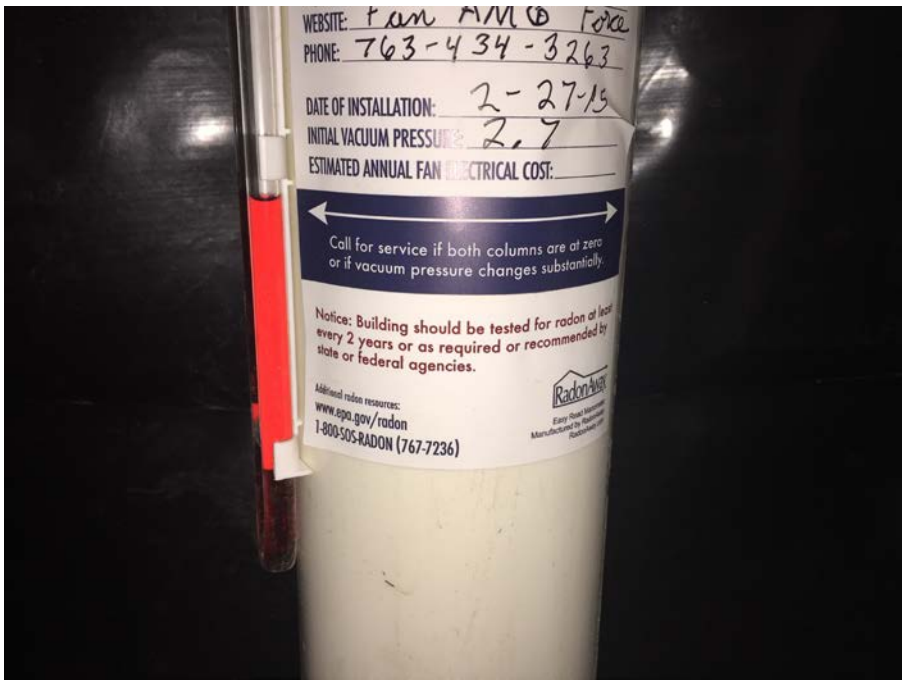
Preparer Signature: Brandon Flaada	Date: **3-25-15**

Docs #

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Ramsey Street **Job No.:** J140472.01 **Date:** 3/25/15

Date:	3/25/15
View of:	System manometer with both liquid columns at “0”



Date:	3/25/15
View of:	Label on system manometer stating if both columns are at “0”…to call for service

DAILY LOG

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Ramsey Street **Job No.:** J140472.01 **Date:** 3/26/15

Project Manager	Amanda Malaney	Site Supervisor:	Brandon Flaada

Other Personnel on Site (Other Bay West Staff, Client, Regulators, Visitors)

Detailed chronology and description of work performed:

- discussed air samples integrity and system issue with Amanda
- also discussed system issue with "Walt" before going to site to troubleshoot
- mobilized to site and gained access from property owner
- assessed the system gauge and found the little tube Walt mentioned was indeed pulled out of the manometer, thus not allowing the gauge to work. The system fan seemed to operating normally. I called Walt to let him know and he directed me to place the loose end of the little tube into either side of the manometer. As soon as I did that, the column of liquid on the side of the gauge I placed the tube increased from 0 to 2.1.
- that appeared to be the only issue.
- I let Amanda know and she agreed the air samples could still be run then since the system was running fine.
- Photos attached to this daily log show the system gauge before and after, as well as the circuit breaker panel and how it is labeled for the system.
- coordinated with property owner that I was done again and they could lock up
- demobilized back to office; completed daily logs for project and photos into DMS

Preparer Signature: Brandon Flaada	Date: 3-26-15

Docs #

Bay West Inc.
Five Empire Drive
St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Ramsey Street **Job No.:** J140472.01 **Date:** 3/26/15

Date:	3/26/15
View of:	System manometer and the little tube that had been pulled out

Date:	3/26/15
View of:	System manometer after replacing the little tube; the gauge went up to 2.1

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St. Paul, Minnesota 55103-1867
651/291-0456
FAX 651/291-0991-
800-279-0456

Job Name: Ramsey Street **Job No.:** J140472.01 **Date:** 3/26/15

Date:	3/26/15
View of:	Close-up view of the little tube and from where it had been pulled

Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Vapor Intrusion Interior Building Survey Form

Remediation Program

Doc Type: Site Inspection Information

Part 1: Physical Building Inspection

Preparer's name: Hillary McBrown Date/Time prepared: 8/2/12 @12:00
Affiliation: Bay West Phone number: (651) 216-2637

1. Occupant information

did not interview Apt. occupant (2nd level)

Occupant name(s): James Westman Interviewed: ☒ Yes ☐ No
Mailing address: 412 N. Central Avenue
City: Duluth State: MN Zip code: 55807
Phone: (218) 628-1210 Fax: E-mail:
Number of occupants at this location: 1 Age range of occupants: ~33
↳ single occupant Apt. upstairs – Dentistry has many varying occupants

2. Owner/Landlord information (Check if same as occupant: ☒)

Occupant name(s): Interviewed: ☐ Yes ☐ No
Mailing address:
City: State: Zip code:
Home phone: Office phone:

3. Building type (Check appropriate response)

☒ Residential ☐ Industrial ☐ School ☐ Church ☒ Commercial/Multi-use = Dentistry
☐ Other (specify):

If the property is residential, what type? (Check appropriate response)

☐ Ranch rambler ☐ Raised rambler ☐ Townhouses/Condos ☐ Duplex ☐ Modular ☐ 2-Family
☐ Split level ☐ Contemporary ☒ Apartment house ☐ Cape cod ☐ Log home ☐ 3-Family
☐ Colonial ☐ Mobile home ☐ Other (specify):

↳ upper level apt. occupies 1/2 of space - the back 1/2 of the dentistry on the 2nd floor is a deck.

4. Building description

If the property is commercial or industrial, describe the business use(s):

The main level is dentistry w/ lobby, front desk & exam rooms; the basement is an office break room / laundry for 2nd floor apt. & has a bathroom; half of the 2nd floor is apt. & second half is a deck.

Indicate the number of floors and general use of each floor of the building beginning with lowest level:

The main floor serves as a dentistry with multiple exam rooms; patients come & go throughout the day.

If there are multiple residential units, indicate how many units: 1 When was building constructed: ~1964
Type of insulation used in building: no idea Elevators or lifts: ☐ Yes ☒ No
Basement/Lowest level depth below grade: ~10 feet (feet)

Observed basement characteristics (Check all that apply)

Is basement/lowest level occupied:	☐ Full time	☒ Occasionally → during lunch or when apt. occupant does laundry	☐ Almost never		
Basement type:	☒ Full	☒ Crawlspace partial	☐ Slab	☐ Other:	
Floor materials:	☒ Concrete	☐ Dirt	☐ Stone	☐ Other:	
Floor covering:	☒ Uncovered	☐ Covered	☐ Covered with:		
Concrete floor:	☐ Unsealed	☒ Sealed	☐ Sealed with:		
Foundation walls:	☐ Poured	☒ Block	☐ Stone	☐ Other:	
Basement finished:	☐ Unfinished	☐ Finished	☒ Partially finished		
Basement wetness:	☐ Wet	☒ Damp slight → had problems prior to 2005 before the City re-did Central Ave - they would get a lot of water leaking in basement on Central Ave. side.	☐ Seldom	☐ Moldy	
Sump pump present:	☐ Yes ☒ No	If yes, was water present: ☐ Yes ☐ No			

Indicate sources of water supply sources (i.e., drinking, irrigation, etc.) and type of sewage disposal (Check all that apply)

Water supply:	☒ Public water	☐ Drilled well	☐ Driven well	☐ Dug well
Sewage disposal:	☒ Public sewer	☐ Septic tank	☐ Leach field	☐ Dry well:

5. Heating, venting, air conditioning, or other building controls (Check all that apply)

Type of heating system(s) used in this building (Check all that apply)

☐ Hot air circulation ☐ Space heaters ☐ Electric baseboard ☐ In-floor heating ☐ Heat pump

☐ Steam radiation ☐ Wood stove ☐ Hot water baseboard ☐ Radiant floor ☐ Outdoor wood boiler

☐ Other (specify): **Primary type:** 1 gas hot water → only for 2nd floor, which was the original heating system for entire building; have gas forced air for entire main level (added in 1973)

Primary type of fuel used (Check appropriate response)

☒ Natural gas ☐ Fuel oil ☐ Kerosene ☐ Electric ☐ Propane

☐ Solar ☐ Wood ☐ Coal

If hot water tank present, indicate fuel source: natural gas

Boiler/furnace is located in:	☒ Basement both	☐ Outdoors	☐ Main floor	☐ Other:
Type of air conditioning:	☒ Central air	☐ Window units	☐ Open windows	☐ No mechanical system

Are there air distribution ducts present: ☒ Yes ☐ No

Describe the supply and cold air return ductwork and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

relatively new = excellent condition. It was re-done in recent years.

*Mentions there are no odors recently but in the past they would notice odors in the basement - solvent-like odors and he mentions Lelands.

Describe the type of mechanical ventilation systems used within or for the building (e.g., air-to-air exchangers, HVAC, etc.). Indicate whether the interior spaces of the building use separate ventilation systems and/or controls. Provide information on any existing building mitigation system (e.g., radon mitigation, passive venting systems, etc.). If available, provide information on air exchange rates for any existing mechanical ventilation systems currently in use.

2nd floor has no ventilation system - no forced air.

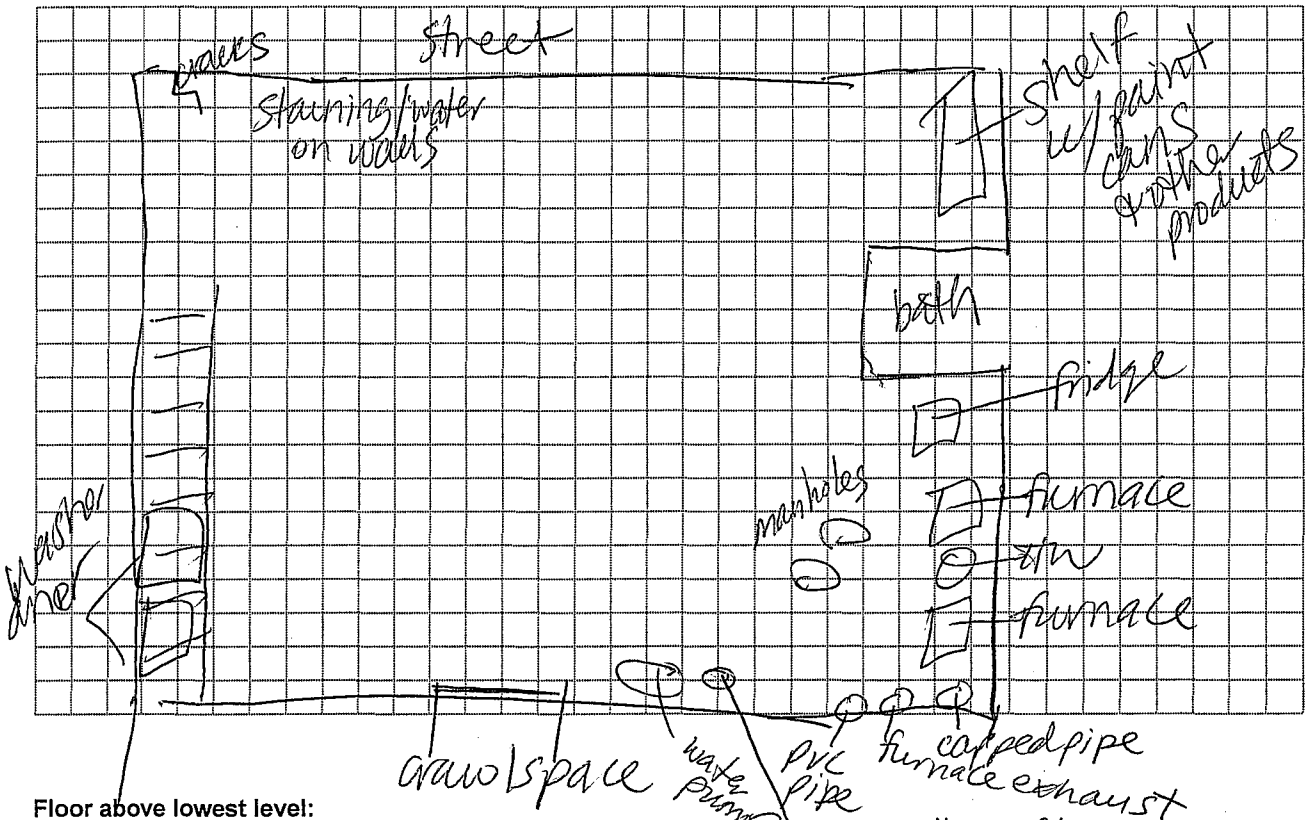
There is an air exchanger for main floor on the main floor - the filters get cleaned frequently.

- all exam rooms / equipment used is ventilated outdoors.

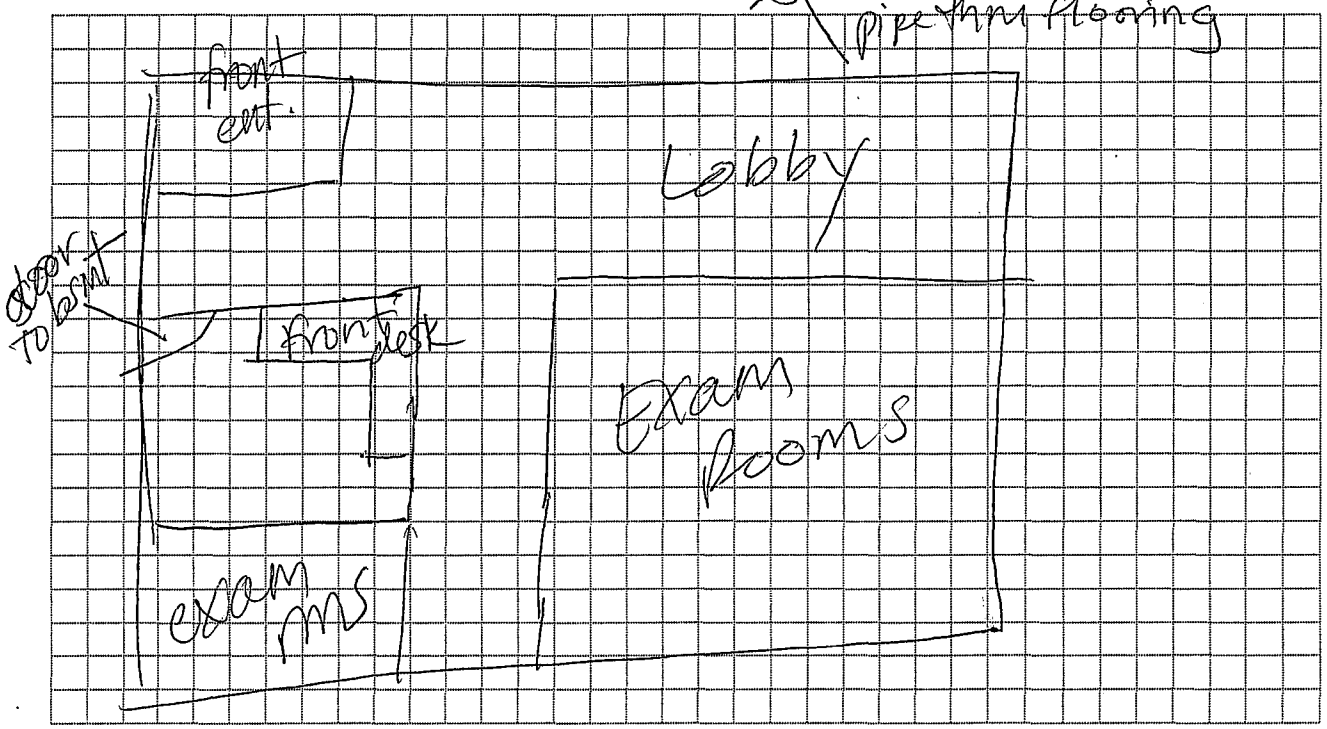
6. Grid plans

Use grid plans to describe floor plans, locate potential soil vapor entry points (e.g., cracks, utility ports, drains); and if applicable, identify sample locations (sub-slab, indoor air, outdoor air sampling).

Floor plan for basement or lowest level:

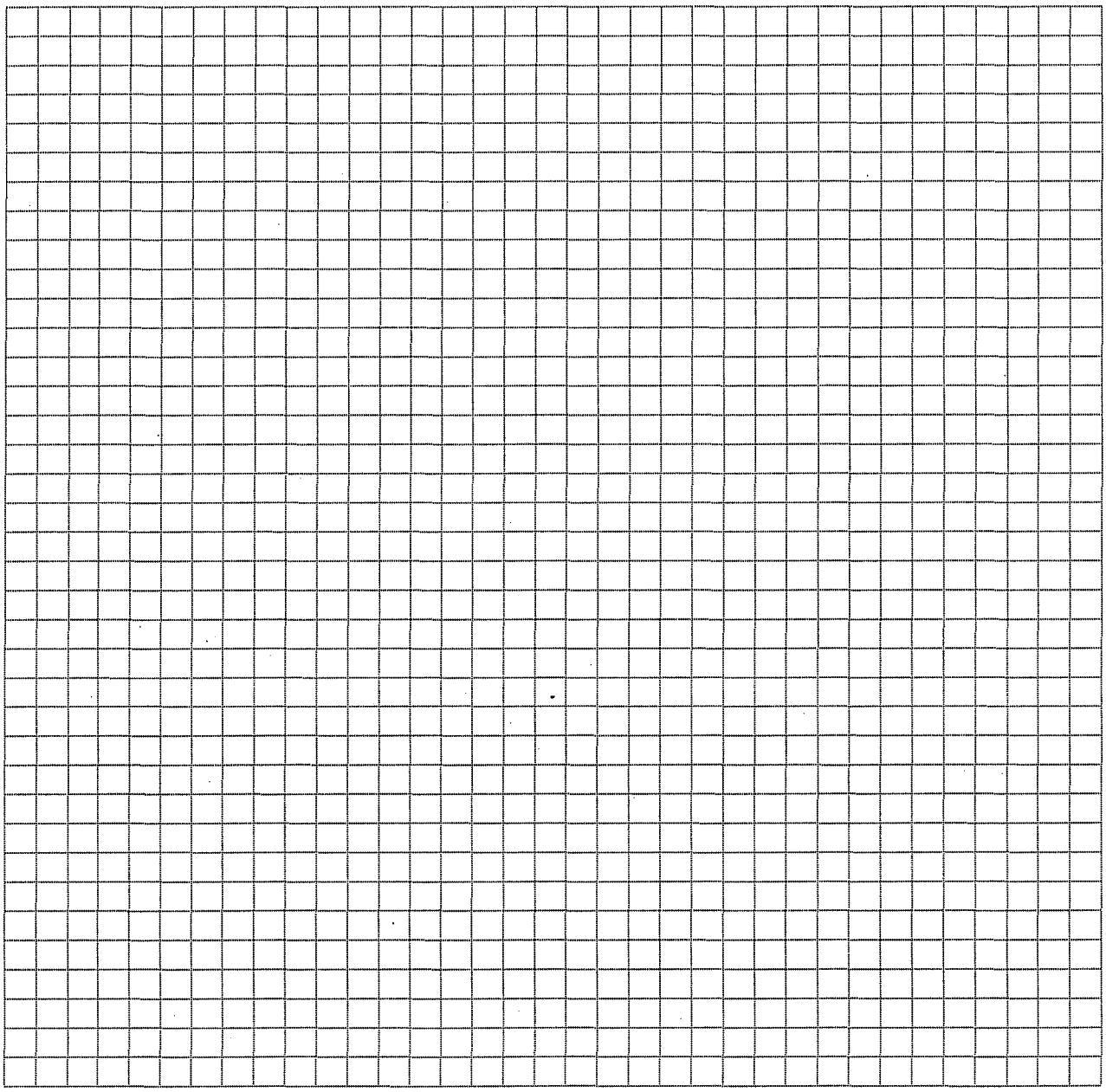


Floor above lowest level:



Outdoor grid plot (Include if outdoor ambient air samples collected):

Insert sketch (or attach separate document) of the area outside the building and locate outdoor air sample locations. If applicable, provide information on spill locations, potential air contamination sources, locations of wells, septic system, etc., and PID meter readings. Indicate wind direction and speed during sampling.



Part 2: Indoor Air Quality Survey

Complete if indoor air sampling is conducted (use grids in Part 1 for labeling sampling locations).

Factors that may influence indoor air quality:

Is there an attached garage:	☐ Yes ☒ No	
Are petroleum-powered machines or vehicles stored in the garage (e.g., lawn mower, ATV, car):	☐ Yes ☒ No	Please specify: _____
Has the building ever had a fire:	☐ Yes ☒ No	When: _____
Is a kerosene or unvented gas space heater present:	☐ Yes ☒ No	Where & type: _____
Is there smoking in the building:	☐ Yes ☒ No	How frequently: _____
Have cleaning products been used recently:	☐ Yes ☐ No	When & type: _____
Have cosmetic products been used recently:	☐ Yes ☐ No	When & type: _____
Has painting/staining been done in the last 6 months:	☐ Yes ☐ No	Where & when: _____
Has any remodeling or construction occurred in the last 6 months:	☐ Yes ☐ No	Where & when: _____
Is there new carpet, drapes, or other textiles:	☐ Yes ☐ No	Where & when: _____
Have air fresheners been used recently:	☐ Yes ☐ No	When & type: _____

Is there a clothes dryer: ☐ Yes ☐ No If yes, is it vented outside: _____

Are there odors in the building: ☐ Yes ☐ No If yes, please describe: _____

Do any of the building occupants use solvents at work: ☐ Yes ☐ No

If yes, what types of solvents are used: _____

Do any of the building occupants regularly use or work at a dry-cleaning service: ☐ Yes ☐ No

If yes, indicate approximately how frequent: _____

Product inventory form (Add additional rows if needed)

Make and model of field instrument used: _____

List specific products identified in the building that have the potential to affect indoor air quality:

Location	Product description*	Comments	Instrument readings if taken and units

* Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D). Include photographs of product containers as appropriate to document products and ingredients.

Bay West
Customer-Focused Environmental & Industrial Solutions

Vapor Intrusion Mitigation System Inspection Checklist

Property Address: 406 N. Central Ave Duluth, MN 55807

Brand/Type of Manometer Used: Alnor (TSI Inc.) model # AXD620

Property Address: 406 N Central Ave, Duluth, MN

Test Location ID*	Sub-Slab Pressure (-inches of H_2O)	Sub-Slab Pressure (Pascal)	Date	Time	
SS-05	-0.012	-2.988	2/24/15	1135	
TP-01	+0.003	+0.747	2/24/15	1138	
TP-02	-0.005	-1.245	2/24/15	1140	
TP-03	-0.005	-1.245	2/24/15	1143	
SS-05	-0.016	-3.984	2/24/15	1150	larger fan
TP-01	+0.003	+0.747	2/24/15	1152	larger fan
TP-02	0.000	0	2/24/15	1155	larger fan
TP-03	0.000	0	2/24/15	1159	larger fan
SS-05	-0.026	-6.474	2/26/15	0952	
TP-05	-0.004	-0.996	2/26/15	0946	
TP-04	-0.099	-24.651	2/26/15	0948	
TP-02	-0.015	-3.735	2/26/15	0950	
TP-06	-0.004	-0.996	2/26/15	0954	
TP-07	-0.004	-0.996	2/26/15	0957	
~~TP-05~~			~~2/27/15~~	~~1233~~	MRM 2/27
TP-07	-0.393	-97.857	2/27/15	1233	
SS-05	-0.132	-32.868	2/27/15	1235	
TP-04	-0.103	-25.647	2/27/15	1237	
TP-02	-0.012	-2.988	2/27/15	1239	
TP-08	-0.013	-3.237	2/27/15	1254	
TP-09	0.000	0	2/27/15	1258	
TP-02	-0.015	3.735	6/26/15	1355	
TP-04	-0.060	14.94	6/26/15	1400	
TP-07	-0.527	131.223	6/26/15	1405	
TP-08	-0.013	3.237	6/26/15	1410	
SS-05	Point is submerged - do not collect a reading				
TP-09	0.00	0	6/26/15	1430	

Notes: *Multiply inches of water by 249 to convert to Pascal.

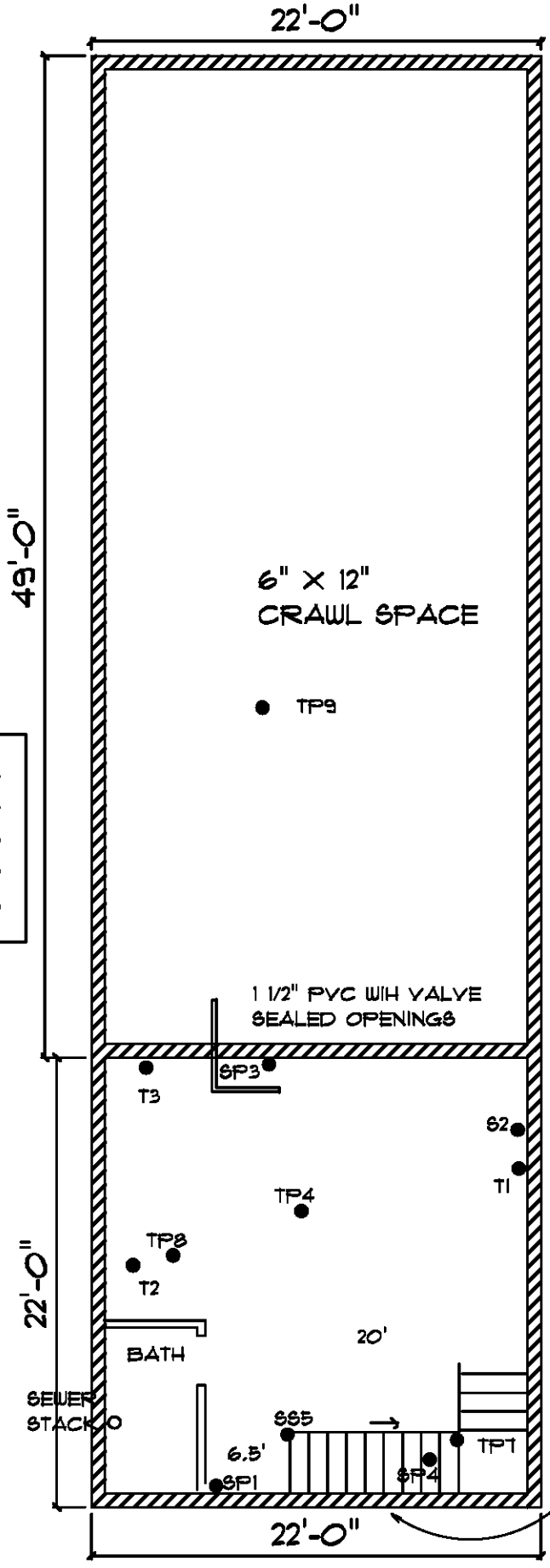
*Must correspond with ID on Site Sketch-pg. 5

*3 pascals (0.012 inches of water) = Winter Conditions; 5 pascals (0.020 inches of water) = Non-Winter Conditions

Appendix B

SSD Design and Specifications

- Front -



POST MITIGATION

TP1	.393
TP4	.103
TP2	.012
TP8	.013
SS5	.132
TP9	.000 OVER CRAWL SPACE

FAN AGM FORCE
2.6" W/C

N

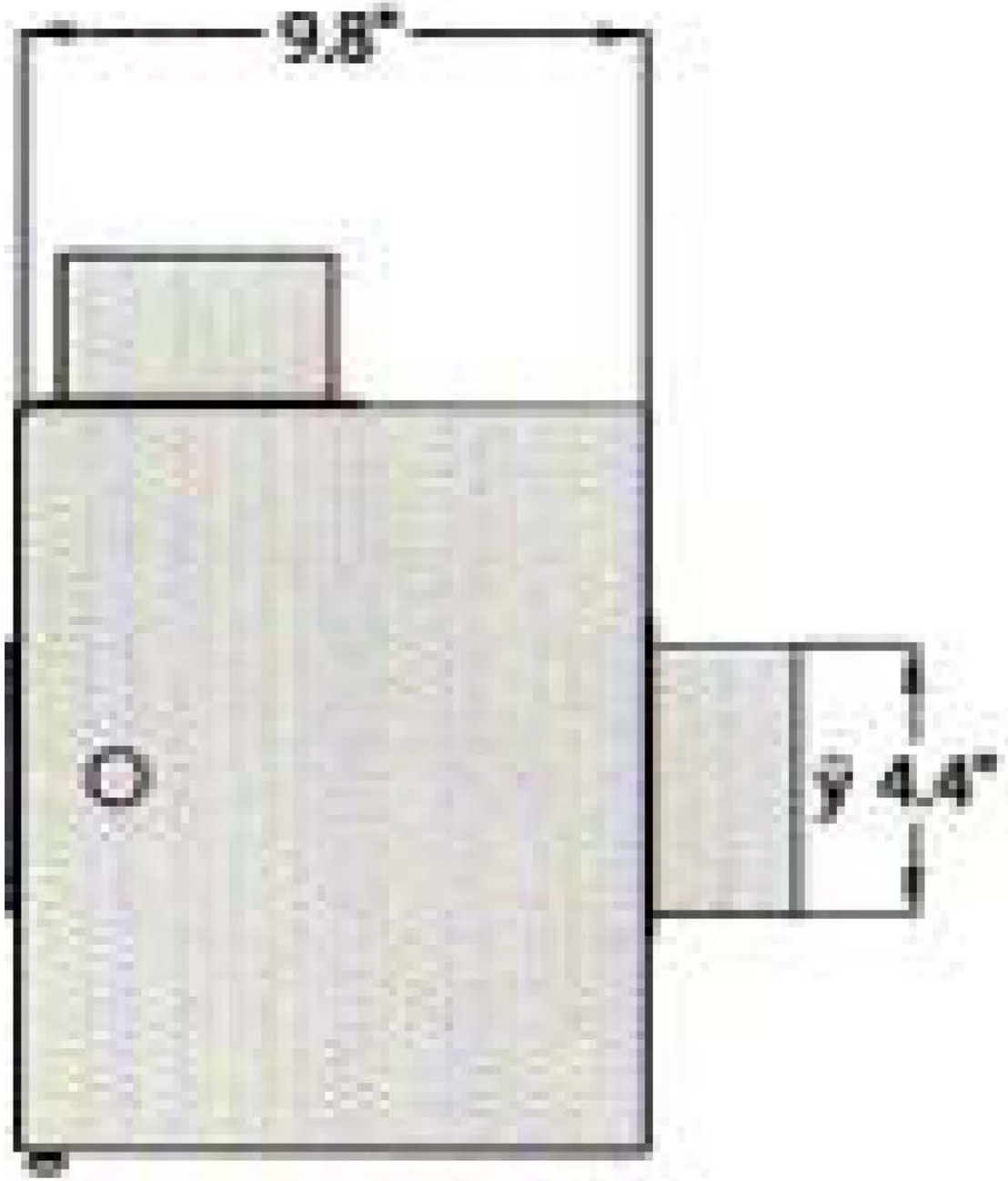
70'

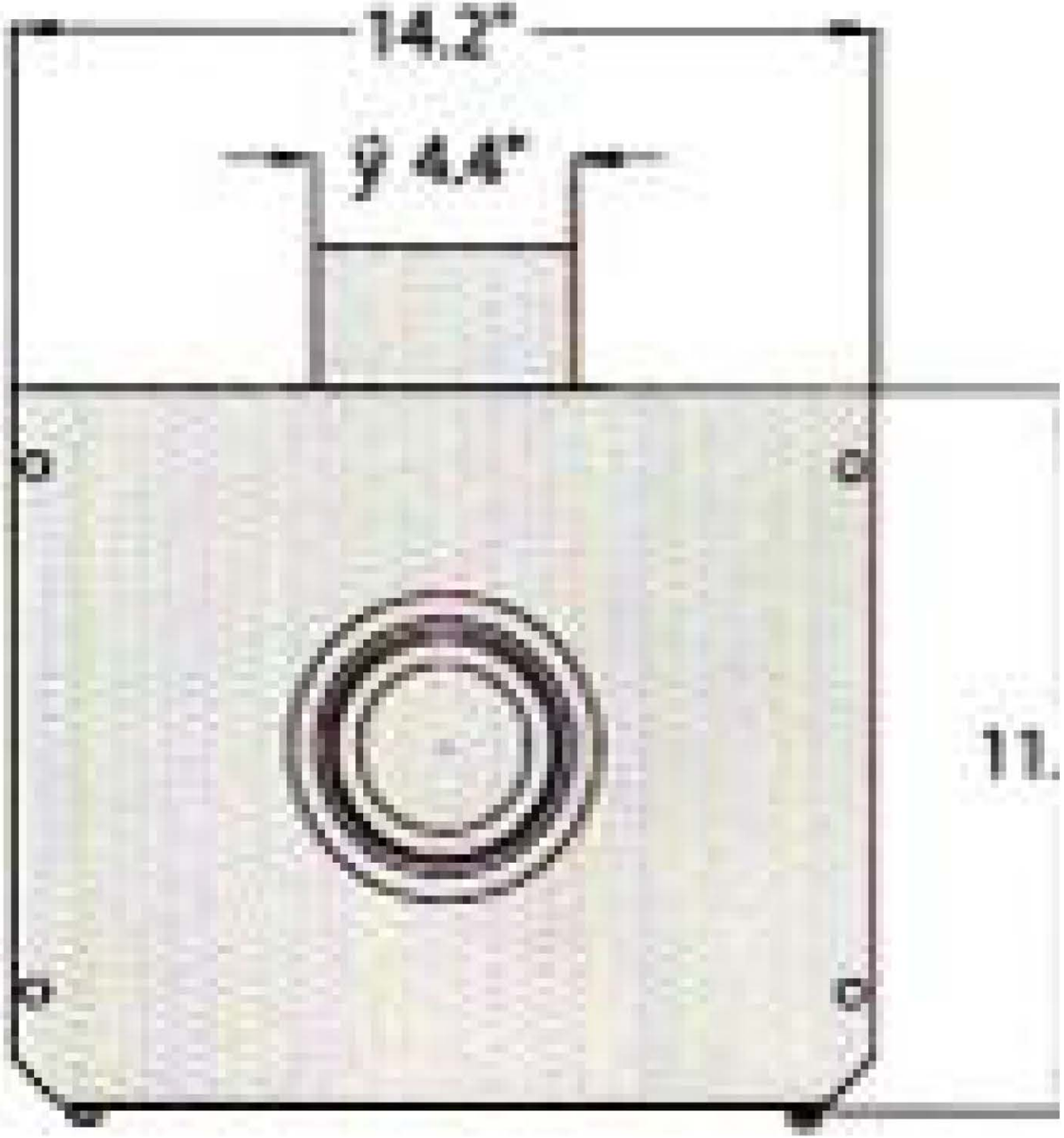
PRE MITIGATION
DIANOSTIC

T1	+ .003
T2	- .000
T3	- .000

POROUS LIMESTONE
WALL
- VAPOR BARRIER
WITH 3/4" SUCTION LINE
& VALVE

406 CENTRAL AVE
DULUTH, MN
HOME SAFETY
SOLUTIONS INC
INFO@HOMESAFETYSOLUTIONSINC.COM


9.8"
ȳ 4.4"


14.2"
ȳ 4.4"

AMG Fan Warranty

Five Year Full Replacement

Conditions Of Warranty.

Festa Radon Technologies ("FRT") warrants that the FRT Radon Fan Line,("the Products") shall be free from defects in material and workmanship for a period of (5) years from the date of purchase by the origional purchaser of the fan. If within the applicable warranty period the Products prove to be defective by reason of faulty workmanship or materials, FRT will undertake to have the defective product (or any part thereof) replaced at no cost to the customer subject to the following conditions:

1. The product has been purchased and used solely in accordance with all Radon Mitigation Standards and recommendations and state and local codes of practice.

2. The product is returned promptly on being found defective, together with this warranty and proof of date of installation at the customer's risk and expense to Festa Radon Technologies Co. ("FRT") from whom the product was purchased. All warranty claims must be made through FRT.

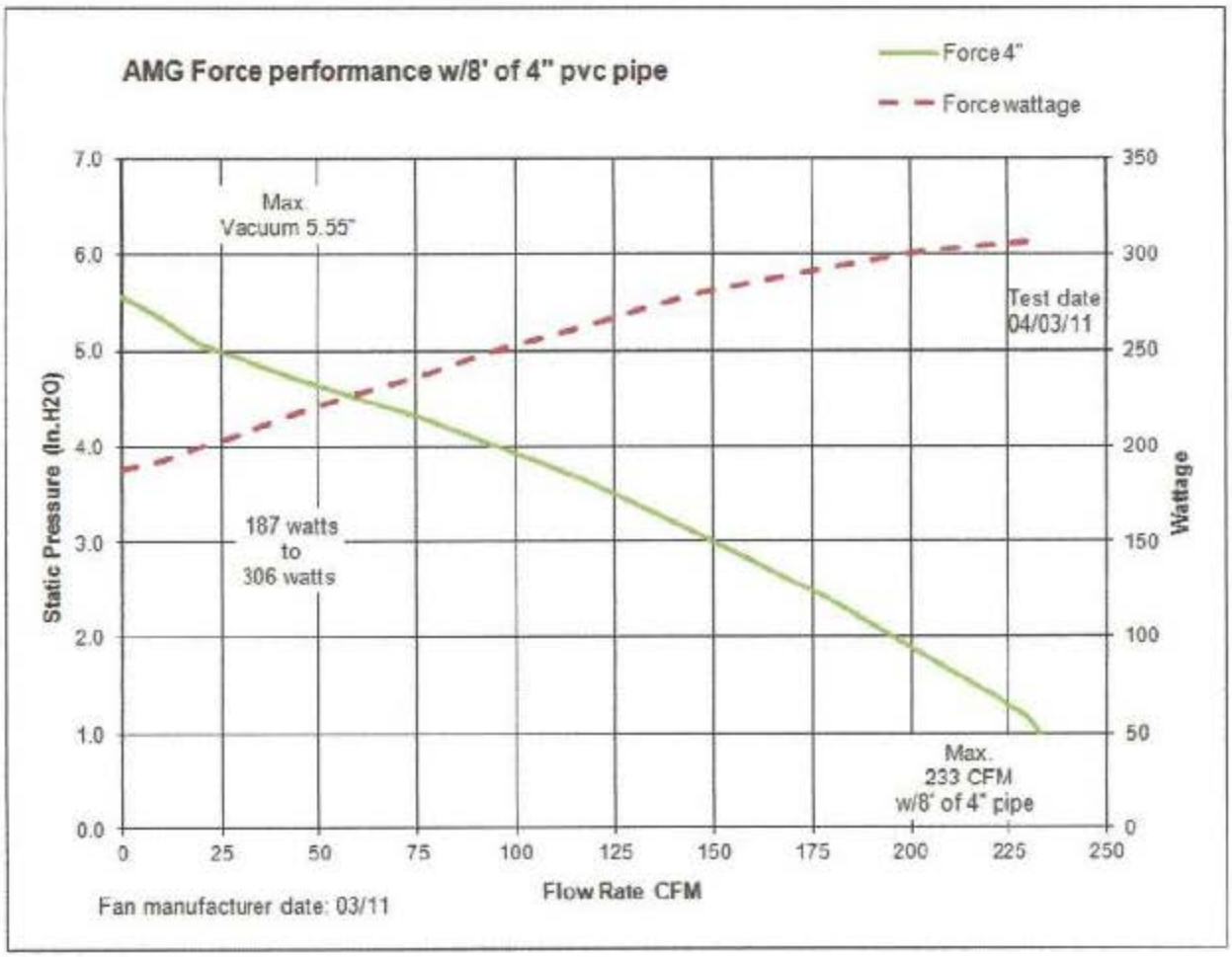
3. This warranty shall not apply to any Product failure or defect due to any cause beyond the reasonable control of FRT including: damage caused through fire, flood, explosion, accident, misuse, wear and tear, neglect, incorrect adjustment or repair, damage caused through installation, adaptation, modification or use in an improper manner or inconsistent with the technical and or / safety standards required where the product is used, or to damage occurring during transit to or from the customer.

4. If at any time during the Warranty Period any part or parts or the Product are replaced with a part or parts not supplied or approved by FRT or the Product has been dismantled or repaired by any person not authorized by FRT, FRT shall have the right to terminate this warranty in whole or in part immediately without further notice.

5. FRT's decision on all matters relating to complaints and Product defects and failures (alleged or actual) shall be final. Any product or defective part, which has been replaced, shall be FRT's.

6. FRT will offer to customers a Warranty of a full Five (5) Years, from date of purchase, in accordance with the terms listed above.

1 (800) 806-7866 1 (877) 264-3267
474 Progress Avenue, Cranberry Twp., PA 16066


AMG Force performance w/8' of 4" pvc pipe
Force 4"
Force wattage
Max.
Vacuum 5.55"
Test date
04/03/11
187 watts
to
306 watts
Max.
233 CFM
w/8' of 4" pipe
Static Pressure (In.H2O)
Wattage
Flow Rate CFM
Fan manufacturer date: 03/11
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
350
300
250
200
150
100
50
0
0
25
50
75
100
125
150
175
200
225
250

Appendix C

Laboratory Analytical Reports

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

March 12, 2015

Amanda Malaney
Bay West, Inc.
5 Empire Drive
Saint Paul, MN 55103

RE: Project: J140472 Ramsey Street
Pace Project No.: 10298168

Dear Amanda Malaney:
Enclosed are the analytical results for sample(s) received by the laboratory on February 27, 2015. 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,

Steve Albrecht
steve.albrecht@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Minnesota Certification IDs

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

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

SAMPLE SUMMARY

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10298168001	**412Central-CS-022715**	Air	02/27/15 08:00	02/27/15 17:50
10298168002	**412Central-SS-022715**	Air	02/27/15 08:20	02/27/15 17:50
10298168003	**412Central-CS-022715 CERT**	Air	02/27/15 08:00	02/27/15 17:50

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

SAMPLE ANALYTE COUNT

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10298168001	**412Central-CS-022715**	TO-15	AH2	61
10298168002	**412Central-SS-022715**	TO-15	MJL	61
10298168003	**412Central-CS-022715 CERT**	TO-15	DR1	61

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Date: March 12, 2015

412Central-CS-022715 (Lab ID: 10298168001)

- K3: The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

412Central-SS-022715 (Lab ID: 10298168002)

- K3: The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

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

PROJECT NARRATIVE

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Method: **TO-15**
Description: TO15 MSV AIR
Client: Bay West, Inc.
Date: March 12, 2015

General Information:
2 samples were analyzed for TO-15. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: AIR/22703

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
- LCS (Lab ID: 1914926)
  - Carbon tetrachloride

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: AIR/22689

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- 412Central-SS-022715 (Lab ID: 10298168002)
  - Acetone

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

PROJECT NARRATIVE

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Method: **TO-15**
Description: Individual Can Certification
Client: Bay West, Inc.
Date: March 12, 2015

General Information:
1 sample was analyzed for TO-15. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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

ANALYTICAL RESULTS

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Sample: 412Central-CS-022715 **Lab ID: 10298168001** Collected: 02/27/15 08:00 Received: 02/27/15 17:50 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	ND	ug/m3	4.4	2.2	1.83		03/10/15 16:33	67-64-1	
Benzene	**1.6**	ug/m3	0.59	0.22	1.83		03/10/15 16:33	71-43-2	
Benzyl chloride	ND	ug/m3	1.9	0.96	1.83		03/10/15 16:33	100-44-7	
Bromodichloromethane	ND	ug/m3	2.5	0.33	1.83		03/10/15 16:33	75-27-4	
Bromoform	ND	ug/m3	3.8	0.59	1.83		03/10/15 16:33	75-25-2	
Bromomethane	ND	ug/m3	1.4	0.49	1.83		03/10/15 16:33	74-83-9	
1,3-Butadiene	ND	ug/m3	0.82	0.16	1.83		03/10/15 16:33	106-99-0	
2-Butanone (MEK)	ND	ug/m3	1.1	0.50	1.83		03/10/15 16:33	78-93-3	
Carbon disulfide	ND	ug/m3	1.2	0.13	1.83		03/10/15 16:33	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.2	0.59	1.83		03/10/15 16:33	56-23-5	
Chlorobenzene	ND	ug/m3	1.7	0.19	1.83		03/10/15 16:33	108-90-7	
Chloroethane	**4.5**	ug/m3	0.99	0.29	1.83		03/10/15 16:33	75-00-3	
Chloroform	ND	ug/m3	0.91	0.33	1.83		03/10/15 16:33	67-66-3	
Chloromethane	ND	ug/m3	0.77	0.35	1.83		03/10/15 16:33	74-87-3	
Cyclohexane	ND	ug/m3	1.3	0.23	1.83		03/10/15 16:33	110-82-7	
Dibromochloromethane	ND	ug/m3	3.2	1.6	1.83		03/10/15 16:33	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	2.9	0.43	1.83		03/10/15 16:33	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	2.2	0.26	1.83		03/10/15 16:33	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	2.2	0.42	1.83		03/10/15 16:33	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	2.2	0.36	1.83		03/10/15 16:33	106-46-7	
Dichlorodifluoromethane	**7.1**	ug/m3	1.8	0.20	1.83		03/10/15 16:33	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.5	0.26	1.83		03/10/15 16:33	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.75	0.22	1.83		03/10/15 16:33	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.5	0.19	1.83		03/10/15 16:33	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	3.7	0.36	1.83		03/10/15 16:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.5	0.30	1.83		03/10/15 16:33	156-60-5	
1,2-Dichloropropane	ND	ug/m3	1.7	0.28	1.83		03/10/15 16:33	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	1.7	0.25	1.83		03/10/15 16:33	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	1.7	0.28	1.83		03/10/15 16:33	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	2.6	0.46	1.83		03/10/15 16:33	76-14-2	
Ethanol	**35.5**	ug/m3	1.8	0.58	1.83		03/10/15 16:33	64-17-5	
Ethyl acetate	ND	ug/m3	1.3	0.23	1.83		03/10/15 16:33	141-78-6	
Ethylbenzene	**7.2**	ug/m3	1.6	0.33	1.83		03/10/15 16:33	100-41-4	
4-Ethyltoluene	**4.9**	ug/m3	1.8	0.32	1.83		03/10/15 16:33	622-96-8	
n-Heptane	**179**	ug/m3	1.5	0.30	1.83		03/10/15 16:33	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	9.9	0.75	1.83		03/10/15 16:33	87-68-3	
n-Hexane	**9.3**	ug/m3	3.3	0.18	1.83		03/10/15 16:33	110-54-3	
2-Hexanone	ND	ug/m3	1.5	0.39	1.83		03/10/15 16:33	591-78-6	
Methylene Chloride	ND	ug/m3	6.5	0.42	1.83		03/10/15 16:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	3.8	0.31	1.83		03/10/15 16:33	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	1.3	0.16	1.83		03/10/15 16:33	1634-04-4	
Naphthalene	ND	ug/m3	4.9	0.47	1.83		03/10/15 16:33	91-20-3	
2-Propanol	**24.4**	ug/m3	2.3	0.17	1.83		03/10/15 16:33	67-63-0	
Propylene	ND	ug/m3	0.64	0.20	1.83		03/10/15 16:33	115-07-1	
Styrene	ND	ug/m3	1.6	0.25	1.83		03/10/15 16:33	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.3	0.43	1.83		03/10/15 16:33	79-34-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Sample: 412Central-CS-022715 **Lab ID: 10298168001** Collected: 02/27/15 08:00 Received: 02/27/15 17:50 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Tetrachloroethene	**7.2**	ug/m3	1.3	0.34	1.83		03/10/15 16:33	127-18-4	
Tetrahydrofuran	ND	ug/m3	1.1	0.25	1.83		03/10/15 16:33	109-99-9	
Toluene	**5.0**	ug/m3	1.4	0.25	1.83		03/10/15 16:33	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	6.9	0.67	1.83		03/10/15 16:33	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.3	0.25	1.83		03/10/15 16:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.0	0.44	1.83		03/10/15 16:33	79-00-5	
Trichloroethene	ND	ug/m3	1.0	0.33	1.83		03/10/15 16:33	79-01-6	
Trichlorofluoromethane	ND	ug/m3	2.1	0.25	1.83		03/10/15 16:33	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	2.9	0.29	1.83		03/10/15 16:33	76-13-1	
1,2,4-Trimethylbenzene	**10.1**	ug/m3	1.8	0.22	1.83		03/10/15 16:33	95-63-6	
1,3,5-Trimethylbenzene	**7.8**	ug/m3	1.8	0.38	1.83		03/10/15 16:33	108-67-8	
Vinyl acetate	ND	ug/m3	1.3	0.64	1.83		03/10/15 16:33	108-05-4	
Vinyl chloride	ND	ug/m3	0.48	0.17	1.83		03/10/15 16:33	75-01-4	
m&p-Xylene	**31.7**	ug/m3	3.2	0.26	1.83		03/10/15 16:33	179601-23-1	
o-Xylene	ND	ug/m3	1.6	0.81	1.83		03/10/15 16:33	95-47-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Sample: 412Central-SS-022715 **Lab ID: 10298168002** Collected: 02/27/15 08:20 Received: 02/27/15 17:50 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	**147**	ug/m3	3.8	1.9	1.57		03/08/15 19:39	67-64-1	E
Benzene	ND	ug/m3	0.51	0.19	1.57		03/08/15 19:39	71-43-2	
Benzyl chloride	ND	ug/m3	1.6	0.83	1.57		03/08/15 19:39	100-44-7	
Bromodichloromethane	ND	ug/m3	2.1	0.29	1.57		03/08/15 19:39	75-27-4	
Bromoform	ND	ug/m3	3.3	0.51	1.57		03/08/15 19:39	75-25-2	
Bromomethane	ND	ug/m3	1.2	0.42	1.57		03/08/15 19:39	74-83-9	
1,3-Butadiene	ND	ug/m3	0.71	0.13	1.57		03/08/15 19:39	106-99-0	
2-Butanone (MEK)	**8.0**	ug/m3	0.94	0.43	1.57		03/08/15 19:39	78-93-3	
Carbon disulfide	ND	ug/m3	0.99	0.11	1.57		03/08/15 19:39	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.0	0.50	1.57		03/08/15 19:39	56-23-5	
Chlorobenzene	ND	ug/m3	1.5	0.17	1.57		03/08/15 19:39	108-90-7	
Chloroethane	ND	ug/m3	0.85	0.25	1.57		03/08/15 19:39	75-00-3	
Chloroform	ND	ug/m3	0.78	0.28	1.57		03/08/15 19:39	67-66-3	
Chloromethane	ND	ug/m3	0.66	0.30	1.57		03/08/15 19:39	74-87-3	
Cyclohexane	ND	ug/m3	1.1	0.20	1.57		03/08/15 19:39	110-82-7	
Dibromochloromethane	ND	ug/m3	2.7	1.4	1.57		03/08/15 19:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	2.4	0.37	1.57		03/08/15 19:39	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.9	0.22	1.57		03/08/15 19:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.9	0.36	1.57		03/08/15 19:39	541-73-1	
1,4-Dichlorobenzene	**3.0**	ug/m3	1.9	0.31	1.57		03/08/15 19:39	106-46-7	
Dichlorodifluoromethane	**2.0**	ug/m3	1.6	0.17	1.57		03/08/15 19:39	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.3	0.22	1.57		03/08/15 19:39	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.65	0.19	1.57		03/08/15 19:39	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.3	0.16	1.57		03/08/15 19:39	75-35-4	
cis-1,2-Dichloroethene	**50.6**	ug/m3	3.2	0.31	1.57		03/08/15 19:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.3	0.26	1.57		03/08/15 19:39	156-60-5	
1,2-Dichloropropane	ND	ug/m3	1.5	0.24	1.57		03/08/15 19:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	1.4	0.21	1.57		03/08/15 19:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	1.4	0.24	1.57		03/08/15 19:39	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	2.2	0.39	1.57		03/08/15 19:39	76-14-2	
Ethanol	**63.8**	ug/m3	1.5	0.49	1.57		03/08/15 19:39	64-17-5	
Ethyl acetate	ND	ug/m3	1.2	0.20	1.57		03/08/15 19:39	141-78-6	
Ethylbenzene	**1.5**	ug/m3	1.4	0.28	1.57		03/08/15 19:39	100-41-4	
4-Ethyltoluene	ND	ug/m3	1.6	0.27	1.57		03/08/15 19:39	622-96-8	
n-Heptane	**2.4**	ug/m3	1.3	0.25	1.57		03/08/15 19:39	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	8.5	0.65	1.57		03/08/15 19:39	87-68-3	
n-Hexane	ND	ug/m3	2.8	0.16	1.57		03/08/15 19:39	110-54-3	
2-Hexanone	**2.1**	ug/m3	1.3	0.33	1.57		03/08/15 19:39	591-78-6	
Methylene Chloride	ND	ug/m3	5.5	0.36	1.57		03/08/15 19:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	3.3	0.27	1.57		03/08/15 19:39	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	1.1	0.14	1.57		03/08/15 19:39	1634-04-4	
Naphthalene	ND	ug/m3	4.2	0.41	1.57		03/08/15 19:39	91-20-3	
2-Propanol	**62.4**	ug/m3	2.0	0.15	1.57		03/08/15 19:39	67-63-0	
Propylene	**1.3**	ug/m3	0.55	0.17	1.57		03/08/15 19:39	115-07-1	
Styrene	ND	ug/m3	1.4	0.21	1.57		03/08/15 19:39	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.1	0.37	1.57		03/08/15 19:39	79-34-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Sample: 412Central-SS-022715 **Lab ID: 10298168002** Collected: 02/27/15 08:20 Received: 02/27/15 17:50 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Tetrachloroethene	**329**	ug/m3	1.1	0.30	1.57		03/08/15 19:39	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.94	0.22	1.57		03/08/15 19:39	109-99-9	
Toluene	**6.2**	ug/m3	1.2	0.21	1.57		03/08/15 19:39	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	5.9	0.57	1.57		03/08/15 19:39	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.1	0.22	1.57		03/08/15 19:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	0.87	0.38	1.57		03/08/15 19:39	79-00-5	
Trichloroethene	**18.1**	ug/m3	0.86	0.28	1.57		03/08/15 19:39	79-01-6	
Trichlorofluoromethane	ND	ug/m3	1.8	0.22	1.57		03/08/15 19:39	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	2.5	0.25	1.57		03/08/15 19:39	76-13-1	
1,2,4-Trimethylbenzene	**3.3**	ug/m3	1.6	0.19	1.57		03/08/15 19:39	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.6	0.32	1.57		03/08/15 19:39	108-67-8	
Vinyl acetate	ND	ug/m3	1.1	0.55	1.57		03/08/15 19:39	108-05-4	
Vinyl chloride	ND	ug/m3	0.41	0.15	1.57		03/08/15 19:39	75-01-4	
m&p-Xylene	**6.5**	ug/m3	2.8	0.22	1.57		03/08/15 19:39	179601-23-1	
o-Xylene	**2.2**	ug/m3	1.4	0.69	1.57		03/08/15 19:39	95-47-6	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Sample: 412Central-CS-022715 CERT **Lab ID: 10298168003** Collected: 02/27/15 08:00 Received: 02/27/15 17:50 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15								
Acetone	ND	ug/m3	2.4	1.2	1		02/07/15 13:56	67-64-1	
Benzene	ND	ug/m3	0.32	0.12	1		02/07/15 13:56	71-43-2	
Benzyl chloride	ND	ug/m3	1.0	0.53	1		02/07/15 13:56	100-44-7	
Bromodichloromethane	ND	ug/m3	1.4	0.18	1		02/07/15 13:56	75-27-4	
Bromoform	ND	ug/m3	2.1	0.32	1		02/07/15 13:56	75-25-2	
Bromomethane	ND	ug/m3	0.79	0.27	1		02/07/15 13:56	74-83-9	
1,3-Butadiene	ND	ug/m3	0.45	0.085	1		02/07/15 13:56	106-99-0	
2-Butanone (MEK)	ND	ug/m3	0.60	0.27	1		02/07/15 13:56	78-93-3	
Carbon disulfide	ND	ug/m3	0.63	0.072	1		02/07/15 13:56	75-15-0	
Carbon tetrachloride	ND	ug/m3	0.64	0.32	1		02/07/15 13:56	56-23-5	
Chlorobenzene	ND	ug/m3	0.94	0.11	1		02/07/15 13:56	108-90-7	
Chloroethane	ND	ug/m3	0.54	0.16	1		02/07/15 13:56	75-00-3	
Chloroform	ND	ug/m3	0.50	0.18	1		02/07/15 13:56	67-66-3	
Chloromethane	ND	ug/m3	0.42	0.19	1		02/07/15 13:56	74-87-3	
Cyclohexane	ND	ug/m3	0.70	0.13	1		02/07/15 13:56	110-82-7	
Dibromochloromethane	ND	ug/m3	1.7	0.87	1		02/07/15 13:56	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.6	0.23	1		02/07/15 13:56	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.2	0.14	1		02/07/15 13:56	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.2	0.23	1		02/07/15 13:56	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.2	0.20	1		02/07/15 13:56	106-46-7	
Dichlorodifluoromethane	ND	ug/m3	1.0	0.11	1		02/07/15 13:56	75-71-8	
1,1-Dichloroethane	ND	ug/m3	0.82	0.14	1		02/07/15 13:56	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	0.12	1		02/07/15 13:56	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.81	0.10	1		02/07/15 13:56	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	2.0	0.20	1		02/07/15 13:56	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	0.16	1		02/07/15 13:56	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.94	0.15	1		02/07/15 13:56	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.92	0.14	1		02/07/15 13:56	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.92	0.15	1		02/07/15 13:56	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	1.4	0.25	1		02/07/15 13:56	76-14-2	
Ethanol	ND	ug/m3	0.96	0.32	1		02/07/15 13:56	64-17-5	
Ethyl acetate	ND	ug/m3	0.73	0.13	1		02/07/15 13:56	141-78-6	
Ethylbenzene	ND	ug/m3	0.88	0.18	1		02/07/15 13:56	100-41-4	
4-Ethyltoluene	ND	ug/m3	1.0	0.17	1		02/07/15 13:56	622-96-8	
n-Heptane	ND	ug/m3	0.83	0.16	1		02/07/15 13:56	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	2.2	0.41	1		02/07/15 13:56	87-68-3	
n-Hexane	ND	ug/m3	0.72	0.10	1		02/07/15 13:56	110-54-3	
2-Hexanone	ND	ug/m3	0.83	0.21	1		02/07/15 13:56	591-78-6	
Methylene Chloride	ND	ug/m3	3.5	0.23	1		02/07/15 13:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	2.1	0.17	1		02/07/15 13:56	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	0.73	0.089	1		02/07/15 13:56	1634-04-4	
Naphthalene	ND	ug/m3	2.7	0.26	1		02/07/15 13:56	91-20-3	
2-Propanol	ND	ug/m3	1.2	0.093	1		02/07/15 13:56	67-63-0	
Propylene	ND	ug/m3	0.35	0.11	1		02/07/15 13:56	115-07-1	
Styrene	ND	ug/m3	0.87	0.14	1		02/07/15 13:56	100-42-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Sample: 412Central-CS-022715 CERT **Lab ID: 10298168003** Collected: 02/27/15 08:00 Received: 02/27/15 17:50 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15								
1,1,2,2-Tetrachloroethane	ND	ug/m3	0.70	0.23	1		02/07/15 13:56	79-34-5	
Tetrachloroethene	ND	ug/m3	0.69	0.19	1		02/07/15 13:56	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.60	0.14	1		02/07/15 13:56	109-99-9	
Toluene	ND	ug/m3	0.77	0.14	1		02/07/15 13:56	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	1.5	0.36	1		02/07/15 13:56	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	0.70	0.14	1		02/07/15 13:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	0.56	0.24	1		02/07/15 13:56	79-00-5	
Trichloroethene	ND	ug/m3	0.55	0.18	1		02/07/15 13:56	79-01-6	
Trichlorofluoromethane	ND	ug/m3	1.1	0.14	1		02/07/15 13:56	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.6	0.16	1		02/07/15 13:56	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	1.0	0.12	1		02/07/15 13:56	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.0	0.21	1		02/07/15 13:56	108-67-8	
Vinyl acetate	ND	ug/m3	0.72	0.35	1		02/07/15 13:56	108-05-4	
Vinyl chloride	ND	ug/m3	0.26	0.093	1		02/07/15 13:56	75-01-4	
m&p-Xylene	ND	ug/m3	1.8	0.14	1		02/07/15 13:56	179601-23-1	
o-Xylene	ND	ug/m3	0.88	0.44	1		02/07/15 13:56	95-47-6	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472 Ramsey Street
Pace Project No.: 10298168

QC Batch: AIR/22689
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10298168002

METHOD BLANK: 1913710
Matrix: Air
Associated Lab Samples: 10298168002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.70	03/08/15 12:09	
1,1,2,2-Tetrachloroethane	ug/m3	ND	0.70	03/08/15 12:09	
1,1,2-Trichloroethane	ug/m3	ND	0.56	03/08/15 12:09	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.6	03/08/15 12:09	
1,1-Dichloroethane	ug/m3	ND	0.82	03/08/15 12:09	
1,1-Dichloroethene	ug/m3	ND	0.81	03/08/15 12:09	
1,2,4-Trichlorobenzene	ug/m3	ND	3.8	03/08/15 12:09	
1,2,4-Trimethylbenzene	ug/m3	ND	1.0	03/08/15 12:09	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.6	03/08/15 12:09	
1,2-Dichlorobenzene	ug/m3	ND	1.2	03/08/15 12:09	
1,2-Dichloroethane	ug/m3	ND	0.41	03/08/15 12:09	
1,2-Dichloropropane	ug/m3	ND	0.94	03/08/15 12:09	
1,3,5-Trimethylbenzene	ug/m3	ND	1.0	03/08/15 12:09	
1,3-Butadiene	ug/m3	ND	0.45	03/08/15 12:09	
1,3-Dichlorobenzene	ug/m3	ND	1.2	03/08/15 12:09	
1,4-Dichlorobenzene	ug/m3	ND	1.2	03/08/15 12:09	
2-Butanone (MEK)	ug/m3	ND	0.60	03/08/15 12:09	
2-Hexanone	ug/m3	ND	0.83	03/08/15 12:09	
2-Propanol	ug/m3	ND	1.2	03/08/15 12:09	
4-Ethyltoluene	ug/m3	ND	1.0	03/08/15 12:09	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	2.1	03/08/15 12:09	
Acetone	ug/m3	ND	2.4	03/08/15 12:09	
Benzene	ug/m3	ND	0.32	03/08/15 12:09	
Benzyl chloride	ug/m3	ND	1.0	03/08/15 12:09	
Bromodichloromethane	ug/m3	ND	1.4	03/08/15 12:09	
Bromoform	ug/m3	ND	2.1	03/08/15 12:09	
Bromomethane	ug/m3	ND	0.79	03/08/15 12:09	
Carbon disulfide	ug/m3	ND	0.63	03/08/15 12:09	
Carbon tetrachloride	ug/m3	ND	0.64	03/08/15 12:09	
Chlorobenzene	ug/m3	ND	0.94	03/08/15 12:09	
Chloroethane	ug/m3	ND	0.54	03/08/15 12:09	
Chloroform	ug/m3	ND	0.50	03/08/15 12:09	
Chloromethane	ug/m3	ND	0.42	03/08/15 12:09	
cis-1,2-Dichloroethene	ug/m3	ND	2.0	03/08/15 12:09	
cis-1,3-Dichloropropene	ug/m3	ND	0.92	03/08/15 12:09	
Cyclohexane	ug/m3	ND	0.70	03/08/15 12:09	
Dibromochloromethane	ug/m3	ND	1.7	03/08/15 12:09	
Dichlorodifluoromethane	ug/m3	ND	1.0	03/08/15 12:09	
Dichlorotetrafluoroethane	ug/m3	ND	1.4	03/08/15 12:09	
Ethanol	ug/m3	ND	0.96	03/08/15 12:09	
Ethyl acetate	ug/m3	ND	0.73	03/08/15 12:09	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472 Ramsey Street
Pace Project No.: 10298168

METHOD BLANK: 1913710 Matrix: Air
Associated Lab Samples: 10298168002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/m3	ND	0.88	03/08/15 12:09	
Hexachloro-1,3-butadiene	ug/m3	ND	5.4	03/08/15 12:09	
m&p-Xylene	ug/m3	ND	1.8	03/08/15 12:09	
Methyl-tert-butyl ether	ug/m3	ND	0.73	03/08/15 12:09	
Methylene Chloride	ug/m3	ND	3.5	03/08/15 12:09	
n-Heptane	ug/m3	ND	0.83	03/08/15 12:09	
n-Hexane	ug/m3	ND	1.8	03/08/15 12:09	
Naphthalene	ug/m3	ND	2.7	03/08/15 12:09	
o-Xylene	ug/m3	ND	0.88	03/08/15 12:09	
Propylene	ug/m3	ND	0.35	03/08/15 12:09	
Styrene	ug/m3	ND	0.87	03/08/15 12:09	
Tetrachloroethene	ug/m3	ND	0.69	03/08/15 12:09	
Tetrahydrofuran	ug/m3	ND	0.60	03/08/15 12:09	
Toluene	ug/m3	ND	0.77	03/08/15 12:09	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	03/08/15 12:09	
trans-1,3-Dichloropropene	ug/m3	ND	0.92	03/08/15 12:09	
Trichloroethene	ug/m3	ND	0.55	03/08/15 12:09	
Trichlorofluoromethane	ug/m3	ND	1.1	03/08/15 12:09	
Vinyl acetate	ug/m3	ND	0.72	03/08/15 12:09	
Vinyl chloride	ug/m3	ND	0.26	03/08/15 12:09	

LABORATORY CONTROL SAMPLE: 1913711

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	64.3	116	72-140	
1,1,2,2-Tetrachloroethane	ug/m3	69.8	70.2	100	68-137	
1,1,2-Trichloroethane	ug/m3	55.5	56.5	102	66-138	
1,1,2-Trichlorotrifluoroethane	ug/m3	77.9	86.7	111	70-132	
1,1-Dichloroethane	ug/m3	41.2	43.6	106	68-137	
1,1-Dichloroethene	ug/m3	40.3	40.3	100	73-138	
1,2,4-Trichlorobenzene	ug/m3	75.5	74.5	99	48-150	
1,2,4-Trimethylbenzene	ug/m3	50	54.0	108	75-134	
1,2-Dibromoethane (EDB)	ug/m3	78.1	83.9	107	75-132	
1,2-Dichlorobenzene	ug/m3	61.2	65.4	107	71-129	
1,2-Dichloroethane	ug/m3	41.2	49.3	120	73-139	
1,2-Dichloropropane	ug/m3	47	46.6	99	70-130	
1,3,5-Trimethylbenzene	ug/m3	50	52.2	104	75-133	
1,3-Butadiene	ug/m3	22.5	22.9	102	66-135	
1,3-Dichlorobenzene	ug/m3	61.2	65.8	108	75-131	
1,4-Dichlorobenzene	ug/m3	61.2	65.8	108	69-135	
2-Butanone (MEK)	ug/m3	30	32.0	107	67-131	
2-Hexanone	ug/m3	41.7	42.5	102	72-130	
2-Propanol	ug/m3	25	24.9	100	66-133	
4-Ethyltoluene	ug/m3	50	51.2	102	75-130	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472 Ramsey Street
Pace Project No.: 10298168

LABORATORY CONTROL SAMPLE: 1913711

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Methyl-2-pentanone (MIBK)	ug/m3	41.7	42.2	101	68-134	
Acetone	ug/m3	24.2	28.6	118	63-144	
Benzene	ug/m3	32.5	31.8	98	64-139	
Benzyl chloride	ug/m3	52.5	57.3	109	75-129	
Bromodichloromethane	ug/m3	68.2	76.5	112	75-134	
Bromoform	ug/m3	105	118	112	72-130	
Bromomethane	ug/m3	39.5	42.5	108	71-132	
Carbon disulfide	ug/m3	31.7	33.7	106	56-139	
Carbon tetrachloride	ug/m3	64	82.2	129	75-150	
Chlorobenzene	ug/m3	46.8	46.3	99	71-132	
Chloroethane	ug/m3	26.8	26.8	100	71-129	
Chloroform	ug/m3	49.7	57.0	115	73-136	
Chloromethane	ug/m3	21	20.5	98	52-143	
cis-1,2-Dichloroethene	ug/m3	40.3	45.8	114	64-137	
cis-1,3-Dichloropropene	ug/m3	46.2	52.4	114	75-128	
Cyclohexane	ug/m3	35	35.6	102	62-143	
Dibromochloromethane	ug/m3	86.6	94.8	109	75-136	
Dichlorodifluoromethane	ug/m3	50.3	53.5	106	70-141	
Dichlorotetrafluoroethane	ug/m3	71.1	72.9	103	71-139	
Ethanol	ug/m3	19.2	19.2	100	60-144	
Ethyl acetate	ug/m3	36.6	39.2	107	64-137	
Ethylbenzene	ug/m3	44.2	42.6	96	71-136	
Hexachloro-1,3-butadiene	ug/m3	108	122	113	51-150	
m&p-Xylene	ug/m3	88.3	85.0	96	71-134	
Methyl-tert-butyl ether	ug/m3	36.7	40.1	109	73-134	
Methylene Chloride	ug/m3	35.3	36.4	103	64-130	
n-Heptane	ug/m3	41.7	42.6	102	63-135	
n-Hexane	ug/m3	35.8	33.5	93	69-135	
Naphthalene	ug/m3	53.3	52.5	99	43-150	
o-Xylene	ug/m3	44.2	43.8	99	75-134	
Propylene	ug/m3	17.5	14.7	84	58-135	
Styrene	ug/m3	43.3	43.9	101	75-133	
Tetrachloroethene	ug/m3	69	71.0	103	66-137	
Tetrahydrofuran	ug/m3	30	34.1	114	58-135	
Toluene	ug/m3	38.3	37.9	99	70-129	
trans-1,2-Dichloroethene	ug/m3	40.3	44.0	109	61-140	
trans-1,3-Dichloropropene	ug/m3	46.2	49.5	107	75-134	
Trichloroethene	ug/m3	54.6	59.7	109	70-134	
Trichlorofluoromethane	ug/m3	57.1	60.8	106	67-140	
Vinyl acetate	ug/m3	35.8	38.2	107	60-139	
Vinyl chloride	ug/m3	26	25.9	99	72-129	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472 Ramsey Street
Pace Project No.: 10298168

SAMPLE DUPLICATE: 1913973

Parameter	Units	10298175003 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1,2,2-Tetrachloroethane	ug/m3	ND	ND		25	
1,1,2-Trichloroethane	ug/m3	ND	ND		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	ND		25	
1,1-Dichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trichlorobenzene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	ND	.67J		25	
1,2-Dibromoethane (EDB)	ug/m3	ND	ND		25	
1,2-Dichlorobenzene	ug/m3	ND	ND		25	
1,2-Dichloroethane	ug/m3	ND	ND		25	
1,2-Dichloropropane	ug/m3	ND	ND		25	
1,3,5-Trimethylbenzene	ug/m3	ND	ND		25	
1,3-Butadiene	ug/m3	ND	ND		25	
1,3-Dichlorobenzene	ug/m3	ND	ND		25	
1,4-Dichlorobenzene	ug/m3	ND	ND		25	
2-Butanone (MEK)	ug/m3	20.2	19.9	1	25	
2-Hexanone	ug/m3	1.6	1.6	4	25	
2-Propanol	ug/m3	ND	ND		25	
4-Ethyltoluene	ug/m3	ND	ND		25	
4-Methyl-2-pentanone (MIBK)	ug/m3	5.5	5.4	2	25	
Acetone	ug/m3	100	103	3	25	
Benzene	ug/m3	2.0	1.9	2	25	
Benzyl chloride	ug/m3	ND	ND		25	
Bromodichloromethane	ug/m3	ND	ND		25	
Bromoform	ug/m3	ND	ND		25	
Bromomethane	ug/m3	ND	ND		25	
Carbon disulfide	ug/m3	ND	ND		25	
Carbon tetrachloride	ug/m3	ND	ND		25	
Chlorobenzene	ug/m3	ND	ND		25	
Chloroethane	ug/m3	ND	ND		25	
Chloroform	ug/m3	ND	ND		25	
Chloromethane	ug/m3	1.2	1.0	15	25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
cis-1,3-Dichloropropene	ug/m3	ND	ND		25	
Cyclohexane	ug/m3	1.1	0.94	14	25	
Dibromochloromethane	ug/m3	ND	ND		25	
Dichlorodifluoromethane	ug/m3	2.5	2.5	3	25	
Dichlorotetrafluoroethane	ug/m3	ND	ND		25	
Ethanol	ug/m3	8.3	7.1	16	25	
Ethyl acetate	ug/m3	ND	ND		25	
Ethylbenzene	ug/m3	ND	.68J		25	
Hexachloro-1,3-butadiene	ug/m3	ND	ND		25	
m&p-Xylene	ug/m3	ND	2.3J		25	
Methyl-tert-butyl ether	ug/m3	ND	ND		25	
Methylene Chloride	ug/m3	ND	1.5J		25	
n-Heptane	ug/m3	2.7	ND		25	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472 Ramsey Street
Pace Project No.: 10298168

SAMPLE DUPLICATE: 1913973

Parameter	Units	10298175003 Result	Dup Result	RPD	Max RPD	Qualifiers
n-Hexane	ug/m3	8.3	7.7	7	25	
Naphthalene	ug/m3	ND	ND		25	
o-Xylene	ug/m3	ND	.79J		25	
Propylene	ug/m3	5.4	5.5	3	25	
Styrene	ug/m3	ND	ND		25	
Tetrachloroethene	ug/m3	ND	ND		25	
Tetrahydrofuran	ug/m3	ND	ND		25	
Toluene	ug/m3	5.1	5.0	2	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
trans-1,3-Dichloropropene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	ND	ND		25	
Trichlorofluoromethane	ug/m3	ND	1.5		25	
Vinyl acetate	ug/m3	2.3	2.6	9	25	
Vinyl chloride	ug/m3	ND	ND		25	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472 Ramsey Street
Pace Project No.: 10298168

QC Batch: AIR/22703
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10298168001

METHOD BLANK: 1914925
Matrix: Air
Associated Lab Samples: 10298168001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.70	03/10/15 11:07	
1,1,2,2-Tetrachloroethane	ug/m3	ND	0.70	03/10/15 11:07	
1,1,2-Trichloroethane	ug/m3	ND	0.56	03/10/15 11:07	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.6	03/10/15 11:07	
1,1-Dichloroethane	ug/m3	ND	0.82	03/10/15 11:07	
1,1-Dichloroethene	ug/m3	ND	0.81	03/10/15 11:07	
1,2,4-Trichlorobenzene	ug/m3	ND	3.8	03/10/15 11:07	
1,2,4-Trimethylbenzene	ug/m3	ND	1.0	03/10/15 11:07	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.6	03/10/15 11:07	
1,2-Dichlorobenzene	ug/m3	ND	1.2	03/10/15 11:07	
1,2-Dichloroethane	ug/m3	ND	0.41	03/10/15 11:07	
1,2-Dichloropropane	ug/m3	ND	0.94	03/10/15 11:07	
1,3,5-Trimethylbenzene	ug/m3	ND	1.0	03/10/15 11:07	
1,3-Butadiene	ug/m3	ND	0.45	03/10/15 11:07	
1,3-Dichlorobenzene	ug/m3	ND	1.2	03/10/15 11:07	
1,4-Dichlorobenzene	ug/m3	ND	1.2	03/10/15 11:07	
2-Butanone (MEK)	ug/m3	ND	0.60	03/10/15 11:07	
2-Hexanone	ug/m3	ND	0.83	03/10/15 11:07	
2-Propanol	ug/m3	ND	1.2	03/10/15 11:07	
4-Ethyltoluene	ug/m3	ND	1.0	03/10/15 11:07	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	2.1	03/10/15 11:07	
Acetone	ug/m3	ND	2.4	03/10/15 11:07	
Benzene	ug/m3	ND	0.32	03/10/15 11:07	
Benzyl chloride	ug/m3	ND	1.0	03/10/15 11:07	
Bromodichloromethane	ug/m3	ND	1.4	03/10/15 11:07	
Bromoform	ug/m3	ND	2.1	03/10/15 11:07	
Bromomethane	ug/m3	ND	0.79	03/10/15 11:07	
Carbon disulfide	ug/m3	ND	0.63	03/10/15 11:07	
Carbon tetrachloride	ug/m3	ND	0.64	03/10/15 11:07	
Chlorobenzene	ug/m3	ND	0.94	03/10/15 11:07	
Chloroethane	ug/m3	ND	0.54	03/10/15 11:07	
Chloroform	ug/m3	ND	0.50	03/10/15 11:07	
Chloromethane	ug/m3	ND	0.42	03/10/15 11:07	
cis-1,2-Dichloroethene	ug/m3	ND	2.0	03/10/15 11:07	
cis-1,3-Dichloropropene	ug/m3	ND	0.92	03/10/15 11:07	
Cyclohexane	ug/m3	ND	0.70	03/10/15 11:07	
Dibromochloromethane	ug/m3	ND	1.7	03/10/15 11:07	
Dichlorodifluoromethane	ug/m3	ND	1.0	03/10/15 11:07	
Dichlorotetrafluoroethane	ug/m3	ND	1.4	03/10/15 11:07	
Ethanol	ug/m3	ND	0.96	03/10/15 11:07	
Ethyl acetate	ug/m3	ND	0.73	03/10/15 11:07	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472 Ramsey Street
Pace Project No.: 10298168

METHOD BLANK: 1914925 Matrix: Air
Associated Lab Samples: 10298168001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/m3	ND	0.88	03/10/15 11:07	
Hexachloro-1,3-butadiene	ug/m3	ND	5.4	03/10/15 11:07	
m&p-Xylene	ug/m3	ND	1.8	03/10/15 11:07	
Methyl-tert-butyl ether	ug/m3	ND	0.73	03/10/15 11:07	
Methylene Chloride	ug/m3	ND	3.5	03/10/15 11:07	
n-Heptane	ug/m3	ND	0.83	03/10/15 11:07	
n-Hexane	ug/m3	ND	1.8	03/10/15 11:07	
Naphthalene	ug/m3	ND	2.7	03/10/15 11:07	
o-Xylene	ug/m3	ND	0.88	03/10/15 11:07	
Propylene	ug/m3	ND	0.35	03/10/15 11:07	
Styrene	ug/m3	ND	0.87	03/10/15 11:07	
Tetrachloroethene	ug/m3	ND	0.69	03/10/15 11:07	
Tetrahydrofuran	ug/m3	ND	0.60	03/10/15 11:07	
Toluene	ug/m3	ND	0.77	03/10/15 11:07	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	03/10/15 11:07	
trans-1,3-Dichloropropene	ug/m3	ND	0.92	03/10/15 11:07	
Trichloroethene	ug/m3	ND	0.55	03/10/15 11:07	
Trichlorofluoromethane	ug/m3	ND	1.1	03/10/15 11:07	
Vinyl acetate	ug/m3	ND	0.72	03/10/15 11:07	
Vinyl chloride	ug/m3	ND	0.26	03/10/15 11:07	

LABORATORY CONTROL SAMPLE: 1914926

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	65.0	117	72-140	
1,1,2,2-Tetrachloroethane	ug/m3	69.8	79.8	114	68-137	
1,1,2-Trichloroethane	ug/m3	55.5	63.5	114	66-138	
1,1,2-Trichlorotrifluoroethane	ug/m3	77.9	96.0	123	70-132	
1,1-Dichloroethane	ug/m3	41.2	50.4	122	68-137	
1,1-Dichloroethene	ug/m3	40.3	48.1	119	73-138	
1,2,4-Trichlorobenzene	ug/m3	75.5	84.4	112	48-150	
1,2,4-Trimethylbenzene	ug/m3	50	56.7	113	75-134	
1,2-Dibromoethane (EDB)	ug/m3	78.1	91.6	117	75-132	
1,2-Dichlorobenzene	ug/m3	61.2	72.6	119	71-129	
1,2-Dichloroethane	ug/m3	41.2	51.4	125	73-139	
1,2-Dichloropropane	ug/m3	47	53.6	114	70-130	
1,3,5-Trimethylbenzene	ug/m3	50	55.1	110	75-133	
1,3-Butadiene	ug/m3	22.5	24.6	109	66-135	
1,3-Dichlorobenzene	ug/m3	61.2	71.3	117	75-131	
1,4-Dichlorobenzene	ug/m3	61.2	73.5	120	69-135	
2-Butanone (MEK)	ug/m3	30	37.4	125	67-131	
2-Hexanone	ug/m3	41.7	51.2	123	72-130	
2-Propanol	ug/m3	25	28.2	113	66-133	
4-Ethyltoluene	ug/m3	50	58.7	117	75-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472 Ramsey Street
Pace Project No.: 10298168

LABORATORY CONTROL SAMPLE: 1914926

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Methyl-2-pentanone (MIBK)	ug/m3	41.7	48.7	117	68-134	
Acetone	ug/m3	24.2	31.1	129	63-144	
Benzene	ug/m3	32.5	35.6	110	64-139	
Benzyl chloride	ug/m3	52.5	64.8	123	75-129	
Bromodichloromethane	ug/m3	68.2	82.4	121	75-134	
Bromoform	ug/m3	105	134	127	72-130	
Bromomethane	ug/m3	39.5	42.4	107	71-132	
Carbon disulfide	ug/m3	31.7	36.5	115	56-139	
Carbon tetrachloride	ug/m3	64	89.1	139	75-150	CH
Chlorobenzene	ug/m3	46.8	51.7	110	71-132	
Chloroethane	ug/m3	26.8	31.4	117	71-129	
Chloroform	ug/m3	49.7	61.6	124	73-136	
Chloromethane	ug/m3	21	24.3	116	52-143	
cis-1,2-Dichloroethene	ug/m3	40.3	49.1	122	64-137	
cis-1,3-Dichloropropene	ug/m3	46.2	53.9	117	75-128	
Cyclohexane	ug/m3	35	40.3	115	62-143	
Dibromochloromethane	ug/m3	86.6	101	117	75-136	
Dichlorodifluoromethane	ug/m3	50.3	50.2	100	70-141	
Dichlorotetrafluoroethane	ug/m3	71.1	84.4	119	71-139	
Ethanol	ug/m3	19.2	21.8	114	60-144	
Ethyl acetate	ug/m3	36.6	43.5	119	64-137	
Ethylbenzene	ug/m3	44.2	47.4	107	71-136	
Hexachloro-1,3-butadiene	ug/m3	108	125	115	51-150	
m&p-Xylene	ug/m3	88.3	101	115	71-134	
Methyl-tert-butyl ether	ug/m3	36.7	43.6	119	73-134	
Methylene Chloride	ug/m3	35.3	43.2	122	64-130	
n-Heptane	ug/m3	41.7	49.5	119	63-135	
n-Hexane	ug/m3	35.8	38.5	107	69-135	
Naphthalene	ug/m3	53.3	57.6	108	43-150	
o-Xylene	ug/m3	44.2	46.7	106	75-134	
Propylene	ug/m3	17.5	15.2	87	58-135	
Styrene	ug/m3	43.3	47.1	109	75-133	
Tetrachloroethene	ug/m3	69	73.2	106	66-137	
Tetrahydrofuran	ug/m3	30	36.9	123	58-135	
Toluene	ug/m3	38.3	42.3	110	70-129	
trans-1,2-Dichloroethene	ug/m3	40.3	46.3	115	61-140	
trans-1,3-Dichloropropene	ug/m3	46.2	59.4	129	75-134	
Trichloroethene	ug/m3	54.6	62.9	115	70-134	
Trichlorofluoromethane	ug/m3	57.1	70.1	123	67-140	
Vinyl acetate	ug/m3	35.8	44.7	125	60-139	
Vinyl chloride	ug/m3	26	27.1	104	72-129	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472 Ramsey Street
Pace Project No.: 10298168

SAMPLE DUPLICATE: 1915802

Parameter	Units	10298198026 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	ND		25	
1,1,2,2-Tetrachloroethane	ug/m3	ND	ND		25	
1,1,2-Trichloroethane	ug/m3	ND	ND		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	ND		25	
1,1-Dichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trichlorobenzene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	ND	1.1J		25	
1,2-Dibromoethane (EDB)	ug/m3	ND	ND		25	
1,2-Dichlorobenzene	ug/m3	ND	ND		25	
1,2-Dichloroethane	ug/m3	ND	ND		25	
1,2-Dichloropropane	ug/m3	ND	ND		25	
1,3,5-Trimethylbenzene	ug/m3	ND	ND		25	
1,3-Butadiene	ug/m3	ND	ND		25	
1,3-Dichlorobenzene	ug/m3	ND	ND		25	
1,4-Dichlorobenzene	ug/m3	ND	ND		25	
2-Butanone (MEK)	ug/m3	1.7	1.9	10	25	
2-Hexanone	ug/m3	ND	ND		25	
2-Propanol	ug/m3	ND	.96J		25	
4-Ethyltoluene	ug/m3	ND	ND		25	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	ND		25	
Acetone	ug/m3	15.3	13.1	16	25	
Benzene	ug/m3	1.2	1.1	12	25	
Benzyl chloride	ug/m3	ND	ND		25	
Bromodichloromethane	ug/m3	ND	ND		25	
Bromoform	ug/m3	ND	ND		25	
Bromomethane	ug/m3	ND	ND		25	
Carbon disulfide	ug/m3	ND	ND		25	
Carbon tetrachloride	ug/m3	ND	ND		25	
Chlorobenzene	ug/m3	3.1	3.0	2	25	
Chloroethane	ug/m3	ND	ND		25	
Chloroform	ug/m3	ND	ND		25	
Chloromethane	ug/m3	1.5	1.4	7	25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
cis-1,3-Dichloropropene	ug/m3	ND	ND		25	
Cyclohexane	ug/m3	3.5	3.2	11	25	
Dibromochloromethane	ug/m3	ND	ND		25	
Dichlorodifluoromethane	ug/m3	2.4	2.2	12	25	
Dichlorotetrafluoroethane	ug/m3	ND	ND		25	
Ethanol	ug/m3	4.7	5.7	20	25	
Ethyl acetate	ug/m3	ND	ND		25	
Ethylbenzene	ug/m3	10	9.5	5	25	
Hexachloro-1,3-butadiene	ug/m3	ND	ND		25	
m&p-Xylene	ug/m3	5.1	4.7	8	25	
Methyl-tert-butyl ether	ug/m3	ND	ND		25	
Methylene Chloride	ug/m3	ND	1.5J		25	
n-Heptane	ug/m3	1.7	ND		25	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472 Ramsey Street
Pace Project No.: 10298168

SAMPLE DUPLICATE: 1915802

Parameter	Units	10298198026 Result	Dup Result	RPD	Max RPD	Qualifiers
n-Hexane	ug/m3	ND	2J		25	
Naphthalene	ug/m3	ND	ND		25	
o-Xylene	ug/m3	1.8	1.8	0	25	
Propylene	ug/m3	ND	ND		25	
Styrene	ug/m3	6.0	5.6	7	25	
Tetrachloroethene	ug/m3	20.1	17.9	12	25	
Tetrahydrofuran	ug/m3	ND	ND		25	
Toluene	ug/m3	9.4	8.8	6	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
trans-1,3-Dichloropropene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	ND	ND		25	
Trichlorofluoromethane	ug/m3	ND	1.6J		25	
Vinyl acetate	ug/m3	ND	ND		25	
Vinyl chloride	ug/m3	ND	ND		25	

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: J140472 Ramsey Street
Pace Project No.: 10298168

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.

SAMPLE QUALIFIERS

Sample: 10298168001

[1] The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

Sample: 10298168002

[1] The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

ANALYTE QUALIFIERS

CH The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J140472 Ramsey Street
Pace Project No.: 10298168

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10298168001	**412Central-CS-022715**	TO-15	AIR/22703		
10298168002	**412Central-SS-022715**	TO-15	AIR/22689		
10298168003	**412Central-CS-022715 CERT**	TO-15	AIR/22639		

10249160

Pace Analytical®
www.pacelabs.com

AIR: CHAIN-OF-CUSTODY / Analytical Request Document

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

State Admin Contract Project

14024

Page: 1 of 1

Section A Required Client Information:

Company: Bay West LLC
Address: 5 Empire Drive St. Paul, MN 55103
Email To: amanda@baywest.com
Phone: 651.291.3495 Fax:
Requested Due Date/TAT: standard

Section B Required Project Information:

Report To: Amanda Malaney
Copy To:
Purchase Order No.: 101744
Project Name: Ramsey Street
Project Number: 140472

Section C Invoice Information:

Attention: accountspayable@baywest.com
Company Name: Bay West LLC
Address: Same
Pace Quote Reference:
Pace Project Manager/Sales Rep.: Steve Albrecht
Pace Profile #:

Program: UST / Superfund / Emissions / Clean Air Act / Voluntary Clean Up / Dry Clean / RCRA / Other MPCA (V)

Location of Sampling by State: MN

Reporting Units: ug/m³ ___ mg/m³ ___ PPBV ___ PPMV ___ Other ___

Report Level II.___ III.___ IV.___ Other ___

Section D Required Client Information

AIR SAMPLE ID
Sample IDs MUST BE UNIQUE

Valid Media Codes

MEDIA	CODE
Tedlar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

ITEM #	AIR SAMPLE ID	MEDIA CODE	PID Reading (Client only)	COLLECTED COMPOSITE START END/GRAB DATE	COLLECTED COMPOSITE START END/GRAB TIME	COLLECTED COMPOSITE - DATE	COLLECTED COMPOSITE - TIME	Canister Pressure (Initial Field - psig)	Canister Pressure (Final Field - psig)	Summa Can Number	Flow Control Number	Method: PM10	3C- Fixed Gas (%)	TO-3	TO-3M (Methane)	TO-4 (PCBs)	TO-13 (PAH)	TO-14	TO-15	TO15 Short List*	Pace Lab ID
1	412Central-CS-022715	6LC		02/26/15	0730	02/27/15	0800	-28	-7	0523	0348							X			001 003
2	412Central-SS-022715	1LC		02/27/15	0811	02/27/15	0820	-30	0	2236	0667							X			002
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Comments:
State admin. contract project
MPCA no# 300012382

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature] / BayWest	2/26/15	1415	[signature]	2/27/15	1415
[signature]	2/27/15	1530	[signature]	2/27/15	1530
[signature]	2/27/15	1750	[signature] PACE	2-27-15	1750

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: William McGown

SIGNATURE of SAMPLER: [signature] DATE Signed (MM / DD / YY): 02/27/15

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

ORIGINAL

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386

Pace Analytical®	Document Name: Air Sample Condition Upon Receipt	Document Revised: 26Dec2013 Page 1 of 1
	Document No.: F-MN-A-106-rev.09	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition Upon Receipt

Client Name: Bay west

Project #: WO# : 10298168

10298168

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

Tracking Number: _____

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

Optional: Proj. Due Date: Proj. Name:

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

Temp. (TO17 and TO13 samples only) (°C): _____ **Corrected Temp (°C):** _____ **Thermom. Used:** ☐ B88A912167504 ☐ B88A9132521491 ☐ 72337080 ☐ 80512447

Temp should be above freezing to 6°C **Correction Factor:** _____ **Date & Initials of Person Examining Contents:** 2/25/15

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?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Media: Air Can				11.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.

Samples Received:

Canisters		Flow Controllers		Stand Alone G	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID
CS	0523		0348		cert can
SS	2236		0667		

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Steve Albrecht for Steve Albrecht **Date:** 3-3-15

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)

Data File: \\192.168.10.12\chem\10airD.i\031015.b\06917.d
Report Date: 12-Mar-2015 10:30

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Client SDG: 031015.b
Lab Smp Id: 10298168001
Operator : AH2
Sample Date:
Sample Location:
Sample Point:
Sample Matrix: AIR
Date Received:
Analysis Type: VOA
Level: LOW
Inj Date: 10-MAR-2015 16:33

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.	617-78-7	Pentane, 3-ethyl-	5.617	8.98	NJ
2.	560-21-4	Pentane, 2,3,3-trimethyl-	5.736	10.5	NJ
3.	592-27-8	Heptane, 2-methyl-	5.797	25.3	NJ
4.	16747-26-5	Hexane, 2,2,4-trimethyl-	6.099	3.48	NJ
5.	638-04-0	Cyclohexane, 1,3-dimethyl-,	6.154	4.90	NJ
6.	111-65-9	Octane	6.375	7.96	NJ
7.	1072-05-5	Heptane, 2,6-dimethyl-	6.887	2.03	NJ
8.	2216-33-3	Octane, 3-methyl-	7.025	20.2	NJ
9.	3073-66-3	Cyclohexane, 1,1,3-trimethy	7.224	18.1	NJ
10.		Unknown	7.536	2.49	J

Data File: \\192.168.10.12\chem\10airD.i\031015.b\06917.d
Report Date: 12-Mar-2015 10:30

Pace Analytical Services, Inc.

TO14/TO15 Analysis

Data file : \\192.168.10.12\chem\10airD.i\031015.b\06917.d
Lab Smp Id: 10298168001
Inj Date : 10-MAR-2015 16:33
Operator : AH2 Inst ID: 10airD.i
Smp Info :
Misc Info : 22703
Comment : Volatile Organic Compounds in Air
Method : \\192.168.10.12\chem\10airD.i\031015.b\TO15_063-15.m
Meth Date : 11-Mar-2015 07:51 ahamilton Quant Type: ISTD
Cal Date : 05-MAR-2015 05:41 Cal File: 06341.d
Als bottle: 17
Dil Factor: 1.83000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: VIRTUALXP-28174

Concentration Formula: Amt * DF * Uf * CpndVariable

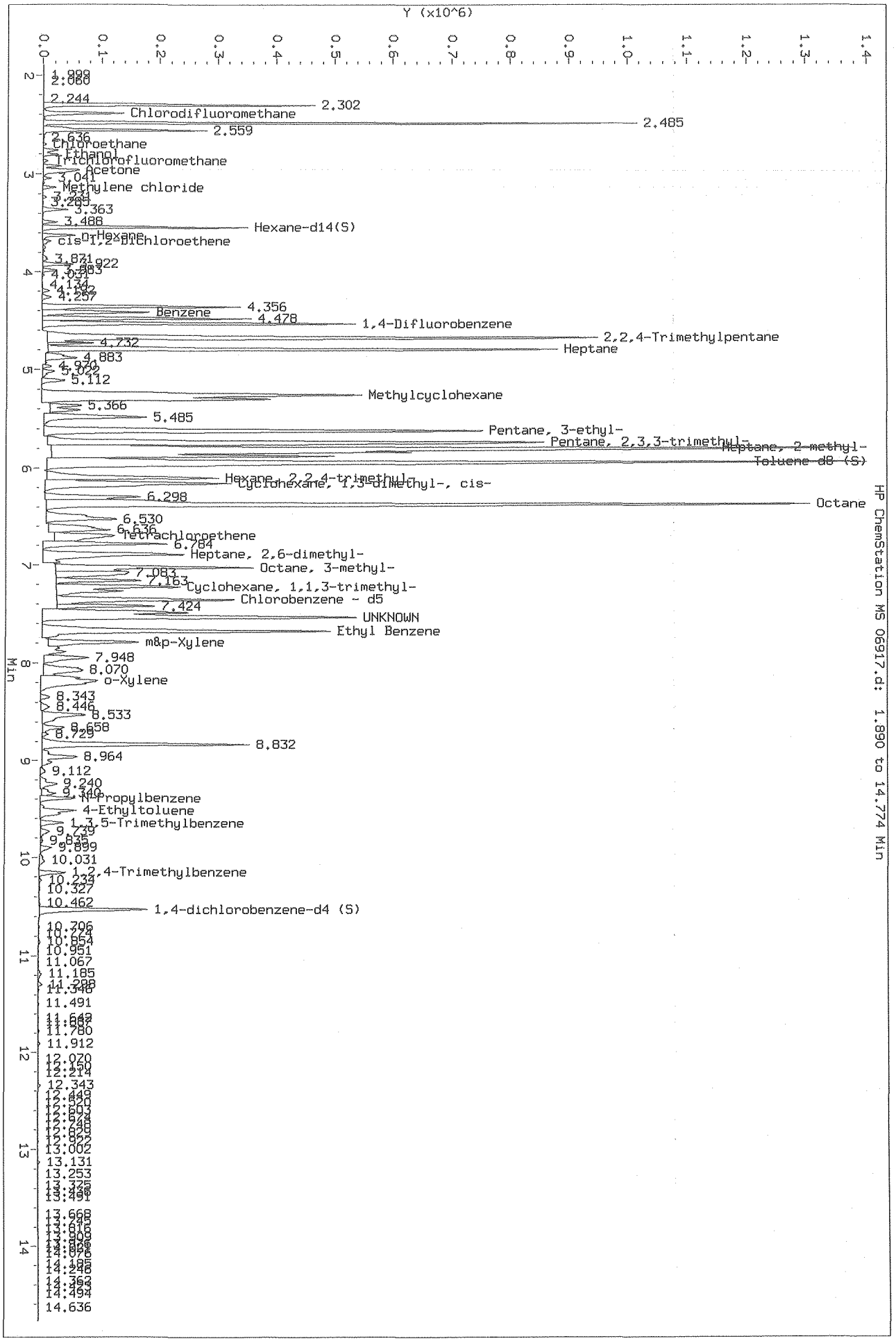
Name	Value	Description
DF	1.830	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	COMPOUND	RT	AREA	AMOUNT
$	54 Toluene-d8 (S)	5.874	3055615	9.624
	60 Tetrachloroethene	6.732	352792	0.575
*	61 Chlorobenzene - d5	7.353	648083	10.000
	63 Ethyl Benzene	7.645	1061624	0.887

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Pentane, 3-ethyl-				CAS #: 617-78-7			
5.617	1558902	4.90996120	8.98	83	NBS75K.1	1595	54
Pentane, 2,3,3-trimethyl-				CAS #: 560-21-4			
5.736	1822630	5.74060495	10.5	90	NBS75K.1	3088	54
Heptane, 2-methyl-				CAS #: 592-27-8			
5.797	4383353	13.8059285	25.3	72	NBS75K.1	3092	54
Hexane, 2,2,4-trimethyl-				CAS #: 16747-26-5			
6.099	604243	1.90313996	3.48	83	NBS75K.1	65103	54

Data File: \\192.168.10.12\chem\10airD.i\031015.b\06917.d
Report Date: 12-Mar-2015 10:30

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Cyclohexane, 1,3-dimethyl-, cis-				CAS #: 638-04-0			
6.154	850067	2.67739435	4.90	87	NBS75K.l	2677	54
Octane				CAS #: 111-65-9			
6.375	2670350	4.34902397	7.96	86	NBS75K.l	64207	60
Heptane, 2,6-dimethyl-				CAS #: 1072-05-5			
6.887	680665	1.10855464	2.03	90	NBS75K.l	5156	60
Octane, 3-methyl-				CAS #: 2216-33-3			
7.025	714727	11.0283179	20.2	87	NBS75K.l	65130	61
Cyclohexane, 1,1,3-trimethyl-				CAS #: 3073-66-3			
7.224	640164	9.87779730	18.1	90	NBS75K.l	64942	61
Unknown				CAS #:			
7.536	1629920	1.36210197	2.49	0		0	63



Data File: \\192.168.10.12\chem\10airD.i\031015.b\06917.d
Injection Date: 10-MAR-2015 16:33
Instrument: 10airD.i
Client Sample ID:

HP ChemStation MS 06917.d: 1.890 to 14.774 Min

Data File: \\192.168.10.12\chem\10airD.i\030815.b\06718.d
Report Date: 10-Mar-2015 10:33

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Client SDG: 030815.b
Lab Smp Id: 10298168002
Operator : MJL
Sample Date:
Sample Location:
Sample Point:
Sample Matrix: AIR
Date Received:
Analysis Type: VOA
Level: LOW
Inj Date: 08-MAR-2015 19:39

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	6.594	14.0	J
2.		Unknown	9.076	0.631	J
3.	556-67-2	Cyclotetrasiloxane, octamet	9.732	7.06	NJ
4.	112-40-3	Dodecane	11.790	0.122	NJ
5.	112-40-3	Dodecane	13.012	0.116	NJ
6.		Unknown	13.153	0.143	J
7.	5911-04-6	Nonane, 3-methyl-	13.697	0.114	NJ
8.	629-50-5	Tridecane	13.909	0.0916	NJ
9.	295-17-0	Cyclotetradecane	13.960	0.0603	NJ
10.		Unknown	14.063	0.142	J

Data File: \\192.168.10.12\chem\10airD.i\030815.b\06718.d
Report Date: 10-Mar-2015 10:33

Pace Analytical Services, Inc.

TO14/TO15 Analysis

Data file : \\192.168.10.12\chem\10airD.i\030815.b\06718.d
Lab Smp Id: 10298168002
Inj Date : 08-MAR-2015 19:39
Operator : MJL Inst ID: 10airD.i
Smp Info :
Misc Info : 22689
Comment : Volatile Organic Compounds in Air
Method : \\192.168.10.12\chem\10airD.i\030815.b\TO15_063-15.m
Meth Date : 09-Mar-2015 07:49 mlytle Quant Type: ISTD
Cal Date : 05-MAR-2015 05:41 Cal File: 06341.d
Als bottle: 18
Dil Factor: 1.57000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: VIRTUALXP-22741

Concentration Formula: Amt * DF * Uf * CpndVariable

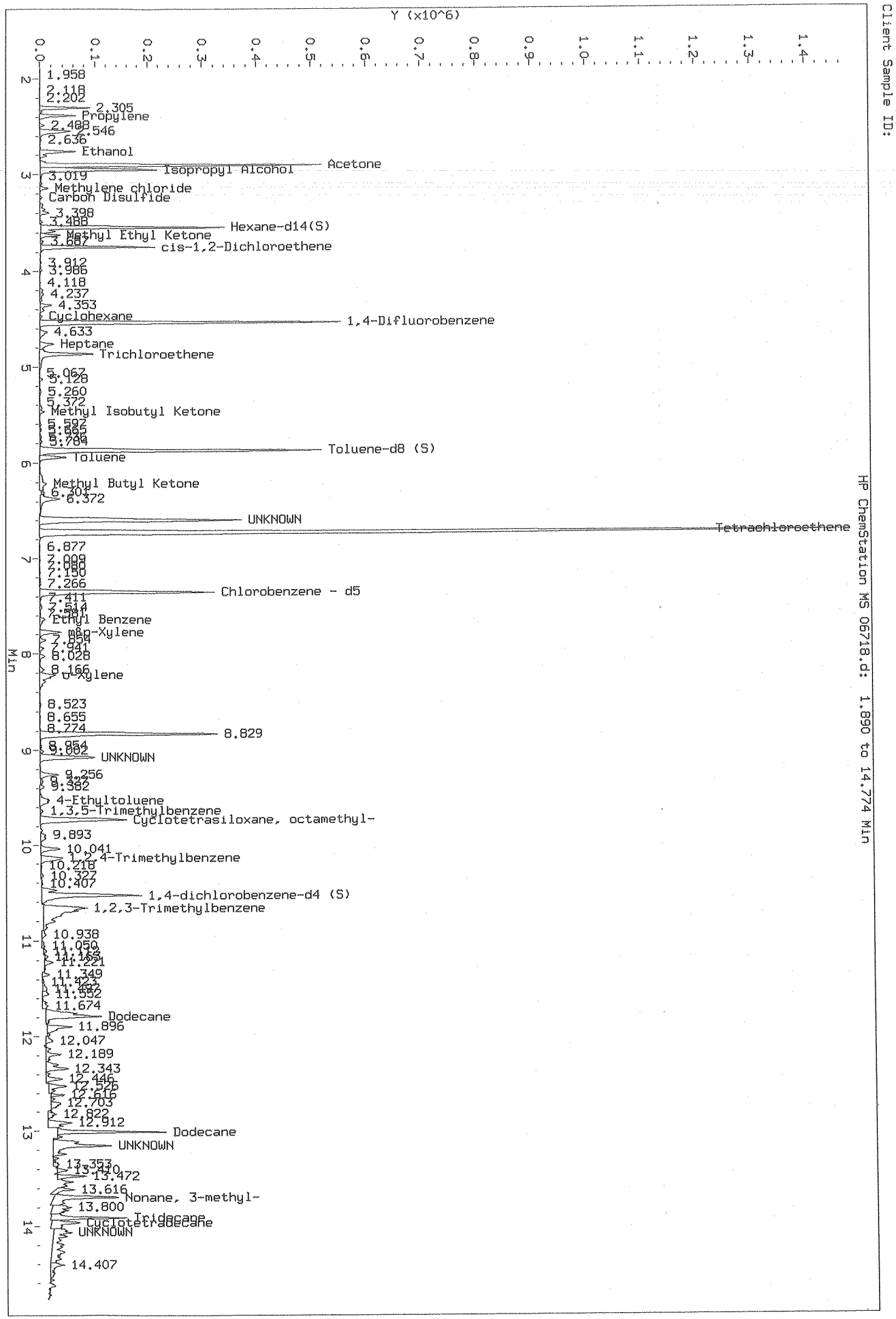
Name	Value	Description
DF	1.570	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	COMPOUND	RT	AREA	AMOUNT
60	Tetrachloroethene	6.723	2605169	30.349
71	4-Ethyltoluene	9.546	66643	0.123
72	1,3,5-Trimethylbenzene	9.636	9368	0.122
81	1,2,3-Trimethylbenzene	10.742	421780	0.111

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
6.594	763446	8.89373399	14.0	0		0	60
Unknown				CAS #:			
9.076	217323	0.40214343	0.631	0		0	71
Cyclotetrasiloxane, octamethyl-				CAS #: 556-67-2			
9.732	346898	4.50012687	7.06	86	NBS75K.1	41966	72
Dodecane				CAS #: 112-40-3			
11.790	294407	0.07741496	0.122	86	NBS75K.1	68254	81

Data File: \\192.168.10.12\chem\10airD.i\030815.b\06718.d
Report Date: 10-Mar-2015 10:33

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Dodecane				CAS #: 112-40-3			
13.012	281752	0.07408734	0.116	87	NBS75K.l	68249	81
Unknown				CAS #:			
13.153	346362	0.09107658	0.143	0		0	81
Nonane, 3-methyl-				CAS #: 5911-04-6			
13.697	275945	0.07256045	0.114	78	NBS75K.l	8075	81
Tridecane				CAS #: 629-50-5			
13.909	221993	0.05837357	0.0916	95	NBS75K.l	69019	81
Cyclotetradecane				CAS #: 295-17-0			
13.960	145973	0.03838383	0.0603	72	NBS75K.l	21964	81
Unknown				CAS #:			
14.063	343817	0.09040754	0.142	0		0	81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0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
Min
1.958
2.118
2.202
2.305
Propylene
2.488
2.546
2.636
Ethanol
Acetone
Isopropyl Alcohol
3.019
Methylene chloride
Carbon Disulfide
3.398
3.488
Hexane-d14(S)
Methyl Ethyl Ketone
3.667
cis-1,2-Dichloroethene
3.912
3.986
4.118
4.237
4.353
Cyclohexane
1,4-Difluorobenzene
4.633
Heptane
Trichloroethene
5.067
5.128
5.260
5.372
Methyl Isobutyl Ketone
5.597
5.665
5.784
Toluene-d8 (S)
Toluene
Methyl Butyl Ketone
6.303
6.372
UNKNOWN
Tetrachloroethene
6.877
7.009
7.150
7.266
Chlorobenzene - d5
7.411
7.514
Ethyl Benzene
m&p-Xylene
7.854
7.941
8.028
8.166
o-Xylene
8.523
8.655
8.774
8.829
8.854
9.002
UNKNOWN
9.256
9.382
4-Ethyltoluene
1,3,5-Trimethylbenzene
Cyclotetrasiloxane, octamethyl-
9.893
10.041
1,2,4-Trimethylbenzene
10.218
10.327
10.407
1,4-dichlorobenzene-d4 (S)
1,2,3-Trimethylbenzene
10.938
11.050
11.168
11.221
11.349
11.402
11.552
11.674
Dodecane
11.896
12.047
12.189
12.343
12.446
12.525
12.616
12.703
12.822
12.912
Dodecane
UNKNOWN
13.353
13.410
13.472
13.616
Nonane, 3-methyl-
13.800
Tridecane
Cyclotetradecane
UNKNOWN
14.407
HP ChemStation MS 06718.d: 1.890 to 14.774 Min
Data File: \\192.168.10.12\chem\10airD.i\030815.b\06718.d
Injection Date: 08-MAR-2015 19:39
Instrument: 10airD.i
Client Sample ID:

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

April 08, 2015

Amanda Malaney
Bay West, Inc.
5 Empire Drive
Saint Paul, MN 55103

RE: Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Dear Amanda Malaney:
Enclosed are the analytical results for sample(s) received by the laboratory on March 25, 2015. 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,

Steve Albrecht
steve.albrecht@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Minnesota Certification IDs

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

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

SAMPLE SUMMARY

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10300712001	**SS-05**	Air	03/24/15 15:15	03/25/15 18:03
10300712002	**406 Indoor 24-hr**	Air	03/25/15 14:40	03/25/15 18:03
10300712003	**406 Outdoor 24-hr**	Air	03/25/15 14:45	03/25/15 18:03
10300712004	**SS-05 Can Cert**	Air	03/24/15 15:15	03/25/15 18:03
10300712005	**406 Indoor 24-hr Can Cert**	Air	03/25/15 14:40	03/25/15 18:03
10300712006	**406 Outdoor 24-hr Can Cert**	Air	03/25/15 14:45	03/25/15 18:03

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

SAMPLE ANALYTE COUNT

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10300712001	**SS-05**	TO-15	RTP	61
10300712002	**406 Indoor 24-hr**	TO-15	RTP	61
10300712003	**406 Outdoor 24-hr**	TO-15	RTP	61
10300712004	**SS-05 Can Cert**	TO-15	MJL	61
10300712005	**406 Indoor 24-hr Can Cert**	TO-15	MJL	61
10300712006	**406 Outdoor 24-hr Can Cert**	TO-15	DR1	61

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

PROJECT NARRATIVE

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Date: April 08, 2015

SS-05 (Lab ID: 10300712001)

- K3: The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

406 Indoor 24-hr (Lab ID: 10300712002)

- K3: The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

406 Outdoor 24-hr (Lab ID: 10300712003)

- K3: The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

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PROJECT NARRATIVE

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Method: **TO-15**
Description: TO15 MSV AIR
Client: Bay West, Inc.
Date: April 08, 2015

General Information:
3 samples were analyzed for TO-15. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: AIR/22917

E: Analyte concentration exceeded the calibration range. The reported result is estimated.

- 406 Indoor 24-hr (Lab ID: 10300712002)
  - Acetone

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PROJECT NARRATIVE

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Method: **TO-15**
Description: Individual Can Certification
Client: Bay West, Inc.
Date: April 08, 2015

General Information:
3 samples were analyzed for TO-15. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: SS-05 **Lab ID: 10300712001** Collected: 03/24/15 15:15 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	ND	ug/m3	3.2	1.6	1.34		04/02/15 16:53	67-64-1	
Benzene	**4.6**	ug/m3	0.44	0.16	1.34		04/02/15 16:53	71-43-2	
Benzyl chloride	ND	ug/m3	1.4	0.70	1.34		04/02/15 16:53	100-44-7	
Bromodichloromethane	ND	ug/m3	1.8	0.24	1.34		04/02/15 16:53	75-27-4	
Bromoform	ND	ug/m3	2.8	0.43	1.34		04/02/15 16:53	75-25-2	
Bromomethane	ND	ug/m3	1.1	0.36	1.34		04/02/15 16:53	74-83-9	
1,3-Butadiene	ND	ug/m3	0.60	0.11	1.34		04/02/15 16:53	106-99-0	
2-Butanone (MEK)	**13.0**	ug/m3	0.80	0.37	1.34		04/02/15 16:53	78-93-3	
Carbon disulfide	**1.2**	ug/m3	0.84	0.096	1.34		04/02/15 16:53	75-15-0	
Carbon tetrachloride	ND	ug/m3	0.86	0.43	1.34		04/02/15 16:53	56-23-5	
Chlorobenzene	ND	ug/m3	1.3	0.14	1.34		04/02/15 16:53	108-90-7	
Chloroethane	ND	ug/m3	0.72	0.22	1.34		04/02/15 16:53	75-00-3	
Chloroform	ND	ug/m3	0.66	0.24	1.34		04/02/15 16:53	67-66-3	
Chloromethane	ND	ug/m3	0.56	0.26	1.34		04/02/15 16:53	74-87-3	
Cyclohexane	**29.7**	ug/m3	0.94	0.17	1.34		04/02/15 16:53	110-82-7	
Dibromochloromethane	ND	ug/m3	2.3	1.2	1.34		04/02/15 16:53	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	2.1	0.31	1.34		04/02/15 16:53	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.6	0.19	1.34		04/02/15 16:53	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.6	0.31	1.34		04/02/15 16:53	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.6	0.27	1.34		04/02/15 16:53	106-46-7	
Dichlorodifluoromethane	ND	ug/m3	1.4	0.15	1.34		04/02/15 16:53	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.1	0.19	1.34		04/02/15 16:53	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.55	0.16	1.34		04/02/15 16:53	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.1	0.14	1.34		04/02/15 16:53	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	2.7	0.26	1.34		04/02/15 16:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.1	0.22	1.34		04/02/15 16:53	156-60-5	
1,2-Dichloropropane	ND	ug/m3	1.3	0.20	1.34		04/02/15 16:53	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	1.2	0.18	1.34		04/02/15 16:53	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	1.2	0.20	1.34		04/02/15 16:53	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	1.9	0.33	1.34		04/02/15 16:53	76-14-2	
Ethanol	**6.1**	ug/m3	1.3	0.42	1.34		04/02/15 16:53	64-17-5	
Ethyl acetate	**1.2**	ug/m3	0.98	0.17	1.34		04/02/15 16:53	141-78-6	
Ethylbenzene	**88.6**	ug/m3	1.2	0.24	1.34		04/02/15 16:53	100-41-4	
4-Ethyltoluene	**77.0**	ug/m3	1.3	0.23	1.34		04/02/15 16:53	622-96-8	
n-Heptane	**30.8**	ug/m3	1.1	0.22	1.34		04/02/15 16:53	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	2.9	0.55	1.34		04/02/15 16:53	87-68-3	
n-Hexane	**38.5**	ug/m3	0.96	0.14	1.34		04/02/15 16:53	110-54-3	
2-Hexanone	ND	ug/m3	1.1	0.29	1.34		04/02/15 16:53	591-78-6	
Methylene Chloride	ND	ug/m3	4.7	0.31	1.34		04/02/15 16:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	2.8	0.23	1.34		04/02/15 16:53	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	0.98	0.12	1.34		04/02/15 16:53	1634-04-4	
Naphthalene	ND	ug/m3	3.6	0.35	1.34		04/02/15 16:53	91-20-3	
2-Propanol	ND	ug/m3	1.7	0.12	1.34		04/02/15 16:53	67-63-0	
Propylene	**1.6**	ug/m3	0.47	0.15	1.34		04/02/15 16:53	115-07-1	
Styrene	ND	ug/m3	1.2	0.18	1.34		04/02/15 16:53	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	0.94	0.31	1.34		04/02/15 16:53	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: SS-05 **Lab ID: 10300712001** Collected: 03/24/15 15:15 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Tetrachloroethene	**90.1**	ug/m3	0.92	0.25	1.34		04/02/15 16:53	127-18-4	
Tetrahydrofuran	**26.6**	ug/m3	0.80	0.19	1.34		04/02/15 16:53	109-99-9	
Toluene	**1.7**	ug/m3	1.0	0.18	1.34		04/02/15 16:53	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	2.0	0.49	1.34		04/02/15 16:53	120-82-1	
1,1,1-Trichloroethane	**2.3**	ug/m3	0.94	0.19	1.34		04/02/15 16:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	0.74	0.33	1.34		04/02/15 16:53	79-00-5	
Trichloroethene	ND	ug/m3	0.73	0.24	1.34		04/02/15 16:53	79-01-6	
Trichlorofluoromethane	ND	ug/m3	1.5	0.18	1.34		04/02/15 16:53	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	2.1	0.21	1.34		04/02/15 16:53	76-13-1	
1,2,4-Trimethylbenzene	**195**	ug/m3	1.3	0.16	1.34		04/02/15 16:53	95-63-6	
1,3,5-Trimethylbenzene	**44.7**	ug/m3	1.3	0.28	1.34		04/02/15 16:53	108-67-8	
Vinyl acetate	ND	ug/m3	0.96	0.47	1.34		04/02/15 16:53	108-05-4	
Vinyl chloride	ND	ug/m3	0.35	0.12	1.34		04/02/15 16:53	75-01-4	
m&p-Xylene	**118**	ug/m3	2.4	0.19	1.34		04/02/15 16:53	179601-23-1	
o-Xylene	**4.3**	ug/m3	1.2	0.59	1.34		04/02/15 16:53	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: 406 Indoor 24-hr **Lab ID: 10300712002** Collected: 03/25/15 14:40 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	**351**	ug/m3	5.1	2.6	2.12		04/02/15 16:00	67-64-1	E
Benzene	ND	ug/m3	0.69	0.25	2.12		04/02/15 16:00	71-43-2	
Benzyl chloride	ND	ug/m3	2.2	1.1	2.12		04/02/15 16:00	100-44-7	
Bromodichloromethane	ND	ug/m3	2.9	0.39	2.12		04/02/15 16:00	75-27-4	
Bromoform	ND	ug/m3	4.5	0.68	2.12		04/02/15 16:00	75-25-2	
Bromomethane	ND	ug/m3	1.7	0.57	2.12		04/02/15 16:00	74-83-9	
1,3-Butadiene	ND	ug/m3	0.95	0.18	2.12		04/02/15 16:00	106-99-0	
2-Butanone (MEK)	**21.0**	ug/m3	1.3	0.58	2.12		04/02/15 16:00	78-93-3	
Carbon disulfide	ND	ug/m3	1.3	0.15	2.12		04/02/15 16:00	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.4	0.68	2.12		04/02/15 16:00	56-23-5	
Chlorobenzene	ND	ug/m3	2.0	0.22	2.12		04/02/15 16:00	108-90-7	
Chloroethane	ND	ug/m3	1.1	0.34	2.12		04/02/15 16:00	75-00-3	
Chloroform	ND	ug/m3	1.1	0.38	2.12		04/02/15 16:00	67-66-3	
Chloromethane	**1.1**	ug/m3	0.89	0.41	2.12		04/02/15 16:00	74-87-3	
Cyclohexane	ND	ug/m3	1.5	0.27	2.12		04/02/15 16:00	110-82-7	
Dibromochloromethane	ND	ug/m3	3.7	1.8	2.12		04/02/15 16:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	3.3	0.50	2.12		04/02/15 16:00	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	2.6	0.30	2.12		04/02/15 16:00	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	2.6	0.49	2.12		04/02/15 16:00	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	2.6	0.42	2.12		04/02/15 16:00	106-46-7	
Dichlorodifluoromethane	ND	ug/m3	2.1	0.23	2.12		04/02/15 16:00	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.7	0.30	2.12		04/02/15 16:00	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.87	0.25	2.12		04/02/15 16:00	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.7	0.22	2.12		04/02/15 16:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	4.3	0.42	2.12		04/02/15 16:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.7	0.35	2.12		04/02/15 16:00	156-60-5	
1,2-Dichloropropane	ND	ug/m3	2.0	0.32	2.12		04/02/15 16:00	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	2.0	0.29	2.12		04/02/15 16:00	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	2.0	0.32	2.12		04/02/15 16:00	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	3.0	0.53	2.12		04/02/15 16:00	76-14-2	
Ethanol	**107**	ug/m3	2.0	0.67	2.12		04/02/15 16:00	64-17-5	
Ethyl acetate	**23.1**	ug/m3	1.6	0.27	2.12		04/02/15 16:00	141-78-6	
Ethylbenzene	ND	ug/m3	1.9	0.38	2.12		04/02/15 16:00	100-41-4	
4-Ethyltoluene	**14.7**	ug/m3	2.1	0.37	2.12		04/02/15 16:00	622-96-8	
n-Heptane	ND	ug/m3	1.8	0.34	2.12		04/02/15 16:00	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	4.7	0.87	2.12		04/02/15 16:00	87-68-3	
n-Hexane	**2.5**	ug/m3	1.5	0.21	2.12		04/02/15 16:00	110-54-3	
2-Hexanone	ND	ug/m3	1.8	0.45	2.12		04/02/15 16:00	591-78-6	
Methylene Chloride	ND	ug/m3	7.5	0.49	2.12		04/02/15 16:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	**8.9**	ug/m3	4.4	0.36	2.12		04/02/15 16:00	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	1.5	0.19	2.12		04/02/15 16:00	1634-04-4	
Naphthalene	ND	ug/m3	5.6	0.55	2.12		04/02/15 16:00	91-20-3	
2-Propanol	**126**	ug/m3	2.6	0.20	2.12		04/02/15 16:00	67-63-0	
Propylene	**3.9**	ug/m3	0.74	0.23	2.12		04/02/15 16:00	115-07-1	
Styrene	ND	ug/m3	1.8	0.29	2.12		04/02/15 16:00	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.5	0.49	2.12		04/02/15 16:00	79-34-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: 406 Indoor 24-hr **Lab ID: 10300712002** Collected: 03/25/15 14:40 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Tetrachloroethene	ND	ug/m3	1.5	0.40	2.12		04/02/15 16:00	127-18-4	
Tetrahydrofuran	**13.0**	ug/m3	1.3	0.29	2.12		04/02/15 16:00	109-99-9	
Toluene	**3.8**	ug/m3	1.6	0.29	2.12		04/02/15 16:00	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	3.2	0.77	2.12		04/02/15 16:00	120-82-1	
1,1,1-Trichloroethane	**4.7**	ug/m3	1.5	0.29	2.12		04/02/15 16:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.2	0.52	2.12		04/02/15 16:00	79-00-5	
Trichloroethene	ND	ug/m3	1.2	0.38	2.12		04/02/15 16:00	79-01-6	
Trichlorofluoromethane	ND	ug/m3	2.4	0.29	2.12		04/02/15 16:00	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	3.4	0.34	2.12		04/02/15 16:00	76-13-1	
1,2,4-Trimethylbenzene	**40.5**	ug/m3	2.1	0.26	2.12		04/02/15 16:00	95-63-6	
1,3,5-Trimethylbenzene	**11.8**	ug/m3	2.1	0.44	2.12		04/02/15 16:00	108-67-8	
Vinyl acetate	ND	ug/m3	1.5	0.74	2.12		04/02/15 16:00	108-05-4	
Vinyl chloride	ND	ug/m3	0.55	0.20	2.12		04/02/15 16:00	75-01-4	
m&p-Xylene	ND	ug/m3	3.7	0.30	2.12		04/02/15 16:00	179601-23-1	
o-Xylene	ND	ug/m3	1.9	0.93	2.12		04/02/15 16:00	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: 406 Outdoor 24-hr **Lab ID: 10300712003** Collected: 03/25/15 14:45 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	**14.4**	ug/m3	4.9	2.4	2.01		04/02/15 16:27	67-64-1	
Benzene	ND	ug/m3	0.65	0.24	2.01		04/02/15 16:27	71-43-2	
Benzyl chloride	ND	ug/m3	2.1	1.1	2.01		04/02/15 16:27	100-44-7	
Bromodichloromethane	ND	ug/m3	2.7	0.37	2.01		04/02/15 16:27	75-27-4	
Bromoform	ND	ug/m3	4.2	0.65	2.01		04/02/15 16:27	75-25-2	
Bromomethane	ND	ug/m3	1.6	0.54	2.01		04/02/15 16:27	74-83-9	
1,3-Butadiene	ND	ug/m3	0.90	0.17	2.01		04/02/15 16:27	106-99-0	
2-Butanone (MEK)	**2.8**	ug/m3	1.2	0.55	2.01		04/02/15 16:27	78-93-3	
Carbon disulfide	ND	ug/m3	1.3	0.14	2.01		04/02/15 16:27	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.3	0.64	2.01		04/02/15 16:27	56-23-5	
Chlorobenzene	ND	ug/m3	1.9	0.21	2.01		04/02/15 16:27	108-90-7	
Chloroethane	ND	ug/m3	1.1	0.32	2.01		04/02/15 16:27	75-00-3	
Chloroform	ND	ug/m3	1.0	0.36	2.01		04/02/15 16:27	67-66-3	
Chloromethane	ND	ug/m3	0.84	0.39	2.01		04/02/15 16:27	74-87-3	
Cyclohexane	ND	ug/m3	1.4	0.25	2.01		04/02/15 16:27	110-82-7	
Dibromochloromethane	ND	ug/m3	3.5	1.7	2.01		04/02/15 16:27	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	3.1	0.47	2.01		04/02/15 16:27	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	2.5	0.28	2.01		04/02/15 16:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	2.5	0.47	2.01		04/02/15 16:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	2.5	0.40	2.01		04/02/15 16:27	106-46-7	
Dichlorodifluoromethane	ND	ug/m3	2.0	0.22	2.01		04/02/15 16:27	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.6	0.28	2.01		04/02/15 16:27	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.83	0.24	2.01		04/02/15 16:27	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.6	0.21	2.01		04/02/15 16:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	4.1	0.39	2.01		04/02/15 16:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.6	0.33	2.01		04/02/15 16:27	156-60-5	
1,2-Dichloropropane	ND	ug/m3	1.9	0.31	2.01		04/02/15 16:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	1.8	0.27	2.01		04/02/15 16:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	1.8	0.30	2.01		04/02/15 16:27	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	2.9	0.50	2.01		04/02/15 16:27	76-14-2	
Ethanol	**5.4**	ug/m3	1.9	0.63	2.01		04/02/15 16:27	64-17-5	
Ethyl acetate	ND	ug/m3	1.5	0.25	2.01		04/02/15 16:27	141-78-6	
Ethylbenzene	ND	ug/m3	1.8	0.36	2.01		04/02/15 16:27	100-41-4	
4-Ethyltoluene	ND	ug/m3	2.0	0.35	2.01		04/02/15 16:27	622-96-8	
n-Heptane	ND	ug/m3	1.7	0.33	2.01		04/02/15 16:27	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	4.4	0.83	2.01		04/02/15 16:27	87-68-3	
n-Hexane	ND	ug/m3	1.4	0.20	2.01		04/02/15 16:27	110-54-3	
2-Hexanone	ND	ug/m3	1.7	0.43	2.01		04/02/15 16:27	591-78-6	
Methylene Chloride	ND	ug/m3	7.1	0.46	2.01		04/02/15 16:27	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	4.2	0.34	2.01		04/02/15 16:27	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	1.5	0.18	2.01		04/02/15 16:27	1634-04-4	
Naphthalene	ND	ug/m3	5.3	0.52	2.01		04/02/15 16:27	91-20-3	
2-Propanol	ND	ug/m3	2.5	0.19	2.01		04/02/15 16:27	67-63-0	
Propylene	**1.0**	ug/m3	0.70	0.22	2.01		04/02/15 16:27	115-07-1	
Styrene	ND	ug/m3	1.7	0.27	2.01		04/02/15 16:27	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.4	0.47	2.01		04/02/15 16:27	79-34-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: 406 Outdoor 24-hr **Lab ID: 10300712003** Collected: 03/25/15 14:45 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Tetrachloroethene	ND	ug/m3	1.4	0.38	2.01		04/02/15 16:27	127-18-4	
Tetrahydrofuran	ND	ug/m3	1.2	0.28	2.01		04/02/15 16:27	109-99-9	
Toluene	ND	ug/m3	1.5	0.27	2.01		04/02/15 16:27	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	3.0	0.73	2.01		04/02/15 16:27	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.4	0.28	2.01		04/02/15 16:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.1	0.49	2.01		04/02/15 16:27	79-00-5	
Trichloroethene	ND	ug/m3	1.1	0.36	2.01		04/02/15 16:27	79-01-6	
Trichlorofluoromethane	ND	ug/m3	2.3	0.28	2.01		04/02/15 16:27	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	3.2	0.32	2.01		04/02/15 16:27	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	2.0	0.25	2.01		04/02/15 16:27	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	2.0	0.42	2.01		04/02/15 16:27	108-67-8	
Vinyl acetate	ND	ug/m3	1.4	0.70	2.01		04/02/15 16:27	108-05-4	
Vinyl chloride	ND	ug/m3	0.52	0.19	2.01		04/02/15 16:27	75-01-4	
m&p-Xylene	ND	ug/m3	3.5	0.28	2.01		04/02/15 16:27	179601-23-1	
o-Xylene	ND	ug/m3	1.8	0.89	2.01		04/02/15 16:27	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: SS-05 Can Cert **Lab ID: 10300712004** Collected: 03/24/15 15:15 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15								
Acetone	ND	ug/m3	2.4	1.2	1		03/02/15 10:48	67-64-1	
Benzene	ND	ug/m3	0.32	0.12	1		03/02/15 10:48	71-43-2	
Benzyl chloride	ND	ug/m3	1.0	0.53	1		03/02/15 10:48	100-44-7	
Bromodichloromethane	ND	ug/m3	1.4	0.18	1		03/02/15 10:48	75-27-4	
Bromoform	ND	ug/m3	2.1	0.32	1		03/02/15 10:48	75-25-2	
Bromomethane	ND	ug/m3	0.79	0.27	1		03/02/15 10:48	74-83-9	
1,3-Butadiene	ND	ug/m3	0.45	0.085	1		03/02/15 10:48	106-99-0	
2-Butanone (MEK)	ND	ug/m3	0.60	0.27	1		03/02/15 10:48	78-93-3	
Carbon disulfide	ND	ug/m3	0.63	0.072	1		03/02/15 10:48	75-15-0	
Carbon tetrachloride	ND	ug/m3	0.64	0.32	1		03/02/15 10:48	56-23-5	
Chlorobenzene	ND	ug/m3	0.94	0.11	1		03/02/15 10:48	108-90-7	
Chloroethane	ND	ug/m3	0.54	0.16	1		03/02/15 10:48	75-00-3	
Chloroform	ND	ug/m3	0.50	0.18	1		03/02/15 10:48	67-66-3	
Chloromethane	ND	ug/m3	0.42	0.19	1		03/02/15 10:48	74-87-3	
Cyclohexane	ND	ug/m3	0.70	0.13	1		03/02/15 10:48	110-82-7	
Dibromochloromethane	ND	ug/m3	1.7	0.87	1		03/02/15 10:48	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.6	0.23	1		03/02/15 10:48	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.2	0.14	1		03/02/15 10:48	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.2	0.23	1		03/02/15 10:48	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.2	0.20	1		03/02/15 10:48	106-46-7	
Dichlorodifluoromethane	ND	ug/m3	1.0	0.11	1		03/02/15 10:48	75-71-8	
1,1-Dichloroethane	ND	ug/m3	0.82	0.14	1		03/02/15 10:48	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	0.12	1		03/02/15 10:48	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.81	0.10	1		03/02/15 10:48	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	2.0	0.20	1		03/02/15 10:48	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	0.16	1		03/02/15 10:48	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.94	0.15	1		03/02/15 10:48	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.92	0.14	1		03/02/15 10:48	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.92	0.15	1		03/02/15 10:48	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	1.4	0.25	1		03/02/15 10:48	76-14-2	
Ethanol	ND	ug/m3	0.96	0.32	1		03/02/15 10:48	64-17-5	
Ethyl acetate	ND	ug/m3	0.73	0.13	1		03/02/15 10:48	141-78-6	
Ethylbenzene	ND	ug/m3	0.88	0.18	1		03/02/15 10:48	100-41-4	
4-Ethyltoluene	ND	ug/m3	1.0	0.17	1		03/02/15 10:48	622-96-8	
n-Heptane	ND	ug/m3	0.83	0.16	1		03/02/15 10:48	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	2.2	0.41	1		03/02/15 10:48	87-68-3	
n-Hexane	ND	ug/m3	0.72	0.10	1		03/02/15 10:48	110-54-3	
2-Hexanone	ND	ug/m3	0.83	0.21	1		03/02/15 10:48	591-78-6	
Methylene Chloride	ND	ug/m3	3.5	0.23	1		03/02/15 10:48	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	2.1	0.17	1		03/02/15 10:48	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	0.73	0.089	1		03/02/15 10:48	1634-04-4	
Naphthalene	ND	ug/m3	2.7	0.26	1		03/02/15 10:48	91-20-3	
2-Propanol	ND	ug/m3	1.2	0.093	1		03/02/15 10:48	67-63-0	
Propylene	ND	ug/m3	0.88	0.11	1		03/02/15 10:48	115-07-1	
Styrene	ND	ug/m3	0.87	0.14	1		03/02/15 10:48	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	0.70	0.23	1		03/02/15 10:48	79-34-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: SS-05 Can Cert **Lab ID: 10300712004** Collected: 03/24/15 15:15 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15								
Tetrachloroethene	ND	ug/m3	0.69	0.19	1		03/02/15 10:48	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.60	0.14	1		03/02/15 10:48	109-99-9	
Toluene	ND	ug/m3	0.77	0.14	1		03/02/15 10:48	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	1.5	0.36	1		03/02/15 10:48	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	0.70	0.14	1		03/02/15 10:48	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	0.56	0.24	1		03/02/15 10:48	79-00-5	
Trichloroethene	ND	ug/m3	0.55	0.18	1		03/02/15 10:48	79-01-6	
Trichlorofluoromethane	ND	ug/m3	1.1	0.14	1		03/02/15 10:48	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.6	0.16	1		03/02/15 10:48	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	1.0	0.12	1		03/02/15 10:48	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.0	0.21	1		03/02/15 10:48	108-67-8	
Vinyl acetate	ND	ug/m3	0.72	0.35	1		03/02/15 10:48	108-05-4	
Vinyl chloride	ND	ug/m3	0.26	0.093	1		03/02/15 10:48	75-01-4	
m&p-Xylene	ND	ug/m3	1.8	0.14	1		03/02/15 10:48	179601-23-1	
o-Xylene	ND	ug/m3	0.88	0.44	1		03/02/15 10:48	95-47-6	

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ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: 406 Indoor 24-hr Can Cert **Lab ID: 10300712005** Collected: 03/25/15 14:40 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15								
Acetone	ND	ug/m3	2.4	1.2	1		02/28/15 11:35	67-64-1	
Benzene	ND	ug/m3	0.32	0.12	1		02/28/15 11:35	71-43-2	
Benzyl chloride	ND	ug/m3	1.0	0.53	1		02/28/15 11:35	100-44-7	
Bromodichloromethane	ND	ug/m3	1.4	0.18	1		02/28/15 11:35	75-27-4	
Bromoform	ND	ug/m3	2.1	0.32	1		02/28/15 11:35	75-25-2	
Bromomethane	ND	ug/m3	0.79	0.27	1		02/28/15 11:35	74-83-9	
1,3-Butadiene	ND	ug/m3	0.45	0.085	1		02/28/15 11:35	106-99-0	
2-Butanone (MEK)	ND	ug/m3	0.60	0.27	1		02/28/15 11:35	78-93-3	
Carbon disulfide	ND	ug/m3	0.63	0.072	1		02/28/15 11:35	75-15-0	
Carbon tetrachloride	ND	ug/m3	0.64	0.32	1		02/28/15 11:35	56-23-5	
Chlorobenzene	ND	ug/m3	0.94	0.11	1		02/28/15 11:35	108-90-7	
Chloroethane	ND	ug/m3	0.54	0.16	1		02/28/15 11:35	75-00-3	
Chloroform	ND	ug/m3	0.50	0.18	1		02/28/15 11:35	67-66-3	
Chloromethane	ND	ug/m3	0.42	0.19	1		02/28/15 11:35	74-87-3	
Cyclohexane	ND	ug/m3	0.70	0.13	1		02/28/15 11:35	110-82-7	
Dibromochloromethane	ND	ug/m3	1.7	0.87	1		02/28/15 11:35	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.6	0.23	1		02/28/15 11:35	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.2	0.14	1		02/28/15 11:35	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.2	0.23	1		02/28/15 11:35	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.2	0.20	1		02/28/15 11:35	106-46-7	
Dichlorodifluoromethane	ND	ug/m3	1.0	0.11	1		02/28/15 11:35	75-71-8	
1,1-Dichloroethane	ND	ug/m3	0.82	0.14	1		02/28/15 11:35	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	0.12	1		02/28/15 11:35	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.81	0.10	1		02/28/15 11:35	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	2.0	0.20	1		02/28/15 11:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	0.16	1		02/28/15 11:35	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.94	0.15	1		02/28/15 11:35	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.92	0.14	1		02/28/15 11:35	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.92	0.15	1		02/28/15 11:35	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	1.4	0.25	1		02/28/15 11:35	76-14-2	
Ethanol	ND	ug/m3	0.96	0.32	1		02/28/15 11:35	64-17-5	
Ethyl acetate	ND	ug/m3	0.73	0.13	1		02/28/15 11:35	141-78-6	
Ethylbenzene	ND	ug/m3	0.88	0.18	1		02/28/15 11:35	100-41-4	
4-Ethyltoluene	ND	ug/m3	1.0	0.17	1		02/28/15 11:35	622-96-8	
n-Heptane	ND	ug/m3	0.83	0.16	1		02/28/15 11:35	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	2.2	0.41	1		02/28/15 11:35	87-68-3	
n-Hexane	ND	ug/m3	0.72	0.10	1		02/28/15 11:35	110-54-3	
2-Hexanone	ND	ug/m3	0.83	0.21	1		02/28/15 11:35	591-78-6	
Methylene Chloride	ND	ug/m3	3.5	0.23	1		02/28/15 11:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	2.1	0.17	1		02/28/15 11:35	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	0.73	0.089	1		02/28/15 11:35	1634-04-4	
Naphthalene	ND	ug/m3	2.7	0.26	1		02/28/15 11:35	91-20-3	
2-Propanol	ND	ug/m3	1.2	0.093	1		02/28/15 11:35	67-63-0	
Propylene	ND	ug/m3	0.88	0.11	1		02/28/15 11:35	115-07-1	
Styrene	ND	ug/m3	0.87	0.14	1		02/28/15 11:35	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	0.70	0.23	1		02/28/15 11:35	79-34-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414
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ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: 406 Indoor 24-hr Can Cert **Lab ID: 10300712005** Collected: 03/25/15 14:40 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15								
Tetrachloroethene	ND	ug/m3	0.69	0.19	1		02/28/15 11:35	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.60	0.14	1		02/28/15 11:35	109-99-9	
Toluene	ND	ug/m3	0.77	0.14	1		02/28/15 11:35	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	1.5	0.36	1		02/28/15 11:35	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	0.70	0.14	1		02/28/15 11:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	0.56	0.24	1		02/28/15 11:35	79-00-5	
Trichloroethene	ND	ug/m3	0.55	0.18	1		02/28/15 11:35	79-01-6	
Trichlorofluoromethane	ND	ug/m3	1.1	0.14	1		02/28/15 11:35	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.6	0.16	1		02/28/15 11:35	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	1.0	0.12	1		02/28/15 11:35	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.0	0.21	1		02/28/15 11:35	108-67-8	
Vinyl acetate	ND	ug/m3	0.72	0.35	1		02/28/15 11:35	108-05-4	
Vinyl chloride	ND	ug/m3	0.26	0.093	1		02/28/15 11:35	75-01-4	
m&p-Xylene	ND	ug/m3	1.8	0.14	1		02/28/15 11:35	179601-23-1	
o-Xylene	ND	ug/m3	0.88	0.44	1		02/28/15 11:35	95-47-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: 406 Outdoor 24-hr Can Cert **Lab ID: 10300712006** Collected: 03/25/15 14:45 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15								
Acetone	ND	ug/m3	2.4	1.2	1		03/05/15 10:39	67-64-1	
Benzene	ND	ug/m3	0.32	0.12	1		03/05/15 10:39	71-43-2	
Benzyl chloride	ND	ug/m3	1.0	0.53	1		03/05/15 10:39	100-44-7	
Bromodichloromethane	ND	ug/m3	1.4	0.18	1		03/05/15 10:39	75-27-4	
Bromoform	ND	ug/m3	2.1	0.32	1		03/05/15 10:39	75-25-2	
Bromomethane	ND	ug/m3	0.79	0.27	1		03/05/15 10:39	74-83-9	
1,3-Butadiene	ND	ug/m3	0.45	0.085	1		03/05/15 10:39	106-99-0	
2-Butanone (MEK)	ND	ug/m3	0.60	0.27	1		03/05/15 10:39	78-93-3	
Carbon disulfide	ND	ug/m3	0.63	0.072	1		03/05/15 10:39	75-15-0	
Carbon tetrachloride	ND	ug/m3	0.64	0.32	1		03/05/15 10:39	56-23-5	
Chlorobenzene	ND	ug/m3	0.94	0.11	1		03/05/15 10:39	108-90-7	
Chloroethane	ND	ug/m3	0.54	0.16	1		03/05/15 10:39	75-00-3	
Chloroform	ND	ug/m3	0.50	0.18	1		03/05/15 10:39	67-66-3	
Chloromethane	ND	ug/m3	0.42	0.19	1		03/05/15 10:39	74-87-3	
Cyclohexane	ND	ug/m3	0.70	0.13	1		03/05/15 10:39	110-82-7	
Dibromochloromethane	ND	ug/m3	1.7	0.87	1		03/05/15 10:39	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	1.6	0.23	1		03/05/15 10:39	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.2	0.14	1		03/05/15 10:39	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.2	0.23	1		03/05/15 10:39	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.2	0.20	1		03/05/15 10:39	106-46-7	
Dichlorodifluoromethane	ND	ug/m3	1.0	0.11	1		03/05/15 10:39	75-71-8	
1,1-Dichloroethane	ND	ug/m3	0.82	0.14	1		03/05/15 10:39	75-34-3	
1,2-Dichloroethane	ND	ug/m3	0.41	0.12	1		03/05/15 10:39	107-06-2	
1,1-Dichloroethene	ND	ug/m3	0.81	0.10	1		03/05/15 10:39	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	2.0	0.20	1		03/05/15 10:39	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	0.81	0.16	1		03/05/15 10:39	156-60-5	
1,2-Dichloropropane	ND	ug/m3	0.94	0.15	1		03/05/15 10:39	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	0.92	0.14	1		03/05/15 10:39	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	0.92	0.15	1		03/05/15 10:39	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	1.4	0.25	1		03/05/15 10:39	76-14-2	
Ethanol	ND	ug/m3	0.96	0.32	1		03/05/15 10:39	64-17-5	
Ethyl acetate	ND	ug/m3	0.73	0.13	1		03/05/15 10:39	141-78-6	
Ethylbenzene	ND	ug/m3	0.88	0.18	1		03/05/15 10:39	100-41-4	
4-Ethyltoluene	ND	ug/m3	1.0	0.17	1		03/05/15 10:39	622-96-8	
n-Heptane	ND	ug/m3	0.83	0.16	1		03/05/15 10:39	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	5.4	0.41	1		03/05/15 10:39	87-68-3	
n-Hexane	ND	ug/m3	1.8	0.10	1		03/05/15 10:39	110-54-3	
2-Hexanone	ND	ug/m3	0.83	0.21	1		03/05/15 10:39	591-78-6	
Methylene Chloride	ND	ug/m3	3.5	0.23	1		03/05/15 10:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	2.1	0.17	1		03/05/15 10:39	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	0.73	0.089	1		03/05/15 10:39	1634-04-4	
Naphthalene	ND	ug/m3	2.7	0.26	1		03/05/15 10:39	91-20-3	
2-Propanol	ND	ug/m3	1.2	0.093	1		03/05/15 10:39	67-63-0	
Propylene	ND	ug/m3	0.35	0.11	1		03/05/15 10:39	115-07-1	
Styrene	ND	ug/m3	0.87	0.14	1		03/05/15 10:39	100-42-5	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Sample: 406 Outdoor 24-hr Can Cert **Lab ID: 10300712006** Collected: 03/25/15 14:45 Received: 03/25/15 18:03 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Individual Can Certification	Analytical Method: TO-15								
1,1,2,2-Tetrachloroethane	ND	ug/m3	0.70	0.23	1		03/05/15 10:39	79-34-5	
Tetrachloroethene	ND	ug/m3	0.69	0.19	1		03/05/15 10:39	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.60	0.14	1		03/05/15 10:39	109-99-9	
Toluene	ND	ug/m3	0.77	0.14	1		03/05/15 10:39	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	3.8	0.36	1		03/05/15 10:39	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	0.70	0.14	1		03/05/15 10:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	0.56	0.24	1		03/05/15 10:39	79-00-5	
Trichloroethene	ND	ug/m3	0.55	0.18	1		03/05/15 10:39	79-01-6	
Trichlorofluoromethane	ND	ug/m3	1.1	0.14	1		03/05/15 10:39	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	1.6	0.16	1		03/05/15 10:39	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	1.0	0.12	1		03/05/15 10:39	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	1.0	0.21	1		03/05/15 10:39	108-67-8	
Vinyl acetate	ND	ug/m3	0.72	0.35	1		03/05/15 10:39	108-05-4	
Vinyl chloride	ND	ug/m3	0.26	0.093	1		03/05/15 10:39	75-01-4	
m&p-Xylene	ND	ug/m3	1.8	0.14	1		03/05/15 10:39	179601-23-1	
o-Xylene	ND	ug/m3	0.88	0.44	1		03/05/15 10:39	95-47-6	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

QC Batch: AIR/22917 Analysis Method: TO-15
QC Batch Method: TO-15 Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10300712001, 10300712002, 10300712003

METHOD BLANK: 1930992 Matrix: Air
Associated Lab Samples: 10300712001, 10300712002, 10300712003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	0.70	04/02/15 15:20	
1,1,2,2-Tetrachloroethane	ug/m3	ND	0.70	04/02/15 15:20	
1,1,2-Trichloroethane	ug/m3	ND	0.56	04/02/15 15:20	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.6	04/02/15 15:20	
1,1-Dichloroethane	ug/m3	ND	0.82	04/02/15 15:20	
1,1-Dichloroethene	ug/m3	ND	0.81	04/02/15 15:20	
1,2,4-Trichlorobenzene	ug/m3	ND	1.5	04/02/15 15:20	
1,2,4-Trimethylbenzene	ug/m3	ND	1.0	04/02/15 15:20	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.6	04/02/15 15:20	
1,2-Dichlorobenzene	ug/m3	ND	1.2	04/02/15 15:20	
1,2-Dichloroethane	ug/m3	ND	0.41	04/02/15 15:20	
1,2-Dichloropropane	ug/m3	ND	0.94	04/02/15 15:20	
1,3,5-Trimethylbenzene	ug/m3	ND	1.0	04/02/15 15:20	
1,3-Butadiene	ug/m3	ND	0.45	04/02/15 15:20	
1,3-Dichlorobenzene	ug/m3	ND	1.2	04/02/15 15:20	
1,4-Dichlorobenzene	ug/m3	ND	1.2	04/02/15 15:20	
2-Butanone (MEK)	ug/m3	ND	0.60	04/02/15 15:20	
2-Hexanone	ug/m3	ND	0.83	04/02/15 15:20	
2-Propanol	ug/m3	ND	1.2	04/02/15 15:20	
4-Ethyltoluene	ug/m3	ND	1.0	04/02/15 15:20	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	2.1	04/02/15 15:20	
Acetone	ug/m3	ND	2.4	04/02/15 15:20	
Benzene	ug/m3	ND	0.32	04/02/15 15:20	
Benzyl chloride	ug/m3	ND	1.0	04/02/15 15:20	
Bromodichloromethane	ug/m3	ND	1.4	04/02/15 15:20	
Bromoform	ug/m3	ND	2.1	04/02/15 15:20	
Bromomethane	ug/m3	ND	0.79	04/02/15 15:20	
Carbon disulfide	ug/m3	ND	0.63	04/02/15 15:20	
Carbon tetrachloride	ug/m3	ND	0.64	04/02/15 15:20	
Chlorobenzene	ug/m3	ND	0.94	04/02/15 15:20	
Chloroethane	ug/m3	ND	0.54	04/02/15 15:20	
Chloroform	ug/m3	ND	0.50	04/02/15 15:20	
Chloromethane	ug/m3	ND	0.42	04/02/15 15:20	
cis-1,2-Dichloroethene	ug/m3	ND	2.0	04/02/15 15:20	
cis-1,3-Dichloropropene	ug/m3	ND	0.92	04/02/15 15:20	
Cyclohexane	ug/m3	ND	0.70	04/02/15 15:20	
Dibromochloromethane	ug/m3	ND	1.7	04/02/15 15:20	
Dichlorodifluoromethane	ug/m3	ND	1.0	04/02/15 15:20	
Dichlorotetrafluoroethane	ug/m3	ND	1.4	04/02/15 15:20	
Ethanol	ug/m3	ND	0.96	04/02/15 15:20	
Ethyl acetate	ug/m3	ND	0.73	04/02/15 15:20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

METHOD BLANK: 1930992 Matrix: Air
Associated Lab Samples: 10300712001, 10300712002, 10300712003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/m3	ND	0.88	04/02/15 15:20	
Hexachloro-1,3-butadiene	ug/m3	ND	2.2	04/02/15 15:20	
m&p-Xylene	ug/m3	ND	1.8	04/02/15 15:20	
Methyl-tert-butyl ether	ug/m3	ND	0.73	04/02/15 15:20	
Methylene Chloride	ug/m3	ND	3.5	04/02/15 15:20	
n-Heptane	ug/m3	ND	0.83	04/02/15 15:20	
n-Hexane	ug/m3	ND	0.72	04/02/15 15:20	
Naphthalene	ug/m3	ND	2.7	04/02/15 15:20	
o-Xylene	ug/m3	ND	0.88	04/02/15 15:20	
Propylene	ug/m3	ND	0.35	04/02/15 15:20	
Styrene	ug/m3	ND	0.87	04/02/15 15:20	
Tetrachloroethene	ug/m3	ND	0.69	04/02/15 15:20	
Tetrahydrofuran	ug/m3	ND	0.60	04/02/15 15:20	
Toluene	ug/m3	ND	0.77	04/02/15 15:20	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	04/02/15 15:20	
trans-1,3-Dichloropropene	ug/m3	ND	0.92	04/02/15 15:20	
Trichloroethene	ug/m3	ND	0.55	04/02/15 15:20	
Trichlorofluoromethane	ug/m3	ND	1.1	04/02/15 15:20	
Vinyl acetate	ug/m3	ND	0.72	04/02/15 15:20	
Vinyl chloride	ug/m3	ND	0.26	04/02/15 15:20	

LABORATORY CONTROL SAMPLE: 1930993

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	58.7	106	72-140	
1,1,2,2-Tetrachloroethane	ug/m3	69.8	66.0	94	68-137	
1,1,2-Trichloroethane	ug/m3	55.5	55.8	100	66-138	
1,1,2-Trichlorotrifluoroethane	ug/m3	77.9	85.6	110	70-132	
1,1-Dichloroethane	ug/m3	41.2	43.0	104	68-137	
1,1-Dichloroethene	ug/m3	40.3	44.2	110	73-138	
1,2,4-Trichlorobenzene	ug/m3	75.5	85.0	113	48-150	
1,2,4-Trimethylbenzene	ug/m3	50	51.7	103	75-134	
1,2-Dibromoethane (EDB)	ug/m3	78.1	80.9	104	75-132	
1,2-Dichlorobenzene	ug/m3	61.2	64.2	105	71-129	
1,2-Dichloroethane	ug/m3	41.2	42.2	103	73-139	
1,2-Dichloropropane	ug/m3	47	47.5	101	70-130	
1,3,5-Trimethylbenzene	ug/m3	50	51.7	103	75-133	
1,3-Butadiene	ug/m3	22.5	23.6	105	66-135	
1,3-Dichlorobenzene	ug/m3	61.2	63.1	103	75-131	
1,4-Dichlorobenzene	ug/m3	61.2	61.7	101	69-135	
2-Butanone (MEK)	ug/m3	30	32.7	109	67-131	
2-Hexanone	ug/m3	41.7	44.2	106	72-130	
2-Propanol	ug/m3	25	27.2	109	66-133	
4-Ethyltoluene	ug/m3	50	51.7	103	75-130	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

LABORATORY CONTROL SAMPLE: 1930993

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4-Methyl-2-pentanone (MIBK)	ug/m3	41.7	44.4	107	68-134	
Acetone	ug/m3	24.2	20.6	85	63-144	
Benzene	ug/m3	32.5	33.4	103	64-139	
Benzyl chloride	ug/m3	52.5	57.8	110	75-129	
Bromodichloromethane	ug/m3	68.2	71.3	105	75-134	
Bromoform	ug/m3	105	105	100	72-130	
Bromomethane	ug/m3	39.5	39.2	99	71-132	
Carbon disulfide	ug/m3	31.7	34.1	108	56-139	
Carbon tetrachloride	ug/m3	64	67.3	105	75-150	
Chlorobenzene	ug/m3	46.8	47.6	102	71-132	
Chloroethane	ug/m3	26.8	28.0	105	71-129	
Chloroform	ug/m3	49.7	52.5	106	73-136	
Chloromethane	ug/m3	21	21.4	102	52-143	
cis-1,2-Dichloroethene	ug/m3	40.3	44.0	109	64-137	
cis-1,3-Dichloropropene	ug/m3	46.2	48.0	104	75-128	
Cyclohexane	ug/m3	35	37.9	108	62-143	
Dibromochloromethane	ug/m3	86.6	90.7	105	75-136	
Dichlorodifluoromethane	ug/m3	50.3	44.2	88	70-141	
Dichlorotetrafluoroethane	ug/m3	71.1	75.1	106	71-139	
Ethanol	ug/m3	19.2	20.8	109	60-144	
Ethyl acetate	ug/m3	36.6	38.8	106	64-137	
Ethylbenzene	ug/m3	44.2	46.0	104	71-136	
Hexachloro-1,3-butadiene	ug/m3	108	112	103	51-150	
m&p-Xylene	ug/m3	44.2	49.5	112	71-134	
Methyl-tert-butyl ether	ug/m3	36.7	39.8	109	73-134	
Methylene Chloride	ug/m3	35.3	35.3	100	64-130	
n-Heptane	ug/m3	41.7	42.2	101	63-135	
n-Hexane	ug/m3	35.8	33.7	94	69-135	
Naphthalene	ug/m3	53.3	57.5	108	43-150	
o-Xylene	ug/m3	44.2	45.9	104	75-134	
Propylene	ug/m3	17.5	14.3	82	58-135	
Styrene	ug/m3	43.3	47.9	111	75-133	
Tetrachloroethene	ug/m3	69	68.7	100	66-137	
Tetrahydrofuran	ug/m3	30	31.8	106	58-135	
Toluene	ug/m3	38.3	38.5	100	70-129	
trans-1,2-Dichloroethene	ug/m3	40.3	42.6	106	61-140	
trans-1,3-Dichloropropene	ug/m3	46.2	51.4	111	75-134	
Trichloroethene	ug/m3	54.6	59.7	109	70-134	
Trichlorofluoromethane	ug/m3	57.1	58.1	102	67-140	
Vinyl acetate	ug/m3	35.8	38.9	109	60-139	
Vinyl chloride	ug/m3	26	27.8	107	72-129	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

SAMPLE DUPLICATE: 1931791

Parameter	Units	10300712001 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/m3	2.3	2.2	5	25	
1,1,2,2-Tetrachloroethane	ug/m3	ND	ND		25	
1,1,2-Trichloroethane	ug/m3	ND	ND		25	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	ND		25	
1,1-Dichloroethane	ug/m3	ND	ND		25	
1,1-Dichloroethene	ug/m3	ND	ND		25	
1,2,4-Trichlorobenzene	ug/m3	ND	ND		25	
1,2,4-Trimethylbenzene	ug/m3	195	193	1	25	
1,2-Dibromoethane (EDB)	ug/m3	ND	ND		25	
1,2-Dichlorobenzene	ug/m3	ND	ND		25	
1,2-Dichloroethane	ug/m3	ND	ND		25	
1,2-Dichloropropane	ug/m3	ND	ND		25	
1,3,5-Trimethylbenzene	ug/m3	44.7	44.7	0	25	
1,3-Butadiene	ug/m3	ND	ND		25	
1,3-Dichlorobenzene	ug/m3	ND	ND		25	
1,4-Dichlorobenzene	ug/m3	ND	ND		25	
2-Butanone (MEK)	ug/m3	13.0	12.2	7	25	
2-Hexanone	ug/m3	ND	ND		25	
2-Propanol	ug/m3	ND	ND		25	
4-Ethyltoluene	ug/m3	77.0	74.2	4	25	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	ND		25	
Acetone	ug/m3	ND	ND		25	
Benzene	ug/m3	4.6	4.4	5	25	
Benzyl chloride	ug/m3	ND	ND		25	
Bromodichloromethane	ug/m3	ND	ND		25	
Bromoform	ug/m3	ND	ND		25	
Bromomethane	ug/m3	ND	ND		25	
Carbon disulfide	ug/m3	1.2	1.1	7	25	
Carbon tetrachloride	ug/m3	ND	ND		25	
Chlorobenzene	ug/m3	ND	ND		25	
Chloroethane	ug/m3	ND	ND		25	
Chloroform	ug/m3	ND	ND		25	
Chloromethane	ug/m3	ND	ND		25	
cis-1,2-Dichloroethene	ug/m3	ND	ND		25	
cis-1,3-Dichloropropene	ug/m3	ND	ND		25	
Cyclohexane	ug/m3	29.7	27.6	7	25	
Dibromochloromethane	ug/m3	ND	ND		25	
Dichlorodifluoromethane	ug/m3	ND	1.4		25	
Dichlorotetrafluoroethane	ug/m3	ND	ND		25	
Ethanol	ug/m3	6.1	5.3	12	25	
Ethyl acetate	ug/m3	1.2	1.1	6	25	
Ethylbenzene	ug/m3	88.6	85.5	4	25	
Hexachloro-1,3-butadiene	ug/m3	ND	ND		25	
m&p-Xylene	ug/m3	118	113	4	25	
Methyl-tert-butyl ether	ug/m3	ND	ND		25	
Methylene Chloride	ug/m3	ND	3J		25	
n-Heptane	ug/m3	30.8	29.8	3	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

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

QUALITY CONTROL DATA

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

SAMPLE DUPLICATE: 1931791

Parameter	Units	10300712001 Result	Dup Result	RPD	Max RPD	Qualifiers
n-Hexane	ug/m3	38.5	36.1	6	25	
Naphthalene	ug/m3	ND	ND		25	
o-Xylene	ug/m3	4.3	4.2	2	25	
Propylene	ug/m3	1.6	1.5	6	25	
Styrene	ug/m3	ND	ND		25	
Tetrachloroethene	ug/m3	90.1	86.0	5	25	
Tetrahydrofuran	ug/m3	26.6	24.5	8	25	
Toluene	ug/m3	1.7	1.7	0	25	
trans-1,2-Dichloroethene	ug/m3	ND	ND		25	
trans-1,3-Dichloropropene	ug/m3	ND	ND		25	
Trichloroethene	ug/m3	ND	ND		25	
Trichlorofluoromethane	ug/m3	ND	1.2J		25	
Vinyl acetate	ug/m3	ND	ND		25	
Vinyl chloride	ug/m3	ND	ND		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

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

QUALIFIERS

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

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.

SAMPLE QUALIFIERS

Sample: 10300712001
[1] The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).
Sample: 10300712002
[1] The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).
Sample: 10300712003
[1] The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).

ANALYTE QUALIFIERS

E Analyte concentration exceeded the calibration range. The reported result is estimated.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J140472.5 Ramsey Street
Pace Project No.: 10300712

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10300712001	**SS-05**	TO-15	AIR/22917		
10300712002	**406 Indoor 24-hr**	TO-15	AIR/22917		
10300712003	**406 Outdoor 24-hr**	TO-15	AIR/22917		
10300712004	**SS-05 Can Cert**	TO-15	AIR/22893		
10300712005	**406 Indoor 24-hr Can Cert**	TO-15	AIR/22893		
10300712006	**406 Outdoor 24-hr Can Cert**	TO-15	AIR/22893		

10300 FC

Pace Analytical®
www.pacelabs.com

MPCA S7e

AIR: CHAIN-OF-CUSTODY / Analytical Request Document

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

14185 Page: 1 of 1

Section A Required Client Information:

Company: Baywest
Address: 5 Empire Drive
St. Paul, MN 55103
Email To: amandam@baywest.com
Phone: 651-291-3495 Fax:
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Amanda Malaney
Copy To:
Purchase Order No.: See Steve Albrecht
Project Name: Ramsey Street
Project Number: 3140472.5

Section C Invoice Information:

Attention: Accounts Payable
Company Name: Baywest LLC
Address: Same
Pace Quote Reference:
Pace Project Manager/Sales Rep.
Pace Profile #:

Program: UST | Superfund | Emissions | Clean Air Act | Voluntary Clean Up | Dry Clean | RCRA | Other

Location of Sampling by State: MN

Reporting Units: ug/m³ mg/m³ PPBV PPMV Other

Report Level: II. III. IV. Other

Section D Required Client Information

Valid Media Codes

MEDIA	CODE
Tedlar Bag	TB
1 Liter Summa Can	1LC
6 Liter Summa Can	6LC
Low Volume Puff	LVP
High Volume Puff	HVP
Other	PM10

ITEM #	AIR SAMPLE ID (Sample IDs MUST BE UNIQUE)	MEDIA CODE	PID Reading (Client only)	COLLECTED COMPOSITE START END/GRAB DATE	COLLECTED COMPOSITE START END/GRAB TIME	COLLECTED COMPOSITE - DATE	COLLECTED COMPOSITE - TIME	Canister Pressure (Initial Field - psig)	Canister Pressure (Final Field - psig)	Summa Can Number	Flow Control Number	Method: PM10	3C- Fixed Gas (%)	TO-3	TO-3M (Methane)	TO-4 (PCBs)	TO-13 (PAH)	TO-14	TO-15	TO15 Short List*	Pace Lab ID
1	SS-05	6LC	0.0	3/24/15	1515			24	0	1072	FC1026							X			09,004
2	406 Indoor 24-hr	↓	0.0	3/24/15	1410	3/25/15	1440	28	10	1283	FC0751							X			02,005
3	406 Outdoor 24-hr	↓	0.0	3/24/15	1435	3/25/15	1445	27	10	2292	FC0749							X			03,006
4																					
5																					
6																					
7																					
8																					
9																					
10																					
11																					
12																					

Comments:

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
[signature]	3/25/15	1520	[signature]	3/25/15	1520
[signature]	3/25/15	1545	[signature]	3/25/15	1545
[signature]	3/25/15	1803	[signature] PACE	3-25-15	1803

SAMPLE CONDITIONS

Temp in °C	Received on Ice Y/N	Custody Sealed Cooler Y/N	Samples Intact Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N
	Y/N	Y/N	Y/N

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Brandon Flaada

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 3/25/15

ORIGINAL

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414 Air Technical Phone: 612.607.6386

Pace Analytical	Document Name: Air Sample Condition Upon Receipt	Document Revised: 26Dec2013 Page 1 of 1
	Document No.: F-MN-A-106-rev.09	Issuing Authority: Pace Minnesota Quality Office

Air Sample Condition Upon Receipt

Client Name: Bay west

Project #: WO# : 10300712

10300712

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

Tracking Number: _____

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

Optional: Proj. Due Date: Proj. Name:

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

Temp. (TO17 and TO13 samples only) (°C): _____ **Corrected Temp (°C):** _____ **Thermom. Used:** ☐ B88A912167504 ☐ B88A9132521491 ☐ 72337080 ☐ 80512447

Temp should be above freezing to 6°C **Correction Factor:** _____ **Date & Initials of Person Examining Contents:** 32615

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?	☒ Yes	☐ No	☐ N/A	3.
Sampler Name and/or Signature on COC?	☒ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☒ Yes	☐ No	☐ N/A	5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No	☐ N/A	6.
Rush Turn Around Time Requested?	☐ Yes	☒ No	☐ N/A	7.
Sufficient Volume?	☒ Yes	☐ No	☐ N/A	8.
Correct Containers Used?	☒ Yes	☐ No	☐ N/A	9.
-Pace Containers Used?	☒ Yes	☐ No	☐ N/A	
Containers Intact?	☒ Yes	☐ No	☐ N/A	10.
Media: air can				11.
Sample Labels Match COC?	☒ Yes	☐ No	☐ N/A	12.

Samples Received:

Canisters		Flow Controllers		Stand Alone G	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID
SS05	1072		1026		
indoor	1283		0751		
outdoor	2292		0749		

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Steve Albrecht for Steve Albrecht **Date:** 3-27-15

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)

Data File: \\192.168.10.12\chem\10air7.i\040215.b\09221.D
Report Date: 03-Apr-2015 16:28

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Client SDG: 040215.b
Lab Smp Id: 10300712001
Operator : RTP
Sample Date:
Sample Location:
Sample Point:
Sample Matrix: AIR
Date Received:
Analysis Type: VOA
Level: LOW
Inj Date: 02-APR-2015 16:53

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.362	8.60	J
2.	107-83-5	Pentane, 2-methyl-	3.405	15.0	NJ
3.	565-75-3	Pentane, 2,3,4-trimethyl-	5.636	5.04	NJ
4.	560-21-4	Pentane, 2,3,3-trimethyl-	5.752	11.7	NJ
5.	111-65-9	Octane	6.380	6.11	NJ
6.	473-91-6	Cyclopentene, 1,2,3-trimeth	6.648	4.28	NJ
7.		Unknown	7.544	3.82	J
8.	556-67-2	Cyclotetrasiloxane, octamet	9.739	2.97	NJ
9.	611-14-3	Benzene, 1-ethyl-2-methyl-	9.916	13.0	NJ
10.	5943-30-6	Disulfide, bis(1-methylprop	13.348	3.99	NJ

Data File: \\192.168.10.12\chem\10air7.i\040215.b\09221.D
Report Date: 03-Apr-2015 16:28

Pace Analytical Services, Inc.

TO14/TO15 Analysis

Data file : \\192.168.10.12\chem\10air7.i\040215.b\09221.D
Lab Smp Id: 10300712001
Inj Date : 02-APR-2015 16:53
Operator : RTP Inst ID: 10air7.i
Smp Info :
Misc Info : 22917
Comment : Volatile Organic Compounds in Air
Method : \\192.168.10.12\chem\10air7.i\040215.b\TO15_092-15.m
Meth Date : 03-Apr-2015 16:25 drandall Quant Type: ISTD
Cal Date : 02-APR-2015 12:39 Cal File: 09211.D
Als bottle: 21
Dil Factor: 1.34000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MNWKSAIR18

Concentration Formula: Amt * DF * Uf * CpndVariable

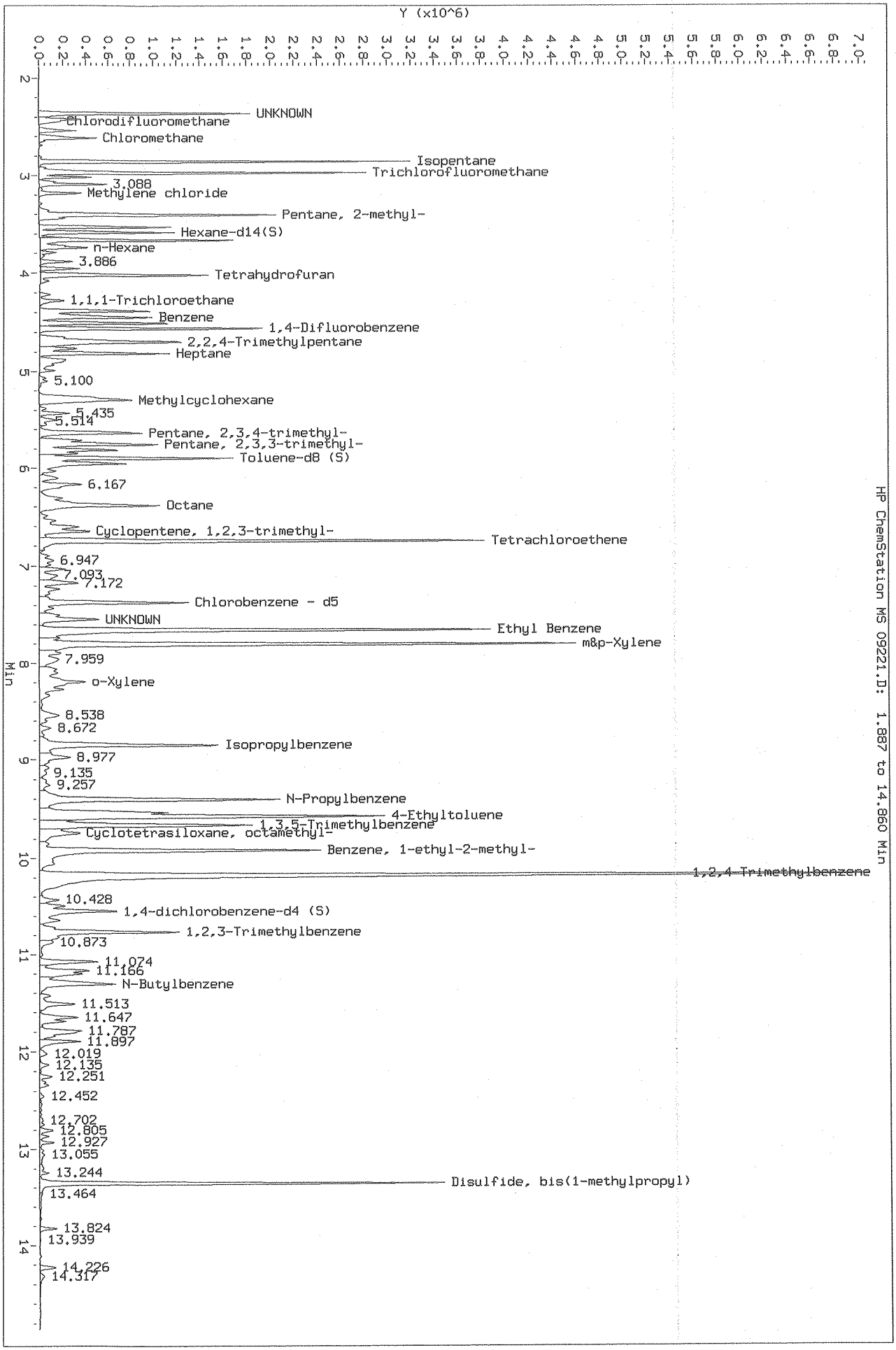
Name	Value	Description
DF	1.340	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	COMPOUND	RT	AREA	AMOUNT
1	Chlorodifluoromethane	2.423	1164694	2.888
$ 28	Hexane-d14(S)	3.582	3182814	10.202
$ 54	Toluene-d8 (S)	5.892	4823621	10.177
60	Tetrachloroethene	6.746	6501079	9.750
63	Ethyl Benzene	7.654	7701739	14.979
72	1,3,5-Trimethylbenzene	9.660	4135524	6.674
83	N-Butylbenzene	11.306	1932751	1.106

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.362	2588853	6.41844760	8.60	0		0	1
Pentane, 2-methyl-				CAS #: 107-83-5			
3.405	3505891	11.2377044	15.0	90	NBS75K.l	62863	28

Data File: \\192.168.10.12\chem\10air7.i\040215.b\09221.D
Report Date: 03-Apr-2015 16:28

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Pentane, 2,3,4-trimethyl-				CAS #: 565-75-3			
5.636	1781468	3.75858282	5.04	78	NBS75K.l	3100	54
Pentane, 2,3,3-trimethyl-				CAS #: 560-21-4			
5.752	4153557	8.76327042	11.7	80	NBS75K.l	3088	54
Octane				CAS #: 111-65-9			
6.380	3039710	4.55858957	6.11	80	NBS75K.l	64207	60
Cyclopentene, 1,2,3-trimethyl-				CAS #: 473-91-6			
6.648	2130305	3.19477441	4.28	92	NBS75K.l	2340	60
Unknown				CAS #:			
7.544	1466781	2.85279079	3.82	0		0	63
Cyclotetrasiloxane, octamethyl-				CAS #: 556-67-2			
9.739	1374723	2.21847088	2.97	86	NBS75K.l	41966	72
Benzene, 1-ethyl-2-methyl-				CAS #: 611-14-3			
9.916	6035663	9.74010499	13.0	95	NBS75K.l	64559	72
Disulfide, bis(1-methylpropyl)				CAS #: 5943-30-6			
13.348	5207715	2.97968427	3.99	94	NBS75K.l	68577	83


Y (x10^6)
Min
UNKNOWN
Chlorodifluoromethane
Chloromethane
Isopentane
Trichlorofluoromethane
3.088
Methylene chloride
Pentane, 2-methyl-
Hexane-d14(S)
n-Hexane
3.886
Tetrahydrofuran
1,1,1-Trichloroethane
Benzene
1,4-Difluorobenzene
2,2,4-Trimethylpentane
Heptane
5.100
Methylcyclohexane
5.435
5.514
Pentane, 2,3,4-trimethyl-
Pentane, 2,3,3-trimethyl-
Toluene-d8 (S)
6.167
Octane
Cyclopentene, 1,2,3-trimethyl-
Tetrachloroethene
6.947
7.093
7.172
Chlorobenzene - d5
UNKNOWN
Ethyl Benzene
m&p-Xylene
7.959
o-Xylene
8.538
8.672
Isopropylbenzene
8.977
9.135
9.257
N-Propylbenzene
4-Ethyltoluene
1,3,5-Trimethylbenzene
Cyclotetrasiloxane, octamethyl-
Benzene, 1-ethyl-2-methyl-
1,2,4-Trimethylbenzene
10.428
1,4-dichlorobenzene-d4 (S)
1,2,3-Trimethylbenzene
10.873
11.074
11.166
N-Butylbenzene
11.513
11.647
11.787
11.897
12.019
12.135
12.251
12.452
12.702
12.805
12.927
13.055
13.244
Disulfide, bis(1-methylpropyl)
13.464
13.824
13.939
14.226
14.317
HP ChemStation MS 09221.D: 1.887 to 14.860 Min
Data File: \\192.168.10.12\chem\10air7.i\040215.b\09221.D
Injection Date: 02-APR-2015 16:53
Instrument: 10air7.i
Client Sample ID:

Data File: \\192.168.10.12\chem\10air7.i\040215.b\09219.D
Report Date: 03-Apr-2015 16:27

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Client SDG: 040215.b
Lab Smp Id: 10300712002
Operator : RTP
Sample Date:
Sample Location:
Sample Point:
Sample Matrix: AIR
Date Received:
Analysis Type: VOA
Level: LOW
Inj Date: 02-APR-2015 16:00

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.362	23.6	J
2.		Unknown	4.959	51.3	J
3.		Unknown	6.380	0.711	J
4.	55429-29-3	Arsenous acid, tris(trimeth	6.599	3.24	NJ
5.	111-84-2	Nonane	8.190	0.541	NJ
6.	80-56-8	.alpha.-Pinene	9.087	1.13	NJ
7.	556-67-2	Cyclotetrasiloxane, octamet	9.739	2.65	NJ
8.	611-14-3	Benzene, 1-ethyl-2-methyl-	9.910	3.84	NJ
9.	124-18-5	Decane	10.050	2.22	NJ
10.	1120-21-4	Undecane	11.793	0.173	NJ

Data File: \\192.168.10.12\chem\10air7.i\040215.b\09219.D
Report Date: 03-Apr-2015 16:27

Pace Analytical Services, Inc.

TO14/TO15 Analysis

Data file : \\192.168.10.12\chem\10air7.i\040215.b\09219.D
Lab Smp Id: 10300712002
Inj Date : 02-APR-2015 16:00
Operator : RTP Inst ID: 10air7.i
Smp Info :
Misc Info : 22917
Comment : Volatile Organic Compounds in Air
Method : \\192.168.10.12\chem\10air7.i\040215.b\TO15_092-15.m
Meth Date : 03-Apr-2015 16:25 drandall Quant Type: ISTD
Cal Date : 02-APR-2015 12:39 Cal File: 09211.D
Als bottle: 19
Dil Factor: 2.12000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MNWKSAIR18

Concentration Formula: Amt * DF * Uf * CpndVariable

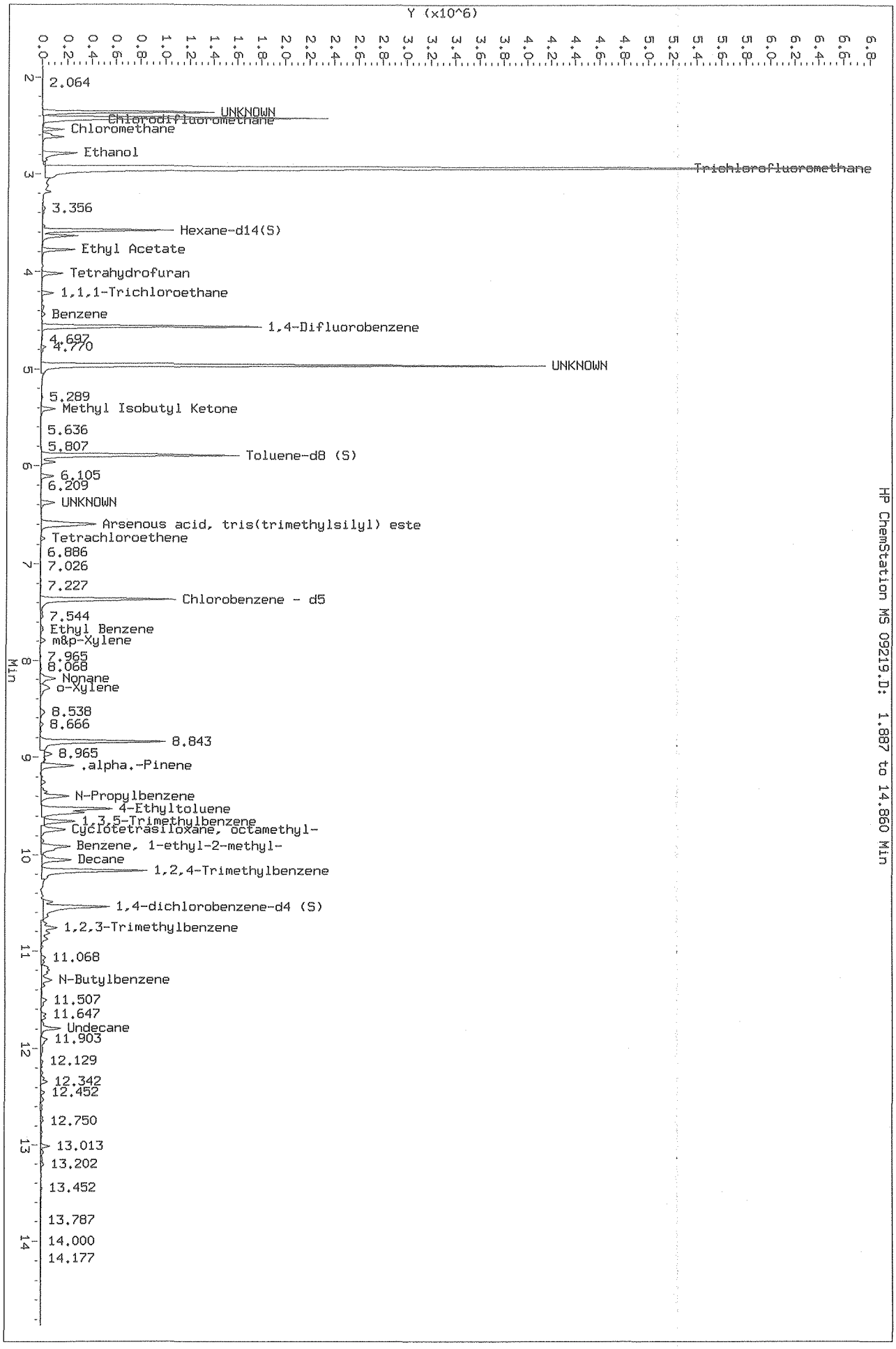
Name	Value	Description
DF	2.120	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

	COMPOUND	RT	AREA	AMOUNT
1	Chlorodifluoromethane	2.423	3164715	18.318
* 43	1,4-Difluorobenzene	4.563	2543889	10.000
60	Tetrachloroethene	6.739	68490	0.094
67	o-Xylene	8.264	272838	0.199
70	N-Propylbenzene	9.391	630313	0.660
72	1,3,5-Trimethylbenzene	9.654	432681	1.117
74	1,2,4-Trimethylbenzene	10.166	1806333	3.823
83	N-Butylbenzene	11.306	534346	0.118

	CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.362	1923873	11.1355077	23.6	0		0	1

Data File: \\192.168.10.12\chem\10air7.i\040215.b\09219.D
Report Date: 03-Apr-2015 16:27

RT	AREA	CONCENTRATIONS ON-COL(ppbv)	CONCENTRATIONS FINAL(ppbv)	QUAL	QUANT LIBRARY	QUANT LIB ENTRY	CPND #
Unknown				CAS #:			
4.959	6159360	24.2123718	51.3	0		0	43
Unknown				CAS #:			
6.380	243767	0.33520719	0.711	0		0	60
Arsenous acid, tris(trimethylsilyl) este				CAS #:	55429-29-3		
6.599	1111226	1.52805940	3.24	72	NBS75K.l	48300	60
Nonane				CAS #:	111-84-2		
8.190	350921	0.25540076	0.541	94	NBS75K.l	5163	67
.alpha.-Pinene				CAS #:	80-56-8		
9.087	507613	0.53190993	1.13	95	NBS75K.l	65808	70
Cyclotetrasiloxane, octamethyl-				CAS #:	556-67-2		
9.739	483625	1.24855586	2.65	86	NBS75K.l	41966	72
Benzene, 1-ethyl-2-methyl-				CAS #:	611-14-3		
9.910	701516	1.81107860	3.84	95	NBS75K.l	64557	72
Decane				CAS #:	124-18-5		
10.050	494794	1.04727309	2.22	87	NBS75K.l	66205	74
Undecane				CAS #:	1120-21-4		
11.793	368589	0.08173855	0.173	89	NBS75K.l	67318	83


Y (x10^6)
Min
2.064
UNKNOWN
Chlorodifluoromethane
Chloromethane
Ethanol
Trichlorofluoromethane
3.356
Hexane-d14(S)
Ethyl Acetate
Tetrahydrofuran
1,1,1-Trichloroethane
Benzene
1,4-Difluorobenzene
4.697
4.770
UNKNOWN
5.289
Methyl Isobutyl Ketone
5.636
5.807
Toluene-d8 (S)
6.105
6.209
UNKNOWN
Arsenous acid, tris(trimethylsilyl) este
Tetrachloroethene
6.886
7.026
7.227
Chlorobenzene - d5
7.544
Ethyl Benzene
m&p-Xylene
7.965
8.068
Nonane
o-Xylene
8.538
8.666
8.843
8.965
.alpha.-Pinene
N-Propylbenzene
4-Ethyltoluene
1,3,5-Trimethylbenzene
Cyclotetrasiloxane, octamethyl-
Benzene, 1-ethyl-2-methyl-
Decane
1,2,4-Trimethylbenzene
1,4-dichlorobenzene-d4 (S)
1,2,3-Trimethylbenzene
11.068
N-Butylbenzene
11.507
11.647
Undecane
11.903
12.129
12.342
12.452
12.750
13.013
13.202
13.452
13.787
14.000
14.177
HP ChemStation MS 09219.D: 1.887 to 14.860 Min
Data File: \\192.168.10.12\chem\10air7.i\040215.b\09219.D
Injection Date: 02-APR-2015 16:00
Instrument: 10air7.i
Client Sample ID:

Data File: \\192.168.10.12\chem\10air7.i\040215.b\09220.D
Report Date: 03-Apr-2015 16:27

Pace Analytical Services, Inc.

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Client SDG: 040215.b
Lab Smp Id: 10300712003
Operator : RTP
Sample Date:
Sample Location:
Sample Point:
Sample Matrix: AIR
Date Received:
Analysis Type: VOA
Level: LOW
Inj Date: 02-APR-2015 16:27

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	2.362	3.56	J
2.		Unknown	3.368	0.367	J
3.		Unknown	4.972	0.371	J
4.		Unknown	6.386	0.795	J
5.	541-05-9	Cyclotrisiloxane, hexamethy	6.605	3.42	NJ
6.	111-71-7	Heptanal	8.227	1.25	NJ
7.	556-67-2	Cyclotetrasiloxane, octamet	9.739	1.26	NJ
8.		Unknown	10.154	1.74	J
9.		Unknown	11.909	1.46	J
10.		Unknown	13.025	0.907	J

Data File: \\192.168.10.12\chem\10air7.i\040215.b\09220.D
Report Date: 03-Apr-2015 16:27

Pace Analytical Services, Inc.

TO14/TO15 Analysis

Data file : \\192.168.10.12\chem\10air7.i\040215.b\09220.D
Lab Smp Id: 10300712003
Inj Date : 02-APR-2015 16:27
Operator : RTP Inst ID: 10air7.i
Smp Info :
Misc Info : 22917
Comment : Volatile Organic Compounds in Air
Method : \\192.168.10.12\chem\10air7.i\040215.b\TO15_092-15.m
Meth Date : 03-Apr-2015 16:25 drandall Quant Type: ISTD
Cal Date : 02-APR-2015 12:39 Cal File: 09211.D
Als bottle: 20
Dil Factor: 2.01000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10MNWKSAIR18

Concentration Formula: Amt * DF * Uf * CpndVariable

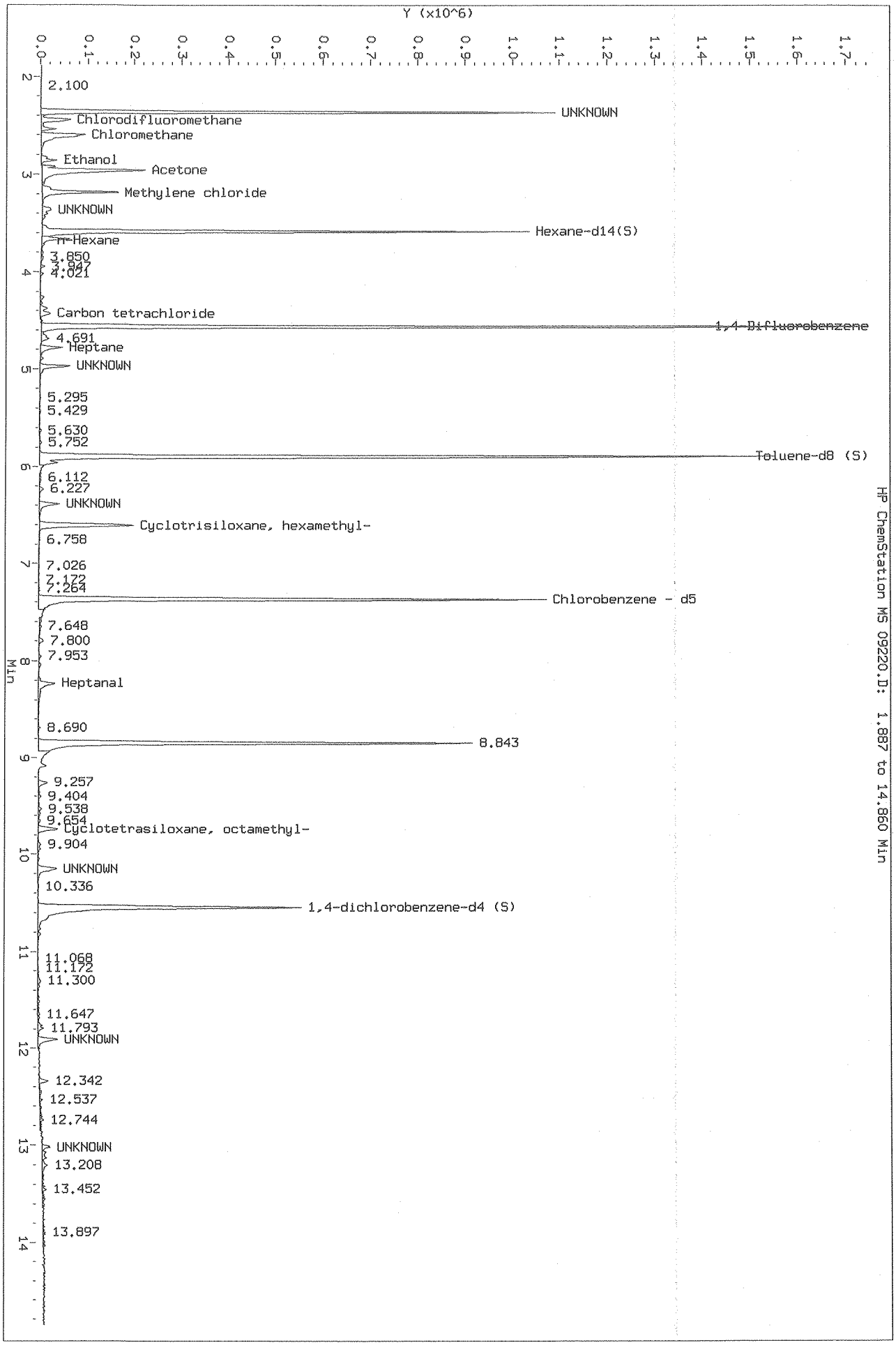
Name	Value	Description
DF	2.010	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

		COMPOUND	RT	AREA	AMOUNT
	1	Chlorodifluoromethane	2.442	172157	0.205
	21	Methylene chloride	3.179	316036	0.833
	45	Heptane	4.783	100672	0.141
$	54	Toluene-d8 (S)	5.892	2536720	10.244
*	61	Chlorobenzene - d5	7.367	1935627	10.000
$	77	1,4-dichlorobenzene-d4	10.544	1360351	9.658

	CONCENTRATIONS				QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
2.362	1488917	1.77321494	3.56	0		0	1
Unknown				CAS #:			
3.368	69313	0.18270122	0.367	0		0	21

Data File: \\192.168.10.12\chem\10air7.i\040215.b\09220.D
Report Date: 03-Apr-2015 16:27

		CONCENTRATIONS			QUANT		
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
4.972	131837	0.18464853	0.371	0		0	45
Unknown				CAS #:			
6.386	97914	0.39541514	0.795	0		0	54
Cyclotrisiloxane, hexamethyl-				CAS #:	541-05-9		
6.605	420898	1.69975159	3.42	91	NBS75K.l	70586	54
Heptanal				CAS #:	111-71-7		
8.227	120023	0.62007474	1.25	72	NBS75K.l	64170	61
Cyclotetrasiloxane, octamethyl-				CAS #:	556-67-2		
9.739	88401	0.62760688	1.26	78	NBS75K.l	41966	77
Unknown				CAS #:			
10.154	122259	0.86798243	1.74	0		0	77
Unknown				CAS #:			
11.909	102315	0.72639014	1.46	0		0	77
Unknown				CAS #:			
13.025	63560	0.45124728	0.907	0		0	77



Data File: \\192.168.10.12\chem\10air7.i\040215.b\09220.D
Injection Date: 02-APR-2015 16:27
Instrument: 10air7.i
Client Sample ID:

HP ChemStation MS 09220.D: 1.887 to 14.860 Min

Appendix D

Disposal Documentation

VEOLIA
ENVIRONMENTAL SERVICES

WASTESTREAM INFORMATION PROFILE

Soil cuttings
Disposal Code

☐ Recertification

Veolia ES LOCATION
☐ Invoice Address
☐ Manifest from – blank if direct

3230 101st Avenue, NE (ADDRESS) Blaine (CITY) MN (ST) 55449

Veolia ES TSDF requested ____ Technology requested ____ Generator No.____

Generator EPA ID No. NOT REQUIRED

1. **Generator Name** MPCA-Former Hegstrom Family Funeral Home
   Generator State No. ____
   Address 520 Lafayette Road
   State Wastestream No.
   City St. Paul **State** MN **Country** USA **ZIP** 55155
   NAICS (SIC) Code ____ ____ ____ **Source** ____ **Origin** ____ **Form** ____ **System Type**

2. **Waste Name** Soil cuttings **Lab or Waste Area**____

3. **Process Generating Waste** Directional borings

4. **Shipping Name** Non DOT, Non RCRA Hazardous Waste (Soil cuttings)

   Hazard Class ____ **UN/NA No.**____ **PG**__ **RQ amt**____**lb**

RQ Desc:	1.	2.
DOT Desc:	1.	2.

5. **Waste Codes** ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____ ____

Wastewater ☐ **Non Wastewater** ☒ **Sub Category**

6. **Physical and chemical properties** *(check all that apply)*

pH
a ☐ < 2
b ☐ 2 - 5
c ☒ 5 - 9
d ☐ 9 - 12.5
e ☐ > 12.5
____ exact

Specific Gravity
a ☐ < .8
b ☐ .8 - 1.0
c ☐ 1.0
d ☐ 1.0 - 1.2
e ☐ > 1.2
NA exact

Flash Point (F)
a ☐ < 80
b ☐ 80 - 100
c ☐ 101 - 140
d ☐ 141 - 200
e ☐ > 200
f ☒ no flash ____exact

Solids
____ % suspended
____ % settleable
____ % dissolved
____ % ash
____ water solubility
____ BTU/lb
Free Liquid Range ___to ___%

Physical State
s ☒ solid
m ☐ semi-solid
l ☐ liquid
p ☐ pumpable semi-solid
f ☐ flowable powder
g ☐ gas
a ☐ aerosol
r ☐ pressurized liquid
d ☐ debris per 40 CFR 268.45
h ☐ sharps

Hazardous Characteristics
a ☐ air reactive
w ☐ water reactive
c ☐ cyanide reactive
f ☐ sulfide reactive
e ☐ explosive
o ☐ oxidizing acid
p ☐ peroxide former
r ☐ radioactive or NRC regulated
s ☐ shock sensitive
t ☐ temp sensitive
m ☐ polymerization/monomer
n ☐ OSHA carcinogen
I ☐ infectious
h ☐ inhalation hazard Zone: _

Odor
a none ☐
b mild ☒
c strong ☐
describe

Halogens
Br ____ % Bromine
Cl ____ % Chlorine
F ____ % Fluorine
I ____ % Iodine

Layers: a ☐ **multilayered:** b ☐ **bi-layered:** c ☒ **single phase:**

Viscosity by Layer:	Top Layer	Second Layer	Bottom Layer
	☐ high (syrup)	☐ high (syrup)	☐ high (syrup)
	☐ medium (oil)	☐ medium (oil)	☐ medium (oil)
	☐ low (water)	☐ low (water)	☐ low (water)
	☐ solid	☐ solid	☒ solid

Color
Dark

Used oil y(n) **HOC <1000 ppm** ☐ **or > 1000 ppm** ☐

WIP No.

7. **Chemical Composition** [M = Marine Pollutant, S - Severe Marine Pollutant, O = Ozone Depleting Substance, U = Underlying Hazardous Constituent, B = Benzene NESHAP, T = TRI Chemical, C = OSHA Carcinogen]

	Constituents	Range	Units		Constituents	Range	Units
	Soil cuttings						

Total Composition Must Equal or Exceed 100%

Other:

8. Is the wastestream being imported into the USA? Yes ☐ No ☒
9. Does the wastestream contain PCBs regulated by 40CFR? Yes ☐ No ☒
   PCB concentration _____ ppm
10. Is the wastestream subject to the Marine Pollutant Regulations? Yes ☐ No ☒
11. Is the wastestream subject to Benzene NESHAP? Yes ☐ No ☒
    If yes, is the wastestream subject to Notification and Control Requirements? Yes ☐ No ☒
    Benzene concentration _____ ppm
12. Is the wastestream subject to RCRA subpart CC controls? Yes ☐ No ☒
    Volatile organic concentration, if known _____ ppmw
    CC approved analytical method ☐ Generator Knowledge ☐
13. Is the wastestream from a CERCLA or state mandated cleanup? Yes ☐ No ☒

14. **Container Information** (*Identify UN container marking if known*)
    Packaging: Bulk Solid ☐ Type/Size: _____ **Bulk Liquid** ☐ Type/Size: _____ **Drum** ☒ Type/Size: DM/55
    Other
    Shipping Frequency: Units 1 Per Month ☐ Quarter ☐ Year ☐ One Time ☒ Other

15. **Additional Information**:

Is analytical or an MSDS available that describes the waste? Yes ☒ No ☐ If yes, please attach.

GENERATOR CERTIFICATION

I hereby certify that all information submitted in this and all attached documents contains true and accurate descriptions of this waste. Any sample submitted is representative as defined in 40 CFR 261 - Appendix I or by using an equivalent method. All relevant information regarding known or suspected hazards in the possession of the generator has been disclosed. I authorize sampling of any waste shipment for purposes of recertification.

Kevin Sikkila	218 302 6642	12/11/14
NAME (PRINT OR TYPE)	**PHONE**	**DATE**
[signature]	Hydrogeologist	
SIGNATURE	**TITLE**	

FACILITY NOTIFICATION

If approved for management, Veolia ES has all the necessary permits and licenses for the waste that has been characterized and identified by this profile.

TSDF PROCESSING USE ONLY: PPE REQUIRED No _____ Yes _____ Describe _____

WIP No.

NON-HAZARDOUS WASTE MANIFEST	1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Waste Tracking Number
	NOT REQUIRED	1	3E: 800-451-8346	SW15152

GENERATOR

5. Generator's Name and Mailing Address
MPCA-Former Hegstrom Family Funeral Home
520 Lafayette Road
St. Paul, MN 55155
Generator's Phone: 651-757-2690

Generator's Site Address (if different than mailing address)
5405 West Ramsey St
Duluth, MN 55807

6. Transporter 1 Company Name
RAY WEST LLC
U.S. EPA ID Number
MND982205437

7. Transporter 2 Company Name
~~Pioneer Tank Lines~~ Veolia ES Technical Solutions - NJ
U.S. EPA ID Number NJD080631369
~~MND044176113~~

8. Designated Facility Name and Site Address
~~Badger Disposal of WI, Inc.~~ Veolia ES Technical Solutions - CWD
~~5611 W. Hemlock St.~~ W124 N9451 Boundary Road
~~Milwaukee, WI 53223~~ Menomonee Falls, WI 53051
Facility's Phone: ~~414-760-0176~~ 800-255-5092
U.S. EPA ID Number
WID003967148
~~WID988580056~~

	9. Waste Shipping Name and Description	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	
1.	Non DOT, Non RCRA Hazardous Waste (Soil cuttings), n.o.s. (Soil cuttings),,	1	DM	220	P	
2.						
3.						
4.						

13. Special Handling Instructions and Additional Information
1) Soil cuttings

J140472

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: Kevin Sikkila
Signature:
Month: 12 Day: 11 Year: 14

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: MATTHEW TENHOFF
Signature:
Month: 12 Day: 11 Year: 14

Transporter 2 Printed/Typed Name: JGengler
Signature:
Month: 12 Day: 22 Year: 14

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month: Day: Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name:
Signature:
Month: Day: Year:

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

June 12, 2014

Amanda Malaney
Bay West, Inc.
5 Empire Drive
Saint Paul, MN 55103

RE: Project: J130616. S Ramsey Street
Pace Project No.: 10268500

Dear Amanda Malaney:
Enclosed are the analytical results for sample(s) received by the laboratory on May 23, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Dennsa Mohamed for
Lori Castille
lori.castille@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
A2LA Certification #: 2926.01
Alabama Certification #40770
Alabama Certification #40770
Alaska Certification #: UST-078
Alaska Certification #MN00064
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 #: Pace
Georgia Certification #: 959
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
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
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
Wisconsin Certification #: 999407970
West Virginia Certification #: 382
West Virginia TO-15 Approval
West Virginia DHHR #:9952C

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

SAMPLE SUMMARY

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10268500001	**IDW-Soil**	Solid	05/22/14 14:25	05/23/14 18:30

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

SAMPLE ANALYTE COUNT

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10268500001	**IDW-Soil**	EPA 6010	IP	7
		EPA 7470A	WBS	1
		EPA 8260	SH2	14

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

Method: **EPA 6010**
Description: 6010 MET ICP, TCLP
Client: Bay West, Inc.
Date: June 12, 2014

General Information:
1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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

PROJECT NARRATIVE

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

Method: **EPA 7470A**
Description: 7470 Mercury, TCLP
Client: Bay West, Inc.
Date: June 12, 2014

General Information:
1 sample was analyzed for EPA 7470A. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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

PROJECT NARRATIVE

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

Method: **EPA 8260**
Description: 8260 MSV TCLP
Client: Bay West, Inc.
Date: June 12, 2014

General Information:
1 sample was analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: MSV/27304

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10269058009

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 1698576)
  - Benzene
- MSD (Lab ID: 1698577)
  - Benzene

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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

ANALYTICAL RESULTS

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

Sample: IDW-Soil **Lab ID: 10268500001** Collected: 05/22/14 14:25 Received: 05/23/14 18:30 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Leachate Method/Date: EPA 1311; 05/28/14 10:31 Initial pH: 9.42; Final pH: 1.41								
Arsenic	ND	mg/L	0.10	0.016	1	05/28/14 15:08	05/29/14 17:53	7440-38-2	
Barium	**0.39**	mg/L	0.050	0.025	1	05/28/14 15:08	05/29/14 17:53	7440-39-3	
Cadmium	ND	mg/L	0.015	0.0012	1	05/28/14 15:08	05/29/14 17:53	7440-43-9	
Chromium	ND	mg/L	0.050	0.025	1	05/28/14 15:08	05/29/14 17:53	7440-47-3	
Lead	ND	mg/L	0.050	0.0089	1	05/28/14 15:08	05/29/14 17:53	7439-92-1	
Selenium	ND	mg/L	0.10	0.033	1	05/28/14 15:08	05/29/14 17:53	7782-49-2	
Silver	ND	mg/L	0.050	0.0032	1	05/28/14 15:08	05/29/14 17:53	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
	Leachate Method/Date: EPA 1311; 05/28/14 10:31 Initial pH: 9.42; Final pH: 1.41								
Mercury	ND	ug/L	0.60	0.078	1	05/28/14 17:08	05/29/14 10:55	7439-97-6	
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 06/04/14 08:56								
Benzene	ND	ug/L	25.0	0.15	1		06/05/14 04:00	71-43-2	
2-Butanone (MEK)	ND	ug/L	125	2.5	1		06/05/14 04:00	78-93-3	
Carbon tetrachloride	ND	ug/L	25.0	0.16	1		06/05/14 04:00	56-23-5	
Chlorobenzene	ND	ug/L	25.0	0.066	1		06/05/14 04:00	108-90-7	
Chloroform	ND	ug/L	25.0	0.16	1		06/05/14 04:00	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	25.0	0.50	1		06/05/14 04:00	106-46-7	
1,2-Dichloroethane	ND	ug/L	25.0	0.13	1		06/05/14 04:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	25.0	0.20	1		06/05/14 04:00	75-35-4	
Tetrachloroethene	ND	ug/L	25.0	0.16	1		06/05/14 04:00	127-18-4	
Trichloroethene	ND	ug/L	10.0	0.091	1		06/05/14 04:00	79-01-6	
Vinyl chloride	ND	ug/L	10.0	0.20	1		06/05/14 04:00	75-01-4	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%.	75-125		1		06/05/14 04:00	17060-07-0	
Toluene-d8 (S)	100	%.	75-125		1		06/05/14 04:00	2037-26-5	
4-Bromofluorobenzene (S)	107	%.	75-125		1		06/05/14 04:00	460-00-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

QC Batch: MERP/10541 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 10268500001

METHOD BLANK: 1692778 Matrix: Water
Associated Lab Samples: 10268500001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.60	05/29/14 10:38	

METHOD BLANK: 1690684 Matrix: Water
Associated Lab Samples: 10268500001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.60	05/29/14 10:43	

METHOD BLANK: 1690685 Matrix: Water
Associated Lab Samples: 10268500001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.60	05/29/14 10:45	

LABORATORY CONTROL SAMPLE: 1692779

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	15	15.4	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1692780 1692781

Parameter	Units	10268082001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	15	15	15.6	15.8	104	106	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

QC Batch: MPRP/46218
QC Batch Method: EPA 3010
Analysis Method: EPA 6010
Analysis Description: 6010 MET TCLP
Associated Lab Samples: 10268500001

METHOD BLANK: 1692787 Matrix: Water
Associated Lab Samples: 10268500001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.10	05/29/14 13:54	
Barium	mg/L	ND	0.050	05/29/14 13:54	
Cadmium	mg/L	ND	0.015	05/29/14 13:54	
Chromium	mg/L	ND	0.050	05/29/14 13:54	
Lead	mg/L	ND	0.050	05/29/14 13:54	
Selenium	mg/L	ND	0.10	05/29/14 13:54	
Silver	mg/L	ND	0.050	05/29/14 13:54	

METHOD BLANK: 1690684 Matrix: Water
Associated Lab Samples: 10268500001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.10	05/29/14 18:00	
Barium	mg/L	ND	0.050	05/29/14 18:00	
Cadmium	mg/L	ND	0.015	05/29/14 18:00	
Chromium	mg/L	ND	0.050	05/29/14 18:00	
Lead	mg/L	ND	0.050	05/29/14 18:00	
Selenium	mg/L	ND	0.10	05/29/14 18:00	
Silver	mg/L	ND	0.050	05/29/14 18:00	

METHOD BLANK: 1690685 Matrix: Water
Associated Lab Samples: 10268500001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.10	05/29/14 18:07	
Barium	mg/L	ND	0.050	05/29/14 18:07	
Cadmium	mg/L	ND	0.015	05/29/14 18:07	
Chromium	mg/L	ND	0.050	05/29/14 18:07	
Lead	mg/L	ND	0.050	05/29/14 18:07	
Selenium	mg/L	ND	0.10	05/29/14 18:07	
Silver	mg/L	ND	0.050	05/29/14 18:07	

LABORATORY CONTROL SAMPLE: 1692788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	5	4.9	98	80-120	

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REPORT OF LABORATORY ANALYSIS

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

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

LABORATORY CONTROL SAMPLE: 1692788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Barium	mg/L	5	4.9	97	80-120	
Cadmium	mg/L	5	4.9	98	80-120	
Chromium	mg/L	5	4.9	97	80-120	
Lead	mg/L	5	4.8	96	80-120	
Selenium	mg/L	5	5.0	101	80-120	
Silver	mg/L	2.5	2.5	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1692789 1692790

Parameter	Units	10268082001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	5	5	5.0	5.2	100	104	75-125	4	30	
Barium	mg/L	0.94	5	5	5.9	5.9	99	100	75-125	.7	30	
Cadmium	mg/L	ND	5	5	5.1	5.1	101	102	75-125	.8	30	
Chromium	mg/L	0.25	5	5	5.2	5.2	99	100	75-125	.4	30	
Lead	mg/L	ND	5	5	4.8	5.0	96	100	75-125	4	30	
Selenium	mg/L	ND	5	5	5.2	5.4	103	107	75-125	3	30	
Silver	mg/L	ND	2.5	2.5	2.5	2.6	100	100	75-125	.6	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

QC Batch: MSV/27304 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 10268500001

METHOD BLANK: 1698574 Matrix: Water
Associated Lab Samples: 10268500001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	25.0	06/05/14 00:39	
1,2-Dichloroethane	ug/L	ND	25.0	06/05/14 00:39	
1,4-Dichlorobenzene	ug/L	ND	25.0	06/05/14 00:39	
2-Butanone (MEK)	ug/L	ND	125	06/05/14 00:39	
Benzene	ug/L	ND	25.0	06/05/14 00:39	
Carbon tetrachloride	ug/L	ND	25.0	06/05/14 00:39	
Chlorobenzene	ug/L	ND	25.0	06/05/14 00:39	
Chloroform	ug/L	ND	25.0	06/05/14 00:39	
Tetrachloroethene	ug/L	ND	25.0	06/05/14 00:39	
Trichloroethene	ug/L	ND	10.0	06/05/14 00:39	
Vinyl chloride	ug/L	ND	10.0	06/05/14 00:39	
1,2-Dichloroethane-d4 (S)	%.	99	75-125	06/05/14 00:39	
4-Bromofluorobenzene (S)	%.	104	75-125	06/05/14 00:39	
Toluene-d8 (S)	%.	100	75-125	06/05/14 00:39	

LABORATORY CONTROL SAMPLE: 1698575

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	500	578	116	65-132	
1,2-Dichloroethane	ug/L	500	504	101	72-125	
1,4-Dichlorobenzene	ug/L	500	498	100	75-125	
2-Butanone (MEK)	ug/L	2500	3140	125	66-128	
Benzene	ug/L	500	539	108	73-125	
Carbon tetrachloride	ug/L	500	514	103	67-134	
Chlorobenzene	ug/L	500	522	104	75-125	
Chloroform	ug/L	500	529	106	70-127	
Tetrachloroethene	ug/L	500	508	102	69-128	
Trichloroethene	ug/L	500	529	106	75-125	
Vinyl chloride	ug/L	500	579	116	65-136	
1,2-Dichloroethane-d4 (S)	%.			93	75-125	
4-Bromofluorobenzene (S)	%.			101	75-125	
Toluene-d8 (S)	%.			100	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1698576 1698577

Parameter	Units	10269058009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1-Dichloroethene	ug/L	ND	500	500	532	570	106	114	54-139	7	30	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1698576 1698577

Parameter	Units	10269058009 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,2-Dichloroethane	ug/L	ND	500	500	491	489	98	98	70-125	.5	30	
1,4-Dichlorobenzene	ug/L	ND	500	500	455	482	91	96	67-125	6	30	
2-Butanone (MEK)	ug/L	260	2500	2500	3310	3280	122	121	65-136	1	30	
Benzene	ug/L	807	500	500	490	532	-63	-55	66-125	8	30	M1
Carbon tetrachloride	ug/L	ND	500	500	470	516	94	103	70-139	9	30	
Chlorobenzene	ug/L	ND	500	500	479	505	96	101	70-125	5	30	
Chloroform	ug/L	ND	500	500	482	503	96	101	66-130	4	30	
Tetrachloroethene	ug/L	ND	500	500	473	512	95	102	63-127	8	30	
Trichloroethene	ug/L	ND	500	500	486	528	97	106	32-150	8	30	
Vinyl chloride	ug/L	ND	500	500	506	572	101	114	62-138	12	30	
1,2-Dichloroethane-d4 (S)	%.						97	97	75-125			
4-Bromofluorobenzene (S)	%.						101	100	75-125			
Toluene-d8 (S)	%.						99	100	75-125			

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J130616. S Ramsey Street
Pace Project No.: 10268500

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10268500001	**IDW-Soil**	EPA 3010	MPRP/46218	EPA 6010	ICP/19608
10268500001	**IDW-Soil**	EPA 7470A	MERP/10541	EPA 7470A	MERC/12120
10268500001	**IDW-Soil**	EPA 8260	MSV/27304		

Pace Analytical®
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

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

MPCA Project

102685QQ

Page: 1 of 1

1742447

Section A Required Client Information:

Company: Barr West
Address: 5 Empire Dr. St. Paul, MN 55103
Email To: amandam@barrwest.com
Phone: 651-291-3495 Fax: —
Requested Due Date/TAT: Standard

Section B Required Project Information:

Report To: Amanda Maloney
Copy To:
Purchase Order No.: 101715
Project Name: Ramsey Street
Project Number: 13061G.5

Section C Invoice Information:

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

REGULATORY AGENCY

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

Site Location STATE: MN

Section D Required Client Information

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

Matrix Codes MATRIX / CODE

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test Y/N	TCLP VOCs	TCLP RCRA Metals	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	IDW-Soil	SL	C	5/19/14	—	5/22/14	1425		2	2									X	X		-001
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS: Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
		5/22/14	1645		5/22/14	1645		Y		
		5/23/14	1605		5/23/14	1605		Y		
		5-23-14	1830	KO/Pace	5-23-14	1830	1.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Brandon Flaada

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/22/14

ORIGINAL

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

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

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

Sample Condition Upon Receipt

Client Name: Baywest+ **Project #:** WO#:10268500

10268500

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

Tracking Number: _____

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

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

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

Cooler Temp Read (°C): 1.0 **Cooler Temp Corrected (°C):** 1.2 **Biological Tissue Frozen?** ☐Yes ☐No ☑N/A

Temp should be above freezing to 6°C **Correction Factor:** +.2 **Date and Initials of Person Examining Contents:** KO 5-23-14

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

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

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 5/27/14

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

Appendix E

City Directories

CENTRAL AV N—Contd
305△Tourist Hotel & Cafe ⓞ
306△Mickelson Carl J taxidermist
307 Pederson Ingall barber
308 Central Coffee Shop
△Spirlong Renold ⓞ
309 Public Markets Inc (br) gro and meats
310△Hartogh Arth uphol
311 Gamble Store No 1291 auto supps
312△Cash & Carry Mkt
313 Sodahl Gustav tailor
△Moran Lawrence A photog
314△Central Furniture Co
315△Krahn Rudolph barber
△Hesselstrom Calig Mrs resir
316△Frankel's Bakery
317△Excelsior Cleaners & Launderers Inc (br)
△Booren Jack C phys
317 1/2△West Theatre motion pictures
△Kaake Theatre Co
318 Salvation Army Corps No 3 Johnson Kaleb
319△Lovely Lady Beauty Salon
321△Wagar G Burnett Inc mfg furriers
△Wagar G Burnett ⓞ
323△Bratton Gift Shop
323½ Moberg Everett J barber
324△Meyers Bakery
325△Swanstrom Amol G men's clo
326△Zenith Cash Market Inc gro and meats
327△Pollard Chas E gro
△Bock Helmer meats
328△Cody Liquor Store
Fitzpatrick D A Inc liquors
329-31 Dormedy Bldg
△Wieland Hardware Co
330△Pekin Cafe
331△Pioneer Natl Bank of Duluth Dormedy Hall
332△Cody Drug Store
△Hotel Cody

12

—Ramsey intersects
400-02 Veterans of Foreign Wars Bldg
Veterans of Foreign Wars Post No 1217
△Tour-O-Two Bar & Lounge
△Rutter Professional Pharmacy
401△Rustic Tavern beer
△West Duluth Recreation billiards
403△Clancey Arth M
Whiteside Furniture Company
403-05 Kreidler Building
Rooms:
1 Chin Wm P
2-3△Jacoby Arth M
4-5 Vacant
6-7△Lippitt Dunbar F dentist
8-10△Scott Co ins
11-12 Vechell Anna M Mrs
Street continued
404△West Duluth Clinic
405△Kreidler & Kreidler real est
406△Olafson Realty Co
407 Johnson Carl shoe repr
410△Fashion Cleaners
McKay Clyde A
412 Vacant
414△Nold Jewelers
416△Kersten Herman J produce
422△Holmberg Carl
—NPRy crosses
427△Boyer Dennis H
428 Christ Temple Church
430△Sterling Motor Co
—Grand av intersects
517 Wallauer Arnold barber
519 Bersu Oluf Shoe Repr
521△Cameo Beauty Shop
529△Waelen Bros Co autos
—Cody intersects
601△City Jail
△Engine Co 8
△Hook & Ladder Co 8
△Police Station No 2
△Municipal Court (W Dul Div)
602 Memorial Park
605△Y W C A Center (W Dul)
YMCA (WDul)
Varney Geo L
619△Masonic Temple
△Euclid Lodge No 195 (AF&AM)
621 Smith Emma L Mrs ⓞ
622△Woods Clinton A
623△Clarke Thos J ⓞ
624△Brennan Wilmer C ⓒ
625△Haver Chas H
626△Gunderson J Palmer ⓞ
628△Moffitt Robt H ⓞ
629△Dunn Ellz M Mrs ⓞ
631△Tofte Gladys E Mrs ⓞ
634△Yoakum Geo I ⓞ

15

—Elinor intersects
701 West Duluth Branch Public Library
702△St Paul's American Luth Ch
706△Ehlen Otto G Rev
710△Greeley Harold G ⓞ
714△Henricks Raymond E
Kaivo Walter E
716△Plummer Earl G jr ⓒ
Plummer John W
726△Wick Walter C ⓞ
728△Central Av Methodist Church
738△Knudsen Anna E Mrs ⓞ
—Central pl ends
818△Brophy Bernard J ⓞ
820△Foubister Thos E ⓞ
Backstrom Robt M
822△Lindberg Hilda M Mrs ⓞ
sw cor△West Jr High Sch
△Ely School
—6th intersects
902△Strand Roy L ⓞ
907△Drill Ervin A ⓞ
909△Fox Gerald J ⓞ
911△Wood Irven B Rev ⓞ
915△Peyton — —
917△Olson Ralph ⓞ
921△East Chas D ⓞ
—Paducah pl intersects
922△Gardner Glen G ⓞ
926△Wilander Martin ⓞ
1002△Jacobson Ted H ⓞ carp contr
△Harris Chas W
1003△Blackwood Anna Mrs ⓞ
Lamkin Helmer M
1006△Larson Melvin B ⓞ
1007△Kennedy Ray E ⓞ
△Stauber evelyn S Mrs
1009△Sallvick E Otto ⓞ
1011△Anderson Orren E ⓞ
1012△Brown John G ⓞ carp contr
1014△Greve Fred E ⓞ
—7th intersects
1015△Lippitt Dunbar F ⓞ
1019 Johnson Olive C Mrs ⓞ
Harty Bernard N
1021△Nelson Carl S ⓞ
1023△Debe Mylon A ⓞ
△Woodall Clayton
Town Paul F
1105△Millen Mark J ⓞ
1112△Olafson Otto A ⓞ
1116△Ottersen Norman E
△Rydstrom Walter E ⓞ
1120△Mathews Jas W ⓞ
1121 Schwandt Emil ⓞ
1122△Olander Uno H ⓞ
1125△Westman Richd B ⓞ
1129△Doyle Matthew J ⓞ
1202△Miller John H ⓞ
1204△Schmitz Frank G ⓒ
—8th intersects
1220△Germander Sidney A ⓞ
1201△Swenson Arnold O ⓒ
1302△Erickson Robt L ⓞ
1306△Schmitz Howard M ⓞ
1307△Switzer Harry C ⓞ
1308△Pollak Richd R ⓞ
1309△McDougall Louis E ⓒ
1310△Anderson Aug J ⓞ
1312△Kelly Lida J Mrs ⓞ
1215△Christiansen Walter J ⓞ
△Adams David F
1315△Miller Edgar W ⓒ
1317△Stark Jos F ⓞ
1318△Mitchell Lawrence H ⓞ
1319△Sheward Agnes Mrs ⓞ
1320△Lueders Frances M Mrs ⓞ
1321△Waelen Albert E ⓞ
1324△Johnson Jonas ⓞ
1326△Johnson Claude A ⓞ
1327△Collier Felix L ⓞ
1328△McDonnell Rose A Mrs ⓞ
1331△Dunphy Clayton J ⓞ
1332△Nelson Herman J ⓞ
—Medina intersects
1401△Danz Robt J ⓞ
1405△Nelson Louis G ⓞ
1406△Sandberg Walter F ⓞ
1407△Bersu Thorwald ⓞ
1408△Peterson Albert J ⓒ
1409△Doyle Geo C ⓞ
1415△Pederson John M ⓞ
—Albion intersects
1502△Jorgensen Helmer ⓒ
1503△Quick Paul M ⓞ
Hansen Robt W
1506△Jernberg Denis G ⓞ
—Columbia av intersects
—DMI&RRy crosses

13

CENTRAL AV S — From Main south to NPRy, 1 west of 54th av W
—Polk intersects
6△Kurtovich Rudolph ⓞ
1114△Central Auto Parts

57

—Raleigh intersects
209△Udovich Michl ⓒ
Udovich Michl jr
228△Norman Block & Tile Co
—Redruth intersects
301 Vacant
—NPRy crosses

31

CENTRAL ENTRANCE—From 6th av E at 2d N and west to Miller Truck Highway
344△Klosowsky Lambert M ⓞ
918△Peterson Roy L gas sta

15

CENTRAL PLACE — From 54th av W, west to Central av, 1 north of Elinor
5403△Bacon Frank G ⓞ
5405△Olson Donald W ⓞ
5407△Olson Paul M ⓞ carp contr

16

CEYLON AV —From Todd southeast 2 blocks, 2 east of Boulevard

24

CHAMBERSBURG AV — From Morris-Thomas rd north to limits, 1 north of 26th
—Ensign intersects
3020△Olson Harry H ⓞ
3101△Karger Chas E ⓞ
△Lamphier Henry ⓞ
3410 Forsberg Gunnard N ⓞ
3415△Carlson Arth W ⓞ
Carlson Chas G ⓞ
3515△Donaghy Geo D ⓞ

CHAMBERSBURG AV—Contd
3620△Anderson Donald B ⓞ carp contr
3630 Johnson Elinor M Mrs ⓞ
—Anderson rd intersects
3702△Torvick Carl ⓞ
3710△Finnelly Robt B ⓞ
3714△Anderson Herman L ⓞ
3732△Patterson S Vernon ⓞ
3814△Johnson Wm M ⓞ
3901△Bradley Chas H ⓞ
3915△Simonson Harvey W ⓞ
3917△Towle Forrest C ⓞ
4001△Jahr Fred C ⓞ

15

CHARLES AV—From 4319 W 8th north to DM&IRRy
815△Gustafson Nels G ⓞ
816△Swenson Alf ⓞ
820△Mitchell J Gordon ⓞ
823△Nelson Theo ⓞ
824△Carlson Edwin A ⓞ
825△Durand Maurice J ⓞ
826△Skoog Herbert L ⓒ
827△Hall Henry ⓞ
829△Eklund Carl W ⓞ
831△Bloomquist Helge A ⓒ
832△Safford Leonard F
837△Ostrom John W ⓞ
838△Sawl Marcus E ⓞ
844△Peterson E ⓞ
850 Vacant
854△Roswold Clifford J ⓞ

52

CHARLES ROAD—From Howard-Gnesen rd W, 1 north of Austin RD 3:
813a△Granquist Thorlid H ⓞ
813b Vacant
814△Rudd Harold P ⓞ
816 Nurminen Elina Mrs ⓞ
△Nurminen Rudolph A ⓞ
△Nurminen Eino A ⓞ
817△Kapuscinski Neale S ⓞ

45

CHARLOTTE PLACE — From Columbus av west to Melrose av, 1 north of StMarie

8

CHATSWORTH AV — From W Boulevard north to Portland, 2 east of 69th av W

1

CHEROKEE — From 126th av W to 125th av, 2 south of NPRy (FDL)

13

CHERRY—From 920 Oneota west to 5800 Grand av

1

CHESTER—From 123d av W, west to Park av (FDL)

46

CHESTER PARK DRIVE EAST — From 1500 E 8th north and northwest to College
800△Graves Chauncey A ⓞ
810 Gruber Edw L
814 Junker Emma M ⓞ
816 Stanton Paul F ⓞ
818△Johnston Warren F ⓒ
822△Bort Neal D ⓞ
828△Stark Theo C ⓞ
—17th av intersects
904△McVaugh Wm S ⓞ
912△Smith Arth E ⓞ
916△DiSanto Jos ⓞ
922△Starr Edw C ⓞ
△Robie Ernest G
928△Andrews Geo A ⓞ
—18th av ends
1004△Christiansen Otto E ⓞ
1014△Erickson Rumar C ⓞ
1018△Stevenson Gordon A ⓞ
1022△Bennett Jos P ⓞ
1030△Evans Chas G ⓞ
1031△Deaux Rich E ⓞ
1036△Dahlberg Axel F ⓞ
1040△Engel Geo N ⓞ
1044△Pitt Wm E ⓞ
1050△Baxter Geo P ⓞ
1052△Gustafson A Ben ⓞ
1056△Trelford Geo S ⓞ
1060△Reed Clarence F ⓞ
1064△Larson Lee M ⓞ
—Kent rd begins
1106△Weygant J Louis ⓒ
1110△Burgndorf Orris A ⓞ
1114△Manfred Carl L Rev ⓞ
1118△Gleeson Michl J ⓞ
1122△Dahl Paul G ⓞ
1124△Junco Jos F ⓞ
1126△Hutchinson Wm A ⓞ
1128△Iverson Geo ⓞ
1130 Under construction
1132△Fry Lawrence D ⓞ

46

CHESTER PARK DRIVE IN—From 1800 Kent rd west and northwest through Chester Park to Boulevard
Chester Park Field
△Mattson Walter E

46

CHESTER PARKWAY—From 1600 E Boulevard south to 1 block Belmont rd
1△Moore Lloyd W ⓞ
2△Niemi Geo V ⓞ
4△White Earl T ⓞ
6△Orchard Clinton L ⓞ
10△Hovland Geo ⓞ
12△Nygaard Irvin S ⓞ
—Belmont rd ends
102△Hietala Leslie E ⓞ
103△Kennard Fredk ⓞ
105△Chabot Lloyd E ⓞ
106△Letourneau Arth J ⓞ
108 Swanson Lawrence C ⓞ
109△Tarnowski Steph T ⓞ
110△Fritzen John E ⓞ
111△Johnson Carl M ⓞ
112△Macuoz Geo W ⓞ
113△McRoit Lloyd I ⓞ
114△McLish Donald A ⓞ
115△Norman Robt W ⓞ
116△McManus Lee C ⓞ
117△Anderson Axel E ⓞ
118△Shoberg Vernon C ⓞ
121△Johnsen Anton L ⓞ
122△Anderson Lawrence M ⓞ
127△Marvin Luke E ⓞ
128△Anderson Adolph B ⓞ
132△Odegard Thos ⓞ

18

CHESTNUT — From W 1st west to beyond Atlantic av
3051△Hutiel Aug ⓞ
3053△Price John S ⓞ
3054△Newman J Fredk ⓞ
3059△Hampston John L ⓞ
3061△Burns Leo J ⓞ
△Peterson John D
△Michon Ernest A jr
Plaisted Howard J
3065△Elpe Hjalmer A ⓞ
3066△Castonguay Archie ⓞ
3069△Maltby Russell J
3070△Matuschak Pauline M Mrs
3071 △Schneider Peter ⓞ
3073△Telando Thos E ⓞ
—Winnipeg av intersects
3102 Kessler Lawrence F ⓞ
3104△Russell John L ⓞ
3106△Johnson Agnes O Mrs
3108△White Marie A Mrs ⓞ
3114△Erickson Waldemar E ⓞ
△Kiepinski Loretta Mrs
△Mattson Peter L ⓞ
3118△Bergman Hugo
△Okerbergh Gust E
△Anderson Chester L
3122△Winklesky Ward W ⓞ
3124△Kuias Anthony D
3126△Murray Floyd E ⓞ
—Michigan av intersects
3152△Clapper Ralph E ⓞ
△Lane Lawrence T jr

19

—3d intersects
3201△McLeod Alex R ⓞ
3203△Sobczak Jos ⓞ
Sobczak Clemence
3207△Anderson Thure A
3209△Cheslak Theo P ⓞ
3211△Lundquist Ethel M ⓒ
3217 Walkowiak Louis
△Miskowski Anthony
3221△Jamrock Jos J ⓞ
△Patterson Alex
3225 Bartecki Casmira
△Anderson Mark H
3227△Grau Geo C
△Mason John A
3229△Espeland Alf E ⓞ
3233△Youngkrantz Earle G
3233½△Zanto John M ⓒ
3235△Kolenda Michalina Mrs ⓞ
△McNulty John J
3237△Carlson Iver E ⓞ
△Lere Fred C
3239△Ciebiera Jennie Mrs ⓞ
△Ciebiera Matt H
—Atlantic av intersects
3309△Borske Edw W
△Borske Frank ⓞ
3315△Kobylinski Alex ⓞ
3317△Sink John C ⓞ
—DM&IRRy crosses
3602 Vacant

5

CHICAGO—From 81st av W west to 85th av (Cremer's Addn)

52

CHICAGO AV—From W Austin north to Calvary rd (Homecroft Park)
4△Dahl Emil O ⓞ
39△Trader Laura T Mrs ⓞ
40△Borrell Jas C ⓞ
44 Vacant
131△Gronroos Willard A ⓞ
135 Vacant
136△Anderson Martha O Mrs
141△Gray Fredk W ⓞ
145△Lundin Russell E ⓞ
146△Wickstrom Nels H ⓞ

52

CHISHOLM E—From 4200 Woodland av east 3 blks, 1 north of Austin
110△Wells Ward M ⓞ
114△Merriman Lloyd A ⓞ
115△Gordon Theo M ⓞ
117△Chesney Mike ⓞ
118△Lillyman Frank K ⓞ
119△Anderson Arth E ⓞ
124△Jonell Milton L ⓞ
125△Dennis John W ⓞ
128△Carver Danl F ⓞ
—Allendale av intersects
201△Backstrom Clifford ⓞ
202△Larson Gust ⓞ
205△Larson Albin F ⓞ
206△Schulze Karl B ⓞ
210△Piering David
211△Kwasigroch John W ⓞ
219△Seamfer John N ⓞ
228△Gustafson Albert ⓞ
—Minneapolis av intersects
301△Gilbertson Leonard R ⓞ
302△Balko Harold G ⓞ
319△Johnson Wm S ⓞ