Minnesota Pollution Control Agency

Investigation Report Form

Guidance Document 4-06

Complete this form to document site investigation activities, including Limited Site Investigations (LSIs) and Remedial Investigations (RIs). Do not revise or delete any text or questions from this report form. Include any additional information that is important for making a site management decision. If only an LSI is necessary, some questions do not need to be answered and have been identified in the form. Highlighted text contains instructions and references to related guidance documents for that section or question. Refer to Minnesota Pollution Control Agency (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 requirements and methods.

MPCA Site ID: Leak000 19190 Date: 5/5/2014

Responsible Party Information

Name: City of Edina Phone #: 952-927-8861

Mailing Address: 7450 Metro Boulevard

City: Edina Zip Code: 55424

Alternate Contact (if any) for Responsible Party: Chad Millner Phone #: 952-927-8861

Leak Site Information

Leak Site Name: Former Public Works Building Phone #:

Leak Site Address: 5146 Eden Avenue

City: Edina Zip Code: 55424 County: Hennepin

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
Sara A. Holter Project Manager		5-2-2014

Name and Title of Report Reviewer(s)	Signature	Date Signed
Jennifer A. Force Senior Project Manager	FOR	5-2-14

Name(s) of Field Technician(s): Scott Jordan

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Minneapolis, Minnesota 55438

Project Manager E-mail Address: sholter@braunintertec.com

Phone: 952-995-2494

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Emergency and High Priority Sites

A. Is an existing drinking water well impacted or likely to be impacted within a two-year travel time? ☐ *Yes* ☒ *No*

B. Is a hydrogeologically sensitive aquifer impacted that is tapped by water wells that are within 500 feet from the release source? **If *YES***, explain below. ☐ *Yes* ☒ *No*

C. Has the public water supply risk assessment concluded that the site is a high priority site with respect to a public water supply well (see Guidance Document 4-18 *Public Water Supply Risk Assessment at Petroleum Remediation Sites*)? ☐ *Yes* ☒ *No*

D. Is there an existing surface water impact as indicated by 1) a petroleum sheen on the surface water or 2) a petroleum sheen or volatile organic compounds in the part per million range observed in a ground water sample collected close to the surface water? ☐ *Yes* ☒ *No*

E. Has free product been detected at the site? **If *YES***, attach Guidance Document 2-03 *Free Product Recovery Report Worksheet* in Section 6. ☐ *Yes* ☒ *No*

F. Are there any existing field-detectable vapor impacts (photoionization detector, explosimeter, odors, etc.) to a receptor? ☐ *Yes* ☒ *No*

G. Did the vapor intrusion assessment detect contaminants in excess of acute intrusion screening values (see Guidance Document 4-01a *Vapor Intrusion Assessments Performed during Site Investigations*)? ☐ *Yes* ☒ *No*

If you answered ***YES*** to any of questions A through G above, describe below the actions taken to date to reduce or eliminate the risk posed by the release.

Section 1: Site Assessment

Site and Release Information

Complete Guidance Document 1-03a *Spatial Data Reporting Form*, Guidance Document 2-05 *Release Information Worksheet* if 3-02 *General Excavation Report Worksheet* was not completed, and include in Section 6.

1.1 Describe the land use and pertinent geographic features (e.g., topographic changes, surface waters, etc.) within 1,000 feet of the site. Illustrate these features using the Site Location Map, aerial photographs, and Sanborn Fire Insurance Maps™ for the various time periods they are available in Section 4.

Currently, the majority of the Site is vacant. The former Public Works building was located on the southwestern portion of the Site with associated parking areas to the east and north of the building (parking areas are still in place) and a storage shed located to the north of the building. The parking areas, east driveway, and south driveway are lined with curb and gutter which lead to storm sewer catch basins. The general grade of the Site is to the south. The current land use in the vicinity of the Site is commercial/industrial. The Site is bordered on the south by Eden Avenue with the Church of Our Lady Grace located beyond, on the east by Arcadia Avenue with commercial buildings and Highway 100 located beyond, on the north by a commercial building with Gus Young Lane located beyond, and on the west by the Soo Line Railroad with commercial buildings located beyond.

1.2 Briefly describe the history of the site and any past site investigation work that may have been completed. If a Phase I or Phase II report has been prepared for this site, include a copy in Section 6.

Based on information from the Phase I report prepared by Wenck Associates, Inc, and dated 2007, the Site has been used by the City of Edina Public Works since 1962. The use of the Site prior to 1962 was in connection with the school district and possibly the railroad. The Site is located in an industrial/commercial area of Edina that was agricultural in its past use.

1.3 List other potential petroleum sources within 500 feet of the site and identify them on the Potential Receptor Map in Section 4.

Currently, there are two 12,000-gallon diesel above-ground storage tanks (ASTs) located on the northeastern portion of the Site. In addition, the property located east of the Site at 5125 Vernon Avenue contains a diesel AST of unknown size for fueling their roof top generator.

1.4 Describe the status of the tank system(s) including current and former tanks, piping, and dispensers. Summarize the status and characteristics of all past and present tanks in Table 1 and identify all components on a Site Map.

The ASTs at the Site are in good condition and are currently being used for fleet refueling. An oil/water separator and four hydraulic hoists were associated with the former Site building and were removed during demolition of the Site building. See the General Excavation Report Worksheet in Appendix A for details.

1.5 Briefly describe the known or suspected source(s) of the release and how it was discovered.

The release was discovered during demolition of the Site building, specifically when the hydraulic hoists and the oil/water separator were removed.

1.6 When did the release occur (if known)? **Unknown**

1.7 What was the volume and type(s) of petroleum product released (if known)? **Unknown**
gallons Released product type(s):

When a tank has been excavated, refer to Guidance Documents 3-01 *Excavation of Petroleum Contaminated Soil and Tank Removal Sampling* and 3-02 *General Excavation Report Worksheet* for reporting requirements. If a tank has been excavated or if contaminated soil was removed for off-site treatment prior to this investigation, include Guidance Document 3-02 in Section 6.

1.8 Was soil excavated for off-site treatment? ☒ *Yes* ☐ *No*

Date(s) soil was excavated: **7/26/2013** Total volume removed: **approximately 400 yds^3**

Volume of total soil removed that was petroleum saturated: **0 yds^3**

Soil treatment method:
☐ Land treatment
☐ Thermal treatment
☐ Composting/Biopiling
☒ Other (off-site disposal)
Name and location of treatment facility: **Rolling Hills Landfill in Buffalo, MN**

If you checked "Other", describe how the soil was treated and attach applicable documentation at the end of the reporting form.

Soil was transported off-site for disposal at Rolling Hills Landfill in Buffalo, MN, which is permitted to accept this type of material.

Site-Specific Geology and Hydrogeology

1.9 Discuss the soil borings drilled and provide rationale for their locations. Include boring logs in Section 6. Boring logs must include all the information required in Guidance Document 4-01 *Soil and Ground Water Assessments Performed during Site Investigations*.

Soil Borings PP-1 through PP-6 were advanced in the area of the former hydraulic hoists. PP-1 through PP-4 were advanced to a depth of 20 feet below ground surface (bgs) near the outer limits of the hoist area and Soil Borings PP-5 and PP-6 were advanced to depths of 38 and 40 feet bgs, respectively, near the center of the hoist area in. Two deeper borings were advanced in near the center of the hoist area in the hopes of encountering groundwater. Soil Vapor Probes (VP-1 through VP-4) also were advanced within the area of the former hydraulic hoists near the outer limits of the hoist area.

1.10 Indicate the locations and depths of soil samples submitted for grain size analysis.

Because groundwater was not encountered in the soil borings, soil samples were not collected for grain-size analysis.

1.11 Discuss in detail the site geology based on soil boring data, grain size analyses, cross sections, geologic logs of nearby water wells, and available published information. Include detailed descriptions of more porous lenses or stringers within tighter soil types.

Based on soils encountered within the six boring locations, fill soil consisting of sandy lean clay was encountered to depths between 5 and 12 feet bgs. Poorly graded sand and silty sand were encountered below the fill soil to the termination depth of each boring. Within Soil Boring PP-5, a 1-foot lean clay layer was encountered between 10 and 11 feet bgs and a 3-foot sandy lean clay layer was encountered between 35 to 38 feet bgs. Within Soil Boring PP-6, a lean clay layer was encountered at a depth of 12 to 12.5 feet bgs.

1.12 Discuss in detail the local and regional hydrogeology based geologic logs of nearby water wells and available published information.

Based on hydro-geologic maps of the area, groundwater is estimated to be approximately 40 feet bgs. Based on the County Well Index there are no wells within 500 feet of the Site; however, the closest well (00206476) is 700 feet to the southwest and groundwater was at 77 feet bgs.

1.13 Discuss site ground water flow direction using soil boring data, monitoring well data if collected, plume geometry, and available published information.

Based on information provided in the Phase I report, regional groundwater flow is to the southeast towards the Minnesota River; however, local groundwater flow may be towards Minnehaha Creek to the northeast.

1.14 Describe any evidence of a fluctuating water table or a seasonal high water table (e.g., mottling, saturated soil color or gleyed soils, monitoring well observations). Also, from other sources of information describe the range of natural water table fluctuations in the area.

Groundwater was not encountered in the borings and no indications of a fluctuating water table were encountered.

Extent and Magnitude of Soil Contamination

1.15 Were soil borings conducted in or adjacent to the following source areas?

Dispensers	☐ *yes*	☐ *no*	☒ *not present*	Piping	☐ *yes*	☐ *no*	☒ *not present*
Transfer areas	☐ *yes*	☐ *no*	☒ *not present*	Remote fill pipes	☐ *yes*	☐ *no*	☒ *not present*
UST basins	☒ *yes*	☐ *no*	☐ *not present*	Valves	☐ *yes*	☐ *no*	☒ *not present*
AST basins	☐ *yes*	☐ *no*	☒ *not present*	Known spill areas	☐ *yes*	☐ *no*	☒ *not present*

1.16 **Horizontal Definition**: Based on requirements described in Guidance Document 4-01, were a sufficient number of soil borings completed to define the horizontal extent of soil contamination in all directions? ☒ *Yes* ☐ *No*

1.17 **Vertical Definition:** Based on requirements described in Guidance Document 4-01, were all soil borings completed to the required depth? ☒ *Yes* ☐ *No*

1.18 **Site Stratigraphy:** Based on requirements described in Guidance Document 4-01, was the stratigraphy boring completed to the required depth? ☒ *Yes* ☐ *No*

If you answered ***NO*** to any of the four previous questions, explain why the borings were not conducted in the required locations or to the required depths. See Guidance Document 4-01 *Soil and Ground Water Assessments Performed during Site Investigations* regarding exceptions and MPCA approval for depth of drilling.

NA

1.19 Describe the vertical and horizontal extent and magnitude of soil contamination based on field observations, soil headspace measurements (Table 2), and soil analytical results (Tables 3 and 4). If non-petroleum contaminants are present, discuss the possible sources of these compounds. Provide a map and two cross sections that illustrate both soil headspace and laboratory analytical results in Section 4. Include laboratory analytical reports and soil sampling methodology in Section 6.

No field indications of contamination or debris were observed in the soil samples collected from the soil borings. Also, no elevated PID readings were encountered. Soil samples for chemical analysis were collected from each of the soil borings advanced at the Site. No volatile organic compounds (VOC) were detected above laboratory method reporting limits (MRLs) with the exception of methyl isobutyl ketone which was detected in Soil Boring PP-5(5-7.5) at a concentration of 0.45 milligrams per kilogram (mg/kg).

DRO was detected in Soil Samples PP-1(12.5-15), PP-2(5-7.5) and PP-5(5-7.5 and 37-38) at concentrations ranging between 9.2 mg/kg and 150 mg/kg. The highest concentrations of DRO were detected at a depth of 5 to 7.5 feet bgs in Soil Boring PP-2 (150 mg/kg) and PP-5 (140 mg/kg). Contaminated soil appears to be very limited to below the former hoists to a depth of 38 feet bgs.

No VOCs or DRO were detected above laboratory MRLs in confirmation soil samples collected after soil was excavated near the oil/water separator. Base confirmation samples were collected at a depth of 22 feet below ground surface and sidewall confirmation samples were collected at depths ranging between 6 to 16 feet bgs.

Results are included in the General Excavation Report Worksheet included in Appendix A.

1.20 Is contaminated soil in contact with ground water? ☐ *Yes* ☒ *No*

If *YES*, or if ground water contamination appears likely, then complete the **Aquifer Determination** section below.

If *NO*, complete question 1.21.

1.21 a) What is the distance separating the deepest contamination from the surface of the water table?

DRO was detected at a depth of 37 to 38 feet bgs in Soil Boring PP-5 and because groundwater is estimated to be greater than 40 feet bgs, there is at least 2 feet of separation.

b) Was this distance measured during site activities, referenced from geologic information, or estimated based on professional opinion during a site visit?

The depth of contamination was based on analytical data and the depth to groundwater was based on published geologic data and field observations.

c) In your judgment, is there a sufficient distance separating the petroleum contaminated soil from the underlying aquifer to prevent contamination of the aquifer? ☒ *Yes* ☐ *No*

Please explain in detail. In your explanation, consider the site-specific geology, the data in this section, and the nature of the petroleum release (i.e., volume, age, released product type).

Based on well logs from municipal wells in the surrounding area, the estimated shallow groundwater beneath the Site is not part of the municipal water supply.

If *YES*, the **Aquifer Determination** is not necessary as part of the LSI.

If *NO*, complete the **Aquifer Determination** section below.

1.22 Is contaminated surface soil (0-2 feet) present at the site? ☐ *Yes* ☒ *No*

If *YES*, delineate the extent of contaminated surface soil, identify the extent(s) of contaminated surface soil on a Site Map, and propose a corrective action in Section 3 to mitigate the impacts. If borings were used to define the extent, complete Table 5. See Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil and Tank Removal Sampling* for more information regarding contaminated surface soil identification, delineation, and excavation.

Aquifer Determination

Complete this section if ground water has been contaminated or may become contaminated based on questions 1.20 and 1.21. Aquifer determination is made during the LSI. It is based upon the stratigraphy and a hydraulic conductivity measurement calculated from grain size analyses. The site stratigraphy gives the context within which the hydraulic conductivity measurement can be interpreted. Please refer to Guidance Document 4-01 *Soil and Ground Water Assessments Performed during Site Investigations* for methods and requirements. Provide the results of grain size analyses, calculations, and other information used for the determination of hydraulic conductivity in Section 6. Determine the aquifer thickness (b) from geologic logs of soil borings, water well logs, and available published information.

1.23 Calculate an average hydraulic conductivity value (K). K = ft/day

Indicate the calculation method (e.g. Hazen, Masch and Denny, Kozeny-Carmen, etc.).
NA

1.24 Calculate a range for aquifer transmissivity (T) using the equation T = Kb, where b is the thickness of the aquifer. **NA**
T_{High} = ft^2/day
T_{Low} = ft^2/day

If the transmissivity of a contaminated hydrogeologic unit is greater than 50 ft^2/day, it is considered an aquifer for the purpose of the Petroleum Remediation Program. If the hydrogeologic unit meets the definition of an aquifer, then monitoring wells are required if any of the following conditions are met: 1) ground water is impacted at or above Minnesota Department of Health (MDH) Health Risk Limits (HRLs) or 1,000 µg/L GRO or DRO; 2) ground water is impacted below the HRLs but levels are likely to reach the HRLs; or 3) there is an insufficient distance separating the petroleum contaminated soil (or an impacted non-aquifer) from an underlying aquifer. If monitoring wells were installed complete the **Aquifer Characterization** section below as part of an RI.

Aquifer Characterization

1.25 Discuss the drilling and installation of monitoring wells including the rationale for their locations. Summarize their construction in Table 9. Attach boring logs, well construction diagrams, and well logs in Section 6.

NA

1.26 Is there a clean or nearly clean (below HRLs) downgradient monitoring well located along the longitudinal axis of the contaminant plume (approximately 20 degrees plus or minus the axis)? ☐ *Yes* ☐ *No*

1.27 Is there a worst case well completed through the source area(s) of the release? ☐ *Yes* ☐ *No*

If you answered ***NO*** to any of the above two questions, please explain why a well was not completed in the required location.

1.28 Provide an estimate of the longitudinal length of the dissolved contaminant plume: feet

1. 29 Calculate ground water flow velocity (based on Darcy's Law) using the average hydraulic conductivity (K), average horizontal hydraulic gradient (dh/dl), and effective porosity (n). Provide documentation and show calculations in Section 6.

Hydraulic conductivity (K) = ft/day
(Method if different than that used in 1.23:)
Porosity (n) = method/reference
Average horizontal gradient (dh/dl) = (unitless)
Calculated ground water velocity (v) = ft/day

1.30 Using the calculated ground water flow velocity from question 1.29, is there a receptor(s) located within a five-year travel time from the source area? ☐ *Yes* ☐ *No*

If *YES*, describe the location and type of receptor(s).

1.31 Were any deep monitoring wells completed at the site? ☐ *Yes* ☐ *No*

If *YES*, list them and indicate their depths:

Contact the MPCA project hydrologist before installing a deep monitoring well. A deep monitoring well **may** be necessary if: 1) contamination exists more than 10 feet below the water table or 2) the impacted aquifer is a drinking water aquifer or is hydraulically connected

to the aquifer(s) presently used by a water supply well located within 500 feet of the release source.

If contamination is present at depth in the aquifer or in deeper aquifers, additional deep wells may be required. Provide the following information if deep wells were installed:

Vertical gradient (dv/dl)
Inferred ground water flow direction

Provide the following information for the deep aquifer unit if it appears to be hydrogeologically distinct from the upper unit.

Porosity (n):
Hydraulic conductivity (K) ft/day

Submit this RI report after completing a minimum of *two quarterly sampling events*. Quarterly ground water monitoring and sampling should continue until MPCA response is received.

Extent and Magnitude of Ground Water Contamination

1.32 Describe the extent and magnitude of ground water contamination based on the analytical results of samples collected as part of an LSI (Tables 6, 7, and 8) and, if applicable, monitoring well samples collected as part of an RI (Tables 10, 11, and 12). Provide Site Maps that illustrate both the laboratory analytical results and, if applicable, ground water gradients in Section 4.

Groundwater was not encountered within the deeper borings advanced at the Site; therefore, no groundwater samples were collected. The deep borings were terminated because no field indications of contamination were observed.

1.33 If non-petroleum contaminants are present, discuss the possible sources of these compounds.

NA

1.34 Provide a discussion on QA/QC, including information on the samples collected and laboratory analyses performed. Include laboratory analytical reports and ground water sampling methodology in Section 6.

NA

1.35 Laboratory certification number:

Evaluation of Natural Attenuation

Refer to the Guidance Document 4-03 *Assessment of Natural Attenuation at Petroleum Release Sites*. **Note**: Evaluation of natural attenuation is not required unless requested by MPCA staff.

1.36 Discuss the results of the natural attenuation assessment (Table 13). Specifically, compare the concentrations of the inorganic parameters inside and outside the plume and whether the data indicate natural biodegradation is occurring at the site.

NA

1.37 If active remediation is anticipated, discuss reasons why natural attenuation (including biodegradation) can not adequately remediate the contaminants to acceptable risk levels.

Extent and Recovery of Free Product

If free product is encountered during the investigation, include Guidance Document 2-03 *Free Product Recovery Report Worksheet* in Section 6. See Guidance Document 2-02 *Free Product: Evaluation and Recovery* for additional information.

1.38 If free product was encountered during the site investigation, describe the work completed to delineate the extent of the free product zone and what efforts were or are being completed to recover it. Tabulate the volume of product recovered in Table 14. Illustrate the estimated horizontal extent of the free product zone on a Site Map in Section 4.

NA

Section 2: Risk Assessment

Well Receptors

List all properties located within 500 feet of the site in Table 15. Identify all properties listed in Table 15 on the Potential Receptor Map in Section 4.

List all wells located within 500 feet of the site and any municipal or industrial wells within ½ mile in Table 16. All water wells within 500 feet of the release source must be listed even if construction information was not obtained or available. Include all available water supply well logs obtained from Minnesota Geological Survey, MDH, drillers, or county well management authorities, and any other well construction documentation in Section 6. Identify all wells listed in Table 16 on the Well Receptor Survey Map in Section 4.

2.1 Were all property owners within 500 feet of the site successfully contacted to determine if water wells are present? ☒ *Yes* ☐ *No*

If *NO*, please explain.

2.2 Discuss any physical limitation to the inspection of properties within the 500-foot survey radius.

NA

2.3 Discuss the results of the ground water receptor survey. Comment on the risks to water supply wells identified within 500 feet from the site as well as the risk posed by or to any municipal or industrial wells found within ½ mile. Specifically indicate whether identified water supply wells use the impacted aquifer. (Note: an impacted aquifer separated from another aquifer by a clay lens may not be considered a separate aquifer).

No groundwater was encountered within the deeper borings advanced at the Site. In addtion, the nearest well is located approximtely 700 feet southwest of the Site and groundwater was measured at a depth of 77 feet bgs. Therefore, there is minimal risk to wells near the Site.

2.4 If water samples were collected from nearby water wells, discuss the analytical results below and tabulate them in Tables 11 and 12.

NA

2.5 Is municipal water available in the area? ☒ *Yes* ☐ *No*

2.6 Based on the public water supply risk assessment, is the site located in a Source Water Assessment Area or Drinking Water Supply Management Area (see Guidance Document 4-18 *Public Water Supply Risk Assessment at Petroleum Remediation Sites*)? ☐ *Yes* ☒ *No*

If *YES*, provide the name of the area and include the required documentation in Section 6.

2.7 Are there any plans for ground water development in the impacted aquifer within ½ mile of the site or one mile downgradient of the site if the aquifer is fractured? ☐ *Yes* ☒ *No*

Provide the name, title and telephone number of the person that was contacted for this information.
Name: **Chad Millner** Title: **Assistant City Engineer** Telephone: **952-826-0318**

Surface Water Receptors

2.8 Are there any surface waters or wetlands located within ¼ mile of the site? ☐ *Yes* ☒ *No*

If *YES*, list them along with their distance and direction from the site in Table 17.

Also, list below any potential pathways such as ditches, drain tiles, storm sewers, etc., that may lead to the identified surface water features.

2.9 If surface water is present downgradient of the site, is there a clean downgradient soil boring or monitoring well located between the site and the surface water? ☐ *Yes* ☐ *No* ☒ *NA*

If *YES*, identify the clean downgradient boring or well, distance to the surface water feature, and discuss the contamination risk potential.

If *NO*, and ground water from a downgradient boring or well is contaminated, we assume that contamination discharges to the surface water. Therefore, provide the following information:

Name of receiving water:	
Plume width, (W):	feet
Plume thickness, (H):	feet
Hydraulic conductivity, (K):	gal/day/ft^2
Horizontal gradient, (dh/dl):	(unitless)
Discharge, (Q) = H*W*K*(dh/dl)/1440	gal/min

Utilities and Subsurface Structures

2.10 Compare the relationship between the distribution of contaminant phases (soil, ground water, vapor, and non-aqueous phase liquid) to the location of all underground utility lines, utility service lines, and nearby basements and sumps. Include all identified utilities in Table 18. Show all utilities, utility service lines, and other subsurface structures on applicable cross sections in Section 4.

Utilities for the former Site building run along Arcadia Avenue to the east and Eden Avenue to the South. No utility lines run through or near the impacted area located near the southwestern portion of the Site. In addition, no basements or sumps are located near the impacted area. A figure depicting public utilities and the former Site building is attached.

2.11 Is there any evidence that free product or contaminated ground water may be traveling off site within the utility corridors? ☐ *Yes* ☒ *No*

If *YES*, a utility backfill investigation is required (refer to Guidance Document 4-01). Discuss the investigation rationale and results.

2.12 Is there a history of field-detectable vapor impacts in the vicinity of the site? ☐ *Yes* ☒ *No*

If *YES*, describe:

Conduct a vapor survey if the vapor receptor survey and risk evaluation indicate a risk of vapor impact or an infiltration risk from contaminated ground water or free product to utilities or subsurface structures. See Guidance Document 4-02 *Potential Receptor Surveys and Risk Evaluation Procedures at Petroleum Release Sites*. Identify all vapor monitoring locations on the Vapor Survey Map by labeling each monitoring location with a number that corresponds to vapor monitoring locations listed in Table 19. Vapor monitoring methods, including instruments used, must be discussed in Section 6.

2.13 Provide a detailed description of each vapor monitoring location and indicate if vapors were detected.

Catch basins (32 total) and manholes (4 total) within 500 feet of the Site were monitored using a PID. No elevated PID readings were observed.

Vapor Intrusion Receptors

When vapor intrusion receptors are present, a preliminary vapor intrusion risk assessment must be completed (see Guidance Document 4-01a *Vapor Intrusion Assessments Performed during Site Investigations*). If completed, include the Vapor Intrusion Assessment Map in Section 4 that identifies all vapor intrusion samples and receptors at and within the 100-foot preliminary assessment area.

2.14 Was a preliminary vapor intrusion risk assessment completed? ☒ *Yes* ☐ *No*

If *NO*, explain why.

2.15 Do any of the soil gas samples from locations near inhabited buildings exceed the ISVs by ten times (10X) for petroleum related compounds? ☒ *Yes* ☐ *No*

If you answered ***YES***, is additional characterization of the vapor intrusion pathway needed for these buildings (e.g. sub-slab soil gas, an indoor building survey, or indoor air sampling)? **If *YES***, complete question 3.4. **If *NO***, explain why. ☐ *Yes* ☒ *No*

The Site building has been demolished and there are no plans for redevelopment at the Site. In addition, there are no buildings located near the soil impacts.

2.16 Have sufficient data been collected to propose a Conceptual Corrective Action Design for buildings that are likely to be impacted by petroleum vapors? **NA** ☐ *Yes* ☐ *No*

If *YES*, describe your justification for corrective action.

2.17 Based on the horizontal extent of impacted ground water or free product from the release, is additional soil gas sampling required beyond the 100-foot preliminary assessment area near inhabited buildings? ☐ *Yes* ☒ *No*

If *YES*, describe your proposal for additional vapor intrusion sampling.

If *NO*, explain why.

The Site building has been demolished and there are no plans for redevelopment at the Site. In addition, there are no buildings located near the soil impacts.

2.18 Were recommended field sampling procedures and laboratory QA/QC from Guidance Document 4-01a followed? ☒ *Yes* ☐ *No*

If *NO*, explain why and discuss implications on data quality.

Site Conceptual Model Discussion

2.19 Provide a detailed site conceptual model (SCM). The SCM should integrate site-specific geology, hydrogeology, and the contaminant distribution with respect to identified exposure pathways (well receptors, surface water receptors, utilities and subsurface receptors, and vapor intrusion receptors). For additional information on SCM development, see Guidance Document 1-01 *Petroleum Remediation Program General Policy*.

Fill soil consisting of sandy lean clay was encountered from depths between 5 and 12 feet bgs. Poorly graded sand and silty sand were encountered below the fill soil to the termination depth of each boring. Within Soil Boring PP-5, a 1-foot lean clay layer was encountered between 10 and 11 feet bgs and a 3-foot sandy lean clay layer was encountered between 35 to 38 feet bgs. Within Soil Boring PP-6, a lean clay layer was encountered at a depth of 12 to 12.5 feet bgs.

No field indications of contamination or debris were observed in the soil samples collected from the soil borings. Also, no elevated PID readings were encountered. Soil samples for chemical analysis were collected from each of the soil borings advanced at the Site. No VOCs were detected above laboratory method reporting limits (MRLs) with the exception of methyl isobutyl ketone which was detected in Soil Boring PP-5(5-7.5) at a concentration of 0.45 milligrams per kilogram (mg/kg). DRO was detected in soil Soil Borings PP-1(12.5-15), PP-2(5-7.5) and PP-5(5-7.5 and 37-38) at concentrations ranging between 9.2 mg/kg and 150 mg/kg. The highest concentrations of DRO were detected at a depth of 5 to 7.5 feet bgs in Soil Boring PP-2 (150 mg/kg) and PP-5 (140 mg/kg).

No VOCs or DRO were detected above laboratory MRLs in confirmation soil samples collected after soil was excavated near the oil/water separator. Base confirmation samples were collected at a depth of 22 feet below ground surface and sidewall confirmation samples were collected at depths ranging between 6 to 16 feet bgs.

Groundwater is estimated to be approximately 40 feet bgs and regional groundwater flow at the water table is assumed to be to the southeast towards the Minnesota River; however, local groundwater flow may be towards Minnehaha Creek to the northeast. No groundwater or indications of groundwater were encountered within the borings advanced at the Site and there is no surface water within 500 feet of the Site. Based on the County Well Index there are no wells within 500 feet of the Site; however, the closest well is 700 feet to the southwest and groundwater was at 77 feet bgs.

Groundwater was not encountered within the deeper borings advanced at the Site; therefore, no groundwater samples were collected. In addition, boring depths were terminated because no field indications of contamination were observed.

Soil-vapor samples were collected from the four soil-vapor points advanced at the Site. Elevated concentrations of several VOCs were detected from each sample location. However, the area where the samples were collected is currently vacant and there are no plans for redevelopment.

Catch basins (32 total) and manholes (4 total) within 500 feet of the Site were monitored using a PID. No elevated PID readings were observed in any of the locations.

2.20 Discuss any other site concerns not included in the above discussion
NA

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 gas/vapor intrusion investigation
- ☐ corrective action

3.2 If closure is recommended, summarize significant investigative events and describe how site-specific exposure pathways identified in question 2.19 have been adequately addressed.

Soil borings were advanced at the Site in the area of the hydraulic hoists. Soil samples and soil vapor samples were collected. No groundwater was encountered at the Site. Impacted soil from beneath the oil/water separator was removed and hauled off Site. The Site building has been removed and the surrounding parking areas are still intact. Currently, there are no plans to redevelop the Site. The risk associated with the remaining contamination appears minimal.

3.3 If additional ground water or field-detectable vapor monitoring is recommended, indicate the proposed monitoring locations, sampling frequency, and target analytes. Conduct quarterly ground water monitoring and sampling until the MPCA responds to this report.

No additional vapor monitoring 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.

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: MPCA staff will review this report at a higher-than-normal priority to determine if corrective action is required.)

Corrective action is not recommended at this time.

Section 4: Figures

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

☒ Site Location Map using a U.S. Geological Survey 7.5 minute quadrangle map.

☐ Aerial photos and Sanborn Fire Insurance Maps™ (if available) of the immediate area.

☒ One or more Site Maps showing:
- Structures
- Locations and depths of on-site buried utilities
- All past and present petroleum storage tanks, piping, dispensers, and transfer areas
- Extent of soil excavation
- Boring and well locations (including any drinking water wells on site)
- Horizontal extent of soil contamination
- Extent of contaminated surface soil
- Horizontal extent of ground water contamination
- Horizontal extent of NAPL
- Location of end points for all geologic cross sections
- Potential pathways that lead to surface water features within ¼ mile of the site

Distinguish sequential elements of investigations by dates, symbols, etc. in the key.

☒ At least two (2) geologic cross sections depicting stratigraphy, soil headspace results, laboratory analytical results, water table elevation, and underground utilities.

☐ Ground water gradient contour maps (for sites with monitoring wells) for each gauging event.

☒ Potential Receptor Map (scale 1 inch = 50 to 100 feet), centered on the release area, showing property boundaries and roads, and potential receptors such as buildings, water wells, underground utilities (distinguish between water, storm sewer, and sanitary sewer), surface waters, ditches, and any other pertinent items within 500 feet of the release source.

☒ Well Receptor Survey Map showing ½-mile radius, 500-foot radius, water supply wells, and other potential sources of contamination on a U.S. Geological Survey 7.5 minute quadrangle map.

☒ 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 Map 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.

Section 5: Tables

Table 1
Tank Information

Tank #	Tank Material[1]	UST or AST	Capacity (gallons)	Contents (product type)	Year Installed	Tank Status[2]	Tank Condition
1	Unknown	AST	12,000	Diesel fuel	Unknown	In use	Good
2	Unknown	AST	12,000	Diesel fuel	Unknown	In use	Good
Oil/Water Separator	Cement Basin	UST	Unknown	Used Oil	Unknown	Removed	Good
Hoist 1	Cement basin	UST	Unknown	Hydraulic Fluid	Unknown	Removed	Good
Hoist 2	Cement basin	UST	Unknown	Hydraulic Fluid	Unknown	Removed	Good
Hoist 3	Cement basin	UST	Unknown	Hydraulic Fluid	Unknown	Removed	Good
Hoist 4	Cement basin	UST	Unknown	Hydraulic Fluid	Unknown	Removed	Good

[1] "F" for fiberglass or "S" for Steel
[2] Indicate: removed (date), abandoned in place (date), or currently in use.
Add additional rows as needed.
Notes:

Table 2
Results of Soil Headspace Screening

Depth (ft)	Soil Boring ID									
	1	2	3	4	5	6	7	8	9	10
2.5	0.0	0.0	0.0	0.0	0.0	0.0				
5	0.0	0.0	0.0	0.0	0.0	0.0				
7.5	0.0	0.0	0.0	0.0	0.0	0.0				
10	0.0	0.0	0.0	0.0	0.0	0.0				
12.5	0.0	0.0	0.0	0.0	0.0	0.0				
15	0.0	0.0	0.0	0.0	0.0	0.0				
17.5	0.0	0.0	0.0	0.0	0.0	0.0				
20	0.0	0.0	0.0	0.0	0.0	0.0				
22.5					0.0	0.0				
25					0.0	0.0				
27.5					0.0	0.0				
30					0.0	0.0				
32.5					0.0	0.0				
35					0.0	0.0				
37.5					0.0	0.0				
40						0.0				

List instruments used and discuss field methods and procedures in Section 6. Add additional rows as needed, and copy the entire table if more columns are needed.
Notes:

Table 3
Analytical Results of Soil Samples[1]

Boring ID	Sampled Depth (ft)	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	GRO	DRO	Lab Type[2]
PP-1	12.5-15	9/26/2013	<0.052	<0.052	<0.052	<0.052	<0.052	NA	9.2	Fixed
PP-2	5-7.5	9/26/2013	<0.059	<0.059	<0.059	<0.059	<0.059	NA	150	Fixed
PP-3	5-7.5	9/26/2013	<0.055	<0.055	<0.055	<0.055	<0.055	NA	<9.4	Fixed
PP-4	5-7.5	9/26/2013	<0.051	<0.051	<0.051	<0.051	<0.051	NA	<8.4	Fixed
PP-5	5-7.5	9/27/2013	<0.054	<0.054	<0.054	<0.054	<0.054	NA	140	Fixed
PP-5	37-38	9/27/2013	<0.051	<0.051	<0.051	<0.051	<0.051	NA	38	Fixed
PP-6	5-7.5	9/27/2013	<0.057	<0.057	<0.057	<0.057	<0.057	NA	<9.4	Fixed
PP-6	37.5-40	9/27/2013	<0.051	<0.051	<0.051	<0.051	<0.051	NA	<8.5	Fixed
Trip Dup	5-7.5	9/26/2013	<0.050	<0.050	<0.050	<0.050	<0.050	NA	NA	Fixed

[1] Report results in mg/kg. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.
Add additional rows as needed.
Notes:

Table 4
Additional Analytical Results of Soil Samples[1]

Boring ID	Sampled Depth (ft)	Date Sampled	Methyl Isobutyl Ketone	Lab Type[2]
PP-1	12.5-15	9/26/2013	<0.26	Fixed
PP-2	5-7.5	9/26/2013	<0.30	Fixed
PP-3	5-7.5	9/26/2013	<0.28	Fixed
PP-4	5-7.5	9/26/2013	<0.25	Fixed
PP-5	5-7.5	9/27/2013	<0.27	Fixed
PP-5	37-38	9/27/2013	0.45	Fixed
PP-6	5-7.5	9/27/2013	<0.28	Fixed
PP-6	37.5-40	9/27/2013	<0.26	Fixed
Trip Dup	5-7.5	9/26/2013	<0.25	Fixed

[1] Report results in mg/kg. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.
Indicate other contaminants (either petroleum or non-petroleum derived) detected in soil collected from borings. Add additional rows as needed, and copy the entire table if more columns are needed.
Notes:

Table 5
Contaminated Surface Soil Results

Sample ID	Headspace 10 ppm or Greater[1] (Y/N)	Petroleum Saturated (Y/N)
NA		

[1] As measured with a photoionization detector (PID).
Add additional rows as needed.
Notes:

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

	Soil Boring									
	1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Static Water Level Depth[1] (ft)	**NA**									
Sampled Depth (ft)										
Sampling Method[2]										

[1] Describe the methods used to measure water levels in borings in Section 6.
[2] Refer to Guidance Document 4-05 for acceptable ground water sampling methods.
Notes:

Table 7
Analytical Results of Water Samples Collected from Borings[1]

Boring ID	Date Sampled	Sampled Depth (ft)	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	GRO	DRO	Lab Type[2]
NA										
Trip Blank										
Equip. Blank										
Lab Blank										
HRL[3]										

[1] Report results in µg/L. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.
[3] See http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html for list of current HRLs.
Add additional rows as needed.
Notes:

Table 8
Other Contaminants Detected in Water Samples Collected from Borings (Petroleum or Non-petroleum Derived)[1]

Boring ID	Date Sampled	Sampled Depth (ft)								Lab Type[2]
NA										
Trip Blank										
Equip. Blank										
Lab Blank										
HRL[3]										

[1] Report results in µg/L. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.
[3] See http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html for list of current HRLs.

Indicate other contaminants (either petroleum or non-petroleum derived) detected in water samples collected from soil borings and temporary wells. Add additional rows as needed, and copy the entire table if more columns are needed.
Notes:

Table 9
Monitoring Well Completion Information[1]

Well Number	MDH Unique Well Number	Date Installed	Surface Elevation	Top of Casing Elevation	Bottom of Well Elevation	Screen Interval (Elev. - Elev.)	Total Well Depth from Surface (ft)
NA							

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

Table 10
Water Level Measurements in Wells[1]

Well Number	Date Sampled	Depth to Water from Top of Riser	Product Thickness	Depth to Water Below Grade	Relative Groundwater Elevation	Water Level Above Screen (Y/N)
NA						

[1] Describe the methods used to measure water levels in Section 6.
Add additional rows as needed.
Notes:

Table 11
Analytical Results of Water Samples Collected from Wells[1]

Well Number	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	MTBE	GRO	DRO	Lab Type[2]
NA									
Trip Blank									
Equip. Blank									
Lab Blank									
HRL[3]									

[1] Report results in µg/L. Use less than symbols to show detection limit.
[2] Indicate "mobile" or "fixed" in the lab type column.
[3] See http://www.health.state.mn.us/divs/eh/groundwater/hrltable.html for list of current HRLs.
Add additional rows as needed.
Notes:

Table 12
Other Contaminants Detected in Water Samples Collected from Wells (Petroleum or Non-petroleum Derived)[1]

Well Number	Date Sampled								Lab Type[2]
NA									
Trip Blank									
Equip. Blank									
Lab Blank									
HRL[3]									

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

Table 13
Natural Attenuation Parameters

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

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

Table 14
Free Product Recovery

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)	
NA											

[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[1]	Property Address	Distance From Site (ft)	Water Supply Well			Public Water Supply		Basement (Y/N)	Sump (Y/N)	Possible Petroleum Sources (Y/N)	Comments (including property use)
			Well Present (Y/N)	How Determined[2]	Well Use[3]	Utilized (Y/N)	Confirmed by City (Y/N)				
1	5101 Arcadia Ave Edina, MN 55436	410 (north east)	N	Mail Survey	NA	Y	Y	N	N	N	Commercial
2	5100 Eden Ave Edina, MN 55436	300 (west)	N	Mail Survey	NA	Y	Y	N	N	N	Commercial
3	5125 Vernon Ave Edina, MN 55436	240 (east)	N	Mail Survey	NA	Y	Y	N	N	Y	Diesel tank for roof generator, commercial
4	5101 Gus Young Lane Edina, MN 55436	450 (north)	N	Mail Survey	NA	Y	Y	N	N	N	Commercial
5	5051 Eden Ave Edina, MN 55436	300 (south)	N	Mail Survey	NA	Y	Y	N	N	N	Commercial
6	5150 Brookside Ave Edina, MN 55436	350 (south west)	N	Mail Survey	NA	Y	Y	N	N	N	Commercial

[1] Property IDs should correspond to labeled properties in the Potential Receptor Map.
[2] For example, visual observation, personal contact, telephone, returned postcard, assumed (i.e., no postcard returned).
[3] For example, domestic, industrial, municipal, livestock, lawn/gardening, irrigation.
Add additional rows as needed.
Notes:

Table 16
Water Supply Wells Located within 500 feet of the Release Source and Municipal or Industrial Wells within ½ mile

Property ID[1]	MDH Unique Well Number	Ground Elevation	Total Depth (ft)	Base of Casing (ft)	Static Elevation	Aquifer	Use	Owner	Distance and Direction from Source (ft)
NA	00256734	912	114	104	52	Platteville-Glenwood	Commercial	Perkins-Edina	
NA	00206476	945	170	130	77	Multiple	Commercial	Standard Oil Company	
NA	00206475	965	278	135	80	Multiple	Commercial	Highland Villa	
NA	00206474	951	547	350	112	Prairie Du Chein-Jordan	Municipal	Edina 7	

[1] Property IDs should correspond to properties listed in Table 15 and labeled properties in the Potential Receptor Map if known or applicable.
Add additional rows as needed.
Notes:

Table 17
Surface Water Receptor Information

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

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

Table 18
Utility Receptor Information

Utility ID[1]	Description	Construction Material	Depth to Top of Structure	Diameter	Flow Direction (for liquids)	Year Installed	Backfill Material	Distance to Water Table
1	8" HDPE water main along Eden Avenue	unknown	unknown	8"	east/west	unknown	sand	unknown
2	8" CIP water main along Eden Avenue	unknown	unknown	8"	east/west	unknown	sand	unknown
3	8" CIP Force Main along Arcadia Avnue	unknown	unknown	8"	north/south	unknown	sand	unknown
4	6" CIP Water Main along Arcadia Avenue	unknown	unknown	6"	north/south	unknown	sand	unknown
5								
6								
7								
8								
9								
10								

[1] ID should correspond to an identified utility line on the Potential Receptor Map.
Add more rows as needed.
Notes:

Utility ID[1]	Name, title, and telephone number for public entity contacted to obtain information or other source of information
Ex 1, 2, 3, 4	City of Edina, Site map for Public Works building Demolition and disposal

[1] IDs should correspond to the same IDs in the above table.
Add more rows as needed.
Notes:

Table 19
Vapor Survey Results

Location ID[1]	Description[2]	Monitoring Date	PID Reading (ppm)	Percent of the LEL[3]
MH-1	Manhole	9/27/2013	0.0	Not measured
CB-1	Catch Basin	9/27/2013	0.0	Not measured
CB-2	Catch Basin	9/27/2013	0.0	Not measured
CB-3	Catch Basin	9/27/2013	0.0	Not measured
CB-4	Catch Basin	9/27/2013	0.0	Not measured
CB-5	Catch Basin	9/27/2013	0.0	Not measured
CB-6	Catch Basin	9/27/2013	0.0	Not measured
CB-7	Catch Basin	9/27/2013	0.0	Not measured
CB-8	Catch Basin	9/27/2013	0.0	Not measured
CB-9	Catch Basin	9/27/2013	0.0	Not measured
CB-10	Catch Basin	9/27/2013	0.0	Not measured
CB-11	Catch Basin	9/27/2013	0.0	Not measured
CB-12	Catch Basin	9/27/2013	0.0	Not measured
CB-13	Catch Basin	9/27/2013	0.0	Not measured
CB-14	Catch Basin	9/27/2013	0.0	Not measured
CB-15	Catch Basin	9/27/2013	0.0	Not measured
CB-16	Catch Basin	9/27/2013	0.0	Not measured
MH-2	Manhole	9/27/2013	0.0	Not measured
CB-17	Catch Basin	9/27/2013	0.0	Not measured
CB-18	Catch Basin	9/27/2013	0.0	Not measured
CB-19	Catch Basin	9/27/2013	0.0	Not measured
CB-20	Catch Basin	9/27/2013	0.0	Not measured
CB-21	Catch Basin	9/27/2013	0.0	Not measured
CB-22	Catch Basin	9/27/2013	0.0	Not measured
CB-23	Catch Basin	9/27/2013	0.0	Not measured
MH-3	Manhole	9/27/2013	0.0	Not measured
CB-24	Catch Basin	9/27/2013	0.0	Not measured
CB-25	Catch Basin	9/27/2013	0.0	Not measured
CB-26	Catch Basin	9/27/2013	0.0	Not measured
CB-27	Catch Basin	9/27/2013	0.0	Not measured
CB-28	Catch Basin	9/27/2013	0.0	Not measured
CB-29	Catch Basin	9/27/2013	0.0	Not measured
MH-4	Manhole	9/27/2013	0.0	Not measured
CB-30	Catch Basin	9/27/2013	0.0	Not measured
CB-31	Catch Basin	9/27/2013	0.0	Not measured
CB-32	Catch Basin	9/27/2013	0.0	Not measured

[1] Location IDs must match labeled locations on the Vapor Survey Map.
[2] Provide a brief description of the monitoring point (e.g., sump, basement corner, sanitary sewer manhole, storm sewer basin, etc.).
[3] LEL = Lower Explosive Limit.
Add additional rows as needed.
Notes:

Table 20
Vapor Results

Sample ID[2]	VP-1		VP-2		VP-3		VP-4				
Date	9/26/2013		9/26/2013		9/26/2013		9/26/2013				
Depth (feet)	5		5		5		5				
PID (ppm)	9.5		19.9		5.0		5.3				
COMPOUNDS	Result	Report Limit	Result	Report Limit	Result	Report Limit	Result	Report Limit	Residential ISV	Industrial ISV	10x Industrial ISV
1,1,1-trichloroethene	<3.22	<3.22	<12.0	<12.0	**4.5**	<2.73	<2.62	<2.62	5,000	10,000	100,000
1,2,4-Trimethylbenzene	**20.3**	<5.81	**86.7**	<21.6	<4.92	<4.92	<4.73	<4.73	7	20	200
1,3,5-Trimethylbenzene	**7.73**	<2.90	**34.6**	<10.8	<2.46	<2.46	<2.36	<2.36	6	20	200
1,3-Butadiene	**17.8**	<1.36	<5.06	<5.06	**5.72**	<1.15	**2.63**	<1.10	0.3	1	10
2-Butanone	**35.2**	<1.81	**500**	<6.74	**12.7**	<1.53	**6.79**	<1.47	5,000	10,000	100,000
2-Hexanone	**27.7**	<2.51	**31.6**	<9.36	<2.13	<2.13	<2.04	<2.04	NE	NE	NE
2-Propanol	**3.49**	<1.51	**62.9**	<5.62	**1.52**	<1.28	**1.72**	<1.23	7,000	20,000	200,000
4-Ethyltoluene	**3.3**	<2.90	**16**	<10.8	<2.46	<2.46	<2.36	<2.36	NE	NE	NE
4-Methyl-2-pentanone	**39.7**	<2.42	**336**	<9.02	<2.05	<2.05	<1.97	<1.97	3,000	8,000	80,000
Acetone	**65**	<5.61	**2790**	<209	**40.3**	<4.76	**21.6**	<4.57	31,000	87,000	870,000
Benzene	**37.6**	<3.92	**105**	<14.6	**3.41**	<3.32	<3.19	<3.19	4.5	13	130
Carbon disulfide	**7.7**	<1.84	**98.1**	<6.85	**4.26**	<1.56	**3.36**	<1.50	700	2,000	20,000
Chlorobenzene	**5.75**	<2.82	<10.5	<10.5	<2.39	<2.39	<2.30	<2.30	50	100	1,000
Chloroform	<2.88	<2.88	<10.7	<10.7	<2.44	<2.44	3.02	<2.35	100	300	3,000
Cyclohexane	**18.9**	<2.03	**53.3**	<7.58	<1.72	<1.72	<1.65	<1.65	6,000	20,000	200,000
Dichlorodifluoromethane	**80.9**	<3.03	**280**	<11.3	**25.8**	<2.57	**72**	<2.47	200	600	6,000
Ethylbenzene	**6.98**	<2.66	**42.4**	<9.93	<2.26	<2.26	<2.17	<2.17	1,000	3,000	30,000
m,p-Xylenes	**13.3**	<5.23	**127**	<19.5	<4.43	<4.43	<4.25	,4.25	100	300	3,000
n-Heptane	**105**	<2.42	**130**	<9.02	<2.05	<2.05	<1.97	<1.97	NE	NE	NE
n-Hexane	**95.1**	<2.08	**192**	<7.76	**3.19**	<1.76	<1.69	<1.69	2,000	600,000	60,000
o-Hexane	**5.59**	<2.66	**62.5**	<9.93	<2.26	<2.26	<2.17	<2.17	100	30,000	3,000
Propylene	**247**	<4.07	**981**	<152	**79.9**	<3.45	**21.8**	<3.31	3,000	800,000	80,000
Styrene	**6.38**	<2.52	**35.9**	<9.38	<2.13	<2.13	<2.05	<2.05	1,000	300,000	30,000
Tetrachloroethene	**616**	<4.01	**347**	<14.9	**2920**	<102	**429**	<3.26	20	6,000	600
Tetrahydrofuran	<1.74	<1.74	**46.4**	<6.49	<1.48	<1.48	<1.42	<1.42	NE	NE	NE
Toluene	**35.2**	<2.31	**122**	<8.62	**4.54**	<1.96	**3.17**	<1.88	5,000	1,000,000	100,000
Trichloroethene	**16**	<3.17	**43.2**	<11.8	**4.35**	<2.69	**15**	<2.58	3	800	80
Trichlorofluoromethane	**247**	<3.57	**30.1**	<13.3	**27.4**	<3.03	**45.6**	<2.91	700	200,000	20,000

[1] Report results in µg/m^3.
[2] Sample IDs should correspond to labeled locations on the Vapor Intrusion Assessment Map.
[3] The Intrusion Screening Values can be found in Guidance Document 4-01a *Vapor Intrusion Assessments Performed during Site Investigations*.
Add additional rows as needed, and copy the entire table if more columns are needed.
Notes:

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. All reproduced data must be legible. Reports missing required documentation are subject to rejection.

☒	*Appendix A*	Guidance Document 3-02 *General Excavation Report Worksheet*.
☒	*Appendix B*	Guidance Document 1-03a *Spatial Data Reporting Form*.
☒	*Appendix C*	Guidance Document 2-05 *Release Information Worksheet*.
☒	*Appendix D*	Copies of applicable Phase I and Phase II reports or supplemental sampling information such as aboveground storage tank (AST) upgrading and decommissioning sampling.
☒	*Appendix E*	Geologic Logs of Soil Borings, Including Construction Diagrams of Temporary and Permanent Wells, and Copies of the Minnesota Department of Health Well Record.
☒	*Appendix F*	Laboratory Analytical Reports for Soil, Soil Gas/Sub-slab Vapor/Indoor Air/Ambient Air, and Ground Water. Include laboratory QA/QC data, Chromatograms, and laboratory certification number.
☒	*Appendix G*	Methodologies and Procedures, Including Field Screening of Soil, Other Field Analyses, Soil Boring, Soil Sampling, Soil Gas/Sub-Slab/Indoor air/Ambient Air Sampling, Vapor Monitoring, Well Installation, and Water Sampling.
☐	*Appendix H*	Field or sampling data sheets (sampling forms, field crew notes, etc.).
☐	*Appendix I*	Grain Size Analysis, Hydraulic Conductivity Measurements, and Other Calculations.
☐	*Appendix J*	Guidance Document 2-03 *Free Product Recovery Report Worksheet.*
☒	*Appendix K*	Copies of Water Supply Well Logs with Legible Unique Numbers.
☒	*Appendix L*	Results of the Public Water Supply Risk Assessment. If the site is within a designated source water protection area, include a copy of the MDH Source Water Assessment and a map from the MPCA Petroleum Remediation Program Maps Online website.
☐	*Appendix M*	Guidance Document 4-19 *Conceptual Corrective Action Design Worksheet*.

Web pages and phone numbers

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

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Printed on recycled paper containing at least 10 percent fibers from paper recycled by consumers.

Appendix A

General Excavation Report Worksheet

Minnesota Pollution Control Agency

General Excavation Report Worksheet

Guidance Document 3-02

Complete the worksheet below to document excavation and treatment of petroleum contaminated soil removed **prior to** a Site Investigation and/or during tank removals and/or upgrades. If soil is excavated as an MPCA-approved corrective action **after** a Site Investigation is conducted, complete Guidance Document 3-02a *Corrective Action Excavation Report Worksheet*. Conduct excavations in accordance with Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil*. Please type or print clearly. Do not revise or delete text or questions from this report form.

The excavation worksheet 3-02 deadline is 10 months from the date of receipt of the MPCA "Petroleum Storage Tank Release Investigation and Corrective Action" letter. MPCA staff may establish a shorter deadline for high priority sites.

PART I: BACKGROUND

Date: May 5, 2014

A. Site: **Former Edina Public Works**

MPCA Site ID#: LEAK00019190

Street: **5146 Eden Avenue**
City, Zip: **Edina, 55424**
County: **Hennepin**

B. Tank Owner/Operator:
Chad Milner, City of Edina

Mailing Address:
City of Edina
Street/Box: **7450 Metro Boulevard**
City, Zip: **Edina, 55424**
Telephone: **952-927-8861**

C. Excavating Contractor:
Jay Johnson Construction
Contact: **Jay Johnson**
Telephone: **763-528-5176**
Tank Contractor Certification Number: **NA**

D. Consultant:
Braun Intertec
Contact: **Sara Holter**
Street/Box: **11001 Hampshire Avenue South**
City, Zip: **Minneapolis, MN**
Telephone: **952-995-2494**

E. Others on-site during site work (e.g., fire marshal, local officials, MPCA staff, etc.): **NA**

F. Site Location Information: Attach Guidance Document 1-03a *Spatial Data Reporting Form* if it has not already been submitted or will not be submitted as part of Guidance Document 4-06 *Investigation Report Form*.

Note: If person other than tank owner and/or operator is conducting the cleanup, provide name, address, and relationship to site on a separate attached sheet.

PART II: DATES

A. Date release reported to MPCA: **7/1/2013**

B. Dates site work performed (tanks removed, piping removed, soil excavation, soil borings, etc.):

Work Performed	Date
Building was demolished, underground piping was removed, and debris material was taken to appropriately permitted facilities.	**3/26/2013 thru 6/13/2013**
Started excavation near the oil/water separator and encountered indications of impacted soil. The already excavated soil was stockpiled onsite and covered with 6-mil poly until receipt of lab results. The release was called in to the Duty Officer.	**7/1/2013**
Removed oil/water separator and evaluated the extent of the soil impacts.	**7/2/2013**
Approximately 400 yards of impacted soil from the area of the oil/water separated was disposed of at Rolling Hills Landfill.	**7/26/2013**

PART III: SITE AND RELEASE INFORMATION

A. Describe the land use and pertinent geographic features within 1,000 feet of the site.
(i.e. residential property, industrial, wetlands, etc.)

The current land use in the vicinity of the Site is commercial/industrial. The Site is bordered on the south by Eden Avenue with the Church of Our Lady Grace located beyond, on the east by Arcadia Avenue with commercial buildings and Highway 100 located beyond, on the north by a commercial building with Gus Young Lane located beyond, and on the west by Soo Line Railroad with commercial buildings located beyond.

B. Provide the following information for all tanks removed and any remaining at the site:

Table 1.

Tank #	Tank ** Material	UST or AST	Capacity (gallons)	Contents (product type)	Year installed	Tank Status*	Condition of Tank
Hoist 1	Cement basin	UST	Unknown	Hydraulic Fluid	unknown	Removed	Good
Hoist 2	Cement basin	UST	Unknown	Hydraulic Fluid	unknown	Removed	Good
Hoist 3	Cement basin	UST	Unknown	Hydraulic Fluid	unknown	Removed	Good
Hoist 4	Cement basin	UST	Unknown	Hydraulic Fluid	unknown	Removed	Good
Oil/Water Separator	Cement	UST	550	Used Oil	unknown	Removed	Good
AST	Unknown	AST	12,000	Diesel Fuel	unknown	In use	Good
AST	Unknown	AST	12,000	Diesel Fuel	unknown	In use	Good

*Indicate: *removed (date), abandoned in place (date), or currently used, upgraded tank, installation of new tank. ** F for fiberglass or S for Steel*
Notes:

Piping Material (check all that apply): ☐ Steel, ☒ Fiberglass, ☐ Flexible Plastic, ☐ Copper, ☐ Other
NA

C. Describe the location and status of the other components of the tank system(s) (i.e., transfer locations, valves, piping and dispensers) for those tanks listed above.

All associated components were removed during demolition of the Site building.

D. Identify the source(s) of the release or contamination encountered. Only check those options that were verified, if source is unknown check Other and describe:

The oil/water separator and hoists were in good condition, it is unknown what caused the release.

☐ Piping, ☐Tank, ☐ Dispenser, ☐ Pump/Turbine, ☐ Delivery Problem, ☒ Other

E. Identify the cause of the release (tank and/or piping).
Check all that apply: ☐ Corrosion, ☐ Install Problem, ☐ Spill, ☒ Unknown,
☐ Mechanical or Physical Damage, ☐ Other

F. Identify the method the release was detected.
Check all that apply: ☐Removal, ☐ Line Leak Detection, ☐ Tank Leak Detection,
☐ Visual/Olfactory, ☐ Site Assessment, ☒ Other

Demolition of Site building

G. Identify any surface soil contamination. **None**

H. What was the volume of the release? (if known): **unknown** gallons

I. Historic contamination present (unknown origin?). ☐ Yes, ☒ No

J. When did the release occur? (if known): **Unknown**

K. Describe source of on-site drinking water. **Public water supply**

L. Has the site ever, at any point had an E-85 tank? ☐ Yes, ☒ No

PART IV: EXCAVATION INFORMATION

A. Dimensions of excavation(s): **Length 35' Width 50' Depth 21'**

B. Original tank backfill material (sand, gravel, etc.), if applicable: **Silty sand**

C. Native soil type (clay, sand, etc.): **Silty sand mixed with areas of clay**

D. Quantity of contaminated soil removed for treatment (cubic yards):

400 yards of impacted soil was disposed of at a permitted waste facility

(Indicate on the site map where the petroleum contaminated soil was excavated)

How many cubic yards of the removed soil was petroleum saturated? **0** yds
(Indicate on the site map where the petroleum saturated soil was excavated)

[**Note**: If the volume removed is more than allowed in Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil*, please document MPCA staff approval.]

E. Were new tanks and/or piping and dispensers installed? (yes/**no**) If yes, what volume of contaminated soil was excavated to accommodate the installation of the new tanks and piping?

F. If contaminated soil was removed to accommodate the installation of new tanks and/or piping, show your calculations for the amount of soil removal allowed using Table 3 in Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil*.

NA

G. Was ground water encountered or a suspected perched water layer or was there evidence of a seasonally high ground water table (i.e. mottling)? (yes/**no**) At what depth? **NA**

H. If ground water was not encountered during the excavation, what is the expected depth of ground water?

Based on hydrogeologgic maps, groundwater in the vicintiy of the Site is approximately 50 feet below ground surface.

I. Additional investigation to determine the need for a Limited Site Investigation is necessary at sites with sandy or silty sandy soil, a water table within 25 feet of the ground surface, and visual or other evidence of soil remaining contamination. See Table 2 in Guidance Document 3-01 *Excavation of Petroleum Contaminated Soil.* If a soil boring is necessary, describe the soil screening and analytical results. Attach the boring logs and laboratory results to this report.

Following the excavation activities, an LSI was conducted at the Site.

J. If no soil boring was performed, explain.

No boring was advanced during the excavation activities; however, borings were advanced during the LSI.

K. If ground water was encountered or if a soil boring was conducted, was there evidence of ground water contamination? (yes/no) Describe this evidence of contamination, e.g., free product (specify thickness), product sheen, ground water in contact with petroleum contaminated soil, water analytical results, etc. **Note**: If you observe free product, contact MPCA staff immediately, as outlined in Guidance Document 2-02 *Free Product: Evaluation and Recovery*.

No groundwater was encountered at the Site.

L. Was bedrock encountered in the excavation? (☐yes/ ☒no) At what depth? **NA**

M. Were other unique conditions associated with this site? (☐yes/ ☒no) If so, explain.

PART V: SAMPLING INFORMATION

A. Briefly describe the field screening methods used to distinguish contaminated from uncontaminated soil:

Soil at the Site was examined by an environmental technician for unusual staining, odors or other apparent signs of contamination. In addition, the soil samples were screened for the presence of organic vapors using a photoionization detector (PID). The PID was equipped with a 10.6-electron-volt lamp and calibrated to an isobutylene standard. The PID was used to perform a headspace method of field-analyses, as recommended by the MPCA in Petroleum Remediation Program Guidance Document 4-04 (September 2008). See Appendix C for methods and procedures.

B. List soil vapor headspace analysis results collected during excavation of tanks, lines and dispensers, valves, and transfer locations. (i.e., soils left in place when excavation is complete). Code the samples with sampling depths in parentheses as follows: sidewall samples S-1 (8 feet), S-2 (4 feet), etc.; bottom samples B-1 (13 feet), B-2 (14 feet), removed soil R-1 (4 feet), R-1 (8 feet), etc.; stockpile samples SP-1, etc; line samples L-1, L2, etc.; transfer locations T-1 (4 feet), T-1 (8 feet), etc.; dispensers D-1 (4 feet), etc.

Be sure the sample codes correspond with the site map in part VI, below.

Sample Code	Soil Type	Reading ppm	Sample Code	Soil Type	Reading ppm
SW-1(6-10)	Sm	0.0	S-1	Sm	0.0
SW-2(8-12)	Clay	0.0	S-2	Sm	0.9
SW-3(12-16)	Sm	0.0	S-3	Sm	0.0
SW-4(7-14)	Sm	0.0	S-4	Sm	0.0
B-1(22)	Sm	0.0	S-5	Sm	0.0
B-2(22)	Sm	0.0			

C. Was the "removed soil" placed back into the excavation basin? (☐yes/ ☒no)
If no, please complete Part VIII: Soil Treatment Information section. If yes, a Limited Site Investigation is necessary (see Guidance Document 4-01 *Soil and Ground Water Assessments Performed during Site Investigations*).

D. Briefly describe the soil analytical sampling and handling procedures used:

Samples collected for VOC and DRO analyses were collected as grab samples. The samples were placed in clean, laboratory supplied sample containers with Teflon® -lined caps, labeled, and transported to the Braun Intertec laboratory under refrigerated conditions using chain-of-custody procedures. See Appendix C for methods and procedures.

E. List below all soil sample analytical results from bottom and side wall samples collected after excavation of tanks, lines and dispensers, valves, and transfer locations (i.e., soils left in place when excavation is complete). Code the samples with sampling depths in parentheses as follows: sidewall samples S-1 (8 feet), S-2 (4 feet), etc.; bottom samples B-1 (13 feet), B-2 (14 feet), removed soil R-1 (4 feet), R-1 (8 feet), etc.; stockpile samples SP-1, etc; line samples L-1, L2, etc.; transfer locations T-1 (4 feet), T-1 (8 feet), etc.; dispensers D-1 (4 feet), etc.;

Be sure the sample codes correspond to the site map required in part VI.

Sample Code	GRO/ DRO	Benzene mg/kg	Ethyl-benzene mg/kg	Toluene Mg/kg	Xylene mg/kg	MTBE mg/kg	Lead mg/kg
SW-1(6-10)	<11/<13	<0.064	<0.064	<0.064	<0.064	<0.064	NA
SW-2((8-12)	<9.7/<12	<0.060	<0.060	<0.060	<0.060	<0.060	NA
SW-3(12-16)	<8.7/<11	<0.054	<0.054	<0.054	<0.054	<0.054	NA
SW-4(7-14)	<9.7/<11	<0.055	<0.055	<0.055	<0.055	<0.055	NA
B-1(22)	<8.1/<10	<0.051	<0.051	<0.051	<0.051	<0.051	NA
B-2(22)	<8.2/<10	<0.050	<0.050	<0.050	<0.050	<0.050	NA
S-(13)	NA/74	<0.052	<0.052	<0.052	<0.052	<0.052	NA
S-2(12-13)	NA/4500	<0.053	<0.053	<0.053	<0.053	<0.053	NA
S-3(12)	NA/42	<0.052	<0.052	<0.052	<0.052	<0.052	NA
S-4(8-10)	NA/15	<0.056	<0.056	<0.056	<0.056	<0.056	NA
S-5(12)	NA/1000	<0.053	<0.053	<0.053	<0.053	<0.053	NA

Note: Attach copies of laboratory reports and chain of custody forms.

PART VI: FIGURES

Attach the following figures to this report:

1. Site location map.
2. Site map(s) drawn to scale illustrating the following:
   a. Location of all present and former tanks, piping, and dispensers;
   b. Location of surface soil contamination
   c. Location of other structures (buildings, canopies, etc.);
   d. Adjacent city, township, or county roadways;
   e. Dimensions of excavation(s), including contour lines (maximum 2-foot contour intervals) to represent the depths of the final excavation(s);
   f. Location of soil screening samples (e.g. R-1), soil analytical samples (e.g., S-1 or B-1), and any soil borings (e.g., SB-1). Also, attach all boring logs.
   g. North arrow, bar scale and map legend.
   h. Provide location of any on-site water wells. If on-site water wells exist, please provide well logs and/or construction diagrams.
   i. Locations of new tanks, piping and dispensers, if installed.

PART VII: CONCLUSIONS AND RECOMMENDATIONS

Recommendation for site: ☒site closure
☒additional investigation

Justify the recommendations for the site. If no further action is necessary, the MPCA staff will review this report following notification of soil treatment.
A Limited Site Investigation was conducted.

PART VIII: SOIL TREATMENT INFORMATION

A. Soil treatment method used (thermal, land application, composting, other). If you choose "other" specify treatment method:

   Impacted soils were hauled offsite to a permitted waste facility.

B. Location of treatment site/facility: **Rolling Hills Landfill in Buffalo, MN**

C. Date MPCA approved soil treatment (if thermal treatment was used, indicate date that the MPCA-permitted thermal treatment facility agreed to accept soil):

D. Identify the location of stockpiled contaminated soil:

   All stockpiled contaminated soils have been removed from the Site.

PART IX: CONSULTANT (OR OTHER) PREPARING THIS REPORT

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 reduction of reimbursement awards. 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 (1994) or Minn. 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 excavation reports or if the report form has been altered.

Name and Title:	Signature:	Date signed:
Sara A. Holter Project Manager		5.2.2014
Jennifer A. Force Senior Project Manager	for	5-2-14

Company and mailing address: Braun Intertec
11001 Hampshire Avenue South
Minneapolis, MN 55438

Telephone: 952-995-2000 Fax: 952-995-2020

If additional investigation is not necessary, please mail this form and all necessary attachments to the MPCA project manager. If additional investigation is necessary, include this form as an appendix to Guidance Document 4-06 *Investigation Report Form*. **MPCA staff will not review excavation reports indicating a limited site investigation is necessary unless the limited site investigation has been completed.**

Web pages and phone numbers

MPCA staff	http://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 Infor. Request	http://www.pca.state.mn.us/about/inforequest.html
MPCA Petroleum Brownfields Program	http://www.pca.state.mn.us/programs/vpic_p.html
PetroFund Web Page	http://www.state.mn.us/cgi-bin/portal/mn/jsp/content.do?id=-536881377&agency=Commerce
PetroFund Phone	**651-297-1119**, or **1-800-638-0418**
State Duty Officer	**651-649-5451 or 1-800-422-0798**

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Appendix B

Spatial Data Reporting Form

Petroleum Remediation Program
Minnesota Pollution Control Agency

http://www.pca.state.mn.us/programs/lust_p.html

Spatial Data Reporting Form

Guidance Document 1-03a
(For complete instructions, see Guidance Document 1-03.)

Part 1. Background

Has a site location data point been submitted for this site (circle/highlight)? YES or NO
If yes, you do not need to complete Part 2 of this form but should complete Part 3 if there are additional site features to report. This form can be submitted electronically if desired (e.g., as an e-mail attachment to the project manager).

MPCA Site ID: LEAK00019190
Site Name: Former Public Works Building
Data Collection Date: 11/11/2013
Name of Person Who Collected Data: Sara Holter
Organization Name: Braun Intertec
Organization Type: Consultant

Part 2. Site Location (use one of the three spatial data reporting formats provided)

Point Description: Center of Site
Collection Method: Map Interpolation
Datum (circle/highlight): WGS84 NAD83
1) Longitude (dd mm ss.ss): 44°54'36.70" Latitude (dd mm ss.ss): 93°31'11.12"
2) Longitude (dd.dddddd): Latitude (dd.dddddd):
3) UTM - X (Easting): UTM - Y (Northing):
UTM Zone:

Appendix C

Release Information Worksheet

Minnesota Pollution Control Agency

Release Information Worksheet

Guidance Document 2-05
Petroleum Remediation Program

The Release Information Worksheet is necessary in order to meet the Public Record Provision of the Energy Policy Act of 2005. Complete the worksheet below to document tank and release information. This form may be included as an appendix in Guidance Document 4-06 or 4-08, or it may be submitted independently. Please type or print clearly. Do not revise or delete text or questions from this form.

A. General information

Site name/city: Former Edina Public Works, Edina MN MPCA Site ID#: LEAK000 19190

B. Tank material (check all that apply): cement basin

☐ Steel ☐ Fiberglass

C. Piping material (check all that apply): NA

☐ Steel ☐ Fiberglass ☐ Flexible plastic ☐ Copper ☐ Other (specify): _____

D. Identify the known source(s) of the release or contamination encountered (Only check those options that were verified, if source is unknown check Other and describe):

☐ Piping ☐ Tank ☐ Dispenser ☐ Submersible turbine pump ☐ Delivery problem

☒ Other (specify): unknown

E. Identify the cause of the release (tank and/or piping) (check all that apply):

☐ Overfill ☐ Mechanical or physical damage ☐ Install problem ☐ Corrosion ☐ Spill ☒ Unknown

☐ Other (specify): _____

F. Identify how the release was detected (check all that apply):

☐ Removal ☐ Line leak detection ☐ Tank leak detection ☒ Visual/Olfactory ☐ Site assessment

☒ Other (specify): Release was discovered during demolition of the Site building

G. Has the site ever stored E85 in any former or current tank? ☐ Yes ☒ No

H. Has the site ever stored leaded gasoline in any former or current tank? ☐ Yes ☒ No

Web pages and phone numbers:

MPCA staff:	http://www.pca.state.mn.us/pca/staff/index.cfm
MPCA phone:	**651-296-6300 or 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
PetroFund Web page:	http://www.state.mn.us/cgi-bin/portal/mn/jsp/content.do?id=-536881377&agency=Commerce
PetroFund phone:	**651-215-1775 or 1-800-638-0418**
State Duty Officer:	**651-649-5451 or 1-800-422-0798**

Minnesota Pollution Control Agency • 520 Lafayette Rd. N., St. Paul, MN 55155-4194 • www.pca.state.mn.us
651-296-6300 • 800-657-3864 • TTY 651-282-5332 or 800-657-3864 • Available in alternative formats

Appendix D

Previous Reports

Appendix E

Soil Boring Logs, Construction Diagrams, and Well Records

BRAUN INTERTEC

LOG OF BORING

Braun Project BL-12-07042B
ENVIRONMENTAL INVESTIGATIONS
Former City of Edina Public Works Building
5146 Eden Avenue
Edina, Minnesota

BORING: **PP-1**

LOCATION: See attached sketch.

DRILLER: S. Jordan | METHOD: Geoprobe | DATE: **9/26/13** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	PID ppm	Tests or Notes
0.0	FILL	FILL: Sandy Lean Clay, trace Gravel, dark brown, wet.			0.0	
					0.0	
5.0	SP-SM	POORLY GRADED SAND with SILT, fine- to medium-grained, trace Gravel, brown, moist, (Glacial Outwash)			0.0	
					0.0	
					0.0	
					0.0	Soil sample collected from 13 to 15 feet for analytical testing.
					0.0	
					0.0	
20.0		END OF PROBE.				
		Water not observed while drilling.				
		Probehole immediately grouted.				

LOG OF BORING N:\GINT\PROJECTS\MINNEAPOLIS\2012\07042B.GPJ BRAUN_V8_CURRENT.GDT 11/11/13 11:27

BRAUN INTERTEC

LOG OF BORING

Braun Project BL-12-07042B
ENVIRONMENTAL INVESTIGATIONS
Former City of Edina Public Works Building
5146 Eden Avenue
Edina, Minnesota

BORING: **PP-2**

LOCATION: See attached sketch.

DRILLER: S. Jordan | METHOD: Geoprobe | DATE: **9/26/13** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	PID ppm	Tests or Notes
0.0	FILL	FILL: Sandy Lean Clay, trace Gravel and concrete, dark brown, wet.			0.0	
					0.0	
					0.0	Soil sample collected from 5 to 7 1/2 feet for analytical testing.
7.5	SP-SM	POORLY GRADED SAND with SILT, fine- to medium-grained, trace Gravel, brown, moist. (Alluvium)			0.0	
					0.0	
					0.0	
15.0	SP	POORLY GRADED SAND, fine-grained, light brown, moist. (Glacial Outwash)			0.0	
					0.0	
20.0		END OF PROBE.				
		Water not observed while drilling.				
		Probehole immediately grouted.				

LOG OF BORING N:\GINT\PROJECTS\MINNEAPOLIS\2012\07042B.GPJ BRAUN_V8_CURRENT.GDT 11/11/13 11:27

BRAUN INTERTEC

LOG OF BORING

Braun Project BL-12-07042B
ENVIRONMENTAL INVESTIGATIONS
Former City of Edina Public Works Building
5146 Eden Avenue
Edina, Minnesota

BORING: **PP-3**

LOCATION: See attached sketch.

DRILLER: S. Jordan | METHOD: Geoprobe | DATE: **9/26/13** | SCALE: **1" = 4'**

Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	PID ppm	Tests or Notes
0.0	FILL	FILL: Silty Sand, fine- to medium-grained, trace Gravel, dark brown, moist.			0.0	
2.5	FILL	FILL: Sandy Lean Clay, trace Gravel, dark brown, wet.			0.0	
					0.0	Soil sample collected from 5 to 7 1/2 feet for analytical testing.
7.5	SP-SM	POORLY GRADED SAND with SILT, fine- to medium-grained, trace Gravel, brown, moist. (Alluvium)			0.0	
					0.0	
					0.0	
15.0	SM	SILTY SAND, fine-grained, light brown, moist. (Alluvium)			0.0	
					0.0	
20.0		END OF PROBE.				
		Water not observed while drilling.				
		Probehole immediately grouted.				

(See Descriptive Terminology sheet for explanation of abbreviations)

LOG OF BORING N:\GINT\PROJECTS\MINNEAPOLIS\2012\07042B.GPJ BRAUN_V8_CURRENT.GDT 11/11/13 11:27

BRAUN INTERTEC

LOG OF BORING

Braun Project BL-12-07042B
ENVIRONMENTAL INVESTIGATIONS
Former City of Edina Public Works Building
5146 Eden Avenue
Edina, Minnesota

BORING: **PP-4**

LOCATION: See attached sketch.

DRILLER: S. Jordan | METHOD: Geoprobe | DATE: **9/26/13** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	PID ppm	Tests or Notes
0.0	FILL	FILL: Sandy Lean Clay, with Gravel, trace concrete, brown and gray, moist.			0.0	
2.5	FILL	FILL: Poorly Graded Sand with Silt, fine- to coarse-grained, with Grave, trace concrete, light brown, moist. (Glacial Outwash)			0.0	
					0.0	Soil sample collected from 5 to 7 1/2 feet for analytical testing.
7.5	SM	SILTY SAND, fine- to coarse-grained, with Gravel, light brown, moist. (Alluvium)			0.0	
10.0	SP-SM	POORLY GRADED SAND with SILT, fine- to medium-grained, trace Gravel, light brown, moist, (Glacial Outwash)			0.0	
					0.0	
					0.0	
17.5	SM	SILTY SAND, fine- to coarse-grained, with Gravel, brown, moist. (Glacial Outwash)			0.0	
20.0		END OF PROBE.			0.0	
		Water not observed while drilling.				
		Probehole immediately grouted.				

LOG OF BORING N:\GINT\PROJECTS\MINNEAPOLIS\2012\07042B.GPJ BRAUN_V8_CURRENT.GDT 11/11/13 11:27

BRAUN INTERTEC

LOG OF BORING

Braun Project BL-12-07042B
ENVIRONMENTAL INVESTIGATIONS
Former City of Edina Public Works Building
5146 Eden Avenue
Edina, Minnesota

BORING: **PP-5**

LOCATION: See attached sketch.

DRILLER: S. Jordan | METHOD: Geoprobe | DATE: **9/27/13** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	PID ppm	Tests or Notes
0.0	FILL	FILL: Silty Sand, fine- to medium-grained, with Gravel, dark brown, moist.				
					0.0	
					0.0	Soil sample collected from 5 to 7 1/2 feet for analytical testing.
7.5	SM	SILTY SAND, fine- to coarse-grained, with Gravel, light brown, moist. (Possible Fill)			0.0	
10.0	CL	LEAN CLAY, brown, wet. (Alluvium)			0.0	
11.0	SM	SILTY SAND, fine-grained, brown, moist. (Alluvium)				
					0.0	
15.0	SP-SM	POORLY GRADED SAND with SILT, fine- to medium-grained, trace Gravel, brown, moist. (Glacial Outwash)			0.0	
					0.0	
					0.0	
					0.0	
					0.0	
					0.0	
					0.0	

LOG OF BORING N:\GINT\PROJECTS\MINNEAPOLIS\2012\07042B.GPJ BRAUN_V8_CURRENT.GDT 11/11/13 11:27

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LOG OF BORING

Braun Project BL-12-07042B
ENVIRONMENTAL INVESTIGATIONS
Former City of Edina Public Works Building
5146 Eden Avenue
Edina, Minnesota

BORING: **PP-5 (cont.)**

LOCATION: See attached sketch.

DRILLER: S. Jordan | METHOD: Geoprobe | DATE: **9/27/13** | SCALE: **1" = 4'**

Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	PID ppm	Tests or Notes
32.0		POORLY GRADED SAND with SILT, fine- to medium-grained, trace Gravel, brown, moist. (Glacial Outwash) *(continued)*				
35.0	CL	SANDY LEAN CLAY, tan, dry. (Glacial Outwash)			0.0	
38.0		END OF PROBE - SAMPLER REFUSALL at 38 feet. Water not observed while probing. Probehole immediately grouted.			0.0	Soil sample collected at 38-foot depth for analytical testing.

(See Descriptive Terminology sheet for explanation of abbreviations)

LOG OF BORING N:\GINT\PROJECTS\MINNEAPOLIS\2012\07042B.GPJ BRAUN_V8_CURRENT.GDT 11/11/13 11:27

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LOG OF BORING

Braun Project BL-12-07042B
ENVIRONMENTAL INVESTIGATIONS
Former City of Edina Public Works Building
5146 Eden Avenue
Edina, Minnesota

BORING: **PP-6**

LOCATION: See attached sketch.

DRILLER: S. Jordan | METHOD: Geoprobe | DATE: **9/27/13** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	PID ppm	Tests or Notes
0.0	FILL	FILL: Sandy Lean Clay, trace Gravel and concrete, dark brown, moist.				
					0.0	
					0.0	Soil sample collected from 5 to 7 1/2 feet for analytical testing.
					0.0	
					0.0	
12.0						
12.5	CL	SANDY LEAN CLAY, trace Gravel, brown, moist.				
	SP-SM	POORLY GRADED SAND with SILT, fine-grained, trace Gravel, light brown, moist. (Glacial Outwash)			0.0	
					0.0	
					0.0	
					0.0	
					0.0	
25.0						
	SP	POORLY GRADED SAND, fine- to coarse-grained, trace Gravel, brown, moist. (Glacial Outwash)			0.0	
					0.0	
					0.0	

LOG OF BORING N:\GINT\PROJECTS\MINNEAPOLIS\2012\07042B.GPJ BRAUN_V8_CURRENT.GDT 11/11/13 11:27

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LOG OF BORING

Braun Project BL-12-07042B
ENVIRONMENTAL INVESTIGATIONS
Former City of Edina Public Works Building
5146 Eden Avenue
Edina, Minnesota

BORING: **PP-6 (cont.)**

LOCATION: See attached sketch.

DRILLER: S. Jordan | METHOD: Geoprobe | DATE: **9/27/13** | SCALE: **1" = 4'**

Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	PID ppm	Tests or Notes
32.0		POORLY GRADED SAND, fine- to coarse-grained, trace Gravel, brown, moist. (Glacial Outwash) *(continued)*			0.0	
					0.0	
					0.0	Soil sample collected from 37 1/2 to 40 feet for analytical testing.
40.0		END OF PROBE.			0.0	
		Water not observed while drilling.				
		Probehole immediately grouted.				

(See Descriptive Terminology sheet for explanation of abbreviations)

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BRAUN INTERTEC

LOG OF BORING

Braun Project BL-12-07042B
ENVIRONMENTAL INVESTIGATIONS
Former City of Edina Public Works Building
5146 Eden Avenue
Edina, Minnesota

BORING: **PP-7**

LOCATION: See attached sketch.

DRILLER: S. Jordan | METHOD: Geoprobe | DATE: **9/26/13** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	PID ppm	Tests or Notes
0.0						
0.3	PAV	4 inches of bituminous.			0.0	
	FILL	FILL: Silty Sand, fine- to medium-grained, trace Gravel, dark brown.				Soil sample collected from 1 to 2 1/2 feet for analytical testing.
2.5	FILL	FILL: Clayey Sand, trace Gravel, dark brown, wet.			0.0	
					0.0	
					0.0	
10.0	SM	SILTY SAND, fine- to medium-grained, trace Gravel, dark brown to light brown, moist. (Glacial Till)			0.0	
					0.0	
15.0		END OF PROBE.			0.0	
		Water not observed while drilling.				
		Probehole immediately grouted.			0.0	

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BRAUN INTERTEC

LOG OF BORING

Braun Project BL-12-07042B
ENVIRONMENTAL INVESTIGATIONS
Former City of Edina Public Works Building
5146 Eden Avenue
Edina, Minnesota

BORING: **PP-8**

LOCATION: See attached sketch.

DRILLER: S. Jordan | METHOD: Geoprobe | DATE: **9/26/13** | SCALE: **1" = 4'**

(See Descriptive Terminology sheet for explanation of abbreviations)

Depth feet	Symbol	Description of Materials (Soil-ASTM D2488 or D2487, Rock-USACE EM1110-1-2908)	BPF	WL	PID ppm	Tests or Notes
0.0						
0.3	PAV	4 inches of bituminous.				
	FILL	FILL: Silty Sand, fine- to coarse-grained, with Gravel, dark brown, moist.			1.6	
					0.0	
7.5						
	FILL	FILL: Clayey Sand, fine- to coarse-grained, with Gravel, brown, moist.			0.0	
10.0						
	CL	SANDY LEAN CLAY, trace Gravel, dark brown, moist. (Glacial Till)			0.0	
12.5						
	SM	SILTY SAND, fine- to coarse-grained, some Gravel, brown, moist. (Glacial Till)			0.0	
15.0						
		END OF PROBE.			0.0	
		Water not observed while drilling.				
		Probehole immediately grouted.				

LOG OF BORING N:\GINT\PROJECTS\MINNEAPOLIS\2012\07042B.GPJ BRAUN_V8_CURRENT.GDT 11/11/13 11:27

Appendix F

Laboratory Analytical Reports

Braun Intertec Corporation
11001 Hampshire Avenue S.
Minneapolis, MN 55438

Phone: 952.995.2000
Fax: 952.995.2020
Web: braunintertec.com

Ms. Sara Holter
Braun Intertec-Bloomington
11001 Hampshire Ave. South
Bloomington, MN 55438

October 03, 2013

Report #: 1305382

RE: Former Edina Public Works Building
BL-12-07042B C

Dear Sara Holter:

Braun Intertec Corporation received samples for the project identified above on September 26, 2013. Analytical results are summarized in the following report.

All routine quality assurance procedures were followed, unless otherwise noted.

Analytical results are reported on an "as received" basis unless otherwise noted. Where possible, the samples will be retained by the laboratory for 14 days following issuance of the initial final report. The samples will be disposed of or returned at that time. Arrangements can be made for extended storage by contacting me at this time.

We appreciate your decision to use Braun Intertec Corporation for this project. We are committed to being your vendor of choice to meet your analytical chemistry needs.

If you have any questions please contact me at the above phone number.

Sincerely,

Thomas P. Wagner
Project Manager

Certification/Accreditation Number

Minnesota Department of Health #027-053-117

Providing engineering and environmental solutions since 1957

BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Qualifiers and Abbreviations

ho	The sample chromatogram indicates the presence of higher boiling hydrocarbons than expected in the diesel range chromatogram.
hno	The sample chromatogram indicates the presence of lower and higher boiling hydrocarbons than expected in the diesel range chromatogram.
A5	Methyl Isobuty Ketone recovery for the continuing calibration sample is 131%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A4a	Trans-1,3-Dichloropropene recovery for the continuing calibration sample is 126%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A4	Bromoform recovery for the continuing calibration sample is 124%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A3a	Tetrahydrofuran recovery for the continuing calibration sample is 131%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A3	Acetone recovery for the continuing calibration sample is 147%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A2a	Tetracholoethene recovery for the continuing calibration sample is 126%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A2	2-Butanone(MEK) recovery for the continuing calibration sample is 137%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A1a	Naphthalene recovery for the continuing calibration sample is 126%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A1	1,2-Dibromo-3-chloropropane recovery for the continuing calibration sample is 123%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
ca	This field of testing is not certifiable by the Minnesota Department of Health.
COC	Chain of Custody
dry	Sample results reported on a dry weight basis
MRL	Method Reporting Limit
NA	Not Applicable
ND	Analyte NOT DETECTED
NR	Not Reported
%Rec	Percent Recovery
RPD	Relative Percent Difference
VOC	Volatile Organic Compound

A field of testing is the combination of analyte, matrix, method, and regulatory program.

BRAUN INTERTEC

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Sample Summary

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PP-1 (12.5-15.0)	1305382-01	Soil	09/26/13 09:47	09/26/13 14:45
PP-4 (5.0-7.5)	1305382-02	Soil	09/26/13 10:14	09/26/13 14:45
PP-3 (5.0-7.5)	1305382-03	Soil	09/26/13 10:45	09/26/13 14:45
PP-2 (5.0-7.5)	1305382-04	Soil	09/26/13 11:13	09/26/13 14:45
Trip Blank (Phase C)	1305382-05	Soil	09/26/13 00:00	09/26/13 14:45

BRAUN INTERTEC

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Conditions Upon Receipt

Cooler: Cooler 1

Temperature:	1.8 °C	**COC Included:**	Yes	**Custody Seals Used:**	No
Temperature Blank:	Yes	**COC Complete:**	Yes	**Custody Seals Intact:**	NA
Received on Ice:	Yes	**COC & Labels Agree:**	Yes	**Hand Delivered by Client:**	Yes
Preservation Confirmed:	No	**Sufficient Sample Provided:**	Yes	**Headspace Present (VOC):**	No

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-1 (12.5-15.0)

1305382-01 (Soil)

9/26/13 9:47

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**97**	0.050	% Wt	1	B3I0654	9/30/13	9/30/13	MJW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	**9.2**	8.0	mg/kg dry	1	B3I0631	9/27/13	9/28/13	RSS	WI DRO (95)	ho
Surrogate: n-Nonane	*51.2 %*	*Limits: 20-80%*			*B3I0631*	*9/27/13*	*9/28/13*	*RSS*	*WI DRO (95)*	
Surrogate: n-Triacontane	*78.3 %*	*Limits: 30-125%*			*B3I0631*	*9/27/13*	*9/28/13*	*RSS*	*WI DRO (95)*	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.52	0.52	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.52	0.52	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-1 (12.5-15.0)

1305382-01 (Soil)

9/26/13 9:47

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Acetone	< 0.78	0.78	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3
Allyl Chloride	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Benzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromochloromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromoform	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4
Bromomethane	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroform	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dibromomethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Ethylbenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.10	0.10	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Naphthalene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
o-Xylene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Styrene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-1 (12.5-15.0)

1305382-01 (Soil)

9/26/13 9:47

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
trans-1,2-Dichloroethene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,3-Dichloropropene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Vinyl chloride	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*103 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*97.8 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*99.5 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*101 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	

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Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-4 (5.0-7.5)

1305382-02 (Soil)

9/26/13 10:14

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**98**	0.050	% Wt	1	B3I0654	9/30/13	9/30/13	MJW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	< 8.5	8.5	mg/kg dry	1	B3I0631	9/27/13	9/28/13	RSS	WI DRO (95)	
Surrogate: n-Nonane	*54.9 %*	*Limits: 20-80%*			*B3I0631*	*9/27/13*	*9/28/13*	*RSS*	*WI DRO (95)*	
Surrogate: n-Triacontane	*84.9 %*	*Limits: 30-125%*			*B3I0631*	*9/27/13*	*9/28/13*	*RSS*	*WI DRO (95)*	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.51	0.51	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.51	0.51	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-4 (5.0-7.5)

1305382-02 (Soil)

9/26/13 10:14

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Acetone	< 0.76	0.76	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3
Allyl Chloride	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Benzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromochloromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromoform	< 0.25	0.25	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4
Bromomethane	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroform	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dibromomethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Ethylbenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.10	0.10	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	< 0.25	0.25	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.25	0.25	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Naphthalene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
o-Xylene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Styrene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.25	0.25	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-4 (5.0-7.5)

1305382-02 (Soil)

9/26/13 10:14

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
trans-1,2-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,3-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Vinyl chloride	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*98.5 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*103 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*101 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	

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PP-3 (5.0-7.5)

1305382-03 (Soil)

9/26/13 10:45

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**90**	0.050	% Wt	1	B3I0654	9/30/13	9/30/13	MJW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	< 9.4	9.4	mg/kg dry	1	B3I0631	9/27/13	9/28/13	RSS	WI DRO (95)	
Surrogate: n-Nonane	*56.6 %*	*Limits: 20-80%*			*B3I0631*	*9/27/13*	*9/28/13*	*RSS*	*WI DRO (95)*	
Surrogate: n-Triacontane	*84.4 %*	*Limits: 30-125%*			*B3I0631*	*9/27/13*	*9/28/13*	*RSS*	*WI DRO (95)*	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.55	0.55	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.55	0.55	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-3 (5.0-7.5)

1305382-03 (Soil)

9/26/13 10:45

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Acetone	< 0.83	0.83	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3
Allyl Chloride	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Benzene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromobenzene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromochloromethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromoform	< 0.28	0.28	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4
Bromomethane	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorobenzene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroform	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloromethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dibromomethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Ethylbenzene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.11	0.11	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	< 0.28	0.28	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.28	0.28	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Naphthalene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
o-Xylene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Styrene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.28	0.28	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-3 (5.0-7.5)

1305382-03 (Soil)

9/26/13 10:45

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
trans-1,2-Dichloroethene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,3-Dichloropropene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.055	0.055	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Vinyl chloride	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*107 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*97.4 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*101 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*99.8 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-2 (5.0-7.5)

1305382-04 (Soil)

9/26/13 11:13

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**84**	0.050	% Wt	1	B3I0654	9/30/13	9/30/13	MJW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	**150**	9.9	mg/kg dry	1	B3I0631	9/27/13	9/28/13	RSS	WI DRO (95)	hno
Surrogate: n-Nonane	*47.5 %*	*Limits: 20-80%*			*B3I0631*	*9/27/13*	*9/28/13*	*RSS*	*WI DRO (95)*	
Surrogate: n-Triacontane	*91.7 %*	*Limits: 30-125%*			*B3I0631*	*9/27/13*	*9/28/13*	*RSS*	*WI DRO (95)*	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.59	0.59	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.59	0.59	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-2 (5.0-7.5)

1305382-04 (Soil)

9/26/13 11:13

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Acetone	< 0.89	0.89	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3
Allyl Chloride	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Benzene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromobenzene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromochloromethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromoform	< 0.30	0.30	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4
Bromomethane	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorobenzene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroform	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloromethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dibromomethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Ethylbenzene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.12	0.12	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	< 0.30	0.30	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.30	0.30	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Naphthalene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
o-Xylene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Styrene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.30	0.30	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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PP-2 (5.0-7.5)

1305382-04 (Soil)

9/26/13 11:13

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
trans-1,2-Dichloroethene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,3-Dichloropropene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.059	0.059	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Vinyl chloride	< 0.15	0.15	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*97.4 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*101 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*101 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Trip Blank (Phase C)

1305382-05 (Soil)

9/26/13 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.50	0.50	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.50	0.50	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Acetone	< 0.75	0.75	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3
Allyl Chloride	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Benzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromochloromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromoform	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4
Bromomethane	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Trip Blank (Phase C)

1305382-05 (Soil)

9/26/13 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Chloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroform	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dibromomethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Ethylbenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.10	0.10	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Naphthalene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
o-Xylene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Styrene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,2-Dichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,3-Dichloropropene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Vinyl chloride	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*98.2 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*99.7 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*100 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Classical Chemistry Parameters - Quality Control

Batch B3I0654 - % Solids

Method Blank (B3I0654-BLK1) Prepared & Analyzed: 09/30/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	< 0.050	0.050	% Wt	NA	NA	NA	NA	NA	NA	

Duplicate (B3I0654-DUP1) **Source: 1305332-01** Prepared & Analyzed: 09/30/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	8.47	0.050	% Wt	NA	7.93	NA	NA	6.61	20	

Standard Reference Material (B3I0654-SRM1) Prepared & Analyzed: 09/30/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	91.6		% Wt	92.8	NA	98.7	90-110	NA	NA	

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Total Petroleum Hydrocarbons - Quality Control

Batch B3I0631 - WI DRO (95)

Method Blank (B3I0631-BLK1)

Prepared & Analyzed: 09/27/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	< 10	10	mg/kg	NA	NA	NA	NA	NA	NA	
Surrogate: n-Nonane	*2.64*		mg/kg	*4.00*	*NA*	*65.9*	*20-80*			
Surrogate: n-Triacontane	*3.48*		mg/kg	*4.00*	*NA*	*87.1*	*30-125*			

Laboratory Control Sample (B3I0631-BS2)

Prepared & Analyzed: 09/27/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	29.6	10	mg/kg	32.0	NA	92.5	70-120	NA	NA	
Surrogate: n-Nonane	*2.49*		mg/kg	*4.00*	*NA*	*62.3*	*20-80*			
Surrogate: n-Triacontane	*3.40*		mg/kg	*4.00*	*NA*	*84.9*	*30-125*			

Laboratory Control Sample Duplicate (B3I0631-BSD2)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	32.7	10	mg/kg	32.0	NA	102	70-120	9.88	20	
Surrogate: n-Nonane	*2.81*		mg/kg	*4.00*	*NA*	*70.2*	*20-80*			
Surrogate: n-Triacontane	*3.56*		mg/kg	*4.00*	*NA*	*89.1*	*30-125*			

Duplicate (B3I0631-DUP2)

Source: 1305270-01

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	< 9.5	9.5	mg/kg dry	NA	5.45	NA	NA	12.1	20	
Surrogate: n-Nonane	*1.76*		mg/kg dry	*3.80*	*NA*	*46.3*	*20-80*			
Surrogate: n-Triacontane	*3.03*		mg/kg dry	*3.80*	*NA*	*79.6*	*30-125*			

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Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Method Blank (B3I0634-BLK1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2-Trichlorotrifluoroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,3-Trichlorobenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,3-Trichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,4-Trichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,4-Trimethylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dibromo-3-chloropropane	< 0.50	0.50	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dibromoethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,3,5-Trimethylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,3-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
2,2-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
2-Butanone (MEK)	< 0.50	0.50	mg/kg	NA	NA	NA	NA	NA	NA	
2-Chlorotoluene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
4-Chlorotoluene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
4-Isopropyltoluene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Acetone	< 0.75	0.75	mg/kg	NA	NA	NA	NA	NA	NA	
Allyl Chloride	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Benzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromochloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromodichloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromoform	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Bromomethane	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Carbon Tetrachloride	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chlorodibromomethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloroform	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
cis-1,2-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
cis-1,3-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Dibromomethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	

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Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Method Blank (B3I0634-BLK1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Dichlorofluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Ethyl Ether	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Ethylbenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Hexachlorobutadiene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Isopropylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
m,p-Xylenes	< 0.10	0.10	mg/kg	NA	NA	NA	NA	NA	NA	
Methyl Isobutyl Ketone	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Methylene chloride	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Methyl-t-butyl ether	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Naphthalene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
n-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
n-Propylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
o-Xylene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
sec-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Styrene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
tert-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Tetrachloroethene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Tetrahydrofuran	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Toluene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
trans-1,2-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
trans-1,3-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Trichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Trichlorofluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Vinyl chloride	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*25.6*		ug/L	*25.0*	*NA*	*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.0*		ug/L	*25.0*	*NA*	*100*	*80-120*			
Surrogate: Dibromofluoromethane	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Toluene-d8	*25.4*		ug/L	*25.0*	*NA*	*102*	*80-120*			

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample (B3I0634-BS1) Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,1,1-Trichloroethane	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	1.31	0.050	mg/kg	1.25	NA	104	75-125	NA	NA	
1,1,2-Trichloroethane	1.31	0.050	mg/kg	1.25	NA	105	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
1,1-Dichloroethane	1.41	0.050	mg/kg	1.25	NA	113	75-125	NA	NA	
1,1-Dichloroethene	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,1-Dichloropropene	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
1,2,3-Trichlorobenzene	1.39	0.12	mg/kg	1.25	NA	111	75-125	NA	NA	
1,2,3-Trichloropropane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
1,2,4-Trichlorobenzene	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
1,2,4-Trimethylbenzene	1.42	0.12	mg/kg	1.25	NA	113	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	1.41	0.50	mg/kg	1.25	NA	112	75-125	NA	NA	
1,2-Dibromoethane	1.34	0.050	mg/kg	1.25	NA	107	75-125	NA	NA	
1,2-Dichlorobenzene	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,2-Dichloroethane	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
1,2-Dichloropropane	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,3,5-Trimethylbenzene	1.41	0.12	mg/kg	1.25	NA	113	75-125	NA	NA	
1,3-Dichlorobenzene	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,3-Dichloropropane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
1,4-Dichlorobenzene	1.36	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
2,2-Dichloropropane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
2-Butanone (MEK)	1.64	0.50	mg/kg	1.25	NA	131	75-140	NA	NA	
2-Chlorotoluene	1.36	0.12	mg/kg	1.25	NA	109	75-125	NA	NA	
4-Chlorotoluene	1.39	0.12	mg/kg	1.25	NA	111	75-125	NA	NA	
4-Isopropyltoluene	1.41	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
Acetone	1.69	0.75	mg/kg	1.25	NA	135	80-175	NA	NA	
Allyl Chloride	1.42	0.050	mg/kg	1.25	NA	114	75-125	NA	NA	
Benzene	1.36	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
Bromobenzene	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
Bromochloromethane	1.38	0.050	mg/kg	1.25	NA	110	75-125	NA	NA	
Bromodichloromethane	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
Bromoform	1.40	0.25	mg/kg	1.25	NA	112	75-125	NA	NA	
Bromomethane	1.09	0.12	mg/kg	1.25	NA	86.9	70-130	NA	NA	
Carbon Tetrachloride	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
Chlorobenzene	1.33	0.050	mg/kg	1.25	NA	106	75-125	NA	NA	
Chlorodibromomethane	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
Chloroethane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
Chloroform	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
Chloromethane	1.24	0.050	mg/kg	1.25	NA	99.0	75-125	NA	NA	
cis-1,2-Dichloroethene	1.40	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
cis-1,3-Dichloropropene	1.34	0.050	mg/kg	1.19	NA	112	75-125	NA	NA	
Dibromomethane	1.33	0.050	mg/kg	1.25	NA	106	75-125	NA	NA	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample (B3I0634-BS1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.29	0.050	mg/kg	1.25	NA	103	70-130	NA	NA	
Dichlorofluoromethane	1.37	0.050	mg/kg	1.25	NA	110	75-125	NA	NA	
Ethyl Ether	1.42	0.050	mg/kg	1.25	NA	113	75-125	NA	NA	
Ethylbenzene	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
Hexachlorobutadiene	1.25	0.12	mg/kg	1.25	NA	100	75-125	NA	NA	
Isopropylbenzene	1.40	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
m,p-Xylenes	2.76	0.10	mg/kg	2.50	NA	110	75-125	NA	NA	
Methyl Isobutyl Ketone	1.46	0.25	mg/kg	1.25	NA	117	75-125	NA	NA	
Methylene chloride	1.32	0.25	mg/kg	1.25	NA	105	75-125	NA	NA	
Methyl-t-butyl ether	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
Naphthalene	1.45	0.12	mg/kg	1.25	NA	116	75-125	NA	NA	
n-Butylbenzene	1.41	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
n-Propylbenzene	1.41	0.12	mg/kg	1.25	NA	113	75-125	NA	NA	
o-Xylene	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
sec-Butylbenzene	1.41	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
Styrene	1.40	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
tert-Butylbenzene	1.40	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
Tetrachloroethene	1.50	0.12	mg/kg	1.25	NA	120	75-125	NA	NA	
Tetrahydrofuran	1.51	0.25	mg/kg	1.25	NA	120	75-125	NA	NA	
Toluene	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
trans-1,2-Dichloroethene	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
trans-1,3-Dichloropropene	1.35	0.050	mg/kg	1.16	NA	117	75-125	NA	NA	
Trichloroethene	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
Trichlorofluoromethane	1.37	0.050	mg/kg	1.25	NA	110	75-125	NA	NA	
Vinyl chloride	1.33	0.12	mg/kg	1.25	NA	106	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*25.8*		ug/L	*25.0*	*NA*	*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.8*		ug/L	*25.0*	*NA*	*99.0*	*80-120*			
Surrogate: Dibromofluoromethane	*25.9*		ug/L	*25.0*	*NA*	*104*	*80-120*			
Surrogate: Toluene-d8	*24.8*		ug/L	*25.0*	*NA*	*99.1*	*80-120*			

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample Duplicate (B3I0634-BSD1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.24	0.050	mg/kg	1.25	NA	99.2	75-125	9.17	20	
1,1,1-Trichloroethane	1.24	0.050	mg/kg	1.25	NA	99.1	75-125	11.2	20	
1,1,2,2-Tetrachloroethane	1.22	0.050	mg/kg	1.25	NA	97.5	75-125	6.92	20	
1,1,2-Trichloroethane	1.24	0.050	mg/kg	1.25	NA	98.8	75-125	5.73	20	
1,1,2-Trichlorotrifluoroethane	1.20	0.050	mg/kg	1.25	NA	95.6	75-125	12.0	20	
1,1-Dichloroethane	1.25	0.050	mg/kg	1.25	NA	99.6	75-125	12.3	20	
1,1-Dichloroethene	1.23	0.050	mg/kg	1.25	NA	98.4	75-125	10.4	20	
1,1-Dichloropropene	1.25	0.050	mg/kg	1.25	NA	100	75-125	11.4	20	
1,2,3-Trichlorobenzene	1.26	0.12	mg/kg	1.25	NA	101	75-125	9.84	20	
1,2,3-Trichloropropane	1.26	0.050	mg/kg	1.25	NA	100	75-125	7.36	20	
1,2,4-Trichlorobenzene	1.27	0.050	mg/kg	1.25	NA	101	75-125	10.0	20	
1,2,4-Trimethylbenzene	1.28	0.12	mg/kg	1.25	NA	102	75-125	10.7	20	
1,2-Dibromo-3-chloropropane	1.26	0.50	mg/kg	1.25	NA	100	75-125	11.3	20	
1,2-Dibromoethane	1.24	0.050	mg/kg	1.25	NA	99.1	75-125	7.74	20	
1,2-Dichlorobenzene	1.24	0.050	mg/kg	1.25	NA	99.0	75-125	9.89	20	
1,2-Dichloroethane	1.24	0.050	mg/kg	1.25	NA	99.2	75-125	11.2	20	
1,2-Dichloropropane	1.23	0.050	mg/kg	1.25	NA	98.0	75-125	10.4	20	
1,3,5-Trimethylbenzene	1.27	0.12	mg/kg	1.25	NA	101	75-125	11.1	20	
1,3-Dichlorobenzene	1.24	0.050	mg/kg	1.25	NA	98.6	75-125	9.67	20	
1,3-Dichloropropane	1.23	0.050	mg/kg	1.25	NA	98.1	75-125	9.24	20	
1,4-Dichlorobenzene	1.25	0.050	mg/kg	1.25	NA	99.8	75-125	8.21	20	
2,2-Dichloropropane	1.20	0.050	mg/kg	1.25	NA	95.4	75-125	12.0	20	
2-Butanone (MEK)	1.41	0.50	mg/kg	1.25	NA	113	75-140	14.9	20	
2-Chlorotoluene	1.24	0.12	mg/kg	1.25	NA	98.7	75-125	9.88	20	
4-Chlorotoluene	1.27	0.12	mg/kg	1.25	NA	101	75-125	8.97	20	
4-Isopropyltoluene	1.27	0.050	mg/kg	1.25	NA	101	75-125	10.2	20	
Acetone	1.51	0.75	mg/kg	1.25	NA	120	80-175	11.3	25	
Allyl Chloride	1.28	0.050	mg/kg	1.25	NA	102	75-125	11.0	20	
Benzene	1.24	0.050	mg/kg	1.25	NA	98.9	75-125	9.13	20	
Bromobenzene	1.23	0.050	mg/kg	1.25	NA	98.2	75-125	10.2	20	
Bromochloromethane	1.24	0.050	mg/kg	1.25	NA	99.3	75-125	10.1	20	
Bromodichloromethane	1.27	0.050	mg/kg	1.25	NA	101	75-125	7.69	20	
Bromoform	1.31	0.25	mg/kg	1.25	NA	104	75-125	6.65	20	
Bromomethane	0.979	0.12	mg/kg	1.25	NA	78.2	70-130	10.6	20	
Carbon Tetrachloride	1.24	0.050	mg/kg	1.25	NA	99.0	75-125	11.4	20	
Chlorobenzene	1.23	0.050	mg/kg	1.25	NA	98.2	75-125	7.77	20	
Chlorodibromomethane	1.26	0.050	mg/kg	1.25	NA	101	75-125	8.21	20	
Chloroethane	1.19	0.050	mg/kg	1.25	NA	95.0	75-125	12.7	20	
Chloroform	1.24	0.050	mg/kg	1.25	NA	99.4	75-125	10.8	20	
Chloromethane	1.11	0.050	mg/kg	1.25	NA	88.4	75-125	11.2	20	
cis-1,2-Dichloroethene	1.25	0.050	mg/kg	1.25	NA	99.4	75-125	11.4	20	
cis-1,3-Dichloropropene	1.22	0.050	mg/kg	1.19	NA	102	75-125	9.65	20	
Dibromomethane	1.22	0.050	mg/kg	1.25	NA	97.4	75-125	8.29	20	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample Duplicate (B3I0634-BSD1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.16	0.050	mg/kg	1.25	NA	92.3	70-130	11.0	20	
Dichlorofluoromethane	1.22	0.050	mg/kg	1.25	NA	97.6	75-125	11.5	20	
Ethyl Ether	1.26	0.050	mg/kg	1.25	NA	100	75-125	12.3	20	
Ethylbenzene	1.27	0.050	mg/kg	1.25	NA	101	75-125	9.23	20	
Hexachlorobutadiene	1.17	0.12	mg/kg	1.25	NA	93.5	75-125	6.89	20	
Isopropylbenzene	1.29	0.12	mg/kg	1.25	NA	103	75-125	8.39	20	
m,p-Xylenes	2.53	0.10	mg/kg	2.50	NA	101	75-125	8.71	20	
Methyl Isobutyl Ketone	1.32	0.25	mg/kg	1.25	NA	105	75-125	10.7	20	
Methylene chloride	1.16	0.25	mg/kg	1.25	NA	92.9	75-125	12.4	20	
Methyl-t-butyl ether	1.26	0.050	mg/kg	1.25	NA	101	75-125	10.8	20	
Naphthalene	1.32	0.12	mg/kg	1.25	NA	106	75-125	9.12	20	
n-Butylbenzene	1.27	0.12	mg/kg	1.25	NA	101	75-125	10.5	20	
n-Propylbenzene	1.28	0.12	mg/kg	1.25	NA	102	75-125	9.82	20	
o-Xylene	1.25	0.050	mg/kg	1.25	NA	99.4	75-125	8.16	20	
sec-Butylbenzene	1.28	0.12	mg/kg	1.25	NA	102	75-125	9.45	20	
Styrene	1.31	0.12	mg/kg	1.25	NA	104	75-125	7.23	20	
tert-Butylbenzene	1.26	0.12	mg/kg	1.25	NA	100	75-125	10.8	20	
Tetrachloroethene	1.40	0.12	mg/kg	1.25	NA	112	75-125	6.81	20	
Tetrahydrofuran	1.36	0.25	mg/kg	1.25	NA	109	75-125	10.3	20	
Toluene	1.24	0.050	mg/kg	1.25	NA	98.8	75-125	8.58	20	
trans-1,2-Dichloroethene	1.22	0.050	mg/kg	1.25	NA	97.6	75-125	11.1	20	
trans-1,3-Dichloropropene	1.23	0.050	mg/kg	1.16	NA	107	75-125	9.08	20	
Trichloroethene	1.28	0.050	mg/kg	1.25	NA	102	75-125	9.09	20	
Trichlorofluoromethane	1.22	0.050	mg/kg	1.25	NA	97.6	75-125	11.5	20	
Vinyl chloride	1.17	0.12	mg/kg	1.25	NA	93.1	70-130	13.0	20	
Surrogate: 1,2-Dichloroethane-d4	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.1*		ug/L	*25.0*	*NA*	*100*	*80-120*			
Surrogate: Dibromofluoromethane	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Toluene-d8	*25.0*		ug/L	*25.0*	*NA*	*100*	*80-120*			

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Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike (B3I0634-MS1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,1,1-Trichloroethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	
1,1,2-Trichloroethane	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
1,1-Dichloroethane	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
1,1-Dichloroethene	1.48	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,1-Dichloropropene	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
1,2,3-Trichlorobenzene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,2,3-Trichloropropane	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2,4-Trichlorobenzene	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2,4-Trimethylbenzene	1.51	0.14	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	1.51	0.56	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2-Dibromoethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,2-Dichlorobenzene	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
1,2-Dichloroethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,2-Dichloropropane	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,3,5-Trimethylbenzene	1.51	0.14	mg/kg dry	1.40	ND	108	75-125	NA	NA	
1,3-Dichlorobenzene	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,3-Dichloropropane	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
1,4-Dichlorobenzene	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
2,2-Dichloropropane	1.45	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
2-Butanone (MEK)	1.59	0.56	mg/kg dry	1.40	ND	113	75-170	NA	NA	
2-Chlorotoluene	1.48	0.14	mg/kg dry	1.40	ND	105	75-125	NA	NA	
4-Chlorotoluene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	NA	NA	
4-Isopropyltoluene	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Acetone	1.72	0.84	mg/kg dry	1.40	ND	123	75-180	NA	NA	
Allyl Chloride	1.54	0.056	mg/kg dry	1.40	ND	110	75-125	NA	NA	
Benzene	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
Bromobenzene	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	
Bromochloromethane	1.48	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Bromodichloromethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Bromoform	1.56	0.28	mg/kg dry	1.40	ND	111	75-125	NA	NA	
Bromomethane	1.16	0.14	mg/kg dry	1.40	ND	82.5	70-130	NA	NA	
Carbon Tetrachloride	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Chlorobenzene	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
Chlorodibromomethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Chloroethane	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	
Chloroform	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
Chloromethane	1.32	0.056	mg/kg dry	1.40	ND	94.2	75-125	NA	NA	
cis-1,2-Dichloroethene	1.53	0.056	mg/kg dry	1.40	ND	109	75-125	NA	NA	
cis-1,3-Dichloropropene	1.45	0.056	mg/kg dry	1.34	ND	109	75-125	NA	NA	
Dibromomethane	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike (B3I0634-MS1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.40	0.056	mg/kg dry	1.40	ND	99.7	70-130	NA	NA	
Dichlorofluoromethane	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
Ethyl Ether	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Ethylbenzene	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
Hexachlorobutadiene	1.40	0.14	mg/kg dry	1.40	ND	99.5	75-125	NA	NA	
Isopropylbenzene	1.55	0.14	mg/kg dry	1.40	ND	110	75-125	NA	NA	
m,p-Xylenes	3.01	0.11	mg/kg dry	2.80	ND	107	75-125	NA	NA	
Methyl Isobutyl Ketone	1.62	0.28	mg/kg dry	1.40	ND	115	75-125	NA	NA	
Methylene chloride	1.42	0.28	mg/kg dry	1.40	0.0602	97.1	75-125	NA	NA	
Methyl-t-butyl ether	1.53	0.056	mg/kg dry	1.40	ND	109	75-125	NA	NA	
Naphthalene	1.56	0.14	mg/kg dry	1.40	ND	111	75-125	NA	NA	
n-Butylbenzene	1.51	0.14	mg/kg dry	1.40	ND	108	75-125	NA	NA	
n-Propylbenzene	1.50	0.14	mg/kg dry	1.40	ND	107	75-125	NA	NA	
o-Xylene	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
sec-Butylbenzene	1.50	0.14	mg/kg dry	1.40	ND	107	75-125	NA	NA	
Styrene	1.56	0.14	mg/kg dry	1.40	ND	111	75-125	NA	NA	
tert-Butylbenzene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Tetrachloroethene	1.67	0.14	mg/kg dry	1.40	ND	119	75-125	NA	NA	
Tetrahydrofuran	1.66	0.28	mg/kg dry	1.40	ND	118	75-125	NA	NA	
Toluene	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
trans-1,2-Dichloroethene	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
trans-1,3-Dichloropropene	1.48	0.056	mg/kg dry	1.30	ND	114	75-125	NA	NA	
Trichloroethene	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
Trichlorofluoromethane	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
Vinyl chloride	1.41	0.14	mg/kg dry	1.40	ND	100	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*25.5*		ug/L	*25.0*	*NA*	*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.5*		ug/L	*25.0*	*NA*	*102*	*80-120*			
Surrogate: Dibromofluoromethane	*25.7*		ug/L	*25.0*	*NA*	*103*	*80-120*			
Surrogate: Toluene-d8	*24.9*		ug/L	*25.0*	*NA*	*99.7*	*80-120*			

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike Duplicate (B3I0634-MSD1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	3.79	20	
1,1,1-Trichloroethane	1.40	0.056	mg/kg dry	1.40	ND	100	75-125	6.08	20	
1,1,2,2-Tetrachloroethane	1.38	0.056	mg/kg dry	1.40	ND	98.3	75-125	5.14	20	
1,1,2-Trichloroethane	1.39	0.056	mg/kg dry	1.40	ND	98.7	75-125	4.97	20	
1,1,2-Trichlorotrifluoroethane	1.39	0.056	mg/kg dry	1.40	ND	99.2	75-125	5.52	20	
1,1-Dichloroethane	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	6.48	20	
1,1-Dichloroethene	1.39	0.056	mg/kg dry	1.40	ND	98.8	75-125	6.56	20	
1,1-Dichloropropene	1.44	0.056	mg/kg dry	1.40	ND	102	75-125	5.84	20	
1,2,3-Trichlorobenzene	1.43	0.14	mg/kg dry	1.40	ND	102	75-125	4.15	20	
1,2,3-Trichloropropane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	5.94	20	
1,2,4-Trichlorobenzene	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	4.34	20	
1,2,4-Trimethylbenzene	1.45	0.14	mg/kg dry	1.40	ND	104	75-125	3.71	20	
1,2-Dibromo-3-chloropropane	1.43	0.56	mg/kg dry	1.40	ND	102	75-125	5.16	20	
1,2-Dibromoethane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	5.38	20	
1,2-Dichlorobenzene	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	3.06	20	
1,2-Dichloroethane	1.41	0.056	mg/kg dry	1.40	ND	101	75-125	5.25	20	
1,2-Dichloropropane	1.40	0.056	mg/kg dry	1.40	ND	99.4	75-125	4.40	20	
1,3,5-Trimethylbenzene	1.46	0.14	mg/kg dry	1.40	ND	104	75-125	3.47	20	
1,3-Dichlorobenzene	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	3.74	20	
1,3-Dichloropropane	1.40	0.056	mg/kg dry	1.40	ND	99.4	75-125	5.01	20	
1,4-Dichlorobenzene	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	3.65	20	
2,2-Dichloropropane	1.37	0.056	mg/kg dry	1.40	ND	97.7	75-125	5.83	20	
2-Butanone (MEK)	1.56	0.56	mg/kg dry	1.40	ND	111	75-170	1.92	20	
2-Chlorotoluene	1.41	0.14	mg/kg dry	1.40	ND	100	75-125	5.17	20	
4-Chlorotoluene	1.45	0.14	mg/kg dry	1.40	ND	103	75-125	2.66	20	
4-Isopropyltoluene	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	4.45	20	
Acetone	1.61	0.84	mg/kg dry	1.40	ND	114	75-180	6.87	25	
Allyl Chloride	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	5.26	20	
Benzene	1.40	0.056	mg/kg dry	1.40	ND	100	75-125	4.98	20	
Bromobenzene	1.39	0.056	mg/kg dry	1.40	ND	99.3	75-125	4.02	20	
Bromochloromethane	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	3.42	20	
Bromodichloromethane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	5.53	20	
Bromoform	1.47	0.28	mg/kg dry	1.40	ND	104	75-125	6.26	20	
Bromomethane	1.15	0.14	mg/kg dry	1.40	ND	81.7	70-130	0.924	20	
Carbon Tetrachloride	1.40	0.056	mg/kg dry	1.40	ND	99.9	75-125	6.27	20	
Chlorobenzene	1.40	0.056	mg/kg dry	1.40	ND	100	75-125	3.88	20	
Chlorodibromomethane	1.41	0.056	mg/kg dry	1.40	ND	101	75-125	5.25	20	
Chloroethane	1.37	0.056	mg/kg dry	1.40	ND	97.9	75-125	5.28	20	
Chloroform	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	5.10	20	
Chloromethane	1.30	0.056	mg/kg dry	1.40	ND	92.7	75-125	1.62	20	
cis-1,2-Dichloroethene	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	5.58	20	
cis-1,3-Dichloropropene	1.37	0.056	mg/kg dry	1.34	ND	103	75-125	5.75	20	
Dibromomethane	1.38	0.056	mg/kg dry	1.40	ND	98.1	75-125	4.57	20	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike Duplicate (B3I0634-MSD1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.36	0.056	mg/kg dry	1.40	ND	97.0	70-130	2.72	20	
Dichlorofluoromethane	1.40	0.056	mg/kg dry	1.40	ND	99.9	75-125	5.18	20	
Ethyl Ether	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	4.07	20	
Ethylbenzene	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	5.20	20	
Hexachlorobutadiene	1.31	0.14	mg/kg dry	1.40	ND	93.6	75-125	6.12	20	
Isopropylbenzene	1.47	0.14	mg/kg dry	1.40	ND	105	75-125	5.05	20	
m,p-Xylenes	2.88	0.11	mg/kg dry	2.80	ND	103	75-125	4.27	20	
Methyl Isobutyl Ketone	1.50	0.28	mg/kg dry	1.40	ND	107	75-125	7.26	20	
Methylene chloride	1.37	0.28	mg/kg dry	1.40	0.0602	93.1	75-125	4.06	20	
Methyl-t-butyl ether	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	4.39	20	
Naphthalene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	4.26	20	
n-Butylbenzene	1.44	0.14	mg/kg dry	1.40	ND	102	75-125	4.98	20	
n-Propylbenzene	1.46	0.14	mg/kg dry	1.40	ND	104	75-125	2.99	20	
o-Xylene	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	5.19	20	
sec-Butylbenzene	1.45	0.14	mg/kg dry	1.40	ND	103	75-125	3.84	20	
Styrene	1.47	0.14	mg/kg dry	1.40	ND	105	75-125	5.78	20	
tert-Butylbenzene	1.45	0.14	mg/kg dry	1.40	ND	103	75-125	2.75	20	
Tetrachloroethene	1.60	0.14	mg/kg dry	1.40	ND	114	75-125	4.27	20	
Tetrahydrofuran	1.52	0.28	mg/kg dry	1.40	ND	109	75-125	8.76	20	
Toluene	1.40	0.056	mg/kg dry	1.40	ND	99.4	75-125	5.58	20	
trans-1,2-Dichloroethene	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	3.63	20	
trans-1,3-Dichloropropene	1.39	0.056	mg/kg dry	1.30	ND	107	75-125	6.10	20	
Trichloroethene	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	5.33	20	
Trichlorofluoromethane	1.39	0.056	mg/kg dry	1.40	ND	99.2	75-125	5.90	20	
Vinyl chloride	1.35	0.14	mg/kg dry	1.40	ND	96.2	70-130	3.95	20	
Surrogate: 1,2-Dichloroethane-d4	*25.5*		ug/L	*25.0*	*NA*	*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.3*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Dibromofluoromethane	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Toluene-d8	*25.0*		ug/L	*25.0*	*NA*	*100*	*80-120*			

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305382
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

For Braun Intertec Use Only
Laboratory Work Order No.
1305382

BRAUN INTERTEC
Braun Intertec Corporation
11001 Hampshire Ave. S
Minneapolis, MN 55438

REQUEST FOR LABORATORY ANALYTICAL SERVICES

Bottle orders and sampling inquires:
labservices@braunintertec.com
Phone: 952-995-2600 Fax: 952-995-2601

IMPORTANT
Date Results Requested: STD
Time
Rush Charges Authorized? ___ Yes ___ No
Rush / Quote #

Page 1 of 1

010197

REPORT RESULTS TO
Contact Name Sara Holter
Company Braun Intertec
Mailing Address BL
City, State, Zip
Telephone # Fax #
E-mail

Project ID/Name Fmr Edina Public Works Bldg P.O. #/Project # BL-12-07042 B Phase C

SEND INVOICE TO
Contact Name Company
Address
City, State, Zip
Telephone # Fax #

Special Instructions and/or Specific Regulatory Requirements:
(method, limit of detection, petrofund, reporting units)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)

LAB ID#	CLIENT SAMPLE IDENTIFICATION (IDs must be unique)	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	VOLUME/AREA (specify units)	Number of Containers	Metals Field Filtered Y/N	Site Location (State) MN	DRO	VOC	FOR LAB USE ONLY
01	PP-1 (12.5-15.0)	09/26/13	0947	S		5		X	X		
02	PP-4 ~~(7.5-5.0)~~ (5.0-7.5)	9-26-13	1014	S		5		X	X		
03	PP-3 (5.0-7.5)	↓	1045	S		5		X	X		
04	PP-2 (5.0-7.5	↓	1113	S		5		X	X		
05	Trip Blank (Phase C)	↓	—	MeOH		1					

CHAIN OF CUSTODY
Collected by: (Print) Scott Jordan
Relinquished by: Date/Time 9-26-13/1445
Relinquished by: Date/Time
Collector's Signature:
Received by: Date/Time
Received Contents Not Verified: Date/Time
Received Contents Verified: Date/Time 9/26/13 1445
Comments:

Custody Seal Intact ☐ Yes ☐ No ☐ N/A ☒ Hand Delivered by Client
On Ice ☒ Yes ☐ No
Temp Blank ☒ Yes ☐ No
Temp: 1.8 °C

Form # CS02.03 F:\Groups\QA-QC\Forms\clientservices\COC-CS02 Effective Date: 10/10/07

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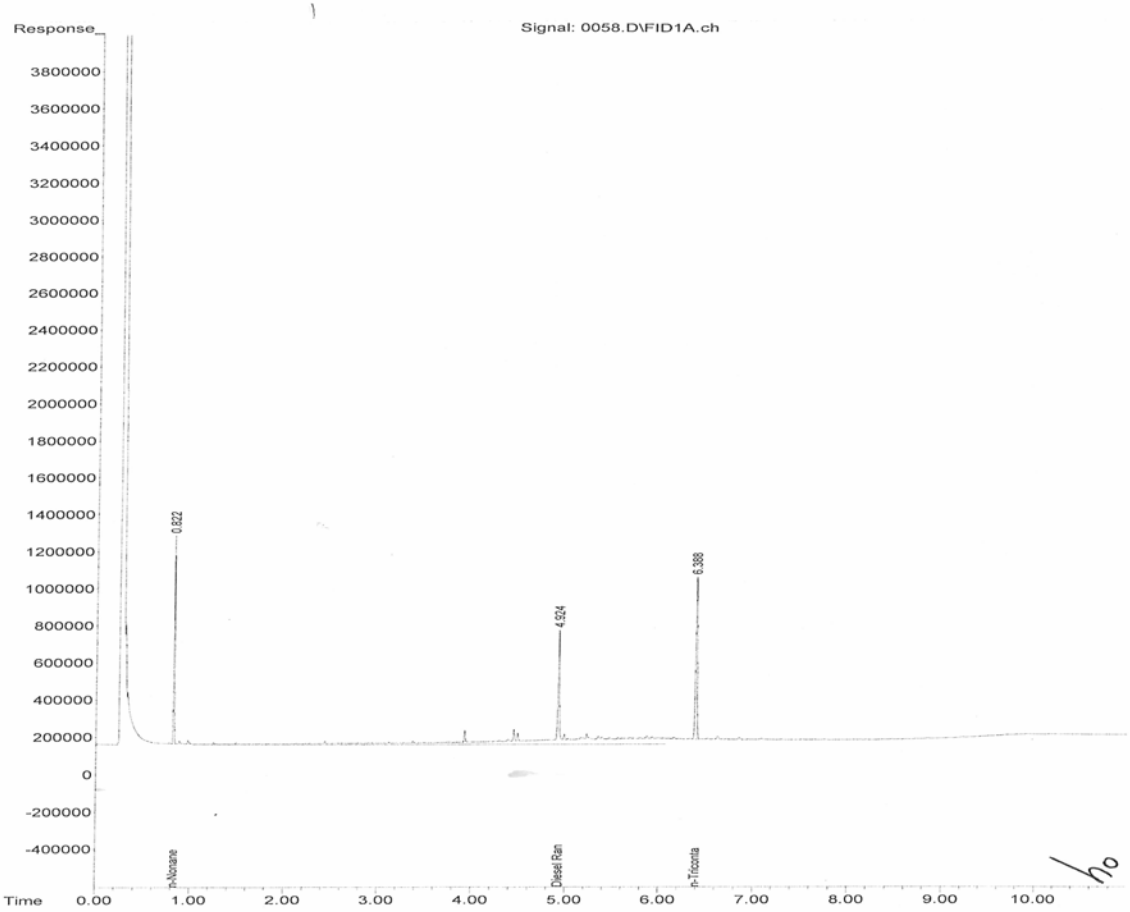
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

No Name Entered Quantitation Report (QT Reviewed)
Sample : 1305382-01
Operator : RSS
Acq On : 28 Sep 2013 2:53 am DRO

Data File: F:\LabData\AgilentGCs\7890_2\3270\0058.D
DataAcq Meth:DRO_ACQ.M
Quant Method : F:\LabData\AgilentGCs\7890_2\Methods\DRO_3266.M
ALS Vial : 33 Sample Multiplier: 1



DRO_3266.M Mon Sep 30 08:40:19 2013 Page: 2

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9/30/13

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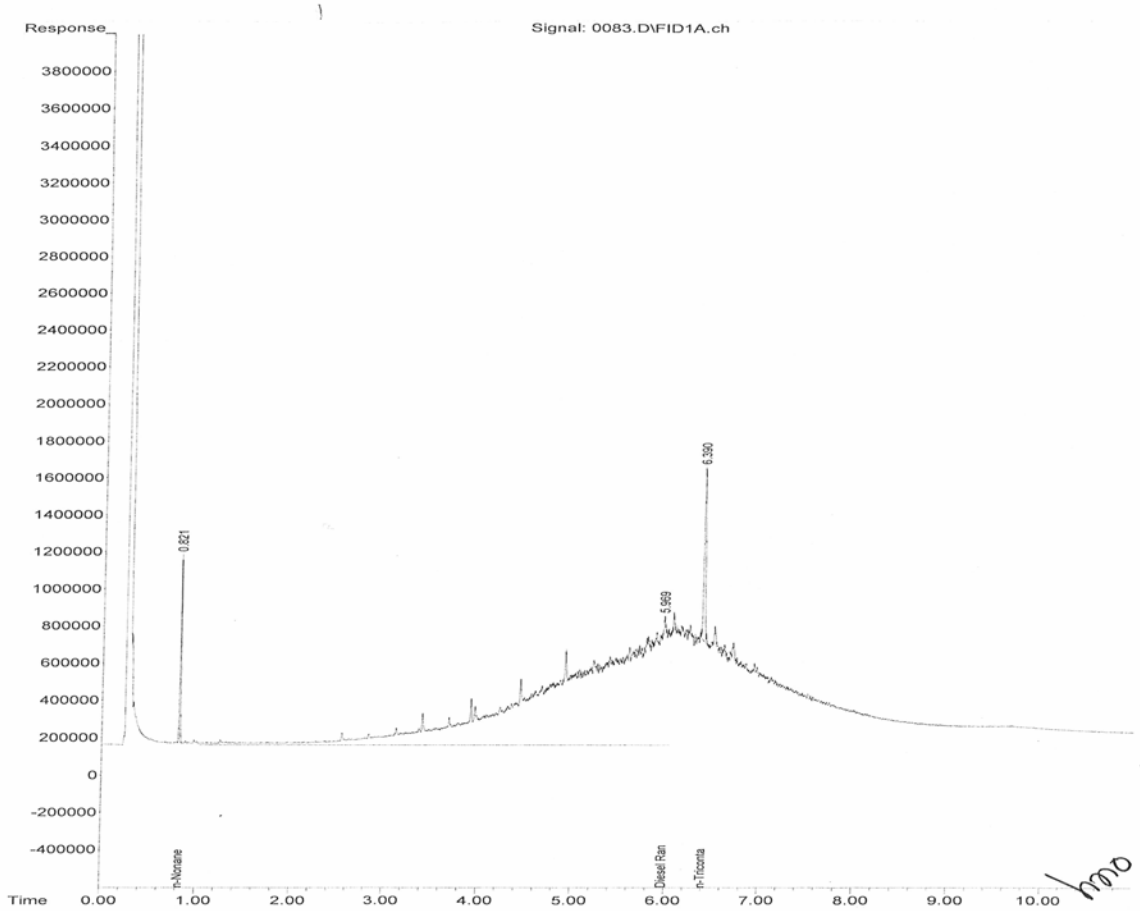
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

No Name Entered Quantitation Report (QT Reviewed)
Sample : 1305382-04RE1
Operator : RSS
Acq On : 28 Sep 2013 12:12 pm DRO

Data File: F:\LabData\AgilentGCs\7890_2\3270\0083.D
DataAcq Meth:DRO_ACQ.M
Quant Method : F:\LabData\AgilentGCs\7890_2\Methods\DRO_3266.M
ALS Vial : 45 Sample Multiplier: 1



DRO_3266.M Mon Sep 30 08:58:37 2013 Page: 2

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9/30/13

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Ms. Sara Holter
Braun Intertec-Bloomington
11001 Hampshire Ave. South
Bloomington, MN 55438

August 02, 2013

Report #: 1303974

RE: City of Edina
BL-12-07042A

Dear Sara Holter:

Braun Intertec Corporation received samples for the project identified above on July 26, 2013. Analytical results are summarized in the following report.

All routine quality assurance procedures were followed, unless otherwise noted.

Analytical results are reported on an "as received" basis unless otherwise noted. Where possible, the samples will be retained by the laboratory for 14 days following issuance of the initial final report. The samples will be disposed of or returned at that time. Arrangements can be made for extended storage by contacting me at this time.

We appreciate your decision to use Braun Intertec Corporation for this project. We are committed to being your vendor of choice to meet your analytical chemistry needs.

If you have any questions please contact me at the above phone number.

Sincerely,

Thomas P. Wagner
Project Manager

Certification/Accreditation Number

Minnesota Department of Health #027-053-117

Providing engineering and environmental solutions since 1957

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Qualifiers and Abbreviations

ho	The sample chromatogram indicates the presence of higher boiling hydrocarbons than expected in the diesel range chromatogram.
hj	The sample chromatogram indicates the presence of higher boiling hydrocarbons than expected in the gasoline range chromatogram.
gp	The relative percent difference (RPD) for the laboratory control sample and laboratory control sample duplicate is outside of laboratory control limits.
ca	This field of testing is not certifiable by the Minnesota Department of Health.
COC	Chain of Custody
dry	Sample results reported on a dry weight basis
MRL	Method Reporting Limit
NA	Not Applicable
ND	Analyte NOT DETECTED
NR	Not Reported
%Rec	Percent Recovery
RPD	Relative Percent Difference
VOC	Volatile Organic Compound

A field of testing is the combination of analyte, matrix, method, and regulatory program.

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Sample Summary

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Trip Blank	1303974-01	Soil	07/25/13 00:00	07/26/13 15:40
SW-1 (6-10)	1303974-02	Soil	07/26/13 09:05	07/26/13 15:40
B-1 (22)	1303974-03	Soil	07/26/13 11:42	07/26/13 15:40
SW-2 (8-12)	1303974-04	Soil	07/26/13 12:02	07/26/13 15:40
SW-3 (12-16)	1303974-05	Soil	07/26/13 14:42	07/26/13 15:40
SW-4 (7-14)	1303974-06	Soil	07/26/13 14:45	07/26/13 15:40
B-2 (22)	1303974-07	Soil	07/26/13 14:40	07/26/13 15:40

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Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Conditions Upon Receipt

Cooler: Cooler 1

Temperature:	3.4 °C	**COC Included:**	Yes	**Custody Seals Used:**	No
Temperature Blank:	Yes	**COC Complete:**	Yes	**Custody Seals Intact:**	NA
Received on Ice:	Yes	**COC & Labels Agree:**	Yes	**Hand Delivered by Client:**	Yes
Preservation Confirmed:	No	**Sufficient Sample Provided:**	Yes	**Headspace Present (VOC):**	No

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Trip Blank

1303974-01 (Soil)

7/25/13 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
1,1-Dichloroethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloroethene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloropropene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichloropropane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.50	0.50	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromoethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloroethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloropropane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichloropropane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2,2-Dichloropropane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Butanone (MEK)	< 0.50	0.50	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Chlorotoluene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
4-Chlorotoluene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
4-Isopropyltoluene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Acetone	< 0.75	0.75	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	gp
Allyl Chloride	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Benzene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromobenzene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromochloromethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromodichloromethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromoform	< 0.25	0.25	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromomethane	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Carbon Tetrachloride	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorobenzene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorodibromomethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Trip Blank

1303974-01 (Soil)

7/25/13 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Chloroethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroform	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloromethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,2-Dichloroethene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,3-Dichloropropene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dibromomethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorodifluoromethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorofluoromethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
Ethyl Ether	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Ethylbenzene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Hexachlorobutadiene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Isopropylbenzene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
m,p-Xylenes	< 0.10	0.10	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl Isobutyl Ketone	< 0.25	0.25	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methylene chloride	< 0.25	0.25	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl-t-butyl ether	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Naphthalene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Butylbenzene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Propylbenzene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
o-Xylene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
sec-Butylbenzene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Styrene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
tert-Butylbenzene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrachloroethene	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrahydrofuran	< 0.25	0.25	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
Toluene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,2-Dichloroethene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,3-Dichloropropene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichloroethene	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichlorofluoromethane	< 0.050	0.050	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Vinyl chloride	< 0.12	0.12	mg/kg	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*100 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*104 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*96.6 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Toluene-d8	*97.2 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	

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Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

SW-1 (6-10)

1303974-02 (Soil)

7/26/13 9:05

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**79**	0.050	% Wt	1	B3G0756	7/30/13	7/31/13	ZCW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	< 11	11	mg/kg dry	1	B3G0779	7/31/13	8/1/13	EAK	WI DRO (95)	ho
Surrogate: n-Nonane	*48.3 %*	*Limits: 20-80%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Surrogate: n-Triacontane	*80.9 %*	*Limits: 30-125%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Gasoline Range Organics (GRO)	< 13	13	mg/kg dry	1	B3G0707	7/29/13	7/30/13	SRH	WI GRO (95)	hj

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,1-Trichloroethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichloroethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
1,1-Dichloroethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloroethene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloropropene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichloropropane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.64	0.64	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromoethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichlorobenzene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloroethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloropropane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichlorobenzene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichloropropane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,4-Dichlorobenzene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2,2-Dichloropropane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Butanone (MEK)	< 0.64	0.64	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Chlorotoluene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
4-Chlorotoluene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	

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SW-1 (6-10)

1303974-02 (Soil)

7/26/13 9:05

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
4-Isopropyltoluene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Acetone	< 0.96	0.96	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	gp
Allyl Chloride	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Benzene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromobenzene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromochloromethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromodichloromethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromoform	< 0.32	0.32	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromomethane	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Carbon Tetrachloride	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorobenzene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorodibromomethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroform	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloromethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,2-Dichloroethene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,3-Dichloropropene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dibromomethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorodifluoromethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorofluoromethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
Ethyl Ether	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Ethylbenzene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Hexachlorobutadiene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Isopropylbenzene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
m,p-Xylenes	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl Isobutyl Ketone	< 0.32	0.32	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methylene chloride	< 0.32	0.32	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl-t-butyl ether	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Naphthalene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Butylbenzene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Propylbenzene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
o-Xylene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
sec-Butylbenzene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Styrene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
tert-Butylbenzene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrachloroethene	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrahydrofuran	< 0.32	0.32	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

SW-1 (6-10)

1303974-02 (Soil)

7/26/13 9:05

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Toluene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,2-Dichloroethene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,3-Dichloropropene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichloroethene	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichlorofluoromethane	< 0.064	0.064	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Vinyl chloride	< 0.16	0.16	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*99.5 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*99.8 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*97.5 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Toluene-d8	*99.2 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	

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Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

B-1 (22)

1303974-03 (Soil)

7/26/13 11:42

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**99**	0.050	% Wt	1	B3G0756	7/30/13	7/31/13	ZCW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	< 8.1	8.1	mg/kg dry	1	B3G0779	7/31/13	8/1/13	EAK	WI DRO (95)	
Surrogate: n-Nonane	*48.0 %*	*Limits: 20-80%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Surrogate: n-Triacontane	*80.2 %*	*Limits: 30-125%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Gasoline Range Organics (GRO)	< 10	10	mg/kg dry	1	B3G0707	7/29/13	7/30/13	SRH	WI GRO (95)	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,1-Trichloroethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichloroethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
1,1-Dichloroethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichloropropane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.51	0.51	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromoethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloroethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,4-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2,2-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Butanone (MEK)	< 0.51	0.51	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
4-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

B-1 (22)

1303974-03 (Soil)

7/26/13 11:42

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
4-Isopropyltoluene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Acetone	< 0.76	0.76	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	gp
Allyl Chloride	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Benzene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromobenzene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromochloromethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromodichloromethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromoform	< 0.25	0.25	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromomethane	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Carbon Tetrachloride	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorobenzene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorodibromomethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroform	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloromethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,2-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,3-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dibromomethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorodifluoromethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorofluoromethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
Ethyl Ether	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Ethylbenzene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Hexachlorobutadiene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Isopropylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
m,p-Xylenes	< 0.10	0.10	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl Isobutyl Ketone	< 0.25	0.25	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methylene chloride	< 0.25	0.25	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl-t-butyl ether	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Naphthalene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Propylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
o-Xylene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
sec-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Styrene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
tert-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrachloroethene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrahydrofuran	< 0.25	0.25	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

B-1 (22)

1303974-03 (Soil)

7/26/13 11:42

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Toluene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,2-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,3-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichloroethene	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichlorofluoromethane	< 0.051	0.051	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Vinyl chloride	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*100 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*101 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*97.3 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Toluene-d8	*101 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	

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Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

SW-2 (8-12)

1303974-04 (Soil)

7/26/13 12:02

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**84**	0.050	% Wt	1	B3G0756	7/30/13	7/31/13	ZCW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	< 9.7	9.7	mg/kg dry	1	B3G0779	7/31/13	8/1/13	EAK	WI DRO (95)	ho
Surrogate: n-Nonane	*45.4 %*	*Limits: 20-80%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Surrogate: n-Triacontane	*83.5 %*	*Limits: 30-125%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Gasoline Range Organics (GRO)	< 12	12	mg/kg dry	1	B3G0707	7/29/13	7/30/13	SRH	WI GRO (95)	hj

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,1-Trichloroethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichloroethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
1,1-Dichloroethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloroethene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloropropene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichloropropane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.60	0.60	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromoethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichlorobenzene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloroethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloropropane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichlorobenzene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichloropropane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,4-Dichlorobenzene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2,2-Dichloropropane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Butanone (MEK)	< 0.60	0.60	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Chlorotoluene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
4-Chlorotoluene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

SW-2 (8-12)

1303974-04 (Soil)

7/26/13 12:02

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
4-Isopropyltoluene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Acetone	< 0.90	0.90	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	gp
Allyl Chloride	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Benzene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromobenzene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromochloromethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromodichloromethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromoform	< 0.30	0.30	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromomethane	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Carbon Tetrachloride	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorobenzene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorodibromomethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroform	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloromethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,2-Dichloroethene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,3-Dichloropropene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dibromomethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorodifluoromethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorofluoromethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
Ethyl Ether	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Ethylbenzene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Hexachlorobutadiene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Isopropylbenzene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
m,p-Xylenes	< 0.12	0.12	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl Isobutyl Ketone	< 0.30	0.30	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methylene chloride	< 0.30	0.30	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl-t-butyl ether	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Naphthalene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Butylbenzene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Propylbenzene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
o-Xylene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
sec-Butylbenzene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Styrene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
tert-Butylbenzene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrachloroethene	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrahydrofuran	< 0.30	0.30	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

SW-2 (8-12)

1303974-04 (Soil)

7/26/13 12:02

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Toluene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,2-Dichloroethene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,3-Dichloropropene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichloroethene	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichlorofluoromethane	< 0.060	0.060	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Vinyl chloride	< 0.15	0.15	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*101 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*101 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*99.2 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Toluene-d8	*99.6 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

SW-3 (12-16)

1303974-05 (Soil)

7/26/13 14:42

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**93**	0.050	% Wt	1	B3G0756	7/30/13	7/31/13	ZCW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	< 8.7	8.7	mg/kg dry	1	B3G0779	7/31/13	8/1/13	EAK	WI DRO (95)	ho
Surrogate: n-Nonane	*48.7 %*	*Limits: 20-80%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Surrogate: n-Triacontane	*83.4 %*	*Limits: 30-125%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Gasoline Range Organics (GRO)	< 11	11	mg/kg dry	1	B3G0707	7/29/13	7/30/13	SRH	WI GRO (95)	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,1-Trichloroethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichloroethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
1,1-Dichloroethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloroethene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloropropene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichloropropane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.54	0.54	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromoethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichlorobenzene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloroethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloropropane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichlorobenzene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichloropropane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,4-Dichlorobenzene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2,2-Dichloropropane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Butanone (MEK)	< 0.54	0.54	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
4-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

SW-3 (12-16)

1303974-05 (Soil)

7/26/13 14:42

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
4-Isopropyltoluene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Acetone	< 0.80	0.80	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	gp
Allyl Chloride	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Benzene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromobenzene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromochloromethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromodichloromethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromoform	< 0.27	0.27	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromomethane	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Carbon Tetrachloride	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorobenzene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorodibromomethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroform	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloromethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,2-Dichloroethene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,3-Dichloropropene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dibromomethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorodifluoromethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorofluoromethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
Ethyl Ether	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Ethylbenzene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Hexachlorobutadiene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Isopropylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
m,p-Xylenes	< 0.11	0.11	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl Isobutyl Ketone	< 0.27	0.27	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methylene chloride	< 0.27	0.27	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl-t-butyl ether	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Naphthalene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Propylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
o-Xylene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
sec-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Styrene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
tert-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrachloroethene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrahydrofuran	< 0.27	0.27	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca

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Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

SW-3 (12-16)

1303974-05 (Soil)

7/26/13 14:42

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Toluene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,2-Dichloroethene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,3-Dichloropropene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichloroethene	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichlorofluoromethane	< 0.054	0.054	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Vinyl chloride	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*102 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*103 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*97.1 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Toluene-d8	*101 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

SW-4 (7-14)

1303974-06 (Soil)

7/26/13 14:45

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**91**	0.050	% Wt	1	B3G0756	7/30/13	7/31/13	ZCW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	< 9.7	9.7	mg/kg dry	1	B3G0779	7/31/13	8/1/13	EAK	WI DRO (95)	ho
Surrogate: n-Nonane	*48.5 %*	*Limits: 20-80%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Surrogate: n-Triacontane	*82.0 %*	*Limits: 30-125%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Gasoline Range Organics (GRO)	< 11	11	mg/kg dry	1	B3G0707	7/29/13	7/30/13	SRH	WI GRO (95)	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,1-Trichloroethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichloroethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
1,1-Dichloroethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloroethene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloropropene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichloropropane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.55	0.55	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromoethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichlorobenzene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloroethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloropropane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichlorobenzene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichloropropane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,4-Dichlorobenzene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2,2-Dichloropropane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Butanone (MEK)	< 0.55	0.55	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Chlorotoluene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
4-Chlorotoluene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

SW-4 (7-14)

1303974-06 (Soil)

7/26/13 14:45

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
4-Isopropyltoluene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Acetone	< 0.82	0.82	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	gp
Allyl Chloride	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Benzene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromobenzene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromochloromethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromodichloromethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromoform	< 0.27	0.27	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromomethane	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Carbon Tetrachloride	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorobenzene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorodibromomethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroform	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloromethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,2-Dichloroethene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,3-Dichloropropene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dibromomethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorodifluoromethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorofluoromethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
Ethyl Ether	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Ethylbenzene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Hexachlorobutadiene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Isopropylbenzene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
m,p-Xylenes	< 0.11	0.11	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl Isobutyl Ketone	< 0.27	0.27	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methylene chloride	< 0.27	0.27	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl-t-butyl ether	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Naphthalene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Butylbenzene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Propylbenzene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
o-Xylene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
sec-Butylbenzene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Styrene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
tert-Butylbenzene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrachloroethene	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrahydrofuran	< 0.27	0.27	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

SW-4 (7-14)

1303974-06 (Soil)

7/26/13 14:45

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Toluene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,2-Dichloroethene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,3-Dichloropropene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichloroethene	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichlorofluoromethane	< 0.055	0.055	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Vinyl chloride	< 0.14	0.14	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*101 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*98.9 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*97.8 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Toluene-d8	*98.6 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

B-2 (22)

1303974-07 (Soil)

7/26/13 14:40

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**99**	0.050	% Wt	1	B3G0756	7/30/13	7/31/13	ZCW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	< 8.2	8.2	mg/kg dry	1	B3G0779	7/31/13	8/1/13	EAK	WI DRO (95)	ho
Surrogate: n-Nonane	*45.1 %*	*Limits: 20-80%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Surrogate: n-Triacontane	*81.8 %*	*Limits: 30-125%*			*B3G0779*	*7/31/13*	*8/1/13*	*EAK*	*WI DRO (95)*	
Gasoline Range Organics (GRO)	< 10	10	mg/kg dry	1	B3G0707	7/29/13	7/30/13	SRH	WI GRO (95)	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
1,1-Dichloroethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloroethene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,1-Dichloropropene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,3-Trichloropropane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.50	0.50	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dibromoethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloroethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,2-Dichloropropane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,3-Dichloropropane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2,2-Dichloropropane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Butanone (MEK)	< 0.50	0.50	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
2-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
4-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	

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Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

B-2 (22)

1303974-07 (Soil)

7/26/13 14:40

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
4-Isopropyltoluene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Acetone	< 0.76	0.76	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	gp
Allyl Chloride	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Benzene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromobenzene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromochloromethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromodichloromethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromoform	< 0.25	0.25	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Bromomethane	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Carbon Tetrachloride	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorobenzene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chlorodibromomethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloroform	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Chloromethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,2-Dichloroethene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
cis-1,3-Dichloropropene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dibromomethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorodifluoromethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Dichlorofluoromethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca
Ethyl Ether	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Ethylbenzene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Hexachlorobutadiene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Isopropylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
m,p-Xylenes	< 0.10	0.10	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl Isobutyl Ketone	< 0.25	0.25	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methylene chloride	< 0.25	0.25	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Methyl-t-butyl ether	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Naphthalene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
n-Propylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
o-Xylene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
sec-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Styrene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
tert-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrachloroethene	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Tetrahydrofuran	< 0.25	0.25	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	ca

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

B-2 (22)

1303974-07 (Soil)

7/26/13 14:40

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Toluene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,2-Dichloroethene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
trans-1,3-Dichloropropene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichloroethene	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Trichlorofluoromethane	< 0.050	0.050	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Vinyl chloride	< 0.13	0.13	mg/kg dry	1	B3G0715	7/29/13	7/29/13	krr	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*102 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*98.8 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*98.3 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	
Surrogate: Toluene-d8	*97.6 %*	*Limits: 80-120%*			*B3G0715*	*7/29/13*	*7/29/13*	*krr*	*EPA 8260B*	

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Classical Chemistry Parameters - Quality Control

Batch B3G0756 - % Solids

Method Blank (B3G0756-BLK1)

Prepared & Analyzed: 07/31/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	< 0.050	0.050	% Wt	NA	NA	NA	NA	NA	NA	

Duplicate (B3G0756-DUP1)

Source: 1303958-01 Prepared & Analyzed: 07/31/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	90.1	0.050	% Wt	NA	88.9	NA	NA	1.35	20	

Standard Reference Material (B3G0756-SRM1)

Prepared & Analyzed: 07/31/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	92.7		% Wt	92.8	NA	99.9	90-110	NA	NA	

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Total Petroleum Hydrocarbons - Quality Control

Batch B3G0707 - WI GRO (95)

Method Blank (B3G0707-BLK1)

Prepared: 07/29/13 Analyzed: 07/30/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Gasoline Range Organics (GRO)	< 10	10	mg/kg	NA	NA	NA	NA	NA	NA	

Laboratory Control Sample (B3G0707-BS1)

Prepared: 07/29/13 Analyzed: 07/30/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Gasoline Range Organics (GRO)	15.5	10	mg/kg	16.0	NA	97.2	80-120	NA	NA	

Laboratory Control Sample Duplicate (B3G0707-BSD1)

Prepared: 07/29/13 Analyzed: 07/30/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Gasoline Range Organics (GRO)	18.2	10	mg/kg	16.0	NA	114	80-120	15.5	20	

Duplicate (B3G0707-DUP1)

Source: 1303891-01

Prepared: 07/29/13 Analyzed: 07/30/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Gasoline Range Organics (GRO)	< 11	11	mg/kg dry	NA	ND	NA	NA	NA	20	

Batch B3G0779 - WI DRO (95)

Method Blank (B3G0779-BLK1)

Prepared: 07/31/13 Analyzed: 08/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	< 10	10	mg/kg	NA	NA	NA	NA	NA	NA	
Surrogate: n-Nonane	*2.42*		mg/kg	*4.00*	*NA*	*60.6*	*20-80*			
Surrogate: n-Triacontane	*3.18*		mg/kg	*4.00*	*NA*	*79.4*	*30-125*			

Laboratory Control Sample (B3G0779-BS1)

Prepared: 07/31/13 Analyzed: 08/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	26.0	10	mg/kg	32.0	NA	81.3	70-120	NA	NA	
Surrogate: n-Nonane	*2.21*		mg/kg	*4.00*	*NA*	*55.4*	*20-80*			
Surrogate: n-Triacontane	*3.27*		mg/kg	*4.00*	*NA*	*81.7*	*30-125*			

Laboratory Control Sample Duplicate (B3G0779-BSD1)

Prepared: 07/31/13 Analyzed: 08/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	27.6	10	mg/kg	32.0	NA	86.3	70-120	5.93	20	
Surrogate: n-Nonane	*2.54*		mg/kg	*4.00*	*NA*	*63.6*	*20-80*			
Surrogate: n-Triacontane	*3.37*		mg/kg	*4.00*	*NA*	*84.3*	*30-125*			

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Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Total Petroleum Hydrocarbons - Quality Control

Batch B3G0779 - WI DRO (95)

Laboratory Control Sample Duplicate (B3G0779-BSD1)

Prepared: 07/31/13 Analyzed: 08/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

Duplicate (B3G0779-DUP1)

Source: 1303959-01

Prepared: 07/31/13 Analyzed: 08/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	< 9.2	9.2	mg/kg dry	NA	2.11	NA	NA	105	20	
Surrogate: n-Nonane	*1.77*		mg/kg dry	*3.67*	*NA*	*48.2*	*20-80*			
Surrogate: n-Triacontane	*3.10*		mg/kg dry	*3.67*	*NA*	*84.4*	*30-125*			

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Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3G0715 - EPA 5035

Method Blank (B3G0715-BLK1)

Prepared & Analyzed: 07/29/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2-Trichlorotrifluoroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,3-Trichlorobenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,3-Trichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,4-Trichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,4-Trimethylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dibromo-3-chloropropane	< 0.50	0.50	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dibromoethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,3,5-Trimethylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,3-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
2,2-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
2-Butanone (MEK)	< 0.50	0.50	mg/kg	NA	NA	NA	NA	NA	NA	
2-Chlorotoluene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
4-Chlorotoluene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
4-Isopropyltoluene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Acetone	< 0.75	0.75	mg/kg	NA	NA	NA	NA	NA	NA	
Allyl Chloride	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Benzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromochloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromodichloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromoform	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Bromomethane	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Carbon Tetrachloride	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chlorodibromomethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloroform	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
cis-1,2-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
cis-1,3-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Dibromomethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	

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Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3G0715 - EPA 5035

Method Blank (B3G0715-BLK1)

Prepared & Analyzed: 07/29/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Dichlorofluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Ethyl Ether	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Ethylbenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Hexachlorobutadiene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Isopropylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
m,p-Xylenes	< 0.10	0.10	mg/kg	NA	NA	NA	NA	NA	NA	
Methyl Isobutyl Ketone	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Methylene chloride	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Methyl-t-butyl ether	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Naphthalene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
n-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
n-Propylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
o-Xylene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
sec-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Styrene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
tert-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Tetrachloroethene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Tetrahydrofuran	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Toluene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
trans-1,2-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
trans-1,3-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Trichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Trichlorofluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Vinyl chloride	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*25.3*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*26.7*		ug/L	*25.0*	*NA*	*107*	*80-120*			
Surrogate: Dibromofluoromethane	*24.5*		ug/L	*25.0*	*NA*	*98.1*	*80-120*			
Surrogate: Toluene-d8	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			

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Volatile Organic Compounds - Quality Control

Batch B3G0715 - EPA 5035

Laboratory Control Sample (B3G0715-BS1)

Prepared & Analyzed: 07/29/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.32	0.050	mg/kg	1.25	NA	105	75-125	NA	NA	
1,1,1-Trichloroethane	1.30	0.050	mg/kg	1.25	NA	104	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	1.32	0.050	mg/kg	1.25	NA	106	75-125	NA	NA	
1,1,2-Trichloroethane	1.29	0.050	mg/kg	1.25	NA	103	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	1.29	0.050	mg/kg	1.25	NA	103	75-125	NA	NA	
1,1-Dichloroethane	1.28	0.050	mg/kg	1.25	NA	102	75-125	NA	NA	
1,1-Dichloroethene	1.27	0.050	mg/kg	1.25	NA	101	75-125	NA	NA	
1,1-Dichloropropene	1.28	0.050	mg/kg	1.25	NA	102	75-125	NA	NA	
1,2,3-Trichlorobenzene	1.25	0.12	mg/kg	1.25	NA	100	75-125	NA	NA	
1,2,3-Trichloropropane	1.26	0.050	mg/kg	1.25	NA	101	75-125	NA	NA	
1,2,4-Trichlorobenzene	1.24	0.050	mg/kg	1.25	NA	99.1	75-125	NA	NA	
1,2,4-Trimethylbenzene	1.30	0.12	mg/kg	1.25	NA	104	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	1.29	0.50	mg/kg	1.25	NA	103	75-125	NA	NA	
1,2-Dibromoethane	1.31	0.050	mg/kg	1.25	NA	105	75-125	NA	NA	
1,2-Dichlorobenzene	1.27	0.050	mg/kg	1.25	NA	101	75-125	NA	NA	
1,2-Dichloroethane	1.28	0.050	mg/kg	1.25	NA	102	75-125	NA	NA	
1,2-Dichloropropane	1.29	0.050	mg/kg	1.25	NA	103	75-125	NA	NA	
1,3,5-Trimethylbenzene	1.32	0.12	mg/kg	1.25	NA	105	75-125	NA	NA	
1,3-Dichlorobenzene	1.28	0.050	mg/kg	1.25	NA	102	75-125	NA	NA	
1,3-Dichloropropane	1.30	0.050	mg/kg	1.25	NA	104	75-125	NA	NA	
1,4-Dichlorobenzene	1.27	0.050	mg/kg	1.25	NA	102	75-125	NA	NA	
2,2-Dichloropropane	1.33	0.050	mg/kg	1.25	NA	106	75-125	NA	NA	
2-Butanone (MEK)	1.42	0.50	mg/kg	1.25	NA	114	75-140	NA	NA	
2-Chlorotoluene	1.25	0.12	mg/kg	1.25	NA	99.9	75-125	NA	NA	
4-Chlorotoluene	1.28	0.12	mg/kg	1.25	NA	102	75-125	NA	NA	
4-Isopropyltoluene	1.33	0.050	mg/kg	1.25	NA	106	75-125	NA	NA	
Acetone	1.72	0.75	mg/kg	1.25	NA	137	80-175	NA	NA	
Allyl Chloride	1.26	0.050	mg/kg	1.25	NA	101	75-125	NA	NA	
Benzene	1.30	0.050	mg/kg	1.25	NA	104	75-125	NA	NA	
Bromobenzene	1.24	0.050	mg/kg	1.25	NA	99.2	75-125	NA	NA	
Bromochloromethane	1.26	0.050	mg/kg	1.25	NA	101	75-125	NA	NA	
Bromodichloromethane	1.30	0.050	mg/kg	1.25	NA	104	75-125	NA	NA	
Bromoform	1.35	0.25	mg/kg	1.25	NA	108	75-125	NA	NA	
Bromomethane	1.31	0.12	mg/kg	1.25	NA	105	70-130	NA	NA	
Carbon Tetrachloride	1.37	0.050	mg/kg	1.25	NA	110	75-125	NA	NA	
Chlorobenzene	1.27	0.050	mg/kg	1.25	NA	101	75-125	NA	NA	
Chlorodibromomethane	1.33	0.050	mg/kg	1.25	NA	106	75-125	NA	NA	
Chloroethane	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
Chloroform	1.27	0.050	mg/kg	1.25	NA	101	75-125	NA	NA	
Chloromethane	1.22	0.050	mg/kg	1.25	NA	97.8	75-125	NA	NA	
cis-1,2-Dichloroethene	1.28	0.050	mg/kg	1.25	NA	102	75-125	NA	NA	
cis-1,3-Dichloropropene	1.32	0.050	mg/kg	1.25	NA	105	75-125	NA	NA	
Dibromomethane	1.28	0.050	mg/kg	1.25	NA	102	75-125	NA	NA	

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3G0715 - EPA 5035

Laboratory Control Sample (B3G0715-BS1)

Prepared & Analyzed: 07/29/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.26	0.050	mg/kg	1.25	NA	101	70-130	NA	NA	
Dichlorofluoromethane	1.28	0.050	mg/kg	1.25	NA	103	75-125	NA	NA	
Ethyl Ether	1.22	0.050	mg/kg	1.25	NA	97.0	75-125	NA	NA	
Ethylbenzene	1.32	0.050	mg/kg	1.25	NA	105	75-125	NA	NA	
Hexachlorobutadiene	1.30	0.12	mg/kg	1.25	NA	104	75-125	NA	NA	
Isopropylbenzene	1.34	0.12	mg/kg	1.25	NA	107	75-125	NA	NA	
m,p-Xylenes	2.65	0.10	mg/kg	2.50	NA	106	75-125	NA	NA	
Methyl Isobutyl Ketone	1.35	0.25	mg/kg	1.25	NA	108	75-125	NA	NA	
Methylene chloride	1.29	0.25	mg/kg	1.25	NA	103	75-125	NA	NA	
Methyl-t-butyl ether	1.26	0.050	mg/kg	1.25	NA	101	75-125	NA	NA	
Naphthalene	1.27	0.12	mg/kg	1.25	NA	102	75-125	NA	NA	
n-Butylbenzene	1.33	0.12	mg/kg	1.25	NA	106	75-125	NA	NA	
n-Propylbenzene	1.27	0.12	mg/kg	1.25	NA	101	75-125	NA	NA	
o-Xylene	1.30	0.050	mg/kg	1.25	NA	104	75-125	NA	NA	
sec-Butylbenzene	1.34	0.12	mg/kg	1.25	NA	107	75-125	NA	NA	
Styrene	1.34	0.12	mg/kg	1.25	NA	107	75-125	NA	NA	
tert-Butylbenzene	1.31	0.12	mg/kg	1.25	NA	105	75-125	NA	NA	
Tetrachloroethene	1.35	0.12	mg/kg	1.25	NA	108	75-125	NA	NA	
Tetrahydrofuran	1.31	0.25	mg/kg	1.25	NA	104	75-125	NA	NA	
Toluene	1.28	0.050	mg/kg	1.25	NA	103	75-125	NA	NA	
trans-1,2-Dichloroethene	1.26	0.050	mg/kg	1.25	NA	101	75-125	NA	NA	
trans-1,3-Dichloropropene	1.34	0.050	mg/kg	1.25	NA	107	75-125	NA	NA	
Trichloroethene	1.24	0.050	mg/kg	1.25	NA	99.2	75-125	NA	NA	
Trichlorofluoromethane	1.29	0.050	mg/kg	1.25	NA	103	75-125	NA	NA	
Vinyl chloride	1.13	0.12	mg/kg	1.25	NA	89.9	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*25.1*		ug/L	*25.0*	*NA*	*100*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.6*		ug/L	*25.0*	*NA*	*103*	*80-120*			
Surrogate: Dibromofluoromethane	*24.9*		ug/L	*25.0*	*NA*	*99.6*	*80-120*			
Surrogate: Toluene-d8	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3G0715 - EPA 5035

Laboratory Control Sample Duplicate (B3G0715-BSD1)

Prepared & Analyzed: 07/29/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.30	0.050	mg/kg	1.25	NA	104	75-125	1.57	20	
1,1,1-Trichloroethane	1.28	0.050	mg/kg	1.25	NA	102	75-125	1.79	20	
1,1,2,2-Tetrachloroethane	1.32	0.050	mg/kg	1.25	NA	106	75-125	0.189	20	
1,1,2-Trichloroethane	1.24	0.050	mg/kg	1.25	NA	99.2	75-125	3.67	20	
1,1,2-Trichlorotrifluoroethane	1.25	0.050	mg/kg	1.25	NA	99.7	75-125	3.11	20	
1,1-Dichloroethane	1.23	0.050	mg/kg	1.25	NA	98.3	75-125	3.59	20	
1,1-Dichloroethene	1.26	0.050	mg/kg	1.25	NA	100	75-125	0.792	20	
1,1-Dichloropropene	1.25	0.050	mg/kg	1.25	NA	99.5	75-125	2.65	20	
1,2,3-Trichlorobenzene	1.22	0.12	mg/kg	1.25	NA	97.4	75-125	2.75	20	
1,2,3-Trichloropropane	1.24	0.050	mg/kg	1.25	NA	98.7	75-125	2.08	20	
1,2,4-Trichlorobenzene	1.22	0.050	mg/kg	1.25	NA	97.8	75-125	1.34	20	
1,2,4-Trimethylbenzene	1.26	0.12	mg/kg	1.25	NA	101	75-125	3.35	20	
1,2-Dibromo-3-chloropropane	1.26	0.50	mg/kg	1.25	NA	100	75-125	2.55	20	
1,2-Dibromoethane	1.30	0.050	mg/kg	1.25	NA	104	75-125	0.880	20	
1,2-Dichlorobenzene	1.24	0.050	mg/kg	1.25	NA	99.0	75-125	2.00	20	
1,2-Dichloroethane	1.23	0.050	mg/kg	1.25	NA	98.2	75-125	4.02	20	
1,2-Dichloropropane	1.23	0.050	mg/kg	1.25	NA	98.3	75-125	4.91	20	
1,3,5-Trimethylbenzene	1.29	0.12	mg/kg	1.25	NA	103	75-125	2.11	20	
1,3-Dichlorobenzene	1.26	0.050	mg/kg	1.25	NA	100	75-125	1.97	20	
1,3-Dichloropropane	1.27	0.050	mg/kg	1.25	NA	102	75-125	2.33	20	
1,4-Dichlorobenzene	1.24	0.050	mg/kg	1.25	NA	99.2	75-125	2.46	20	
2,2-Dichloropropane	1.30	0.050	mg/kg	1.25	NA	103	75-125	2.70	20	
2-Butanone (MEK)	1.29	0.50	mg/kg	1.25	NA	103	75-140	9.98	20	
2-Chlorotoluene	1.23	0.12	mg/kg	1.25	NA	97.9	75-125	2.02	20	
4-Chlorotoluene	1.22	0.12	mg/kg	1.25	NA	97.1	75-125	5.25	20	
4-Isopropyltoluene	1.29	0.050	mg/kg	1.25	NA	103	75-125	2.71	20	
Acetone	1.31	0.75	mg/kg	1.25	NA	105	80-175	27.1	25	
Allyl Chloride	1.21	0.050	mg/kg	1.25	NA	96.3	75-125	4.78	20	
Benzene	1.26	0.050	mg/kg	1.25	NA	101	75-125	3.28	20	
Bromobenzene	1.21	0.050	mg/kg	1.25	NA	96.5	75-125	2.77	20	
Bromochloromethane	1.23	0.050	mg/kg	1.25	NA	98.5	75-125	2.52	20	
Bromodichloromethane	1.26	0.050	mg/kg	1.25	NA	101	75-125	3.32	20	
Bromoform	1.33	0.25	mg/kg	1.25	NA	106	75-125	1.01	20	
Bromomethane	1.24	0.12	mg/kg	1.25	NA	99.3	70-130	5.40	20	
Carbon Tetrachloride	1.31	0.050	mg/kg	1.25	NA	104	75-125	4.93	20	
Chlorobenzene	1.25	0.050	mg/kg	1.25	NA	99.6	75-125	1.83	20	
Chlorodibromomethane	1.28	0.050	mg/kg	1.25	NA	103	75-125	3.52	20	
Chloroethane	1.21	0.050	mg/kg	1.25	NA	96.6	75-125	12.0	20	
Chloroform	1.22	0.050	mg/kg	1.25	NA	97.4	75-125	3.82	20	
Chloromethane	1.18	0.050	mg/kg	1.25	NA	94.4	75-125	3.49	20	
cis-1,2-Dichloroethene	1.24	0.050	mg/kg	1.25	NA	98.6	75-125	3.27	20	
cis-1,3-Dichloropropene	1.30	0.050	mg/kg	1.25	NA	104	75-125	1.03	20	
Dibromomethane	1.23	0.050	mg/kg	1.25	NA	98.3	75-125	3.82	20	

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3G0715 - EPA 5035

Laboratory Control Sample Duplicate (B3G0715-BSD1)

Prepared & Analyzed: 07/29/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.22	0.050	mg/kg	1.25	NA	97.3	70-130	3.71	20	
Dichlorofluoromethane	1.25	0.050	mg/kg	1.25	NA	99.7	75-125	2.84	20	
Ethyl Ether	1.18	0.050	mg/kg	1.25	NA	94.6	75-125	2.54	20	
Ethylbenzene	1.30	0.050	mg/kg	1.25	NA	104	75-125	1.11	20	
Hexachlorobutadiene	1.28	0.12	mg/kg	1.25	NA	103	75-125	1.39	20	
Isopropylbenzene	1.31	0.12	mg/kg	1.25	NA	105	75-125	1.77	20	
m,p-Xylenes	2.56	0.10	mg/kg	2.50	NA	103	75-125	3.18	20	
Methyl Isobutyl Ketone	1.30	0.25	mg/kg	1.25	NA	104	75-125	3.78	20	
Methylene chloride	1.24	0.25	mg/kg	1.25	NA	98.9	75-125	3.68	20	
Methyl-t-butyl ether	1.23	0.050	mg/kg	1.25	NA	98.6	75-125	2.40	20	
Naphthalene	1.24	0.12	mg/kg	1.25	NA	99.3	75-125	2.30	20	
n-Butylbenzene	1.30	0.12	mg/kg	1.25	NA	103	75-125	2.44	20	
n-Propylbenzene	1.23	0.12	mg/kg	1.25	NA	98.3	75-125	3.12	20	
o-Xylene	1.27	0.050	mg/kg	1.25	NA	101	75-125	2.34	20	
sec-Butylbenzene	1.31	0.12	mg/kg	1.25	NA	105	75-125	1.78	20	
Styrene	1.32	0.12	mg/kg	1.25	NA	106	75-125	1.20	20	
tert-Butylbenzene	1.27	0.12	mg/kg	1.25	NA	101	75-125	3.68	20	
Tetrachloroethene	1.32	0.12	mg/kg	1.25	NA	105	75-125	2.44	20	
Tetrahydrofuran	1.21	0.25	mg/kg	1.25	NA	96.7	75-125	7.51	20	
Toluene	1.27	0.050	mg/kg	1.25	NA	101	75-125	1.45	20	
trans-1,2-Dichloroethene	1.21	0.050	mg/kg	1.25	NA	96.4	75-125	4.37	20	
trans-1,3-Dichloropropene	1.29	0.050	mg/kg	1.25	NA	103	75-125	4.15	20	
Trichloroethene	1.20	0.050	mg/kg	1.25	NA	95.9	75-125	3.40	20	
Trichlorofluoromethane	1.24	0.050	mg/kg	1.25	NA	99.2	75-125	3.52	20	
Vinyl chloride	1.16	0.12	mg/kg	1.25	NA	92.4	70-130	2.76	20	
Surrogate: 1,2-Dichloroethane-d4	*24.8*		ug/L	*25.0*	*NA*	*99.1*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.9*		ug/L	*25.0*	*NA*	*103*	*80-120*			
Surrogate: Dibromofluoromethane	*25.0*		ug/L	*25.0*	*NA*	*99.9*	*80-120*			
Surrogate: Toluene-d8	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3G0715 - EPA 5035

Matrix Spike (B3G0715-MS1) **Source: 1303884-01** Prepared & Analyzed: 07/29/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.56	0.059	mg/kg dry	1.48	ND	105	75-125	NA	NA	
1,1,1-Trichloroethane	1.53	0.059	mg/kg dry	1.48	ND	103	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	1.61	0.059	mg/kg dry	1.48	ND	109	75-125	NA	NA	
1,1,2-Trichloroethane	1.46	0.059	mg/kg dry	1.48	ND	98.8	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	1.55	0.059	mg/kg dry	1.48	ND	104	75-125	NA	NA	
1,1-Dichloroethane	1.50	0.059	mg/kg dry	1.48	ND	101	75-125	NA	NA	
1,1-Dichloroethene	1.50	0.059	mg/kg dry	1.48	ND	101	75-125	NA	NA	
1,1-Dichloropropene	1.51	0.059	mg/kg dry	1.48	ND	102	75-125	NA	NA	
1,2,3-Trichlorobenzene	1.54	0.15	mg/kg dry	1.48	ND	104	75-125	NA	NA	
1,2,3-Trichloropropane	1.52	0.059	mg/kg dry	1.48	ND	102	75-125	NA	NA	
1,2,4-Trichlorobenzene	1.52	0.059	mg/kg dry	1.48	ND	103	75-125	NA	NA	
1,2,4-Trimethylbenzene	1.56	0.15	mg/kg dry	1.48	ND	105	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	1.55	0.59	mg/kg dry	1.48	ND	105	75-125	NA	NA	
1,2-Dibromoethane	1.49	0.059	mg/kg dry	1.48	ND	100	75-125	NA	NA	
1,2-Dichlorobenzene	1.49	0.059	mg/kg dry	1.48	ND	100	75-125	NA	NA	
1,2-Dichloroethane	1.48	0.059	mg/kg dry	1.48	ND	99.6	75-125	NA	NA	
1,2-Dichloropropane	1.48	0.059	mg/kg dry	1.48	ND	99.4	75-125	NA	NA	
1,3,5-Trimethylbenzene	1.57	0.15	mg/kg dry	1.48	ND	106	75-125	NA	NA	
1,3-Dichlorobenzene	1.50	0.059	mg/kg dry	1.48	ND	101	75-125	NA	NA	
1,3-Dichloropropane	1.52	0.059	mg/kg dry	1.48	ND	103	75-125	NA	NA	
1,4-Dichlorobenzene	1.48	0.059	mg/kg dry	1.48	ND	99.8	75-125	NA	NA	
2,2-Dichloropropane	1.56	0.059	mg/kg dry	1.48	ND	105	75-125	NA	NA	
2-Butanone (MEK)	1.56	0.59	mg/kg dry	1.48	ND	105	75-170	NA	NA	
2-Chlorotoluene	1.49	0.15	mg/kg dry	1.48	ND	100	75-125	NA	NA	
4-Chlorotoluene	1.52	0.15	mg/kg dry	1.48	ND	102	75-125	NA	NA	
4-Isopropyltoluene	1.59	0.059	mg/kg dry	1.48	ND	107	75-125	NA	NA	
Acetone	1.91	0.89	mg/kg dry	1.48	ND	129	75-180	NA	NA	
Allyl Chloride	1.50	0.059	mg/kg dry	1.48	ND	101	75-125	NA	NA	
Benzene	1.51	0.059	mg/kg dry	1.48	ND	102	75-125	NA	NA	
Bromobenzene	1.46	0.059	mg/kg dry	1.48	ND	98.5	75-125	NA	NA	
Bromochloromethane	1.45	0.059	mg/kg dry	1.48	ND	97.5	75-125	NA	NA	
Bromodichloromethane	1.56	0.059	mg/kg dry	1.48	ND	105	75-125	NA	NA	
Bromoform	1.59	0.30	mg/kg dry	1.48	ND	107	75-125	NA	NA	
Bromomethane	1.49	0.15	mg/kg dry	1.48	ND	101	70-130	NA	NA	
Carbon Tetrachloride	1.64	0.059	mg/kg dry	1.48	ND	110	75-125	NA	NA	
Chlorobenzene	1.50	0.059	mg/kg dry	1.48	ND	101	75-125	NA	NA	
Chlorodibromomethane	1.55	0.059	mg/kg dry	1.48	ND	105	75-125	NA	NA	
Chloroethane	1.63	0.059	mg/kg dry	1.48	ND	110	75-125	NA	NA	
Chloroform	1.47	0.059	mg/kg dry	1.48	ND	99.3	75-125	NA	NA	
Chloromethane	1.38	0.059	mg/kg dry	1.48	ND	93.3	75-125	NA	NA	
cis-1,2-Dichloroethene	1.48	0.059	mg/kg dry	1.48	ND	99.8	75-125	NA	NA	
cis-1,3-Dichloropropene	1.55	0.059	mg/kg dry	1.48	ND	104	75-125	NA	NA	
Dibromomethane	1.45	0.059	mg/kg dry	1.48	ND	97.6	75-125	NA	NA	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3G0715 - EPA 5035

Matrix Spike (B3G0715-MS1) **Source: 1303884-01** Prepared & Analyzed: 07/29/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.48	0.059	mg/kg dry	1.48	ND	99.7	70-130	NA	NA	
Dichlorofluoromethane	1.50	0.059	mg/kg dry	1.48	ND	101	75-125	NA	NA	
Ethyl Ether	1.46	0.059	mg/kg dry	1.48	ND	98.1	75-125	NA	NA	
Ethylbenzene	1.57	0.059	mg/kg dry	1.48	ND	106	75-125	NA	NA	
Hexachlorobutadiene	1.65	0.15	mg/kg dry	1.48	ND	111	75-125	NA	NA	
Isopropylbenzene	1.57	0.15	mg/kg dry	1.48	ND	106	75-125	NA	NA	
m,p-Xylenes	3.12	0.12	mg/kg dry	2.96	ND	106	75-125	NA	NA	
Methyl Isobutyl Ketone	1.56	0.30	mg/kg dry	1.48	ND	105	75-125	NA	NA	
Methylene chloride	1.57	0.30	mg/kg dry	1.48	0.0948	99.6	75-125	NA	NA	
Methyl-t-butyl ether	1.48	0.059	mg/kg dry	1.48	ND	99.5	75-125	NA	NA	
Naphthalene	1.56	0.15	mg/kg dry	1.48	ND	105	75-125	NA	NA	
n-Butylbenzene	1.62	0.15	mg/kg dry	1.48	ND	109	75-125	NA	NA	
n-Propylbenzene	1.50	0.15	mg/kg dry	1.48	ND	101	75-125	NA	NA	
o-Xylene	1.53	0.059	mg/kg dry	1.48	ND	103	75-125	NA	NA	
sec-Butylbenzene	1.61	0.15	mg/kg dry	1.48	ND	109	75-125	NA	NA	
Styrene	1.56	0.15	mg/kg dry	1.48	ND	105	75-125	NA	NA	
tert-Butylbenzene	1.56	0.15	mg/kg dry	1.48	ND	105	75-125	NA	NA	
Tetrachloroethene	1.54	0.15	mg/kg dry	1.48	ND	104	75-125	NA	NA	
Tetrahydrofuran	1.53	0.30	mg/kg dry	1.48	ND	103	75-125	NA	NA	
Toluene	1.53	0.059	mg/kg dry	1.48	ND	103	75-125	NA	NA	
trans-1,2-Dichloroethene	1.44	0.059	mg/kg dry	1.48	ND	97.4	75-125	NA	NA	
trans-1,3-Dichloropropene	1.56	0.059	mg/kg dry	1.48	ND	105	75-125	NA	NA	
Trichloroethene	1.48	0.059	mg/kg dry	1.48	ND	99.8	75-125	NA	NA	
Trichlorofluoromethane	1.52	0.059	mg/kg dry	1.48	ND	103	75-125	NA	NA	
Vinyl chloride	1.36	0.15	mg/kg dry	1.48	ND	91.6	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*24.6*		ug/L	*25.0*	*NA*	*98.4*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.3*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Dibromofluoromethane	*24.7*		ug/L	*25.0*	*NA*	*98.6*	*80-120*			
Surrogate: Toluene-d8	*25.3*		ug/L	*25.0*	*NA*	*101*	*80-120*			

BRAUN INTERTEC

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3G0715 - EPA 5035

Matrix Spike Duplicate (B3G0715-MSD1) **Source: 1303884-01** Prepared & Analyzed: 07/29/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.53	0.059	mg/kg dry	1.48	ND	103	75-125	1.80	20	
1,1,1-Trichloroethane	1.51	0.059	mg/kg dry	1.48	ND	102	75-125	1.40	20	
1,1,2,2-Tetrachloroethane	1.59	0.059	mg/kg dry	1.48	ND	107	75-125	0.998	20	
1,1,2-Trichloroethane	1.48	0.059	mg/kg dry	1.48	ND	99.7	75-125	0.925	20	
1,1,2-Trichlorotrifluoroethane	1.51	0.059	mg/kg dry	1.48	ND	102	75-125	2.28	20	
1,1-Dichloroethane	1.45	0.059	mg/kg dry	1.48	ND	97.8	75-125	3.33	20	
1,1-Dichloroethene	1.44	0.059	mg/kg dry	1.48	ND	97.3	75-125	3.67	20	
1,1-Dichloropropene	1.48	0.059	mg/kg dry	1.48	ND	99.9	75-125	2.13	20	
1,2,3-Trichlorobenzene	1.48	0.15	mg/kg dry	1.48	ND	100	75-125	3.45	20	
1,2,3-Trichloropropane	1.48	0.059	mg/kg dry	1.48	ND	99.7	75-125	2.61	20	
1,2,4-Trichlorobenzene	1.48	0.059	mg/kg dry	1.48	ND	99.8	75-125	2.80	20	
1,2,4-Trimethylbenzene	1.51	0.15	mg/kg dry	1.48	ND	102	75-125	3.08	20	
1,2-Dibromo-3-chloropropane	1.56	0.59	mg/kg dry	1.48	ND	105	75-125	0.760	20	
1,2-Dibromoethane	1.49	0.059	mg/kg dry	1.48	ND	101	75-125	0.198	20	
1,2-Dichlorobenzene	1.44	0.059	mg/kg dry	1.48	ND	97.3	75-125	3.11	20	
1,2-Dichloroethane	1.45	0.059	mg/kg dry	1.48	ND	97.5	75-125	2.15	20	
1,2-Dichloropropane	1.49	0.059	mg/kg dry	1.48	ND	100	75-125	0.919	20	
1,3,5-Trimethylbenzene	1.53	0.15	mg/kg dry	1.48	ND	103	75-125	2.82	20	
1,3-Dichlorobenzene	1.46	0.059	mg/kg dry	1.48	ND	98.5	75-125	2.52	20	
1,3-Dichloropropane	1.50	0.059	mg/kg dry	1.48	ND	101	75-125	1.49	20	
1,4-Dichlorobenzene	1.47	0.059	mg/kg dry	1.48	ND	99.0	75-125	0.803	20	
2,2-Dichloropropane	1.56	0.059	mg/kg dry	1.48	ND	105	75-125	0.00	20	
2-Butanone (MEK)	1.66	0.59	mg/kg dry	1.48	ND	112	75-170	6.55	20	
2-Chlorotoluene	1.44	0.15	mg/kg dry	1.48	ND	97.2	75-125	3.07	20	
4-Chlorotoluene	1.47	0.15	mg/kg dry	1.48	ND	99.2	75-125	3.25	20	
4-Isopropyltoluene	1.55	0.059	mg/kg dry	1.48	ND	104	75-125	2.98	20	
Acetone	1.84	0.89	mg/kg dry	1.48	ND	124	75-180	3.79	25	
Allyl Chloride	1.46	0.059	mg/kg dry	1.48	ND	98.2	75-125	3.20	20	
Benzene	1.49	0.059	mg/kg dry	1.48	ND	101	75-125	1.38	20	
Bromobenzene	1.44	0.059	mg/kg dry	1.48	ND	96.9	75-125	1.63	20	
Bromochloromethane	1.41	0.059	mg/kg dry	1.48	ND	95.1	75-125	2.45	20	
Bromodichloromethane	1.57	0.059	mg/kg dry	1.48	ND	106	75-125	0.681	20	
Bromoform	1.59	0.30	mg/kg dry	1.48	ND	107	75-125	0.0372	20	
Bromomethane	1.46	0.15	mg/kg dry	1.48	ND	98.3	70-130	2.45	20	
Carbon Tetrachloride	1.62	0.059	mg/kg dry	1.48	ND	109	75-125	1.13	20	
Chlorobenzene	1.47	0.059	mg/kg dry	1.48	ND	98.8	75-125	2.32	20	
Chlorodibromomethane	1.53	0.059	mg/kg dry	1.48	ND	103	75-125	1.77	20	
Chloroethane	1.60	0.059	mg/kg dry	1.48	ND	108	75-125	1.36	20	
Chloroform	1.47	0.059	mg/kg dry	1.48	ND	98.9	75-125	0.403	20	
Chloromethane	1.37	0.059	mg/kg dry	1.48	ND	92.2	75-125	1.16	20	
cis-1,2-Dichloroethene	1.45	0.059	mg/kg dry	1.48	ND	98.0	75-125	1.86	20	
cis-1,3-Dichloropropene	1.57	0.059	mg/kg dry	1.48	ND	106	75-125	1.33	20	
Dibromomethane	1.48	0.059	mg/kg dry	1.48	ND	99.7	75-125	2.19	20	

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3G0715 - EPA 5035

Matrix Spike Duplicate (B3G0715-MSD1) **Source: 1303884-01** Prepared & Analyzed: 07/29/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.44	0.059	mg/kg dry	1.48	ND	97.0	70-130	2.76	20	
Dichlorofluoromethane	1.46	0.059	mg/kg dry	1.48	ND	98.6	75-125	2.40	20	
Ethyl Ether	1.42	0.059	mg/kg dry	1.48	ND	95.4	75-125	2.76	20	
Ethylbenzene	1.52	0.059	mg/kg dry	1.48	ND	102	75-125	3.19	20	
Hexachlorobutadiene	1.55	0.15	mg/kg dry	1.48	ND	104	75-125	6.47	20	
Isopropylbenzene	1.53	0.15	mg/kg dry	1.48	ND	103	75-125	2.76	20	
m,p-Xylenes	3.05	0.12	mg/kg dry	2.96	ND	103	75-125	2.44	20	
Methyl Isobutyl Ketone	1.56	0.30	mg/kg dry	1.48	ND	105	75-125	0.190	20	
Methylene chloride	1.56	0.30	mg/kg dry	1.48	0.0948	98.8	75-125	0.756	20	
Methyl-t-butyl ether	1.47	0.059	mg/kg dry	1.48	ND	98.9	75-125	0.644	20	
Naphthalene	1.52	0.15	mg/kg dry	1.48	ND	103	75-125	2.19	20	
n-Butylbenzene	1.54	0.15	mg/kg dry	1.48	ND	104	75-125	4.88	20	
n-Propylbenzene	1.45	0.15	mg/kg dry	1.48	ND	97.5	75-125	3.46	20	
o-Xylene	1.49	0.059	mg/kg dry	1.48	ND	101	75-125	2.19	20	
sec-Butylbenzene	1.56	0.15	mg/kg dry	1.48	ND	105	75-125	2.87	20	
Styrene	1.53	0.15	mg/kg dry	1.48	ND	103	75-125	2.34	20	
tert-Butylbenzene	1.51	0.15	mg/kg dry	1.48	ND	102	75-125	3.44	20	
Tetrachloroethene	1.50	0.15	mg/kg dry	1.48	ND	101	75-125	3.27	20	
Tetrahydrofuran	1.50	0.30	mg/kg dry	1.48	ND	101	75-125	2.42	20	
Toluene	1.47	0.059	mg/kg dry	1.48	ND	99.1	75-125	3.91	20	
trans-1,2-Dichloroethene	1.45	0.059	mg/kg dry	1.48	ND	97.9	75-125	0.532	20	
trans-1,3-Dichloropropene	1.58	0.059	mg/kg dry	1.48	ND	106	75-125	1.09	20	
Trichloroethene	1.46	0.059	mg/kg dry	1.48	ND	98.5	75-125	1.25	20	
Trichlorofluoromethane	1.51	0.059	mg/kg dry	1.48	ND	102	75-125	0.819	20	
Vinyl chloride	1.38	0.15	mg/kg dry	1.48	ND	93.2	70-130	1.73	20	
Surrogate: 1,2-Dichloroethane-d4	*24.9*		ug/L	*25.0*	*NA*	*99.6*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Dibromofluoromethane	*25.0*		ug/L	*25.0*	*NA*	*100*	*80-120*			
Surrogate: Toluene-d8	*25.3*		ug/L	*25.0*	*NA*	*101*	*80-120*			

BRAUN INTERTEC

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Braun Intertec-Bloomington	Client Ref: City of Edina	Report #: 1303974
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042A	Account ID: BL2004

For Braun Intertec Use Only
Laboratory Work Order No.
1303974

BRAUN INTERTEC
Braun Intertec Corporation
11001 Hampshire Ave. S
Minneapolis, MN 55438

REQUEST FOR LABORATORY ANALYTICAL SERVICES

Bottle orders and sampling inquires:
labservices@braunintertec.com
Phone: 952-995-2600 Fax: 952-995-2601

IMPORTANT
Date Results Requested: 8-2-13
Time
Rush Charges Authorized? ___ Yes ___ No
Rush / Quote #

Page 1 of 1
012712

REPORT RESULTS TO
Contact Name: Sara Holter
Project ID/Name: City of Edina
P.O. #/Project #: BL-12-07042A
Company: BRAUN Intertec
Mailing Address: BL
City, State, Zip
Telephone #
Fax #
E-mail

SEND INVOICE TO
Contact Name
Company
Address
City, State, Zip
Telephone #
Fax #

Special Instructions and/or Specific Regulatory Requirements:
(method, limit of detection, petrofund, reporting units)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)

Site Location (State): MN

LAB ID#	CLIENT SAMPLE IDENTIFICATION (IDs must be unique)	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	VOLUME/AREA (specify units)	Number of Containers	Metals Field Filtered Y/N	DRO	GRO	VOC	FOR LAB USE ONLY
1	Trip Blank	7-26-13	—	MeOH							
2	SW-1 (6-10)		0905	S		5		X	X	X	
3	B-1 (22)		1142	S		5		X	X	X	
4	SW-2 (8-12)		1202	S		5		X	X	X	
5	SW-3 (12-16)		1442			5		X	X	X	
6	SW-4 (7-14)		1445			5		X	X	X	
7	B-2 (22)		1440			6		X	X	X	

CHAIN OF CUSTODY
Collected by: (Print) Scott Jordan
Collector's Signature:
Relinquished by: Date/Time 7-26-13 1539
Received by: Date/Time
Relinquished by: Date/Time
Received Contents Not Verified: Date/Time
Received Contents Verified: Date/Time 7/26/13 1540
Comments:

Custody Seal Intact ☐ Yes ☐ No ☐ N/A ☑ Hand Delivered by Client
On Ice ☑ Yes ☐ No
Temp Blank ☑ Yes ☐ No
Temp: 3.4 °C

Form # CS02.03 F:\Groups\QA-QC\Forms\clientservices\COC-CS02 Effective Date: 10/10/07

Braun Intertec Corporation
11001 Hampshire Avenue S.
Minneapolis, MN 55438

Phone: 952.995.2000
Fax: 952.995.2020
Web: braunintertec.com

Ms. Sara Holter
Braun Intertec-Bloomington
11001 Hampshire Ave. South
Bloomington, MN 55438

October 03, 2013

Report #: 1305411

RE: Former Edina Public Works Building
BL-12-07042B C

Dear Sara Holter:

Braun Intertec Corporation received samples for the project identified above on September 27, 2013. Analytical results are summarized in the following report.

All routine quality assurance procedures were followed, unless otherwise noted.

Analytical results are reported on an "as received" basis unless otherwise noted. Where possible, the samples will be retained by the laboratory for 14 days following issuance of the initial final report. The samples will be disposed of or returned at that time. Arrangements can be made for extended storage by contacting me at this time.

We appreciate your decision to use Braun Intertec Corporation for this project. We are committed to being your vendor of choice to meet your analytical chemistry needs.

If you have any questions please contact me at the above phone number.

Sincerely,

Thomas P. Wagner
Project Manager

Certification/Accreditation Number

Minnesota Department of Health #027-053-117

Providing engineering and environmental solutions since 1957

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Qualifiers and Abbreviations

vfa	The method reporting limit (MRL) was raised for one or more analytes; a dilution of the sample was necessary due to high analyte levels and/or matrix interferences.
qp	The relative percent difference (RPD) was outside of laboratory control limits for the sample and sample duplicate (DUP).
ho	The sample chromatogram indicates the presence of higher boiling hydrocarbons than expected in the diesel range chromatogram.
hno	The sample chromatogram indicates the presence of lower and higher boiling hydrocarbons than expected in the diesel range chromatogram.
A5	Methyl Isobuty Ketone recovery for the continuing calibration sample is 131%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A4a	Trans-1,3-Dichloropropene recovery for the continuing calibration sample is 126%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A4	Bromoform recovery for the continuing calibration sample is 124%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A3a	Tetrahydrofuran recovery for the continuing calibration sample is 131%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A3	Acetone recovery for the continuing calibration sample is 147%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A2a	Tetracholoethene recovery for the continuing calibration sample is 126%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A2	2-Butanone(MEK) recovery for the continuing calibration sample is 137%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A1a	Naphthalene recovery for the continuing calibration sample is 126%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A1	1,2-Dibromo-3-chloropropane recovery for the continuing calibration sample is 123%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
ca	This field of testing is not certifiable by the Minnesota Department of Health.
COC	Chain of Custody
dry	Sample results reported on a dry weight basis
MRL	Method Reporting Limit
NA	Not Applicable
ND	Analyte NOT DETECTED
NR	Not Reported
%Rec	Percent Recovery
RPD	Relative Percent Difference
VOC	Volatile Organic Compound

A field of testing is the combination of analyte, matrix, method, and regulatory program.

BRAUN INTERTEC

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Sample Summary

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Trip Blank	1305411-01	Soil	09/27/13 00:00	09/27/13 13:36
PP-5 (5.0-7.5)	1305411-02	Soil	09/27/13 10:27	09/27/13 13:36
PP-5 (37.0-38.0)	1305411-03	Soil	09/27/13 11:23	09/27/13 13:36
PP-6 (5.0-7.5)	1305411-04	Soil	09/27/13 11:44	09/27/13 13:36
PP-6 (37.5-40.0)	1305411-05	Soil	09/27/13 13:05	09/27/13 13:36

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Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Conditions Upon Receipt

Cooler: Cooler 1

Temperature:	2.4 °C	**COC Included:**	Yes	**Custody Seals Used:**	No
Temperature Blank:	Yes	**COC Complete:**	Yes	**Custody Seals Intact:**	NA
Received on Ice:	Yes	**COC & Labels Agree:**	Yes	**Hand Delivered by Client:**	Yes
Preservation Confirmed:	No	**Sufficient Sample Provided:**	Yes	**Headspace Present (VOC):**	No

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Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Trip Blank

1305411-01 (Soil)

9/27/13 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.50	0.50	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.50	0.50	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Acetone	< 0.75	0.75	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3
Allyl Chloride	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Benzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromochloromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromoform	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4
Bromomethane	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Trip Blank

1305411-01 (Soil)

9/27/13 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Chloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroform	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dibromomethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Ethylbenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.10	0.10	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Naphthalene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
o-Xylene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Styrene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,2-Dichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,3-Dichloropropene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Vinyl chloride	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*96.9 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*99.9 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*102 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-5 (5.0-7.5)

1305411-02 (Soil)

9/27/13 10:27

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**93**	0.050	% Wt	1	B3J0036	10/2/13	10/2/13	ZCW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	**140**	44	mg/kg dry	5	B3J0001	10/1/13	10/2/13	RSS	WI DRO (95)	ho, qp, vfa
Surrogate: n-Nonane	*37.3 %*	*Limits: 20-80%*			*B3J0001*	*10/1/13*	*10/2/13*	*RSS*	*WI DRO (95)*	
Surrogate: n-Triacontane	*97.0 %*	*Limits: 30-125%*			*B3J0001*	*10/1/13*	*10/2/13*	*RSS*	*WI DRO (95)*	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.54	0.54	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.54	0.54	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-5 (5.0-7.5)

1305411-02 (Soil)

9/27/13 10:27

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Acetone	< 0.81	0.81	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3
Allyl Chloride	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Benzene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromobenzene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromochloromethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromoform	< 0.27	0.27	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4
Bromomethane	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorobenzene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroform	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloromethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dibromomethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Ethylbenzene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.11	0.11	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	< 0.27	0.27	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.27	0.27	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Naphthalene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
o-Xylene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Styrene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.27	0.27	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-5 (5.0-7.5)

1305411-02 (Soil)

9/27/13 10:27

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
trans-1,2-Dichloroethene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,3-Dichloropropene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.054	0.054	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Vinyl chloride	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*108 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*97.5 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*102 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*99.5 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-5 (37.0-38.0)

1305411-03 (Soil)

9/27/13 11:23

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**98**	0.050	% Wt	1	B3J0036	10/2/13	10/2/13	ZCW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	**38**	8.0	mg/kg dry	1	B3J0001	10/1/13	10/1/13	RSS	WI DRO (95)	hno
Surrogate: n-Nonane	*29.7 %*	*Limits: 20-80%*			*B3J0001*	*10/1/13*	*10/1/13*	*RSS*	*WI DRO (95)*	
Surrogate: n-Triacontane	*74.3 %*	*Limits: 30-125%*			*B3J0001*	*10/1/13*	*10/1/13*	*RSS*	*WI DRO (95)*	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.51	0.51	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.51	0.51	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-5 (37.0-38.0)

1305411-03 (Soil)

9/27/13 11:23

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Acetone	< 0.77	0.77	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3
Allyl Chloride	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Benzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromochloromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromoform	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4
Bromomethane	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroform	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dibromomethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Ethylbenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.10	0.10	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	**0.45**	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Naphthalene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
o-Xylene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Styrene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-5 (37.0-38.0)

1305411-03 (Soil)

9/27/13 11:23

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
trans-1,2-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,3-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Vinyl chloride	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*98.4 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*101 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*100 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	

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PP-6 (5.0-7.5)

1305411-04 (Soil)

9/27/13 11:44

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**88**	0.050	% Wt	1	B3J0036	10/2/13	10/2/13	ZCW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	< 9.4	9.4	mg/kg dry	1	B3J0001	10/1/13	10/1/13	RSS	WI DRO (95)	
Surrogate: n-Nonane	*48.8 %*	*Limits: 20-80%*			*B3J0001*	*10/1/13*	*10/1/13*	*RSS*	*WI DRO (95)*	
Surrogate: n-Triacontane	*86.0 %*	*Limits: 30-125%*			*B3J0001*	*10/1/13*	*10/1/13*	*RSS*	*WI DRO (95)*	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.57	0.57	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.57	0.57	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-6 (5.0-7.5)

1305411-04 (Soil)

9/27/13 11:44

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Acetone	< 0.85	0.85	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A3
Allyl Chloride	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Benzene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Bromobenzene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Bromochloromethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Bromoform	< 0.28	0.28	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A4
Bromomethane	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Chlorobenzene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Chloroethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Chloroform	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Chloromethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Dibromomethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Ethylbenzene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.11	0.11	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	< 0.28	0.28	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.28	0.28	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Naphthalene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
o-Xylene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Styrene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.28	0.28	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-6 (5.0-7.5)

1305411-04 (Soil)

9/27/13 11:44

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
trans-1,2-Dichloroethene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
trans-1,3-Dichloropropene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.057	0.057	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Vinyl chloride	< 0.14	0.14	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/29/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*96.3 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/29/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*99.6 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/29/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*99.6 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/29/13*	*SGM*	*EPA 8260B*	

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PP-6 (37.5-40.0)

1305411-05 (Soil)

9/27/13 13:05

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**97**	0.050	% Wt	1	B3J0036	10/2/13	10/2/13	ZCW	EPA 3545A 11.4	ca

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	< 8.5	8.5	mg/kg dry	1	B3J0001	10/1/13	10/1/13	RSS	WI DRO (95)	
Surrogate: n-Nonane	*46.9 %*	*Limits: 20-80%*			*B3J0001*	*10/1/13*	*10/1/13*	*RSS*	*WI DRO (95)*	
Surrogate: n-Triacontane	*86.4 %*	*Limits: 30-125%*			*B3J0001*	*10/1/13*	*10/1/13*	*RSS*	*WI DRO (95)*	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.51	0.51	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.51	0.51	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-6 (37.5-40.0)

1305411-05 (Soil)

9/27/13 13:05

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Acetone	< 0.77	0.77	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A3
Allyl Chloride	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Benzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Bromobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Bromochloromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Bromoform	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A4
Bromomethane	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Chlorobenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Chloroethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Chloroform	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Chloromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Dibromomethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Ethylbenzene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.10	0.10	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Naphthalene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
o-Xylene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Styrene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

PP-6 (37.5-40.0)

1305411-05 (Soil)

9/27/13 13:05

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
trans-1,2-Dichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
trans-1,3-Dichloropropene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.051	0.051	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Vinyl chloride	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/29/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*105 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/29/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*96.7 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/29/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*99.3 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/29/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*100 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/29/13*	*SGM*	*EPA 8260B*	

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Classical Chemistry Parameters - Quality Control

Batch B3J0036 - % Solids

Method Blank (B3J0036-BLK1)

Prepared & Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	< 0.050	0.050	% Wt	NA	NA	NA	NA	NA	NA	

Duplicate (B3J0036-DUP1)

Source: 1305411-02 Prepared & Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	93.3	0.050	% Wt	NA	92.8	NA	NA	0.507	20	

Standard Reference Material (B3J0036-SRM1)

Prepared & Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	91.7		% Wt	92.8	NA	98.9	90-110	NA	NA	

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Total Petroleum Hydrocarbons - Quality Control

Batch B3J0001 - WI DRO (95)

Method Blank (B3J0001-BLK1)

Prepared & Analyzed: 10/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	< 10	10	mg/kg	NA	NA	NA	NA	NA	NA	
Surrogate: n-Nonane	*2.62*		mg/kg	*4.00*	*NA*	*65.4*	*20-80*			
Surrogate: n-Triacontane	*3.52*		mg/kg	*4.00*	*NA*	*88.1*	*30-125*			

Laboratory Control Sample (B3J0001-BS1)

Prepared & Analyzed: 10/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	29.6	10	mg/kg	32.0	NA	92.6	70-120	NA	NA	
Surrogate: n-Nonane	*2.23*		mg/kg	*4.00*	*NA*	*55.6*	*20-80*			
Surrogate: n-Triacontane	*3.49*		mg/kg	*4.00*	*NA*	*87.2*	*30-125*			

Laboratory Control Sample Duplicate (B3J0001-BSD1)

Prepared & Analyzed: 10/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	30.4	10	mg/kg	32.0	NA	94.9	70-120	2.48	20	
Surrogate: n-Nonane	*2.60*		mg/kg	*4.00*	*NA*	*65.0*	*20-80*			
Surrogate: n-Triacontane	*3.50*		mg/kg	*4.00*	*NA*	*87.4*	*30-125*			

Duplicate (B3J0001-DUP2)

Source: 1305411-02RE1 Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	109	43	mg/kg dry	NA	142	NA	NA	26.5	20	qp
Surrogate: n-Nonane	*1.10*		mg/kg dry	*3.46*	*NA*	*31.8*	*20-80*			
Surrogate: n-Triacontane	*2.57*		mg/kg dry	*3.46*	*NA*	*74.4*	*30-125*			

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Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Method Blank (B3I0634-BLK1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2-Trichlorotrifluoroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,3-Trichlorobenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,3-Trichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,4-Trichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,4-Trimethylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dibromo-3-chloropropane	< 0.50	0.50	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dibromoethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,3,5-Trimethylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,3-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
2,2-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
2-Butanone (MEK)	< 0.50	0.50	mg/kg	NA	NA	NA	NA	NA	NA	
2-Chlorotoluene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
4-Chlorotoluene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
4-Isopropyltoluene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Acetone	< 0.75	0.75	mg/kg	NA	NA	NA	NA	NA	NA	
Allyl Chloride	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Benzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromochloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromodichloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromoform	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Bromomethane	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Carbon Tetrachloride	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chlorodibromomethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloroform	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
cis-1,2-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
cis-1,3-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Dibromomethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Method Blank (B3I0634-BLK1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Dichlorofluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Ethyl Ether	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Ethylbenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Hexachlorobutadiene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Isopropylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
m,p-Xylenes	< 0.10	0.10	mg/kg	NA	NA	NA	NA	NA	NA	
Methyl Isobutyl Ketone	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Methylene chloride	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Methyl-t-butyl ether	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Naphthalene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
n-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
n-Propylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
o-Xylene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
sec-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Styrene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
tert-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Tetrachloroethene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Tetrahydrofuran	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Toluene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
trans-1,2-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
trans-1,3-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Trichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Trichlorofluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Vinyl chloride	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*25.6*		ug/L	*25.0*	*NA*	*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.0*		ug/L	*25.0*	*NA*	*100*	*80-120*			
Surrogate: Dibromofluoromethane	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Toluene-d8	*25.4*		ug/L	*25.0*	*NA*	*102*	*80-120*			

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample (B3I0634-BS1) Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,1,1-Trichloroethane	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	1.31	0.050	mg/kg	1.25	NA	104	75-125	NA	NA	
1,1,2-Trichloroethane	1.31	0.050	mg/kg	1.25	NA	105	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
1,1-Dichloroethane	1.41	0.050	mg/kg	1.25	NA	113	75-125	NA	NA	
1,1-Dichloroethene	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,1-Dichloropropene	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
1,2,3-Trichlorobenzene	1.39	0.12	mg/kg	1.25	NA	111	75-125	NA	NA	
1,2,3-Trichloropropane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
1,2,4-Trichlorobenzene	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
1,2,4-Trimethylbenzene	1.42	0.12	mg/kg	1.25	NA	113	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	1.41	0.50	mg/kg	1.25	NA	112	75-125	NA	NA	
1,2-Dibromoethane	1.34	0.050	mg/kg	1.25	NA	107	75-125	NA	NA	
1,2-Dichlorobenzene	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,2-Dichloroethane	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
1,2-Dichloropropane	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,3,5-Trimethylbenzene	1.41	0.12	mg/kg	1.25	NA	113	75-125	NA	NA	
1,3-Dichlorobenzene	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,3-Dichloropropane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
1,4-Dichlorobenzene	1.36	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
2,2-Dichloropropane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
2-Butanone (MEK)	1.64	0.50	mg/kg	1.25	NA	131	75-140	NA	NA	
2-Chlorotoluene	1.36	0.12	mg/kg	1.25	NA	109	75-125	NA	NA	
4-Chlorotoluene	1.39	0.12	mg/kg	1.25	NA	111	75-125	NA	NA	
4-Isopropyltoluene	1.41	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
Acetone	1.69	0.75	mg/kg	1.25	NA	135	80-175	NA	NA	
Allyl Chloride	1.42	0.050	mg/kg	1.25	NA	114	75-125	NA	NA	
Benzene	1.36	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
Bromobenzene	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
Bromochloromethane	1.38	0.050	mg/kg	1.25	NA	110	75-125	NA	NA	
Bromodichloromethane	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
Bromoform	1.40	0.25	mg/kg	1.25	NA	112	75-125	NA	NA	
Bromomethane	1.09	0.12	mg/kg	1.25	NA	86.9	70-130	NA	NA	
Carbon Tetrachloride	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
Chlorobenzene	1.33	0.050	mg/kg	1.25	NA	106	75-125	NA	NA	
Chlorodibromomethane	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
Chloroethane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
Chloroform	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
Chloromethane	1.24	0.050	mg/kg	1.25	NA	99.0	75-125	NA	NA	
cis-1,2-Dichloroethene	1.40	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
cis-1,3-Dichloropropene	1.34	0.050	mg/kg	1.19	NA	112	75-125	NA	NA	
Dibromomethane	1.33	0.050	mg/kg	1.25	NA	106	75-125	NA	NA	

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample (B3I0634-BS1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.29	0.050	mg/kg	1.25	NA	103	70-130	NA	NA	
Dichlorofluoromethane	1.37	0.050	mg/kg	1.25	NA	110	75-125	NA	NA	
Ethyl Ether	1.42	0.050	mg/kg	1.25	NA	113	75-125	NA	NA	
Ethylbenzene	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
Hexachlorobutadiene	1.25	0.12	mg/kg	1.25	NA	100	75-125	NA	NA	
Isopropylbenzene	1.40	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
m,p-Xylenes	2.76	0.10	mg/kg	2.50	NA	110	75-125	NA	NA	
Methyl Isobutyl Ketone	1.46	0.25	mg/kg	1.25	NA	117	75-125	NA	NA	
Methylene chloride	1.32	0.25	mg/kg	1.25	NA	105	75-125	NA	NA	
Methyl-t-butyl ether	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
Naphthalene	1.45	0.12	mg/kg	1.25	NA	116	75-125	NA	NA	
n-Butylbenzene	1.41	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
n-Propylbenzene	1.41	0.12	mg/kg	1.25	NA	113	75-125	NA	NA	
o-Xylene	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
sec-Butylbenzene	1.41	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
Styrene	1.40	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
tert-Butylbenzene	1.40	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
Tetrachloroethene	1.50	0.12	mg/kg	1.25	NA	120	75-125	NA	NA	
Tetrahydrofuran	1.51	0.25	mg/kg	1.25	NA	120	75-125	NA	NA	
Toluene	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
trans-1,2-Dichloroethene	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
trans-1,3-Dichloropropene	1.35	0.050	mg/kg	1.16	NA	117	75-125	NA	NA	
Trichloroethene	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
Trichlorofluoromethane	1.37	0.050	mg/kg	1.25	NA	110	75-125	NA	NA	
Vinyl chloride	1.33	0.12	mg/kg	1.25	NA	106	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*25.8*		ug/L	*25.0*	*NA*	*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.8*		ug/L	*25.0*	*NA*	*99.0*	*80-120*			
Surrogate: Dibromofluoromethane	*25.9*		ug/L	*25.0*	*NA*	*104*	*80-120*			
Surrogate: Toluene-d8	*24.8*		ug/L	*25.0*	*NA*	*99.1*	*80-120*			

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample Duplicate (B3I0634-BSD1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.24	0.050	mg/kg	1.25	NA	99.2	75-125	9.17	20	
1,1,1-Trichloroethane	1.24	0.050	mg/kg	1.25	NA	99.1	75-125	11.2	20	
1,1,2,2-Tetrachloroethane	1.22	0.050	mg/kg	1.25	NA	97.5	75-125	6.92	20	
1,1,2-Trichloroethane	1.24	0.050	mg/kg	1.25	NA	98.8	75-125	5.73	20	
1,1,2-Trichlorotrifluoroethane	1.20	0.050	mg/kg	1.25	NA	95.6	75-125	12.0	20	
1,1-Dichloroethane	1.25	0.050	mg/kg	1.25	NA	99.6	75-125	12.3	20	
1,1-Dichloroethene	1.23	0.050	mg/kg	1.25	NA	98.4	75-125	10.4	20	
1,1-Dichloropropene	1.25	0.050	mg/kg	1.25	NA	100	75-125	11.4	20	
1,2,3-Trichlorobenzene	1.26	0.12	mg/kg	1.25	NA	101	75-125	9.84	20	
1,2,3-Trichloropropane	1.26	0.050	mg/kg	1.25	NA	100	75-125	7.36	20	
1,2,4-Trichlorobenzene	1.27	0.050	mg/kg	1.25	NA	101	75-125	10.0	20	
1,2,4-Trimethylbenzene	1.28	0.12	mg/kg	1.25	NA	102	75-125	10.7	20	
1,2-Dibromo-3-chloropropane	1.26	0.50	mg/kg	1.25	NA	100	75-125	11.3	20	
1,2-Dibromoethane	1.24	0.050	mg/kg	1.25	NA	99.1	75-125	7.74	20	
1,2-Dichlorobenzene	1.24	0.050	mg/kg	1.25	NA	99.0	75-125	9.89	20	
1,2-Dichloroethane	1.24	0.050	mg/kg	1.25	NA	99.2	75-125	11.2	20	
1,2-Dichloropropane	1.23	0.050	mg/kg	1.25	NA	98.0	75-125	10.4	20	
1,3,5-Trimethylbenzene	1.27	0.12	mg/kg	1.25	NA	101	75-125	11.1	20	
1,3-Dichlorobenzene	1.24	0.050	mg/kg	1.25	NA	98.6	75-125	9.67	20	
1,3-Dichloropropane	1.23	0.050	mg/kg	1.25	NA	98.1	75-125	9.24	20	
1,4-Dichlorobenzene	1.25	0.050	mg/kg	1.25	NA	99.8	75-125	8.21	20	
2,2-Dichloropropane	1.20	0.050	mg/kg	1.25	NA	95.4	75-125	12.0	20	
2-Butanone (MEK)	1.41	0.50	mg/kg	1.25	NA	113	75-140	14.9	20	
2-Chlorotoluene	1.24	0.12	mg/kg	1.25	NA	98.7	75-125	9.88	20	
4-Chlorotoluene	1.27	0.12	mg/kg	1.25	NA	101	75-125	8.97	20	
4-Isopropyltoluene	1.27	0.050	mg/kg	1.25	NA	101	75-125	10.2	20	
Acetone	1.51	0.75	mg/kg	1.25	NA	120	80-175	11.3	25	
Allyl Chloride	1.28	0.050	mg/kg	1.25	NA	102	75-125	11.0	20	
Benzene	1.24	0.050	mg/kg	1.25	NA	98.9	75-125	9.13	20	
Bromobenzene	1.23	0.050	mg/kg	1.25	NA	98.2	75-125	10.2	20	
Bromochloromethane	1.24	0.050	mg/kg	1.25	NA	99.3	75-125	10.1	20	
Bromodichloromethane	1.27	0.050	mg/kg	1.25	NA	101	75-125	7.69	20	
Bromoform	1.31	0.25	mg/kg	1.25	NA	104	75-125	6.65	20	
Bromomethane	0.979	0.12	mg/kg	1.25	NA	78.2	70-130	10.6	20	
Carbon Tetrachloride	1.24	0.050	mg/kg	1.25	NA	99.0	75-125	11.4	20	
Chlorobenzene	1.23	0.050	mg/kg	1.25	NA	98.2	75-125	7.77	20	
Chlorodibromomethane	1.26	0.050	mg/kg	1.25	NA	101	75-125	8.21	20	
Chloroethane	1.19	0.050	mg/kg	1.25	NA	95.0	75-125	12.7	20	
Chloroform	1.24	0.050	mg/kg	1.25	NA	99.4	75-125	10.8	20	
Chloromethane	1.11	0.050	mg/kg	1.25	NA	88.4	75-125	11.2	20	
cis-1,2-Dichloroethene	1.25	0.050	mg/kg	1.25	NA	99.4	75-125	11.4	20	
cis-1,3-Dichloropropene	1.22	0.050	mg/kg	1.19	NA	102	75-125	9.65	20	
Dibromomethane	1.22	0.050	mg/kg	1.25	NA	97.4	75-125	8.29	20	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample Duplicate (B3I0634-BSD1) Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.16	0.050	mg/kg	1.25	NA	92.3	70-130	11.0	20	
Dichlorofluoromethane	1.22	0.050	mg/kg	1.25	NA	97.6	75-125	11.5	20	
Ethyl Ether	1.26	0.050	mg/kg	1.25	NA	100	75-125	12.3	20	
Ethylbenzene	1.27	0.050	mg/kg	1.25	NA	101	75-125	9.23	20	
Hexachlorobutadiene	1.17	0.12	mg/kg	1.25	NA	93.5	75-125	6.89	20	
Isopropylbenzene	1.29	0.12	mg/kg	1.25	NA	103	75-125	8.39	20	
m,p-Xylenes	2.53	0.10	mg/kg	2.50	NA	101	75-125	8.71	20	
Methyl Isobutyl Ketone	1.32	0.25	mg/kg	1.25	NA	105	75-125	10.7	20	
Methylene chloride	1.16	0.25	mg/kg	1.25	NA	92.9	75-125	12.4	20	
Methyl-t-butyl ether	1.26	0.050	mg/kg	1.25	NA	101	75-125	10.8	20	
Naphthalene	1.32	0.12	mg/kg	1.25	NA	106	75-125	9.12	20	
n-Butylbenzene	1.27	0.12	mg/kg	1.25	NA	101	75-125	10.5	20	
n-Propylbenzene	1.28	0.12	mg/kg	1.25	NA	102	75-125	9.82	20	
o-Xylene	1.25	0.050	mg/kg	1.25	NA	99.4	75-125	8.16	20	
sec-Butylbenzene	1.28	0.12	mg/kg	1.25	NA	102	75-125	9.45	20	
Styrene	1.31	0.12	mg/kg	1.25	NA	104	75-125	7.23	20	
tert-Butylbenzene	1.26	0.12	mg/kg	1.25	NA	100	75-125	10.8	20	
Tetrachloroethene	1.40	0.12	mg/kg	1.25	NA	112	75-125	6.81	20	
Tetrahydrofuran	1.36	0.25	mg/kg	1.25	NA	109	75-125	10.3	20	
Toluene	1.24	0.050	mg/kg	1.25	NA	98.8	75-125	8.58	20	
trans-1,2-Dichloroethene	1.22	0.050	mg/kg	1.25	NA	97.6	75-125	11.1	20	
trans-1,3-Dichloropropene	1.23	0.050	mg/kg	1.16	NA	107	75-125	9.08	20	
Trichloroethene	1.28	0.050	mg/kg	1.25	NA	102	75-125	9.09	20	
Trichlorofluoromethane	1.22	0.050	mg/kg	1.25	NA	97.6	75-125	11.5	20	
Vinyl chloride	1.17	0.12	mg/kg	1.25	NA	93.1	70-130	13.0	20	
Surrogate: 1,2-Dichloroethane-d4	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.1*		ug/L	*25.0*	*NA*	*100*	*80-120*			
Surrogate: Dibromofluoromethane	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Toluene-d8	*25.0*		ug/L	*25.0*	*NA*	*100*	*80-120*			

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike (B3I0634-MS1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,1,1-Trichloroethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	
1,1,2-Trichloroethane	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
1,1-Dichloroethane	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
1,1-Dichloroethene	1.48	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,1-Dichloropropene	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
1,2,3-Trichlorobenzene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,2,3-Trichloropropane	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2,4-Trichlorobenzene	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2,4-Trimethylbenzene	1.51	0.14	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	1.51	0.56	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2-Dibromoethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,2-Dichlorobenzene	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
1,2-Dichloroethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,2-Dichloropropane	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,3,5-Trimethylbenzene	1.51	0.14	mg/kg dry	1.40	ND	108	75-125	NA	NA	
1,3-Dichlorobenzene	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,3-Dichloropropane	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
1,4-Dichlorobenzene	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
2,2-Dichloropropane	1.45	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
2-Butanone (MEK)	1.59	0.56	mg/kg dry	1.40	ND	113	75-170	NA	NA	
2-Chlorotoluene	1.48	0.14	mg/kg dry	1.40	ND	105	75-125	NA	NA	
4-Chlorotoluene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	NA	NA	
4-Isopropyltoluene	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Acetone	1.72	0.84	mg/kg dry	1.40	ND	123	75-180	NA	NA	
Allyl Chloride	1.54	0.056	mg/kg dry	1.40	ND	110	75-125	NA	NA	
Benzene	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
Bromobenzene	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	
Bromochloromethane	1.48	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Bromodichloromethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Bromoform	1.56	0.28	mg/kg dry	1.40	ND	111	75-125	NA	NA	
Bromomethane	1.16	0.14	mg/kg dry	1.40	ND	82.5	70-130	NA	NA	
Carbon Tetrachloride	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Chlorobenzene	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
Chlorodibromomethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Chloroethane	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	
Chloroform	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
Chloromethane	1.32	0.056	mg/kg dry	1.40	ND	94.2	75-125	NA	NA	
cis-1,2-Dichloroethene	1.53	0.056	mg/kg dry	1.40	ND	109	75-125	NA	NA	
cis-1,3-Dichloropropene	1.45	0.056	mg/kg dry	1.34	ND	109	75-125	NA	NA	
Dibromomethane	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike (B3I0634-MS1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.40	0.056	mg/kg dry	1.40	ND	99.7	70-130	NA	NA	
Dichlorofluoromethane	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
Ethyl Ether	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Ethylbenzene	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
Hexachlorobutadiene	1.40	0.14	mg/kg dry	1.40	ND	99.5	75-125	NA	NA	
Isopropylbenzene	1.55	0.14	mg/kg dry	1.40	ND	110	75-125	NA	NA	
m,p-Xylenes	3.01	0.11	mg/kg dry	2.80	ND	107	75-125	NA	NA	
Methyl Isobutyl Ketone	1.62	0.28	mg/kg dry	1.40	ND	115	75-125	NA	NA	
Methylene chloride	1.42	0.28	mg/kg dry	1.40	0.0602	97.1	75-125	NA	NA	
Methyl-t-butyl ether	1.53	0.056	mg/kg dry	1.40	ND	109	75-125	NA	NA	
Naphthalene	1.56	0.14	mg/kg dry	1.40	ND	111	75-125	NA	NA	
n-Butylbenzene	1.51	0.14	mg/kg dry	1.40	ND	108	75-125	NA	NA	
n-Propylbenzene	1.50	0.14	mg/kg dry	1.40	ND	107	75-125	NA	NA	
o-Xylene	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
sec-Butylbenzene	1.50	0.14	mg/kg dry	1.40	ND	107	75-125	NA	NA	
Styrene	1.56	0.14	mg/kg dry	1.40	ND	111	75-125	NA	NA	
tert-Butylbenzene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Tetrachloroethene	1.67	0.14	mg/kg dry	1.40	ND	119	75-125	NA	NA	
Tetrahydrofuran	1.66	0.28	mg/kg dry	1.40	ND	118	75-125	NA	NA	
Toluene	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
trans-1,2-Dichloroethene	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
trans-1,3-Dichloropropene	1.48	0.056	mg/kg dry	1.30	ND	114	75-125	NA	NA	
Trichloroethene	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
Trichlorofluoromethane	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
Vinyl chloride	1.41	0.14	mg/kg dry	1.40	ND	100	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*25.5*		ug/L	*25.0*	*NA*	*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.5*		ug/L	*25.0*	*NA*	*102*	*80-120*			
Surrogate: Dibromofluoromethane	*25.7*		ug/L	*25.0*	*NA*	*103*	*80-120*			
Surrogate: Toluene-d8	*24.9*		ug/L	*25.0*	*NA*	*99.7*	*80-120*			

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike Duplicate (B3I0634-MSD1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	3.79	20	
1,1,1-Trichloroethane	1.40	0.056	mg/kg dry	1.40	ND	100	75-125	6.08	20	
1,1,2,2-Tetrachloroethane	1.38	0.056	mg/kg dry	1.40	ND	98.3	75-125	5.14	20	
1,1,2-Trichloroethane	1.39	0.056	mg/kg dry	1.40	ND	98.7	75-125	4.97	20	
1,1,2-Trichlorotrifluoroethane	1.39	0.056	mg/kg dry	1.40	ND	99.2	75-125	5.52	20	
1,1-Dichloroethane	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	6.48	20	
1,1-Dichloroethene	1.39	0.056	mg/kg dry	1.40	ND	98.8	75-125	6.56	20	
1,1-Dichloropropene	1.44	0.056	mg/kg dry	1.40	ND	102	75-125	5.84	20	
1,2,3-Trichlorobenzene	1.43	0.14	mg/kg dry	1.40	ND	102	75-125	4.15	20	
1,2,3-Trichloropropane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	5.94	20	
1,2,4-Trichlorobenzene	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	4.34	20	
1,2,4-Trimethylbenzene	1.45	0.14	mg/kg dry	1.40	ND	104	75-125	3.71	20	
1,2-Dibromo-3-chloropropane	1.43	0.56	mg/kg dry	1.40	ND	102	75-125	5.16	20	
1,2-Dibromoethane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	5.38	20	
1,2-Dichlorobenzene	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	3.06	20	
1,2-Dichloroethane	1.41	0.056	mg/kg dry	1.40	ND	101	75-125	5.25	20	
1,2-Dichloropropane	1.40	0.056	mg/kg dry	1.40	ND	99.4	75-125	4.40	20	
1,3,5-Trimethylbenzene	1.46	0.14	mg/kg dry	1.40	ND	104	75-125	3.47	20	
1,3-Dichlorobenzene	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	3.74	20	
1,3-Dichloropropane	1.40	0.056	mg/kg dry	1.40	ND	99.4	75-125	5.01	20	
1,4-Dichlorobenzene	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	3.65	20	
2,2-Dichloropropane	1.37	0.056	mg/kg dry	1.40	ND	97.7	75-125	5.83	20	
2-Butanone (MEK)	1.56	0.56	mg/kg dry	1.40	ND	111	75-170	1.92	20	
2-Chlorotoluene	1.41	0.14	mg/kg dry	1.40	ND	100	75-125	5.17	20	
4-Chlorotoluene	1.45	0.14	mg/kg dry	1.40	ND	103	75-125	2.66	20	
4-Isopropyltoluene	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	4.45	20	
Acetone	1.61	0.84	mg/kg dry	1.40	ND	114	75-180	6.87	25	
Allyl Chloride	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	5.26	20	
Benzene	1.40	0.056	mg/kg dry	1.40	ND	100	75-125	4.98	20	
Bromobenzene	1.39	0.056	mg/kg dry	1.40	ND	99.3	75-125	4.02	20	
Bromochloromethane	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	3.42	20	
Bromodichloromethane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	5.53	20	
Bromoform	1.47	0.28	mg/kg dry	1.40	ND	104	75-125	6.26	20	
Bromomethane	1.15	0.14	mg/kg dry	1.40	ND	81.7	70-130	0.924	20	
Carbon Tetrachloride	1.40	0.056	mg/kg dry	1.40	ND	99.9	75-125	6.27	20	
Chlorobenzene	1.40	0.056	mg/kg dry	1.40	ND	100	75-125	3.88	20	
Chlorodibromomethane	1.41	0.056	mg/kg dry	1.40	ND	101	75-125	5.25	20	
Chloroethane	1.37	0.056	mg/kg dry	1.40	ND	97.9	75-125	5.28	20	
Chloroform	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	5.10	20	
Chloromethane	1.30	0.056	mg/kg dry	1.40	ND	92.7	75-125	1.62	20	
cis-1,2-Dichloroethene	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	5.58	20	
cis-1,3-Dichloropropene	1.37	0.056	mg/kg dry	1.34	ND	103	75-125	5.75	20	
Dibromomethane	1.38	0.056	mg/kg dry	1.40	ND	98.1	75-125	4.57	20	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike Duplicate (B3I0634-MSD1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.36	0.056	mg/kg dry	1.40	ND	97.0	70-130	2.72	20	
Dichlorofluoromethane	1.40	0.056	mg/kg dry	1.40	ND	99.9	75-125	5.18	20	
Ethyl Ether	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	4.07	20	
Ethylbenzene	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	5.20	20	
Hexachlorobutadiene	1.31	0.14	mg/kg dry	1.40	ND	93.6	75-125	6.12	20	
Isopropylbenzene	1.47	0.14	mg/kg dry	1.40	ND	105	75-125	5.05	20	
m,p-Xylenes	2.88	0.11	mg/kg dry	2.80	ND	103	75-125	4.27	20	
Methyl Isobutyl Ketone	1.50	0.28	mg/kg dry	1.40	ND	107	75-125	7.26	20	
Methylene chloride	1.37	0.28	mg/kg dry	1.40	0.0602	93.1	75-125	4.06	20	
Methyl-t-butyl ether	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	4.39	20	
Naphthalene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	4.26	20	
n-Butylbenzene	1.44	0.14	mg/kg dry	1.40	ND	102	75-125	4.98	20	
n-Propylbenzene	1.46	0.14	mg/kg dry	1.40	ND	104	75-125	2.99	20	
o-Xylene	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	5.19	20	
sec-Butylbenzene	1.45	0.14	mg/kg dry	1.40	ND	103	75-125	3.84	20	
Styrene	1.47	0.14	mg/kg dry	1.40	ND	105	75-125	5.78	20	
tert-Butylbenzene	1.45	0.14	mg/kg dry	1.40	ND	103	75-125	2.75	20	
Tetrachloroethene	1.60	0.14	mg/kg dry	1.40	ND	114	75-125	4.27	20	
Tetrahydrofuran	1.52	0.28	mg/kg dry	1.40	ND	109	75-125	8.76	20	
Toluene	1.40	0.056	mg/kg dry	1.40	ND	99.4	75-125	5.58	20	
trans-1,2-Dichloroethene	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	3.63	20	
trans-1,3-Dichloropropene	1.39	0.056	mg/kg dry	1.30	ND	107	75-125	6.10	20	
Trichloroethene	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	5.33	20	
Trichlorofluoromethane	1.39	0.056	mg/kg dry	1.40	ND	99.2	75-125	5.90	20	
Vinyl chloride	1.35	0.14	mg/kg dry	1.40	ND	96.2	70-130	3.95	20	
Surrogate: 1,2-Dichloroethane-d4	*25.5*		ug/L	*25.0*	*NA*	*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.3*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Dibromofluoromethane	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Toluene-d8	*25.0*		ug/L	*25.0*	*NA*	*100*	*80-120*			

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Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

For Braun Intertec Use Only
Laboratory Work Order No.
1305411

BRAUN INTERTEC
Braun Intertec Corporation
11001 Hampshire Ave. S
Minneapolis, MN 55438

REQUEST FOR LABORATORY ANALYTICAL SERVICES

Bottle orders and sampling inquires:
labservices@braunintertec.com
Phone: 952-995-2600 Fax: 952-995-2601

IMPORTANT
Date Results Requested: STD
Time
Rush Charges Authorized? ___ Yes ___ No
Rush / Quote #

Page 1 of 1
012702

REPORT RESULTS TO
Contact Name: Sara Holter
Project ID/Name: Former Edina Public Works Bldg
P.O. #/Project #: BL-12-07042B Phase C
Company: Braun Intertec
Mailing Address: BL
City, State, Zip
Telephone #
Fax #
E-mail

SEND INVOICE TO
Contact Name
Company
Address
City, State, Zip
Telephone #
Fax #

Special Instructions and/or Specific Regulatory Requirements:
(method, limit of detection, petrofund, reporting units)

PP-5 (5.0-7.5) duplicate sample

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)

LAB ID#	CLIENT SAMPLE IDENTIFICATION (IDs must be unique)	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	VOLUME/AREA (specify units)	Number of Containers	Metals Field Filtered Y/N	Site Location (State): MN	DRO	VOC	FOR LAB USE ONLY
01	Trip Blank	9-27-13	—	MeOH		1					
02	PP-5 (5.0-7.5)		1027	S		10		X	X		
03	PP-5 (37.0-38.0)		1123	S		5		X	X		
04	PP-6 (5.0-7.5)		1144	S		5		X	X		
05	PP-6 (37.5-40.0)		1305	S		5		X	X		

CHAIN OF CUSTODY
Collected by: (Print) Scott Jordan
Collector's Signature:
Relinquished by: Date/Time 9-27-13 1334
Relinquished by: Date/Time
Received by: Date/Time
Received Contents Not Verified: Date/Time
Received Contents Verified: Date/Time 9/27/13 1336
Comments:

Custody Seal Intact ☐ Yes ☐ No ☐ N/A ☑ Hand Delivered by Client
On Ice ☑ Yes ☐ No
Temp Blank ☑ Yes ☐ No
Temp: 2.4 °C

Form # CS02.03 F:\Groups\QA-QC\Forms\clientservices\COC-CS02 Effective Date: 10/10/07

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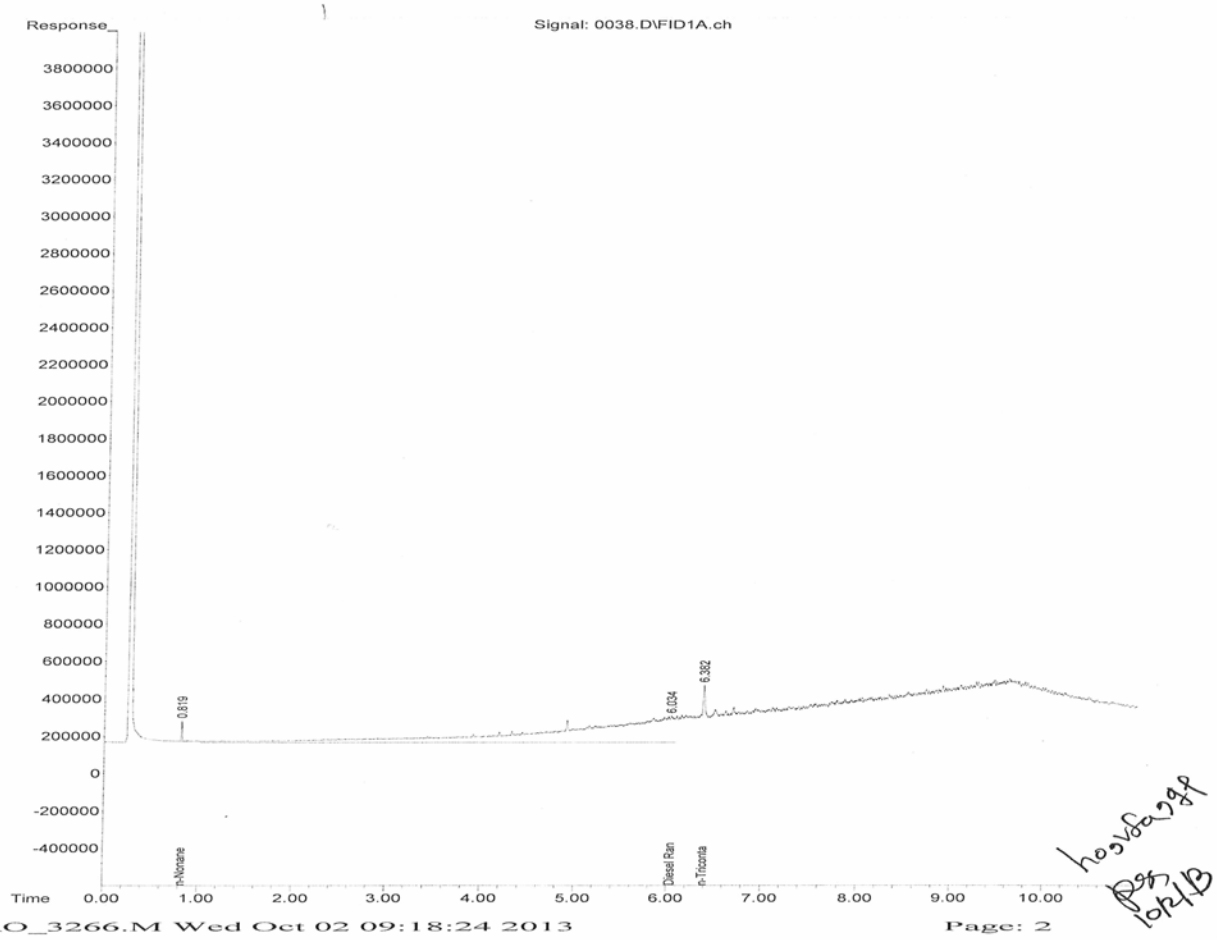
Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

Sample : 1305411-02RE1@5X
Operator : RSS
Acq On : 2 Oct 2013 9:02 am

DRO

Data File: F:\LabData\AgilentGCs\7890_2\3274\0038.D
DataAcq Meth:DRO_ACQ.M
Quant Method : F:\LabData\AgilentGCs\7890_2\Methods\DRO_3266.M
ALS Vial : 20 Sample Multiplier: 1



hosvfa298
RGS
10/2/13

DRO_3266.M Wed Oct 02 09:18:24 2013 Page: 2

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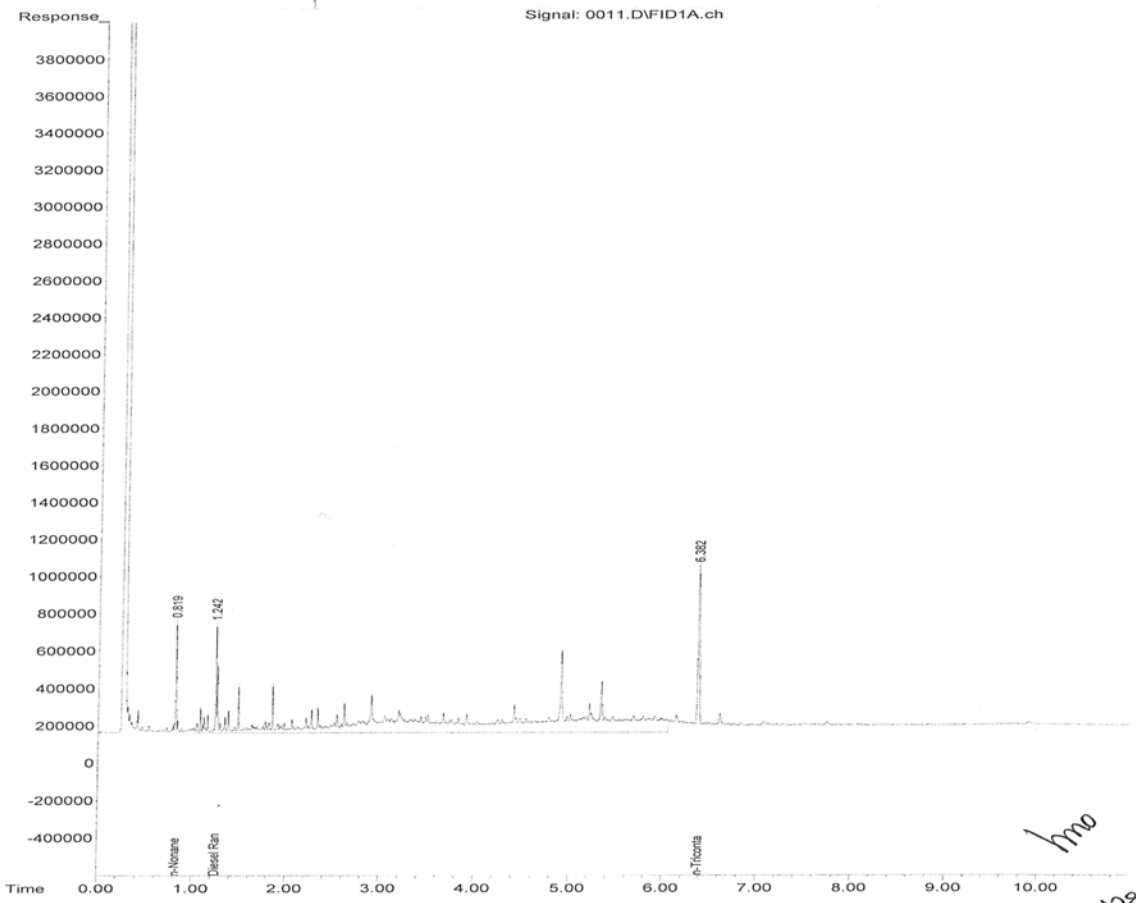
Braun Intertec-Bloomington	Client Ref: Former Edina Public Works Building	Report #: 1305411
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07042B C	Account ID: BL2004

2

Sample : 1305411-03
Operator : RSS
Acq On : 1 Oct 2013 1:23 pm

DRO

Data File: F:\LabData\AgilentGCs\7890_2\3274\0011.D
DataAcq Meth:DRO_ACQ.M
Quant Method : F:\LabData\AgilentGCs\7890_2\Methods\DRO_3266.M
ALS Vial : 9 Sample Multiplier: 1



DRO_3266.M Tue Oct 01 14:57:26 2013 Page: 2

hmo

10/1/13

Braun Intertec Corporation
11001 Hampshire Avenue S.
Minneapolis, MN 55438

Phone: 952.995.2000
Fax: 952.995.2020
Web: braunintertec.com

Ms. Sara Holter
Braun Intertec-Bloomington
11001 Hampshire Ave. South
Bloomington, MN 55438

October 04, 2013

Report #: 1305381

RE: Former Edina Public Work
BL-12-07092B D

Dear Sara Holter:

Braun Intertec Corporation received samples for the project identified above on September 26, 2013. Analytical results are summarized in the following report.

All routine quality assurance procedures were followed, unless otherwise noted.

Analytical results are reported on an "as received" basis unless otherwise noted. Where possible, the samples will be retained by the laboratory for 14 days following issuance of the initial final report. The samples will be disposed of or returned at that time. Arrangements can be made for extended storage by contacting me at this time.

We appreciate your decision to use Braun Intertec Corporation for this project. We are committed to being your vendor of choice to meet your analytical chemistry needs.

If you have any questions please contact me at the above phone number.

Sincerely,

Thomas P. Wagner
Project Manager

Certification/Accreditation Number

Minnesota Department of Health #027-053-117

Providing engineering and environmental solutions since 1957

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Work	Report #: 1305381
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Qualifiers and Abbreviations

hno	The sample chromatogram indicates the presence of lower and higher boiling hydrocarbons than expected in the diesel range chromatogram.
E	The concentration indicated for this analyte is an estimated value above the calibration range of the instrument. This value is considered an estimate.
A5	Methyl Isobuty Ketone recovery for the continuing calibration sample is 131%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A4a	Trans-1,3-Dichloropropene recovery for the continuing calibration sample is 126%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A4	Bromoform recovery for the continuing calibration sample is 124%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A3a	Tetrahydrofuran recovery for the continuing calibration sample is 131%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A3	Acetone recovery for the continuing calibration sample is 147%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A2a	Tetracholoethene recovery for the continuing calibration sample is 126%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A2	2-Butanone(MEK) recovery for the continuing calibration sample is 137%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A1a	Naphthalene recovery for the continuing calibration sample is 126%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
A1	1,2-Dibromo-3-chloropropane recovery for the continuing calibration sample is 123%. Method requirements are 80 % to 120%. There may be a high bias in the reported results.
ca	This field of testing is not certifiable by the Minnesota Department of Health.
COC	Chain of Custody
dry	Sample results reported on a dry weight basis
MRL	Method Reporting Limit
NA	Not Applicable
ND	Analyte NOT DETECTED
NR	Not Reported
%Rec	Percent Recovery
RPD	Relative Percent Difference
VOC	Volatile Organic Compound

A field of testing is the combination of analyte, matrix, method, and regulatory program.

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Sample Summary

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Trip Blank (Phase D)	1305381-01	Soil	09/26/13 00:00	09/26/13 14:45
PP-7	1305381-02	Soil	09/26/13 11:56	09/26/13 14:45

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Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Conditions Upon Receipt

Cooler: Cooler 1

Temperature:	1.8 °C	**COC Included:**	Yes	**Custody Seals Used:**	No
Temperature Blank:	Yes	**COC Complete:**	Yes	**Custody Seals Intact:**	NA
Received on Ice:	Yes	**COC & Labels Agree:**	Yes	**Hand Delivered by Client:**	Yes
Preservation Confirmed:	No	**Sufficient Sample Provided:**	Yes	**Headspace Present (VOC):**	No

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Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Trip Blank (Phase D)

1305381-01 (Soil)

9/26/13 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.50	0.50	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.50	0.50	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Acetone	< 0.75	0.75	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3
Allyl Chloride	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Benzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromochloromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromoform	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4
Bromomethane	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorobenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Trip Blank (Phase D)

1305381-01 (Soil)

9/26/13 0:00

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Chloroethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroform	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dibromomethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Ethylbenzene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.10	0.10	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Naphthalene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
o-Xylene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Styrene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.25	0.25	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,2-Dichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,3-Dichloropropene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.050	0.050	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Vinyl chloride	< 0.12	0.12	mg/kg	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*106 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*99.0 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*100 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*101 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

PP-7

1305381-02 (Soil)

9/26/13 11:56

Classical Chemistry Parameters

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
% Solids	**96**	0.050	% Wt	1	B3I0654	9/30/13	9/30/13	MJW	EPA 3545A 11.4	ca

Metals

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Arsenic	**3.3**	2.1	mg/kg dry	1	B3J0024	10/1/13	10/2/13	DRM	EPA 6010C	
Barium	**33**	2.1	mg/kg dry	1	B3J0024	10/1/13	10/2/13	DRM	EPA 6010C	
Cadmium	< 0.52	0.52	mg/kg dry	1	B3J0024	10/1/13	10/2/13	DRM	EPA 6010C	
Chromium	**13**	1.0	mg/kg dry	1	B3J0024	10/1/13	10/2/13	DRM	EPA 6010C	
Lead	**3.1**	1.0	mg/kg dry	1	B3J0024	10/1/13	10/2/13	DRM	EPA 6010C	
Selenium	< 2.1	2.1	mg/kg dry	1	B3J0024	10/1/13	10/2/13	DRM	EPA 6010C	
Silver	< 0.52	0.52	mg/kg dry	1	B3J0024	10/1/13	10/2/13	DRM	EPA 6010C	
Mercury	< 0.017	0.017	mg/kg dry	1	B3J0020	10/1/13	10/1/13	CJS	EPA 7471B	

Total Petroleum Hydrocarbons

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Diesel Range Organics (DRO)	**11**	8.4	mg/kg dry	1	B3I0631	9/27/13	9/28/13	RSS	WI DRO (95)	hno
Surrogate: n-Nonane	*40.3 %*	*Limits: 20-80%*			*B3I0631*	*9/27/13*	*9/28/13*	*RSS*	*WI DRO (95)*	
Surrogate: n-Triacontane	*82.0 %*	*Limits: 30-125%*			*B3I0631*	*9/27/13*	*9/28/13*	*RSS*	*WI DRO (95)*	

Semivolatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
2-Methylnaphthalene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Acenaphthene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Acenaphthylene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Anthracene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Benz(a)anthracene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Benzo(a)pyrene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Benzo(b)fluoranthene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Benzo(g,h,i)perylene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Benzo(k)fluoranthene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Carbazole	< 0.34	0.34	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Chrysene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Dibenz(a,h)anthracene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Dibenzofuran	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Fluoranthene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Fluorene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

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1305381-02 (Soil)

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Semivolatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Indeno(1,2,3-cd)pyrene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Naphthalene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Phenanthrene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Pyrene	< 0.13	0.13	mg/kg dry	1	B3J0022	10/1/13	10/2/13	SGM	EPA 8270D	
Surrogate: 2-Fluorobiphenyl	*70.8 %*	*Limits: 30-104%*			*B3J0022*	*10/1/13*	*10/2/13*	*SGM*	*EPA 8270D*	
Surrogate: Nitrobenzene-d5	*54.2 %*	*Limits: 30-100%*			*B3J0022*	*10/1/13*	*10/2/13*	*SGM*	*EPA 8270D*	
Surrogate: Terphenyl-d14	*93.2 %*	*Limits: 30-115%*			*B3J0022*	*10/1/13*	*10/2/13*	*SGM*	*EPA 8270D*	

Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
1,1,1,2-Tetrachloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,1-Trichloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2,2-Tetrachloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1,2-Trichlorotrifluoroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
1,1-Dichloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloroethene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,1-Dichloropropene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichlorobenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,3-Trichloropropane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trichlorobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2,4-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dibromo-3-chloropropane	< 0.52	0.52	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1
1,2-Dibromoethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichlorobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,2-Dichloropropane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3,5-Trimethylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichlorobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,3-Dichloropropane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
1,4-Dichlorobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2,2-Dichloropropane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
2-Butanone (MEK)	< 0.52	0.52	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2
2-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Chlorotoluene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
4-Isopropyltoluene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Acetone	< 0.78	0.78	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3

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1305381-02 (Soil)

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Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
Allyl Chloride	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Benzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromochloromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromodichloromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Bromoform	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4
Bromomethane	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Carbon Tetrachloride	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorobenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chlorodibromomethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloroform	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Chloromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,2-Dichloroethene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
cis-1,3-Dichloropropene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dibromomethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorodifluoromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Dichlorofluoromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	ca
Ethyl Ether	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Ethylbenzene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Hexachlorobutadiene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Isopropylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
m,p-Xylenes	< 0.10	0.10	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl Isobutyl Ketone	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A5
Methylene chloride	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Methyl-t-butyl ether	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Naphthalene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A1a
n-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
n-Propylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
o-Xylene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
sec-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Styrene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
tert-Butylbenzene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Tetrachloroethene	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A2a
Tetrahydrofuran	< 0.26	0.26	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A3a, ca
Toluene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
trans-1,2-Dichloroethene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	

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Volatile Organic Compounds

Analyte	Result	MRL	Units	Dilution	Batch	Prepared	Analyzed	Analyst	Method	Notes
trans-1,3-Dichloropropene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	A4a
Trichloroethene	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Trichlorofluoromethane	< 0.052	0.052	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Vinyl chloride	< 0.13	0.13	mg/kg dry	1	B3I0634	9/27/13	9/28/13	SGM	EPA 8260B	
Surrogate: 1,2-Dichloroethane-d4	*104 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: 4-Bromofluorobenzene	*99.0 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Dibromofluoromethane	*99.2 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	
Surrogate: Toluene-d8	*101 %*	*Limits: 80-120%*			*B3I0634*	*9/27/13*	*9/28/13*	*SGM*	*EPA 8260B*	

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Classical Chemistry Parameters - Quality Control

Batch B3I0654 - % Solids

Method Blank (B3I0654-BLK1) Prepared & Analyzed: 09/30/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	< 0.050	0.050	% Wt	NA	NA	NA	NA	NA	NA	

Duplicate (B3I0654-DUP1) **Source: 1305332-01** Prepared & Analyzed: 09/30/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	8.47	0.050	% Wt	NA	7.93	NA	NA	6.61	20	

Standard Reference Material (B3I0654-SRM1) Prepared & Analyzed: 09/30/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
% Solids	91.6		% Wt	92.8	NA	98.7	90-110	NA	NA	

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Metals - Quality Control

Batch B3J0020 - EPA 7471B

Method Blank (B3J0020-BLK1)

Prepared & Analyzed: 10/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	< 0.020	0.020	mg/kg	NA	NA	NA	NA	NA	NA	

Laboratory Control Sample (B3J0020-BS1)

Prepared & Analyzed: 10/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.263	0.020	mg/kg	0.250	NA	105	85-115	NA	NA	

Laboratory Control Sample Duplicate (B3J0020-BSD1)

Prepared & Analyzed: 10/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.261	0.020	mg/kg	0.250	NA	104	85-115	0.879	20	

Matrix Spike (B3J0020-MS1)

Source: 1305322-02

Prepared & Analyzed: 10/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.263	0.019	mg/kg dry	0.238	0.00582	108	80-120	NA	NA	

Matrix Spike Duplicate (B3J0020-MSD1)

Source: 1305322-02

Prepared & Analyzed: 10/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	0.272	0.020	mg/kg dry	0.251	0.00582	106	80-120	3.39	20	

Standard Reference Material (B3J0020-SRM1)

Prepared & Analyzed: 10/01/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Mercury	4.00	0.24	mg/kg	4.05	NA	98.7	71.6-128	NA	NA	

Batch B3J0024 - EPA 3050B

Method Blank (B3J0024-BLK1)

Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	< 2.0	2.0	mg/kg	NA	NA	NA	NA	NA	NA	
Barium	< 2.0	2.0	mg/kg	NA	NA	NA	NA	NA	NA	
Cadmium	< 0.50	0.50	mg/kg	NA	NA	NA	NA	NA	NA	
Chromium	< 1.0	1.0	mg/kg	NA	NA	NA	NA	NA	NA	

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Metals - Quality Control

Batch B3J0024 - EPA 3050B

Method Blank (B3J0024-BLK1)

Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Lead	< 1.0	1.0	mg/kg	NA	NA	NA	NA	NA	NA	
Selenium	< 2.0	2.0	mg/kg	NA	NA	NA	NA	NA	NA	
Silver	< 0.50	0.50	mg/kg	NA	NA	NA	NA	NA	NA	

Laboratory Control Sample (B3J0024-BS1)

Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	293	2.0	mg/kg	300	NA	97.7	80-120	NA	NA	
Barium	301	2.0	mg/kg	300	NA	100	80-120	NA	NA	
Cadmium	280	0.50	mg/kg	300	NA	93.2	80-120	NA	NA	
Chromium	289	1.0	mg/kg	300	NA	96.3	80-120	NA	NA	
Lead	298	1.0	mg/kg	300	NA	99.4	80-120	NA	NA	
Selenium	292	2.0	mg/kg	300	NA	97.4	80-120	NA	NA	
Silver	58.1	0.50	mg/kg	60.0	NA	96.8	80-120	NA	NA	

Laboratory Control Sample Duplicate (B3J0024-BSD1)

Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	300	2.0	mg/kg	300	NA	100	80-120	2.33	20	
Barium	303	2.0	mg/kg	300	NA	101	80-120	0.685	20	
Cadmium	288	0.50	mg/kg	300	NA	95.9	80-120	2.81	20	
Chromium	297	1.0	mg/kg	300	NA	99.2	80-120	2.87	20	
Lead	306	1.0	mg/kg	300	NA	102	80-120	2.52	20	
Selenium	299	2.0	mg/kg	300	NA	99.6	80-120	2.25	20	
Silver	57.7	0.50	mg/kg	60.0	NA	96.1	80-120	0.671	20	

Matrix Spike (B3J0024-MS1)

Source: 1305450-09

Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	268	1.9	mg/kg	285	1.45	93.7	75-125	NA	NA	

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Metals - Quality Control

Batch B3J0024 - EPA 3050B

Matrix Spike (B3J0024-MS1)

Source: 1305450-09 Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Barium	287	1.9	mg/kg	285	19.6	94.0	75-125	NA	NA	
Cadmium	253	0.47	mg/kg	285	0.0156	89.1	75-125	NA	NA	
Chromium	271	0.95	mg/kg	285	7.95	92.5	75-125	NA	NA	
Lead	267	0.95	mg/kg	285	2.11	93.1	75-125	NA	NA	
Selenium	267	1.9	mg/kg	285	0.238	93.6	75-125	NA	NA	
Silver	52.4	0.47	mg/kg	56.9	ND	92.1	75-125	NA	NA	

Matrix Spike Duplicate (B3J0024-MSD1)

Source: 1305450-09 Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	269	1.9	mg/kg	281	1.45	95.1	75-125	0.256	20	
Barium	285	1.9	mg/kg	281	19.6	94.5	75-125	0.570	20	
Cadmium	253	0.47	mg/kg	281	0.0156	90.1	75-125	0.0951	20	
Chromium	271	0.94	mg/kg	281	7.95	93.4	75-125	0.172	20	
Lead	268	0.94	mg/kg	281	2.11	94.5	75-125	0.347	20	
Selenium	265	1.9	mg/kg	281	0.238	94.3	75-125	0.451	20	
Silver	52.4	0.47	mg/kg	56.2	ND	93.2	75-125	0.0410	20	

Standard Reference Material (B3J0024-SRM1)

Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Arsenic	153	4.3	mg/kg	192	NA	79.6	58.3-110	NA	NA	
Barium	158	4.3	mg/kg	191	NA	82.5	61.2-110	NA	NA	
Cadmium	184	1.1	mg/kg	245	NA	75.3	60.4-110	NA	NA	
Chromium	238	2.1	mg/kg	303	NA	78.4	58.4-110	NA	NA	
Lead	177	2.1	mg/kg	225	NA	78.8	60.9-110	NA	NA	
Selenium	73.6	4.3	mg/kg	112	NA	65.7	43.4-111	NA	NA	
Silver	20.7	1.1	mg/kg	28.8	NA	72.0	50.3-110	NA	NA	

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Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Metals - Quality Control

Batch B3J0024 - EPA 3050B

Standard Reference Material (B3J0024-SRM1) Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

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Total Petroleum Hydrocarbons - Quality Control

Batch B3I0631 - WI DRO (95)

Method Blank (B3I0631-BLK1)

Prepared & Analyzed: 09/27/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	< 10	10	mg/kg	NA	NA	NA	NA	NA	NA	
Surrogate: n-Nonane	*2.64*		mg/kg	*4.00*	*NA*	*65.9*	*20-80*			
Surrogate: n-Triacontane	*3.48*		mg/kg	*4.00*	*NA*	*87.1*	*30-125*			

Laboratory Control Sample (B3I0631-BS2)

Prepared & Analyzed: 09/27/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	29.6	10	mg/kg	32.0	NA	92.5	70-120	NA	NA	
Surrogate: n-Nonane	*2.49*		mg/kg	*4.00*	*NA*	*62.3*	*20-80*			
Surrogate: n-Triacontane	*3.40*		mg/kg	*4.00*	*NA*	*84.9*	*30-125*			

Laboratory Control Sample Duplicate (B3I0631-BSD2)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	32.7	10	mg/kg	32.0	NA	102	70-120	9.88	20	
Surrogate: n-Nonane	*2.81*		mg/kg	*4.00*	*NA*	*70.2*	*20-80*			
Surrogate: n-Triacontane	*3.56*		mg/kg	*4.00*	*NA*	*89.1*	*30-125*			

Duplicate (B3I0631-DUP2)

Source: 1305270-01

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Diesel Range Organics (DRO)	< 9.5	9.5	mg/kg dry	NA	5.45	NA	NA	12.1	20	
Surrogate: n-Nonane	*1.76*		mg/kg dry	*3.80*	*NA*	*46.3*	*20-80*			
Surrogate: n-Triacontane	*3.03*		mg/kg dry	*3.80*	*NA*	*79.6*	*30-125*			

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Semivolatile Organic Compounds - Quality Control

Batch B3J0022 - EPA 3546

Method Blank (B3J0022-BLK1) Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Methylnaphthalene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Acenaphthene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Acenaphthylene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Anthracene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Benz(a)anthracene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Benzo(a)pyrene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Benzo(b)fluoranthene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Benzo(g,h,i)perylene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Benzo(k)fluoranthene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Carbazole	< 0.33	0.33	mg/kg	NA	NA	NA	NA	NA	NA	
Chrysene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Dibenz(a,h)anthracene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Dibenzofuran	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Fluoranthene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Fluorene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Indeno(1,2,3-cd)pyrene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Naphthalene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Phenanthrene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Pyrene	< 0.13	0.13	mg/kg	NA	NA	NA	NA	NA	NA	
Surrogate: 2-Fluorobiphenyl	*1.06*		mg/kg	*1.66*	*NA*	*63.9*	*30-104*			
Surrogate: Nitrobenzene-d5	*0.880*		mg/kg	*1.66*	*NA*	*53.0*	*30-100*			
Surrogate: Terphenyl-d14	*1.58*		mg/kg	*1.66*	*NA*	*94.9*	*30-115*			

Laboratory Control Sample (B3J0022-BS1) Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Methylnaphthalene	2.09	0.13	mg/kg	3.32	NA	63.0	30-130	NA	NA	
Acenaphthene	2.33	0.13	mg/kg	3.32	NA	70.2	50-110	NA	NA	
Acenaphthylene	2.14	0.13	mg/kg	3.32	NA	64.6	30-130	NA	NA	
Anthracene	2.65	0.13	mg/kg	3.32	NA	80.0	30-130	NA	NA	
Benz(a)anthracene	2.76	0.13	mg/kg	3.32	NA	83.4	30-130	NA	NA	
Benzo(a)pyrene	2.69	0.13	mg/kg	3.32	NA	81.3	30-130	NA	NA	
Benzo(b)fluoranthene	2.69	0.13	mg/kg	3.32	NA	81.2	30-130	NA	NA	
Benzo(g,h,i)perylene	2.90	0.13	mg/kg	3.32	NA	87.5	30-130	NA	NA	
Benzo(k)fluoranthene	2.88	0.13	mg/kg	3.32	NA	86.9	30-130	NA	NA	
Carbazole	2.70	0.33	mg/kg	3.32	NA	81.5	30-130	NA	NA	
Chrysene	2.63	0.13	mg/kg	3.32	NA	79.2	30-130	NA	NA	
Dibenz(a,h)anthracene	2.81	0.13	mg/kg	3.32	NA	84.7	30-130	NA	NA	
Dibenzofuran	2.34	0.13	mg/kg	3.32	NA	70.6	30-130	NA	NA	
Fluoranthene	2.67	0.13	mg/kg	3.32	NA	80.6	30-130	NA	NA	
Fluorene	2.48	0.13	mg/kg	3.32	NA	74.9	30-130	NA	NA	
Indeno(1,2,3-cd)pyrene	2.71	0.13	mg/kg	3.32	NA	81.6	30-130	NA	NA	

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Semivolatile Organic Compounds - Quality Control

Batch B3J0022 - EPA 3546

Laboratory Control Sample (B3J0022-BS1) Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Naphthalene	2.04	0.13	mg/kg	3.32	NA	61.6	30-130	NA	NA	
Phenanthrene	2.62	0.13	mg/kg	3.32	NA	79.0	30-130	NA	NA	
Pyrene	2.63	0.13	mg/kg	3.32	NA	79.2	55-120	NA	NA	
Surrogate: 2-Fluorobiphenyl	*1.19*		mg/kg	*1.66*	*NA*	*71.8*	*30-104*			
Surrogate: Nitrobenzene-d5	*0.963*		mg/kg	*1.66*	*NA*	*58.1*	*30-100*			
Surrogate: Terphenyl-d14	*1.55*		mg/kg	*1.66*	*NA*	*93.4*	*30-115*			

Laboratory Control Sample Duplicate (B3J0022-BSD1) Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Methylnaphthalene	2.11	0.13	mg/kg	3.32	NA	63.5	30-130	0.892	20	
Acenaphthene	2.31	0.13	mg/kg	3.32	NA	69.7	50-110	0.582	20	
Acenaphthylene	2.16	0.13	mg/kg	3.32	NA	64.9	30-130	0.658	20	
Anthracene	2.63	0.13	mg/kg	3.32	NA	79.2	30-130	0.897	20	
Benz(a)anthracene	2.69	0.13	mg/kg	3.32	NA	81.0	30-130	2.79	20	
Benzo(a)pyrene	2.64	0.13	mg/kg	3.32	NA	79.6	30-130	1.91	20	
Benzo(b)fluoranthene	2.74	0.13	mg/kg	3.32	NA	82.4	30-130	1.65	20	
Benzo(g,h,i)perylene	2.77	0.13	mg/kg	3.32	NA	83.4	30-130	4.69	20	
Benzo(k)fluoranthene	2.83	0.13	mg/kg	3.32	NA	85.1	30-130	1.96	20	
Carbazole	2.59	0.33	mg/kg	3.32	NA	77.9	30-130	4.34	20	
Chrysene	2.58	0.13	mg/kg	3.32	NA	77.8	30-130	1.75	20	
Dibenz(a,h)anthracene	2.73	0.13	mg/kg	3.32	NA	82.2	30-130	2.89	20	
Dibenzofuran	2.29	0.13	mg/kg	3.32	NA	69.0	30-130	2.04	20	
Fluoranthene	2.53	0.13	mg/kg	3.32	NA	76.3	30-130	5.35	20	
Fluorene	2.36	0.13	mg/kg	3.32	NA	71.1	30-130	5.16	20	
Indeno(1,2,3-cd)pyrene	2.68	0.13	mg/kg	3.32	NA	80.6	30-130	1.12	20	
Naphthalene	2.06	0.13	mg/kg	3.32	NA	61.9	30-130	0.619	20	
Phenanthrene	2.54	0.13	mg/kg	3.32	NA	76.4	30-130	3.21	20	
Pyrene	2.67	0.13	mg/kg	3.32	NA	80.5	55-120	1.74	20	
Surrogate: 2-Fluorobiphenyl	*1.20*		mg/kg	*1.66*	*NA*	*72.6*	*30-104*			
Surrogate: Nitrobenzene-d5	*0.968*		mg/kg	*1.66*	*NA*	*58.3*	*30-100*			
Surrogate: Terphenyl-d14	*1.56*		mg/kg	*1.66*	*NA*	*94.0*	*30-115*			

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Semivolatile Organic Compounds - Quality Control

Batch B3J0022 - EPA 3546

Matrix Spike (B3J0022-MS1) **Source: 1305322-02** Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Methylnaphthalene	7.73	0.14	mg/kg dry	3.54	5.34	67.5	30-130	NA	NA	E
Acenaphthene	3.22	0.14	mg/kg dry	3.54	0.678	71.8	30-130	NA	NA	
Acenaphthylene	2.44	0.14	mg/kg dry	3.54	ND	68.9	30-130	NA	NA	
Anthracene	3.28	0.14	mg/kg dry	3.54	ND	92.7	30-130	NA	NA	
Benz(a)anthracene	2.99	0.14	mg/kg dry	3.54	ND	84.4	30-130	NA	NA	
Benzo(a)pyrene	2.82	0.14	mg/kg dry	3.54	ND	79.6	30-130	NA	NA	
Benzo(b)fluoranthene	2.89	0.14	mg/kg dry	3.54	ND	81.6	30-130	NA	NA	
Benzo(g,h,i)perylene	3.01	0.14	mg/kg dry	3.54	ND	85.0	30-130	NA	NA	
Benzo(k)fluoranthene	3.01	0.14	mg/kg dry	3.54	ND	85.1	30-130	NA	NA	
Carbazole	2.86	0.35	mg/kg dry	3.54	ND	80.8	30-130	NA	NA	
Chrysene	2.78	0.14	mg/kg dry	3.54	ND	78.7	30-130	NA	NA	
Dibenz(a,h)anthracene	3.05	0.14	mg/kg dry	3.54	ND	86.2	30-130	NA	NA	
Dibenzofuran	2.92	0.14	mg/kg dry	3.54	ND	82.5	30-130	NA	NA	
Fluoranthene	3.02	0.14	mg/kg dry	3.54	ND	85.4	30-130	NA	NA	
Fluorene	3.39	0.14	mg/kg dry	3.54	0.684	76.5	30-130	NA	NA	
Indeno(1,2,3-cd)pyrene	2.90	0.14	mg/kg dry	3.54	ND	82.0	30-130	NA	NA	
Naphthalene	2.89	0.14	mg/kg dry	3.54	0.595	65.0	30-130	NA	NA	
Phenanthrene	4.38	0.14	mg/kg dry	3.54	1.53	80.3	30-130	NA	NA	
Pyrene	2.89	0.14	mg/kg dry	3.54	0.121	78.2	30-130	NA	NA	
Surrogate: 2-Fluorobiphenyl	*1.35*		mg/kg dry	*1.77*	*NA*	*76.3*	*30-104*			
Surrogate: Nitrobenzene-d5	*1.23*		mg/kg dry	*1.77*	*NA*	*69.4*	*30-100*			
Surrogate: Terphenyl-d14	*1.65*		mg/kg dry	*1.77*	*NA*	*93.4*	*30-115*			

Matrix Spike Duplicate (B3J0022-MSD1) **Source: 1305322-02** Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
2-Methylnaphthalene	7.75	0.14	mg/kg dry	3.55	5.34	67.9	30-130	0.248	30	E
Acenaphthene	3.35	0.14	mg/kg dry	3.55	0.678	75.2	30-130	3.89	30	
Acenaphthylene	2.50	0.14	mg/kg dry	3.55	ND	70.4	30-130	2.42	30	
Anthracene	3.20	0.14	mg/kg dry	3.55	ND	90.1	30-130	2.58	30	
Benz(a)anthracene	2.95	0.14	mg/kg dry	3.55	ND	83.2	30-130	1.12	30	
Benzo(a)pyrene	2.83	0.14	mg/kg dry	3.55	ND	79.6	30-130	0.291	30	
Benzo(b)fluoranthene	2.89	0.14	mg/kg dry	3.55	ND	81.5	30-130	0.119	30	
Benzo(g,h,i)perylene	2.99	0.14	mg/kg dry	3.55	ND	84.2	30-130	0.774	30	
Benzo(k)fluoranthene	3.04	0.14	mg/kg dry	3.55	ND	85.8	30-130	1.06	30	
Carbazole	2.94	0.35	mg/kg dry	3.55	ND	82.8	30-130	2.69	30	
Chrysene	2.82	0.14	mg/kg dry	3.55	ND	79.3	30-130	1.10	30	
Dibenz(a,h)anthracene	2.88	0.14	mg/kg dry	3.55	ND	81.0	30-130	5.91	30	
Dibenzofuran	2.97	0.14	mg/kg dry	3.55	ND	83.7	30-130	1.73	30	
Fluoranthene	3.04	0.14	mg/kg dry	3.55	ND	85.7	30-130	0.617	30	
Fluorene	3.51	0.14	mg/kg dry	3.55	0.684	79.6	30-130	3.43	30	
Indeno(1,2,3-cd)pyrene	2.87	0.14	mg/kg dry	3.55	ND	80.8	30-130	1.13	30	

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Semivolatile Organic Compounds - Quality Control

Batch B3J0022 - EPA 3546

Matrix Spike Duplicate (B3J0022-MSD1) **Source: 1305322-02** Prepared: 10/01/13 Analyzed: 10/02/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Naphthalene	2.91	0.14	mg/kg dry	3.55	0.595	65.3	30-130	0.608	30	
Phenanthrene	4.39	0.14	mg/kg dry	3.55	1.53	80.5	30-130	0.363	30	
Pyrene	2.96	0.14	mg/kg dry	3.55	0.121	79.9	30-130	2.26	30	
Surrogate: 2-Fluorobiphenyl	*1.41*		mg/kg dry	*1.77*	*NA*	*79.5*	*30-104*			
Surrogate: Nitrobenzene-d5	*1.24*		mg/kg dry	*1.77*	*NA*	*69.7*	*30-100*			
Surrogate: Terphenyl-d14	*1.67*		mg/kg dry	*1.77*	*NA*	*94.2*	*30-115*			

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Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Method Blank (B3I0634-BLK1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,1-Trichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2,2-Tetrachloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2-Trichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1,2-Trichlorotrifluoroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,1-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,3-Trichlorobenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,3-Trichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,4-Trichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2,4-Trimethylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dibromo-3-chloropropane	< 0.50	0.50	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dibromoethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,2-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,3,5-Trimethylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
1,3-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,3-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
1,4-Dichlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
2,2-Dichloropropane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
2-Butanone (MEK)	< 0.50	0.50	mg/kg	NA	NA	NA	NA	NA	NA	
2-Chlorotoluene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
4-Chlorotoluene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
4-Isopropyltoluene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Acetone	< 0.75	0.75	mg/kg	NA	NA	NA	NA	NA	NA	
Allyl Chloride	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Benzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromochloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromodichloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Bromoform	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Bromomethane	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Carbon Tetrachloride	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chlorobenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chlorodibromomethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloroethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloroform	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Chloromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
cis-1,2-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
cis-1,3-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Dibromomethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Method Blank (B3I0634-BLK1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Dichlorofluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Ethyl Ether	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Ethylbenzene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Hexachlorobutadiene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Isopropylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
m,p-Xylenes	< 0.10	0.10	mg/kg	NA	NA	NA	NA	NA	NA	
Methyl Isobutyl Ketone	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Methylene chloride	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Methyl-t-butyl ether	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Naphthalene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
n-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
n-Propylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
o-Xylene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
sec-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Styrene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
tert-Butylbenzene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Tetrachloroethene	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Tetrahydrofuran	< 0.25	0.25	mg/kg	NA	NA	NA	NA	NA	NA	
Toluene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
trans-1,2-Dichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
trans-1,3-Dichloropropene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Trichloroethene	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Trichlorofluoromethane	< 0.050	0.050	mg/kg	NA	NA	NA	NA	NA	NA	
Vinyl chloride	< 0.12	0.12	mg/kg	NA	NA	NA	NA	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*25.6*		ug/L	*25.0*	*NA*	*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.0*		ug/L	*25.0*	*NA*	*100*	*80-120*			
Surrogate: Dibromofluoromethane	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Toluene-d8	*25.4*		ug/L	*25.0*	*NA*	*102*	*80-120*			

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample (B3I0634-BS1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,1,1-Trichloroethane	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	1.31	0.050	mg/kg	1.25	NA	104	75-125	NA	NA	
1,1,2-Trichloroethane	1.31	0.050	mg/kg	1.25	NA	105	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
1,1-Dichloroethane	1.41	0.050	mg/kg	1.25	NA	113	75-125	NA	NA	
1,1-Dichloroethene	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,1-Dichloropropene	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
1,2,3-Trichlorobenzene	1.39	0.12	mg/kg	1.25	NA	111	75-125	NA	NA	
1,2,3-Trichloropropane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
1,2,4-Trichlorobenzene	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
1,2,4-Trimethylbenzene	1.42	0.12	mg/kg	1.25	NA	113	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	1.41	0.50	mg/kg	1.25	NA	112	75-125	NA	NA	
1,2-Dibromoethane	1.34	0.050	mg/kg	1.25	NA	107	75-125	NA	NA	
1,2-Dichlorobenzene	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,2-Dichloroethane	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
1,2-Dichloropropane	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,3,5-Trimethylbenzene	1.41	0.12	mg/kg	1.25	NA	113	75-125	NA	NA	
1,3-Dichlorobenzene	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
1,3-Dichloropropane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
1,4-Dichlorobenzene	1.36	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
2,2-Dichloropropane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
2-Butanone (MEK)	1.64	0.50	mg/kg	1.25	NA	131	75-140	NA	NA	
2-Chlorotoluene	1.36	0.12	mg/kg	1.25	NA	109	75-125	NA	NA	
4-Chlorotoluene	1.39	0.12	mg/kg	1.25	NA	111	75-125	NA	NA	
4-Isopropyltoluene	1.41	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
Acetone	1.69	0.75	mg/kg	1.25	NA	135	80-175	NA	NA	
Allyl Chloride	1.42	0.050	mg/kg	1.25	NA	114	75-125	NA	NA	
Benzene	1.36	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
Bromobenzene	1.36	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
Bromochloromethane	1.38	0.050	mg/kg	1.25	NA	110	75-125	NA	NA	
Bromodichloromethane	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
Bromoform	1.40	0.25	mg/kg	1.25	NA	112	75-125	NA	NA	
Bromomethane	1.09	0.12	mg/kg	1.25	NA	86.9	70-130	NA	NA	
Carbon Tetrachloride	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
Chlorobenzene	1.33	0.050	mg/kg	1.25	NA	106	75-125	NA	NA	
Chlorodibromomethane	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
Chloroethane	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
Chloroform	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
Chloromethane	1.24	0.050	mg/kg	1.25	NA	99.0	75-125	NA	NA	
cis-1,2-Dichloroethene	1.40	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
cis-1,3-Dichloropropene	1.34	0.050	mg/kg	1.19	NA	112	75-125	NA	NA	
Dibromomethane	1.33	0.050	mg/kg	1.25	NA	106	75-125	NA	NA	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample (B3I0634-BS1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.29	0.050	mg/kg	1.25	NA	103	70-130	NA	NA	
Dichlorofluoromethane	1.37	0.050	mg/kg	1.25	NA	110	75-125	NA	NA	
Ethyl Ether	1.42	0.050	mg/kg	1.25	NA	113	75-125	NA	NA	
Ethylbenzene	1.39	0.050	mg/kg	1.25	NA	111	75-125	NA	NA	
Hexachlorobutadiene	1.25	0.12	mg/kg	1.25	NA	100	75-125	NA	NA	
Isopropylbenzene	1.40	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
m,p-Xylenes	2.76	0.10	mg/kg	2.50	NA	110	75-125	NA	NA	
Methyl Isobutyl Ketone	1.46	0.25	mg/kg	1.25	NA	117	75-125	NA	NA	
Methylene chloride	1.32	0.25	mg/kg	1.25	NA	105	75-125	NA	NA	
Methyl-t-butyl ether	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
Naphthalene	1.45	0.12	mg/kg	1.25	NA	116	75-125	NA	NA	
n-Butylbenzene	1.41	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
n-Propylbenzene	1.41	0.12	mg/kg	1.25	NA	113	75-125	NA	NA	
o-Xylene	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
sec-Butylbenzene	1.41	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
Styrene	1.40	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
tert-Butylbenzene	1.40	0.12	mg/kg	1.25	NA	112	75-125	NA	NA	
Tetrachloroethene	1.50	0.12	mg/kg	1.25	NA	120	75-125	NA	NA	
Tetrahydrofuran	1.51	0.25	mg/kg	1.25	NA	120	75-125	NA	NA	
Toluene	1.35	0.050	mg/kg	1.25	NA	108	75-125	NA	NA	
trans-1,2-Dichloroethene	1.37	0.050	mg/kg	1.25	NA	109	75-125	NA	NA	
trans-1,3-Dichloropropene	1.35	0.050	mg/kg	1.16	NA	117	75-125	NA	NA	
Trichloroethene	1.40	0.050	mg/kg	1.25	NA	112	75-125	NA	NA	
Trichlorofluoromethane	1.37	0.050	mg/kg	1.25	NA	110	75-125	NA	NA	
Vinyl chloride	1.33	0.12	mg/kg	1.25	NA	106	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*25.8*		ug/L	*25.0*	*NA*	*103*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*24.8*		ug/L	*25.0*	*NA*	*99.0*	*80-120*			
Surrogate: Dibromofluoromethane	*25.9*		ug/L	*25.0*	*NA*	*104*	*80-120*			
Surrogate: Toluene-d8	*24.8*		ug/L	*25.0*	*NA*	*99.1*	*80-120*			

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Work	Report #: 1305381
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample Duplicate (B3I0634-BSD1)

Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.24	0.050	mg/kg	1.25	NA	99.2	75-125	9.17	20	
1,1,1-Trichloroethane	1.24	0.050	mg/kg	1.25	NA	99.1	75-125	11.2	20	
1,1,2,2-Tetrachloroethane	1.22	0.050	mg/kg	1.25	NA	97.5	75-125	6.92	20	
1,1,2-Trichloroethane	1.24	0.050	mg/kg	1.25	NA	98.8	75-125	5.73	20	
1,1,2-Trichlorotrifluoroethane	1.20	0.050	mg/kg	1.25	NA	95.6	75-125	12.0	20	
1,1-Dichloroethane	1.25	0.050	mg/kg	1.25	NA	99.6	75-125	12.3	20	
1,1-Dichloroethene	1.23	0.050	mg/kg	1.25	NA	98.4	75-125	10.4	20	
1,1-Dichloropropene	1.25	0.050	mg/kg	1.25	NA	100	75-125	11.4	20	
1,2,3-Trichlorobenzene	1.26	0.12	mg/kg	1.25	NA	101	75-125	9.84	20	
1,2,3-Trichloropropane	1.26	0.050	mg/kg	1.25	NA	100	75-125	7.36	20	
1,2,4-Trichlorobenzene	1.27	0.050	mg/kg	1.25	NA	101	75-125	10.0	20	
1,2,4-Trimethylbenzene	1.28	0.12	mg/kg	1.25	NA	102	75-125	10.7	20	
1,2-Dibromo-3-chloropropane	1.26	0.50	mg/kg	1.25	NA	100	75-125	11.3	20	
1,2-Dibromoethane	1.24	0.050	mg/kg	1.25	NA	99.1	75-125	7.74	20	
1,2-Dichlorobenzene	1.24	0.050	mg/kg	1.25	NA	99.0	75-125	9.89	20	
1,2-Dichloroethane	1.24	0.050	mg/kg	1.25	NA	99.2	75-125	11.2	20	
1,2-Dichloropropane	1.23	0.050	mg/kg	1.25	NA	98.0	75-125	10.4	20	
1,3,5-Trimethylbenzene	1.27	0.12	mg/kg	1.25	NA	101	75-125	11.1	20	
1,3-Dichlorobenzene	1.24	0.050	mg/kg	1.25	NA	98.6	75-125	9.67	20	
1,3-Dichloropropane	1.23	0.050	mg/kg	1.25	NA	98.1	75-125	9.24	20	
1,4-Dichlorobenzene	1.25	0.050	mg/kg	1.25	NA	99.8	75-125	8.21	20	
2,2-Dichloropropane	1.20	0.050	mg/kg	1.25	NA	95.4	75-125	12.0	20	
2-Butanone (MEK)	1.41	0.50	mg/kg	1.25	NA	113	75-140	14.9	20	
2-Chlorotoluene	1.24	0.12	mg/kg	1.25	NA	98.7	75-125	9.88	20	
4-Chlorotoluene	1.27	0.12	mg/kg	1.25	NA	101	75-125	8.97	20	
4-Isopropyltoluene	1.27	0.050	mg/kg	1.25	NA	101	75-125	10.2	20	
Acetone	1.51	0.75	mg/kg	1.25	NA	120	80-175	11.3	25	
Allyl Chloride	1.28	0.050	mg/kg	1.25	NA	102	75-125	11.0	20	
Benzene	1.24	0.050	mg/kg	1.25	NA	98.9	75-125	9.13	20	
Bromobenzene	1.23	0.050	mg/kg	1.25	NA	98.2	75-125	10.2	20	
Bromochloromethane	1.24	0.050	mg/kg	1.25	NA	99.3	75-125	10.1	20	
Bromodichloromethane	1.27	0.050	mg/kg	1.25	NA	101	75-125	7.69	20	
Bromoform	1.31	0.25	mg/kg	1.25	NA	104	75-125	6.65	20	
Bromomethane	0.979	0.12	mg/kg	1.25	NA	78.2	70-130	10.6	20	
Carbon Tetrachloride	1.24	0.050	mg/kg	1.25	NA	99.0	75-125	11.4	20	
Chlorobenzene	1.23	0.050	mg/kg	1.25	NA	98.2	75-125	7.77	20	
Chlorodibromomethane	1.26	0.050	mg/kg	1.25	NA	101	75-125	8.21	20	
Chloroethane	1.19	0.050	mg/kg	1.25	NA	95.0	75-125	12.7	20	
Chloroform	1.24	0.050	mg/kg	1.25	NA	99.4	75-125	10.8	20	
Chloromethane	1.11	0.050	mg/kg	1.25	NA	88.4	75-125	11.2	20	
cis-1,2-Dichloroethene	1.25	0.050	mg/kg	1.25	NA	99.4	75-125	11.4	20	
cis-1,3-Dichloropropene	1.22	0.050	mg/kg	1.19	NA	102	75-125	9.65	20	
Dibromomethane	1.22	0.050	mg/kg	1.25	NA	97.4	75-125	8.29	20	

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Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Laboratory Control Sample Duplicate (B3I0634-BSD1) Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.16	0.050	mg/kg	1.25	NA	92.3	70-130	11.0	20	
Dichlorofluoromethane	1.22	0.050	mg/kg	1.25	NA	97.6	75-125	11.5	20	
Ethyl Ether	1.26	0.050	mg/kg	1.25	NA	100	75-125	12.3	20	
Ethylbenzene	1.27	0.050	mg/kg	1.25	NA	101	75-125	9.23	20	
Hexachlorobutadiene	1.17	0.12	mg/kg	1.25	NA	93.5	75-125	6.89	20	
Isopropylbenzene	1.29	0.12	mg/kg	1.25	NA	103	75-125	8.39	20	
m,p-Xylenes	2.53	0.10	mg/kg	2.50	NA	101	75-125	8.71	20	
Methyl Isobutyl Ketone	1.32	0.25	mg/kg	1.25	NA	105	75-125	10.7	20	
Methylene chloride	1.16	0.25	mg/kg	1.25	NA	92.9	75-125	12.4	20	
Methyl-t-butyl ether	1.26	0.050	mg/kg	1.25	NA	101	75-125	10.8	20	
Naphthalene	1.32	0.12	mg/kg	1.25	NA	106	75-125	9.12	20	
n-Butylbenzene	1.27	0.12	mg/kg	1.25	NA	101	75-125	10.5	20	
n-Propylbenzene	1.28	0.12	mg/kg	1.25	NA	102	75-125	9.82	20	
o-Xylene	1.25	0.050	mg/kg	1.25	NA	99.4	75-125	8.16	20	
sec-Butylbenzene	1.28	0.12	mg/kg	1.25	NA	102	75-125	9.45	20	
Styrene	1.31	0.12	mg/kg	1.25	NA	104	75-125	7.23	20	
tert-Butylbenzene	1.26	0.12	mg/kg	1.25	NA	100	75-125	10.8	20	
Tetrachloroethene	1.40	0.12	mg/kg	1.25	NA	112	75-125	6.81	20	
Tetrahydrofuran	1.36	0.25	mg/kg	1.25	NA	109	75-125	10.3	20	
Toluene	1.24	0.050	mg/kg	1.25	NA	98.8	75-125	8.58	20	
trans-1,2-Dichloroethene	1.22	0.050	mg/kg	1.25	NA	97.6	75-125	11.1	20	
trans-1,3-Dichloropropene	1.23	0.050	mg/kg	1.16	NA	107	75-125	9.08	20	
Trichloroethene	1.28	0.050	mg/kg	1.25	NA	102	75-125	9.09	20	
Trichlorofluoromethane	1.22	0.050	mg/kg	1.25	NA	97.6	75-125	11.5	20	
Vinyl chloride	1.17	0.12	mg/kg	1.25	NA	93.1	70-130	13.0	20	
Surrogate: 1,2-Dichloroethane-d4	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.1*		ug/L	*25.0*	*NA*	*100*	*80-120*			
Surrogate: Dibromofluoromethane	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Toluene-d8	*25.0*		ug/L	*25.0*	*NA*	*100*	*80-120*			

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Work	Report #: 1305381
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike (B3I0634-MS1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,1,1-Trichloroethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,1,2,2-Tetrachloroethane	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	
1,1,2-Trichloroethane	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,1,2-Trichlorotrifluoroethane	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
1,1-Dichloroethane	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
1,1-Dichloroethene	1.48	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,1-Dichloropropene	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
1,2,3-Trichlorobenzene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,2,3-Trichloropropane	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2,4-Trichlorobenzene	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2,4-Trimethylbenzene	1.51	0.14	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2-Dibromo-3-chloropropane	1.51	0.56	mg/kg dry	1.40	ND	107	75-125	NA	NA	
1,2-Dibromoethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,2-Dichlorobenzene	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
1,2-Dichloroethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
1,2-Dichloropropane	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,3,5-Trimethylbenzene	1.51	0.14	mg/kg dry	1.40	ND	108	75-125	NA	NA	
1,3-Dichlorobenzene	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
1,3-Dichloropropane	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
1,4-Dichlorobenzene	1.47	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
2,2-Dichloropropane	1.45	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
2-Butanone (MEK)	1.59	0.56	mg/kg dry	1.40	ND	113	75-170	NA	NA	
2-Chlorotoluene	1.48	0.14	mg/kg dry	1.40	ND	105	75-125	NA	NA	
4-Chlorotoluene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	NA	NA	
4-Isopropyltoluene	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Acetone	1.72	0.84	mg/kg dry	1.40	ND	123	75-180	NA	NA	
Allyl Chloride	1.54	0.056	mg/kg dry	1.40	ND	110	75-125	NA	NA	
Benzene	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
Bromobenzene	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	
Bromochloromethane	1.48	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Bromodichloromethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Bromoform	1.56	0.28	mg/kg dry	1.40	ND	111	75-125	NA	NA	
Bromomethane	1.16	0.14	mg/kg dry	1.40	ND	82.5	70-130	NA	NA	
Carbon Tetrachloride	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Chlorobenzene	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	NA	NA	
Chlorodibromomethane	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Chloroethane	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	
Chloroform	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
Chloromethane	1.32	0.056	mg/kg dry	1.40	ND	94.2	75-125	NA	NA	
cis-1,2-Dichloroethene	1.53	0.056	mg/kg dry	1.40	ND	109	75-125	NA	NA	
cis-1,3-Dichloropropene	1.45	0.056	mg/kg dry	1.34	ND	109	75-125	NA	NA	
Dibromomethane	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	NA	NA	

The results in this report apply only to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Work	Report #: 1305381
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike (B3I0634-MS1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.40	0.056	mg/kg dry	1.40	ND	99.7	70-130	NA	NA	
Dichlorofluoromethane	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
Ethyl Ether	1.49	0.056	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Ethylbenzene	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
Hexachlorobutadiene	1.40	0.14	mg/kg dry	1.40	ND	99.5	75-125	NA	NA	
Isopropylbenzene	1.55	0.14	mg/kg dry	1.40	ND	110	75-125	NA	NA	
m,p-Xylenes	3.01	0.11	mg/kg dry	2.80	ND	107	75-125	NA	NA	
Methyl Isobutyl Ketone	1.62	0.28	mg/kg dry	1.40	ND	115	75-125	NA	NA	
Methylene chloride	1.42	0.28	mg/kg dry	1.40	0.0602	97.1	75-125	NA	NA	
Methyl-t-butyl ether	1.53	0.056	mg/kg dry	1.40	ND	109	75-125	NA	NA	
Naphthalene	1.56	0.14	mg/kg dry	1.40	ND	111	75-125	NA	NA	
n-Butylbenzene	1.51	0.14	mg/kg dry	1.40	ND	108	75-125	NA	NA	
n-Propylbenzene	1.50	0.14	mg/kg dry	1.40	ND	107	75-125	NA	NA	
o-Xylene	1.50	0.056	mg/kg dry	1.40	ND	107	75-125	NA	NA	
sec-Butylbenzene	1.50	0.14	mg/kg dry	1.40	ND	107	75-125	NA	NA	
Styrene	1.56	0.14	mg/kg dry	1.40	ND	111	75-125	NA	NA	
tert-Butylbenzene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	NA	NA	
Tetrachloroethene	1.67	0.14	mg/kg dry	1.40	ND	119	75-125	NA	NA	
Tetrahydrofuran	1.66	0.28	mg/kg dry	1.40	ND	118	75-125	NA	NA	
Toluene	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
trans-1,2-Dichloroethene	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
trans-1,3-Dichloropropene	1.48	0.056	mg/kg dry	1.30	ND	114	75-125	NA	NA	
Trichloroethene	1.52	0.056	mg/kg dry	1.40	ND	108	75-125	NA	NA	
Trichlorofluoromethane	1.48	0.056	mg/kg dry	1.40	ND	105	75-125	NA	NA	
Vinyl chloride	1.41	0.14	mg/kg dry	1.40	ND	100	70-130	NA	NA	
Surrogate: 1,2-Dichloroethane-d4	*25.5*		ug/L	*25.0*	*NA*	*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.5*		ug/L	*25.0*	*NA*	*102*	*80-120*			
Surrogate: Dibromofluoromethane	*25.7*		ug/L	*25.0*	*NA*	*103*	*80-120*			
Surrogate: Toluene-d8	*24.9*		ug/L	*25.0*	*NA*	*99.7*	*80-120*			

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Braun Intertec-Bloomington	Client Ref: Former Edina Public Work	Report #: 1305381
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike Duplicate (B3I0634-MSD1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
1,1,1,2-Tetrachloroethane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	3.79	20	
1,1,1-Trichloroethane	1.40	0.056	mg/kg dry	1.40	ND	100	75-125	6.08	20	
1,1,2,2-Tetrachloroethane	1.38	0.056	mg/kg dry	1.40	ND	98.3	75-125	5.14	20	
1,1,2-Trichloroethane	1.39	0.056	mg/kg dry	1.40	ND	98.7	75-125	4.97	20	
1,1,2-Trichlorotrifluoroethane	1.39	0.056	mg/kg dry	1.40	ND	99.2	75-125	5.52	20	
1,1-Dichloroethane	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	6.48	20	
1,1-Dichloroethene	1.39	0.056	mg/kg dry	1.40	ND	98.8	75-125	6.56	20	
1,1-Dichloropropene	1.44	0.056	mg/kg dry	1.40	ND	102	75-125	5.84	20	
1,2,3-Trichlorobenzene	1.43	0.14	mg/kg dry	1.40	ND	102	75-125	4.15	20	
1,2,3-Trichloropropane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	5.94	20	
1,2,4-Trichlorobenzene	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	4.34	20	
1,2,4-Trimethylbenzene	1.45	0.14	mg/kg dry	1.40	ND	104	75-125	3.71	20	
1,2-Dibromo-3-chloropropane	1.43	0.56	mg/kg dry	1.40	ND	102	75-125	5.16	20	
1,2-Dibromoethane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	5.38	20	
1,2-Dichlorobenzene	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	3.06	20	
1,2-Dichloroethane	1.41	0.056	mg/kg dry	1.40	ND	101	75-125	5.25	20	
1,2-Dichloropropane	1.40	0.056	mg/kg dry	1.40	ND	99.4	75-125	4.40	20	
1,3,5-Trimethylbenzene	1.46	0.14	mg/kg dry	1.40	ND	104	75-125	3.47	20	
1,3-Dichlorobenzene	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	3.74	20	
1,3-Dichloropropane	1.40	0.056	mg/kg dry	1.40	ND	99.4	75-125	5.01	20	
1,4-Dichlorobenzene	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	3.65	20	
2,2-Dichloropropane	1.37	0.056	mg/kg dry	1.40	ND	97.7	75-125	5.83	20	
2-Butanone (MEK)	1.56	0.56	mg/kg dry	1.40	ND	111	75-170	1.92	20	
2-Chlorotoluene	1.41	0.14	mg/kg dry	1.40	ND	100	75-125	5.17	20	
4-Chlorotoluene	1.45	0.14	mg/kg dry	1.40	ND	103	75-125	2.66	20	
4-Isopropyltoluene	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	4.45	20	
Acetone	1.61	0.84	mg/kg dry	1.40	ND	114	75-180	6.87	25	
Allyl Chloride	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	5.26	20	
Benzene	1.40	0.056	mg/kg dry	1.40	ND	100	75-125	4.98	20	
Bromobenzene	1.39	0.056	mg/kg dry	1.40	ND	99.3	75-125	4.02	20	
Bromochloromethane	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	3.42	20	
Bromodichloromethane	1.41	0.056	mg/kg dry	1.40	ND	100	75-125	5.53	20	
Bromoform	1.47	0.28	mg/kg dry	1.40	ND	104	75-125	6.26	20	
Bromomethane	1.15	0.14	mg/kg dry	1.40	ND	81.7	70-130	0.924	20	
Carbon Tetrachloride	1.40	0.056	mg/kg dry	1.40	ND	99.9	75-125	6.27	20	
Chlorobenzene	1.40	0.056	mg/kg dry	1.40	ND	100	75-125	3.88	20	
Chlorodibromomethane	1.41	0.056	mg/kg dry	1.40	ND	101	75-125	5.25	20	
Chloroethane	1.37	0.056	mg/kg dry	1.40	ND	97.9	75-125	5.28	20	
Chloroform	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	5.10	20	
Chloromethane	1.30	0.056	mg/kg dry	1.40	ND	92.7	75-125	1.62	20	
cis-1,2-Dichloroethene	1.45	0.056	mg/kg dry	1.40	ND	103	75-125	5.58	20	
cis-1,3-Dichloropropene	1.37	0.056	mg/kg dry	1.34	ND	103	75-125	5.75	20	
Dibromomethane	1.38	0.056	mg/kg dry	1.40	ND	98.1	75-125	4.57	20	

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11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

Volatile Organic Compounds - Quality Control

Batch B3I0634 - EPA 5030B

Matrix Spike Duplicate (B3I0634-MSD1) **Source: 1305381-02** Prepared: 09/27/13 Analyzed: 09/28/13

Analyte	Result	MRL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Dichlorodifluoromethane	1.36	0.056	mg/kg dry	1.40	ND	97.0	70-130	2.72	20	
Dichlorofluoromethane	1.40	0.056	mg/kg dry	1.40	ND	99.9	75-125	5.18	20	
Ethyl Ether	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	4.07	20	
Ethylbenzene	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	5.20	20	
Hexachlorobutadiene	1.31	0.14	mg/kg dry	1.40	ND	93.6	75-125	6.12	20	
Isopropylbenzene	1.47	0.14	mg/kg dry	1.40	ND	105	75-125	5.05	20	
m,p-Xylenes	2.88	0.11	mg/kg dry	2.80	ND	103	75-125	4.27	20	
Methyl Isobutyl Ketone	1.50	0.28	mg/kg dry	1.40	ND	107	75-125	7.26	20	
Methylene chloride	1.37	0.28	mg/kg dry	1.40	0.0602	93.1	75-125	4.06	20	
Methyl-t-butyl ether	1.46	0.056	mg/kg dry	1.40	ND	104	75-125	4.39	20	
Naphthalene	1.49	0.14	mg/kg dry	1.40	ND	106	75-125	4.26	20	
n-Butylbenzene	1.44	0.14	mg/kg dry	1.40	ND	102	75-125	4.98	20	
n-Propylbenzene	1.46	0.14	mg/kg dry	1.40	ND	104	75-125	2.99	20	
o-Xylene	1.42	0.056	mg/kg dry	1.40	ND	101	75-125	5.19	20	
sec-Butylbenzene	1.45	0.14	mg/kg dry	1.40	ND	103	75-125	3.84	20	
Styrene	1.47	0.14	mg/kg dry	1.40	ND	105	75-125	5.78	20	
tert-Butylbenzene	1.45	0.14	mg/kg dry	1.40	ND	103	75-125	2.75	20	
Tetrachloroethene	1.60	0.14	mg/kg dry	1.40	ND	114	75-125	4.27	20	
Tetrahydrofuran	1.52	0.28	mg/kg dry	1.40	ND	109	75-125	8.76	20	
Toluene	1.40	0.056	mg/kg dry	1.40	ND	99.4	75-125	5.58	20	
trans-1,2-Dichloroethene	1.43	0.056	mg/kg dry	1.40	ND	102	75-125	3.63	20	
trans-1,3-Dichloropropene	1.39	0.056	mg/kg dry	1.30	ND	107	75-125	6.10	20	
Trichloroethene	1.44	0.056	mg/kg dry	1.40	ND	103	75-125	5.33	20	
Trichlorofluoromethane	1.39	0.056	mg/kg dry	1.40	ND	99.2	75-125	5.90	20	
Vinyl chloride	1.35	0.14	mg/kg dry	1.40	ND	96.2	70-130	3.95	20	
Surrogate: 1,2-Dichloroethane-d4	*25.5*		ug/L	*25.0*	*NA*	*102*	*80-120*			
Surrogate: 4-Bromofluorobenzene	*25.3*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Dibromofluoromethane	*25.2*		ug/L	*25.0*	*NA*	*101*	*80-120*			
Surrogate: Toluene-d8	*25.0*		ug/L	*25.0*	*NA*	*100*	*80-120*			

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Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

For Braun Intertec Use Only
Laboratory Work Order No.
1305381

BRAUN INTERTEC
Braun Intertec Corporation
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Minneapolis, MN 55438

REQUEST FOR LABORATORY ANALYTICAL SERVICES

Bottle orders and sampling inquires:
labservices@braunintertec.com
Phone: 952-995-2600 Fax: 952-995-2601

IMPORTANT
Date Results Requested: STd
Time
Rush Charges Authorized? ____ Yes ____ No
Rush / Quote #

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010198

REPORT RESULTS TO
Contact Name: Sara Holter
Project ID/Name: Fmr Edina Public Works
P.O. #/Project #: BL-12-07042B Phase D
Company: Braun Intertec
Mailing Address: BL
City, State, Zip
Telephone #
Fax #
E-mail

SEND INVOICE TO
Contact Name
Company
Address
City, State, Zip
Telephone #
Fax #

Special Instructions and/or Specific Regulatory Requirements:
(method, limit of detection, petrofund, reporting units)

ANALYSIS REQUESTED
(Enter an 'X' in the box below to indicate request)

LAB ID#	CLIENT SAMPLE IDENTIFICATION (IDs must be unique)	DATE SAMPLED	TIME SAMPLED	MATRIX/ MEDIA	VOLUME/AREA (specify units)	Number of Containers	Metals Field Filtered Y/N	Site Location (State) MN	DRO	VOC	PAH	8RCRA metal							FOR LAB USE ONLY
01	Trip Blank (Phase D)	9-26-13	—	MeOH		1													
02	PP-7 (0.5-2.5)	↓	1156	S		5			X	X	X	X							

CHAIN OF CUSTODY
Collected by: (Print) Scott Jordan
Collector's Signature:
Relinquished by: Date/Time 9-26-13 1445
Received by: Date/Time
Relinquished by: Date/Time
Received Contents Not Verified: Date/Time
Custody Seal Intact ☐ Yes ☐ No ☐ N/A ☒ Hand Delivered by Client
On Ice ☒ Yes ☐ No
Received Contents Verified: Date/Time 9/26/13 1445
Temp Blank ☒ Yes ☐ No
Comments:
Temp: 1.8 °C

Form # CS02.03 F:\Groups\QA-QC\Forms\clientservices\COC-CS02 Effective Date: 10/10/07

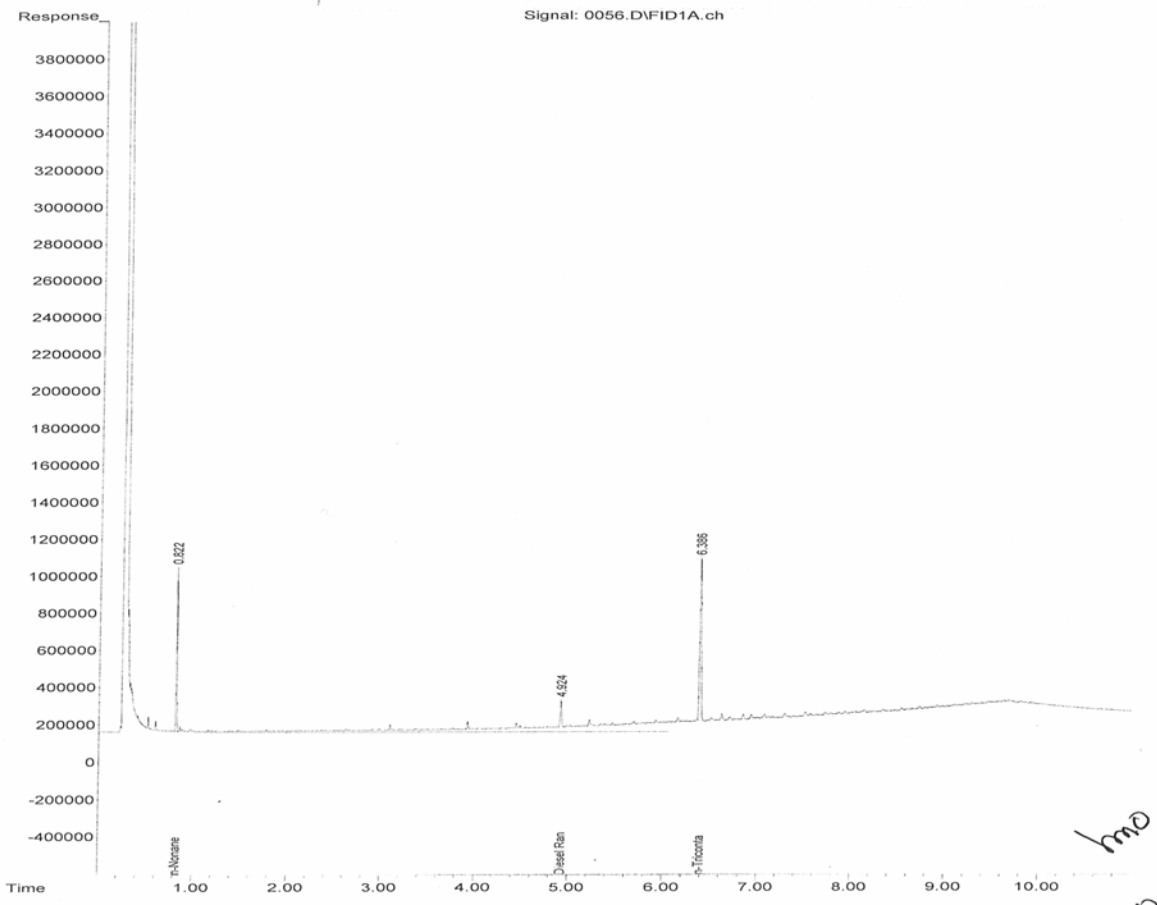
BRAUN INTERTEC

11001 Hampshire Ave. S.
Minneapolis, MN 55438
952.995.2000 Phone
952.995.2020 Fax

Braun Intertec-Bloomington	Client Ref: Former Edina Public Work	Report #: 1305381
11001 Hampshire Ave. South	Client Contact: Ms. Sara Holter	Project Mgr: Thomas P. Wagner
Bloomington, MN 55438	PO Number: BL-12-07092B D	Account ID: BL2004

No Name Entered Quantitation Report (QT Reviewed)
Sample : 1305381-02
Operator : RSS
Acq On : 28 Sep 2013 2:18 am DRO

Data File: F:\LabData\AgilentGCs\7890_2\3270\0056.D
DataAcq Meth:DRO_ACQ.M
Quant Method : F:\LabData\AgilentGCs\7890_2\Methods\DRO_3266.M
ALS Vial : 32 Sample Multiplier: 1



DRO_3266.M Mon Sep 30 08:39:19 2013 Page: 2

hmo

RSS 9/30/13

Appendix G

Methods and Procedures

1 Procedure

1.1 Purpose

This standard operating procedure (SOP) describes the procedure for screening soil potentially contaminated with petroleum and/or hazardous substances that can be ionized within the energy range of the PID UV lamp being used or can be observed in the field. The purpose of the screening soil procedure is to assist with site soil characterization of organic chemical contamination, soil sample selection for laboratory analysis and soil management during excavation.

1.2 Scope and Applicability

This procedure should be used during field activities where soil screening procedures are required by regulatory guidance or site-specific work plans. This procedure is used for soil characterization and not for health and safety monitoring.

1.3 Summary of Method

Screening soils for contamination includes recording PID readings using both direct read and headspace methods and also observing soil samples for staining, odors or other indications of contamination.

1.4 Definitions

Background Readings: The PID measurement of ambient air and bag headspace reading without soil in the bag.

Ionization energy (IE): The energy required to displace an electron and “ionize” a compound. Replaces old term *ionization potential* (IP).

Photoionization detector (PID): The PID is a portable, nonspecific, vapor/gas detector employing the principle of photoionization to detect and measure real-time concentrations of a variety of chemical compounds, both organic and inorganic, in air.

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Standard Operating Procedure (SOP): A set of written instructions that document a routine or repetitive activity used by Braun Intertec.

Soil Screening: A procedure used in the field to detect the presence of volatile organic compounds (VOCs) in soil. The procedure involves collecting a bag headspace sample, letting the headspace develop, and screening the sample with a calibrated photoionization detector (PID).

Field Logbook: Bound notebooks with written record of field observations and data collection. See Field Notes SOP 7.21.04 Field Notes and Documentation.

Bag Headspace: A procedure used in the field to gather readings in parts per million (ppm) of soil suspected of containing contamination. The procedure requires nitrile gloves, one-quart polyethylene bag with a zipper enclosure, and a calibrated photoionization detector (PID).

1.5 Health and Safety Warnings

The soil screening procedure should be performed in accordance with the *Braun Intertec Corporate Health and Safety Standard Operating Procedures Manual* and the site-specific health and safety plan. Do not purposefully smell soil to determine if it is contaminated or to attempt to discern the contaminant type. Incidental olfactory observations should be documented, but avoided, if possible, by adjusting work practices.

1.6 Cautions

PIDs will provide non-specific measurement of the presence of organic compounds, including the following: aromatics, ketones and aldehydes, amines and amides, chlorinated hydrocarbons, sulfur compounds, saturated and unsaturated hydrocarbons, and alcohols. The light energy in electron volts (eV) emitted by the PID lamp must be greater than the ionization energy (IE) of the compound(s) of interest. However, 11.7-eV lamps should only be used when compounds with IEs over 10.6 eV are expected and are the primary contaminants. Examples include carbon tetrachloride, methylene chloride, chloroform and trichloroethane. Consult the *NIOSH Guide to Chemical Hazards* for ionization potentials for most common contaminants. The PID will NOT measure the following: radiation, air (N_2, O_2, CO_2, and H_2O), natural gas (methane, ethane, propane), acid gases (HCl, HF, HNO_3), common toxics (CO, HCN, SO_2), freons, ozone, hydrogen peroxide, PCBs or greases.

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1.7 Interferences and Limitations

Excessive moisture in the headspace may cause a false positive response on the PID due to condensation in the sensor causing current leakage across the electrodes. The problem is exacerbated by dirty, bent or corroded electrodes. This problem tends to manifest itself by a "drift" upward of the measurement, rather than a sharp response to the presence of an organic vapor. Humidity from wet soil also absorbs UV light and may dampen response when vapors are present. The warming of cold, wet samples tends to cause excessive humidity in the headspace and if the PID is colder than the samples, condensation in the PID can result.

Avoid getting condensate or soil in the inlet probe. Avoid getting soil in the grooves of the bag zipper, so that it will close securely.

1.8 Personnel Qualifications and Responsibilities

The field technician is responsible for properly preparing, collecting, and recording the information from screening soil procedure in accordance with this SOP. The field technician should be trained in performing this SOP and is responsible for understanding and implementing this SOP during field activities, as well as obtaining the appropriate equipment and supplies necessary for the screening soil procedure. The field technician should also be trained in proper calibration, maintenance and cleaning of the PID.

1.9 Equipment and Supplies

The following materials are required for this SOP:

- Bound field logbook
- Sampling method SOP field forms
- Black waterproof and/or indelible ink pens
- Photoionization detector equipped with a 10.2 eV (+/-) or greater lamp source, charged and calibrated
- Multiple quart-size polyethylene freezer bags with self-sealing closure
- Trowel/shovel to collect sample (decontaminated)
- Clean disposable gloves
- Paper towels

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1.10 Procedure

1.10.1 Preparation

Calibrate the PID onsite at least daily to yield total organic vapors in parts per million (ppm) using an isobutylene standard. Record the lamp IE, standard used, date, time and results of the daily calibration.

1.10.2 Collection

- Scan freshly exposed soil (from split-spoon, push-probe liner, excavating equipment, sidewall, etc.) with the organic vapor detection, taking care to keep the instrument probe far enough from the sample to avoid intake of soil particles and moisture. Record the highest meter response in the field notebook. The maximum response should occur between two and five seconds.

- Visually examine the soil for staining or sheens. Note observations in field notebook.

- Do not intentionally smell the soil for odors, but note unintentional olfactory indication of contamination in the field notebook.

- Describe the type and general amount of debris, if present, in the field notebook.

- Collect soil samples according to SOP 7.17.27 Bag Headspace Procedure. Collect soil samples in increments according to instructions established by project manager or the site work plan. Record readings in field logbook. Soil samples for laboratory analysis should not be collected from the bag used for headspace analysis.

- In addition to screening a soil sample, a background PID headspace reading should also be established in the field during the day. Under the same conditions as the screened soil sample (heated vehicle or building, etc.), take an empty polyethylene freezer bag, puff up with air, and insert the probe of the PID in the same way as the soil sample. Watch the screen of the PID for the highest PID reading (ppm). Record the highest reading the PID reached in the bound field logbook.

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1.10.3 Documentation

Results of the screened soil should be recorded in the field logbook. Documentation should include the following:

- Calibration: date, time, calibration standard and result
- Maintenance performed, if any
- Ambient air temperature at which screened soil was collected
- Sample identification information per sample method SOP
- General observations: PID alarm, condensed moisture in the bag, unusual odors associated with the soil sample and/or ambient air

1.11 Data and Records Management

Field data should be recorded and managed in accordance with SOP 7.21.04 Field Notes and Documentation.

1.12 Quality Assurance Quality Control

Field staff should check the PID maintenance log before beginning each new job to make sure that scheduled maintenance is current. Erratic PID responses in the field should be evaluated and field maintenance performed or the PID should be replaced. The PID should be calibrated daily in the field. The technician should perform a humidity response test prior to use. Ambient air quality at the work site should be checked and recorded as should a headspace sample of an empty polyethylene bag. All QA checks should be documented in the field logbook.

1.13 References

NIOSH, Pocket Guide to Chemical Hazards, NIOSH Publications, Cincinnati, OH

RAE Systems, Using RAE Systems PIDs For Measuring Soil Headspace and In Soil Vapor Extractions, Technical Note TN-118, Rev 3, wh.06-03, RAE Systems, Inc. ; San Jose, CA

RAE Systems, RAE Systems PID Training Outline, Application Note AP-000, Rev 2, cw.04-05, RAE Systems, Inc.; San Jose, CA

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Minnesota Pollution Control Agency, September 2008. *Soil Sample Collection and Analysis Procedures; Field Screening Procedures.* Guidance Document 4-04, c-prp4-04. Office of Minnesota Pollution Control Agency; St. Paul, MN

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1.0 Procedure

1.1 Purpose

This Standard Operating Procedure (SOP) provides guidelines for the collection of soil vapor samples using a negatively pressurized air sampling canister from a soil boring for analytical testing for the presence of contaminants including organic compounds. **Note:** Analytical laboratories often times have sampling instructions for its canisters, and specific sampling instructions should be reviewed and used in conjunction with this SOP when available.

1.2 Equipment and Supplies

- Laboratory-cleaned, negatively pressurized sampling canister such as a Summa Canister or Silco Canister
- An in-line particulate trap or filter should also be used
- Protective Shipping Container (Box or Case)
- Inert tubing (e.g., polyethylene or Teflon) in the appropriate diameter to attach to the sampler and sample container. **Note:** More than one size of tubing might be required.
- Threaded adaptor to connect tubing to down-hole sampling point
- Utility knife to cut tubing
- Wrench (typically 9/16-inch) to remove or tighten caps or connectors
- Vise-grip locking pliers, clamp or similar
- Bentonite or other material to construct seal
- Chain-of-Custody (COC)
- Hand pump, graduated syringe, or similar to purge tubing and sampling point
- Calibrated photoionization detector (PID) (follow 7.15.02 Use of MiniRae 3000 (PID) SOP)
- Nitrile gloves

1.3 Procedure

- Inspect laboratory-supplied equipment to ensure that all necessary parts are present and operable. If using a sampling canister with a vacuum gauge, ensure that the canisters are under negative pressure.

- Record in field notebook the following information:

    - Canister serial/identification number
    - Flow-control serial/identification number, if present
    - Initial pressure reading from canister vacuum gauge, if present. **Note:** Canister should be under negative pressure
    - Sample identification
    - Temperature at time of sampling

- Complete and attach sample identification label to canister labeling tag. **Note:** Do not attach label directly to canister.

- Ensure that all utilities (public and/or private) are marked prior to advancement of the sampling point.

- Advance the sampling point to the desired depth using manual or power driven method (i.e. hammer drill, power hammer, push probe drill rig or other device).

    - The sampling point will be fitted of a disposable sampling tip and sampling point adaptor.
    - Retract the sampling point about one foot to detach the disposable sampling tip and expose the sampling point to the surrounding soil.

- Connect inert tubing to the sampling point.

    - Attach threaded adapter to tubing.
    - Feed the tubing into sampling rods.
    - Reverse thread tubing adapter onto sampling point adapter using a counter-clockwise rotation.
    - Tug gently to ensure secure fit.

- Seal the borehole space around the probe rods at the ground surface using appropriate non-shrinking material (i.e. hydrated bentonite) to prevent sample short circuiting from the atmosphere.

- Connect purging device (i.e. PID, graduated syringe, hand pump) to the tubing that is attached to the sampling tip.

- Begin purging the inert tubing to purge a minimum of two volumes of air from the tubing and sampler.

- Following purging, clamp the tubing with a vice grip pliers or similar tool and disconnect the purging device.

- Connect the canister tubing to the tubing attached to the sampling point.

    - Inspect connection between sampling point tubing and canister tubing to ensure snug fit.

- Remove clamping tool and make sure sampling point tubing is not blocked by crimp.

- Record start time of sample collection in field notebook and on sample identification label.

- Begin sample collection by slowly opening the valve on the canister counter until valve is fully open.

    - Listen for a “hissing” sound as the sample is being collected.
    - Monitor the sampling progress.
    - **Note:** If water or soil is observed within the tubing, stop the sample collection immediately and close the canister valve. Contact project manager, approval may be granted to stop

collection and sample may be analyzed as a partial sample if enough pressure/soil gas has been collected. If water or soil is in air sampling canister, or not enough volume is collected, a new borehole may need to be completed near the first attempt.

- Sampling is complete when the vacuum gauge is still under a slight negative pressure, or if a gauge is not present, when the "hissing" is no longer heard. Grab sample collection is typically achieved within 1 minute upon opening the canister valve.
- Close the canister valve.
- Clamp the tubing with a vice grip pliers or similar tool.
- Record the sample collection stop time and final pressure in field book, if a vacuum gauge is connected to the canister.
- Disconnect the canister tubing from the sampling point tubing.
- Insert the tip of the PID into the sampling point tubing.
- Release the clamping tool and ensure that the sampling point tubing is not obstructed by a crimp.
- Measure the organic vapor readings from the sampling point tubing and record the highest measurable concentration in field notebook.
- Disconnect the PID from the sampling point tubing.
- Complete COC using information collected in field notebook by following 7.21.03 Chain of Custody SOP.

1 Procedure

1.1 Purpose

This standard operating procedure (SOP) describes the procedure for the calibration, care, and use of the MiniRae 3000 photoionization detector (PID). The MiniRae 3000 PID is used to collect a reading of a freshly exposed soil surface or of the bag headspace of soil potentially contaminated with petroleum and/or substances that can be ionized within the energy range of the UV lamp of the PID. The PID reading will determine soil sample selection for laboratory analysis and soil management during excavations.

1.2 Scope and Applicability

This procedure should be used during field activities where bag headspace sampling and soil screening is required by regulatory guidance or site-specific work plans. This procedure is used for soil characterization and not for health and safety monitoring; health and safety procedures are provided in the site-specific Health and Safety Plan or Corporate Safety Manual.

1.3 Summary of Calibration, Charging, and Use

To use, turn on the MiniRae PID by pressing the power button located in the center of the screen face. Hold the button for a couple of seconds. Allow the PID to run an internal test, and wait until the main page appears. Screw the probe into the top of the PID. Calibrate the PID using isobutylene span gas. Follow the on-screen instructions to return to the main page. The PID is ready to collect readings. Charge the PID by screwing in the base charger securely to the outlets in the bottom of the PID, or set PID securely on the cradle charger. A green light will flash when the PID is being charged. When the instrument is fully charged, the light will remain solid. Charge the PID daily during regular use.

1.4 Definitions

Refer to standardized Braun Intertec Corporation Environmental Consulting definitions and terminology listed in the Quality Management System Section 3.0

Background Reading: The PID measurement of ambient air and bag headspace reading without soil in the bag.

Isobutylene span gas: A certified calibration gas specifically used for a PID, which has 100.0 ppm isobutylene concentration.

MSDS: Material Safety Data Sheet

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Photoionization Detector (PID): The PID is a portable, nonspecific, vapor/gas detector employing the principle of photoionization to detect and measure real-time concentrations of a variety of chemical compounds, both organic and inorganic, in air.

True Value: The value that the PID should be calibrating at; e.g., if 100.0 ppm isobutylene span gas is being used, the true value is 100.0 ppm.

1.5 Health and Safety Warnings

Review the MSDS for isobutylene span gas. The use of the Datalogger 580B procedure should be used in accordance with the *Braun Intertec Corporate Health and Safety Standard Operating Procedures Manual* and the site-specific health and safety plan. Do not purposefully smell soil to determine if it is contaminated or to attempt to discern the contaminant type. Incidental olfactory observations should be documented, but avoided if possible, by adjusting work practices.

1.6 Cautions

PIDs will provide non-specific measurement of the presence of organic compounds, including the following: aromatics, ketones and aldehydes, amines and amides, chlorinated hydrocarbons, sulfur compounds, saturated and unsaturated hydrocarbons, and alcohols. The light energy in electron volts (eV) emitted by the PID lamp must be greater than the ionization energy (IE) of the compound(s) of interest. However, 11.7 eV lamps should only be used when compounds with IEs over 10.6 eV are expected and are the primary contaminants. Examples include carbon tetrachloride, methylene chloride, chloroform and trichloroethanes. Consult the *NIOSH Guide to Chemical Hazards* for ionization potentials for most common contaminants. The PID will NOT measure the following: radiation, air (N_2, O_2, CO_2, H_2O), natural gas (methane, ethane, propane), acid gases (HCl, HF, HNO_3), common toxics (CO, HCN, SO_2), freons, ozone, hydrogen peroxide, PCBs or greases.

1.7 Interferences

The MiniRae 3000 is extremely sensitive to moisture; refrain from letting moisture get into the probe or excess moisture onto the screen face, as it will make the screen unreadable and/or damage the internal lamp. It is also sensitive to vibration and direct sunlight. Keep the PID in a cooler, vehicle, or covered. The PID also gets clogged easily. Avoid direct contact with the soil in the probe. The MiniRae 3000 also does not have a handle like the OVM-datalogger 580B. Do not drop, or tie it off to take readings in a tunnel, pit, boring or manhole.

1.8 Personnel Qualifications and Responsibilities

The field technician is responsible for properly charging, calibrating and using the MiniRae 3000 PID in accordance with this SOP. The field technician should be trained in performing this SOP and is responsible for understanding and implementing this SOP during field activities.

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1.9 Equipment and Supplies

The following materials are required for this SOP:

- SOP field forms
- MiniRae 3000 PID and probe
- Isobutylene span gas
- Regulator
- Polyethylene tubing

1.10 Procedure

To turn MiniRae 3000 on:
There are three (3) buttons on the screen face of the MiniRae 3000:

- MODE (Φ)
- **Y/+**
- **N/-**

And one (1) button on the body of the instrument:

- LIGHT

Press and briefly hold the center MODE button until the alarm and/or lights flash. A whirring sound can also be heard. The screen will flash through a series of screens. Screens will display:

RAE
SYSTEMS

PGM-7320
VOL 01.01

MIMIRAE 3000
SN 952-001736

Self test….

Test Passed!

The whirring sound will get slightly louder while the instrument is conducting its' self test.

NOTE: If the screen displays "Lamp" alarm, the internal lamp has failed to light. Wait for several minutes until it lights. If the "Lamp" display remains, turn the PID off, and retry turning the instrument on.

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To calibrate:
Press and hold the MODE (Φ) and **N/-** buttons at the same time for approximately two (2) seconds. The screen will display:

ENTER PASSWORD _____

Do not enter a password. Press MODE (Φ), or enter, again. The screen will give the options of:

CALIBRATION
ZERO CALIB (highlighted)
SPAN CALIB

Press **N/-,** or the down arrow on the screen to highlight the SPAN CALIB option. Press **Y/+,** or SELECT on the screen. The screen will display:

C. Gas = Isobutene
Span = 100 ppm
Please apply gas 1…

Connect regulator to the Isobutylene span gas canister. (The gauge on the canister registers how much span gas remains in the canister). Attach the polyethylene tubing to the top of the regulator. Push in and twist the control button on the regulator until the gas can be heard escaping the canister.

Screw in the PID probe into the top of the PID. Do not strip the threads of the PID. Connect the tubing from the regulator to the end of the probe. Hold the tubing in place securely.

As soon as the tubing is in place, the PID will start a 30 second countdown. The next screen will display:

Span 1 is done
Reading ___.___ppm.

The reading should be within +/- 5.0ppm of the span gas (e.g., 100.5 ppm or 95.0ppm of Isobutylene span gas. The unit is calibrated. Record the Calibration value in the bound field book. Also record the true value of the span gas that the instrument was calibrated at; i.e., 100.0 ppm.

Release the tubing from the PID probe. Turn off the span gas by pressing and twisting the control button on the regulator until the gas does not escape from the canister any longer. Unscrew regulator from span gas canister.
To charge:

***Cradle Charger*:** Plug in the AC/DC adapter to wall outlet. Make sure a good connection is made between the base of the PID and the prongs of the cradle charger. A green light should appear and the screen will display:

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CHARGING……..

When the instrument is fully charged, the screen will display:

FULLY CHARGED!

***Base Charger*:** Plug in the AC/DC adapter into a wall outlet. Screw in the base charger to the bottom of the PID securely. The screen will read the same as it does for the cradle charger.

To turn off:
Press and hold the MODE (Φ) button. The instrument will count down for 5 seconds. The lights and/or alarm will flash and sound during the countdown. Release the MODE (Φ) button when the screen displays:

UNIT OFF!

1.11 Data and Records Management

PIDs should be charged nightly in order to be ready for the following day's field work. All PIDs should be calibrated on site every morning. All calibration and true value numbers should be recorded in the bound field logbook. Field Data should be recorded and managed in accordance with SOP #933.

1.12 Quality Assurance Quality Control

Field staff should check the PID maintenance log before beginning each new job to make sure that scheduled maintenance is current. Erratic PID responses in the field should be evaluated and field maintenance performed or the PID should be replaced. The PID should be calibrated daily in the field. The technician should perform a humidity response test prior to use. Ambient air quality at the work site should be checked and recorded as should a headspace sample of an empty polyethylene bag.
All QA checks should be documented in the field log book.

1.13 References

MiniRae 3000 PID operations manual.

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1 Procedure

1.1 Purpose

This standard operating procedure (SOP) describes the procedure for screening soil potentially contaminated with petroleum and/or hazardous substances that can be ionized within the energy range of the PID UV lamp being used. The purpose of the bag headspace procedure is to assist with site soil characterization of organic chemical contamination, soil sample selection for laboratory analysis and soil management during excavation.

1.2 Scope and Applicability

This procedure should be used during field activities where bag headspace procedures are required by regulatory guidance or site-specific work plans. This procedure is used for soil characterization and not for health and safety monitoring.

1.3 Summary of Method

A quart-size polyethylene freezer bag with a tight sealing closure is half filled with soil and immediately closed leaving air in the top half of the bag (headspace). Organic vapors are allowed to accumulate in the headspace for approximately 10 minutes at room temperature. The bag is opened slightly and the tip of the PID probe is inserted to the middle of the headspace. The highest PID response observed is recorded in the field notes.

1.4 Definitions

Background Readings: The PID measurement of ambient air and bag headspace reading without soil in the bag.

Ionization energy (IE): The energy required to displace an electron and “ionize” a compound. Replaces old term *ionization potential* (IP).

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Photoionization detector (PID): The PID is a portable, nonspecific, vapor/gas detector employing the principle of photoionization to detect and measure real-time concentrations of a variety of chemical compounds, both organic and inorganic, in air.
Standard Operating Procedure (SOP): A set of written instructions that document a routine or repetitive activity used by Braun Intertec.

1.5 Health and Safety Warnings

The bag headspace procedure should be performed in accordance with the *Braun Intertec Corporate Health and Safety Standard Operating Procedures Manual* and the site specific health and safety plan. Do not purposefully smell soil to determine if it is contaminated or to attempt to discern the contaminant type. Incidental olfactory observations should be documented, but avoided, if possible, by adjusting work practices.

1.6 Cautions

PIDs will provide non-specific measurement of the presence of organic compounds including the following: aromatics, ketones and aldehydes, amines and amides, chlorinated hydrocarbons, sulfur compounds, saturated and unsaturated hydrocarbons, and alcohols. The light energy in electron volts (eV) emitted by the PID lamp must be greater than the ionization energy (IE) of the compound(s) of interest. However, 11.7-eV lamps should only be used when compounds with IEs over 10.6 eV are expected and are the primary contaminants. Examples include carbon tetrachloride, methylene chloride, chloroform and trichloroethane. Consult the *NIOSH Guide to Chemical Hazards* for ionization potentials for most common contaminants. The PID will NOT measure the following: radiation, air (N_2, O_2, CO_2, H_2O), natural gas (methane, ethane, propane), acid gases (HCl, HF, HNO_3), common toxics (CO, HCN, SO_2), freons, ozone, hydrogen peroxide, PCBs or greases.

1.7 Interferences

Excessive moisture in the headspace may cause a false positive response on the PID due to condensation in the sensor causing current leakage across the electrodes. The problem is exacerbated by dirty, bent out of shape or corroded electrodes. This problem tends to manifest itself by a “drift” upward of the measurement, rather than a sharp response to the presence of an organic vapor. Humidity from wet soil also absorbs UV light and may dampen response when vapors are present. The warming of cold,

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wet samples tends to cause excessive humidity in the headspace and if the PID is colder than the samples, condensation in the PID can result. Avoid getting condensate or soil in the inlet probe. Avoid getting soil in the grooves of the bag zipper, so that it will close securely.

1.8 Personnel Qualifications and Responsibilities

The field technician is responsible for properly preparing, collecting, and recording the information from a bag headspace reading in accordance with this SOP. The field technician should be trained in performing this SOP and is responsible for understanding and implementing this SOP during field activities, as well as obtaining the appropriate equipment and supplies necessary for the bag headspace procedure. The field technician should also be trained in proper calibration, maintenance and cleaning of the PID.

1.9 Equipment and Supplies

The following materials are required for this SOP:

- Quart-size polyethylene freezer bags with a tight sealing closure (new one for each test)
- Photoionization detector (PID) with appropriate IE lamp source, calibrated and charged
- Sampling equipment for specified method
- Sampling method SOP field forms
- Laboratory sample containers as needed
- Proper PPE
- Paper towels and/or rags

1.10 Procedure

1.10.1. Preparation

Calibrate the PID onsite at least daily to yield total organic vapors in parts per million (ppm) using an isobutylene standard. Record the lamp IE, standard used, date, time and results of the daily calibration.

1.10.2. Collection

While wearing proper PPE, the field technician should fill one half of a quart size polyethylene freezer bag with a tight sealing closure, leaving air in the upper half of the bag (the volume ratio of soil: headspace

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should be 1:1). Close the bag immediately, making sure all soil is clear from the path of the bag's zipper. Break apart the soil while vigorously shaking the bag for 15 seconds, avoiding puncturing a hole in the bag or tearing apart the zipper.

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Allow the headspace to develop in the bag at room temperature between 10 and 20 minutes. If the temperature is below the operating range of the PID, allow the headspace to develop within a heated vehicle or building. Record the ambient temperature during headspace screening [Note: if the screening is being performed in a heated vehicle or building, record that temperature].

Vigorously shake the bag again for 15 seconds. Open the bag slightly, enough for the end of the PID probe tip to enter the bag and insert the tip to the middle of the headspace, avoiding contact with the soil and/or potential moisture from condensation in the bag. Watch the PID screen for the highest reading. Maximum reading should appear within about two seconds.

In addition to screening a soil sample, a background PID headspace reading should also be established in the field during the day. Under the same conditions as the screened soil sample (heated vehicle or building, etc.), take an empty polyethylene freezer bag, puff up with air, and insert the probe of the PID in the same way as the soil sample. Watch the screen of the PID for the highest PID reading (ppm). Record the highest reading the PID reached in the bound filed logbook.

1.10.3. Documentation

Bag headspace data should be recorded in the field logbook. Documentation should include the following:

- Calibration: date, time, calibration standard and result
- Maintenance performed, if any
- Background readings: ambient air and bags
- Ambient air temperature at which headspace screened
- Sample identification information per sample method SOP
- General observations: PID alarm, condensed moisture in the bag, unusual odors associated with the soil sample and/or ambient air

1.11 Data and Records Management

Field data should be recorded and managed in accordance with SOP 7.21.04 Field Notes and Documentation.

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1.12 Quality Assurance Quality Control

Field staff should check the PID maintenance log before beginning each new job to make sure that scheduled maintenance is current. Erratic PID responses in the field should be evaluated and field maintenance performed or the PID should be replaced. The PID should be calibrated daily in the field. The technician should perform a humidity response test prior to use. Ambient air quality at the work site should be checked and recorded as should a headspace sample of an empty polyethylene bag. All QA checks should be documented in the field log book.

1.13 References

MPCA, September 2008. *Soil Sample Collection and Analysis Procedures, Field Screening Procedures.* Guidance Document 4-04, c-prp4-04. Petroleum Remediation Program, Minnesota Pollution Control Agency; St. Paul, MN

NIOSH, Pocket Guide to Chemical Hazards, NIOSH Publications; Cincinnati, OH

RAE Systems, Using RAE Systems PIDs For Measuring Soil Headspace and In Soil Vapor Extractions, Technical Note TN-118, Rev 3, wh.06-03, RAE Systems, Inc. ; San Jose, CA

RAE Systems, RAE Systems PID Training Outline, Application Note AP-000, rev 2, cw.04-05, RAE Systems, Inc.; San Jose, CA

RAE Systems, Addressing MiniRAE 2000 and ppbRAE Moisture Sensitivity, Technical Note TN-163, Rev 3, cw&wh. 10-05, RAE Systems, Inc. ; San Jose, CA

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Appendix H

Field Sampling Data Sheets

Appendix I

Grain-Size Analysis, Hydraulic Conductivity Calculations

Appendix J

Free Product Recovery Report Worksheet

Appendix K

Water Supply Well Logs

Minnesota Unique Well No.

206474

County: Hennepin
Quad: Minneapolis South
Quad ID: 104A

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date: 08/24/1991
Update Date: 03/10/2014
Received Date:

Well Name EDINA 7

Township Range Dir Section Subsections Elevation 951 ft.

117 21 W 28 CCDCAA **Elevation Method** 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
547 ft.	547 ft.	03/00/1955

Drilling Method --

Well Address

EDINA MN

Drilling Fluid --

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Community Supply **PWS ID** 1270011 **Source** S06

Geological Material	Color	Hardness	From	To
CLAY			0	18
SAND + GRAVEL			18	35
CLAY			35	78
SAND			78	132
LIMEROCK			132	159
SOAPSTONE			159	162
SANDROCK			162	290
SANDROCK + SHALE			290	324
SHAKOPEE			324	453
JORDAN			453	459
JORDAN			459	545
SHALE			545	547

Casing Type Steel (black or low carbon) **Joint** No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter
24 in. to 148 ft.	lbs./ft.	
16 in. to 350 ft.	lbs./ft.	

Open Hole from 350 ft. to 547 ft.

Screen NO **Make** **Type**

Diameter **Slot/Gauze** **Length** **Set Between**

Static Water Level
112 ft. from Land surface Date Measured 03/00/1955

PUMPING LEVEL (below land surface)
137 ft. after hrs. pumping 1040 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

REMARKS
GAMMA LOGGED 11-8-04 BY JIM TRAEN

Located by: Minnesota Department of Health

Method: GPS Differentially Corrected

Unique Number Verification: Information from owner

Input Date: 03/22/1993

System: *UTM - Nad83, Zone15, Meters*

X: 471863 **Y:** 4972656

Grouting Information Well Grouted? ☑ Yes ☐ No

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number___ HP 0 Volts
Length of drop Pipe _ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Borehole Geophysics Yes
First Bedrock Platteville Formation
Last Strat St.Lawrence Formation
Aquifer Prairie Du Chien-Jordan
Depth to Bedrock 132 ft.

Well Contractor Certification

License Business Name	Lic. Or Reg. No.	Name of Driller
Keys Well Co.	62012	

County Well Index Online Report **206474** Printed 5/2/2014 HE-01205-07

Minnesota Unique Well No.

206475

County Hennepin
Quad Minneapolis South
Quad ID 104A

MINNESOTA DEPARTMENT OF HEALTH

WELL AND BORING RECORD

Minnesota Statutes Chapter 103I

Entry Date 08/24/1991
Update Date 02/14/2014
Received Date

Well Name HIGHLAND VILLA

Township	Range	Dir	Section	Subsections	Elevation	Elevation Method
117	21	W	28	CCCAAA	965 ft.	7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
278 ft.	278 ft.	07/30/1969

Drilling Method --

Well Address
5300 212 HY
EDINA MN

Drilling Fluid –

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Commercial

Geological Material	Color	Hardness	From	To
CLAY	BROWN		0	20
GRAVEL + BOULDERS	BROWN		20	35
SAND + BOULDERS	BROWN		35	70
CLAY	GRAY		70	85
SAND	BROWN		85	110
DIRTY SAND + GRAVEL	BROWN		110	125
BROKEN LIMEROCK + GRAVEL	GRAY		125	133
LIMESTONE	GRAY	HARD	133	145
SANDSTONE	GRAY		145	190
SANDSTONE	YELLOW		190	250
SANDSTONE	WHITE		250	278
SHALE	RED		278	278

Casing Type **Joint** No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter
10 in. to 135 ft.	lbs./ft.	

Open Hole from 135 ft. to 278 ft.

Screen NO **Make** **Type**

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
80 ft. from Land surface Date Measured 07/30/1969

PUMPING LEVEL (below land surface)
100 ft. after hrs. pumping 175 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A **Input Date:** 01/01/1990
System: *UTM - Nad83, Zone15, Meters* **X:** 471730 **Y:** 4972790

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name JACUZZI Model number __ HP 10 Volts
Length of drop Pipe 147 ft. Capacity 150 g.p.m Type Submersible Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock Platteville Formation
Last Strat St.Peter Sandstone
Aquifer Multiple
Depth to Bedrock 125 ft.

Well Contractor Certification

License Business Name	Lic. Or Reg. No.	Name of Driller
Renner E.H. & Sons	27015	

County Well Index Online Report **206475** Printed 5/2/2014
HE-01205-07

Minnesota Unique Well No.
256734

County: Hennepin
Quad: Minneapolis South
Quad ID: 104A

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes Chapter 103I

Entry Date: 04/18/2005
Update Date: 02/14/2014
Received Date:

Well Name PERKINS EDINA

Township	Range	Dir	Section	Subsections	Elevation	Elevation Method
117	21	W	28	DADDDA	912 ft.	7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
114 ft.	114 ft.	0

Drilling Method --

Well Address
EDEN AV
EDINA MN

Drilling Fluid –

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Commercial

Geological Material	Color	Hardness	From	To
GLACIAL DRIFT			0	103
PLATTEVILLE LIMESTONE			103	108
GLENWOOD SHALE			108	114

Casing Type Steel (black or low carbon) **Joint** No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** ft.

Casing Diameter	Weight	Hole Diameter
8 in. to 104 ft.	lbs./ft.	

Open Hole from 104 ft. to 114 ft.

Screen NO **Make** **Type**

Diameter **Slot/Gauze** **Length** **Set Between**

Static Water Level
52 ft. from Land surface Date Measured 04/19/2005

PUMPING LEVEL (below land surface)
ft. after hrs. pumping g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

REMARKS
GAMMA LOGGED 4-18-2005

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey
Method: Digitization (Screen) - Map (1:24,000)
Unique Number Verification: Information from owner
Input Date: 04/18/2005
System: *UTM - Nad83, Zone15, Meters*
X: 472381 **Y:** 4973005

Nearest Known Source of Contamination
0 feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☐ Not Installed Date Installed
Manufacturer's name Model number __ HP _ Volts
Length of drop Pipe _ ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

Borehole Geophysics Yes
First Bedrock Platteville Formation
Last Strat Glenwood Formation
Aquifer Platteville-Glenwood
Depth to Bedrock 103 ft.

Well Contractor Certification

Minnesota Geological Survey	MGS	
License Business Name	Lic. Or Reg. No.	Name of Driller

County Well Index Online Report **256734** Printed 5/2/2014 HE-01205-07

Minnesota Unique Well No.
206476

County: Hennepin
Quad: Minneapolis South
Quad ID: 104A

MINNESOTA DEPARTMENT OF HEALTH
WELL AND BORING RECORD
Minnesota Statutes Chapter 103I

Entry Date: 08/24/1991
Update Date: 02/14/2014
Received Date:

Well Name STANDARD OIL CO.

Township	Range	Dir	Section	Subsections	Elevation	
117	21	W	28	CDBBCB	Elevation Method	945 ft. 7.5 minute topographic map (+/- 5 feet)

Well Depth	Depth Completed	Date Well Completed
170 ft.	170 ft.	12/21/1952

Drilling Method --

Well Address
EDINA MN

Drilling Fluid –

Well Hydrofractured? ☐ Yes ☐ No
From Ft. to Ft.

Use Commercial

Geological Material	Color	Hardness	From	To
SAND	BROWN		0	18
SAND + CLAY	BROWN		18	38
GRAVEL	DARK		38	66
SAND	LIGHT		66	78
SAND + CLAY	BROWN		78	101
SAND + CLAY	BROWN		101	114
SAND	LIGHT		114	128
SAND + STONES	LIGHT		128	129
LIMESTONE	BLUE		129	160
SHALE	BLUE		160	163
SANDROCK	WHITE		163	170

Casing Type Joint No Information **Drive Shoe?** ☐ Yes ☐ No **Above/Below** 0 ft.

Casing Diameter	Weight	Hole Diameter
4 in. to 130 ft.	lbs./ft.	

Open Hole from 130 ft. to 170 ft.

Screen NO **Make** **Type**

Diameter	Slot/Gauze	Length	Set Between

Static Water Level
77 ft. from Land surface Date Measured 12/21/1952

PUMPING LEVEL (below land surface)
79 ft. after hrs. pumping 28 g.p.m.

Well Head Completion
Pitless adapter manufacturer Model
☐ Casing Protection ☐ 12 in. above grade
☐ At-grade (Environmental Wells and Borings ONLY)

NO REMARKS

Grouting Information Well Grouted? ☐ Yes ☐ No

Located by: Minnesota Geological Survey **Method:** Digitized - scale 1:24,000 or larger (Digitizing Table)
Unique Number Verification: N/A **Input Date:** 01/01/1990
System: *UTM - Nad83, Zone15, Meters* **X:** 471952 **Y:** 4972912

Nearest Known Source of Contamination
_feet _direction _type
Well disinfected upon completion? ☐ Yes ☐ No

Pump ☑ Not Installed Date Installed
Manufacturer's name FAIRBANKS MORSE Model number __ HP 0 Volts
Length of drop Pipe 94 ft. Capacity _g.p.m Type Material

Abandoned Wells Does property have any not in use and not sealed well(s)? ☐ Yes ☐ No

Variance Was a variance granted from the MDH for this well? ☐ Yes ☐ No

First Bedrock Platteville Formation **Aquifer** Multiple
Last Strat St.Peter Sandstone **Depth to Bedrock** 129 ft.

Well Contractor Certification

License Business Name	Lic. Or Reg. No.	Name of Driller
Renner E.H. & Sons	27015	

County Well Index Online Report **206476** Printed 5/2/2014 HE-01205-07

Appendix L

Public Water Supply Risk Assessment and MDH Source Water Assessment

Source Water Protection Areas

- [x] Wellhead Protection Areas (WHPA)
- [x] Drinking Water Supply Mgmt Areas (DWSMA)
- [x] DWSMA Vulnerability
  - Very High Vulnerability
  - High Vulnerability
  - Moderate Vulnerability
  - Low Vulnerability
  - Very Low Vulnerability

For more information...

Type in an Address, City, or Zip below:

5146 Eden Avenue, Edina, MN

Find

Address Found: 5146 Eden Avenue, Minneapolis, MN 55436, USA

Click on water layers to learn more.

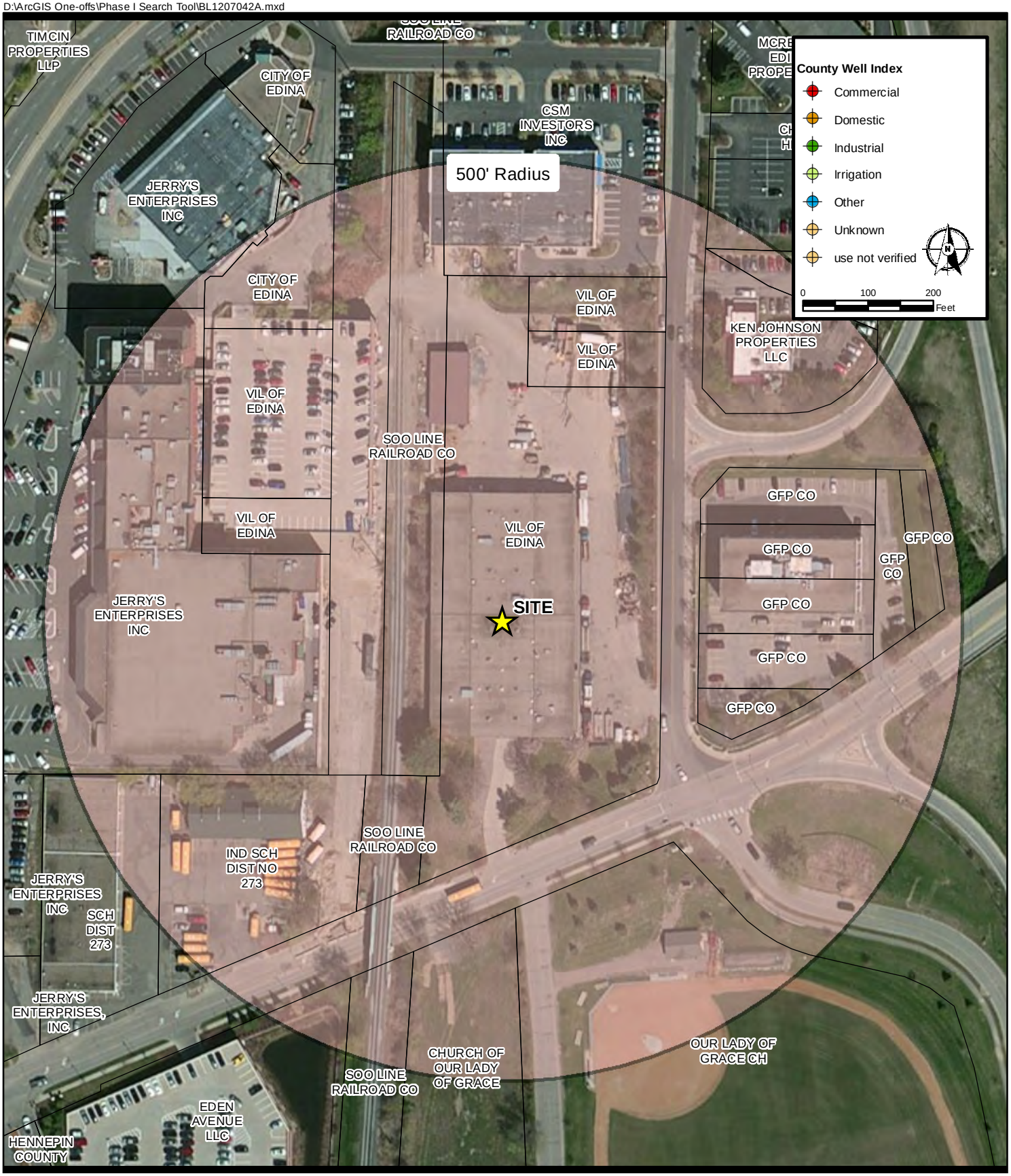
Site

Appendix M

Conceptual Corrective Action Design Worksheet

Figures

D:\ArcGIS One-offs\Phase I Search Tool\BL1207042A.mxd



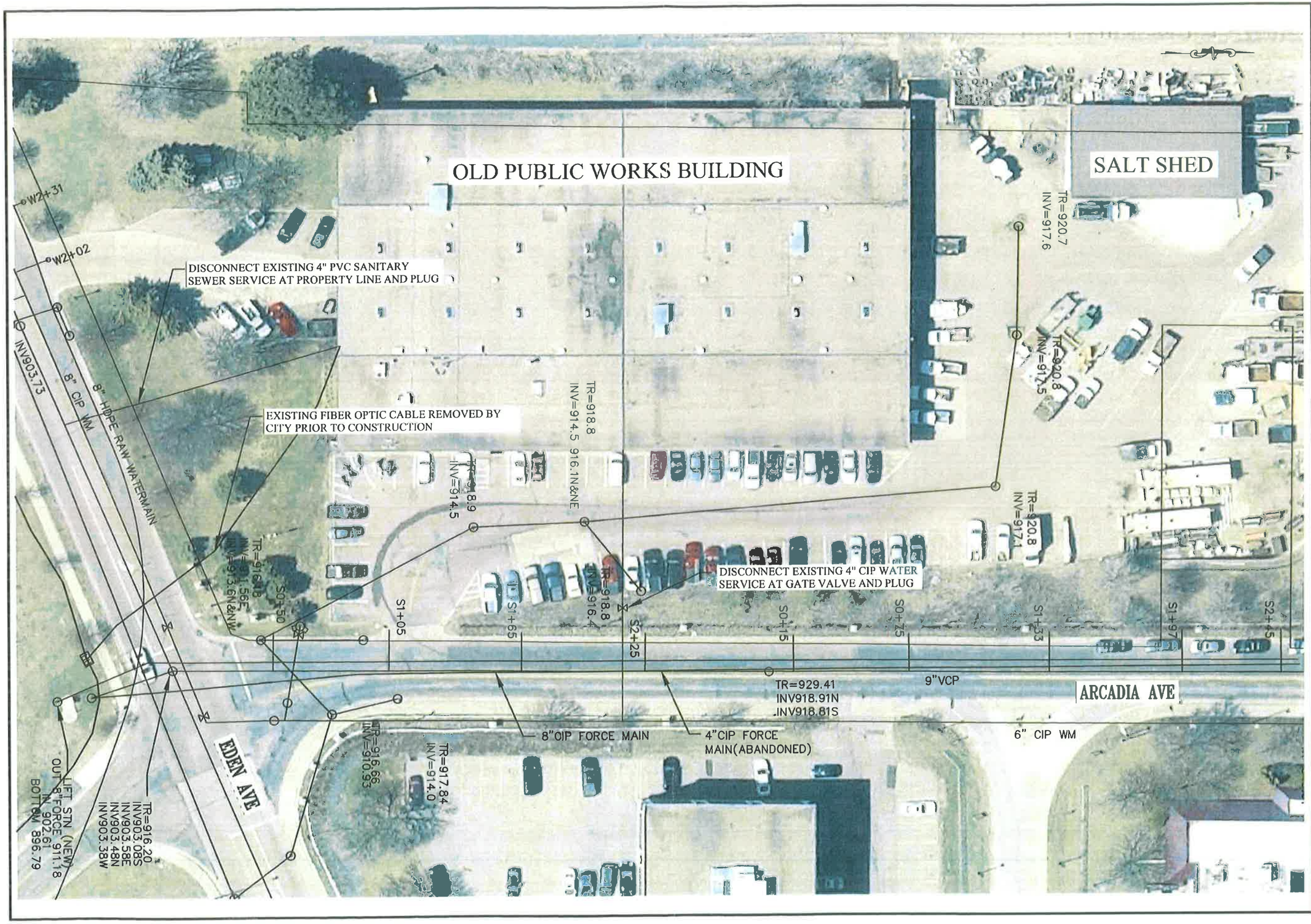
Sheet: 1 of 1

Fig. 4

Project No:	BL1207042A
Drawing No.	BL1207042A
Scale:	1 in = 200 ft
Drawn By:	RHD
Date Drawn:	9/24/13
Checked By:	SH
Last Modified:	9/26/13

WELL RECEPTOR SURVEY MAP
PROJECT BL-12-07042A, PHASE C
5146 EDEN AVENUE, EDINA, MN

BRAUN INTERTEC
11001 Hampshire Avenue So.
Minneapolis, MN 55438
PH. (952) 995-2000
FAX (952) 995-2020



NO.	DATE	BY	REMARKS
			REVISIONS

SITE PLAN

CITY OF EDINA
7450 METRO BOULEVARD
EDINA, MN 55439-3037
Ph: 952-826-0371
Fax: 952-826-0392

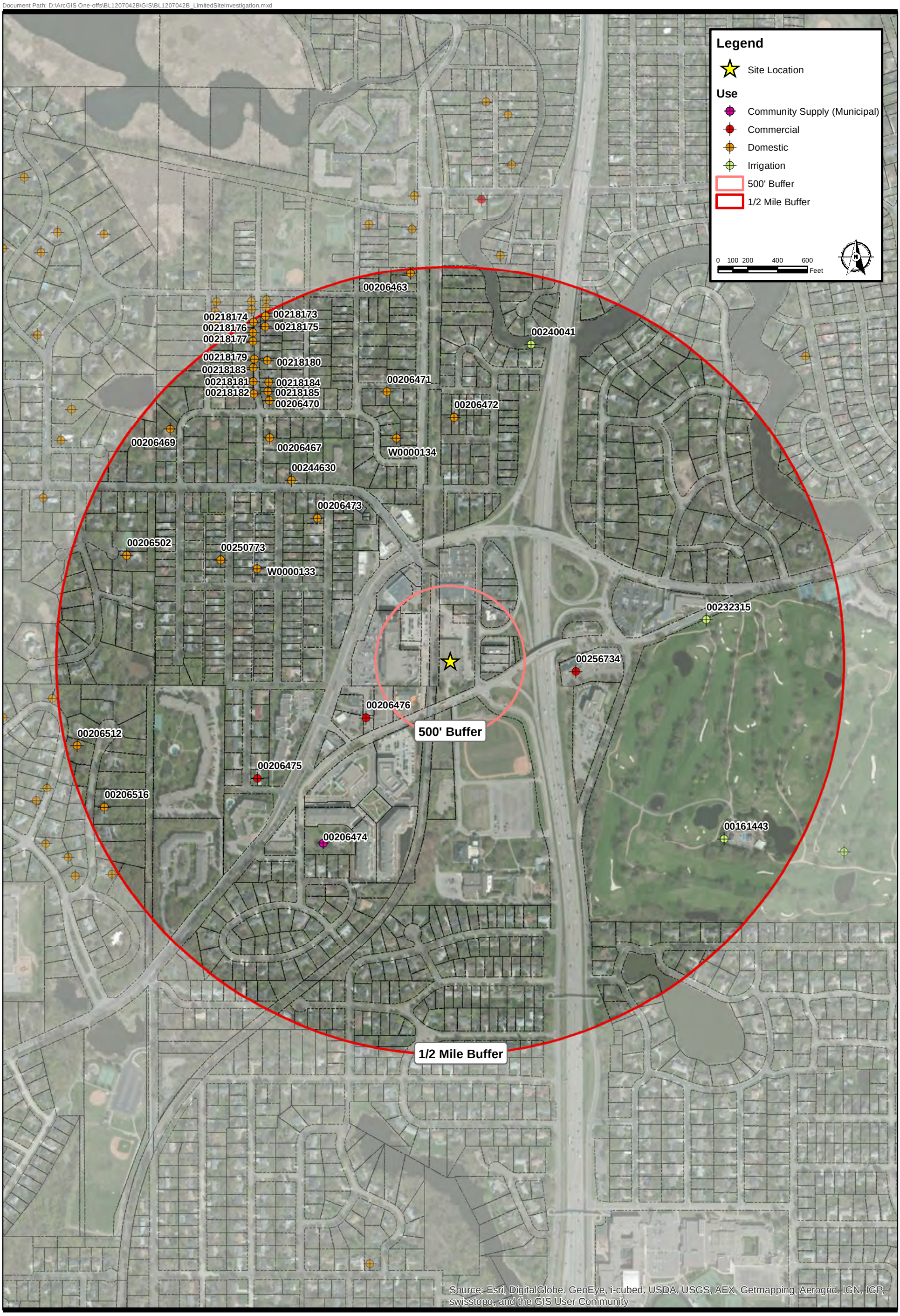
PW BUILDING DEMO AND DISPOSAL

I HEREBY CERTIFY THAT THIS PLAN WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA

DATE: 1/10/13 LIC. NO. 43970

DRAWN:	JTC
CHECKED:	CAM
APPROVED:	WDH
DATE:	1-7-13
IMP.#	A-246
CONTR.#	PW 13-1
SHEET	2 of 2

Document Path: D:\ArcGIS One-offs\BL1207042B\GIS\BL1207042B_LimitedSiteInvestigation.mxd



Sheet: 1 of 1

Fig. X

Project No:	BL1302346
Drawing No.	BL1207042B_LimitedSiteInvestigation
Scale:	1 in = 600 ft
Drawn By:	RHD
Date Drawn:	1/6/14
Checked By:	SH
Last Modified:	1/9/14

LIMITED SITE INVESTIGATION
FORMER EDINA PUBLIC WORKS BUILDING
5146 EDEN AVENUE, EDINA, MN

BRAUN INTERTEC
11001 Hampshire Avenue So.
Minneapolis, MN 55438
PH. (952) 995-2000
FAX (952) 995-2020

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▼ **CONFIRMATION SAMPLE LOCATION**

PUSH PROBE SOIL BORING LOCATION

SOIL VAPOR SAMPLE LOCATION

N

50' 0 100'

SCALE: 1" = 100'

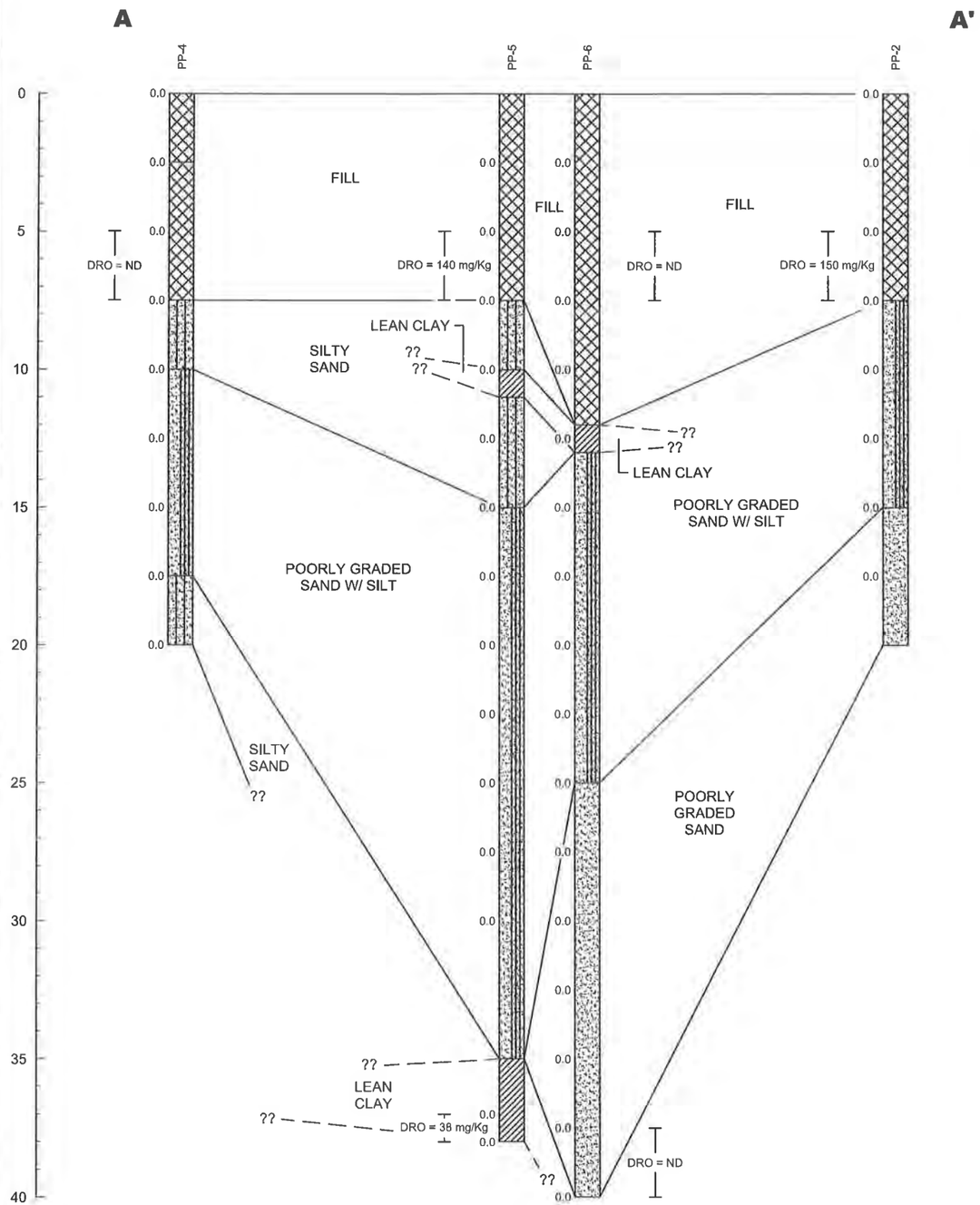
Sheet: of

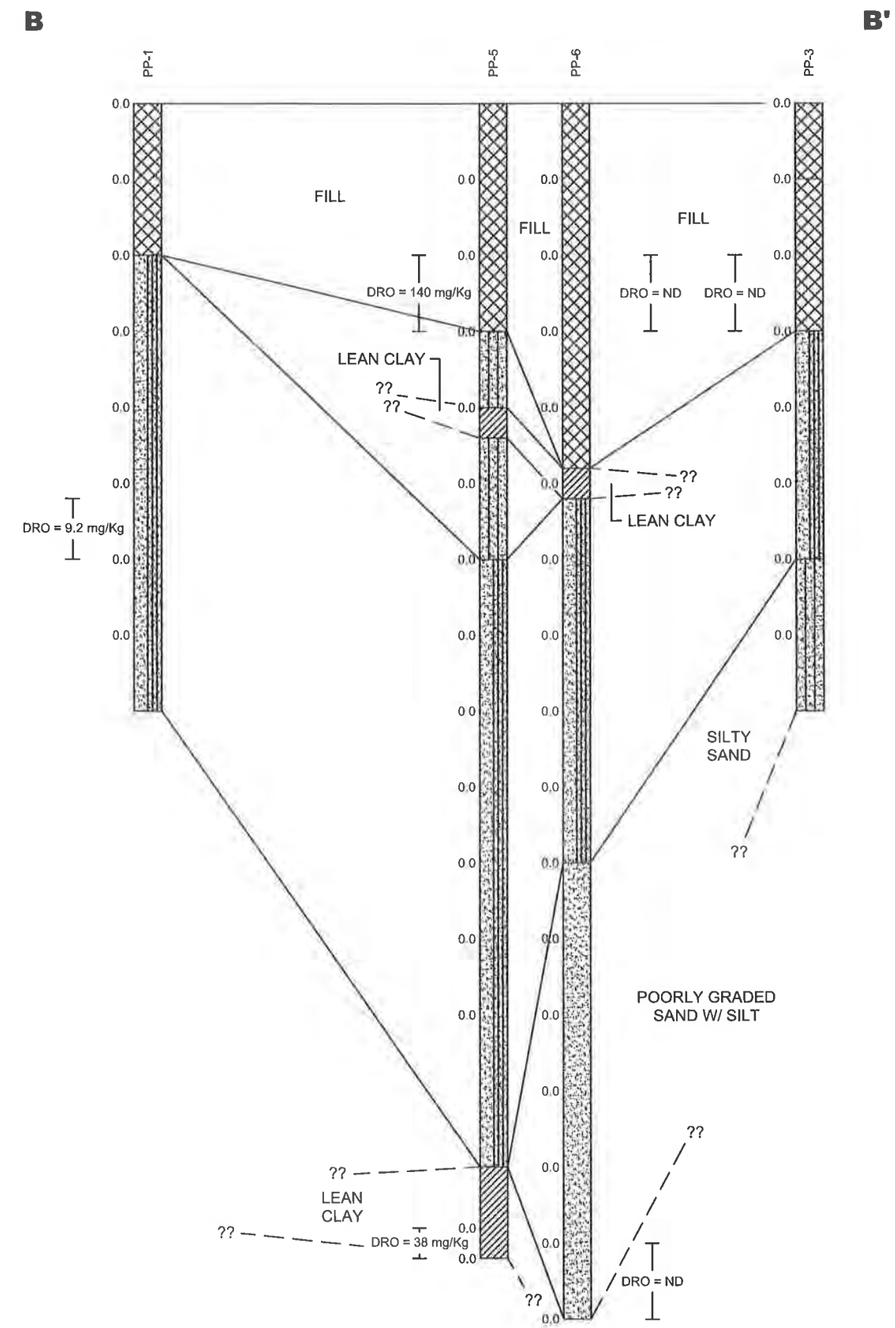
Fig:

Project No: BL1207042B	
Drawing No: BL1207042A	
Scale:	1"= 100'
Drawn By:	JAG
Date Drawn:	8/16/13
Checked By:	JAF
Last Modified:	5/2/14

CONFIRMATION SAMPLE, SOIL BORING AND SOIL VAPOR SAMPLE LOCATION SKETCH
ENVIRONMENTAL CONSULTING SERVICES
FORMER CITY OF EDINA PUBLIC WORKS BUILDING
5146 EDEN AVENUE
EDINA, MINNESOTA

BRAUN INTERTEC
11001 Hampshire Avenue So.
Minneapolis, MN 55438
PH. (952) 995-2000
FAX (952) 995-2020





5' 0 10'

HORIZONTAL SCALE: 1"= 10'

2.5' 0 5'

VERTICAL SCALE: 5'

VERTICAL EXAGGERATION: 2X

BRAUN INTERTEC

11001 Hampshire Avenue So.
Minneapolis, MN 55438
PH. (952) 995-2000
FAX (952) 995-2020

Base Dwg Provided By:

CROSS SECTIONS A-A' AND B-B'
LIMITED SITE INVESTIGATION
FORMER CITY OF EDINA PUBLIC WORKS BUILDING
5146 EDEN AVENUE
EDINA, MINNESOTA

Project No: BL1207042B

Drawing No: BL1207042A

Scale:	AS SHOWN
Drawn By:	JAG
Date Drawn:	8/16/13
Checked By:	SH
Last Modified:	1/21/14

Sheet: of | Fig:

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