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April 20, 2010

Ms. Arlene Furuseth
Project Leader
Minnesota Pollution Control Agency
714 Lake Avenue, Suite 220
Detroit Lakes, MN 56501

Re: Monitoring Report for Leak 15,656 at Former Alex Exhaust; Work Order Number B34876; AECOM Project 60141264

Dear Ms. Furuseth:

The attached Monitoring Report Form (MPCA Guidance Document 4-08) was prepared by AECOM to document the findings of work requested by you in fiscal year 2010 (FY10) for the above referenced site. This Report was prepared by AECOM under the Minnesota Pollution Control Agency (MPCA) Multi Site Contract Work Order Number B34876.

AECOM recommends site closure for Leak #15,656. The recommendation for site closure is based on site investigation, risk receptor assessment and corrective action activities completed to date.

AECOM has appreciated the opportunity to provide continued service on this release in FY10. If you have questions concerning the project, we welcome the opportunity to discuss these considerations with you. You may contact Tim Grape by calling 763-852-4218, or by email at: tim.grape@aecom.com. It would be a pleasure to hear from you.

Sincerely,

Timothy J. Grape, PG
Project Manager

Robert L. DeGroot, PG PE
Principal Engineer

TJG/dn
Encs.

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: Leak00**15656** Date: **April 20, 2010**

Responsible Party Information

Name: **No viable Responsible Party has been identified. Site was referred to Fund Financed Program on March 15, 2006. MPCA Project Leader is Arlene Furuseth**

MPCA Phone #: **(218) 846-0732**

Mailing Address: **714 Lake Avenue, Suite 220**

City: **Detroit Lakes** Zip Code: **56501**

Alternate Contact (if any) for Responsible Party: **None Available** Phone #: **None Available**

Leak Site Information

Leak Site Name: **Alex Exhaust** Property Owner: **Mr. Ben Zacher** Phone #: **(320) 760-1712**

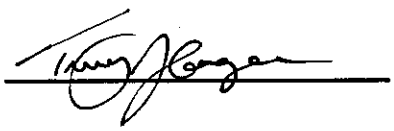
Leak Site Address: **905 - 3rd Avenue East (Highway 27)**

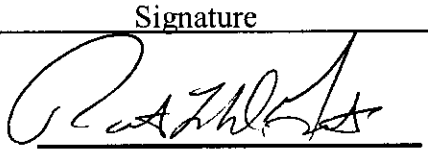
City: **Alexandria** Zip Code: **56308** County: **Douglas**

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 are instructed to reject unsigned reports and reports that have been altered.

Name and Title of Report Author(s)	Signature	Date Signed
Timothy J. Grape, PG **Project Manager**		4/20/10

Name and Title of Report Reviewer(s)	Signature	Date Signed
Robert L. DeGroot, PG PE **Principal Engineer**		4/20/10

Name(s) of Field Technician(s): **Jason Rowe**

Company and mailing address: **AECOM Inc.**
161 Cheshire Lane North, Suite 500
Minneapolis, MN 55441

Project Manager E-mail Address: **tim.grape@aecom.com**

Phone: **(763) 852-4200**

Fax: **(763) 473-0400**

Section 1: Work Completed

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.

Site work completed since the Investigation Report submittal by AECOM in February, 2009 included additional investigation to further define soil and groundwater contamination and additional vapor intrusion investigation associated with the main site building. A summary of the site work completed in fiscal year 2010 (FY10) is included below and is described in further detail throughout the remaining sections of the Monitoring Report:

- **November 9-10, 2009 - Completion of four temporary wells/soil borings (borings) B-10, B-11, B-12 and B-13 to further define the extent of soil and groundwater impacts.**
- **November 9-10, 2009 - Installation and sampling of a permanent vapor monitoring point (VP-1P) near the southeast corner of the main site building (former Alex Exhaust), completion of a vapor survey inside the site building and an Indoor Building Survey and Product Inventory with the current building tenant.**
- **February 4, 2010 – Installation and sampling of a permanent sub-slab vapor monitoring point (Sub-Slab (VP-1)) inside the main site building, completion of an updated vapor survey and an Indoor Building Survey and Product Inventory with the current building tenant.**
- **April 16, 2010 – AECOM submitted Petroleum Release Notification Follow-up letters to property owners previously contacted as part of risk receptor surveys in accordance with MPCA Guidance Document 2-07. The properties that follow-up letters were sent to are summarized on the Petroleum Release Notification Follow-up table included in Appendix H.**

The site location is illustrated on Figure 1. An aerial photograph of the site is presented on Figure 2. The boring locations are illustrated on Figure 3. The permanent vapor monitoring point (VP-1P) and sub-slab vapor monitoring point (Sub-Slab (VP-1)) locations are illustrated on Figure 4.

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

No additional site work beyond the work summarized in Section 1.1 above was requested by the MPCA.

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.

Groundwater samples were collected from borings B-10, B-12 and B-13 during the November, 2009 additional investigation to further define the extent of groundwater contamination northwest and northeast of the source area as well as within the source area (former UST basin) located directly east of the main site building. The groundwater samples were analyzed for volatile organic compounds (VOCs), gasoline range organics (GRO) and diesel range organics (DRO).

Boring B-10 was advanced in the former UST basin area as the location of the UST basin was not known during the initial investigation work. The groundwater sample (TW-10) collected from boring B-10 had a benzene concentration (609 µg/L) exceeding the health risk limit (HRL) of 2 µg/L, an ethylbenzene concentration (788 µg/L) exceeding the health based value (HBV) of 50 µg/L and a 1,3,5-trimethylbenzene concentration (136 µg/L) exceeding the HRL of 100 µg/L. DRO (6,800 µg/L) and GRO (6,690 µg/L) were also detected above the HBV for total petroleum hydrocarbons (TPH) of 200 µg/L. A duplicate groundwater sample (TW-100) was collected from B-10. The groundwater concentrations of duplicate sample TW-100 were generally consistent with the original sample (TW-10) concentrations.

why not 2 soil sample

rationale inconsistent w/ guidance

A groundwater sample was not collected from boring B-11 as field evidence (elevated PID readings) of soil contamination was observed from 6 feet to 20 feet. Boring B-13 was offset approximately 90 feet east of boring B-11 to define the extent of impacts northeast of the source area. The groundwater sample (TW-13) collected from boring B-13 had a DRO concentration of 150 µg/L which is below the HBV for TPH of 200 µg/L. Low level concentrations of bromodichloromethane (3.3 µg/L), chloroform (2.4 µg/L) and dibromochloromethane (3.3 µg/L) were also detected in groundwater sample TW-13. These three compounds were detected in similar concentrations in the field blank collected during sampling activities.

The groundwater sample (TW-12) collected from boring B-12 was non-detect for VOC, GRO and DRO compounds.

The horizontal extent of groundwater contamination northwest and northeast of the release area was generally defined by borings B-12 and B-13, respectively. Groundwater concentrations exceeding HRLs and HBVs were detected in the groundwater sample (TW-10) collected from the former UST basin area. The estimated horizontal extent of groundwater contamination is illustrated on Figure 6. The extent of groundwater contamination south of the release site beneath the Alexandria Concrete Company property has not been characterized as access to this property was not granted by the property owner. A temporary well/soil boring (B-9) completed down-gradient of this property in 2008 did not show evidence of groundwater contamination.

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The cumulative groundwater analytical results are summarized on Table 7 and Table 8. Copies of the most recent groundwater analytical reports are attached in Appendix A. The temporary well groundwater purging and sampling information is summarized on the Sampling Information Forms attached in Appendix D.

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.

AECOM conducted vapor monitoring inside the site building on November 10, 2010 and February 4, 2010 as part of the Indoor Building Surveys. The main site building is currently being used on a part-time basis (approximately 4 hours per day) for auto repair work according to the property owner. An outbuilding used for storage is also located on the northern portion of the property.

AECOM conducted screening of ambient air inside the main site building with a photoionization detector (PID) equipped with a 10.6 eV lamp and calibrated onsite to a benzene reference gas (100 ppm isobutylene) along with a factory calibrated GEM 500 Quad Gas Meter. No elevated (above 10 PID units) PID readings or lower explosive limit (LEL as methane) readings were observed in the ambient air inside the main site building during either of the vapor monitoring events.

A four inch diameter floor drain was observed in the service garage portion of the building. The tenant interviewed (Pete) indicated that the floor drain had been "plugged" for several years and he was not aware of the drain discharge location (sanitary sewer or flammable waste trap). No evidence of a flammable waste trap was identified during the Indoor Building Surveys. A PID reading collected at the floor drain was less than 1 PID unit. No evidence of vapor intrusion to the main site building was identified based on the vapor monitoring events conducted.

NOTE: If vapor concentrations exceed 10 percent of the lower explosive limit, exit the building and contact the local fire department immediately. Then contact the Minnesota Duty Officer (24 hours) at 651-649-5451 (metro and outside Minnesota) or 1-800-422-0798 (Greater Minnesota). TTY users call 651-297-5353 (V/TTY) or 1-800-627-3529 (V/TTY).

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.

Follow-up vapor intrusion assessment work completed for the main site building in FY10 consisted of installation and one round of sampling on a permanent outdoor vapor point (VP-1P) followed by installation and one round of sampling on an indoor sub-slab vapor point (Sub-Slab VP-1). The vapor point sample locations including the permanent vapor point and the sub-slab vapor point are illustrated on Figure 4. The vapor point purging and sampling information for each location is summarized on the Soil Vapor Probe Sampling Summary form found in Appendix D. AECOM also conducted an Indoor Building Survey and Product Inventory for inside the main site building during each vapor point sampling event in FY10. The Indoor Building Survey and Product Inventory forms are attached in Appendix D. The results of the follow-up vapor intrusion assessment work are summarized below.

<u>Permanent Vapor Monitoring Point</u>
AECOM installed a permanent vapor monitoring point (VP-1P) on November 9, 2009 approximately 10 feet southeast of the main site building (see Figure 4). The permanent vapor point screen intake was set at a depth of 3 feet to 3.5 feet as the main site building is slab-on-grade construction. On

November 10, 2009 the permanent vapor monitoring point VP-1P was purged with a LandTec GEM 500 quad gas meter and a vapor sample was collected in a 6 liter Summa canister for analysis of VOC using Method TO-15 (full scan).

Analytical results of VP-1P indicate the presence of vapor concentrations above 100 times the established ISV standards for acetone, benzene, cyclohexane, n-hexane and xylenes (m&p) in the soils adjacent to the main site building. Vapor concentrations were detected in VP-1P above the acute ISV standards for acetone, benzene, ethylbenzene, toluene and xylenes (m&p). The presence of high petroleum vapor concentrations at VP-1P may indicate the presence of a release from a former piping run associated with the UST distribution system. The exact location of the former piping run(s) is unknown; however, the former UST basin area was located east of the main site building and the dispenser island area was located directly south of the main site building indicating that the former fuel distribution piping was likely located in the vicinity of VP-1P. The analytical results for vapor sample VP-1P are summarized on Table 20. The analytical report for vapor sample VP-1P is included in Appendix A.

AECOM tabulated the analytical results from VP-1P and submitted them to the MPCA for review on December 11, 2009. A telephone conversation between Mr. Paul Stock (MPCA Project Hydrogeologist) and Mr. Tim Grape (AECOM Project Manager) was conducted on January 12, 2010 to discuss the results of the vapor intrusion sampling and to determine the next course of action regarding vapor intrusion risk associated with the main site building. Mr. Stock and Mr. Grape concurred that a vapor sample from beneath the floor slab of the main site building would be required to further evaluate the vapor intrusion risk based on the elevated vapor concentrations observed in the permanent vapor monitoring point near the building along with an updated Indoor Building Survey and Product Inventory to be completed concurrent with the sub-slab sampling event.

Sub-Slab Vapor Monitoring Point

AECOM returned to the site on February 4, 2010 to install and sample a permanent sub-slab vapor monitoring point inside the main site building. The permanent sub-slab vapor monitoring point was installed in the approximate center of the main site building within the office area along the western interior wall. The location of the sub-slab monitoring point is illustrated on Figure 4 and on a site sketch included with the February 4, 2010 Indoor Building Survey form attached in Appendix D. The sub-slab vapor monitoring point was purged with a LandTec GEM 500 quad gas meter and a vapor sample was collected in a 6 liter Summa canister equipped with a 200 milliliter/minute flow controller for analysis of VOC using Method TO-15 (full scan).

Analytical results of the sub-slab vapor sample did not indicate the presence of VOCs immediately beneath the building footprint at concentrations above the established Acute ISV standards or above 10 times the ISV standards. The sub-slab sample was collected in February under frozen soil conditions when soil vapor concentrations would be expected to be at a seasonal high. The analytical results for the Sub-Slab VP-1 sample are summarized on Table 20. The laboratory analytical report sample is included in Appendix A.

Indoor Building Surveys and Product Inventories

AECOM conducted an Indoor Building Survey and Product Inventory on November 11, 2009 and an updated Indoor Building Survey and Product Inventory on February 4, 2010. The results of the Indoor Building Surveys and Product Inventories indicate that the main site building consists of an approximately 1,200 square foot, slab-on-grade building which is currently being used on a part-time basis (less than 4 hours a day) for automobile repair and service.

The western portion of the building consists of a service garage with a bay door on the south side of the building. A 4-inch diameter floor drain was identified in the service garage area. The current tenant indicated that the floor drain has not worked (drained) in the several years that he has used the building and to the best of his knowledge the drain is plugged. AECOM inserted a PID into the drain and no elevated PID readings were observed coming from the floor drain. AECOM did not identify a flammable waste trap inside the building during the Indoor Building Surveys. An unused hydraulic floor jack attached to the concrete floor was also identified in the service garage. Minor cracking was observed in the concrete floor in the service garage. The office area floor was tiled with no evidence of major floor cracks and the bathroom area floor was carpeted.

The product inventories identified a chemical storage shelf located on the north wall inside of the service garage. A vehicle being prepared for painting was present in the garage portion of the main site building during the February 4, 2010 site visit. Numerous petroleum based chemicals associated with automobile repair work including automobile paint and body work chemicals were stored in this area. The eastern portion of the building consists of an office area, a storage area and a bathroom. A gasoline powered generator was located in the office area, approximately 30 quarts of automobile basecoat color was located in the storage area and miscellaneous cleaners were observed in the bathroom. An exhaust fan was identified on the northeast wall of the bathroom. Products identified in the main site building that have the potential to affect indoor air quality are summarized in Section 13 of the Building Survey and Product Inventory Forms attached in Appendix D.

<u>Vapor Intrusion Risk Assessment Summary</u>
Soil vapor concentrations above acute ISV standards were identified in the vapor monitoring point located adjacent to the main site building. The risks associated with vapor intrusion to the main site building from Leak 15656 are limited based on the results of the sub-slab soil vapor sampling completed and the information obtained during the Indoor Building Surveys and Product Inventories. The sub-slab vapor sample results did not indicate the presence of VOCs immediately beneath the building footprint at concentrations above the established acute ISV standards or above 10 times the ISV standards. The Indoor Building Surveys did not detect the presence of completed vapor pathways or evidence of vapor intrusion to the main site building. The site is utilized on a part-time basis as an automobile repair facility and numerous petroleum based products that have the potential to affect indoor air quality were identified inside the building.

No vapor intrusion risk was identified for the Café building (903 - 3rd Avenue) located directly west of the project site based on the preliminary vapor intrusion assessment work completed in 2007. No additional vapor intrusion risk assessment is recommended for Leak 15656.

2.4 Free Product

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

No visual or measurable "free product" or light non-aqueous phase liquid (LNAPL) was observed in the temporary monitoring wells completed for this release.

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.

PID headspace screening was conducted on soil samples collected from the borings. Elevated (greater than 10 PID units) PID headspace readings were observed in soil boring B-11 from 6 feet to 18 feet ranging from 15 to 145 PID units and in source area boring B-10 from 2.5 feet to 16 feet ranging from 15 to 112 PID units. No elevated PID readings were observed in borings B-12 and B-13. A cumulative summary of PID headspace readings for soil samples collected from borings is presented on Table 2.

An analytical soil sample was collected from the highest observed PID headspace (112 PID units) from boring B-10 at 13 feet, above the observed water table interface from boring B-12 at 18 feet and above the observed water table interface from boring B-13 at 16 feet. The above soil samples were analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX), GRO and DRO compounds. DRO (14.9 mg/kg), GRO (13.3 mg/kg), ethylbenzene (0.19 mg/kg) and xylenes (0.26 mg/kg) were detected in soil sample B-10 (13'). No BTEX, GRO or DRO compounds were detected in the analytical soil samples B-12 (18') and B-13 (16').

The horizontal extent of soil contamination northwest and northeast of the site building has been generally defined by borings B-12 and B-13. The estimated horizontal extent of soil contamination based on soil borings is illustrated on Figure 5. The vertical extent of soil contamination observed in source area boring B-10 based on field evidence (PID headspace and visual/olfactory) was 16 feet.

Cumulative analytical results for soil samples collected from borings are summarized on Table 3. Copies of the most current laboratory analytical reports for soil samples are attached in Appendix A.

AECOM mailed Petroleum Release Notification Follow-up letters on April 16, 2010 to property owners for properties within 500 feet of the release source that were previously contacted regarding risk receptor surveys. The follow-up letters were prepared in accordance with MPCA Guidance Documents 2-07 and 2-08. A list of properties that follow-up letters were mailed to is summarized in Appendix H.

2.6 Site Conceptual Model
Discuss any changes to the overall site conceptual model that has altered the current site management decision based upon the information presented in this report.

No major changes to the overall site conceptual model are required based on the information presented in this Monitoring Report for site work completed in FY10.

The additional vapor intrusion risk assessment work conducted in FY10 indicates that the vapor intrusion risk for the main site building is minimal. Soil vapor concentrations above acute ISV standards are present within the former UST basin area. However; the sub-slab vapor sample results did not indicate the presence of VOCs immediately beneath the building footprint at concentrations above acute ISV standards or above 10 times the ISV standards. In addition, the Indoor Building Surveys did not detect the presence of completed vapor pathways or evidence of vapor intrusion to the main site building. No additional vapor intrusion assessment is recommended.

The horizontal extent of soil and groundwater contamination northwest and northeast of the release area, the vertical extent of contamination in the source area and stratigraphy at depth information was further defined by four temporary wells/soil borings in FY10. Further definition of groundwater contamination north of the release area and vertical definition of contamination in the source area reinforces a low risk well receptor scenario regarding the City of Alexandria North well field which is located approximately 1/2 mile north of the release site.

Vertical and horizontal stability of the contaminant body has likely occurred based on the age of the release and the removal of the original source (UST system) back in 1988. Residual soil, soil vapor and groundwater contamination remains in the vicinity of the former UST basin area. No visible or measurable LNAPL was identified in the temporary wells/soil borings conducted and the soil and groundwater concentrations observed in the source area boring do not indicate the presence of LNAPL above residual saturation. However; residual LNAPL may be present below residual LNAPL saturation providing a continuing source of vapor and dissolved phase groundwater contamination at the site as evidenced by the high soil vapor concentrations observed at the permanent soil vapor point (VP-1P). The receptor risks associated with the more mobile soil vapor and aqueous contaminant phases at the concentrations observed are considered low based on the follow up risk assessment work completed for this release.

Section 3: 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*.

3.1 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

3.2 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.

Timeline of significant site events:

- **May 16, 1988** — **Four gasoline USTs removed from site, no record of site impacts or removal documentation (Excavation Report).**
- **February 5, 2004** — **Release discovered during soil boring for Mn/DOT TH 29/27 Highway reconstruction and called in to State Duty Officer.**
- **Summer, 2005** — **Approximately 1,200 cubic yards of petroleum contaminated soil associated with Leak 15,656 was excavated and disposed of during Mn/DOT highway reconstruction activities.**
- **February 7-8, 2007** — **STS | AECOM conducted Limited Site Investigation including six soil borings and four soil vapor probes.**
- **February 27-28, 2008** — **STS | AECOM conducted two additional soil borings to define horizontal extent of contamination. STS | AECOM could not conduct all borings necessary for site definition due to property access issues.**
- **December 12, 2008** — **STS | AECOM conducted a single temporary well/soil boring (B-9) to define the down-gradient horizontal extent of groundwater contamination.**
- **November 10-11, 2009** — **AECOM conducted four additional borings (B-10 through B-13) to further define the extent of soil and groundwater contamination. AECOM conducted additional vapor intrusion assessment including installation and sampling of a permanent vapor monitoring point (VP-1P) adjacent to the main site building and completion of an Indoor Building Survey and Product Inventory.**

- **February 4, 2010** — **AECOM installed and sampled a sub-slab vapor monitoring point inside the main site building and conducted an updated Indoor Building Survey and Product Inventory to further assess vapor intrusion risk to this receptor**

Site closure is recommended for Leak 15,656 based on the site investigation and corrective action activities completed to address the site specific exposure pathways.

- **The release source (UST fuel distribution system) was removed from the site in 1988.**
- **Approximately 1,200 cubic yards of petroleum contaminated soil associated with Leak 15,656 was removed from the Mn/DOT road right-of-way including around the utility lines.**
- **No water well receptors were identified within 500 feet of the release source.**
- **There does not appear to be a risk to the municipal water supply from Leak 15,656 based on the well receptor survey data collected.**
- **No visible or measurable LNAPL or dissolved phase groundwater contamination was identified migrating along the utility corridors.**
- **The vapor intrusion risk to the main site building is low based on the results of the sub-slab vapor sampling and the Indoor Building Surveys and Product Inventories completed.**
- **No vapor intrusion risk to the Café building located directly west of the project site was identified based on the preliminary vapor intrusion assessment completed in 2007.**
- **No surface soil contamination was identified in the upper 2 feet of the site soils.**
- **No risk to surface water was identified.**

3.3 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). Continue ground water monitoring and sampling in accordance with the previously-approved schedule until the MPCA responds to this report.

No additional monitoring or subsurface investigation is recommended.

3.4 If additional vapor intrusion investigation is recommended, provide details of proposed activities such as completing an indoor building survey, sub-slab vapor sampling, indoor air sampling, or locations for additional soil gas sampling.

No additional vapor intrusion investigation is recommended for Leak 15656.

The sub-slab vapor monitoring point inside the building and the outside vapor monitoring point (VP-1P) should be removed/sealed as part of site closure.

The current property owner has indicated to AECOM that the existing main site building may be demolished and the site redeveloped in the near future. Redevelopment activities in the vicinity of the project site will likely encounter petroleum contaminated soil which will need to be handled in accordance with regulatory requirements.

3.5 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

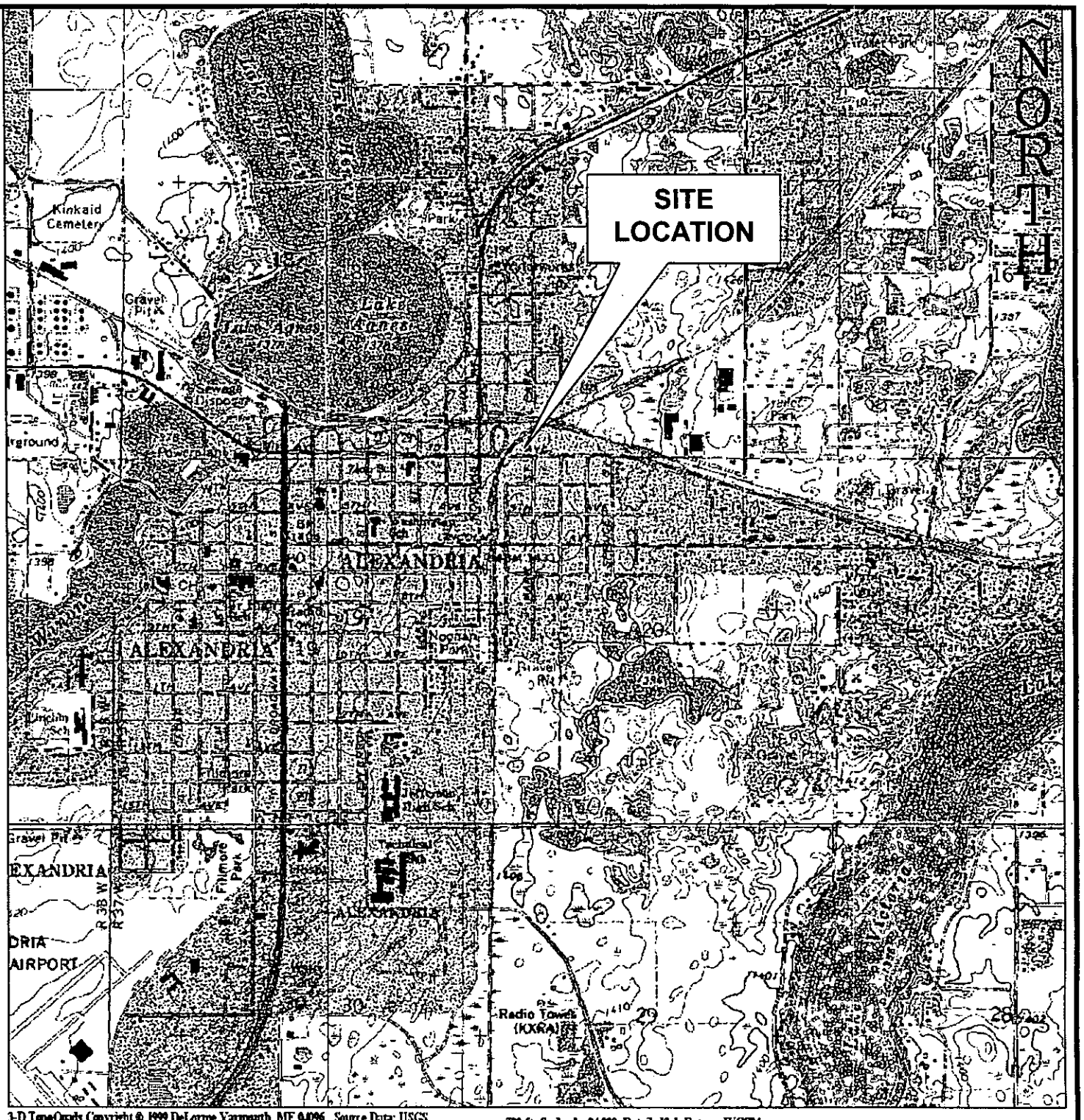
the corrective action design process and other requirements. (Note: If a *Conceptual Corrective Action Design Worksheet* is submitted, MPCA staff will review this report at a higher-than-normal priority to determine if corrective action is required.)

No corrective action is recommended.

Section 4: 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.

- ☒ **Figure 1 - Site Location Diagram**
- ☒ **Figure 2 – Aerial Photograph**
- ☒ **Figure 3 – Soil Boring and Utility Location Diagram**
- ☒ **Figure 4 – Soil Vapor Sampling Location Diagram**
- ☒ **Figure 5 – Horizontal Extent of Soil Contamination**
- ☒ **Figure 6 – Horizontal Extent of Groundwater Contamination**
- ☒ **Figure 7A – Cross Section Alignment Diagram**
- ☒ **Figure 7B – Cross Sections**
- ☒ **Figure 8 – Potential Receptor Map**
- ☒ **Figure 9 – Potential Well Receptor Survey**
- ☐ Updated ground water gradient contour maps using water level elevations from each monitoring event since the last report. Show all wells at the site, and differentiate wells constructed in different aquifers. Label ground water contours and elevations at each data point used for contouring.
- ☐ Hydrograph for all monitoring and recovery wells.
- ☐ Graph(s) showing contaminant concentrations over time for all monitoring and recovery wells.
- ☐ Vapor Survey Map showing utilities and buildings with basements and monitoring locations within 500 feet (if a survey was required). If the survey area has been expanded beyond 500 feet, adjust the map to encompass the entire surveyed area.
- ☐ Vapor Intrusion Assessment Diagram - showing all vapor intrusion samples and receptors at and within the 100-foot preliminary assessment area. If the assessment area has been expanded beyond 100 feet, adjust the map to encompass the entire assessment area.



AECOM

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SITE LOCATION DIAGRAM
Alex Exhaust
MPCA Leak # 15,656
905 3rd Avenue E.
Alexandria, Minnesota

DRAWN BY	TJG
CHECKED BY	RLD
APPROVED BY	RLD
CADFILE	SCALE 1" = 2000'
AECOM PROJ. 60141264	FIGURE NO. 1

Fig-1.DOC

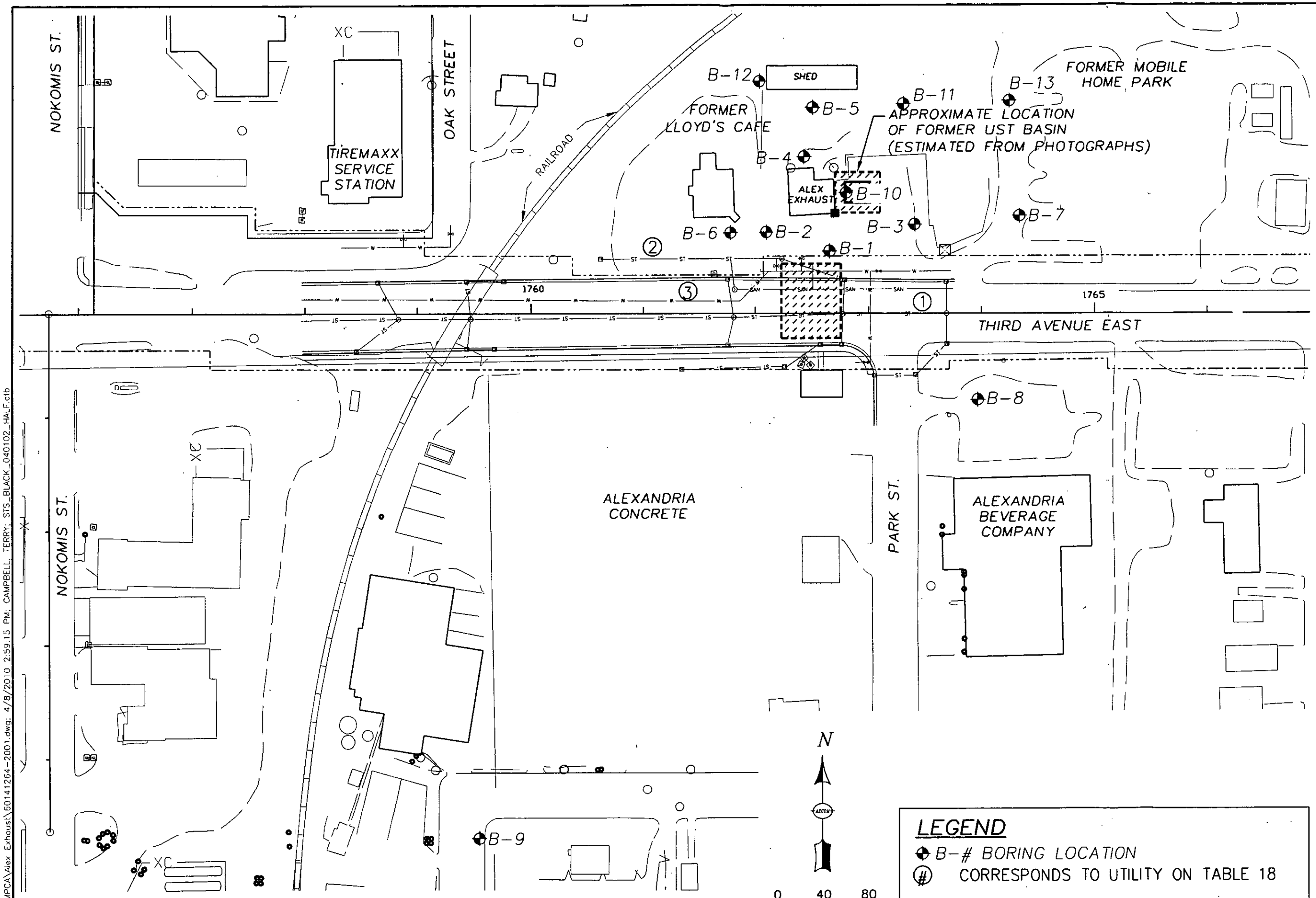
AECOM

161 Cheshire Lane North
Plymouth, Minnesota 55441
T 763.852-4200
F 763.473-0400
www.aecom.com

AERIAL PHOTOGRAPH - MDH CWI (2003)
Alex Exhaust
MPCA Leak # 15,656
905 3rd Avenue E.
Alexandria, Minnesota

DRAWN BY	TJG
CHECKED BY	RLD
APPROVED BY	RLD
CADFILE	SCALE As Shown
AECOM PROJ. 60141264	FIGURE NO. 2

FIGFRAME.DOC



NOTE: SITE PLAN PROVIDED BY AMERICAN ENGINEERING TESTING INC.
UTILITIES SHOWN APPROXIMATE BASED ON 12-23-2002 DESIGN DRAWINGS.

LEGEND

- B-# BORING LOCATION
- (#) CORRESPONDS TO UTILITY ON TABLE 18
- AREA OF Mn/DOT CONTAMINATED SOIL REMOVAL

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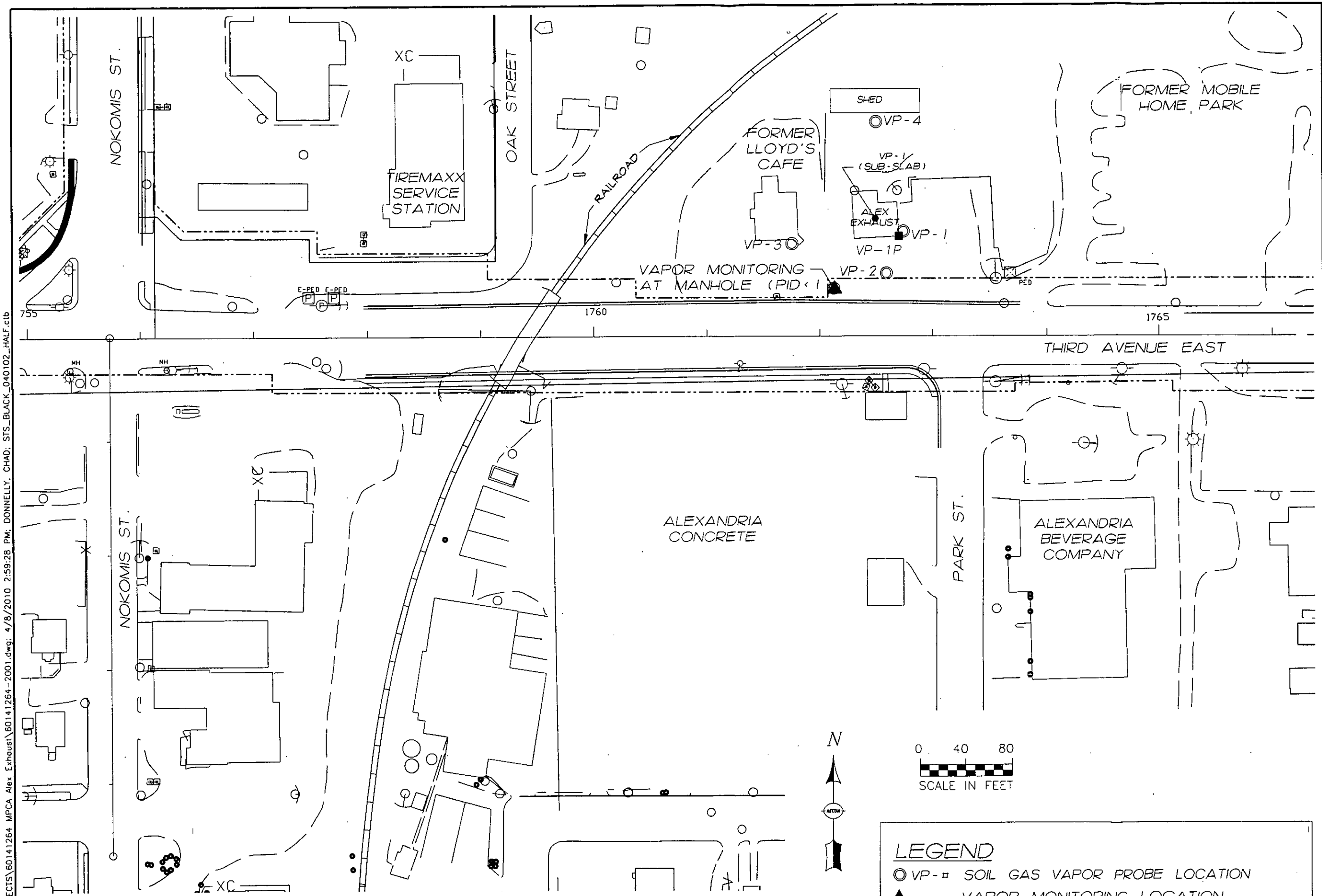
Minneapolis, MN 55441 USA
(763) 852-4200
www.aecom.com

SOIL BORING / UTILITY LOCATION DIAGRAM
ALEX EXHAUST
905 3rd AVENUE EAST
ALEXANDRIA, MINNESOTA
FOR: MPCA

Drawn:	TTC	4/08/10
Checked:	TJ	4/08/10
Approved:	RLD	4/08/10
PROJECT NUMBER	60141264	
FIGURE NUMBER	3	



NOTE: SITE PLAN PROVIDED BY AMERICAN ENGINEERING TESTING INC.
UTILITIES SHOWN APPROXIMATE BASED ON 12-23-2002 DESIGN DRAWINGS.

LEGEND

- ◎ VP-# SOIL GAS VAPOR PROBE LOCATION
- ▲ VAPOR MONITORING LOCATION
- ■ VP-# PERMANENT SOIL GAS VAPOR MEASURING

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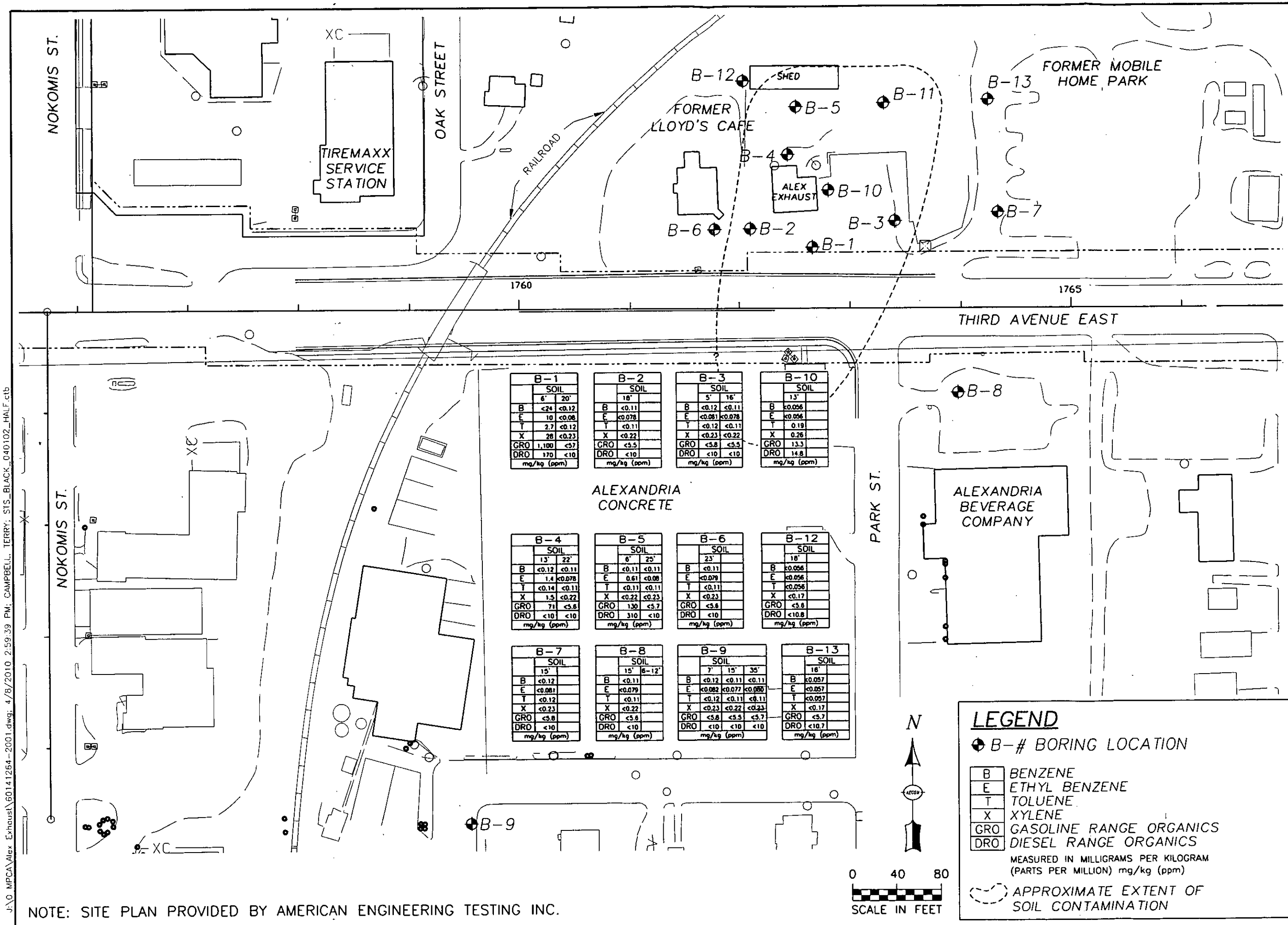
SOIL VAPOR SAMPLING LOCATION DIAGRAM
ALEX EXHAUST
905 3rd AVENUE EAST
ALEXANDRIA, MINNESOTA
FOR: MPCA

Drawn:	TTC	4/08/10
Checked:	TJ	4/08/10
Approved:	RLD	4/08/10
PROJECT NUMBER	60141264	
FIGURE NUMBER	4	



B-1	SOIL	
	6'	20'
B	<24	<0.12
E	10	<0.08
T	2.7	<0.12
X	28	<0.23
GRO	1,100	<57
DRO	170	<10
mg/kg (ppm)		

B-2	SOIL
	18'
B	<0.11
E	<0.078
T	<0.11
X	<0.22
GRO	<5.5
DRO	<10
mg/kg (ppm)	

B-3	SOIL	
	5'	16'
B	<0.12	<0.11
E	<0.081	<0.078
T	<0.12	<0.11
X	<0.23	<0.22
GRO	<5.8	<5.5
DRO	<10	<10
mg/kg (ppm)		

B-10	SOIL
	13'
B	<0.056
E	<0.056
T	0.19
X	0.26
GRO	13.3
DRO	14.8
mg/kg (ppm)	

B-4	SOIL	
	13'	22'
B	<0.12	<0.11
E	1.4	<0.078
T	<0.14	<0.11
X	1.5	<0.22
GRO	71	<5.8
DRO	<10	<10
mg/kg (ppm)		

B-5	SOIL	
	6'	25'
B	<0.11	<0.11
E	0.61	<0.08
T	<0.11	<0.11
X	<0.22	<0.23
GRO	130	<5.7
DRO	310	<10
mg/kg (ppm)		

B-6	SOIL
	23'
B	<0.11
E	<0.079
T	<0.11
X	<0.23
GRO	<5.8
DRO	<10
mg/kg (ppm)	

B-12	SOIL
	18'
B	<0.056
E	<0.056
T	<0.056
X	<0.17
GRO	<5.8
DRO	<10.8
mg/kg (ppm)	

B-7	SOIL
	15'
B	<0.12
E	<0.081
T	<0.12
X	<0.23
GRO	<5.8
DRO	<10
mg/kg (ppm)	

B-8	SOIL	
	15'	6-12'
B	<0.11	
E	<0.079	
T	<0.11	
X	<0.22	
GRO	<5.6	
DRO	<10	
mg/kg (ppm)		

B-9	SOIL		
	7'	15'	35'
B	<0.12	<0.11	<0.11
E	<0.082	<0.077	<0.080
T	<0.12	<0.11	<0.11
X	<0.23	<0.22	<0.23
GRO	<5.8	<5.5	<5.7
DRO	<10	<10	<10
mg/kg (ppm)			

B-13	SOIL
	16'
B	<0.057
E	<0.057
T	<0.057
X	<0.17
GRO	<5.7
DRO	<10.7
mg/kg (ppm)	

LEGEND

- B-# BORING LOCATION

B	BENZENE
E	ETHYL BENZENE
T	TOLUENE
X	XYLENE
GRO	GASOLINE RANGE ORGANICS
DRO	DIESEL RANGE ORGANICS

MEASURED IN MILLIGRAMS PER KILOGRAM (PARTS PER MILLION) mg/kg (ppm)

- APPROXIMATE EXTENT OF SOIL CONTAMINATION

NOTE: SITE PLAN PROVIDED BY AMERICAN ENGINEERING TESTING INC.

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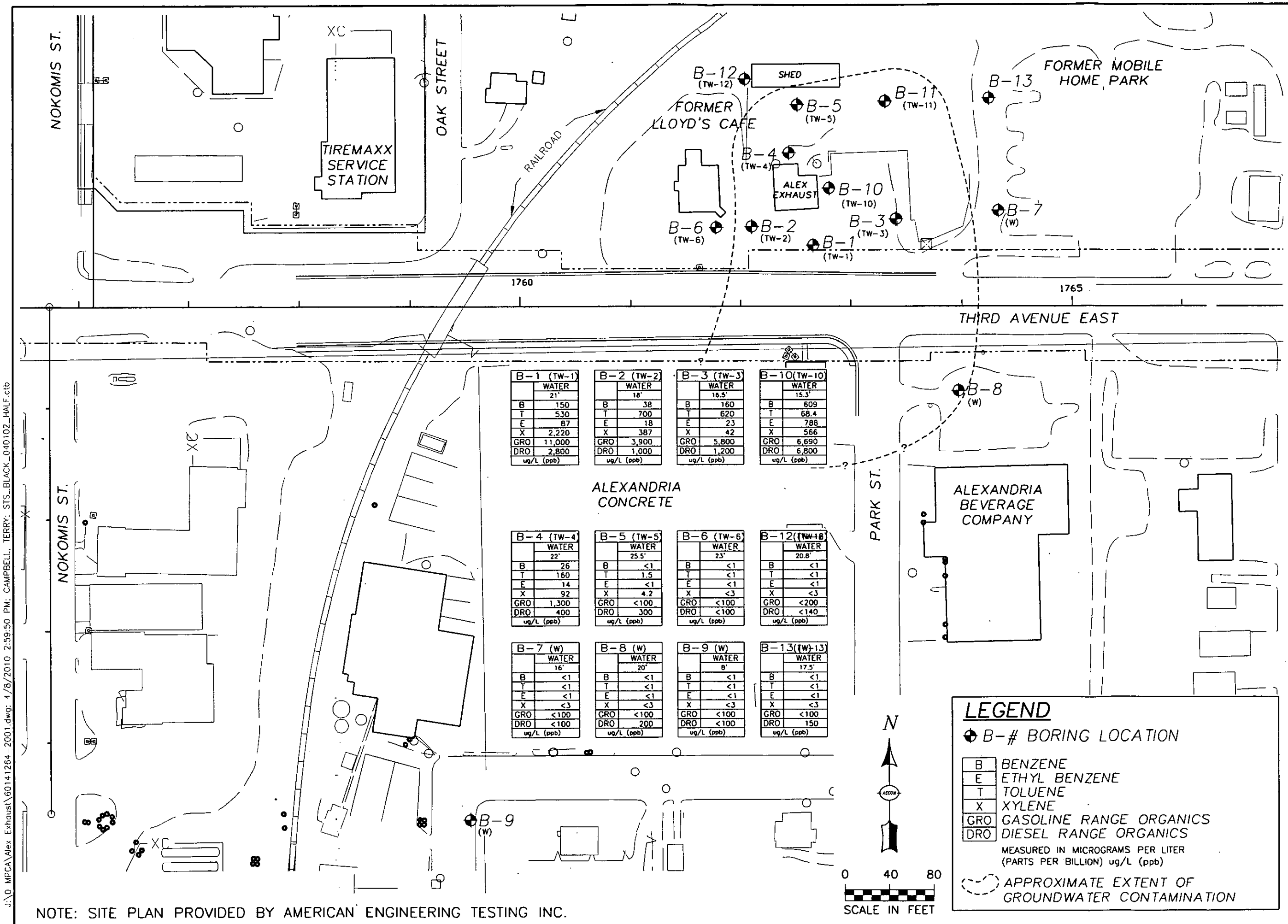
HORIZONTAL EXTENT OF SOIL CONTAMINATION
ALEX EXHAUST
905 3rd AVENUE EAST
ALEXANDRIA, MINNESOTA
FOR: MPCA

Drawn:	TTC	4/08/10
Checked:	TJ	4/08/10
Approved:	RLD	4/08/10
PROJECT NUMBER	60141264	
FIGURE NUMBER	5	



NOTE: SITE PLAN PROVIDED BY AMERICAN ENGINEERING TESTING INC.

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HORIZONTAL EXTENT OF GROUNDWATER CONTAMINATION
ALEX EXHAUST
905 3rd AVENUE EAST
ALEXANDRIA, MINNESOTA
FOR: MPCA

Drawn:	TTC	4/08/10
Checked:	TJ	4/08/10
Approved:	RLD	4/08/10
PROJECT NUMBER	60141264	
FIGURE NUMBER	6	

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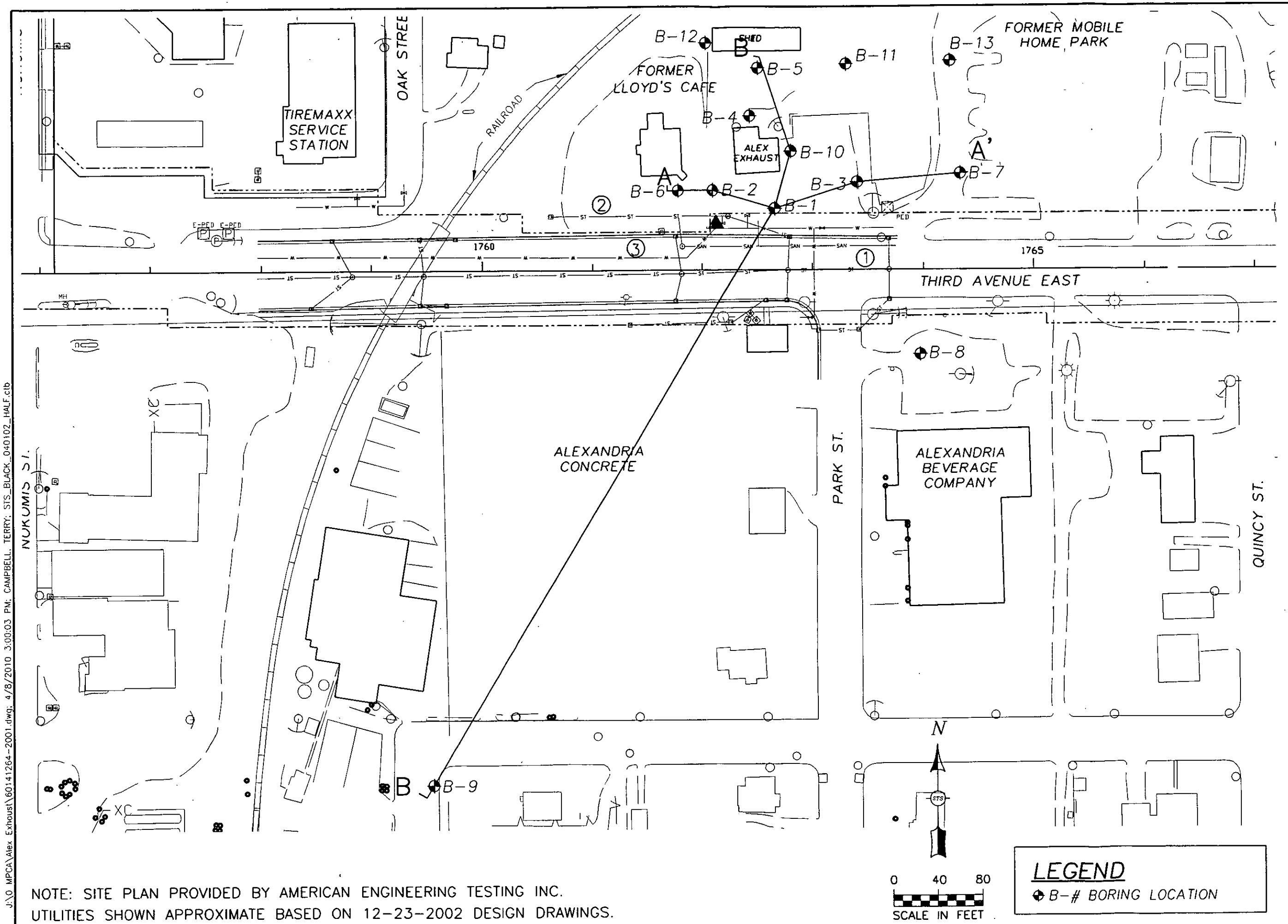

NOTE: SITE PLAN PROVIDED BY AMERICAN ENGINEERING TESTING INC.
UTILITIES SHOWN APPROXIMATE BASED ON 12-23-2002 DESIGN DRAWINGS.

LEGEND

◆ B-# BORING LOCATION

AECOM
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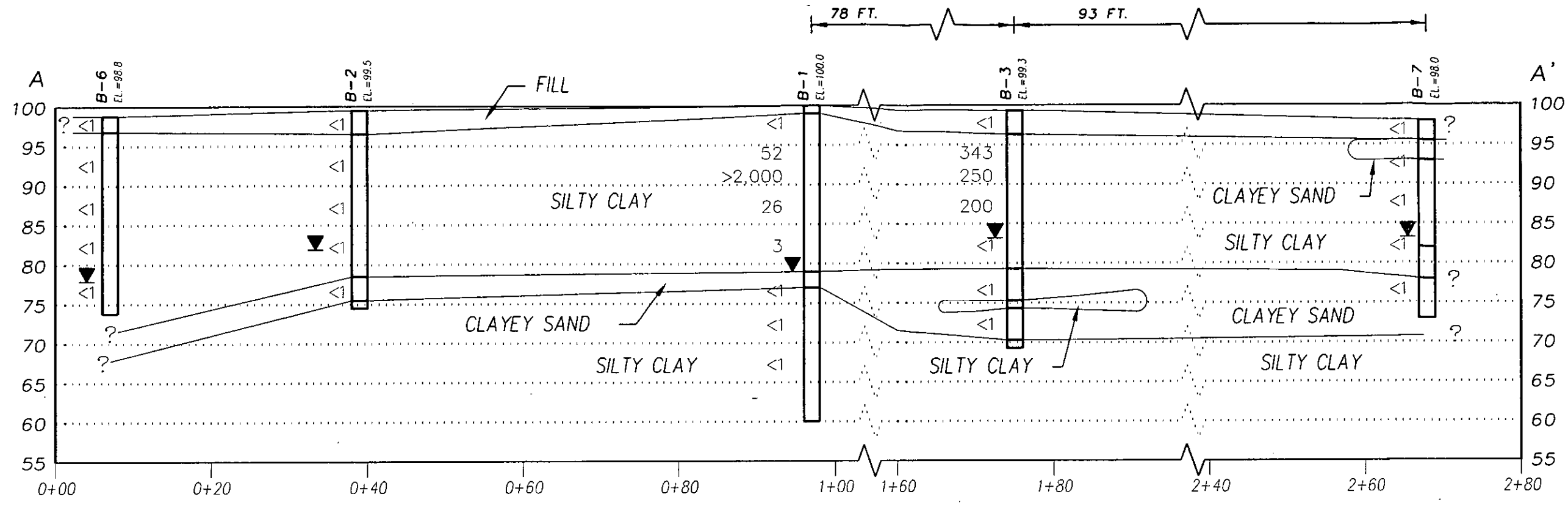
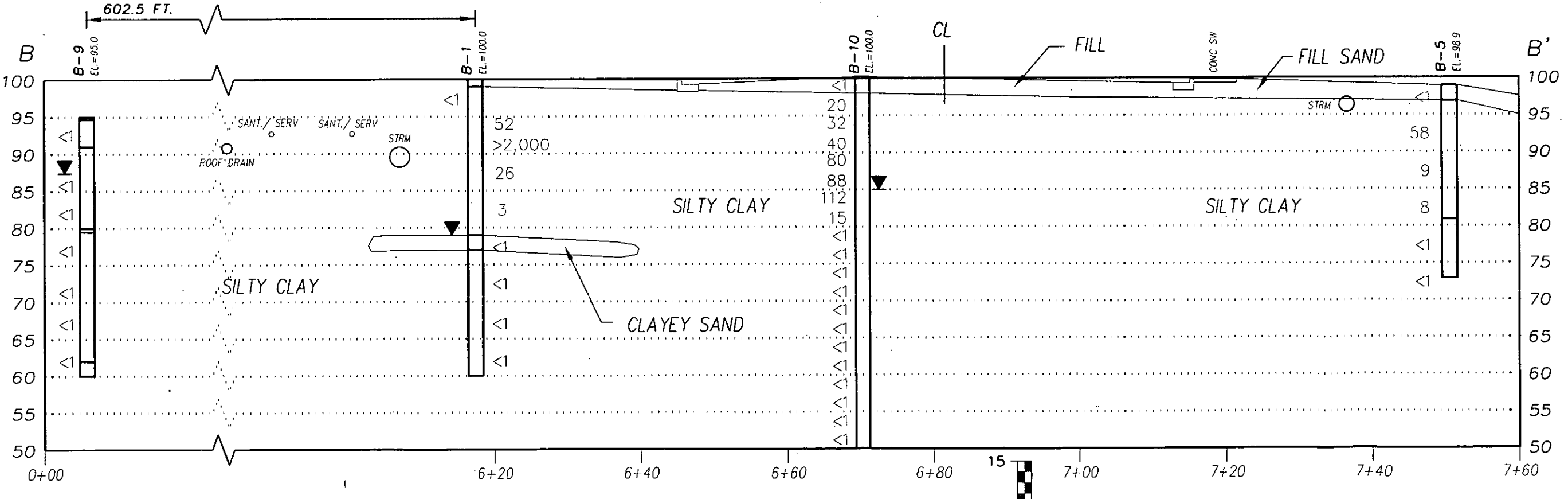
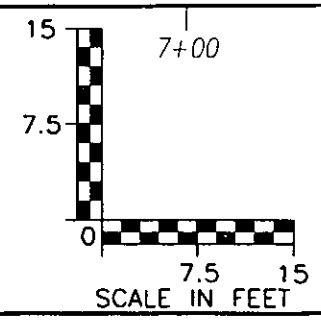
CROSS SECTION ALIGNMENT LOCATION DIAGRAM
ALEX EXHAUST
905 3rd AVENUE EAST
ALEXANDRIA, MINNESOTA
FOR: MPCA

Drawn:	TTC	4/08/10
Checked:	TJ	4/08/10
Approved:	RLD	4/08/10
PROJECT NUMBER	60141264	
FIGURE NUMBER	7	







LEGEND
▼ WATER LEVEL
<1 PID HEADSPACE READING

UTILITIES SHOWN APPROXIMATE BASED ON 12-23-2002 DESIGN DRAWINGS.

J:\0 MPCA\Alex Exhaust\60141264-2001.dwg, 4/8/2010 3:00:16 PM, CAMPBELL, TERRY, STS_BLACK_040102_HALF.ctb

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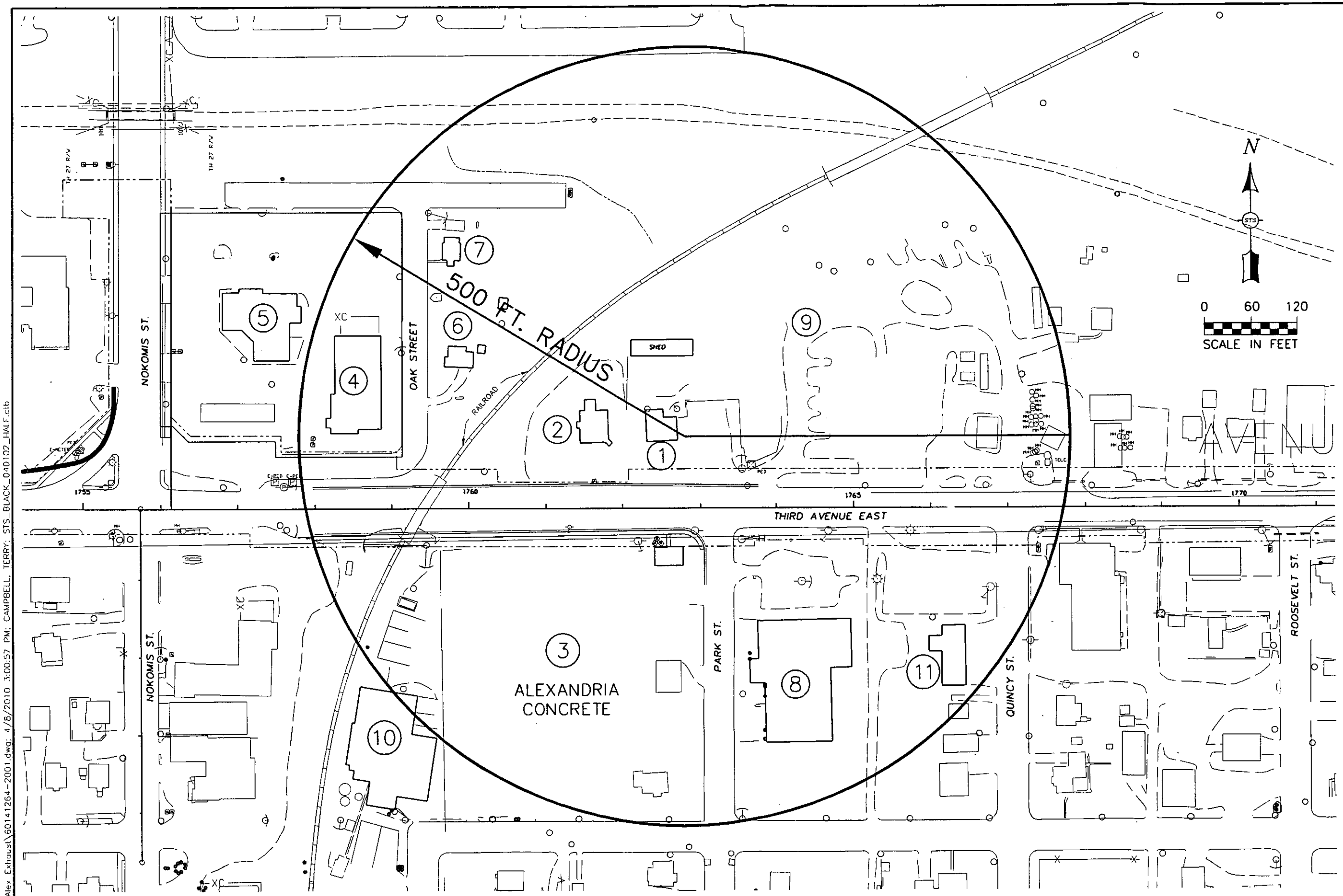
CROSS SECTION DIAGRAM A-A' & B-B'
ALEX EXHAUST
905 3rd AVENUE EAST
ALEXANDRIA, MINNESOTA
FOR: MPCA

Drawn:	TTC	4/08/10
Checked:	TJ	4/08/10
Approved:	RLD	4/08/10
PROJECT NUMBER	60141264	
FIGURE NUMBER	7A	



NOTE:SITE PLAN PROVIDED BY AMERICAN ENGINEERING TESTING INC.

LEGEND

(#) CORRESPONDS TO PROPERTIES LISTED ON TABLE 15

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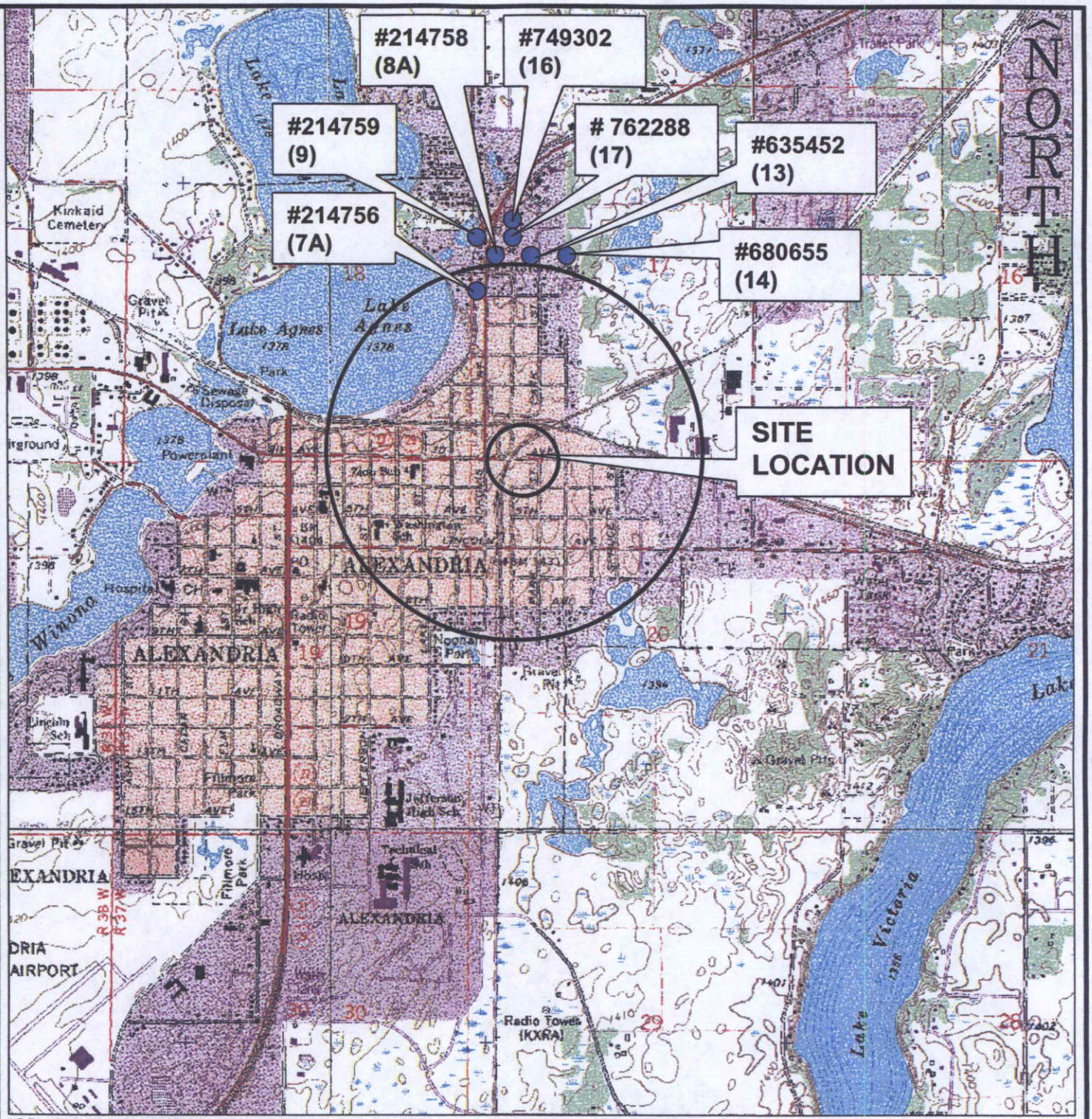
www.aecom.com

POTENTIAL RECEPTOR MAP (500 FT. RADIUS)

ALEX EXHAUST
905 3rd AVENUE EAST
ALEXANDRIA, MINNESOTA
FOR: MPCA

Drawn :	TTC	4/08/10
Checked:	TJ	4/08/10
Approved:	RLD	4/08/10
PROJECT NUMBER	60141264	
FIGURE NUMBER	8	

J:\D MPCA\Alex Exhaust\60141264-2001.dwg, 4/8/2010 3:00:57 PM, CAMPBELL, TERRY, STS_BLACK_040102_HALF.ctb



● Existing Municipal Water Well (#Unique Well Number (City of Alexandria #))

AECOM
161 Cheshire Lane North
Plymouth, Minnesota 55441
T 763.852-4200
F 763.473-0400
www.aecom.com

POTENTIAL WELL RECEPTOR SURVEY
500 Foot and ½ Mile Radius
Alex Exhaust
MPCA LEAK # 15656
905 3rd Avenue E.
Alexandria, Minnesota

DRAWN BY	TJG
CHECKED BY	RLD
APPROVED BY	RLD
CADFILE	SCALE 1" = 2000'
AECOM PROJ. 60141264	FIGURE NO. 9

Section 5: 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	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. Free Product 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

Table 1
Tank Information

Tank #	Tank Material[1]	UST or AST	Capacity (gallons)	Contents (product type)	Year Installed	Tank Status[2]	Tank Condition
1	S	UST	2,000	Unknown	Unknown	Removed (5/16/88)	Fair
2	S	UST	3,000	Unknown	Unknown	Removed (5/16/88)	Fair
3	S	UST	3,000	Unknown	Unknown	Removed (5/16/88)	Fair
4	S	UST	3,000	Unknown	Unknown	Removed (5/16/88)	Fair

Notes:
[1] "F" for fiberglass or "S" for steel
[2] Indicate; removed (date), abandoned in place (date), or currently in use.
Tank Information was obtained from the City of Alexandria Fire Marshall (Mr. Dennis Stark)

Leak 15656 - Alex Exhaust
AECOM Project 60141264

Table 2
Results of Soil Headspace Screening
(PID Units)

Depth (ft.)	Soil Boring												
	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11	B-12	B-13
0-2.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1 2	<1	<1	<1
2.5-5	**52**	<1	**343**	<1	<1	<1	<1	<1	<1	**70** 4	<1	<1	<1
5-7.5	**>2000**	<1	**250**	**>2000**	**58**	<1	<1	<1	<1	**32** 6	**15**	<1	<1
7.5-10	**>2000**	<1	**205**	**>2000**	**55**	<1	<1	<1	<1	**75** 8	**40**	<1	<1
10-12.5	**26**	<1	**202**	**>2000**	9	<1	<1	<1	<1	**88** 10	**145**	NR	<1
12.5-15	**26**	<1	**200**	**>2000**	8	<1	<1	<1	<1	**112** 12	**110**	NR	<1
15-17.5	3	<1	<1	**31**	8	<1	<1	<1	<1	**15** 14	**28**	<1	<1
17.5-20	3	<1	<1	**29**	<1	<1	<1	<1	<1	<1 16	8	<1	<1
20-22.5	<1	<1	<1	**11**	<1	<1	<1	<1	<1	<1 18	EOB = 20'	<1	<1
22.5-25	<1	**45**	<1	10	<1	<1	<1	<1	<1	<1 20	NOE(22.5)	<1	<1
25-27.5	<1	EOB = 25'	<1	<1	<1	EOB= 25'	EOB= 25'	<1	<1	<1 22		<1	<1
27.5-30	<1		**21**	<1	EOB = 26'			<1	<1	<1 24		<1	<1
30-32.5	<1		EOB = 30'	EOB = 30'				EOB = 30'	<1	<1 26		EOB = 30'	EOB = 30'
32.5-35	<1								<1	<1 28			
35-37.5	<1								EOB = 35'	<1 30			
37.5-40	<1									<1 32			
40-42	EOB = 40'									<1 34			
42-44										<1 36			
44-46										<1 38			
46-48										<1 40			
48-50										<1 42			
										EOB = 50'			

Notes:
EOB = End of Boring
BOLD = Elevated PID Headspace (greater than 10 PID units)
NR = No Recovery

Wrong depths for B10-B13 should be every 2 ft

?

No recovery

Table 3
Analytical Results of Soil Samples
(Results are in mg/kg)

Boring ID	Sampled Depth (ft.)	Date Sampled	Benzene	Toluene	Ethyl-Benzene	Xylenes	GRO	DRO	Lab Type
B-1	6	02/08/07	<2.4	**2.7**	**10**	**28**	**1100**	**170**	Fixed
B-1	20	02/08/07	<0.12	<0.12	<0.08	<0.23	<57	<10	Fixed
B-2	18	02/07/07	<0.11	<0.11	<0.078	<0.22	<5.5	<10	Fixed
B-3	5	02/07/07	<0.12	<0.12	<0.081	<0.23	<5.8	<10	Fixed
B-3	16	02/07/07	<0.11	<0.11	<0.078	<0.22	<5.5	<10	Fixed
B-4	13	02/07/07	<0.12	<0.14	**1.4**	**1.5**	**71**	<10	Fixed
B-4	22	02/07/07	<0.11	<0.11	<0.078	<0.22	<5.6	<10	Fixed
B-5	6	02/07/07	<0.11	<0.11	**0.61**	<0.22	**130**	**310**	Fixed
B-5	25	02/07/07	<0.11	<0.11	<0.08	<0.23	<5.7	<10	Fixed
B-6	23	02/07/07	<0.11	<0.11	<0.079	<0.23	<5.6	<10	Fixed
B-7	15	02/27/08	<0.12	<0.12	<0.081	<0.23	<5.8	<10	Fixed
B-8	15	02/27/08	<0.11	<0.11	<0.079	<0.22	<5.6	<10	Fixed
B-9	7	12/12/08	<0.12	<0.12	<0.082	<0.23	<5.8	<10	Fixed
B-9	15	12/12/08	<0.11	<0.11	<0.077	<0.22	<5.5	<10	Fixed
B-9	35	12/12/08	<0.11	<0.11	<0.080	<0.23	<5.7	<10	Fixed
B-10	13	11/09/09	<0.056	<0.056	**0.19**	**0.26**	**13.3**	**14.9**	Fixed
B-12	18	11/09/09	<0.056	<0.056	<0.056	<0.17	<5.6	<10.9	Fixed
B-13	16	11/09/09	<0.057	<0.057	<0.057	<0.17	<5.7	<10.7	Fixed
SLV	**--**	***June-05***	***0.034****	***6.4***	***4.7***	***45***	***NE***	***NE***	**--**
SRV	**--**	***Jun-09***	***6***	***107***	***200***	***45***	***NE***	***NE***	**--**

Notes:
A less than (<) sign indicates the analytical result is below the lab's detection limit.
BOLD = Result is above detection limits.
[ ] = Compound detected above SLV
SLV = MPCA Tier 1 Soil Leaching Value.
SRV 1= MPCA Tier 1 (Chronic, Residential Property) Soil Reference Value.
NE = None established.
* = Laboratory reporting limits exceed SLV.

Table 4

Other Contaminants Detected in Soils (Petroleum or Non-petroleum Derived)

SOIL SAMPLES WERE ANALYZED FOR BTEX, GRO AND DRO ONLY

Boring ID	Sampled Depth	Date sampled	Naphthalene mg/kg	1,2,4-TMB mg/kg	1,3,5-TMB mg/kg	Lab Type
SLV						
SRV						

Notes:

Table 5
Contaminated Surface Soil Results

Sample ID	Headspace 10 ppm or Greater[1] (Y/N)	Petroleum Saturated (Y/N)
B-10	N	N
B-11	N	N
B-12	N	N
B-13	N	N

[1]As measured with a photoionization detector (PID).
Notes:

Table 6
Water Level Measurements and Depths of Water Samples Collected from Borings

	Soil Boring											
	B-1 (TW-1)	B-2 (TW-2)	B-3 (TW-3)	B-4 (TW-4)	B-5 (TW-5)	B-6 (TW-6)	B-7	B-8	B-9	B-10	B-12	B-13
Static Water Level Depth (ft)	21	17.6	16.1	21.7	25.2	22.5	15.8	19.7	7.6	15.0	20.5	17.1
Sampled Depth (ft.)	~21	~18	~16.5	~22	~25.5	~23	~16	~20	~9	~15.3	~20.8	~17.5
Samling Method	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Peristaltic Pump	Disposable Bailer	Disposable Bailer	Disposable Bailer

Notes:

Table 7
Analytical Results of Water Samples from Borings
(Analytical Results in µg/l)

Boring ID	Date Sampled	Sampled Depth (ft)	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE	GRO	DRO	Lab Type
B-1 (TW-1)	02/08/07	21.0	**150**	87	**530**	2,220	<20	**11,000**	**2,800**	Fixed
B-2 (TW-2)	02/07/07	18.0	**38**	18	**700**	387	<1	**3,900**	**1,000**	Fixed
B-3 (TW-3)	02/07/07	16.5	**160**	23	**620**	42	<10	**5,800**	**1,200**	Fixed
B-4 (TW-4)	02/07/07	22.0	**26**	14	**160**	92	<1	**1,300**	**400**	Fixed
B-5 (TW-5)	02/07/07	25.5	<1	<1	1.5	4.2	<1	<100	**300**	Fixed
B-6 (TW-6)	02/07/07	23.0	<1	<1	<1	<3	<1	<100	<100	Fixed
B-7(W)	02/27/08	16.0	<1	<1	<1	<3	<1	<100	<100	Fixed
B-77 (W) (Duplicate of B-7 (W))	02/27/08	16.0	<1	<1	<1	<3	<1	<100	<100	Fixed
B-8 (W)	02/28/08	20.0	<1	<1	<1	<3	<1	<100	**200**	Fixed
B-9 (W)	12/12/08	8.0	<1	<1	<1	<3	<1	<100	<100	Fixed
B-99 (W) Duplicate of B-9 (W)	12/12/08	8.0	<1	<1	<1	<3	<1	<100	<100	Fixed
TW-10[1]	11/10/09	15.3	**609**	68.4	**788**	566	<10	**6,690**	**6,800**	Fixed
TW-100 (Duplicate of TW-10)	11/10/09	15.3	**622**	71.7	**821**	598	<10	**6,730**	**5,600**	Fixed
TW-12[1]	11/09/09	20.8	<2	<2	<2	<6	<2	<200	<140	Fixed
TW-13[1]	11/09/09	17.5	<1	<1	<1	<3	<1	<100	150	Fixed
Field Blank	11/10/09	--	<1	<1	<1	<3	<1	<100	<110	Fixed
Trip Blank	11/09/09	--	<1	<1	<1	<3	<1	<100	NA	Fixed
Field Blank	02/08/07	--	<1	<1	<1	<3	<1	<100	<100	Fixed
Trip Blank	02/27/08	--	<1	<1	<1	<3	<1	<100	NA	Fixed
Field Blank	02/28/08	--	<1	<1	<1	<3	<1	<100	<100	Fixed
Trip Blank	12/12/08	--	<1	<1	<1	<3	<1	<100	NA	Fixed
Field Blank	12/12/08	--	<1	<1	<1	<3	<1	<100	<100	Fixed
HRL	***03/12/10***	**	***2***	**	***NE***	***10,000***	***NE***	***NE***	***NE***	
HBV	***03/12/10***	**	***NE***	***200***	***50***	***NE***	***70***	***200****	***200****	

Notes:
A less than (<) sign indicates the analytical result is below the lab's quantitation limit shown
BOLD type indicates the sample concentration equals or exceeds the HRL/HBV
HRL = Health Risk Limit
HBV = Health Based Value, not promulgated - used as a screening value
*HBV based on MPCA Drinking Water Criteria for Total Petroleum Hydrocarbons (TPH), 1999
NE = Not Established
1 = TW-10, TW-12 and TW-13 are groundwater samples collected from temporary well soil borings B-10, B-12 and B-13 respectively

Leak 15656 - Alex Exhaust
AECOM Project 60141264

Table 8
Other Contaminants Detected in Water Samples Collected from Borings (Petroleum or Non-petroleum Derived)
(Analytical Results in µg/l)

Well Number	Date Sampled	Sampled Depth (ft)	1,2,4, Trimethyl benzene	1,3,5, Trimethyl benzene	1,2 Dichlorobenzene	1,2 Dichloroethane	Bromodichlorom ethane	Chloroform	Dibromochlorom ethane	Naphthalene	n-Propylbenzene	n-butylbenzene	Isopropylbenzene	p-Isopropyltoluene	sec-butylbenzene	Tetrahydrofuran
B-1 (TW-1)	02/08/07	21.0	1200	**380**	<20	**370**	<1	<1	<1	210	180	<1	61	<20	23	<100
B-2 (TW-2)	02/07/07	18.0	200	150	2.3	<2	<1	<1	<1	77	83	<1	38	1.9	4.2	<5
B-3 (TW-3)	02/07/07	16.5	<10	75	<10	<20	<1	<1	<1	30	130	<1	65	<10	12	<50
B-4 (TW-4)	02/07/07	22.0	53	21	<1	<2	<1	<1	<1	18	19	<1	9.2	1.2	1.8	<5
B-5 (TW-5)	02/07/07	25.5	8	2.5	<1	<2	<1	<1	<1	<2	1.1	<1	<1	<1	<1	<5
B-6 (TW-6)	02/07/07	23.0	<1	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<5
B-7(W)	02/27/08	16.0	<1	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<5
B-77 (W) (Duplicate of B-7 (W))	02/27/08	16.0	<1	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<5
B-8 (W)	02/28/08	20.0	<1	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<5
B-9 (W)	12/12/08	8.0	<1	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<5
B-99 (W) Duplicate of B-9 (W)	12/12/08	8.0	<1	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<5
TW-10[1]	11/10/09	15.3	**205**	**136**	<10	<10	<10	12.1	<10	125	94.5	13.2	39.7	<10	<10	<100
TW-100 (Duplicate of TW-10)	11/10/09	15.3	**219**	**147**	<10	<10	<10	12.8	<10	139	101	14.7	42.1	<10	<10	<100
TW-12[1]	11/09/09	20.8	<2	<2	<2	<2	<2	<2	<2	<8	<2	<2	<2	<2	<2	<20
TW-13[1]	11/09/09	17.5	<1	<1	<1	<1	3.3	2.4	3.3	<4	<1	<1	<1	<1	<1	<10
Field Blank	11/10/09	--	<1	<1	<1	<1	3.9	2.4	3.8	<4	<1	<1	<1	<1	<1	<10
Trip Blank	11/09/09	--	<1	<1	<1	<1	<1	<1	<1	<4	<1	<1	<1	<1	<1	<10
Field Blank	02/08/07	--	<1	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	12
Trip Blank	02/27/08	--	<1	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<5
Field Blank	02/28/08	--	<1	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<5
Trip Blank	12/12/08	--	<1	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<5
Field Blank	12/12/08	--	<1	<1	<1	<2	<1	<1	<1	<2	<1	<1	<1	<1	<1	<5
HRL	***03/12/10***	**--**	NE	100	600	4	6	30	10	300	NE	NE	300	NE	NE	NE
RAA	***03/12/10***	**--**	100	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE
HBV	***03/12/10***	**--**	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	100

Notes:
A less than (<) sign indicates the analytical result is below the lab's quantitation limit shown
BOLD type indicates the sample concentration equals or exceeds the HRL/HBV/RAA
HRL = Minnesota Department of Health's "Health Risk Limit for drinking water
HBV = Health Based Value, based on MPCA Drinking Water Criteria for "TPH"
NE = Not Established

Table 9
Monitoring Well Completion Information[1]

NO MONITORING WELLS WERE INSTALLED FOR THIS RELEASE

Well Number	MDH Unique Well Number	Date Installed	Surface Elevation	Top of Riser Elevation	Bottom of Well (Elevation)	Screen Interval (Elev. - Elev.)	Well Stickup	Total Well Depth from Surface (ft)
1					0.0		0.00	
2					0.0		0.00	
3					0.0		0.00	
4					0.0		0.00	
5					0.0		0.00	
6					0.0		0.00	
7					0.0		0.00	
8					0.0		0.00	
9					0.0		0.00	
10					0.0		0.00	

[1] Include well construction diagrams and MDH well logs in Section 6.
Notes: (location and elevation of benchmark)

Table 10
Water Level Measurements in Monitoring Wells

NO MONITORING WELLS WERE INSTALLED FOR THIS RELEASE

Well Number (Unique Number)	Date	Depth to Water from Top of Riser	Product Thickness	Depth to Water Below Grade	Relative Groundwater Elevation	Water Level Above Screen (Y/N)
1						
2						
3						
4						

[1]Describe the methods used to measure water levels in Section 6.
Notes:

Table 11

Analytical Results of Water Samples Collected from Wells[1]
(all units expressed in ug/l - ppb)

NO MONITORING WELLS WERE INSTALLED FOR THIS RELEASE

Well #	Date Sampled	Benzene	Toluene	Ethyl Benzene	Xylenes	MTBE	GRO	DRO	Lab Type[2]
MW-1									
MW-2									
MW-3									
MW-4									
Trip Blank									
Field Blank									
Lab Blank									
HRL(ug/L)									

[1] Report results in ug/L. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.

Table 12

Other Contaminants Detected in Water Samples

Collected from Wells (Petroleum or Non-petroleum Derived)

NO MONITORING WELLS WERE INSTALLED FOR THIS RELEASE

Well Number	Date Sampled	1,2 DCA	EDB				
MW-1							
MW-2							
MW-3							
Field							
Trip Blank							
Lab Blank							
HRL							

[1] Report results in ug/L. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.

Table 13
Natural Attenuation Parameters

NO MONITORING WELLS WERE INSTALLED FOR THIS RELEASE

Well Number	Sample Date	Temp. °C	pH	Dissolved Oxygen (mg/L)	Nitrate (mg/L)	(Fe II) (mg/L)	(H_2S, HS^-) (mg/L)
MW-1							
MW-2							
MW-3							
MW-4							

Describe the methods and procedures used in Section 6.
Notes:

Table 14
Free Product Recovery

NO FREE PRODUCT HAS BEEN ENCOUNTERED

Recovery Location ID	Recovery Date	Pre-Recovery Measurements				Recovery Method	Event Recovery[3]		Cumulative Recovery[4]		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-1											
MW-2											
MW-3											
MW-4											

[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).
Describe the methods and procedures used in Section 6. Add additional rows as needed.
Notes:

Table 15

Properties Located within 500 feet of the Release Source

Prop ID	Property Address	Distance From Site (ft)	Water Supply Well			Public Water Supply		Basement (Y/N)	Sump (Y/N)	Petroleum Sources (Y/N)	Comments (including property use)
			Well Present (Y/N)	How Determined	Well Use	Utilized (Y/N)	Confirmed by City (Y/N)				
1	905 3rd Avenue East	0 - Project Site Address	N	Visual + Telephone Conversation with Property	NA	NA	Y	N	N	Y	Former Service Station/Automobile Repair shop
2	903 3rd Avenue East	~80' west	N	Visual + Telephone Conversation with Property	NA	NA	Y	N	N	N	Lloyd's Café
3	924 3rd Avenue East	~140' south	N	Visual + Telephone Conversation with Site Manager	NA	NA	Y	N	N	Y	Alexandria Concrete Company, Inc.
4	801 3rd Avenue East	~400' northwest	N	Visual + Personal Contact	NA	NA	Y	N	N	Y	Alexandria Tire and Auto/TireMaxx Service Center
5	209 Nokomis Street	~500' northwest	N	Visual + Personal Contact	NA	NA	Y	N	N	Y	Gas Station/Burger King Restaurant
6	207 Oak Street	~250' northwest	N	Visual + Personal Contact	NA	NA	Y	Y	N	N	Single Family Residence
7	203 Oak Street	~380' northwest	N	Visual + Personal Contact	NA	NA	Y	Y	N	N	Single Family Residence
8	1102 3rd Avenue East	~200' southeast	N	Visual + Personal Contact	NA	NA	Y	N	N	N	Alexandria Beverage Company
9	1023 3rd Avenue East	~60' east	N	Visual + Telephone Conversation with Property	NA	NA	Y	N	N	N	Former Mobile Home Park (vacant lot)
10	901 4th Avenue East	~500' southwest	N	Visual + Telephone Conversation with Site Manager	NA	NA	Y	N	N	Y	Morrelle London Aggregate, LLC
11	312 Quincy Street	~300' southeast	N	Visual + Personal Contact	NA	NA	Y	N	N	N	Alex Rubbish

Notes:

NA = Not applicable

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

Property ID	MDH Unique Well Number	Ground Elevation	Total Depth (ft)	Base of Casing (ft)	Static Elevation	Aquifer	Use	Owner	Distance & Direction from source (ft)
City Well 7A*	214756	1405	129	No Record	1367	QBAA	Municipal	City of Alexandria	Approximately 2,500 feet north

Notes:
No water supply wells were identified within 500 feet of the release source
* This municipal well is located approximately 2,500 feet north of the release site

2640
2 | 5280
4
12
8

Table 17

Surface Water Receptor Information

NO SURFACE WATERS WERE IDENTIFIED WITHIN 1/4 MILE OF THE RELEASE SITE

Map ID[1]	Name and Type[2]	Distance and Direction from Plume Edge (ft)	Clean Boring/Well Between?[3] (Y/N)

Notes:

Table 18
Utility Receptor Information

Utility ID	Description	Construction Material	Depth to Top of Structure	Diameter	Flow Direction (for liquids)	Year Installed	Backfill Material	Distance to Water Table
1	Sanitary sewer main between Park Street and Nokomis	PVC	8 ft	8 inch	East	2005	Imported Sand/Native soil	~16 feet
2	Storm SewerMain between Park Street and Nokomis	Concrete	10 ft.	30 inch	East	2005	Imported Sand/Native soil	~16 feet
3	Water Main between Park Street and Nokomis	Copper	8ft.	12 inch	East	2005	Imported Sand/Native soil	~16 feet

Notes:
Utility ID # corresponds to Utility Location on Figure 3

Utility ID	Name, title, and telephone number for public entity contacted to obtain information or other source of information
1,2,3	Tim Schoonhoven, City Engineer (WSN), (320) 762-8149

Notes:

Table 19
Vapor Survey Results

Location ID	Description	Monitoring Date	PID reading (PID units)	Percent of the LEL
VM-1	Storm Sewer Manhole	2/8/2007	<1	NA
905 3rd Avenue	Breathing zone inside the main site building	11/10/2009	<1	0
905 3rd Avenue	Breathing zone inside the main site building	2/4/2010	<1	0
905 3rd Avenue	Floor drain in service garage	2/4/2010	<1	0

Site building

Notes:
NA = Not Analyzed

Leak 15656 - Alex Exhaust
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Table 20
Results of Soil Gas Sampling for Vapor Intrusion Screening
(Concentrations are Reported in µg/m^3)
Partial Listing - Only Compounds Detected in One or More Samples are Included

Sample ID	VP-1		VP-2		VP-3		VP-4		Field Blank		VP-1P		Sub-Slab (VP-1)*		*Acute Intrusion Screening Value*	*10x Intrusion Screening Value*	*100x Intrusion Screening Value*
Date	2/8/2007		2/8/2007		2/8/2007		2/8/2007		2/8/2007		11/10/2009		2/4/2010				
Depth (feet)	3		8		3		3		Ambient		3		Sub-Slab				
PID (PID units)	>2,000		>2,000		<1		136		<1		129		<1				
COMPOUNDS	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit			
Acetone	ND	312	ND	300	**48.6**	3.6	**48.4**	3.1	**5.7**	0.6	**6,220,000**^{E}	12,300	**35.5**	0.66	***60,000***	***310,000***	***3,100,000***
Benzene	**15,700**	422	**33,500**	406	**29.1**	0.98	**21.9**	4.2	ND	0.81	**213,000**	16,600	**2.6**	0.90	***1,000***	***45***	***450***
2-Butanone (MEK)	ND	390	ND	375	**11**	0.91	ND	3.9	**1.7**	0.75	ND	15,400	**4.2**	0.83	***10,000***	***50,000***	***500,000***
Carbon Disulfide	ND	410	ND	394	**3.7**	0.95	**6.8**	4.1	ND	0.79	ND	16,100	ND	0.87	***6,000***	***7,000***	***70,000***
Chloromethane	ND	273	ND	262	ND	0.63	ND	2.7	**0.83**	0.52	ND	10800	ND	0.58	***1,000***	***900***	***9,000***
Cyclohexane	**1,080,000**	4420	**918,000**	4250	**98.5**	1.0	**27**	4.4	ND	0.85	**10,100,000**^{E}	17,400	**2.0**	0.94	***NA***	***60,000***	***600,000***
Dichlorodifluoromethane	ND	650	ND	625	**29.7**	1.5	ND	6.5	**2.2**	1.2	ND	25,600	**1.9**	1.4	***NA***	***2,000***	***20,000***
Ethanol	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	48,600	**195**^{E}	2.6	***180,000***	***150,000***	***1,500,000***
Ethylbenzene	**18,400**	572	**18,000**	550	**15**	1.3	**7.2**	5.7	ND	1.1	**33,800**	22,500	**8.9**	1.2	***10,000***	***10,000***	***100,000***
4-Ethyltoluene	**4,050**	1620	**5,100**	1560	**11**	3.8	ND	16.2	ND	3.1	ND	64,000	ND	3.4	***NA***	***NA***	***NA***
n-Heptane	**288,000**	5400	ND	519	**36.2**	1.3	**21.1**	5.4	ND	1.0	**1,730,000**	21,200	**4.4**	1.1	***NA***	***NA***	***NA***
n-Hexane	**540,000**	4680	**829,000**	4500	**42.1**	1.1	**32.5**	4.7	ND	0.9	**4,950,000**^{E}	18,400	**2.5**	0.99	***NA***	***20,000***	***200,000***
Methylene Chloride	ND	462	ND	444	**2.1**	1.1	ND	4.6	ND	0.89	ND	18,200	ND	0.98	***10,000***	***200***	***2,000***
4-methyl-2-pentanone (MIBK	ND	540	ND	519	ND	1.3	ND	5.4	ND	1.0	ND	21,200	**5.9**	1.1	***NA***	***30,000***	***300,000***
Naphthalene	ND	1760	ND	1690	**4.3**	4.1	ND	17.6	ND	3.4	ND	69,100	ND	3.7	***NA***	***90***	***900***
2-Propanol	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	ND	64,000	**16.6**	3.4	***3,200***	***70,000***	***700,000***
Propylene	ND	228	ND	219	**167**	2.6	**267**	2.3	ND	0.44	ND	8,960	**0.57**	0.48	***NA***	***30,000***	***300,000***
Styrene	ND	556	ND	544	**2.9**	1.3	ND	5.7	ND	1.1	ND	22,300	ND	1.2	***21,000***	***10,000***	***100,000***
Tetrachloroethene	ND	910	ND	875	**3.2**	2.1	ND	9.1	ND	1.8	ND	35,800	**2.4**	1.9	***20,000***	***200***	***2,000***
Toluene	**4,100**	500	**3,740**	481	**39.1**	1.2	**25**	5.0	ND	0.96	**94,000**	19,700	**15.4**	1.1	***37,000***	***50,000***	***500,000***
1,2,4-Trimethylbenzene	**5,930**	1620	**6,970**	1560	**31.3**	3.8	ND	16.2	ND	3.1	ND	64,000	ND	3.4	***NA***	***70***	***700***
1,3,5-Trimethylbenzene	**2,370**	1620	**4,190**	1560	**8.9**	3.8	ND	16.2	ND	3.1	ND	64,000	ND	3.4	***NA***	***60***	***600***
Xylenes (m&p)	**31,200**	1140	**28,600**	1100	**36.9**	2.7	**14.1**	11.4	ND	2.2	**62,000**	45,100	**28.1**	2.4	***43,000***	***1,000***	***10,000***
Xylenes (o)	**5,180**	572	**2,760**	550	**11.7**	1.3	ND	5.7	ND	1.1	ND	22,500	**6.0**	1.2	***43,000***	***1,000***	***10,000***

Notes:
Bold = Concentration detected above laboratory reporting limit
=Concentration exceeds 100 times the ISV
= Concentration exceeds the Acute ISV
ISV standards based on MPCA ISVs for Vapor Intrusion Table, February, 2009 Version
E = Analyte concentration exceeded the calibration range. The reported result is estimated.
NA = No Toxicity Data Available
ND = Not Detected
NR = No Analysis Run for this compound, compound was not on analyte list at the time the sample was analyzed
* - The sub-slab sample was collected from beneath the interior floor slab of the site building located at 905 3rd Avenue East

Section 6: 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.

☒	*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*	**Sampling Information Forms for temporary wells, Soil Vapor Probe Sampling Summary Forms and Indoor Building Survey and Product Inventory Forms.**
☐	*Appendix E*	Guidance Document 1-03a *Spatial Data Reporting Form* (previously submitted with Limited Site Investigation Report).
☐	*Appendix F*	Guidance Document 2-05 *Release Information Worksheet* (previously submitted with Limited Site Investigation Report)
☐	*Appendix G*	Guidance Document 4-19 *Conceptual Corrective Action Design Worksheet.*
☒	*Appendix H*	Petroleum Release Notification Follow-up Summary

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=53688.1377&agency=Commerce
Petrofund Phone	**651-215-1775 or 1-800-638-0418**
State Duty Officer	**651-649-5451 or 1-800-422-0798**

Appendix A

Copies of Most Recent Laboratory Analytical Reports

Pace Analytical
www.pacelabs.com

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

November 18, 2009

Mr. Tim Grape
AECOM
161 Cheshire Lane North
Suite 500
Minneapolis, MN 55441

No chromatograms

RE: Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Dear Mr. Grape:
Enclosed are the analytical results for sample(s) received by the laboratory on November 11, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Carol Davy

carol.davy@pacelabs.com
Project Manager

Enclosures

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

CERTIFICATIONS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Minnesota Certification IDs

1700 Elm Street SE, Suite 200 Minneapolis, MN 55414
Alaska Certification #: UST-078
Washington Certification #: C754
Tennessee Certification #: 02818
Pennsylvania Certification #: 68-00563
Oregon Certification #: MN200001
North Dakota Certification #: R-036
North Carolina Certification #: 530
New York Certification #: 11647
New Jersey Certification #: MN-002
Montana Certification #: MT CERT0092
Minnesota Certification #: 027-053-137
Maine Certification #: 2007029
Louisiana Certification #: LA080009
Louisiana Certification #: 03086
Kansas Certification #: E-10167
Iowa Certification #: 368
Illinois Certification #: 200011
Florida/NELAP Certification #: E87605
California Certification #: 01155CA
Arizona Certification #: AZ-0014
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10116766001	B-13 (16')	Solid	11/09/09 12:18	11/11/09 13:50
10116766002	B-12 (18')	Solid	11/09/09 16:22	11/11/09 13:50
10116766003	B-10 (13')	Solid	11/10/09 11:20	11/11/09 13:50
10116766005	Methanol Blank	Solid	11/10/09 00:00	11/11/09 13:50
10116766006	TW-13	Water	11/09/09 11:35	11/11/09 13:50
10116766007	TW-12	Water	11/09/09 15:12	11/11/09 13:50
10116766008	TW-10	Water	11/10/09 10:00	11/11/09 13:50
10116766009	TW-100	Water	11/10/09 10:12	11/11/09 13:50
10116766010	FIELD BLANK	Water	11/10/09 14:00	11/11/09 13:50
10116766011	TRIP BLANK	Water	11/09/09 00:00	11/11/09 13:50

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SAMPLE ANALYTE COUNT

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10116766001	B-13 (16')	% Moisture	JDL	1
		WI MOD DRO	KL1	2
		WI MOD GRO	AMS1	7
10116766002	B-12 (18')	% Moisture	JDL	1
		WI MOD DRO	KL1	2
		WI MOD GRO	AMS1	7
10116766003	B-10 (13')	% Moisture	JDL	1
		WI MOD DRO	KL1	2
		WI MOD GRO	AMS1	7
10116766005	Methanol Blank	WI MOD GRO	AMS1	7
10116766006	TW-13	EPA 8260	CNC	73
		WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
10116766007	TW-12	EPA 8260	CNC	73
		WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
10116766008	TW-10	EPA 8260	CNC	73
		WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
10116766009	TW-100	EPA 8260	CNC	73
		WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
10116766010	FIELD BLANK	EPA 8260	CNC	73
		WI MOD DRO	KL1	2
		WI MOD GRO	MJH	2
10116766011	TRIP BLANK	EPA 8260	CNC	73

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PROJECT NARRATIVE

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Method: **WI MOD DRO**
Description: WIDRO GCS
Client: AECOM
Date: November 18, 2009

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

P4: Sample field preservation does not meet EPA or method recommendations for this analysis.
- TW-12 (Lab ID: 10116766007)
- TW-13 (Lab ID: 10116766006)

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.

QC Batch: OEXT/11900

A5: Greater than 5% sediment in sample determined by visual observation. Aqueous portion decanted from the sediment and extracted. The sample container could not be rinsed with solvent per the method requirement.
- TW-12 (Lab ID: 10116766007)

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 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:

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PROJECT NARRATIVE

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Method: **WI MOD DRO**
Description: WIDRO GCS
Client: AECOM
Date: November 18, 2009

Analyte Comments:

QC Batch: OEXT/11900

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

- TW-10 (Lab ID: 10116766008)
  - Diesel Range Organics
- TW-100 (Lab ID: 10116766009)
  - Diesel Range Organics

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PROJECT NARRATIVE

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Method: **WI MOD DRO**
Description: WIDRO GCS
Client: AECOM
Date: November 18, 2009

General Information:
3 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 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:

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PROJECT NARRATIVE

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Method: **WI MOD GRO**
Description: WIGRO GCV
Client: AECOM
Date: November 18, 2009

General Information:
5 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.

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 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/6634

1M: The sample was analyzed at a dilution due to a large amount of sediment in the vials. The pH was found to be greater than 2.

- TW-12 (Lab ID: 10116766007)
  - a,a,a-Trifluorotoluene (S)

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PROJECT NARRATIVE

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Method: WI MOD GRO
Description: WIGRO GCV
Client: AECOM
Date: November 18, 2009

General Information:
4 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.

Sample Preparation:
The samples were prepared in accordance with TPH GRO/PVOC WI ext. 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 with any exceptions noted below.

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

QC Batch: GCV/6630

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.

- LCSD (Lab ID: 713057)
  - Methyl-tert-butyl ether

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

QC Batch: GCV/6631

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

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: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Method: **% Moisture**
Description: Dry Weight
Client: AECOM
Date: November 18, 2009

General Information:
3 samples were analyzed for % Moisture. 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 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:

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PROJECT NARRATIVE

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Method: EPA 8260
Description: 8260 VOC
Client: AECOM
Date: November 18, 2009

General Information:
6 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 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/13422

A matrix spike and matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10116761007

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 714380)
  - Acetone
- MSD (Lab ID: 714381)
  - Naphthalene

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: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Method: **EPA 8260**
Description: 8260 VOC
Client: AECOM
Date: November 18, 2009

Analyte Comments:

QC Batch: MSV/13440

2M: The sample was analyzed at a dilution due to a large amount of sediment in the vials. The pH was found to be greater than 2; therefore, the sample was analyzed outside of recommended holding time.

- TW-12 (Lab ID: 10116766007)
  - Dibromofluoromethane (S)

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

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: B-13 (16') **Lab ID: 10116766001** Collected: 11/09/09 12:18 Received: 11/11/09 13:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	ND	mg/kg	10.7	5.3	1	11/13/09 18:21	11/16/09 23:48		
n-Triacontane (S)	82	%	50-150		1	11/13/09 18:21	11/16/09 23:48		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	ND	mg/kg	0.057	0.028	1	11/13/09 10:13	11/13/09 18:01	71-43-2	
Ethylbenzene	ND	mg/kg	0.057	0.028	1	11/13/09 10:13	11/13/09 18:01	100-41-4	
Gasoline Range Organics	ND	mg/kg	5.7	2.8	1	11/13/09 10:13	11/13/09 18:01		
Methyl-tert-butyl ether	ND	mg/kg	0.28	0.14	1	11/13/09 10:13	11/13/09 18:01	1634-04-4	L1
Toluene	ND	mg/kg	0.057	0.028	1	11/13/09 10:13	11/13/09 18:01	108-88-3	
Xylene (Total)	ND	mg/kg	0.17	0.085	1	11/13/09 10:13	11/13/09 18:01	1330-20-7	
a,a,a-Trifluorotoluene (S)	104	%	80-125		1	11/13/09 10:13	11/13/09 18:01	98-08-8	
Dry Weight	Analytical Method: % Moisture								
Percent Moisture	**11.1**	%	0.10	0.10	1		11/13/09 00:00		

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: B-12 (18') **Lab ID: 10116766002** Collected: 11/09/09 16:22 Received: 11/11/09 13:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	ND	mg/kg	10.9	5.5	1	11/13/09 18:21	11/16/09 23:55		
n-Triacontane (S)	81	%	50-150		1	11/13/09 18:21	11/16/09 23:55		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	ND	mg/kg	0.056	0.028	1	11/13/09 10:13	11/13/09 18:24	71-43-2	
Ethylbenzene	ND	mg/kg	0.056	0.028	1	11/13/09 10:13	11/13/09 18:24	100-41-4	
Gasoline Range Organics	ND	mg/kg	5.6	2.8	1	11/13/09 10:13	11/13/09 18:24		
Methyl-tert-butyl ether	ND	mg/kg	0.28	0.14	1	11/13/09 10:13	11/13/09 18:24	1634-04-4	L1
Toluene	ND	mg/kg	0.056	0.028	1	11/13/09 10:13	11/13/09 18:24	108-88-3	
Xylene (Total)	ND	mg/kg	0.17	0.084	1	11/13/09 10:13	11/13/09 18:24	1330-20-7	
a,a,a-Trifluorotoluene (S)	106	%	80-125		1	11/13/09 10:13	11/13/09 18:24	98-08-8	
Dry Weight	Analytical Method: % Moisture								
Percent Moisture	**11.1**	%	0.10	0.10	1		11/13/09 00:00		

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: B-10 (13') **Lab ID: 10116766003** Collected: 11/10/09 11:20 Received: 11/11/09 13:50 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIDRO GCS	Analytical Method: WI MOD DRO Preparation Method: WI MOD DRO								
Diesel Range Organics	**14.9**	mg/kg	10.4	5.2	1	11/13/09 18:21	11/17/09 00:19		
n-Triacontane (S)	101	%	50-150		1	11/13/09 18:21	11/17/09 00:19		
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	ND	mg/kg	0.056	0.028	1	11/13/09 10:13	11/13/09 18:47	71-43-2	
Ethylbenzene	**0.19**	mg/kg	0.056	0.028	1	11/13/09 10:13	11/13/09 18:47	100-41-4	
Gasoline Range Organics	**13.3**	mg/kg	5.6	2.8	1	11/13/09 10:13	11/13/09 18:47		
Methyl-tert-butyl ether	ND	mg/kg	0.28	0.14	1	11/13/09 10:13	11/13/09 18:47	1634-04-4	L1
Toluene	ND	mg/kg	0.056	0.028	1	11/13/09 10:13	11/13/09 18:47	108-88-3	
Xylene (Total)	**0.26**	mg/kg	0.17	0.084	1	11/13/09 10:13	11/13/09 18:47	1330-20-7	
a,a,a-Trifluorotoluene (S)	102	%	80-125		1	11/13/09 10:13	11/13/09 18:47	98-08-8	
Dry Weight	Analytical Method: % Moisture								
Percent Moisture	**9.5**	%	0.10	0.10	1		11/13/09 00:00		

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: Methanol Blank **Lab ID: 10116766005** Collected: 11/10/09 00:00 Received: 11/11/09 13:50 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
WIGRO GCV	Analytical Method: WI MOD GRO Preparation Method: TPH GRO/PVOC WI ext.								
Benzene	ND	mg/kg	0.050	0.025	1	11/13/09 10:13	11/13/09 14:54	71-43-2	
Ethylbenzene	ND	mg/kg	0.050	0.025	1	11/13/09 10:13	11/13/09 14:54	100-41-4	
Gasoline Range Organics	ND	mg/kg	5.0	2.5	1	11/13/09 10:13	11/13/09 14:54		
Methyl-tert-butyl ether	ND	mg/kg	0.25	0.12	1	11/13/09 10:13	11/13/09 14:54	1634-04-4	L1
Toluene	ND	mg/kg	0.050	0.025	1	11/13/09 10:13	11/13/09 14:54	108-88-3	
Xylene (Total)	ND	mg/kg	0.15	0.075	1	11/13/09 10:13	11/13/09 14:54	1330-20-7	
a,a,a-Trifluorotoluene (S)	105	%	80-125		1	11/13/09 10:13	11/13/09 14:54	98-08-8	

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: TW-13 **Lab ID: 10116766006** Collected: 11/09/09 11:35 Received: 11/11/09 13:50 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								
Diesel Range Organics	**0.15**	mg/L	0.11	0.054	1	11/12/09 10:56	11/17/09 21:34		P4
n-Triacontane (S)	87	%	50-150		1	11/12/09 10:56	11/17/09 21:34		
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	50.0	1		11/13/09 15:19		
a,a,a-Trifluorotoluene (S)	100	%	80-125		1		11/13/09 15:19	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	10.0	5.0	1		11/16/09 17:06	67-64-1	
Allyl chloride	ND	ug/L	4.0	2.0	1		11/16/09 17:06	107-05-1	
Benzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	74-97-5	
Bromodichloromethane	**3.3**	ug/L	1.0	0.50	1		11/16/09 17:06	75-27-4	
Bromoform	ND	ug/L	8.0	4.0	1		11/16/09 17:06	75-25-2	
Bromomethane	ND	ug/L	4.0	2.0	1		11/16/09 17:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	4.0	2.0	1		11/16/09 17:06	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	2.0	1		11/16/09 17:06	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	108-90-7	
Chloroethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	75-00-3	
Chloroform	**2.4**	ug/L	1.0	0.50	1		11/16/09 17:06	67-66-3	
Chloromethane	ND	ug/L	4.0	2.0	1		11/16/09 17:06	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		11/16/09 17:06	96-12-8	
Dibromochloromethane	**3.3**	ug/L	1.0	0.50	1		11/16/09 17:06	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.50	1		11/16/09 17:06	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	75-43-4	
1,2-Dichloropropane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.50	1		11/16/09 17:06	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	2.0	1		11/16/09 17:06	10061-01-5	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: TW-13 **Lab ID: 10116766006** Collected: 11/09/09 11:35 Received: 11/11/09 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	4.0	2.0	1		11/16/09 17:06	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	2.0	1		11/16/09 17:06	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	4.0	2.0	1		11/16/09 17:06	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.50	1		11/16/09 17:06	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		11/16/09 17:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	4.0	2.0	1		11/16/09 17:06	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.50	1		11/16/09 17:06	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		11/16/09 17:06	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	103-65-1	
Styrene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	5.0	1		11/16/09 17:06	109-99-9	
Toluene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		11/16/09 17:06	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.20	1		11/16/09 17:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1.5	1		11/16/09 17:06	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1.0	1		11/16/09 17:06	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.50	1		11/16/09 17:06	95-47-6	
Dibromofluoromethane (S)	107	%	75-125		1		11/16/09 17:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	75-125		1		11/16/09 17:06	17060-07-0	
Toluene-d8 (S)	96	%	75-125		1		11/16/09 17:06	2037-26-5	
4-Bromofluorobenzene (S)	98	%	75-125		1		11/16/09 17:06	460-00-4	

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: TW-12 **Lab ID: 10116766007** Collected: 11/09/09 15:12 Received: 11/11/09 13:50 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								
Diesel Range Organics	ND	mg/L	0.14	0.069	1	11/12/09 10:56	11/17/09 21:03		P4
n-Triacontane (S)	82	%	50-150		1	11/12/09 10:56	11/17/09 21:03		
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	200	100	2		11/13/09 16:47		
a,a,a-Trifluorotoluene (S)	100	%	80-125		2		11/13/09 16:47	98-08-8	1M sediment/ dilution
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	20.0	10.0	2		11/18/09 02:29	67-64-1	
Allyl chloride	ND	ug/L	8.0	4.0	2		11/18/09 02:29	107-05-1	
Benzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	71-43-2	
Bromobenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	108-86-1	
Bromochloromethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	74-97-5	
Bromodichloromethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	75-27-4	
Bromoform	ND	ug/L	16.0	8.0	2		11/18/09 02:29	75-25-2	
Bromomethane	ND	ug/L	8.0	4.0	2		11/18/09 02:29	74-83-9	
2-Butanone (MEK)	ND	ug/L	8.0	4.0	2		11/18/09 02:29	78-93-3	
n-Butylbenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	104-51-8	
sec-Butylbenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	135-98-8	
tert-Butylbenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	98-06-6	
Carbon tetrachloride	ND	ug/L	8.0	4.0	2		11/18/09 02:29	56-23-5	
Chlorobenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	108-90-7	
Chloroethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	75-00-3	
Chloroform	ND	ug/L	2.0	1.0	2		11/18/09 02:29	67-66-3	
Chloromethane	ND	ug/L	8.0	4.0	2		11/18/09 02:29	74-87-3	
2-Chlorotoluene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	95-49-8	
4-Chlorotoluene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	8.0	4.0	2		11/18/09 02:29	96-12-8	
Dibromochloromethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	2.0	1.0	2		11/18/09 02:29	106-93-4	
Dibromomethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	106-46-7	
Dichlorodifluoromethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	75-71-8	
1,1-Dichloroethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	75-34-3	
1,2-Dichloroethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	107-06-2	
1,1-Dichloroethene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	156-60-5	
Dichlorofluoromethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	75-43-4	
1,2-Dichloropropane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	78-87-5	
1,3-Dichloropropane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	142-28-9	
2,2-Dichloropropane	ND	ug/L	8.0	1.0	2		11/18/09 02:29	594-20-7	
1,1-Dichloropropene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	8.0	4.0	2		11/18/09 02:29	10061-01-5	

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: TW-12 **Lab ID: 10116766007** Collected: 11/09/09 15:12 Received: 11/11/09 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	8.0	4.0	2		11/18/09 02:29	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	8.0	4.0	2		11/18/09 02:29	60-29-7	
Ethylbenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	8.0	4.0	2		11/18/09 02:29	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	2.0	1.0	2		11/18/09 02:29	98-82-8	
p-Isopropyltoluene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	99-87-6	
Methylene Chloride	ND	ug/L	8.0	4.0	2		11/18/09 02:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	8.0	4.0	2		11/18/09 02:29	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	2.0	1.0	2		11/18/09 02:29	1634-04-4	
Naphthalene	ND	ug/L	8.0	4.0	2		11/18/09 02:29	91-20-3	
n-Propylbenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	103-65-1	
Styrene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	79-34-5	
Tetrachloroethene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	127-18-4	
Tetrahydrofuran	ND	ug/L	20.0	10.0	2		11/18/09 02:29	109-99-9	
Toluene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	79-00-5	
Trichloroethene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	79-01-6	
Trichlorofluoromethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	2.0	1.0	2		11/18/09 02:29	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	108-67-8	
Vinyl chloride	ND	ug/L	0.80	0.40	2		11/18/09 02:29	75-01-4	
Xylene (Total)	ND	ug/L	6.0	3.0	2		11/18/09 02:29	1330-20-7	
m&p-Xylene	ND	ug/L	4.0	2.0	2		11/18/09 02:29	1330-20-7	
o-Xylene	ND	ug/L	2.0	1.0	2		11/18/09 02:29	95-47-6	
Dibromofluoromethane (S)	110	%	75-125		2		11/18/09 02:29	1868-53-7	2M
1,2-Dichloroethane-d4 (S)	116	%	75-125		2		11/18/09 02:29	17060-07-0	
Toluene-d8 (S)	97	%	75-125		2		11/18/09 02:29	2037-26-5	
4-Bromofluorobenzene (S)	96	%	75-125		2		11/18/09 02:29	460-00-4	

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: TW-10 **Lab ID: 10116766008** Collected: 11/10/09 10:00 Received: 11/11/09 13:50 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								
Diesel Range Organics	**6.8**	mg/L	0.52	0.26	5	11/12/09 10:56	11/17/09 22:29		T7
n-Triacontane (S)	66	%	50-150		5	11/12/09 10:56	11/17/09 22:29		
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**6690**	ug/L	500	250	5		11/13/09 16:03		
a,a,a-Trifluorotoluene (S)	101	%	80-125		5		11/13/09 16:03	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	50.0	10		11/16/09 18:58	67-64-1	
Allyl chloride	ND	ug/L	40.0	20.0	10		11/16/09 18:58	107-05-1	
Benzene	**609**	ug/L	10.0	5.0	10		11/16/09 18:58	71-43-2	
Bromobenzene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	108-86-1	
Bromochloromethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	75-27-4	
Bromoform	ND	ug/L	80.0	40.0	10		11/16/09 18:58	75-25-2	
Bromomethane	ND	ug/L	40.0	20.0	10		11/16/09 18:58	74-83-9	
2-Butanone (MEK)	ND	ug/L	40.0	20.0	10		11/16/09 18:58	78-93-3	
n-Butylbenzene	**13.2**	ug/L	10.0	5.0	10		11/16/09 18:58	104-51-8	
sec-Butylbenzene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	135-98-8	
tert-Butylbenzene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	98-06-6	
Carbon tetrachloride	ND	ug/L	40.0	20.0	10		11/16/09 18:58	56-23-5	
Chlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	108-90-7	
Chloroethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	75-00-3	
Chloroform	**12.1**	ug/L	10.0	5.0	10		11/16/09 18:58	67-66-3	
Chloromethane	ND	ug/L	40.0	20.0	10		11/16/09 18:58	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	40.0	20.0	10		11/16/09 18:58	96-12-8	
Dibromochloromethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	5.0	10		11/16/09 18:58	106-93-4	
Dibromomethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	106-46-7	
Dichlorodifluoromethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	75-71-8	
1,1-Dichloroethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	107-06-2	
1,1-Dichloroethene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	156-60-5	
Dichlorofluoromethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	75-43-4	
1,2-Dichloropropane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	78-87-5	
1,3-Dichloropropane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	142-28-9	
2,2-Dichloropropane	ND	ug/L	40.0	5.0	10		11/16/09 18:58	594-20-7	
1,1-Dichloropropene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	40.0	20.0	10		11/16/09 18:58	10061-01-5	

Low boiling pt HCs (i.e. gasoline)

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: TW-10 **Lab ID: 10116766008** Collected: 11/10/09 10:00 Received: 11/11/09 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	40.0	20.0	10		11/16/09 18:58	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	40.0	20.0	10		11/16/09 18:58	60-29-7	
Ethylbenzene	**788**	ug/L	10.0	5.0	10		11/16/09 18:58	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	40.0	20.0	10		11/16/09 18:58	87-68-3	
Isopropylbenzene (Cumene)	**39.7**	ug/L	10.0	5.0	10		11/16/09 18:58	98-82-8	
p-Isopropyltoluene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	99-87-6	
Methylene Chloride	ND	ug/L	40.0	20.0	10		11/16/09 18:58	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	40.0	20.0	10		11/16/09 18:58	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	5.0	10		11/16/09 18:58	1634-04-4	
Naphthalene	**125**	ug/L	40.0	20.0	10		11/16/09 18:58	91-20-3	
n-Propylbenzene	**94.5**	ug/L	10.0	5.0	10		11/16/09 18:58	103-65-1	
Styrene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	127-18-4	
Tetrahydrofuran	ND	ug/L	100	50.0	10		11/16/09 18:58	109-99-9	
Toluene	**68.4**	ug/L	10.0	5.0	10		11/16/09 18:58	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	79-00-5	
Trichloroethene	ND	ug/L	10.0	5.0	10		11/16/09 18:58	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	5.0	10		11/16/09 18:58	76-13-1	
1,2,4-Trimethylbenzene	**205**	ug/L	10.0	5.0	10		11/16/09 18:58	95-63-6	
1,3,5-Trimethylbenzene	**136**	ug/L	10.0	5.0	10		11/16/09 18:58	108-67-8	
Vinyl chloride	ND	ug/L	4.0	2.0	10		11/16/09 18:58	75-01-4	
Xylene (Total)	**566**	ug/L	30.0	15.0	10		11/16/09 18:58	1330-20-7	
m&p-Xylene	**517**	ug/L	20.0	10.0	10		11/16/09 18:58	1330-20-7	
o-Xylene	**49.1**	ug/L	10.0	5.0	10		11/16/09 18:58	95-47-6	
Dibromofluoromethane (S)	99	%	75-125		10		11/16/09 18:58	1868-53-7	
1,2-Dichloroethane-d4 (S)	100	%	75-125		10		11/16/09 18:58	17060-07-0	
Toluene-d8 (S)	99	%	75-125		10		11/16/09 18:58	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		10		11/16/09 18:58	460-00-4	

517
49.1
566.1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: TW-100 **Lab ID: 10116766009** Collected: 11/10/09 10:12 Received: 11/11/09 13:50 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								
Diesel Range Organics	**5.6**	mg/L	0.56	0.28	5	11/12/09 10:56	11/17/09 22:36		T7
n-Triacontane (S)	55	%	50-150		5	11/12/09 10:56	11/17/09 22:36		
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	**6730**	ug/L	500	250	5		11/13/09 16:24		
a,a,a-Trifluorotoluene (S)	106	%	80-125		5		11/13/09 16:24	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	100	50.0	10		11/16/09 19:20	67-64-1	
Allyl chloride	ND	ug/L	40.0	20.0	10		11/16/09 19:20	107-05-1	
Benzene	**622**	ug/L	10.0	5.0	10		11/16/09 19:20	71-43-2	
Bromobenzene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	108-86-1	
Bromochloromethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	74-97-5	
Bromodichloromethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	75-27-4	
Bromoform	ND	ug/L	80.0	40.0	10		11/16/09 19:20	75-25-2	
Bromomethane	ND	ug/L	40.0	20.0	10		11/16/09 19:20	74-83-9	
2-Butanone (MEK)	ND	ug/L	40.0	20.0	10		11/16/09 19:20	78-93-3	
n-Butylbenzene	**14.7**	ug/L	10.0	5.0	10		11/16/09 19:20	104-51-8	
sec-Butylbenzene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	135-98-8	
tert-Butylbenzene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	98-06-6	
Carbon tetrachloride	ND	ug/L	40.0	20.0	10		11/16/09 19:20	56-23-5	
Chlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	108-90-7	
Chloroethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	75-00-3	
Chloroform	**12.8**	ug/L	10.0	5.0	10		11/16/09 19:20	67-66-3	
Chloromethane	ND	ug/L	40.0	20.0	10		11/16/09 19:20	74-87-3	
2-Chlorotoluene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	95-49-8	
4-Chlorotoluene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	40.0	20.0	10		11/16/09 19:20	96-12-8	
Dibromochloromethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	10.0	5.0	10		11/16/09 19:20	106-93-4	
Dibromomethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	106-46-7	
Dichlorodifluoromethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	75-71-8	
1,1-Dichloroethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	75-34-3	
1,2-Dichloroethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	156-60-5	
Dichlorofluoromethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	75-43-4	
1,2-Dichloropropane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	78-87-5	
1,3-Dichloropropane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	142-28-9	
2,2-Dichloropropane	ND	ug/L	40.0	5.0	10		11/16/09 19:20	594-20-7	
1,1-Dichloropropene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	40.0	20.0	10		11/16/09 19:20	10061-01-5	

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: TW-100 **Lab ID: 10116766009** Collected: 11/10/09 10:12 Received: 11/11/09 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	40.0	20.0	10		11/16/09 19:20	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	40.0	20.0	10		11/16/09 19:20	60-29-7	
Ethylbenzene	**821**	ug/L	10.0	5.0	10		11/16/09 19:20	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	40.0	20.0	10		11/16/09 19:20	87-68-3	
Isopropylbenzene (Cumene)	**42.1**	ug/L	10.0	5.0	10		11/16/09 19:20	98-82-8	
p-Isopropyltoluene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	99-87-6	
Methylene Chloride	ND	ug/L	40.0	20.0	10		11/16/09 19:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	40.0	20.0	10		11/16/09 19:20	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	10.0	5.0	10		11/16/09 19:20	1634-04-4	
Naphthalene	**139**	ug/L	40.0	20.0	10		11/16/09 19:20	91-20-3	
n-Propylbenzene	**101**	ug/L	10.0	5.0	10		11/16/09 19:20	103-65-1	
Styrene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	79-34-5	
Tetrachloroethene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	127-18-4	
Tetrahydrofuran	ND	ug/L	100	50.0	10		11/16/09 19:20	109-99-9	
Toluene	**71.7**	ug/L	10.0	5.0	10		11/16/09 19:20	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	79-00-5	
Trichloroethene	ND	ug/L	10.0	5.0	10		11/16/09 19:20	79-01-6	
Trichlorofluoromethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	10.0	5.0	10		11/16/09 19:20	76-13-1	
1,2,4-Trimethylbenzene	**219**	ug/L	10.0	5.0	10		11/16/09 19:20	95-63-6	
1,3,5-Trimethylbenzene	**147**	ug/L	10.0	5.0	10		11/16/09 19:20	108-67-8	
Vinyl chloride	ND	ug/L	4.0	2.0	10		11/16/09 19:20	75-01-4	
Xylene (Total)	**598**	ug/L	30.0	15.0	10		11/16/09 19:20	1330-20-7	
m&p-Xylene	**545**	ug/L	20.0	10.0	10		11/16/09 19:20	1330-20-7	
o-Xylene	**52.6**	ug/L	10.0	5.0	10		11/16/09 19:20	95-47-6	
Dibromofluoromethane (S)	99	%	75-125		10		11/16/09 19:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	99	%	75-125		10		11/16/09 19:20	17060-07-0	
Toluene-d8 (S)	99	%	75-125		10		11/16/09 19:20	2037-26-5	
4-Bromofluorobenzene (S)	100	%	75-125		10		11/16/09 19:20	460-00-4	

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: FIELD BLANK **Lab ID: 10116766010** Collected: 11/10/09 14:00 Received: 11/11/09 13:50 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								
Diesel Range Organics	ND	mg/L	0.11	0.056	1	11/12/09 10:56	11/17/09 21:11		
n-Triacontane (S)	75	%	50-150		1	11/12/09 10:56	11/17/09 21:11		
WIGRO GCV	Analytical Method: WI MOD GRO								
Gasoline Range Organics	ND	ug/L	100	50.0	1		11/13/09 14:35		
a,a,a-Trifluorotoluene (S)	101	%	80-125		1		11/13/09 14:35	98-08-8	
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	10.0	5.0	1		11/16/09 16:00	67-64-1	
Allyl chloride	ND	ug/L	4.0	2.0	1		11/16/09 16:00	107-05-1	
Benzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	74-97-5	
Bromodichloromethane	**3.9**	ug/L	1.0	0.50	1		11/16/09 16:00	75-27-4	
Bromoform	ND	ug/L	8.0	4.0	1		11/16/09 16:00	75-25-2	
Bromomethane	ND	ug/L	4.0	2.0	1		11/16/09 16:00	74-83-9	
2-Butanone (MEK)	ND	ug/L	4.0	2.0	1		11/16/09 16:00	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	2.0	1		11/16/09 16:00	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	108-90-7	
Chloroethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	75-00-3	
Chloroform	**2.4**	ug/L	1.0	0.50	1		11/16/09 16:00	67-66-3	
Chloromethane	ND	ug/L	4.0	2.0	1		11/16/09 16:00	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		11/16/09 16:00	96-12-8	
Dibromochloromethane	**3.8**	ug/L	1.0	0.50	1		11/16/09 16:00	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.50	1		11/16/09 16:00	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	75-43-4	
1,2-Dichloropropane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.50	1		11/16/09 16:00	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	2.0	1		11/16/09 16:00	10061-01-5	

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: FIELD BLANK **Lab ID: 10116766010** Collected: 11/10/09 14:00 Received: 11/11/09 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
trans-1,3-Dichloropropene	ND	ug/L	4.0	2.0	1		11/16/09 16:00	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	2.0	1		11/16/09 16:00	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	4.0	2.0	1		11/16/09 16:00	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.50	1		11/16/09 16:00	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		11/16/09 16:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	4.0	2.0	1		11/16/09 16:00	108-10-1	
Methyl-tert-butyl ether	ND	ug/L	1.0	0.50	1		11/16/09 16:00	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		11/16/09 16:00	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	103-65-1	
Styrene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	5.0	1		11/16/09 16:00	109-99-9	
Toluene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		11/16/09 16:00	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.20	1		11/16/09 16:00	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1.5	1		11/16/09 16:00	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1.0	1		11/16/09 16:00	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.50	1		11/16/09 16:00	95-47-6	
Dibromofluoromethane (S)	109	%	75-125		1		11/16/09 16:00	1868-53-7	
1,2-Dichloroethane-d4 (S)	107	%	75-125		1		11/16/09 16:00	17060-07-0	
Toluene-d8 (S)	97	%	75-125		1		11/16/09 16:00	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1		11/16/09 16:00	460-00-4	

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: TRIP BLANK **Lab ID: 10116766011** Collected: 11/09/09 00:00 Received: 11/11/09 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
Acetone	ND	ug/L	10.0	5.0	1		11/16/09 15:37	67-64-1	
Allyl chloride	ND	ug/L	4.0	2.0	1		11/16/09 15:37	107-05-1	
Benzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	71-43-2	
Bromobenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	108-86-1	
Bromochloromethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	74-97-5	
Bromodichloromethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	75-27-4	
Bromoform	ND	ug/L	8.0	4.0	1		11/16/09 15:37	75-25-2	
Bromomethane	ND	ug/L	4.0	2.0	1		11/16/09 15:37	74-83-9	
2-Butanone (MEK)	ND	ug/L	4.0	2.0	1		11/16/09 15:37	78-93-3	
n-Butylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	104-51-8	
sec-Butylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	135-98-8	
tert-Butylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	98-06-6	
Carbon tetrachloride	ND	ug/L	4.0	2.0	1		11/16/09 15:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	108-90-7	
Chloroethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	75-00-3	
Chloroform	ND	ug/L	1.0	0.50	1		11/16/09 15:37	67-66-3	
Chloromethane	ND	ug/L	4.0	2.0	1		11/16/09 15:37	74-87-3	
2-Chlorotoluene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	95-49-8	
4-Chlorotoluene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	106-43-4	
1,2-Dibromo-3-chloropropane	ND	ug/L	4.0	2.0	1		11/16/09 15:37	96-12-8	
Dibromochloromethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/L	1.0	0.50	1		11/16/09 15:37	106-93-4	
Dibromomethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	74-95-3	
1,2-Dichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	106-46-7	
Dichlorodifluoromethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	75-71-8	
1,1-Dichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	156-60-5	
Dichlorofluoromethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	75-43-4	
1,2-Dichloropropane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	78-87-5	
1,3-Dichloropropane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	142-28-9	
2,2-Dichloropropane	ND	ug/L	4.0	0.50	1		11/16/09 15:37	594-20-7	
1,1-Dichloropropene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	563-58-6	
cis-1,3-Dichloropropene	ND	ug/L	4.0	2.0	1		11/16/09 15:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	4.0	2.0	1		11/16/09 15:37	10061-02-6	
Diethyl ether (Ethyl ether)	ND	ug/L	4.0	2.0	1		11/16/09 15:37	60-29-7	
Ethylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	100-41-4	
Hexachloro-1,3-butadiene	ND	ug/L	4.0	2.0	1		11/16/09 15:37	87-68-3	
Isopropylbenzene (Cumene)	ND	ug/L	1.0	0.50	1		11/16/09 15:37	98-82-8	
p-Isopropyltoluene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	99-87-6	
Methylene Chloride	ND	ug/L	4.0	2.0	1		11/16/09 15:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	4.0	2.0	1		11/16/09 15:37	108-10-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Sample: TRIP BLANK **Lab ID: 10116766011** Collected: 11/09/09 00:00 Received: 11/11/09 13:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 VOC	Analytical Method: EPA 8260								
Methyl-tert-butyl ether	ND	ug/L	1.0	0.50	1		11/16/09 15:37	1634-04-4	
Naphthalene	ND	ug/L	4.0	2.0	1		11/16/09 15:37	91-20-3	
n-Propylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	103-65-1	
Styrene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	100-42-5	
1,1,1,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	630-20-6	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	127-18-4	
Tetrahydrofuran	ND	ug/L	10.0	5.0	1		11/16/09 15:37	109-99-9	
Toluene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	108-88-3	
1,2,3-Trichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	87-61-6	
1,2,4-Trichlorobenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	120-82-1	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	75-69-4	
1,2,3-Trichloropropane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	96-18-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/L	1.0	0.50	1		11/16/09 15:37	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	108-67-8	
Vinyl chloride	ND	ug/L	0.40	0.20	1		11/16/09 15:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1.5	1		11/16/09 15:37	1330-20-7	
m&p-Xylene	ND	ug/L	2.0	1.0	1		11/16/09 15:37	1330-20-7	
o-Xylene	ND	ug/L	1.0	0.50	1		11/16/09 15:37	95-47-6	
Dibromofluoromethane (S)	109	%	75-125		1		11/16/09 15:37	1868-53-7	
1,2-Dichloroethane-d4 (S)	112	%	75-125		1		11/16/09 15:37	17060-07-0	
Toluene-d8 (S)	97	%	75-125		1		11/16/09 15:37	2037-26-5	
4-Bromofluorobenzene (S)	97	%	75-125		1		11/16/09 15:37	460-00-4	

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

QC Batch: OEXT/11906 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10116766001, 10116766002, 10116766003

METHOD BLANK: 713249 Matrix: Solid
Associated Lab Samples: 10116766001, 10116766002, 10116766003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/kg	ND	5.0	11/16/09 23:32	
n-Triacontane (S)	%	77	50-150	11/16/09 23:32	

LABORATORY CONTROL SAMPLE & LCSD: 713250 713251

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/kg	80	71.9	72.1	90	90	70-120	0	20	
n-Triacontane (S)	%				90	82	50-150			

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

QC Batch: MPRP/18281
QC Batch Method: % Moisture
Analysis Method: % Moisture
Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 10116766001, 10116766002, 10116766003

SAMPLE DUPLICATE: 713037

Parameter	Units	10116026019 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	29.7	29.8	0	30	

SAMPLE DUPLICATE: 713038

Parameter	Units	10116841002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.1	14.9	1	30	

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

QC Batch: MSV/13422 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV 465 W
Associated Lab Samples: 10116766006, 10116766008, 10116766009, 10116766010, 10116766011

METHOD BLANK: 713152 Matrix: Water
Associated Lab Samples: 10116766006, 10116766008, 10116766009, 10116766010, 10116766011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/16/09 14:08	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/16/09 14:08	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/16/09 14:08	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/16/09 14:08	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	11/16/09 14:08	
1,1-Dichloroethane	ug/L	ND	1.0	11/16/09 14:08	
1,1-Dichloroethene	ug/L	ND	1.0	11/16/09 14:08	
1,1-Dichloropropene	ug/L	ND	1.0	11/16/09 14:08	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/16/09 14:08	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/16/09 14:08	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/16/09 14:08	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	11/16/09 14:08	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	11/16/09 14:08	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/16/09 14:08	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/16/09 14:08	
1,2-Dichloroethane	ug/L	ND	1.0	11/16/09 14:08	
1,2-Dichloropropane	ug/L	ND	1.0	11/16/09 14:08	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	11/16/09 14:08	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/16/09 14:08	
1,3-Dichloropropane	ug/L	ND	1.0	11/16/09 14:08	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/16/09 14:08	
2,2-Dichloropropane	ug/L	ND	4.0	11/16/09 14:08	
2-Butanone (MEK)	ug/L	ND	4.0	11/16/09 14:08	
2-Chlorotoluene	ug/L	ND	1.0	11/16/09 14:08	
4-Chlorotoluene	ug/L	ND	1.0	11/16/09 14:08	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	4.0	11/16/09 14:08	
Acetone	ug/L	ND	10.0	11/16/09 14:08	
Allyl chloride	ug/L	ND	4.0	11/16/09 14:08	
Benzene	ug/L	ND	1.0	11/16/09 14:08	
Bromobenzene	ug/L	ND	1.0	11/16/09 14:08	
Bromochloromethane	ug/L	ND	1.0	11/16/09 14:08	
Bromodichloromethane	ug/L	ND	1.0	11/16/09 14:08	
Bromoform	ug/L	ND	8.0	11/16/09 14:08	
Bromomethane	ug/L	ND	4.0	11/16/09 14:08	
Carbon tetrachloride	ug/L	ND	4.0	11/16/09 14:08	
Chlorobenzene	ug/L	ND	1.0	11/16/09 14:08	
Chloroethane	ug/L	ND	1.0	11/16/09 14:08	
Chloroform	ug/L	ND	1.0	11/16/09 14:08	
Chloromethane	ug/L	ND	4.0	11/16/09 14:08	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/16/09 14:08	
cis-1,3-Dichloropropene	ug/L	ND	4.0	11/16/09 14:08	
Dibromochloromethane	ug/L	ND	1.0	11/16/09 14:08	
Dibromomethane	ug/L	ND	1.0	11/16/09 14:08	

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

METHOD BLANK: 713152 Matrix: Water

Associated Lab Samples: 10116766006, 10116766008, 10116766009, 10116766010, 10116766011

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	11/16/09 14:08	
Dichlorofluoromethane	ug/L	ND	1.0	11/16/09 14:08	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	11/16/09 14:08	
Ethylbenzene	ug/L	ND	1.0	11/16/09 14:08	
Hexachloro-1,3-butadiene	ug/L	ND	4.0	11/16/09 14:08	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	11/16/09 14:08	
m&p-Xylene	ug/L	ND	2.0	11/16/09 14:08	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/16/09 14:08	
Methylene Chloride	ug/L	ND	4.0	11/16/09 14:08	
n-Butylbenzene	ug/L	ND	1.0	11/16/09 14:08	
n-Propylbenzene	ug/L	ND	1.0	11/16/09 14:08	
Naphthalene	ug/L	ND	4.0	11/16/09 14:08	
o-Xylene	ug/L	ND	1.0	11/16/09 14:08	
p-Isopropyltoluene	ug/L	ND	1.0	11/16/09 14:08	
sec-Butylbenzene	ug/L	ND	1.0	11/16/09 14:08	
Styrene	ug/L	ND	1.0	11/16/09 14:08	
tert-Butylbenzene	ug/L	ND	1.0	11/16/09 14:08	
Tetrachloroethene	ug/L	ND	1.0	11/16/09 14:08	
Tetrahydrofuran	ug/L	ND	10.0	11/16/09 14:08	
Toluene	ug/L	ND	1.0	11/16/09 14:08	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/16/09 14:08	
trans-1,3-Dichloropropene	ug/L	ND	4.0	11/16/09 14:08	
Trichloroethene	ug/L	ND	1.0	11/16/09 14:08	
Trichlorofluoromethane	ug/L	ND	1.0	11/16/09 14:08	
Vinyl chloride	ug/L	ND	0.40	11/16/09 14:08	
Xylene (Total)	ug/L	ND	3.0	11/16/09 14:08	
1,2-Dichloroethane-d4 (S)	%	108	75-125	11/16/09 14:08	
4-Bromofluorobenzene (S)	%	98	75-125	11/16/09 14:08	
Dibromofluoromethane (S)	%	110	75-125	11/16/09 14:08	
Toluene-d8 (S)	%	97	75-125	11/16/09 14:08	

LABORATORY CONTROL SAMPLE: 713153

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	46.0	92	75-125	
1,1,1-Trichloroethane	ug/L	50	47.1	94	75-125	
1,1,2,2-Tetrachloroethane	ug/L	50	41.5	83	75-125	
1,1,2-Trichloroethane	ug/L	50	40.9	82	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	50	44.3	89	70-138	
1,1-Dichloroethane	ug/L	50	44.1	88	75-125	
1,1-Dichloroethene	ug/L	50	42.8	86	69-129	
1,1-Dichloropropene	ug/L	50	43.7	87	75-126	
1,2,3-Trichlorobenzene	ug/L	50	43.0	86	75-125	
1,2,3-Trichloropropane	ug/L	50	40.8	82	72-126	
1,2,4-Trichlorobenzene	ug/L	50	43.7	87	75-125	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

LABORATORY CONTROL SAMPLE: 713153

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	42.7	85	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	41.8	84	67-125	
1,2-Dibromoethane (EDB)	ug/L	50	42.3	85	75-125	
1,2-Dichlorobenzene	ug/L	50	41.6	83	75-125	
1,2-Dichloroethane	ug/L	50	43.2	86	75-125	
1,2-Dichloropropane	ug/L	50	43.6	87	75-125	
1,3,5-Trimethylbenzene	ug/L	50	43.3	87	75-125	
1,3-Dichlorobenzene	ug/L	50	41.2	82	75-125	
1,3-Dichloropropane	ug/L	50	42.2	84	75-125	
1,4-Dichlorobenzene	ug/L	50	40.8	82	75-125	
2,2-Dichloropropane	ug/L	50	51.9	104	48-150	
2-Butanone (MEK)	ug/L	50	44.2	88	51-134	
2-Chlorotoluene	ug/L	50	41.9	84	75-125	
4-Chlorotoluene	ug/L	50	42.7	85	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	50	41.2	82	60-125	
Acetone	ug/L	125	104	83	38-125	
Allyl chloride	ug/L	50	40.5	81	64-137	
Benzene	ug/L	50	44.2	88	75-125	
Bromobenzene	ug/L	50	41.5	83	75-125	
Bromochloromethane	ug/L	50	40.7	81	75-125	
Bromodichloromethane	ug/L	50	44.7	89	75-125	
Bromoform	ug/L	100	94.6	95	68-125	
Bromomethane	ug/L	50	51.8	104	47-129	
Carbon tetrachloride	ug/L	50	47.4	95	59-133	
Chlorobenzene	ug/L	50	42.5	85	75-125	
Chloroethane	ug/L	50	44.1	88	73-132	
Chloroform	ug/L	50	44.8	90	75-125	
Chloromethane	ug/L	50	43.3	87	72-125	
cis-1,2-Dichloroethene	ug/L	50	44.6	89	75-125	
cis-1,3-Dichloropropene	ug/L	50	44.4	89	75-125	
Dibromochloromethane	ug/L	50	45.2	90	75-125	
Dibromomethane	ug/L	50	41.8	84	75-125	
Dichlorodifluoromethane	ug/L	50	43.1	86	69-134	
Dichlorofluoromethane	ug/L	50	44.5	89	70-125	
Diethyl ether (Ethyl ether)	ug/L	50	41.0	82	71-125	
Ethylbenzene	ug/L	50	44.0	88	75-125	
Hexachloro-1,3-butadiene	ug/L	50	43.5	87	75-137	
Isopropylbenzene (Cumene)	ug/L	50	45.4	91	75-125	
m&p-Xylene	ug/L	100	87.6	88	75-125	
Methyl-tert-butyl ether	ug/L	50	43.0	86	75-125	
Methylene Chloride	ug/L	50	40.7	81	75-125	
n-Butylbenzene	ug/L	50	43.1	86	75-125	
n-Propylbenzene	ug/L	50	43.0	86	75-125	
Naphthalene	ug/L	50	42.4	85	72-125	
o-Xylene	ug/L	50	44.2	88	75-125	
p-Isopropyltoluene	ug/L	50	43.1	86	75-125	
sec-Butylbenzene	ug/L	50	44.7	89	75-125	
Styrene	ug/L	50	44.6	89	75-125	

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

LABORATORY CONTROL SAMPLE: 713153

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/L	50	43.4	87	75-125	
Tetrachloroethene	ug/L	50	40.8	82	74-125	
Tetrahydrofuran	ug/L	500	414	83	65-125	
Toluene	ug/L	50	42.3	85	75-125	
trans-1,2-Dichloroethene	ug/L	50	42.5	85	74-125	
trans-1,3-Dichloropropene	ug/L	50	46.1	92	75-125	
Trichloroethene	ug/L	50	41.7	83	75-125	
Trichlorofluoromethane	ug/L	50	46.6	93	73-134	
Vinyl chloride	ug/L	50	44.8	90	75-126	
Xylene (Total)	ug/L	150	132	88	75-125	
1,2-Dichloroethane-d4 (S)	%			101	75-125	
4-Bromofluorobenzene (S)	%			100	75-125	
Dibromofluoromethane (S)	%			103	75-125	
Toluene-d8 (S)	%			99	75-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 714380 714381

Parameter	Units	10116761007 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	400	400	440	436	110	109	71-125	1	30	
1,1,1-Trichloroethane	ug/L	ND	400	400	441	427	110	107	75-125	3	30	
1,1,2,2-Tetrachloroethane	ug/L	ND	400	400	409	431	102	108	75-126	5	30	
1,1,2-Trichloroethane	ug/L	ND	400	400	405	412	101	103	75-125	2	30	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	400	400	443	439	111	110	70-150	1	30	
1,1-Dichloroethane	ug/L	ND	400	400	420	417	105	104	75-125	1	30	
1,1-Dichloroethene	ug/L	ND	400	400	424	429	106	107	64-142	1	30	
1,1-Dichloropropene	ug/L	ND	400	400	433	420	108	105	75-125	3	30	
1,2,3-Trichlorobenzene	ug/L	ND	400	400	435	437	109	109	75-125	0	30	
1,2,3-Trichloropropane	ug/L	ND	400	400	397	402	99	100	72-127	1	30	
1,2,4-Trichlorobenzene	ug/L	ND	400	400	440	447	110	112	75-125	1	30	
1,2,4-Trimethylbenzene	ug/L	47.8	400	400	499	488	113	110	75-125	2	30	
1,2-Dibromo-3-chloropropane	ug/L	ND	400	400	434	422	108	106	65-125	3	30	
1,2-Dibromoethane (EDB)	ug/L	ND	400	400	416	433	104	108	75-125	4	30	
1,2-Dichlorobenzene	ug/L	ND	400	400	425	418	106	105	75-125	2	30	
1,2-Dichloroethane	ug/L	ND	400	400	414	414	103	104	75-125	0	30	
1,2-Dichloropropane	ug/L	ND	400	400	423	423	106	106	75-125	0	30	
1,3,5-Trimethylbenzene	ug/L	ND	400	400	449	441	109	107	75-127	2	30	
1,3-Dichlorobenzene	ug/L	ND	400	400	416	418	104	105	75-125	1	30	
1,3-Dichloropropane	ug/L	ND	400	400	415	422	104	105	75-125	2	30	
1,4-Dichlorobenzene	ug/L	ND	400	400	417	412	104	103	75-125	1	30	
2,2-Dichloropropane	ug/L	ND	400	400	487	465	122	116	48-150	5	30	
2-Butanone (MEK)	ug/L	ND	400	400	493	486	123	121	51-134	2	30	
2-Chlorotoluene	ug/L	ND	400	400	428	419	107	105	75-125	2	30	
4-Chlorotoluene	ug/L	ND	400	400	438	426	110	107	68-127	3	30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	400	400	411	432	103	108	60-135	5	30	
Acetone	ug/L	ND	1000	1000	1370	1230	137	123	30-125	11	30	M0
Allyl chloride	ug/L	ND	400	400	374	380	93	95	40-137	2	30	

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 714380 714381

Parameter	Units	10116761007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Benzene	ug/L	27.3	400	400	453	451	106	106	75-125	0	30	
Bromobenzene	ug/L	ND	400	400	420	431	105	108	75-125	3	30	
Bromochloromethane	ug/L	ND	400	400	386	395	96	99	75-125	2	30	
Bromodichloromethane	ug/L	ND	400	400	418	424	104	106	72-125	1	30	
Bromoform	ug/L	ND	800	800	902	915	113	114	51-125	2	30	
Bromomethane	ug/L	ND	400	400	427	425	107	106	47-130	1	30	
Carbon tetrachloride	ug/L	ND	400	400	460	449	115	112	61-133	2	30	
Chlorobenzene	ug/L	ND	400	400	419	409	105	102	75-125	2	30	
Chloroethane	ug/L	ND	400	400	387	390	97	97	75-132	1	30	
Chloroform	ug/L	ND	400	400	426	415	106	104	75-125	3	30	
Chloromethane	ug/L	ND	400	400	375	374	94	94	68-132	0	30	
cis-1,2-Dichloroethene	ug/L	ND	400	400	427	430	107	107	75-125	1	30	
cis-1,3-Dichloropropene	ug/L	ND	400	400	436	434	109	108	63-125	1	30	
Dibromochloromethane	ug/L	ND	400	400	434	431	108	108	62-125	1	30	
Dibromomethane	ug/L	ND	400	400	419	430	105	108	75-125	3	30	
Dichlorodifluoromethane	ug/L	ND	400	400	387	372	97	93	65-150	4	30	
Dichlorofluoromethane	ug/L	ND	400	400	416	415	104	104	68-127	0	30	
Diethyl ether (Ethyl ether)	ug/L	ND	400	400	407	422	102	105	71-125	4	30	
Ethylbenzene	ug/L	289	400	400	718	698	107	102	75-125	3	30	
Hexachloro-1,3-butadiene	ug/L	ND	400	400	434	431	108	108	75-147	1	30	
Isopropylbenzene (Cumene)	ug/L	ND	400	400	468	454	112	109	75-125	3	30	
m&p-Xylene	ug/L	129	800	800	1000	972	109	105	67-125	3	30	
Methyl-tert-butyl ether	ug/L	ND	400	400	418	434	104	109	75-125	4	30	
Methylene Chloride	ug/L	ND	400	400	407	411	102	103	75-125	1	30	
n-Butylbenzene	ug/L	ND	400	400	443	439	111	110	70-135	1	30	
n-Propylbenzene	ug/L	ND	400	400	450	436	112	109	70-131	3	30	
Naphthalene	ug/L	1150	400	400	1660	1720	126	141	66-127	4	30	M0
o-Xylene	ug/L	68.4	400	400	505	502	109	108	72-125	1	30	
p-Isopropyltoluene	ug/L	ND	400	400	435	430	109	108	71-126	1	30	
sec-Butylbenzene	ug/L	ND	400	400	442	437	111	109	75-127	1	30	
Styrene	ug/L	ND	400	400	438	435	110	109	30-134	1	30	
tert-Butylbenzene	ug/L	ND	400	400	422	415	106	104	75-125	2	30	
Tetrachloroethene	ug/L	ND	400	400	414	404	103	101	74-125	2	30	
Tetrahydrofuran	ug/L	ND	4000	4000	4180	4420	104	111	65-125	6	30	
Toluene	ug/L	ND	400	400	418	410	104	103	75-125	2	30	
trans-1,2-Dichloroethene	ug/L	ND	400	400	422	427	105	107	72-125	1	30	
trans-1,3-Dichloropropene	ug/L	ND	400	400	445	446	111	111	63-125	0	30	
Trichloroethene	ug/L	ND	400	400	410	400	103	100	58-127	3	30	
Trichlorofluoromethane	ug/L	ND	400	400	429	411	107	103	73-150	4	30	
Vinyl chloride	ug/L	ND	400	400	393	384	98	96	75-134	2	30	
Xylene (Total)	ug/L	197	1200	1200	1510	1470	109	106	75-125	2	30	
1,2-Dichloroethane-d4 (S)	%						100	102	75-125			
4-Bromofluorobenzene (S)	%						100	102	75-125			
Dibromofluoromethane (S)	%						104	103	75-125			
Toluene-d8 (S)	%						100	100	75-125			

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

QC Batch: GCV/6634 Analysis Method: WI MOD GRO
QC Batch Method: WI MOD GRO Analysis Description: WIGRO GCV Water
Associated Lab Samples: 10116766006, 10116766007, 10116766008, 10116766009, 10116766010

METHOD BLANK: 713237 Matrix: Water
Associated Lab Samples: 10116766006, 10116766007, 10116766008, 10116766009, 10116766010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Gasoline Range Organics	ug/L	ND	100	11/13/09 13:50	
a,a,a-Trifluorotoluene (S)	%	101	80-125	11/13/09 13:50	

LABORATORY CONTROL SAMPLE & LCSD: 713238 713239

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	1000	983	1020	98	102	80-120	4	20	
a,a,a-Trifluorotoluene (S)	%				101	102	80-125			

MATRIX SPIKE SAMPLE: 714471

Parameter	Units	10116600002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Gasoline Range Organics	ug/L	ND	1000	1030	102	73-132	
a,a,a-Trifluorotoluene (S)	%				101	80-125	

SAMPLE DUPLICATE: 714472

Parameter	Units	10116766006 Result	Dup Result	RPD	Max RPD	Qualifiers
Gasoline Range Organics	ug/L	ND	ND		30	
a,a,a-Trifluorotoluene (S)	%	100	100	1		

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

QC Batch: OEXT/11900 Analysis Method: WI MOD DRO
QC Batch Method: WI MOD DRO Analysis Description: WIDRO GCS
Associated Lab Samples: 10116766006, 10116766007, 10116766008, 10116766009, 10116766010

METHOD BLANK: 712621 Matrix: Water
Associated Lab Samples: 10116766006, 10116766007, 10116766008, 10116766009, 10116766010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Diesel Range Organics	mg/L	ND	0.10	11/17/09 19:12	
n-Triacontane (S)	%	82	50-150	11/17/09 19:12	

LABORATORY CONTROL SAMPLE & LCSD: 712622 712623

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Diesel Range Organics	mg/L	2	1.8	1.9	90	96	66-125	6	20	
n-Triacontane (S)	%				91	97	50-150			

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

QC Batch: MSV/13440
QC Batch Method: EPA 8260
Analysis Method: EPA 8260
Analysis Description: 8260 MSV 465 W
Associated Lab Samples: 10116766007

METHOD BLANK: 715136
Matrix: Water
Associated Lab Samples: 10116766007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	1.0	11/18/09 01:22	
1,1,1-Trichloroethane	ug/L	ND	1.0	11/18/09 01:22	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	11/18/09 01:22	
1,1,2-Trichloroethane	ug/L	ND	1.0	11/18/09 01:22	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	1.0	11/18/09 01:22	
1,1-Dichloroethane	ug/L	ND	1.0	11/18/09 01:22	
1,1-Dichloroethene	ug/L	ND	1.0	11/18/09 01:22	
1,1-Dichloropropene	ug/L	ND	1.0	11/18/09 01:22	
1,2,3-Trichlorobenzene	ug/L	ND	1.0	11/18/09 01:22	
1,2,3-Trichloropropane	ug/L	ND	1.0	11/18/09 01:22	
1,2,4-Trichlorobenzene	ug/L	ND	1.0	11/18/09 01:22	
1,2,4-Trimethylbenzene	ug/L	ND	1.0	11/18/09 01:22	
1,2-Dibromo-3-chloropropane	ug/L	ND	4.0	11/18/09 01:22	
1,2-Dibromoethane (EDB)	ug/L	ND	1.0	11/18/09 01:22	
1,2-Dichlorobenzene	ug/L	ND	1.0	11/18/09 01:22	
1,2-Dichloroethane	ug/L	ND	1.0	11/18/09 01:22	
1,2-Dichloropropane	ug/L	ND	1.0	11/18/09 01:22	
1,3,5-Trimethylbenzene	ug/L	ND	1.0	11/18/09 01:22	
1,3-Dichlorobenzene	ug/L	ND	1.0	11/18/09 01:22	
1,3-Dichloropropane	ug/L	ND	1.0	11/18/09 01:22	
1,4-Dichlorobenzene	ug/L	ND	1.0	11/18/09 01:22	
2,2-Dichloropropane	ug/L	ND	4.0	11/18/09 01:22	
2-Butanone (MEK)	ug/L	ND	4.0	11/18/09 01:22	
2-Chlorotoluene	ug/L	ND	1.0	11/18/09 01:22	
4-Chlorotoluene	ug/L	ND	1.0	11/18/09 01:22	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	4.0	11/18/09 01:22	
Acetone	ug/L	ND	10.0	11/18/09 01:22	
Allyl chloride	ug/L	ND	4.0	11/18/09 01:22	
Benzene	ug/L	ND	1.0	11/18/09 01:22	
Bromobenzene	ug/L	ND	1.0	11/18/09 01:22	
Bromochloromethane	ug/L	ND	1.0	11/18/09 01:22	
Bromodichloromethane	ug/L	ND	1.0	11/18/09 01:22	
Bromoform	ug/L	ND	8.0	11/18/09 01:22	
Bromomethane	ug/L	ND	4.0	11/18/09 01:22	
Carbon tetrachloride	ug/L	ND	4.0	11/18/09 01:22	
Chlorobenzene	ug/L	ND	1.0	11/18/09 01:22	
Chloroethane	ug/L	ND	1.0	11/18/09 01:22	
Chloroform	ug/L	ND	1.0	11/18/09 01:22	
Chloromethane	ug/L	ND	4.0	11/18/09 01:22	
cis-1,2-Dichloroethene	ug/L	ND	1.0	11/18/09 01:22	
cis-1,3-Dichloropropene	ug/L	ND	4.0	11/18/09 01:22	
Dibromochloromethane	ug/L	ND	1.0	11/18/09 01:22	
Dibromomethane	ug/L	ND	1.0	11/18/09 01:22	

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

METHOD BLANK: 715136 Matrix: Water

Associated Lab Samples: 10116766007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dichlorodifluoromethane	ug/L	ND	1.0	11/18/09 01:22	
Dichlorofluoromethane	ug/L	ND	1.0	11/18/09 01:22	
Diethyl ether (Ethyl ether)	ug/L	ND	4.0	11/18/09 01:22	
Ethylbenzene	ug/L	ND	1.0	11/18/09 01:22	
Hexachloro-1,3-butadiene	ug/L	ND	4.0	11/18/09 01:22	
Isopropylbenzene (Cumene)	ug/L	ND	1.0	11/18/09 01:22	
m&p-Xylene	ug/L	ND	2.0	11/18/09 01:22	
Methyl-tert-butyl ether	ug/L	ND	1.0	11/18/09 01:22	
Methylene Chloride	ug/L	ND	4.0	11/18/09 01:22	
n-Butylbenzene	ug/L	ND	1.0	11/18/09 01:22	
n-Propylbenzene	ug/L	ND	1.0	11/18/09 01:22	
Naphthalene	ug/L	ND	4.0	11/18/09 01:22	
o-Xylene	ug/L	ND	1.0	11/18/09 01:22	
p-Isopropyltoluene	ug/L	ND	1.0	11/18/09 01:22	
sec-Butylbenzene	ug/L	ND	1.0	11/18/09 01:22	
Styrene	ug/L	ND	1.0	11/18/09 01:22	
tert-Butylbenzene	ug/L	ND	1.0	11/18/09 01:22	
Tetrachloroethene	ug/L	ND	1.0	11/18/09 01:22	
Tetrahydrofuran	ug/L	ND	10.0	11/18/09 01:22	
Toluene	ug/L	ND	1.0	11/18/09 01:22	
trans-1,2-Dichloroethene	ug/L	ND	1.0	11/18/09 01:22	
trans-1,3-Dichloropropene	ug/L	ND	4.0	11/18/09 01:22	
Trichloroethene	ug/L	ND	1.0	11/18/09 01:22	
Trichlorofluoromethane	ug/L	ND	1.0	11/18/09 01:22	
Vinyl chloride	ug/L	ND	0.40	11/18/09 01:22	
Xylene (Total)	ug/L	ND	3.0	11/18/09 01:22	
1,2-Dichloroethane-d4 (S)	%	108	75-125	11/18/09 01:22	
4-Bromofluorobenzene (S)	%	99	75-125	11/18/09 01:22	
Dibromofluoromethane (S)	%	107	75-125	11/18/09 01:22	
Toluene-d8 (S)	%	97	75-125	11/18/09 01:22	

LABORATORY CONTROL SAMPLE: 715137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	50	52.4	105	75-125	
1,1,1-Trichloroethane	ug/L	50	50.4	101	75-125	
1,1,2,2-Tetrachloroethane	ug/L	50	47.5	95	75-125	
1,1,2-Trichloroethane	ug/L	50	47.6	95	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	50	45.7	91	70-138	
1,1-Dichloroethane	ug/L	50	48.4	97	75-125	
1,1-Dichloroethene	ug/L	50	46.2	92	69-129	
1,1-Dichloropropene	ug/L	50	47.8	96	75-126	
1,2,3-Trichlorobenzene	ug/L	50	49.6	99	75-125	
1,2,3-Trichloropropane	ug/L	50	48.9	98	72-126	
1,2,4-Trichlorobenzene	ug/L	50	50.0	100	75-125	

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

LABORATORY CONTROL SAMPLE: 715137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	50.9	102	75-125	
1,2-Dibromo-3-chloropropane	ug/L	50	49.2	98	67-125	
1,2-Dibromoethane (EDB)	ug/L	50	50.0	100	75-125	
1,2-Dichlorobenzene	ug/L	50	49.3	99	75-125	
1,2-Dichloroethane	ug/L	50	49.7	99	75-125	
1,2-Dichloropropane	ug/L	50	50.1	100	75-125	
1,3,5-Trimethylbenzene	ug/L	50	50.4	101	75-125	
1,3-Dichlorobenzene	ug/L	50	48.1	96	75-125	
1,3-Dichloropropane	ug/L	50	50.1	100	75-125	
1,4-Dichlorobenzene	ug/L	50	48.7	97	75-125	
2,2-Dichloropropane	ug/L	50	50.1	100	48-150	
2-Butanone (MEK)	ug/L	50	53.0	106	51-134	
2-Chlorotoluene	ug/L	50	48.2	96	75-125	
4-Chlorotoluene	ug/L	50	49.5	99	75-125	
4-Methyl-2-pentanone (MIBK)	ug/L	50	49.5	99	60-125	
Acetone	ug/L	125	126	101	38-125	
Allyl chloride	ug/L	50	44.6	89	64-137	
Benzene	ug/L	50	48.3	97	75-125	
Bromobenzene	ug/L	50	48.7	97	75-125	
Bromochloromethane	ug/L	50	45.6	91	75-125	
Bromodichloromethane	ug/L	50	52.0	104	75-125	
Bromoform	ug/L	100	110	110	68-125	
Bromomethane	ug/L	50	50.8	102	47-129	
Carbon tetrachloride	ug/L	50	52.2	104	59-133	
Chlorobenzene	ug/L	50	48.0	96	75-125	
Chloroethane	ug/L	50	43.5	87	73-132	
Chloroform	ug/L	50	48.8	98	75-125	
Chloromethane	ug/L	50	42.1	84	72-125	
cis-1,2-Dichloroethene	ug/L	50	48.4	97	75-125	
cis-1,3-Dichloropropene	ug/L	50	51.5	103	75-125	
Dibromochloromethane	ug/L	50	52.8	106	75-125	
Dibromomethane	ug/L	50	50.6	101	75-125	
Dichlorodifluoromethane	ug/L	50	39.4	79	69-134	
Dichlorofluoromethane	ug/L	50	48.5	97	70-125	
Diethyl ether (Ethyl ether)	ug/L	50	48.7	97	71-125	
Ethylbenzene	ug/L	50	50.3	101	75-125	
Hexachloro-1,3-butadiene	ug/L	50	47.9	96	75-137	
Isopropylbenzene (Cumene)	ug/L	50	51.4	103	75-125	
m&p-Xylene	ug/L	100	100	100	75-125	
Methyl-tert-butyl ether	ug/L	50	50.1	100	75-125	
Methylene Chloride	ug/L	50	46.1	92	75-125	
n-Butylbenzene	ug/L	50	50.6	101	75-125	
n-Propylbenzene	ug/L	50	49.2	98	75-125	
Naphthalene	ug/L	50	50.3	101	72-125	
o-Xylene	ug/L	50	50.0	100	75-125	
p-Isopropyltoluene	ug/L	50	49.8	100	75-125	
sec-Butylbenzene	ug/L	50	51.1	102	75-125	
Styrene	ug/L	50	51.5	103	75-125	

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

LABORATORY CONTROL SAMPLE: 715137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
tert-Butylbenzene	ug/L	50	50.2	100	75-125	
Tetrachloroethene	ug/L	50	46.7	93	74-125	
Tetrahydrofuran	ug/L	500	492	98	65-125	
Toluene	ug/L	50	47.3	95	75-125	
trans-1,2-Dichloroethene	ug/L	50	47.4	95	74-125	
trans-1,3-Dichloropropene	ug/L	50	53.3	107	75-125	
Trichloroethene	ug/L	50	47.6	95	75-125	
Trichlorofluoromethane	ug/L	50	45.8	92	73-134	
Vinyl chloride	ug/L	50	42.9	86	75-126	
Xylene (Total)	ug/L	150	150	100	75-125	
1,2-Dichloroethane-d4 (S)	%			103	75-125	
4-Bromofluorobenzene (S)	%			102	75-125	
Dibromofluoromethane (S)	%			102	75-125	
Toluene-d8 (S)	%			99	75-125	

MATRIX SPIKE SAMPLE: 715168

Parameter	Units	10117010012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	ND	20	21.6	108	71-125	
1,1,1-Trichloroethane	ug/L	ND	20	22.6	113	75-125	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	19.7	98	75-126	
1,1,2-Trichloroethane	ug/L	ND	20	20.3	102	75-125	
1,1,2-Trichlorotrifluoroethane	ug/L	ND	20	23.5	117	70-150	
1,1-Dichloroethane	ug/L	ND	20	21.2	106	75-125	
1,1-Dichloroethene	ug/L	ND	20	21.6	108	64-142	
1,1-Dichloropropene	ug/L	ND	20	21.8	109	75-125	
1,2,3-Trichlorobenzene	ug/L	ND	20	20.9	104	75-125	
1,2,3-Trichloropropane	ug/L	ND	20	19.7	98	72-127	
1,2,4-Trichlorobenzene	ug/L	ND	20	20.3	102	75-125	
1,2,4-Trimethylbenzene	ug/L	ND	20	21.3	106	75-125	
1,2-Dibromo-3-chloropropane	ug/L	ND	20	20.4	102	65-125	
1,2-Dibromoethane (EDB)	ug/L	ND	20	20.5	102	75-125	
1,2-Dichlorobenzene	ug/L	ND	20	20.3	101	75-125	
1,2-Dichloroethane	ug/L	ND	20	20.8	104	75-125	
1,2-Dichloropropane	ug/L	ND	20	21.3	106	75-125	
1,3,5-Trimethylbenzene	ug/L	ND	20	21.4	107	75-127	
1,3-Dichlorobenzene	ug/L	ND	20	20.3	101	75-125	
1,3-Dichloropropane	ug/L	ND	20	20.6	103	75-125	
1,4-Dichlorobenzene	ug/L	ND	20	20.2	101	75-125	
2,2-Dichloropropane	ug/L	ND	20	21.5	108	48-150	
2-Butanone (MEK)	ug/L	ND	20	18.8	94	51-134	
2-Chlorotoluene	ug/L	ND	20	20.8	104	75-125	
4-Chlorotoluene	ug/L	ND	20	21.1	105	68-127	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	20	19.0	95	60-135	
Acetone	ug/L	ND	50	38.4	77	30-125	
Allyl chloride	ug/L	ND	20	17.7	88	40-137	
Benzene	ug/L	ND	20	21.1	105	75-125	

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

MATRIX SPIKE SAMPLE: 715168

Parameter	Units	10117010012 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromobenzene	ug/L	ND	20	20.2	101	75-125	
Bromochloromethane	ug/L	ND	20	18.6	93	75-125	
Bromodichloromethane	ug/L	ND	20	21.9	110	72-125	
Bromoform	ug/L	ND	40	43.0	107	51-125	
Bromomethane	ug/L	ND	20	21.5	108	47-130	
Carbon tetrachloride	ug/L	ND	20	23.9	120	61-133	
Chlorobenzene	ug/L	ND	20	20.8	104	75-125	
Chloroethane	ug/L	ND	20	20.4	102	75-132	
Chloroform	ug/L	ND	20	21.0	105	75-125	
Chloromethane	ug/L	ND	20	18.8	94	68-132	
cis-1,2-Dichloroethene	ug/L	ND	20	20.6	103	75-125	
cis-1,3-Dichloropropene	ug/L	ND	20	20.9	105	63-125	
Dibromochloromethane	ug/L	ND	20	21.2	106	62-125	
Dibromomethane	ug/L	ND	20	20.8	104	75-125	
Dichlorodifluoromethane	ug/L	ND	20	20.7	104	65-150	
Dichlorofluoromethane	ug/L	ND	20	21.3	107	68-127	
Diethyl ether (Ethyl ether)	ug/L	ND	20	19.9	99	71-125	
Ethylbenzene	ug/L	ND	20	21.7	109	75-125	
Hexachloro-1,3-butadiene	ug/L	ND	20	21.0	105	75-147	
Isopropylbenzene (Cumene)	ug/L	ND	20	22.6	113	75-125	
m&p-Xylene	ug/L	ND	40	43.5	109	67-125	
Methyl-tert-butyl ether	ug/L	ND	20	20.1	101	75-125	
Methylene Chloride	ug/L	ND	20	19.5	98	75-125	
n-Butylbenzene	ug/L	ND	20	21.8	109	70-135	
n-Propylbenzene	ug/L	ND	20	21.6	108	70-131	
Naphthalene	ug/L	ND	20	20.0	100	66-127	
o-Xylene	ug/L	ND	20	21.3	107	72-125	
p-Isopropyltoluene	ug/L	ND	20	21.4	107	71-126	
sec-Butylbenzene	ug/L	ND	20	22.4	112	75-127	
Styrene	ug/L	ND	20	21.3	107	30-134	
tert-Butylbenzene	ug/L	ND	20	21.5	107	75-125	
Tetrachloroethene	ug/L	1.0	20	23.2	111	74-125	
Tetrahydrofuran	ug/L	ND	200	194	97	65-125	
Toluene	ug/L	ND	20	20.8	104	75-125	
trans-1,2-Dichloroethene	ug/L	ND	20	21.2	106	72-125	
trans-1,3-Dichloropropene	ug/L	ND	20	21.5	108	63-125	
Trichloroethene	ug/L	ND	20	21.0	105	58-127	
Trichlorofluoromethane	ug/L	ND	20	22.7	113	73-150	
Vinyl chloride	ug/L	ND	20	20.2	101	75-134	
Xylene (Total)	ug/L	ND	60	64.8	108	75-125	
1,2-Dichloroethane-d4 (S)	%				102	75-125	
4-Bromofluorobenzene (S)	%				101	75-125	
Dibromofluoromethane (S)	%				99	75-125	
Toluene-d8 (S)	%				100	75-125	

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

SAMPLE DUPLICATE: 715167

Parameter	Units	10117010010 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	4.7	5.0	6	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	1.5	1.6	9	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	
Carbon tetrachloride	ug/L	ND	ND		30	
Chlorobenzene	ug/L	ND	ND		30	
Chloroethane	ug/L	10.0	10.1	1	30	
Chloroform	ug/L	ND	ND		30	
Chloromethane	ug/L	ND	ND		30	
cis-1,2-Dichloroethene	ug/L	10.1	10.4	3	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	.63J		30	
Diethyl ether (Ethyl ether)	ug/L	39.0	38.4	2	30	
Ethylbenzene	ug/L	ND	ND		30	
Hexachloro-1,3-butadiene	ug/L	ND	ND		30	

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

SAMPLE DUPLICATE: 715167

Parameter	Units	10117010010 Result	Dup Result	RPD	Max RPD	Qualifiers
Isopropylbenzene (Cumene)	ug/L	ND	ND		30	
m&p-Xylene	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	ND		30	
o-Xylene	ug/L	ND	ND		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	41.7	38.1	9	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	.36J		30	
Xylene (Total)	ug/L	ND	ND		30	
1,2-Dichloroethane-d4 (S)	%	110	111	0		
4-Bromofluorobenzene (S)	%	94	96	3		
Dibromofluoromethane (S)	%	107	106	1		
Toluene-d8 (S)	%	95	94	2		

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QUALITY CONTROL DATA

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

QC Batch: GCV/6630 Analysis Method: WI MOD GRO
QC Batch Method: TPH GRO/PVOC WI ext. Analysis Description: WIGRO Solid GCV
Associated Lab Samples: 10116766001, 10116766002, 10116766003, 10116766005

METHOD BLANK: 713055 Matrix: Solid
Associated Lab Samples: 10116766001, 10116766002, 10116766003, 10116766005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Benzene	mg/kg	ND	0.050	11/13/09 14:31	
Ethylbenzene	mg/kg	ND	0.050	11/13/09 14:31	
Gasoline Range Organics	mg/kg	ND	5.0	11/13/09 14:31	
Methyl-tert-butyl ether	mg/kg	ND	0.25	11/13/09 14:31	
Toluene	mg/kg	ND	0.050	11/13/09 14:31	
Xylene (Total)	mg/kg	ND	0.15	11/13/09 14:31	
a,a,a-Trifluorotoluene (S)	%	104	80-125	11/13/09 14:31	

LABORATORY CONTROL SAMPLE & LCSD: 713056 713057

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Benzene	mg/kg	5	5.1	5.5	101	110	80-120	9	20	
Ethylbenzene	mg/kg	5	5.2	5.5	104	109	80-120	5	20	
Gasoline Range Organics	mg/kg	50	55.9	54.1	112	108	80-120	3	20	
Methyl-tert-butyl ether	mg/kg	5	5.4	6.3	107	126	80-120	16	20	L3
Toluene	mg/kg	5	5.1	5.3	101	106	80-120	5	20	
Xylene (Total)	mg/kg	15	15.6	16.3	104	109	80-120	5	20	
a,a,a-Trifluorotoluene (S)	%				102	103	80-125			

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

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.

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.

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

SAMPLE QUALIFIERS

Sample: 10116766007

[1]	Greater than 5% sediment in sample determined by visual observation. Aqueous portion decanted from the sediment and extracted. The sample container could not be rinsed with solvent per the method requirement.

BATCH QUALIFIERS

Batch: GCV/6631

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

ANALYTE QUALIFIERS

1M	The sample was analyzed at a dilution due to a large amount of sediment in the vials. The pH was found to be greater than 2.
2M	The sample was analyzed at a dilution due to a large amount of sediment in the vials. The pH was found to be greater than 2; therefore, the sample was analyzed outside of recommended holding time.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
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.
P4	Sample field preservation does not meet EPA or method recommendations for this analysis.
T7	Low boiling point hydrocarbons are present in the sample.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60141264 Alex's Exhaust
Pace Project No.: 10116766

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10116766006	TW-13	WI MOD DRO	OEXT/11900	WI MOD DRO	GCSV/6191
10116766007	TW-12	WI MOD DRO	OEXT/11900	WI MOD DRO	GCSV/6191
10116766008	TW-10	WI MOD DRO	OEXT/11900	WI MOD DRO	GCSV/6191
10116766009	TW-100	WI MOD DRO	OEXT/11900	WI MOD DRO	GCSV/6191
10116766010	FIELD BLANK	WI MOD DRO	OEXT/11900	WI MOD DRO	GCSV/6191
10116766001	B-13 (16')	% Moisture	MPRP/18281		
10116766002	B-12 (18')	% Moisture	MPRP/18281		
10116766003	B-10 (13')	% Moisture	MPRP/18281		
10116766001	B-13 (16')	TPH GRO/PVOC WI ext.	GCV/6630	WI MOD GRO	GCV/6631
10116766002	B-12 (18')	TPH GRO/PVOC WI ext.	GCV/6630	WI MOD GRO	GCV/6631
10116766003	B-10 (13')	TPH GRO/PVOC WI ext..	GCV/6630	WI MOD GRO	GCV/6631
10116766005	Methanol Blank	TPH GRO/PVOC WI ext.	GCV/6630	WI MOD GRO	GCV/6631
10116766006	TW-13	EPA 8260	MSV/13422		
10116766008	TW-10	EPA 8260	MSV/13422		
10116766009	TW-100	EPA 8260	MSV/13422		
10116766010	FIELD BLANK	EPA 8260	MSV/13422		
10116766011	TRIP BLANK	EPA 8260	MSV/13422		
10116766006	TW-13	WI MOD GRO	GCV/6634		
10116766007	TW-12	WI MOD GRO	GCV/6634		
10116766008	TW-10	WI MOD GRO	GCV/6634		
10116766009	TW-100	WI MOD GRO	GCV/6634		
10116766010	FIELD BLANK	WI MOD GRO	GCV/6634		
10116766001	B-13 (16')	WI MOD DRO	OEXT/11906	WI MOD DRO	GCSV/6195
10116766002	B-12 (18')	WI MOD DRO	OEXT/11906	WI MOD DRO	GCSV/6195
10116766003	B-10 (13')	WI MOD DRO	OEXT/11906	WI MOD DRO	GCSV/6195
10116766007	TW-12	EPA 8260	MSV/13440		

Chain of Custody Record

№ 4607

STS | AECOM

10116766

Record Number 4604 Through 4606

Contact Person Tim Grape
Phone No. 763 852-4218 Office Minneapolis
Project No. 60141264 PO No.
Project Name Alex's Exhaust

Special Handling Request
☐ Rush
☐ Verbal
☐ Other

Laboratory Pace
Contact Person Carol Davy
Phone No. 612 607 6436
Results Due STD

Sample I.D.	Date	Time	Grab	Composite	No. of Containers	Sample Type (Water, soil, air, sludge, etc.)	Preservation Y	Preservation N	Field Data PID/FID Ambient	Field Data PID/FID Sample	Field Data PH	Field Data Special Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
B-13 (16')	11/9	12:18	X		4	Soil	1	3					GRO MTBE, BTEX, DRO	DRY WEIGT 10116766001
B-12 (18')	11/9	1627	X		4		1	3						002
B-10 (13')	11/10	1120	X		4		1	3						003
B-10 (15')	11/10	1130	X		4		1	3						004 ✓ Hold this sample per TBo
METHANOL BLANK	9/27	—	X		1		1	—						005
TW-13	11/9	1135	X		8	Water	8	—					VOCs, GRO, DRO	006
TW-12	11/9	1512	X		8		8	—						007
TW-10	11/10	1000	X		8		8	—						008
TW-100	11/10	1012	X		8		8	—						009

1154, 1155, 1156

Collected by: JASON ROWE	Date SEE ABOVE	Time	Delivery by: Pace	Date 11/11/09	Time 1345
Received by:	Date 11/11/9	Time 1:15	Relinquished by:	Date 11/11/09	Time 1345
Received by:	Date 11/11/09	Time 1350	Relinquished by:	Date 11/11/9	Time 1350
Received by:	Date	Time	Relinquished by:	Date	Time
Received for lab by:	Date	Time	Relinquished by:	Date	Time

Laboratory Comments Only: Seals Intact Upon Receipt? ☐ Yes ☐ No ☐ N/A

Final Disposition:	Comments (Weather Conditions, Precautions, Hazards):

Distribution: Original and Canary - Laboratory Pink - STS Project File Instructions to Laboratory: Forward completed original to STS with analytical results.

T=5.8

Chain of Custody Record

№ 4606

STS | AECOM

10116766

Record Number 4608 Through 460C

Contact Person TIM GRAPE
Phone No. 763 852 4218 Office MINNEAPOLIS
Project No. 60141204 PO No.
Project Name ALEX'S EXHAUST

Special Handling Request
- ☐ Rush
- ☐ Verbal
- ☐ Other

Laboratory PACE
Contact Person CAROL DAVY
Phone No. 612 607 6436
Results Due STD

Sample I.D.	Date	Time	Grab	Composite	No. of Containers	Sample Type (Water, soil, air, sludge, etc.)	Preservation Y	Preservation N	Field Data PID/FID Ambient	Field Data PID/FID Sample	Field Data PH	Field Data Special Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
FIELDBLANK	11/10	1400	X		8	WATER	8	—					VOCs, GRO, DRO	10116766010
TRIPBLANK	11/3	—	Y		8	↓	8	—					VOCs	011

Collected by: JASON RAVE	Date SEE ABOVE	Time	Delivery by: Pace	Date 11/10/09	Time 1315
Received by:	Date 11/11/9	Time 1:15	Relinquished by:	Date 11/10/09	Time 1315
Received by: PACE	Date 11/11/09	Time 1350	Relinquished by:	Date 11/11/9	Time 1350
Received by:	Date	Time	Relinquished by:	Date	Time
Received for lab by:	Date	Time	Relinquished by:	Date	Time

Laboratory Comments Only: Seals Intact Upon Receipt? ☐ Yes ☐ No ☐ N/A

Final Disposition:	Comments (Weather Conditions, Precautions, Hazards):

Distribution: Original and Canary - Laboratory Pink - STS Project File Instructions to Laboratory: Forward completed original to STS with analytical results.

T=5.8

Sample Condition Upon Receipt

Pace Analytical

Client Name: Tecon

Project # 10116766

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

Tracking #: _____

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals Intact: ☐ yes ☐ no

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

Thermometer Used 80344042 or 179425 Type of Ice: (Wet) Blue None ☐ Samples on ice, cooling process has begun

Cooler Temperature 2.8 Biological Tissue is Frozen: Yes No

Temp should be above freezing to 6°C

Comments:

Date and initials of person examining contents: 11/11/09 BH

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 & Signature on COC:	☐Yes ☑No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐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 / WT		
All containers needing acid/base preservation have been checked. Noncompliance are noted in 13.	☐Yes ☐No ☑N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ HCl Samp #
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☐No ☑N/A	Initial when completed: AH Lot # of added preservative
Exceptions: VOA, Coliform, TOC, Oil and Grease, WI-DRO (water)	☐Yes ☐No	
Samples checked for dechlorination:	☐Yes ☐No ☑N/A	14.
Headspace in VOA Vials (>6mm):	☑Yes ☐No ☐N/A	15. 5 VIALS IN TW12
Trip Blank Present:	☑Yes ☐No ☐N/A	16. ISL 082409-3
Trip Blank Custody Seals Present	☑Yes ☐No ☐N/A	4WT 101909-4
Pace Trip Blank Lot # (if purchased): _____		

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Tim Rape Date/Time: 11-12-09 2:54P

Comments/ Resolution: VM sent

Hold Sample B-10(15')

Project Manager Review: CMD Date: 11-12-09

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR.

F-L213Rev.00, 05Aug2009

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December 03, 2009

Mr. Tim Grape
AECOM
161 Cheshire Lane North
Suite 500
Minneapolis, MN 55441

RE: Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

Dear Mr. Grape:
Enclosed are the analytical results for sample(s) received by the laboratory on November 12, 2009. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Carol Davy

carol.davy@pacelabs.com
Project Manager

Enclosures

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Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

Minnesota Certification IDs
1700 Elm Street SE, Suite 200 Minneapolis, MN 55414
Alaska Certification #: UST-078
Washington Certification #: C754
Tennessee Certification #: 02818
Pennsylvania Certification #: 68-00563
Oregon Certification #: MN200001
North Dakota Certification #: R-036
North Carolina Certification #: 530
New York Certification #: 11647
New Jersey Certification #: MN-002
Montana Certification #: MT CERT0092
Minnesota Certification #: 027-053-137
Maine Certification #: 2007029
Louisiana Certification #: LA080009
Louisiana Certification #: 03086
Kansas Certification #: E-10167
Iowa Certification #: 368
Illinois Certification #: 200011
Florida/NELAP Certification #: E87605
California Certification #: 01155CA
Arizona Certification #: AZ-0014
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10116826001	VP-1P	Air	11/10/09 07:50	11/12/09 13:45

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SAMPLE ANALYTE COUNT

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10116826001	VP-1P	TO-15	DB1	60

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PROJECT NARRATIVE

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

Method: TO-15
Description: TO15 MSV AIR
Client: AECOM
Date: December 03, 2009

General Information:
1 sample was analyzed for TO-15. 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.
- VP-1P (Lab ID: 10116826001)

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

K7: The sample was analyzed within the recommended holding time but had QC failures. The reported results were analyzed outside the recommended holding time and confirmed the original analysis.
- VP-1P (Lab ID: 10116826001)

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 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:

Sample Comments:

K1: The Total Hydrocarbon (THC) pattern occured in the first half of the chromatogram (before toluene).
- VP-1P (Lab ID: 10116826001)

A3: This result is reported from a serial dilution
- VP-1P (Lab ID: 10116826001)

Analyte Comments:

QC Batch: AIR/9437

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- VP-1P (Lab ID: 10116826001)
  - Acetone
  - Cyclohexane

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PROJECT NARRATIVE

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

Method: **TO-15**
Description: TO15 MSV AIR
Client: AECOM
Date: December 03, 2009

Analyte Comments:

QC Batch: AIR/9437

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- VP-1P (Lab ID: 10116826001)
  - n-Hexane

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

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ANALYTICAL RESULTS

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

Sample: VP-1P **Lab ID: 10116826001** Collected: 11/10/09 07:50 Received: 11/12/09 13:45 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	**6220000**	ug/m3	12300	6140	25600		11/30/09 22:10	67-64-1	E
Benzene	**213000**	ug/m3	16600	8320	25600		11/30/09 22:10	71-43-2	
Bromodichloromethane	ND	ug/m3	35800	17900	25600		11/30/09 22:10	75-27-4	
Bromoform	ND	ug/m3	53800	26900	25600		11/30/09 22:10	75-25-2	
Bromomethane	ND	ug/m3	20200	10100	25600		11/30/09 22:10	74-83-9	
1,3-Butadiene	ND	ug/m3	11500	5760	25600		11/30/09 22:10	106-99-0	
2-Butanone (MEK)	ND	ug/m3	15400	7680	25600		11/30/09 22:10	78-93-3	
Carbon disulfide	ND	ug/m3	16100	8060	25600		11/30/09 22:10	75-15-0	
Carbon tetrachloride	ND	ug/m3	33300	16600	25600		11/30/09 22:10	56-23-5	
Chlorobenzene	ND	ug/m3	24100	12000	25600		11/30/09 22:10	108-90-7	
Chloroethane	ND	ug/m3	13800	6910	25600		11/30/09 22:10	75-00-3	
Chloroform	ND	ug/m3	25300	12700	25600		11/30/09 22:10	67-66-3	
Chloromethane	ND	ug/m3	10800	5380	25600		11/30/09 22:10	74-87-3	
Cyclohexane	**10100000**	ug/m3	17400	8700	25600		11/30/09 22:10	110-82-7	E
Dibromochloromethane	ND	ug/m3	43500	21800	25600		11/30/09 22:10	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	41000	20500	25600		11/30/09 22:10	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	30700	15400	25600		11/30/09 22:10	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	30700	15400	25600		11/30/09 22:10	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	30700	15400	25600		11/30/09 22:10	106-46-7	
Dichlorodifluoromethane	ND	ug/m3	25600	12800	25600		11/30/09 22:10	75-71-8	
1,1-Dichloroethane	ND	ug/m3	21000	10500	25600		11/30/09 22:10	75-34-3	
1,2-Dichloroethane	ND	ug/m3	21000	10500	25600		11/30/09 22:10	107-06-2	
1,1-Dichloroethene	ND	ug/m3	20700	10400	25600		11/30/09 22:10	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	20700	10400	25600		11/30/09 22:10	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	20700	10400	25600		11/30/09 22:10	156-60-5	
1,2-Dichloropropane	ND	ug/m3	24100	12000	25600		11/30/09 22:10	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	23600	11800	25600		11/30/09 22:10	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	23600	11800	25600		11/30/09 22:10	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	35800	17900	25600		11/30/09 22:10	76-14-2	
Ethanol	ND	ug/m3	48600	21800	25600		11/30/09 22:10	64-17-5	
Ethyl acetate	ND	ug/m3	18700	9340	25600		11/30/09 22:10	141-78-6	
Ethylbenzene	**33800**	ug/m3	22500	11300	25600		11/30/09 22:10	100-41-4	
4-Ethyltoluene	ND	ug/m3	64000	32000	25600		11/30/09 22:10	622-96-8	
n-Heptane	**1730000**	ug/m3	21200	10600	25600		11/30/09 22:10	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	56300	28200	25600		11/30/09 22:10	87-68-3	
n-Hexane	**4950000**	ug/m3	18400	9220	25600		11/30/09 22:10	110-54-3	E
2-Hexanone	ND	ug/m3	21200	10600	25600		11/30/09 22:10	591-78-6	
Methylene Chloride	ND	ug/m3	18200	9090	25600		11/30/09 22:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/m3	21200	10600	25600		11/30/09 22:10	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	18700	9340	25600		11/30/09 22:10	1634-04-4	
Naphthalene	ND	ug/m3	69100	34600	25600		11/30/09 22:10	91-20-3	
2-Propanol	ND	ug/m3	64000	32000	25600		11/30/09 22:10	67-63-0	
Propylene	ND	ug/m3	8960	4480	25600		11/30/09 22:10	115-07-1	
Styrene	ND	ug/m3	22300	11100	25600		11/30/09 22:10	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	35800	17900	25600		11/30/09 22:10	79-34-5	
Tetrachloroethene	ND	ug/m3	35800	17900	25600		11/30/09 22:10	127-18-4	

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ANALYTICAL RESULTS

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

Sample: VP-1P **Lab ID: 10116826001** Collected: 11/10/09 07:50 Received: 11/12/09 13:45 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Tetrahydrofuran	ND	ug/m3	15400	7680	25600		11/30/09 22:10	109-99-9	L2
Toluene	**94000**	ug/m3	19700	9860	25600		11/30/09 22:10	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	25300	12700	25600		11/30/09 22:10	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	28200	14100	25600		11/30/09 22:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	28200	14100	25600		11/30/09 22:10	79-00-5	
Trichloroethene	ND	ug/m3	28200	14100	25600		11/30/09 22:10	79-01-6	
Trichlorofluoromethane	ND	ug/m3	28200	14100	25600		11/30/09 22:10	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	41000	20500	25600		11/30/09 22:10	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	64000	32000	25600		11/30/09 22:10	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	64000	32000	25600		11/30/09 22:10	108-67-8	
Vinyl acetate	ND	ug/m3	18200	9090	25600		11/30/09 22:10	108-05-4	
Vinyl chloride	ND	ug/m3	13300	6660	25600		11/30/09 22:10	75-01-4	
m&p-Xylene	**62000**	ug/m3	45100	22500	25600		11/30/09 22:10	1330-20-7	
o-Xylene	ND	ug/m3	22500	11300	25600		11/30/09 22:10	95-47-6	

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QUALITY CONTROL DATA

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

QC Batch: AIR/9437
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10116826001

METHOD BLANK: 720438
Matrix: Air
Associated Lab Samples: 10116826001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	11/30/09 17:07	
1,1,2,2-Tetrachloroethane	ug/m3	ND	1.4	11/30/09 17:07	
1,1,2-Trichloroethane	ug/m3	ND	1.1	11/30/09 17:07	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.6	11/30/09 17:07	
1,1-Dichloroethane	ug/m3	ND	0.82	11/30/09 17:07	
1,1-Dichloroethene	ug/m3	ND	0.81	11/30/09 17:07	
1,2,4-Trichlorobenzene	ug/m3	ND	0.99	11/30/09 17:07	
1,2,4-Trimethylbenzene	ug/m3	ND	2.5	11/30/09 17:07	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.6	11/30/09 17:07	
1,2-Dichlorobenzene	ug/m3	ND	1.2	11/30/09 17:07	
1,2-Dichloroethane	ug/m3	ND	0.82	11/30/09 17:07	
1,2-Dichloropropane	ug/m3	ND	0.94	11/30/09 17:07	
1,3,5-Trimethylbenzene	ug/m3	ND	2.5	11/30/09 17:07	
1,3-Butadiene	ug/m3	ND	0.45	11/30/09 17:07	
1,3-Dichlorobenzene	ug/m3	ND	1.2	11/30/09 17:07	
1,4-Dichlorobenzene	ug/m3	ND	1.2	11/30/09 17:07	
2-Butanone (MEK)	ug/m3	ND	0.60	11/30/09 17:07	
2-Hexanone	ug/m3	ND	0.83	11/30/09 17:07	
2-Propanol	ug/m3	ND	2.5	11/30/09 17:07	
4-Ethyltoluene	ug/m3	ND	2.5	11/30/09 17:07	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	0.83	11/30/09 17:07	
Acetone	ug/m3	ND	0.48	11/30/09 17:07	
Benzene	ug/m3	ND	0.65	11/30/09 17:07	
Bromodichloromethane	ug/m3	ND	1.4	11/30/09 17:07	
Bromoform	ug/m3	ND	2.1	11/30/09 17:07	
Bromomethane	ug/m3	ND	0.79	11/30/09 17:07	
Carbon disulfide	ug/m3	ND	0.63	11/30/09 17:07	
Carbon tetrachloride	ug/m3	ND	1.3	11/30/09 17:07	
Chlorobenzene	ug/m3	ND	0.94	11/30/09 17:07	
Chloroethane	ug/m3	ND	0.54	11/30/09 17:07	
Chloroform	ug/m3	ND	0.99	11/30/09 17:07	
Chloromethane	ug/m3	ND	0.42	11/30/09 17:07	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	11/30/09 17:07	
cis-1,3-Dichloropropene	ug/m3	ND	0.92	11/30/09 17:07	
Cyclohexane	ug/m3	ND	0.68	11/30/09 17:07	
Dibromochloromethane	ug/m3	ND	1.7	11/30/09 17:07	
Dichlorodifluoromethane	ug/m3	ND	1.0	11/30/09 17:07	
Dichlorotetrafluoroethane	ug/m3	ND	1.4	11/30/09 17:07	
Ethanol	ug/m3	ND	1.9	11/30/09 17:07	
Ethyl acetate	ug/m3	ND	0.73	11/30/09 17:07	
Ethylbenzene	ug/m3	ND	0.88	11/30/09 17:07	
Hexachloro-1,3-butadiene	ug/m3	ND	2.2	11/30/09 17:07	
m&p-Xylene	ug/m3	ND	1.8	11/30/09 17:07	

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QUALITY CONTROL DATA

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

METHOD BLANK: 720438 Matrix: Air

Associated Lab Samples: 10116826001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Methyl-tert-butyl ether	ug/m3	ND	0.73	11/30/09 17:07	
Methylene Chloride	ug/m3	ND	0.71	11/30/09 17:07	
n-Heptane	ug/m3	ND	0.83	11/30/09 17:07	
n-Hexane	ug/m3	ND	0.72	11/30/09 17:07	
Naphthalene	ug/m3	ND	2.7	11/30/09 17:07	
o-Xylene	ug/m3	ND	0.88	11/30/09 17:07	
Propylene	ug/m3	ND	0.35	11/30/09 17:07	
Styrene	ug/m3	ND	0.87	11/30/09 17:07	
Tetrachloroethene	ug/m3	ND	1.4	11/30/09 17:07	
Tetrahydrofuran	ug/m3	ND	0.60	11/30/09 17:07	
Toluene	ug/m3	ND	0.77	11/30/09 17:07	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	11/30/09 17:07	
trans-1,3-Dichloropropene	ug/m3	ND	0.92	11/30/09 17:07	
Trichloroethene	ug/m3	ND	1.1	11/30/09 17:07	
Trichlorofluoromethane	ug/m3	ND	1.1	11/30/09 17:07	
Vinyl acetate	ug/m3	ND	0.71	11/30/09 17:07	
Vinyl chloride	ug/m3	ND	0.52	11/30/09 17:07	

LABORATORY CONTROL SAMPLE: 720439

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	57.2	46.6	82	55-127	
1,1,2,2-Tetrachloroethane	ug/m3	71.2	64.6	91	58-128	
1,1,2-Trichloroethane	ug/m3	56	48.7	87	58-126	
1,1,2-Trichlorotrifluoroethane	ug/m3	76.4	48.8	64	49-134	
1,1-Dichloroethane	ug/m3	41.2	29.1	71	52-129	
1,1-Dichloroethene	ug/m3	40.3	33.9	84	50-130	
1,2,4-Trichlorobenzene	ug/m3	74.7	45.1	60	30-150	
1,2,4-Trimethylbenzene	ug/m3	49.5	49.7	100	53-144	
1,2-Dibromoethane (EDB)	ug/m3	81.3	70.0	86	57-137	
1,2-Dichlorobenzene	ug/m3	62.4	61.4	98	65-140	
1,2-Dichloroethane	ug/m3	44.9	37.1	83	54-125	
1,2-Dichloropropane	ug/m3	50.8	43.0	85	60-125	
1,3,5-Trimethylbenzene	ug/m3	49.5	48.7	98	54-139	
1,3-Butadiene	ug/m3	22.7	14.5	64	54-125	
1,3-Dichlorobenzene	ug/m3	64.2	60.1	94	62-140	
1,4-Dichlorobenzene	ug/m3	63	58.0	92	61-139	
2-Butanone (MEK)	ug/m3	30.9	24.8	80	47-138	
2-Hexanone	ug/m3	42.1	41.3	98	40-143	
2-Propanol	ug/m3	23.8	12.5	52	45-149	
4-Ethyltoluene	ug/m3	50	45.7	91	57-139	
4-Methyl-2-pentanone (MIBK)	ug/m3	42.5	35.7	84	54-132	
Acetone	ug/m3	24.2	13.0	54	44-147	
Benzene	ug/m3	32.8	25.6	78	60-125	
Bromodichloromethane	ug/m3	68.1	57.3	84	53-130	

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QUALITY CONTROL DATA

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

LABORATORY CONTROL SAMPLE: 720439

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/m3	107	97.1	91	55-125	
Bromomethane	ug/m3	39.9	26.6	67	53-132	
Carbon disulfide	ug/m3	32.6	23.6	72	57-150	
Carbon tetrachloride	ug/m3	64.6	51.5	80	53-125	
Chlorobenzene	ug/m3	46.4	41.5	90	50-136	
Chloroethane	ug/m3	26.6	21.2	80	55-130	
Chloroform	ug/m3	48.2	38.7	80	56-125	
Chloromethane	ug/m3	21	20.4	97	49-127	
cis-1,2-Dichloroethene	ug/m3	41.5	33.6	81	58-127	
cis-1,3-Dichloropropene	ug/m3	48.5	51.9	107	62-135	
Cyclohexane	ug/m3	35.4	39.9	113	56-135	
Dibromochloromethane	ug/m3	91	75.1	83	48-132	
Dichlorodifluoromethane	ug/m3	49.3	31.2	63	54-130	
Dichlorotetrafluoroethane	ug/m3	71.1	55.2	78	50-125	
Ethanol	ug/m3	19.2	11.1	58	30-150	
Ethyl acetate	ug/m3	37.4	31.3	84	70-141	
Ethylbenzene	ug/m3	48.6	43.6	90	57-135	
Hexachloro-1,3-butadiene	ug/m3	106	66.5	63	30-150	
m&p-Xylene	ug/m3	91.8	83.0	90	61-135	
Methyl-tert-butyl ether	ug/m3	36.7	27.6	75	56-130	
Methylene Chloride	ug/m3	34.6	21.1	61	49-127	
n-Heptane	ug/m3	42.9	33.7	79	57-133	
n-Hexane	ug/m3	39.1	36.5	93	55-135	
Naphthalene	ug/m3	50.6	32.8	65	30-150	
o-Xylene	ug/m3	45.5	41.2	91	60-134	
Propylene	ug/m3	18.6	16.8	90	63-147	
Styrene	ug/m3	43.3	39.7	92	58-142	
Tetrachloroethene	ug/m3	71.7	57.8	81	61-132	
Tetrahydrofuran	ug/m3	22.5	11.7	52	67-134	L2
Toluene	ug/m3	39.9	32.5	82	56-132	
trans-1,2-Dichloroethene	ug/m3	41.9	34.8	83	52-131	
trans-1,3-Dichloropropene	ug/m3	48.9	44.5	91	62-131	
Trichloroethene	ug/m3	55.2	53.9	98	68-150	
Trichlorofluoromethane	ug/m3	56	49.4	88	52-142	
Vinyl acetate	ug/m3	36.9	27.8	75	53-136	
Vinyl chloride	ug/m3	26.8	16.2	60	57-132	

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QUALIFIERS

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

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.

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.

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

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

SAMPLE QUALIFIERS

Sample: 10116826001

[1]	The Total Hydrocarbon (THC) pattern occured in the first half of the chromatogram (before toluene).
[2]	This result is reported from a serial dilution
[3]	The sample was analyzed within the recommended holding time but had QC failures. The reported results were analyzed outside the recommended holding time and confirmed the original analysis.

ANALYTE QUALIFIERS

E	Analyte concentration exceeded the calibration range. The reported result is estimated.
L2	Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results may be biased low.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: ALEX's Exhaust 60141264
Pace Project No.: 10116826

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10116826001	VP-1P	TO-15	AIR/9437		

Data File: \\192.168.10.12\chem\10air7.i\113009.b\33424.D
Report Date: 01-Dec-2009 11:56

Pace Analytical Services

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 10116826001
Operator : DB1
Sample Location:
Sample Matrix: AIR
Analysis Type: VOA
Inj Date: 30-NOV-2009 22:10

Client SDG: 113009.b

Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 10

CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	3.732	852000	J
2.	78-78-4	Butane, 2-methyl-	4.601	1380000	NJ
3.	107-83-5	Pentane, 2-methyl-	5.529	1240000	NJ
4.	96-14-0	Pentane, 3-methyl-	5.736	482000	NJ
5.	108-08-7	Pentane, 2,4-dimethyl-	6.415	659000	NJ
6.	96-37-7	Cyclopentane, methyl-	6.510	536000	NJ
7.	589-34-4	Hexane, 3-methyl-	7.241	390000	NJ
8.		Unknown	8.376	408000	J
9.	565-75-3	Pentane, 2,3,4-trimethyl-	8.828	629000	NJ
10.	560-21-4	Pentane, 2,3,3-trimethyl-	8.986	751000	NJ

Data File: \\192.168.10.12\chem\10air7.i\113009.b\33424.D
Report Date: 01-Dec-2009 11:56

Pace Analytical Services

TO15 Analysis (UNIX)

Data file : \\192.168.10.12\chem\10air7.i\113009.b\33424.D
Lab Smp Id: 10116826001
Inj Date : 30-NOV-2009 22:10
Operator : DB1 Inst ID: 10air7.i
Smp Info : Sample 6
Misc Info : 9437
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10air7.i\113009.b\TO15_334.m
Meth Date : 30-Nov-2009 16:37 dbrusky Quant Type: ISTD
Cal Date : 30-NOV-2009 14:56 Cal File: 33410.D
Als bottle: 24
Dil Factor: 25600.00000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10VOA10

Concentration Formula: Amt * DF * Uf * CpndVariable

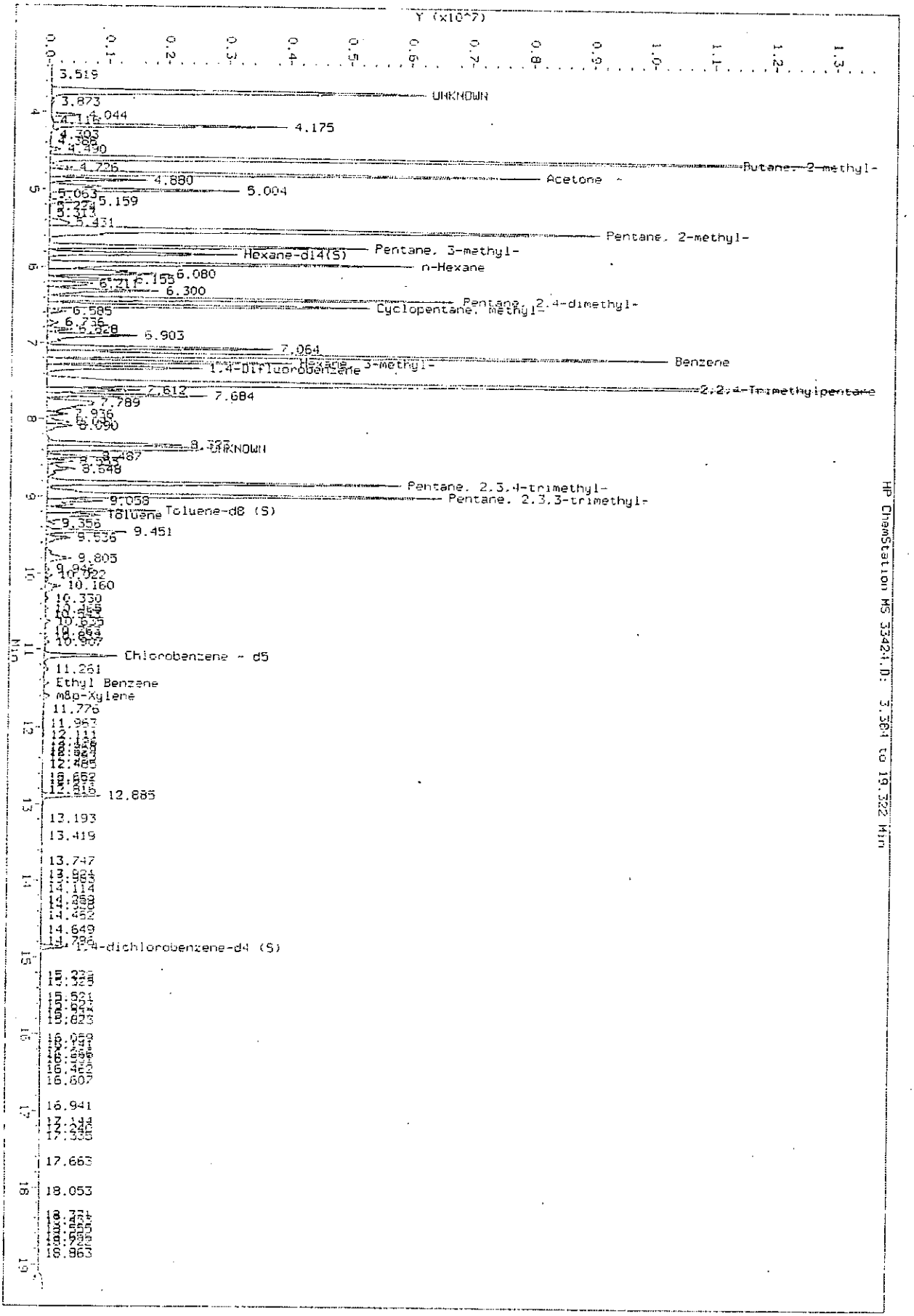
Name	Value	Description
DF	25600.000	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 36 1,4-Difluorobenzene	7.316	5652476	10.000

	RT	AREA	CONCENTRATIONS ON-COL(ppbv)	FINAL(ppbv)	QUAL	QUANT LIBRARY	LIB ENTRY	CPND #
Unknown					CAS #:			
	3.732	18820322	33.2957110	852000	0		0	36
Butane, 2-methyl-					CAS #: 78-78-4			
	4.601	30367194	53.7237001	1380000	86	NBS75K.1	62517	36
Pentane, 2-methyl-					CAS #: 107-83-5			
	5.529	27319155	48.3313044	1240000	90	NBS75K.1	62863	36
Pentane, 3-methyl-					CAS #: 96-14-0			
	5.736	10634133	18.8132287	482000	91	NBS75K.1	62868	36
Pentane, 2,4-dimethyl-					CAS #: 108-08-7			
	6.415	14544431	25.7310773	659000	91	NBS75K.1	1594	36
Cyclopentane, methyl-					CAS #: 96-37-7			
	6.510	11834671	20.9371445	536000	91	NBS75K.1	594	36

Data File: \\192.168.10.12\chem\10air7.i\113009.b\33424.D
Report Date: 01-Dec-2009 11:56

		CONCENTRATIONS			QUANT		
RT	AREA	ON COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	MB ENTRY	CMND #
7.241	3615264	15.3415740	390000	95	UES75K.L	33423	36
Unknown				CAS #:			
8.376	9020580	15.9586336	406000	0		0	36
Pentane, 2,3,4-trimethyl-				CAS #: 565-75-3			
9.536	13691211	24.5784424	629000	83	NBS75K.L	34229	36
Pentane, 2,3,3-trimethyl				CAS #: 560-21-4			
8.986	16576617	29.3262918	751000	90	NBS75K.L	3089	36


Data File: \\192.168.10.12\chem10\ir7.i\113009.b\33424.D
Injection Date: 30-NOV-2009 22:10
Instrument: 10sir7.i
Client Sample ID:
Y (x10^7)
HP ChemStation MS 3342A.D: 3.384 to 19.322 Min
3.519
UNKNOWN
3.873
4.044
4.175
4.303
4.490
4.726
Butane, 2-methyl-
4.880
Acetone
5.004
5.053
5.159
5.224
5.317
5.431
Pentane, 2-methyl-
Hexane-d14(S)
Pentane, 3-methyl-
n-Hexane
6.080
6.155
6.300
Pentane, 2,4-dimethyl-
6.585
Cyclopentane, methyl-
6.736
6.828
6.903
7.064
Hexane, 3-methyl-
Benzene
1,4-Difluorobenzene
2,2,4-Trimethylpentane
7.612
7.684
7.789
7.936
8.090
8.328
UNKNOWN
8.487
8.548
Pentane, 2,3,4-trimethyl-
9.058
Pentane, 2,3,3-trimethyl-
Toluene
Toluene-d8 (S)
9.356
9.451
9.536
9.805
9.942
10.022
10.160
10.330
10.459
10.559
10.625
10.864
10.907
Chlorobenzene - d5
11.261
Ethyl Benzene
m&p-Xylene
11.776
11.967
12.111
12.485
12.885
12.193
13.419
13.747
13.984
14.114
14.490
14.649
1,4-dichlorobenzene-d4 (S)
16.607
16.941
17.663
18.053
18.963

Chain of Custody Record

Nº 4608

STS | AECOM

10116826

Record Number 4608 Through 4608

Contact Person TIM GRAPE
Phone No. 763 852 4218 Office MINNEAPOLIS
Project No. 60141264 PO No.
Project Name ALEX's EXHAUST

Special Handling Request
- ☐ Rush
- ☐ Verbal
- ☐ Other

Laboratory PACE
Contact Person CAROL OAVY
Phone No. 612 607 6436
Results Due STD

Sample I.D.	Date	Time	Grab	Composite	No. of Containers	Sample Type (Water, soil, air, sludge, etc.)	Preservation Y	Preservation N	Field Data PID/FID Ambient	Field Data PID/FID Sample	Field Data PH	Field Data Special Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
														0.5 FLOW GAUGE
VP-1P	11/10	7:50		X	1	AIR		~		12⁴			TO-15 MN List	# 093 CO1

Collected by:	JASON RANTE	Date ~~11/09~~ 11/10/09	Time 7:50	Delivery by: FOOT	Date 11/11/09 Time 13:15
Received by:		Date 11/11/9	Time 1:15	Relinquished by:	Date 11/11/09 Time 1315
Received by:		Date	Time	Relinquished by:	Date 11/11/09 Time 18:50
Received by:	Pace MN	Date 11/11/09	Time 1845	Relinquished by:	Date / / Time
Received for lab by		Date	Time	Relinquished by:	Date Time

Laboratory Comments Only: Seals Intact Upon Receipt? ☐ Yes ☐ No ☐ N/A

Final Disposition:	Comments (Weather Conditions, Precautions, Hazards):

Distribution: Original and Canary - Laboratory Pink - STS Project File Instructions to Laboratory: Forward completed original to STS with analytical results.

Pace Analytical

AIR Sample Condition Upon Receipt

Client Name: Accom Project # 10116826

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

Custody Seal on Cooler/Box Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no

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

Tracking #: N/A

Optional
Proj. Due Date:
Proj. Name:

Date and Initials of person examining contents: 11/12/09

		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 & Signature on COC:	☑Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☑Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐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: Summa		11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.

Samples Received:

Canisters		Flow Controllers		Stand Alone G		Tedlar Bags	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID
001	0093	Flow #	93				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 11-12-09

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)

A106 Rev.01 (22May2009)

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February 12, 2010

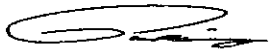
Mr. Tim Grape
AECOM
161 Cheshire Lane North
Suite 500
Minneapolis, MN 55441

RE: Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

Dear Mr. Grape:
Enclosed are the analytical results for sample(s) received by the laboratory on February 05, 2010. The results relate only to the samples included in this report. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,



Paul Kirchberg for
Carol Davy
carol.davy@pacelabs.com
Project Manager

Enclosures

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CERTIFICATIONS

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

Minnesota Certification IDs
1700 Elm Street SE, Suite 200 Minneapolis, MN 55414
Alaska Certification #: UST-078
Washington Certification #: C754
Tennessee Certification #: 02818
Pennsylvania Certification #: 68-00563
Oregon Certification #: MN200001
North Dakota Certification #: R-036
North Carolina Certification #: 530
New York Certification #: 11647
New Jersey Certification #: MN-002
Montana Certification #: MT CERT0092
Minnesota Certification #: 027-053-137
Michigan DEQ Certification #: 9909
Maine Certification #: 2007029
Louisiana Certification #: LA080009
Louisiana Certification #: 03086
Kansas Certification #: E-10167
Iowa Certification #: 368
Illinois Certification #: 200011
Florida/NELAP Certification #: E87605
California Certification #: 01155CA
Arizona Certification #: AZ-0014
Wisconsin Certification #: 999407970

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SAMPLE SUMMARY

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10121876001	VP-1 (sub-slab)	Air	02/04/10 11:20	02/05/10 11:16

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SAMPLE ANALYTE COUNT

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

Lab ID	Sample ID	Method	Analysts	Analytes Reported
10121876001	VP-1 (sub-slab)	TO-15	CJR	61

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PROJECT NARRATIVE

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

Method: TO-15
Description: TO15 MSV AIR
Client: AECOM
Date: February 12, 2010

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.

QC Batch: AIR/9774

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
- LCS (Lab ID: 746925)
  - Naphthalene

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 with any exceptions noted below.

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

QC Batch: AIR/9774

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.
- LCS (Lab ID: 746925)
  - 1,1,2,2-Tetrachloroethane

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

Additional Comments:

Sample Comments:

K3: The Total Hydrocarbon (THC) pattern is evenly distributed throughout the chromatogram (before and after toluene).
- VP-1 (sub-slab) (Lab ID: 10121876001)

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PROJECT NARRATIVE

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

Method: TO-15
Description: TO15 MSV AIR
Client: AECOM
Date: February 12, 2010

Analyte Comments:

QC Batch: AIR/9774

E: Analyte concentration exceeded the calibration range. The reported result is estimated.
- VP-1 (sub-slab) (Lab ID: 10121876001)
  - Ethanol

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

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ANALYTICAL RESULTS

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

Sample: VP-1 (sub-slab) **Lab ID: 10121876001** Collected: 02/04/10 11:20 Received: 02/05/10 11:16 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Acetone	**35.5**	ug/m3	0.66	0.33	1.38		02/11/10 20:22	67-64-1	
Benzene	**2.6**	ug/m3	0.90	0.45	1.38		02/11/10 20:22	71-43-2	
Benzyl chloride	ND	ug/m3	1.4	0.72	1.38		02/11/10 20:22	100-44-7	
Bromodichloromethane	ND	ug/m3	1.9	0.97	1.38		02/11/10 20:22	75-27-4	
Bromoform	ND	ug/m3	2.9	1.4	1.38		02/11/10 20:22	75-25-2	
Bromomethane	ND	ug/m3	1.1	0.55	1.38		02/11/10 20:22	74-83-9	
1,3-Butadiene	ND	ug/m3	0.62	0.31	1.38		02/11/10 20:22	106-99-0	
2-Butanone (MEK)	**4.2**	ug/m3	0.83	0.41	1.38		02/11/10 20:22	78-93-3	
Carbon disulfide	ND	ug/m3	0.87	0.43	1.38		02/11/10 20:22	75-15-0	
Carbon tetrachloride	ND	ug/m3	1.8	0.90	1.38		02/11/10 20:22	56-23-5	
Chlorobenzene	ND	ug/m3	1.3	0.65	1.38		02/11/10 20:22	108-90-7	
Chloroethane	ND	ug/m3	0.75	0.37	1.38		02/11/10 20:22	75-00-3	
Chloroform	ND	ug/m3	1.4	0.68	1.38		02/11/10 20:22	67-66-3	
Chloromethane	ND	ug/m3	0.58	0.29	1.38		02/11/10 20:22	74-87-3	
Cyclohexane	**2.0**	ug/m3	0.94	0.47	1.38		02/11/10 20:22	110-82-7	
Dibromochloromethane	ND	ug/m3	2.3	1.2	1.38		02/11/10 20:22	124-48-1	
1,2-Dibromoethane (EDB)	ND	ug/m3	2.2	1.1	1.38		02/11/10 20:22	106-93-4	
1,2-Dichlorobenzene	ND	ug/m3	1.7	0.83	1.38		02/11/10 20:22	95-50-1	
1,3-Dichlorobenzene	ND	ug/m3	1.7	0.83	1.38		02/11/10 20:22	541-73-1	
1,4-Dichlorobenzene	ND	ug/m3	1.7	0.83	1.38		02/11/10 20:22	106-46-7	
Dichlorodifluoromethane	**1.9**	ug/m3	1.4	0.69	1.38		02/11/10 20:22	75-71-8	
1,1-Dichloroethane	ND	ug/m3	1.1	0.57	1.38		02/11/10 20:22	75-34-3	
1,2-Dichloroethane	ND	ug/m3	1.1	0.57	1.38		02/11/10 20:22	107-06-2	
1,1-Dichloroethene	ND	ug/m3	1.1	0.56	1.38		02/11/10 20:22	75-35-4	
cis-1,2-Dichloroethene	ND	ug/m3	1.1	0.56	1.38		02/11/10 20:22	156-59-2	
trans-1,2-Dichloroethene	ND	ug/m3	1.1	0.56	1.38		02/11/10 20:22	156-60-5	
1,2-Dichloropropane	ND	ug/m3	1.3	0.65	1.38		02/11/10 20:22	78-87-5	
cis-1,3-Dichloropropene	ND	ug/m3	1.3	0.63	1.38		02/11/10 20:22	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/m3	1.3	0.63	1.38		02/11/10 20:22	10061-02-6	
Dichlorotetrafluoroethane	ND	ug/m3	1.9	0.97	1.38		02/11/10 20:22	76-14-2	
Ethanol	**195**	ug/m3	2.6	1.2	1.38		02/11/10 20:22	64-17-5	E
Ethyl acetate	ND	ug/m3	1.0	0.50	1.38		02/11/10 20:22	141-78-6	
Ethylbenzene	**8.9**	ug/m3	1.2	0.61	1.38		02/11/10 20:22	100-41-4	
4-Ethyltoluene	ND	ug/m3	3.4	1.7	1.38		02/11/10 20:22	622-96-8	
n-Heptane	**4.4**	ug/m3	1.1	0.57	1.38		02/11/10 20:22	142-82-5	
Hexachloro-1,3-butadiene	ND	ug/m3	3.0	1.5	1.38		02/11/10 20:22	87-68-3	
n-Hexane	**2.5**	ug/m3	0.99	0.50	1.38		02/11/10 20:22	110-54-3	
2-Hexanone	ND	ug/m3	1.1	0.57	1.38		02/11/10 20:22	591-78-6	
Methylene Chloride	ND	ug/m3	0.98	0.49	1.38		02/11/10 20:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	**5.9**	ug/m3	1.1	0.57	1.38		02/11/10 20:22	108-10-1	
Methyl-tert-butyl ether	ND	ug/m3	1.0	0.50	1.38		02/11/10 20:22	1634-04-4	
Naphthalene	ND	ug/m3	3.7	1.9	1.38		02/11/10 20:22	91-20-3	
2-Propanol	**16.6**	ug/m3	3.4	1.7	1.38		02/11/10 20:22	67-63-0	
Propylene	**0.57**	ug/m3	0.48	0.24	1.38		02/11/10 20:22	115-07-1	
Styrene	ND	ug/m3	1.2	0.60	1.38		02/11/10 20:22	100-42-5	
1,1,2,2-Tetrachloroethane	ND	ug/m3	1.9	0.97	1.38		02/11/10 20:22	79-34-5	

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ANALYTICAL RESULTS

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

Sample: VP-1 (sub-slab) **Lab ID: 10121876001** Collected: 02/04/10 11:20 Received: 02/05/10 11:16 Matrix: Air

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
TO15 MSV AIR	Analytical Method: TO-15								
Tetrachloroethene	**2.4**	ug/m3	1.9	0.97	1.38		02/11/10 20:22	127-18-4	
Tetrahydrofuran	ND	ug/m3	0.83	0.41	1.38		02/11/10 20:22	109-99-9	
Toluene	**15.4**	ug/m3	1.1	0.53	1.38		02/11/10 20:22	108-88-3	
1,2,4-Trichlorobenzene	ND	ug/m3	1.4	0.68	1.38		02/11/10 20:22	120-82-1	
1,1,1-Trichloroethane	ND	ug/m3	1.5	0.76	1.38		02/11/10 20:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/m3	1.5	0.76	1.38		02/11/10 20:22	79-00-5	
Trichloroethene	ND	ug/m3	1.5	0.76	1.38		02/11/10 20:22	79-01-6	
Trichlorofluoromethane	ND	ug/m3	1.5	0.76	1.38		02/11/10 20:22	75-69-4	
1,1,2-Trichlorotrifluoroethane	ND	ug/m3	2.2	1.1	1.38		02/11/10 20:22	76-13-1	
1,2,4-Trimethylbenzene	ND	ug/m3	3.4	1.7	1.38		02/11/10 20:22	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/m3	3.4	1.7	1.38		02/11/10 20:22	108-67-8	
Vinyl acetate	ND	ug/m3	0.98	0.49	1.38		02/11/10 20:22	108-05-4	
Vinyl chloride	ND	ug/m3	0.72	0.36	1.38		02/11/10 20:22	75-01-4	
m&p-Xylene	**28.1**	ug/m3	2.4	1.2	1.38		02/11/10 20:22	1330-20-7	
o-Xylene	**6.0**	ug/m3	1.2	0.61	1.38		02/11/10 20:22	95-47-6	

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QUALITY CONTROL DATA

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

QC Batch: AIR/9774
QC Batch Method: TO-15
Analysis Method: TO-15
Analysis Description: TO15 MSV AIR Low Level
Associated Lab Samples: 10121876001

METHOD BLANK: 746924
Matrix: Air
Associated Lab Samples: 10121876001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/m3	ND	1.1	02/11/10 09:29	
1,1,2,2-Tetrachloroethane	ug/m3	ND	1.4	02/11/10 09:29	
1,1,2-Trichloroethane	ug/m3	ND	1.1	02/11/10 09:29	
1,1,2-Trichlorotrifluoroethane	ug/m3	ND	1.6	02/11/10 09:29	
1,1-Dichloroethane	ug/m3	ND	0.82	02/11/10 09:29	
1,1-Dichloroethene	ug/m3	ND	0.81	02/11/10 09:29	
1,2,4-Trichlorobenzene	ug/m3	ND	0.99	02/11/10 09:29	
1,2,4-Trimethylbenzene	ug/m3	ND	2.5	02/11/10 09:29	
1,2-Dibromoethane (EDB)	ug/m3	ND	1.6	02/11/10 09:29	
1,2-Dichlorobenzene	ug/m3	ND	1.2	02/11/10 09:29	
1,2-Dichloroethane	ug/m3	ND	0.82	02/11/10 09:29	
1,2-Dichloropropane	ug/m3	ND	0.94	02/11/10 09:29	
1,3,5-Trimethylbenzene	ug/m3	ND	2.5	02/11/10 09:29	
1,3-Butadiene	ug/m3	ND	0.45	02/11/10 09:29	
1,3-Dichlorobenzene	ug/m3	ND	1.2	02/11/10 09:29	
1,4-Dichlorobenzene	ug/m3	ND	1.2	02/11/10 09:29	
2-Butanone (MEK)	ug/m3	ND	0.60	02/11/10 09:29	
2-Hexanone	ug/m3	ND	0.83	02/11/10 09:29	
2-Propanol	ug/m3	ND	2.5	02/11/10 09:29	
4-Ethyltoluene	ug/m3	ND	2.5	02/11/10 09:29	
4-Methyl-2-pentanone (MIBK)	ug/m3	ND	0.83	02/11/10 09:29	
Acetone	ug/m3	ND	0.48	02/11/10 09:29	
Benzene	ug/m3	ND	0.65	02/11/10 09:29	
Benzyl chloride	ug/m3	ND	1.0	02/11/10 09:29	
Bromodichloromethane	ug/m3	ND	1.4	02/11/10 09:29	
Bromoform	ug/m3	ND	2.1	02/11/10 09:29	
Bromomethane	ug/m3	ND	0.79	02/11/10 09:29	
Carbon disulfide	ug/m3	ND	0.63	02/11/10 09:29	
Carbon tetrachloride	ug/m3	ND	1.3	02/11/10 09:29	
Chlorobenzene	ug/m3	ND	0.94	02/11/10 09:29	
Chloroethane	ug/m3	ND	0.54	02/11/10 09:29	
Chloroform	ug/m3	ND	0.99	02/11/10 09:29	
Chloromethane	ug/m3	ND	0.42	02/11/10 09:29	
cis-1,2-Dichloroethene	ug/m3	ND	0.81	02/11/10 09:29	
cis-1,3-Dichloropropene	ug/m3	ND	0.92	02/11/10 09:29	
Cyclohexane	ug/m3	ND	0.68	02/11/10 09:29	
Dibromochloromethane	ug/m3	ND	1.7	02/11/10 09:29	
Dichlorodifluoromethane	ug/m3	ND	1.0	02/11/10 09:29	
Dichlorotetrafluoroethane	ug/m3	ND	1.4	02/11/10 09:29	
Ethanol	ug/m3	ND	1.9	02/11/10 09:29	
Ethyl acetate	ug/m3	ND	0.73	02/11/10 09:29	
Ethylbenzene	ug/m3	ND	0.88	02/11/10 09:29	
Hexachloro-1,3-butadiene	ug/m3	ND	2.2	02/11/10 09:29	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

METHOD BLANK: 746924 Matrix: Air

Associated Lab Samples: 10121876001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
m&p-Xylene	ug/m3	ND	1.8	02/11/10 09:29	
Methyl-tert-butyl ether	ug/m3	ND	0.73	02/11/10 09:29	
Methylene Chloride	ug/m3	ND	0.71	02/11/10 09:29	
n-Heptane	ug/m3	ND	0.83	02/11/10 09:29	
n-Hexane	ug/m3	ND	0.72	02/11/10 09:29	
Naphthalene	ug/m3	ND	2.7	02/11/10 09:29	
o-Xylene	ug/m3	ND	0.88	02/11/10 09:29	
Propylene	ug/m3	ND	0.35	02/11/10 09:29	
Styrene	ug/m3	ND	0.87	02/11/10 09:29	
Tetrachloroethene	ug/m3	ND	1.4	02/11/10 09:29	
Tetrahydrofuran	ug/m3	ND	0.60	02/11/10 09:29	
Toluene	ug/m3	ND	0.77	02/11/10 09:29	
trans-1,2-Dichloroethene	ug/m3	ND	0.81	02/11/10 09:29	
trans-1,3-Dichloropropene	ug/m3	ND	0.92	02/11/10 09:29	
Trichloroethene	ug/m3	ND	1.1	02/11/10 09:29	
Trichlorofluoromethane	ug/m3	ND	1.1	02/11/10 09:29	
Vinyl acetate	ug/m3	ND	0.71	02/11/10 09:29	
Vinyl chloride	ug/m3	ND	0.52	02/11/10 09:29	

LABORATORY CONTROL SAMPLE: 746925

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/m3	55.5	44.4	80	55-127	
1,1,2,2-Tetrachloroethane	ug/m3	69.8	91.2	131	58-128	L3
1,1,2-Trichloroethane	ug/m3	55.5	65.6	118	58-126	
1,1,2-Trichlorotrifluoroethane	ug/m3	77.9	75.1	96	49-134	
1,1-Dichloroethane	ug/m3	41.2	41.0	100	52-129	
1,1-Dichloroethene	ug/m3	40.3	37.5	93	50-130	
1,2,4-Trichlorobenzene	ug/m3	75.5	109	144	30-150	CU
1,2,4-Trimethylbenzene	ug/m3	50	49.3	99	53-144	
1,2-Dibromoethane (EDB)	ug/m3	78.1	93.4	120	57-137	
1,2-Dichlorobenzene	ug/m3	61.2	64.5	106	65-140	
1,2-Dichloroethane	ug/m3	41.2	34.3	83	54-125	
1,2-Dichloropropane	ug/m3	47	58.2	124	60-125	
1,3,5-Trimethylbenzene	ug/m3	50	56.7	113	54-139	
1,3-Butadiene	ug/m3	22.5	26.1	116	54-125	
1,3-Dichlorobenzene	ug/m3	61.2	63.0	103	62-140	
1,4-Dichlorobenzene	ug/m3	61.2	64.0	105	61-139	
2-Butanone (MEK)	ug/m3	30	29.6	99	47-138	
2-Hexanone	ug/m3	41.7	49.1	118	40-143	
2-Propanol	ug/m3	23.8	27.2	114	45-149	
4-Ethyltoluene	ug/m3	50	51.4	103	57-139	
4-Methyl-2-pentanone (MIBK)	ug/m3	41.7	51.6	124	54-132	
Acetone	ug/m3	24.2	22.3	92	44-147	
Benzene	ug/m3	32.5	39.4	121	60-125	

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QUALITY CONTROL DATA

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

LABORATORY CONTROL SAMPLE: 746925

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzyl chloride	ug/m3	58.4	54.8	94	70-130	
Bromodichloromethane	ug/m3	68.2	62.5	92	53-130	
Bromoform	ug/m3	105	123	117	55-125	
Bromomethane	ug/m3	39.5	46.0	116	53-132	
Carbon disulfide	ug/m3	31.7	37.1	117	57-150	
Carbon tetrachloride	ug/m3	64	51.7	81	53-125	
Chlorobenzene	ug/m3	46.8	58.5	125	50-136	
Chloroethane	ug/m3	26.8	32.3	120	55-130	
Chloroform	ug/m3	49.7	46.0	93	56-125	
Chloromethane	ug/m3	21	20.3	96	49-127	
cis-1,2-Dichloroethene	ug/m3	40.3	50.4	125	58-127	
cis-1,3-Dichloropropene	ug/m3	46.2	55.0	119	62-135	
Cyclohexane	ug/m3	35	41.5	119	56-135	
Dibromochloromethane	ug/m3	86.6	92.4	107	48-132	
Dichlorodifluoromethane	ug/m3	50.3	41.6	83	54-130	
Dichlorotetrafluoroethane	ug/m3	71.1	69.5	98	50-125	
Ethanol	ug/m3	19.2	18.9	98	30-150	
Ethyl acetate	ug/m3	36.6	43.3	118	70-141	
Ethylbenzene	ug/m3	44.2	51.8	117	57-135	
Hexachloro-1,3-butadiene	ug/m3	108	176	162	30-150	CU
m&p-Xylene	ug/m3	88.3	101	114	61-135	
Methyl-tert-butyl ether	ug/m3	36.7	34.5	94	56-130	
Methylene Chloride	ug/m3	35.3	34.2	97	49-127	
n-Heptane	ug/m3	41.7	47.6	114	57-133	
n-Hexane	ug/m3	35.8	41.9	117	55-135	
Naphthalene	ug/m3	53.3	86.6	162	30-150	CH
o-Xylene	ug/m3	44.2	48.9	111	60-134	
Propylene	ug/m3	17.5	19.1	109	63-147	
Styrene	ug/m3	43.3	49.2	114	58-142	
Tetrachloroethene	ug/m3	69	78.5	114	61-132	
Tetrahydrofuran	ug/m3	30	36.9	123	67-134	
Toluene	ug/m3	38.3	43.4	113	56-132	
trans-1,2-Dichloroethene	ug/m3	40.3	47.2	117	52-131	
trans-1,3-Dichloropropene	ug/m3	46.2	53.1	115	62-131	
Trichloroethene	ug/m3	54.6	60.3	110	68-150	
Trichlorofluoromethane	ug/m3	57.1	43.4	76	52-142	
Vinyl acetate	ug/m3	35.8	41.4	116	53-136	
Vinyl chloride	ug/m3	26	30.8	118	57-132	

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QUALIFIERS

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

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.

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.

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

SAMPLE QUALIFIERS

Sample: 10121876001

[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.

CU The continuing calibration for this compound is outside of Pace Analytical acceptance limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.

E Analyte concentration exceeded the calibration range. The reported result is estimated.

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60146585 Alex Exhaust
Pace Project No.: 10121876

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10121876001	**VP-1 (sub-slab)**	TO-15	AIR/9774		

Data File: \\192.168.10.12\chem\10air7.i\021110.b\042024.D
Report Date: 12-Feb-2010 11:15

Pace Analytical Services

TENTATIVELY IDENTIFIED COMPOUNDS

Client Name:
Lab Smp Id: 10121876001
Operator : CJR
Sample Location:
Sample Matrix: AIR
Analysis Type: VOA
Inj Date: 11-FEB-2010 20:22

Client SDG: 021110.b

Sample Date:
Sample Point:
Date Received:
Level: LOW

Number TICs found: 4

CONCENTRATION UNITS:
(ug/L or ug/KG) ppbv

	CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1.		Unknown	6.514	1.59	J
2.		Unknown	9.809	2.10	J
3.	55429-29-3	Arsenous acid, tris(trimeth	10.068	14.2	NJ
4.	5989-54-8	Cyclohexene, 1-methyl-4-(1-	15.141	1.51	NJ

Data File: \\192.168.10.12\chem\10air7.i\021110.b\042024.D
Report Date: 12-Feb-2010 11:15

Pace Analytical Services

TO15 Analysis (UNIX)

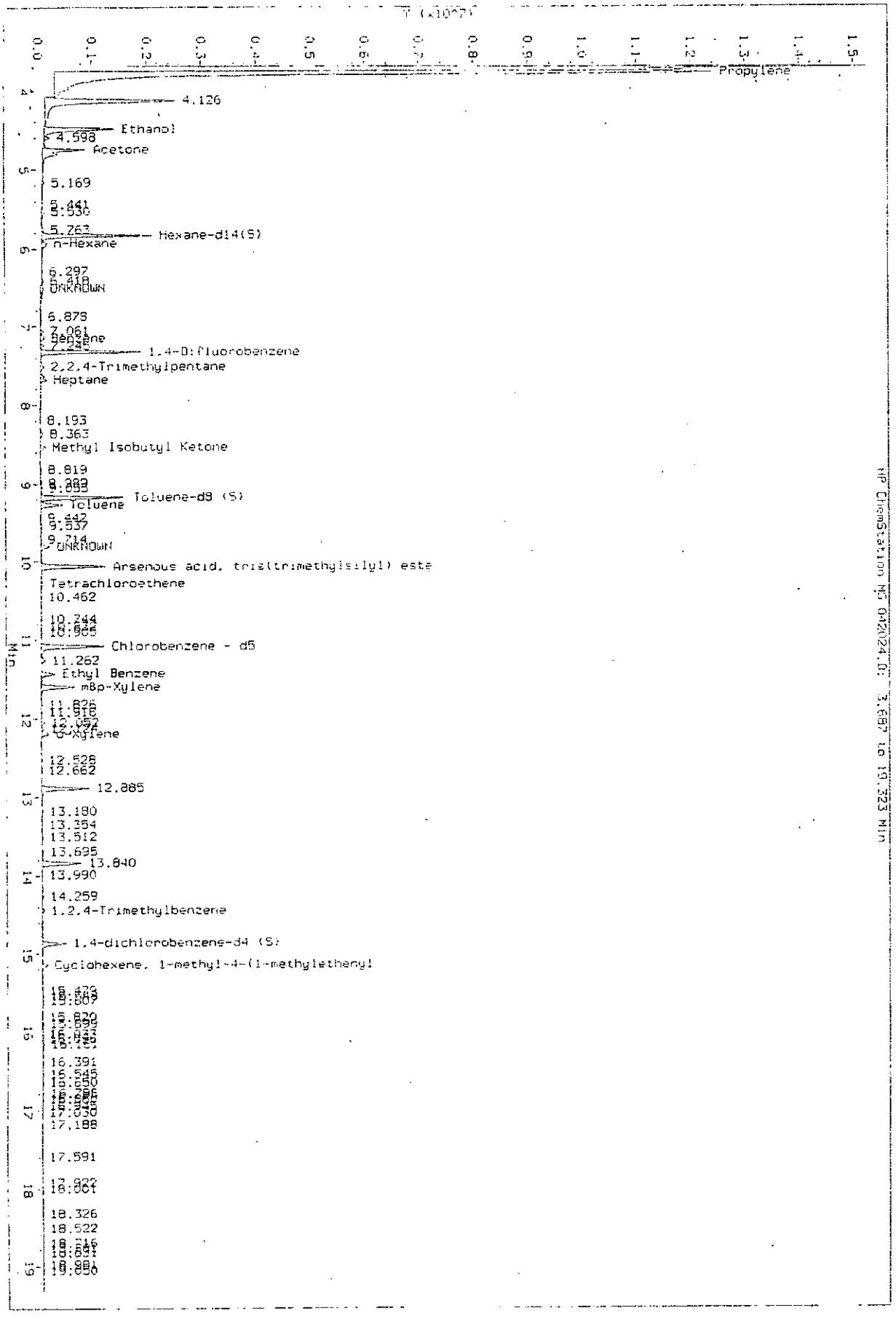
Data file : \\192.168.10.12\chem\10air7.i\021110.b\042024.D
Lab Smp Id: 10121876001
Inj Date : 11-FEB-2010 20:22
Operator : CJR Inst ID: 10air7.i
Smp Info : Sample 4
Misc Info : 9774
Comment : Volatile Organic COMPOUNDS in Air
Method : \\192.168.10.12\chem\10air7.i\021110.b\TO15_037-10.m
Meth Date : 12-Feb-2010 11:14 creindl Quant Type: ISTD
Cal Date : 06-FEB-2010 22:29 Cal File: 03712.D
Als bottle: 24
Dil Factor: 1.38000
Integrator: HP RTE Compound Sublist: all.sub
Target Version: 4.14
Processing Host: 10AIRGROUP

Concentration Formula: Amt * DF * Uf * CpndVariable

Name	Value	Description
DF	1.380	Dilution Factor
Uf	1.000	ng unit correction factor
Cpnd Variable		Local Compound Variable

ISTD	RT	AREA	AMOUNT
* 36 1,4-Difluorobenzene	7.324	3575202	10.000
* 53 Chlorobenzene - d5	11.082	2641287	10.000

	CONCENTRATIONS			QUANT			
RT	AREA	ON-COL(ppbv)	FINAL(ppbv)	QUAL	LIBRARY	LIB ENTRY	CPND #
Unknown				CAS #:			
6.514	412710	1.15436744	1.59	0		0	36
Unknown				CAS #:			
9.809	401747	1.52102808	2.10	0		0	53
Arsenous acid, tris(trimethylsilyl) este				CAS #: 55429-29-3			
10.068	2719533	10.2962401	14.2	72	NBS75K.1	48300	53
Cyclohexene, 1-methyl-4-(1-methylethenyl				CAS #: 5989-54-8			
15.141	288596	1.09263493	1.51	91	NBS75K.1	65806	53


Data File: \\192.168.10.12\Chem10a\r7.i\021110.b\042024.D
Injection Date: 11-FEB-2010 20:22
Instrument: 10a.r7.i
Client Sample ID:
HP ChemStation NO 042024.D: 3.687 to 19.323 Min
Propylene
4.126
Ethanol
4.598
Acetone
5.169
5.441
5.536
5.763
Hexane-d14(S)
n-Hexane
6.297
6.418
UNKNOWN
6.878
7.061
Benzene
7.243
1,4-Difluorobenzene
2,2,4-Trimethylpentane
Heptane
8.193
8.363
Methyl Isobutyl Ketone
8.819
8.889
8.985
Toluene-d8 (S)
Toluene
9.442
9.537
9.714
UNKNOWN
Arsenous acid, tris(trimethylsilyl) este
Tetrachloroethene
10.462
10.244
10.905
Chlorobenzene - d5
11.262
Ethyl Benzene
m&p-Xylene
11.826
11.918
12.052
o-Xylene
12.526
12.662
12.885
13.180
13.354
13.512
13.695
13.840
13.990
14.259
1,2,4-Trimethylbenzene
1,4-dichlorobenzene-d4 (S)
Cyclohexene, 1-methyl-4-(1-methylethenyl
15.820
16.391
16.545
16.650
17.050
17.188
17.591
18.061
18.326
18.522
18.691
19.050
Min

Chain of Custody Record

№ 4896

STS | AECOM

10121876

Contact Person Tim Grape
Phone No. 612-759-5042 Office Minneapolis
Project No. 60146585 PO No.
Project Name Alex Exhaust

Special Handling Request
☐ Rush
☐ Verbal
☐ Other

Record Number ____ Through ____

Laboratory Pace
Contact Person Carol Davy
Phone No. 612-607-6436
Results Due Standard

Sample I.D.	Date	Time	Grab	Composite	No. of Containers	Sample Type (Water, soil, air, sludge, etc.)	Preservation Y	Preservation N	Field Data PID/FID Ambient	Field Data PID/FID Sample	Field Data PH	Field Data Special Cond.	Analysis Request	Comments on Sample (Include Major Contaminants)
VP-1 (sub-slab)	2/4/10	1120	X		1	Air	0	1					TO-15	10121876001

Collected by: Ryan Doherty	Date 2/4/10	Time	Delivery by:	Date	Time
Received by:	Date 2-4-10	Time 1036	Relinquished by:	Date	Time
Received by:	Date 2-5-10	Time 1116	Relinquished by:	Date	Time
Received by:	Date	Time	Relinquished by:	Date	Time
Received for lab by:	Date	Time	Relinquished by:	Date	Time

Laboratory Comments Only: Seals Intact Upon Receipt? ☐ Yes ☐ No ☐ N/A

Final Disposition:	Comments (Weather Conditions, Precautions, Hazards):

Distribution: Original and Canary - Laboratory Pink - STS Project File Instructions to Laboratory: Forward completed original to STS with analytical results.

AIR Sample Condition Upon Receipt

Pace Analytical

Client Name: Arcom Project # 10121876

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Commercial ☐ Pace Other_____

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☒ Other_____

Optional
Proj Due Date:
Proj Name:

Tracking #:_____

Date and initials of person examining contents: 2-5-10 JL

		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 & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No ☐N/A	5.
Short Hold Time Analysis (<72hr):	☐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: 1CAN, 1FC

Canisters		Flow Controllers		Stand Alone G		Tedlar Bags	
Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID	Sample Number	Can ID
VP-1	1250		A13				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted:_____ Date/Time:_____

Comments/ Resolution:_____

Project Manager Review: ORD **Date:** 2-5-10

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)

A106 Rev.01 (22May2009)

Appendix B

AECOM Methodologies and Procedures

AECOM Methodologies and Procedures
Alex Exhaust Site Investigation
Leak 15656

Vapor Monitoring Point Installation and Vapor Sample Collection

Permanent Vapor Monitoring Point Installation

A two-inch diameter hole was advanced to a depth of five feet using direct push technology. A six inch long by ½ inch diameter stainless steel screen was set in the hole from 3.5 to 4 feet with a length of polyethylene tubing extending up to the surface. The hole was backfilled with silica sand to 6 inches above the top of the screen section. The remainder of the hole was backfilled with neat cement grout. The vapor point was completed at the surface with a four inch diameter flush mount aluminum vault with a bolt on cover. A valve was installed on top of the polyethylene tubing to prevent ambient air from entering the tubing.

Permanent Vapor Point Sample Collection

The permanent vapor monitoring point was allowed to rest for twelve hours prior to sample purging and collection. Polyethylene tubing with an in-line, laboratory provided, paper filter/moisture trap was attached to the sampling valve barb. The valve on the vapor implant was opened and A GEM 500 quad gas meter was used to purge the vapor implant. The GEM 500 purge rate is approximately 500 cc/min. Approximately 2 tubing air volumes and 2 implant air volumes were purged prior to sample collection. Methane, carbon dioxide and oxygen readings are monitored were recorded with the GEM 500 during purging. The tubing was pinched closed to prevent introduction of ambient air and the GEM 500 was removed upon completion of purging. The tubing was connected to the Summa canister with the laboratory supplied polyethylene fittings and flow gauge. The valve on the canister was opened to allow collection of vapors through the implant. The valve was closed after the flow gauge indicated complete evacuation of the Summa (approximately 2 hours). A photoionization detector (PID) reading was collected from the vapor implant once sample collection was completed. Sampling information including purge time, fill time, methane, oxygen, carbon dioxide and PID readings were recorded on an AECOM Soil Vapor Probe Summary form.

Sub-Slab Vapor Monitoring Point Installation

A one-inch diameter hole was drilled through the concrete floor slab and into the sub-slab soil (approximately 3 inches) using a rotary hammer drill equipped with a decontaminated one-inch, carbide tipped masonry bit. A vacuum cleaner was used to remove concrete dust and debris from around and inside the drill hole. A 1/2 inch outer diameter (O.D.) by 4.5 inch long sampling implant was set into the drill hole. The sampling implant was constructed of a 3/8 inch O.D. copper pipe with a fritted stainless steel screen threaded on the bottom (down hole) end and a brass cap screw on the top. The cap can be removed and replaced with a brass sampling barb for purging and sample collection. The sampling implant was set into the drill hole so the screen section was at or below the base of the floor slab. Silica sand was placed around the screen intake section to completely cover the screen. The remainder of the annulus was backfilled with neat cement grout, flush with the existing floor slab.

Sub-Slab Vapor Point Sample Collection

The vapor implant was installed with a threaded brass sampling barb. Teflon tape was used on the sample barb threads to create an air tight seal with the implant. Polyethylene tubing with an in-line, laboratory provided, paper filter/moisture trap was attached to the sampling barb. A GEM 500 quad gas meter was connected to the other end of the tubing to purge the vapor implant. The GEM 500 purge rate is approximately 500 cc/min. Approximately 2 tubing air volumes and 2 implant air volumes were purged prior to sample collection. Methane, carbon dioxide and oxygen readings are monitored were recorded

with the GEM 500 during purging. The tubing was pinched closed to prevent introduction of ambient air and the GEM 500 was removed upon completion of purging. The tubing was connected to the Summa canister with the laboratory supplied polyethylene fittings and a 200 milliliter/minute flow restrictor. The valve on the canister was opened to allow collection of sub-slab vapors through the implant. The valve was closed after the flow gauge indicated complete evacuation of the Summa (approximately 45 minutes). A photoionization detector (PID) reading was collected from the sub-slab vapor implant once sample collection was completed. Sampling information including purge time, fill time, methane, oxygen, carbon dioxide and PID readings were recorded on an AECOM Soil Vapor Probe Summary form.

Vapor Monitoring
Vapor monitoring was conducted inside the main site building using a PID meter equipped with a 10.6 eV lamp and calibrated onsite to 100 ppm isobutylene as a benzene reference gas and a factory calibrated LandTec Gem 500 quad gas meter monitoring for oxygen, carbon dioxide, methane and LEL as methane. The AECOM Field Technician collected vapor readings of the ambient air inside the site building in the breathing zone as well as potential vapor intrusion points such as the floor drain identified in the service garage area.

Field Headspace Screening
Field screening of soil samples was conducted in conformance with the polyethylene bag head space screening method outlined in MPCA Guidance Document 4-04. For this purpose, AECOM used a photoionization detector (PID) equipped with a 10.6 eV lamp calibrated onsite, daily using 100 ppm isobutylene as a benzene surrogate. Calibration activities were recorded in a log book which accompanies the PID unit. The results of soil headspace screening were recorded on the soil boring logs.

Analytical Soil and Groundwater Sample Collection
Soil and groundwater samples from boreholes were prepared for laboratory analysis in conformance with MPCA Guidance Document 4-04. Analytical samples were collected in laboratory supplied sampling containers with pre-measured parameter specific preservation. Analytical samples were stored in a cooler on ice until delivery to the analytical laboratory under chain of custody record. A methanol trip blank for soils and VOC water trip blank accompanied the glassware throughout the project.

New two inch PVC with a ten foot slotted screen section was placed inside each hollow stem auger boring set to intersect the groundwater table. An electronic water level tape was used to measure water level elevations in the temporary wells from the top of the well riser to determine the amount of water present in the well. Temporary monitoring wells were sampled by purging the well at a sustainable rate using a new disposable bailer and by collecting readings of "well stabilization" parameters during purging at intervals of approximately one standing volume. The standing volume was determined by calculating the volume of water found in the well screen/casing using a volume calculation of 0.16 gal/ft for a 2 inch diameter well. Well stabilization was considered to occur when approximately three standing well volumes had been purged and the following parameters match within the indicated tolerances:

- pH, ±0.1 unit
- temperature, ±0.5°C
- specific conductivity, ±5% of instrument range
- redox potential (if applicable), ±20 mV
- observed color and turbidity, consistent throughout the last three well volumes

The temporary monitoring well purging and sampling information including stabilization readings was recorded on the AECOM Sampling Information Forms (SIF) included in Appendix D of the Monitoring Report.

Appendix C

Geologic Logs of Additional Soil Borings

AECOM

OWNER: MPCA

PROJECT NAME: Former Alex Exhaust

LOG OF BORING NUMBER: B-10

ARCHITECT-ENGINEER: AECOM

SITE LOCATION: 905 3rd Avenue, Alexandria, MN

DEPTH(FT) / ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
					SURFACE ELEVATION +100.1		
	1				Fine to coase SAND (SP) - trace gravel, Brown		<1
	2	MC			4.0		70
5.0	3				Fine SANDS (SM) with trace silt, dark gray to black with slight petroleum odor		32
	4	MC			6.5 Silty CLAY (CL) - Gray		42
10.0	5						80
	6	MC					88
	7						112
15.0	8	MC			15.5		15
	9				16.5 Wet silty CLAY (CL) - with fine sand, Brown Silty CLAY (CL) - Gray		<1
20.0	10	MC					<1
	11						<1
	12	MC					<1
25.0	13						<1
	14	MC					<1
	15						<1
30.0	16	MC					<1
	17						<1
35.0	18	MC					<1
	19						<1
	20	MC					<1
40.0	21						<1
	22	MC					<1
45.0	23						<1
	24	MC			NR		<1
50.0	25				50.0		

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5)

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % (10 20 30 40 50)

STANDARD PENETRATION BLOWS/FT. (10 20 30 40 50)

48' no SW

End of boring at 50 feet. Drilled to full depth with a Hollow stem auger with attached Macro-Core sampler. Soil samples screened with photoionization detector (PID) in general accordance with MPCA polyethylene bag headspace screening as outlined in Guidance Document 4-04. Installed 2 inch temporary well with screen section set from 15 to 25 feet. Groundwater encountered at 15.0 feet.

Boring backfilled with high solids bentonite grout upon completion.

Soil sample collected at 13 feet for BTEX, MTBE, GRO, and DRO analysis.

Groundwater collected for VOCs, GRO, and DRO analysis.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 15.0	BORING STARTED 11/10/09	AECOM MINNEAPOLIS OFFICE	
WL	BORING COMPLETED 11/10/09	ENTERED BY JR	SHEET NO. 1 OF 1
WL	RIG/FOREMAN HSA with MC/Dusty	APP'D BY	AECOM JOB NO. 60137264

BORING_LOG BORINGS 11.10.09.GPJ STS.GDT 4/1/10

AECOM

OWNER: MPCA

LOG OF BORING NUMBER: B-11

PROJECT NAME: Former Alex Exhaust

ARCHITECT-ENGINEER: AECOM

SITE LOCATION: 905 3rd Avenue, Alexandria, MN

DEPTH(FT) / ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
					SURFACE ELEVATION +100.0		
	1				Fine to coase SAND (SP) - trace gravel, Brown		<1
	2	MC			4.0		<1
5.0	3				5.0 Fine SANDS (SM) with trace silt, dark grey to black		<1
	4	MC			Silty CLAY (CL) - Gray with petroleum odor		15
	5						40
10.0	6	MC					145
	7						110
15.0	8	MC					28
	9						16
	10	MC			20.0		8
20.0					End of boring at 20 feet. Drilled to full depth with a Hollow stem auger with attached Macro-Core sampler. Soil samples screened with photoionization detector (PID) in general accordance with MPCA polyethylene bag headspace screening as outlined in Guidance Document 4-04. Groundwater encountered at 15 feet.		

No groundwater or soil analytical samples collected.

Boring tremie grouted with high solids bentonite grout upon completion.

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5)

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % (10 20 30 40 50)

STANDARD PENETRATION BLOWS/FT. (10 20 30 40 50)

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 15.0	BORING STARTED 11/9/09	AECOM MINNEAPOLIS OFFICE	
WL	BORING COMPLETED 11/9/09	ENTERED BY JR	SHEET NO. 1 OF 1
WL	RIG/FOREMAN HSA with MC/Dusty	APP'D BY	AECOM JOB NO. 60137264

BORING_LOG BORINGS 11.10.09.GPJ STS.GDT 4/1/10

AECOM

OWNER: MPCA

PROJECT NAME: Former Alex Exhaust

LOG OF BORING NUMBER: B-12

ARCHITECT-ENGINEER: AECOM

SITE LOCATION: 905 3rd Avenue, Alexandria, MN

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5)

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % (10 20 30 40 50)

STANDARD PENETRATION BLOWS/FT. (10 20 30 40 50)

DEPTH(FT) / ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
				SURFACE ELEVATION +99.8		
	1			0.5 TOPSOIL - Organic, Black		<1
				Fine to coarse SAND (SP) - trace silt, Brown		
	2	MC		3.0 Fine SAND (SM) - trace silt, Brown		<1
5.0	3					<1
	4	MC		6.5 Silty CLAY (CL) - Gray		<1
	5			10.0		<1
10.0	6	MC		No Recovery		<1
	7			14.0		<1
15.0	8	MC		Silty CLAY (CL) - Brown		<1
	9			18.0		<1
	10	MC		18.5 Wet silty CLAY (CL) - Brown Silty CLAY (CL) - Gray		<1
20.0	11					<1
	12	MC				<1
25.0	13					<1
	14	MC				<1
	15					<1
30.0				30.0		

End of boring at 30 feet. Drilled to full depth with a Hollow stem auger with attached Macro-Core sampler. Soil samples screened with photoionization detector (PID) in general accordance with MPCA polyethylene bag headspace screening as outlined in Guidance Document 4-04. Installed 2 inch temporary well and set at 30 feet. Groundwater encountered at 20.5 feet.

Boring tremie grouted with high solids bentonite grout upon completion.

Soil sample collected at 18 feet for BTEX, MTBE, GRO, and DRO analysis.

Groundwater collected for VOCs, GRO, and DRO analysis.

10'

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 20.5	BORING STARTED 11/9/09	AECOM MINNEAPOLIS OFFICE	
WL	BORING COMPLETED 11/9/09	ENTERED BY JR	SHEET NO. 1 OF 1
WL	RIG/FOREMAN HSA with MC/Dusty	APP'D BY	AECOM JOB NO. 60137264

BORING_LOG BORINGS 11.10.09.GPJ STS.GDT 4/1/10

AECOM

OWNER: MPCA

PROJECT NAME: Former Alex Exhaust

LOG OF BORING NUMBER: B-13

ARCHITECT-ENGINEER: AECOM

SITE LOCATION: 905 3rd Avenue, Alexandria, MN

DEPTH(FT) / ELEVATION(FT)	SAMPLE NO.	SAMPLE TYPE	SAMPLE DISTANCE	RECOVERY	DESCRIPTION OF MATERIAL	UNIT DRY WT. LBS./FT.³	PHOTO-IONIZATION DETECTOR READING (PPM)
					SURFACE ELEVATION +99.5		
	1				0.5 TOPSOIL - Organic, Black		
					Fine SAND (SM) - trace silt, dark grey to black		<1
	2	MC			3.0 Silty CLAY (CL) - Gray		<1
5.0	3						<1
	4	MC					<1
	5						<1
10.0	6	MC					<1
	7						<1
15.0	8	MC			16.0		<1
	9				16.5 Wet silty CLAY (CL) - fine sands, Gray Silty CLAY (CL) - Gray		<1
	10	MC					<1
20.0	11						<1
	12	MC					<1
25.0	13						<1
	14	MC					<1
30.0	15				30.0		<1

UNCONFINED COMPRESSIVE STRENGTH TONS/FT.² (1 2 3 4 5)

PLASTIC LIMIT % — WATER CONTENT % — LIQUID LIMIT % (10 20 30 40 50)

STANDARD PENETRATION BLOWS/FT. (10 20 30 40 50)

End of boring at 30 feet. Drilled to full depth with a Hollow stem auger with attached Macro-Core sampler. Soil samples screened with photoionization detector (PID) in general accordance with MPCA polyethylene bag headspace screening as outlined in Guidance Document 4-04. Installed 2 inch temporary well and set at 30 feet. Groundwater encountered at 17.1 feet.

Boring tremie grouted with high solids bentonite grout upon completion.

Soil sample collected at 16 feet for BTEX, MTBE, GRO, and DRO analysis.

Groundwater collected for VOCs, GRO, and DRO analysis.

The stratification lines represent the approximate boundary lines between soil types: in situ, the transition may be gradual.

WL 17.1	BORING STARTED 11/9/09	AECOM MINNEAPOLIS OFFICE	
WL	BORING COMPLETED 11/9/09	ENTERED BY JR	SHEET NO. 1 OF 1
WL	RIG/FOREMAN HSA with MC/Dusty	APP'D BY	AECOM JOB NO. 60137264

BORING_LOG BORINGS 11.10.09.GPJ STS.GDT 4/1/10

Appendix D

AECOM Sampling Information Forms, Soil Vapor Probe Summary Forms, Indoor Building Survey and Product Inventory Forms

AECOM

SAMPLING INFORMATION FORM

AECOM
161 Cheshire Lane North, Suite 500
Minneapolis, MN 55441

Sampler's Name: Jason Rowe
Unusual Conditions
Location Alexandria MN
Sample ID number TW-10 (B-10) Date sampled 11/10/09
Describe sampling point Source area boring, directly east of main site building in former UST basin
Unique Well Number Temporary well – not applicable

Weather: 53°F Sun
Project Former Alex Exhaust
Project number 60141264
Time 1000

MONITORING WELL INFORMATION: (If Applicable)

Monitoring point elevation = 100.10 Datum = Assumed Local Water elevation = 85.1
Well depth (prior to sampling) = 25 feet below monitoring point (mp)
Depth to water (below mp) = 15.0 feet Date 11/10/09 Time 0935
Well diameter = 2" inches Water level above screen? X No ____ Yes ____ feet
Volume of water in well = ~1.6 gallons

PURGING INFORMATION:

Purging method: Bailer x Submersible pump ____ Tap ____ Other ____
Tubing type: Teflon ____ Black poly ____ Other ____
Pump intake or bailer set at Waterline feet below monitoring point (mp).
Discharge rate (if applicable) ~1 gpm x 0.1336806 = ____ cfm
At least 3 well volumes evacuated before sampling, totaling ~5 gallons.

SAMPLING INFORMATION

Sampling method: Bailer X Tap ____ Other ____
Tubing type (if applicable): Teflon ____ Other ____
Bailer was: Disposable X Laboratory cleaned ____ Field cleaned ____ Other ____
Sample collected from Waterline ~15.3 feet below monitoring point. (mp)
Sample collection discharge rate (if applicable): = Bailed gpm
Sample appearance clear Odor Slight petro odor
Note any sampling observations if necessary: Conducted duplicate at 1012 (TW-100). Conducted field blank @1400.

Chemical Analysis VOCs, GRO, and DRO
Equipment Calibration pH=7, pH=10 and Conductivity=1413 @730

FIELD STABILIZATION

Military time	pH	Redox Pot.	Temperature corrected conductance [umhos/cm]	Temperature [°C]	Water Level (nearest 0.01 ft.)	Cumulative volume of water removed [gal.]
0940	8.65	+141	589	11.2		~1
0950	8.34	+41	597	12.0		~2.5
1000	8.32	+38	598	12.0	15.3	~5

AECOM

SAMPLING INFORMATION FORM

AECOM
161 Cheshire Lane North, Suite 500
Minneapolis, MN 55441

Sampler's Name: Jason Rowe
Unusual Conditions
Location Alexandria MN
Sample ID number TW-12 (B-12) Date sampled 11/9/09
Describe sampling point Northwest of site building, directly west of northern out building on site property
Unique Well Number Temporary well -- not applicable

Weather: 53°F Sun
Project Former Alex Exhaust
Project number 60141264
Time 1512

MONITORING WELL INFORMATION: (If Applicable)

Monitoring point elevation = 99.80 Datum = Assumed Local Water elevation = 79.3
Well depth (prior to sampling) = 25.5 feet below monitoring point (mp)
Depth to water (below mp) = 20.5 feet Date 11/9/09 Time 1455
Well diameter = 2" inches Water level above screen? X No ____ Yes ____ feet
Volume of water in well = ~0.8 gallons

PURGING INFORMATION:

Purging method: Bailer x Submersible pump ____ Tap ____ Other ____
Tubing type: Teflon ____ Black poly ____ Other ____
Pump intake or bailer set at Waterline feet below monitoring point (mp).
Discharge rate (if applicable) ~1 gpm x 0.1336806 = ____ cfm
At least 3 well volumes evacuated before sampling, totaling ~2.4 gallons.

SAMPLING INFORMATION

Sampling method: Bailer X Tap ____ Other ____
Tubing type (if applicable): Teflon ____ Other ____
Bailer was: Disposable X Laboratory cleaned ____ Field cleaned ____ Other ____
Sample collected from Waterline ~20.8 feet below monitoring point. (mp)
Sample collection discharge rate (if applicable): = Bailed gpm
Sample appearance clear Odor None observed
Note any sampling observations if necessary:

Chemical Analysis VOCs, GRO, and DRO
Equipment Calibration pH=7, pH=10 and Conductivity=1413 @1450

FIELD STABILIZATION

Military time	pH	Redox Pot.	Temperature corrected conductance [umhos/cm]	Temperature [°C]	Water Level (nearest 0.01 ft.)	Cumulative volume of water removed [gal.]
1458	8.12	+164	466	12.0		~1
1506	8.02	+134	452	11.1		~2
1512	7.96	+129	447	11.1	20.8	~3

AECOM

SAMPLING INFORMATION FORM

AECOM
161 Cheshire Lane North, Suite 500
Minneapolis, MN 55441

Sampler's Name: **Jason Rowe** Weather: **53°F Sun**
Unusual Conditions _____ Project **Former Alex Exhaust**
Location **Alexandria MN** Project number **60141264**
Sample ID number **TW-13 (B-13)** Date sampled **11/9/09** Time **1135**
Describe sampling point **Northeast of main site building ~ 150 feet east of boring B-5**
Unique Well Number **Temporary well – not applicable**

MONITORING WELL INFORMATION: (If Applicable)

Monitoring point elevation = **99.50** Datum = **Assumed Local** Water elevation = **82.4**
Well depth (prior to sampling) = **20.5** feet below monitoring point (mp)
Depth to water (below mp) = **17.1** feet Date **11/9/09** Time **1121**
Well diameter = **2"** inches Water level above screen? **X** No ____ Yes ____ feet
Volume of water in well = **~0.56** gallons

PURGING INFORMATION:

Purging method: Bailer **x** Submersible pump ____ Tap ____ Other ____
Tubing type: Teflon ____ Black poly ____ Other ____
Pump intake or bailer set at **Waterline** feet below monitoring point (mp).
Discharge rate (if applicable) **~1** gpm x 0.1336806 = ____ cfm
At least **3** well volumes evacuated before sampling, totaling **~1.7** gallons.

SAMPLING INFORMATION

Sampling method: Bailer **X** Tap ____ Other ____
Tubing type (if applicable): Teflon ____ Other ____
Bailer was: Disposable **X** Laboratory cleaned ____ Field cleaned ____ Other ____
Sample collected from **Waterline ~17.5** feet below monitoring point. (mp)
Sample collection discharge rate (if applicable): = **Bailed** gpm
Sample appearance **clear** Odor **None observed**
Note any sampling observations if necessary: ____

Chemical Analysis **VOCs, GRO, and DRO**
Equipment Calibration **pH=7, pH=10 and Conductivity=1413 @730**

FIELD STABILIZATION

Military time	pH	Redox Pot.	Temperature corrected conductance [umhos/cm]	Temperature [°C]	Water Level (nearest 0.01 ft.)	Cumulative volume of water removed [gal.]
1125	8.03	+141	538	16.1		~0.6
1130	7.91	+41	542	16.0		~1.0
1135	7.9	+38	541	16.0	17.5	~1.8

AECOM

Soil Vapor Probe Sampling Summary

AECOM Project Number	60141264	Approximate Depth to Groundwater at site (feet from surface)	15 ft
Date:	10-Nov-09	Vapor Probe Advancement Method (Manual or Probe)	Hand Auger
Inititals:	JR		

					Quad-Gas Readings (GEM 500)						Suma Canister Sample			
AECOM Sample ID	Sample Collection Time	Sample Depth (ft.)	Soil Type in Sample Zone	PID	O2 %	CH4 %	CO2 %	Balance %	Purge Start Time	Purge End Time (secs)	Canister Number	Initial Vacuum Gauge Reading (in. Hg)	Final Vacuum Gauge Reading (in. Hg)	Canister Filling Time (sec.)
VP-1P	7:50	5.00	silty sand	129.00	12.3	6.4	2.7	78.6	7:47	7:50	093	-28	0.0	2hr 10 mins

AECOM

Soil Vapor Probe Sampling Summary

AECOM Project Number: 60141284

Date: 2/4/2010

Inititals: RD

Approximate Depth to Groundwater at site (feet from surface): 15 ft.

Vapor Probe Advancement Method (Manual or Probe): sub-slab

						Quad-Gas Readings (GEM 500)						Suma Canister Sample			
AECOM Sample ID	Sample Collection Date	Sample Collection Time	Sample Depth (ft.)	Soil Type in Sample Zone	PID	O2 %	CH4 %	CO2 %	Balance %	Purge Start Time	Purge End Time	Canister Number	Initial Vacuum Gauge Reading (in. Hg)	Final Vacuum Gauge Reading (in. Hg)	Canister Filling Time (min.)
VP-1 (sub-slab)	2/4/10	1120	sub-slab	clay	<1	18.1	0.0	0.6	81.7	1118	1120	1250	25	1	45

Indoor Building Survey and Product Inventory

Preparer's Name JASON ROWE Date/Time Prepared 11/10/09

Preparer's Affiliation AECOM Phone No. (617) 618-2168

Purpose of Investigation _____

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: Not Given First Name: PETE

Address: Not Given

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location: 1
Age range of Occupants: 50 AND ABOVE

2. OWNER OR LANDLORD: (Check if same as occupant ____)

Interviewed: Y / N

Last Name: Zacher First Name: Ben

Address: _____

County: _____

Home Phone: (320) 760-1712 Office Phone: _____

3. BUILDING CHARACTERISTICS:

Type of Building: (Circle appropriate response)

Residential	School	(Commercial/Multi-use)
Industrial	Church	Other: AUTO REPAIR

If the property is residential, what type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: Slab on grade - Commercial

NA

If multiple units, how many? 1

If the property is commercial, type?

Business Type(s) AUTO REPAIR

Does it include residences (i.e., multi-use)? Y / (N) If yes, how many? _____

Other characteristics:

Number of floors 1 Building age _____

Is the building insulated? (Y) / N How air tight? Tight / Average / Not Tight

Elevators or lifts? Y / (N)

4. AIRFLOW:

Only complete section 4 using air current tubes if specifically instructed by MPCA staff. Section 4 may be used to describe existing ductwork and ventilation capacity in the building.

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Airflow near source

Outdoor air infiltration

EXHAUST FAN IN SHED WALL

Infiltration into air ducts

NA

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a.	Above grade construction	wood frame	concrete	stone	brick
b.	Basement type:	full	crawlspace	slab	other_____
c.	Basement floor:	concrete	dirt	stone	other _____
d.	Basement floor:	uncovered	covered	covered with _____	
e.	Concrete floor:	unsealed	sealed	sealed with _____	
f.	Foundation walls:	poured	block	stone	other _____
g.	Foundation walls:	unsealed	sealed	sealed with _____	
h.	The basement is:	wet	damp	dry	moldy
i.	The basement is:	finished	unfinished	partially finished	
j.	Sump present?	Y / N			
k.	Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: _____ (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary with underline)

Hot air circulation	Heat pump	Hot water baseboard
Space Heaters	Stream radiation	Radiant floor
Electric baseboard	Wood stove	Outdoor wood boiler
In-floor heating	Other (specify) _____	

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: _____

Boiler/furnace located in: Basement Outdoors Main Floor Other _____

Air conditioning: Central Air Window units Open Windows None

Are there air distribution ducts present? (Y) / N

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.

_____

_____

_____

_____

Provide copies of technical specifications and air exchange rates for any existing mechanical ventilation systems currently in use. Please provide this material as an attachment to this survey document.

Describe any mechanical ventilation systems within the building (e.g. air to air exchangers, HVAC, etc.)

_____

_____

7. OCCUPANCY

Is basement/lowest level occupied? Full-time (Occasionally) Seldom Almost Never

Level	General use of each floor (e.g. family room, bedroom, laundry, workshop, storage)
Basement	NA – No Basement
1st Floor	1/2 Auto Repair Garage, 1/4 office, 1/4 Bedroom
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? (Y) N

b. Does the garage have a separate heating unit? (Y) / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g. lawn mower,atv,car)? (Y) N / NA
Please specify AUTO REPAIR

d. Has the building ever had a fire? Y (N) When? _____

e. Is a kerosene or unvented gas space heater present? Y (N) Where & Type? _____

f. Is there smoking in the building? Y / (N) How Frequently? _____

g. Have cleaning products been used recently? Y / (N) When & Type? _____

h. Have cosmetic products been used recently? Y / (N) When & Type? _____

i. Has painting/staining been done in the last 6 months? Y (N) Where & When? _____

j. Is there new carpet, drapes or other textiles? Y / (N) Where & When? _____

k. Have air fresheners been used recently? (Y) N When & Type? CAR FRESHNER

l. Is there a kitchen exhaust fan? Y / (N) If yes, where vented? NO Kitchen

m. Is there a bathroom exhaust fan? (Y) N If yes where vented? WE WIN

n. Is there a clothes dryer? Y / (N) If yes, is it vented outside? Y / N

o. Has there been a pesticide application? Y / (N) When & Type? _____

Are there odors in the building? (Y) N
If yes, please describe: Oil (AUTO REPAIR)

Do any of the building occupants use solvents at work? (Y) / N
(e.g. chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? BRAKE FLUID, OIL, Fuel injector Cleaner, Wax/Grease Remover (xylenes)

If yes, are their clothes washed at work? Y / (N)

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)
Yes, use dry-cleaning regularly (weekly) (No)
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y (N) Date of Installation: _____

Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water supply: Public Water Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

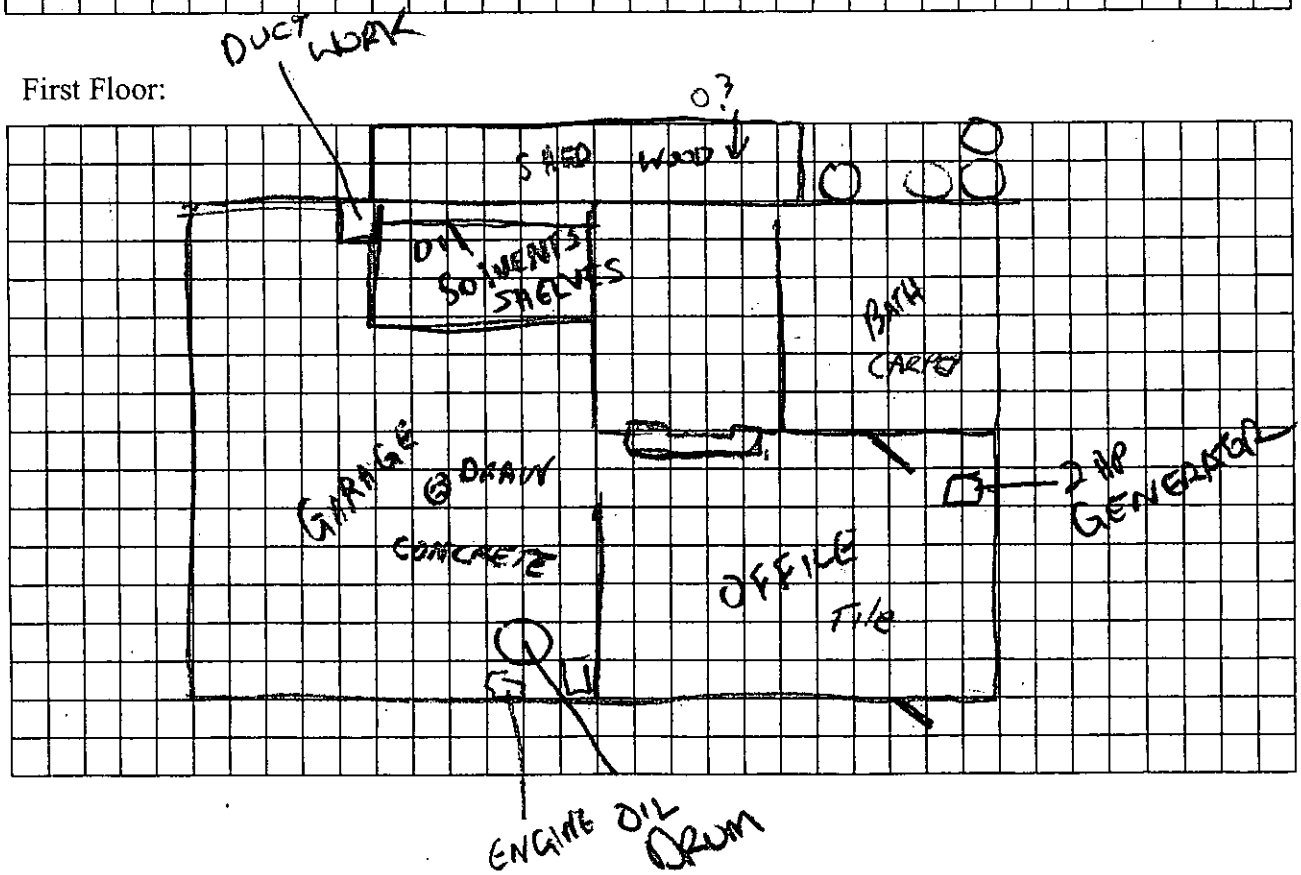
d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement:

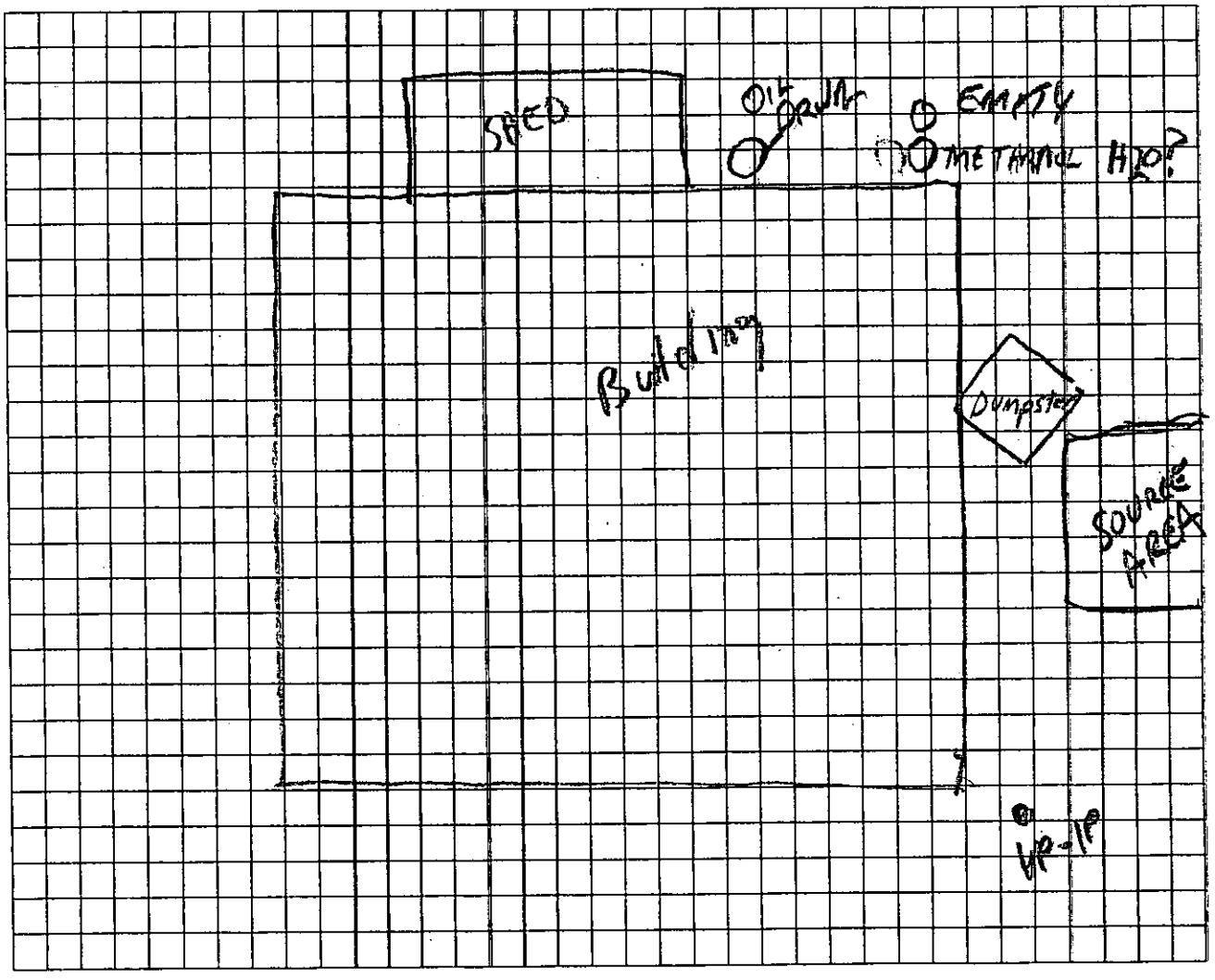
First Floor:



12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: PID MINIRAE 2000/ GEM500

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients (Optional if known)	Field Instrument Reading (units)	Photo** Y / N
2x SHELVES	TRANS FLUID	2x1QT	GOOD		<	
	BRAKE FLUID	12 FL OZ	GOOD		<	
	PRIMER	12 OZ	GOOD		<	
	INJECTOR	16 FL OZ	GOOD		<	
4x	COOLANT	1 GAL	GOOD/USE		<	
	HYDRAULIC FLUID	1 QT	GOOD		<	
2	BUMPER PAINT	12 OZ	GOOD		<	
	ANTI-SEIZE GREASE	REMOVER 4 gallons		MIXED XYLENES	<	
					<	
					<	

*Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)
**Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. The photographs must be of good quality and ingredient labels must be legible.

Indoor Building Survey and Product Inventory

Preparer's Name Ryan Doherty Date/Time Prepared 2/4/10 11:30am

Preparer's Affiliation Aecom Phone No. _____

Purpose of Investigation Sub-slab vapor sampling.

1. OCCUPANT:

Interviewed: (Y) / N

Last Name: Not Given First Name: Pete

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

Number of Occupants/persons at this location: 1
Age range of Occupants: +50

2. OWNER OR LANDLORD: (Check if same as occupant ____)

Interviewed: Y / N

Last Name: Zacher First Name: Ben

Address: _____

County: _____

Home Phone: 320-760-1712 Office Phone: _____

3. BUILDING CHARACTERISTICS:

Type of Building: (Circle appropriate response)

Residential	School	(Commercial/Multi-use)
Industrial	Church	Other: Auto Repair/Paint

If the property is residential, what type? (Circle appropriate response)

NA

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other: _____

If multiple units, how many? NA

If the property is commercial, type?

Business Type(s) Auto Repair

Does it include residences (i.e., multi-use)? Y / (N) If yes, how many? _____

Other characteristics:

Number of floors 1 Building age _____

Is the building insulated? (Y) / N How air tight? Tight / Average / (Not Tight)

Elevators or lifts? Y (N)

4. AIRFLOW:

Only complete section 4 using air current tubes if specifically instructed by MPCA staff. Section 4 may be used to describe existing ductwork and ventilation capacity in the building

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

_____

_____

_____

Airflow near source

_____

_____

_____

Outdoor air infiltration

_____

_____

_____

Infiltration into air ducts

_____

_____

_____

NA

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a.	Above grade construction	wood frame	concrete	stone	brick
b.	Basement type:	full	crawlspace	slab	other_____
c.	Basement floor:	concrete	dirt	stone	other _____
d.	Basement floor:	uncovered	covered	covered with _____	
e.	Concrete floor:	unsealed	sealed	sealed with ?	
f.	Foundation walls:	poured	block	stone	other _____
g.	Foundation walls:	unsealed	sealed	sealed with _____	
h.	The basement is:	wet	damp	dry	moldy
i.	The basement is:	finished	unfinished	partially finished	
j.	Sump present?	Y / N			
k.	Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: AA grade (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

_____

_____

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary with underline)

Hot air circulation	Heat pump	Hot water baseboard
Space Heaters	Stream radiation	Radiant floor
Electric baseboard	Wood stove	Outdoor wood boiler
In-floor heating	Other (specify) _____	

The primary type of fuel used is:

(Natural Gas)	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: Nat Gas

Boiler/furnace located in: Basement Outdoors (Main Floor) Other _____

Air conditioning: Central Air Window units Open Windows None

Are there air distribution ducts present? (Y)/ N

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.

Provide copies of technical specifications and air exchange rates for any existing mechanical ventilation systems currently in use. Please provide this material as an attachment to this survey document.

Describe any mechanical ventilation systems within the building (e.g. air to air exchangers, HVAC, etc.)

7. OCCUPANCY

Is ~~basement/lowest level occupied?~~ Building is occupied... Full-time (Occasionally) Seldom Almost Never

Level	General use of each floor (e.g. family room, bedroom, laundry, workshop, storage)
Basement	
1st Floor	1/2 Auto Repair, 1/4 office, 1/8 bathroom, 1/8 storage Area
2nd Floor	
3rd Floor	
4th Floor	

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? (Y) / N

b. Does the garage have a separate heating unit? (Y) / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g. lawn mower,atv,car)? (Y) / N / NA
Please specify Cars (Auto repair)

d. Has the building ever had a fire? Y / (N) When? _____

e. Is a kerosene or unvented gas space heater present? Y / (N) Where & Type? _____

f. Is there smoking in the building? Y / (N) How Frequently? _____

g. Have cleaning products been used recently? Y / (N) When & Type? _____

h. Have cosmetic products been used recently? Y / (N) When & Type? _____

i. Has painting/staining been done in the last 6 months? Y / (N) Where & When? _____

j. Is there new carpet, drapes or other textiles? Y / (N) Where & When? _____

k. Have air fresheners been used recently? Y / (N) When & Type? _____

l. Is there a kitchen exhaust fan? Y / (N) If yes, where vented? _____

m. Is there a bathroom exhaust fan? (Y) N If yes where vented? WE wall

n. Is there a clothes dryer? Y / (N) If yes, is it vented outside? Y / N

o. Has there been a pesticide application? Y / (N) When & Type? _____

Are there odors in the building? Y / (N)
If yes, please describe: _____

Do any of the building occupants use solvents at work? (Y) / N
(e.g. chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? oil, gas, clearcoat, seafoam, spray paint, cleaners, etc.

If yes, are their clothes washed at work? Y / (N)

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly)
Yes, use dry-cleaning infrequently (monthly or less)
Yes, work at a dry-cleaning service
(No)
Unknown

Is there a radon mitigation system for the building/structure? Y / (N) Date of Installation: _____

Is the system active or passive? Active/Passive NA

9. WATER AND SEWAGE

Water supply: (Public Water) Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: (Public Sewer) Septic Tank Leach Field Dry Well Other: _____

Plugged floor Drain

10. RELOCATION INFORMATION (for oil spill residential emergency)

NA a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

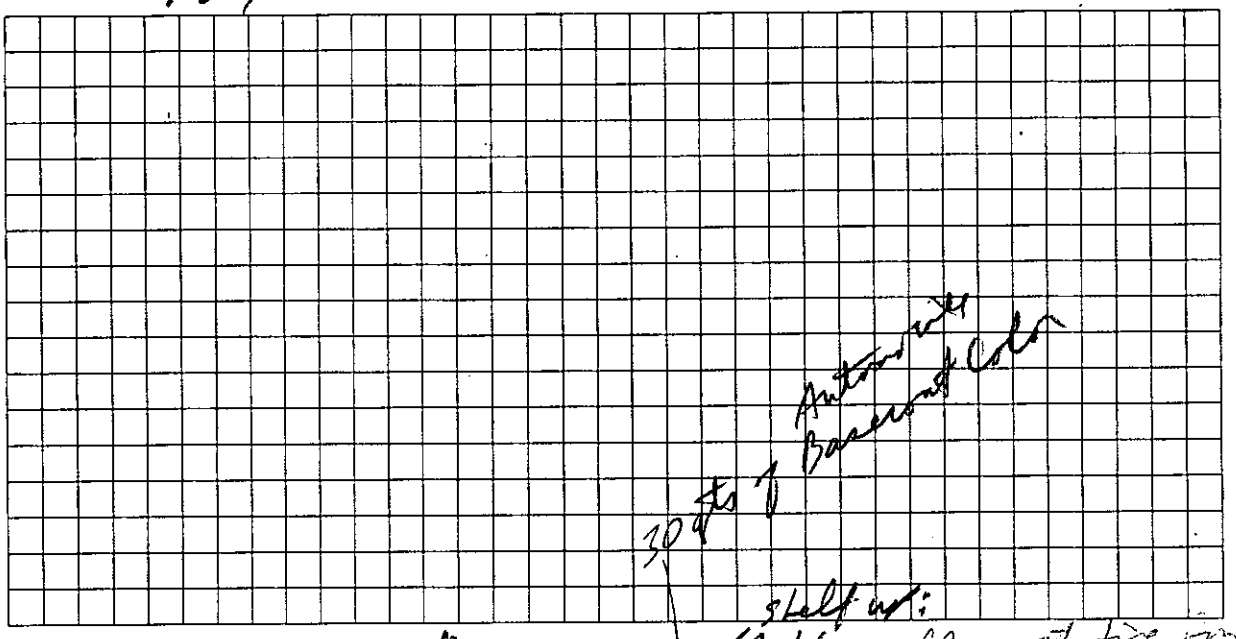
c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

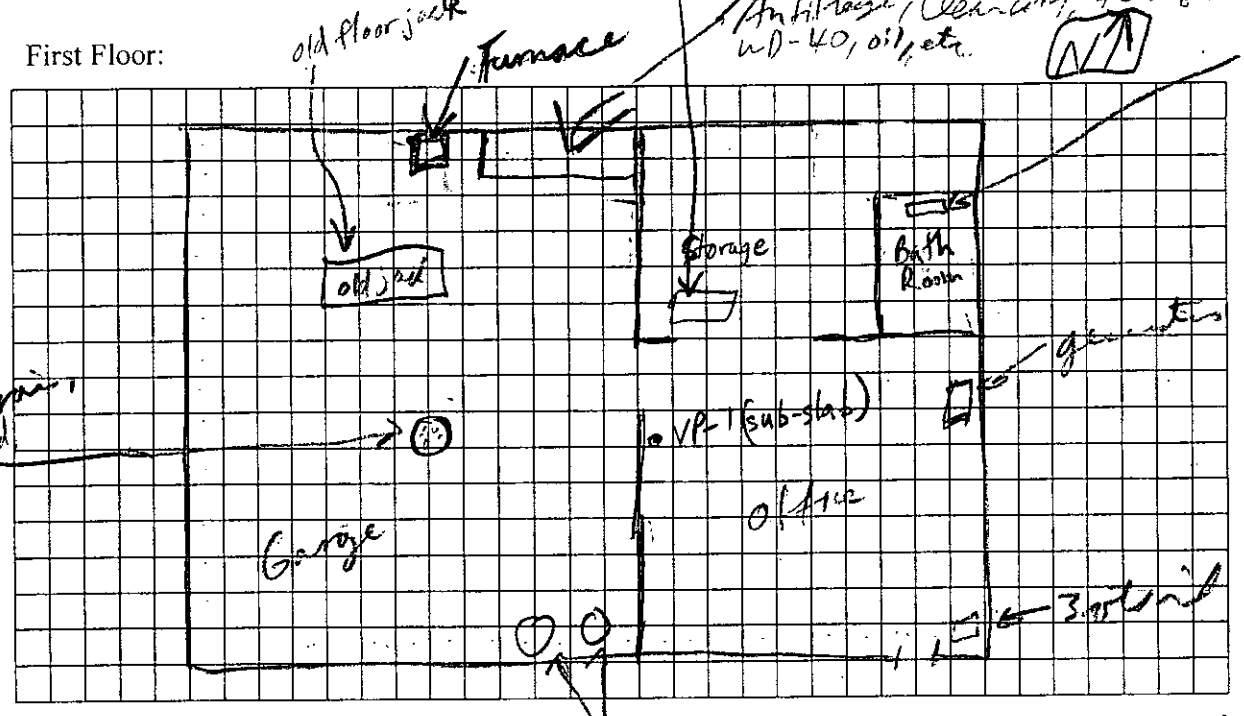
11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement: NA



First Floor:



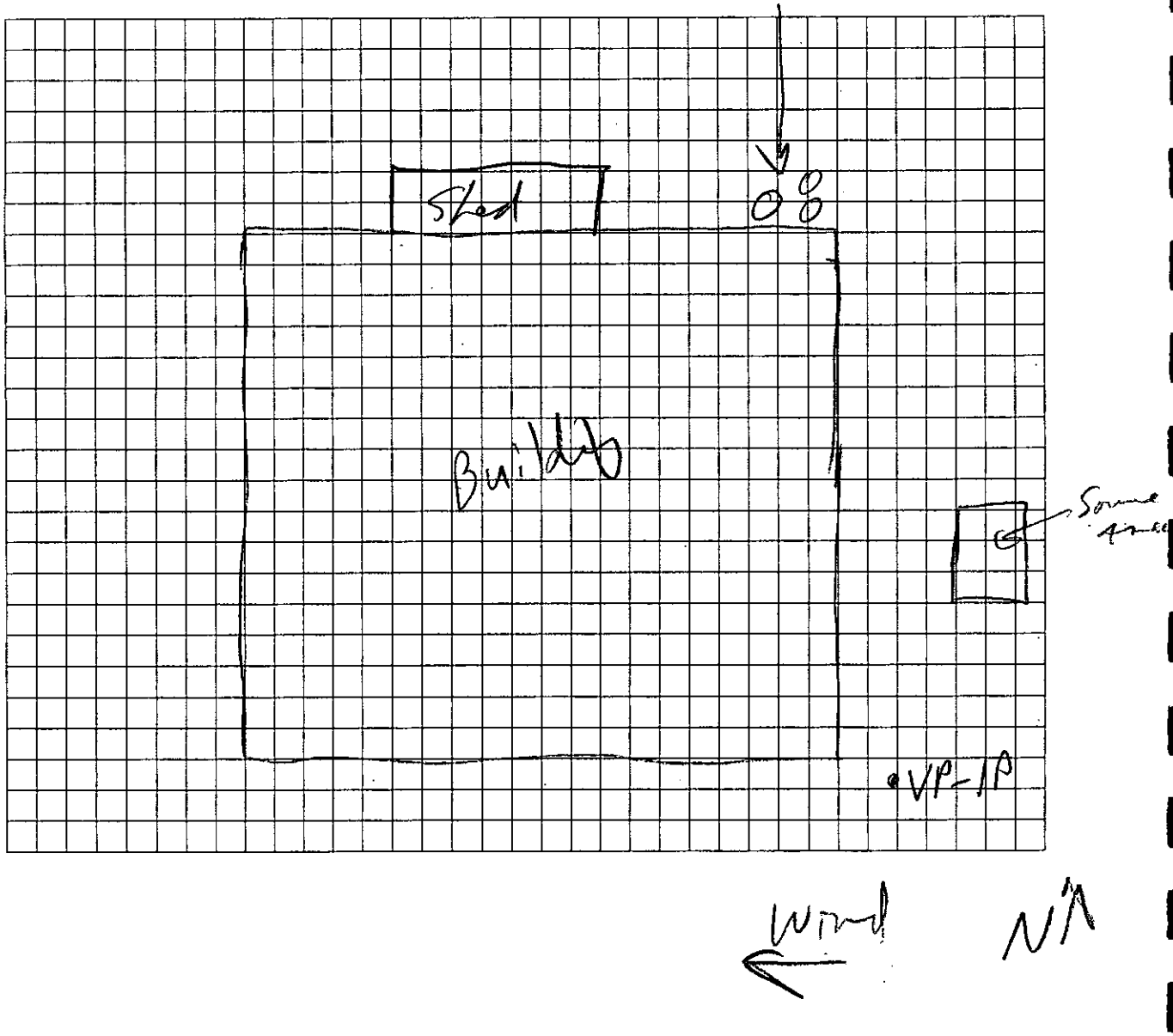
Building ≅ 40' (East/West) by 30' (North/South)

(1" ≅ 5')

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.



13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: Photovac 2020

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients (Optional if known)	Field Instrument Reading (units)	Photo** Y / N
office SE corner	Havoline 5W20	1Qt. x 3	UO	Oil	<1	N
BR	Comet w/Bleach	14oz	U		<1	N
BR	409	16oz	U		<1	N
BR	Fastorage	12oz	U		<1	N
BR	spray disinfectant	16oz	U		<1	N
BR	Works toilet bowl cleaner	16oz	U		<1	N
Storage Area	Basecoat color	30qts	U		<1	N
NE corner shelf	Antifreeze Coolant	1gal x5	U		<1	N
Garage	Clearcoat	1qt x8	U		<1	N
roma-Clear	Acrylic Urethane Auto Refinish	1L x6	U		<1	N
	Power steering fluid	1qt. x3	U		<1	N
	Seafoam	16oz x3	U		<1	N
	Brake fluid	12oz x4	U		<1	N
	ATF	1qt x4	UO		<1	N
	Chromate free etching filler	1gal x2	UO		<1	N
	10W30 oil	1qt x24	UO		<1	N
	Brake Cleaner Aerosol	14oz x8	UO		<1	N
	Etch fill Primer	16oz x1	U		<1	N
	Foam polishing pad 6" face	1qt x4	UO		<1	N
	MachineBlastEZ touch (spray can)	14oz x8	UO		<1	N
Work Bench in Garage	WD-40	3 cans	UO		<1	N
	3 qts oil 10W30		UO		<1	N
SE corner garage	Used oil Storage	2			<1	N

*Describe the condition of the product containers as Unopened (UO), Used (U), or Deteriorated (D)
**Photographs of the front and back of product containers can replace the handwritten list of chemical ingredients. The photographs must be of good quality and ingredient labels must be legible.

Appendix H

Petroleum Release Notification Follow-up Summary

Petroleum Release Notification Follow-up Summary

Property ID[1]	Property Address (Alexandria, MN)	Property Owner[2]
1	905 3rd Avenue East	White Oak Investments, LLC (Ben Zacher)
2	903 3rd Avenue East	Mark Anderson
3	924 3rd Avenue East	Jay Morrell Properties, LLC
4	801 3rd Avenue East	Rabka Enterprises, LLC
5	209 & 211 Nokomis Street	Rabka Enterprises, LLC
6	207 Oak Street	TEL Investments, LLC
7	203 Oak Street	TEL Investments, LLC
8	1102 3rd Avenue East	Alexandria Beverage Company
9	1023 3rd Avenue East	White Oak Investments, LLC (Ben Zacher)
10	901 4th Avenue East	Morrell London Aggregate, LLC
11	312 Quincy Street	Virginia Kluver

Notes:

1 - Property ID corresponds to properties illustrated on Figure 8

2 - Property Owner information obtained from Douglas County Survey and GIS website

Release Notification Letters were mailed to the above properties on April 16, 2010

AECOM (NYSE: ACM) is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental, energy, water and government. With approximately 45,000 employees around the world, AECOM is a leader in all of the key markets that it serves. AECOM provides a blend of global reach, local knowledge, innovation, and technical excellence in delivering solutions that enhance and sustain the world's built, natural, and social environments. A *Fortune 500* company, AECOM serves clients in more than 100 countries and had revenue of $6.1 billion during its fiscal year 2009. More information on AECOM and its services can be found at www.aecom.com.

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AskEnvironment@aecom.com


OBSELFCONFIG


1010


15656


ALEX EXHAUST


905 3RD AVE E


ALEXANDRIA


DOUGLAS


LS


LEAK SITE


TL


VAPOR MONITORING POINT SEALING


AECOM


01-24-2011

AECOM
161 Cheshire Lane North, Suite 500
Minneapolis, MN 55441
www.aecom.com

763-852-4200 tel
763-473-0400 fax

January 24, 2011

Ms. Arlene Furuseth
Project Leader
Minnesota Pollution Control Agency
714 Lake Avenue, Suite 220
Detroit Lakes, MN 56501

Subject: Vapor Monitoring Point Sealing for the former Alex Exhaust - Leak 15656, MPCA Work Order B49241; AECOM Project 60164158

Dear Ms. Furuseth:

AECOM has completed the sealing of two soil vapor monitoring points (VP-1 and VP-1P) for the former Alex Exhuast site (Leak 15656) located at 905 3rd Avenue in Alexandria, Minnesota. The site location is illustrated on Figure 1. The locations of the former vapor monitoring points are illustrated on Figure 2.

The vapor monitoring points were sealed by AECOM on November 3, 2010. AECOM coordinated with the property owner to obtain access to the site building and complete the sealing work.

Vapor monitoring point VP-1P consisted of a stainless steel screen intake set at a depth of approximately 3 to 3.5 feet below ground surface with a 4 inch diameter thread lock vault at the surface (see Photograph 1 attached). The 4 inch vault was removed along with the post run tubing to the screen intake and the vapor monitoring point was backfilled with neat cement grout to the surface. A photograph illustrating the former location of VP-1P after removal and sealing is illustrated on Photograph 2 attached.

Sub-slab vapor monitoring point VP-1 was located inside the former Alex Exhuast building and was completed through the existing floor slab. The vapor monitoring point intake screen and riser section was removed and the remaining void was backfilled with a neat cement grout flush with the existing floor surface. Site photographs 3 and 4 attached illustrate the sub-slab vapor monitoring point before and immeadiately after removal and sealing.

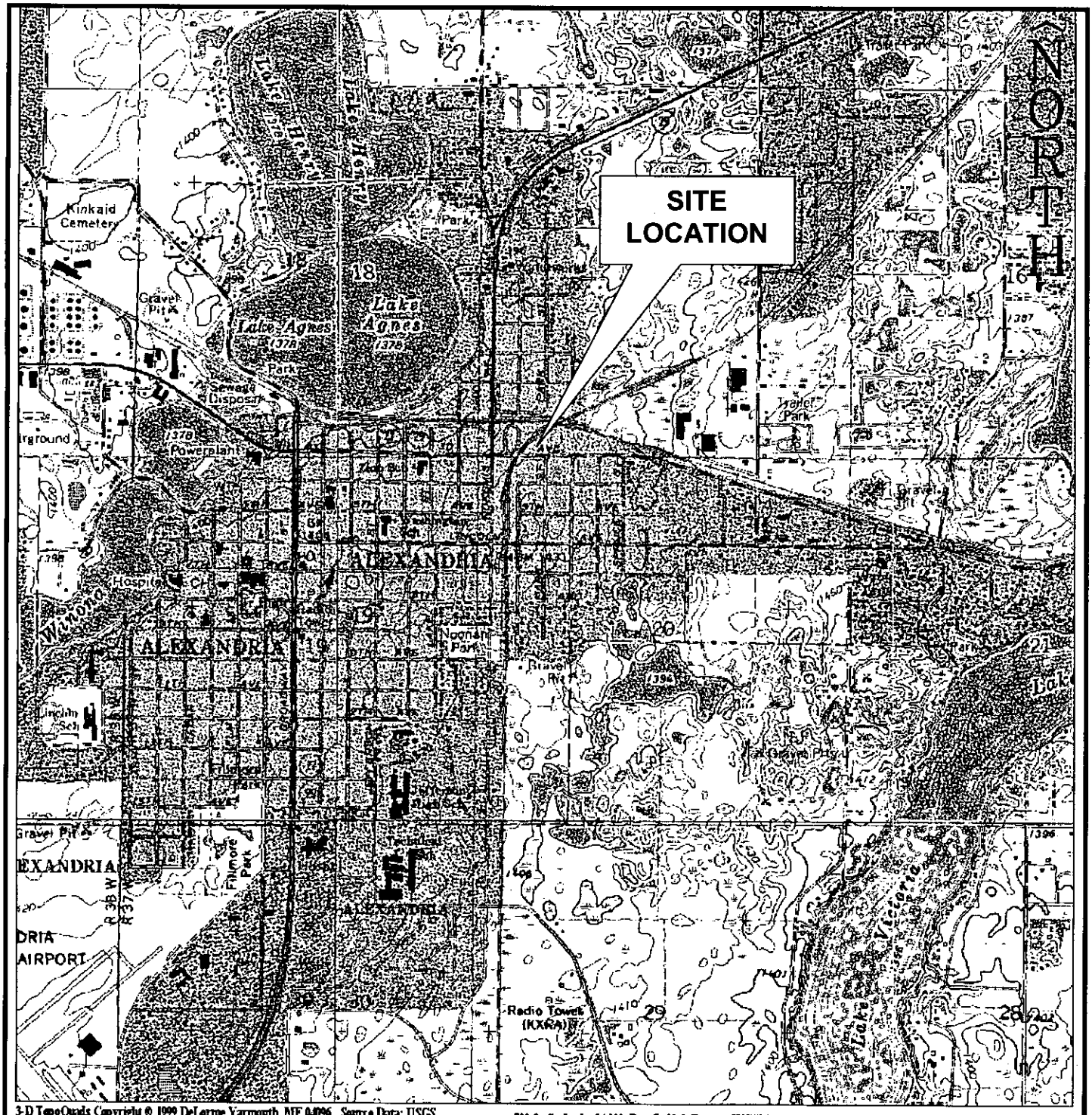
We appreciate the opportunity to provide vapor point sealing and site closure services to you on this project. Please call Tim Grape at (763) 852-4218 if you have any questions in regards to the information presented.

Respectfully,

Timothy J. Grape, PG
Project Geologist

Robert L. DeGroot, PG PE
Principal Engineer

TJG/sks
Attachments:
Figure 1 – Site Location Diagram
Figure 2 –Vapor Monitoring Point Sealing Diagram
Photographic Log



3-D TopoQuads Copyright © 1999 DeLorme Yarmouth, ME 04096 Source Data: USGS 700 ft Scale: 1 : 24,000 Detail: 13-1 Datum: WGS84

AECOM

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Plymouth, Minnesota 55441
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SITE LOCATION DIAGRAM
Alex Exhaust
MPCA Leak # 15,656
905 3rd Avenue E.
Alexandria, Minnesota

DRAWN BY	TJG
CHECKED BY	RLD
APPROVED BY	
CADFILE	SCALE 1" = 2000'
AECOM PROJ. 60164158	FIGURE NO. 1

Alex Exhaust, Leak # 15656
AECOM Project 60164158

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
MPCA	Former Alex Exhaust	60164158

Photo No.	Date:
3	11/3/10

Direction Photo Taken:

Facing down, towards the floor.

Description:

This photograph illustrates the sub slab vapor monitoring point VP-1 prior to sealing.

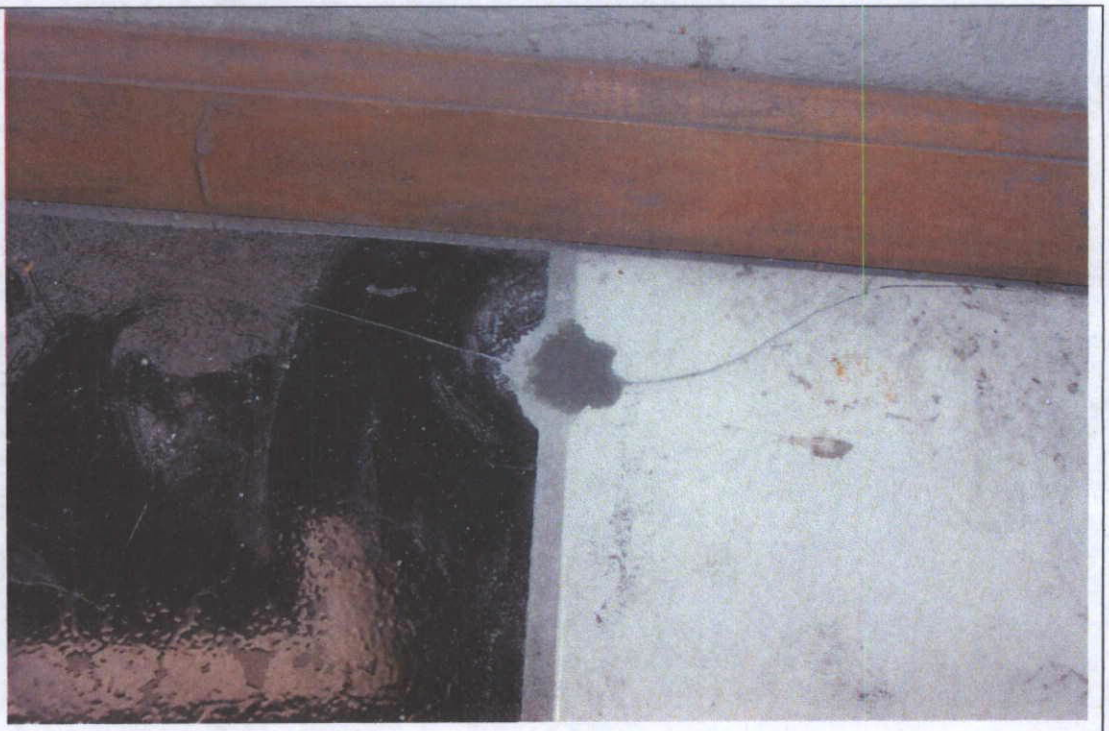
Photo No.	Date:
4	11/3/10

Direction Photo Taken:

Facing down, towards the floor.

Description:

This photograph illustrates the location of sub slab vapor monitoring point VP-1 after sealing.



Alex Exhaust, Leak # 15656
AECOM Project 60164158

AECOM

PHOTOGRAPHIC LOG

Client Name:	Site Location:	Project No.
MPCA	Former Alex Exhaust	60164158

Photo No.	Date:
1	11/3/10

Direction Photo Taken:

Photograph was taken facing down, towards the ground surface

Description:

This photograph illustrates vapor monitoring point VP-1P prior to sealing.

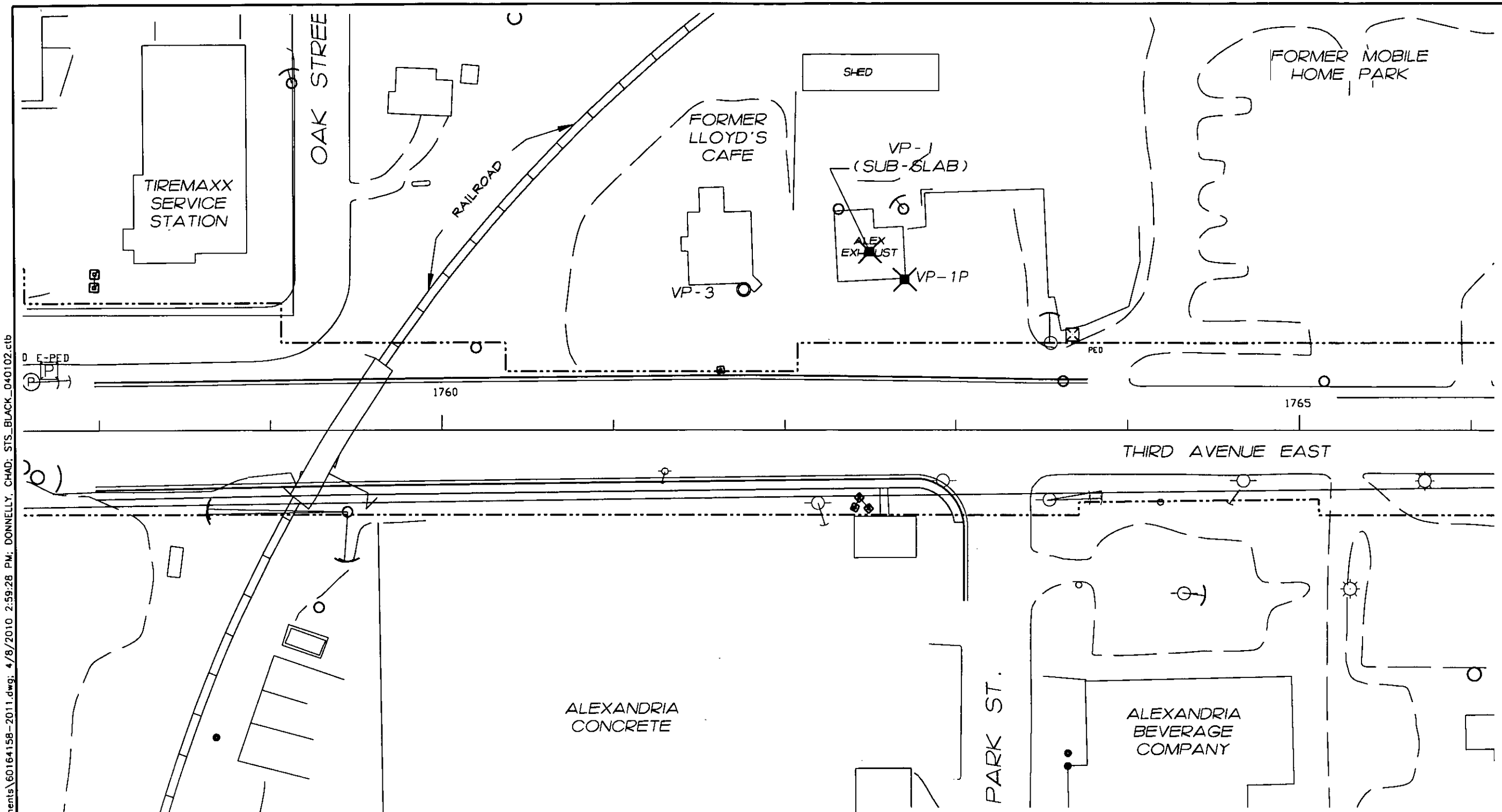
Photo No.	Date:
2	11/3/10

Direction Photo Taken:

Photograph was taken facing down, towards the ground surface

Description:

This photograph illustrates the former location of vapor monitoring point VP-1P after sealing and removal of the protector vault.



NOTE: SITE PLAN PROVIDED BY AMERICAN ENGINEERING TESTING INC.
UTILITIES SHOWN APPROXIMATE BASED ON 12-23-2002 DESIGN DRAWINGS.

LEGEND

VP-# SOIL VAPOR MONITORING POINT SEALED ON NOVEMBER 3, 2010

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SOIL VAPOR POINT SEALING DIAGRAM
ALEX EXHAUST
905 3rd AVENUE EAST
ALEXANDRIA, MINNESOTA
FOR: MPCA

Drawn:	TTC	1/21/2011
Checked:	TJ	1/21/2011
Approved:	RLD	1/21/2011
PROJECT NUMBER	60164158	
FIGURE NUMBER	2	

BATCH SCANNING SHEET

updated 3/23/2012

10/23

Scan Queue* (circle one):

AST/UST Scan	Hazardous Waste
Air Quality**	Major AST
C&E – CR-APT – Scan	Major AST Permit Application
C&E – ER Scan Queue	Permitting – Scan
CSW/ISW/MS4 Scan	~~Remediation~~/Leak Sites
Generic	Rulemaking

*No batch sheet needed for: Bar Code Scanning, DMRs, or Grants

** Air Quality - Only Criteria & Mercury Emissions Inventories

Status:

Prepped by: Joe Sanders Date: 10/17/13

Prep QC'd by: _____ Date: _____

Scanned by: Jordia Copeland Date: 12-19-13

Scan QC'd by: _____ Date: _____

Batch Number: Leak #'s 6853, 160130, 15656, ~~6120~~ 6129

File Type (for archiving): _____

Comments: _____