



www.haleyaldrich.com

**REPORT ON
HUMAN HEALTH RISK ASSESSMENT REPORT
EAST HENNEPIN AVENUE SITE
MINNEAPOLIS, MINNESOTA**

by Haley & Aldrich, Inc.
Bedford, New Hampshire

for General Mills, Inc.
Minneapolis, Minnesota

File No. 41064-003
July 2015





HALEY & ALDRICH, INC.
3 Bedford Farms Drive
Bedford, NH 03110
(603) 625.5353

31 July 2015
File No. 41064-003

General Mills, Inc.
One General Mills Boulevard
Minneapolis, Minnesota 55426

Attention: Mr. Larry Deeney

Subject: Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Dear Mr. Deeney:

Please find enclosed the Human Health Risk Assessment Report for the East Hennepin Avenue Site in Minneapolis, Minnesota. If you have any questions regarding this document, feel free to call Jay Peters at 603-391-3312.

Sincerely yours,
HALEY & ALDRICH, INC.

A handwritten signature in black ink, appearing to read "Jay Peters".

Jay Peters
Risk Assessment Practice Leader

A handwritten signature in black ink, appearing to read "Richard J. Rago".

Richard J. Rago
Vapor Intrusion Practice Leader

Enclosure: Human Health Risk Assessment Report

Z:\41064_General Mills\risk\Risk Assessment\FINAL PDF 7.31.15\2015-0731-HAI-Hennepin-HHRA-F1.docx

TABLE OF CONTENTS

	Page
List of Tables	iii
List of Figures	iii
List of Acronyms	iv
1. Introduction	1
1.1 PROJECT OVERVIEW	1
1.1.1 Site History	2
1.1.2 Response Action History	2
1.2 STUDY AREA DESCRIPTION	3
1.3 CONTENT OF THE HHRA	4
2. Data Evaluation	5
2.1 STUDY AREA INVESTIGATION SUMMARY	5
2.2 DATA SOURCES AND DATA QUALITY	5
2.2.1 Data Used in HHRA	6
2.2.2 Data Not Used in HHRA	8
2.2.3 Data Quality	8
2.3 DATA SUMMARIZATION METHODS	8
3. Exposure Assessment	9
3.1 LAND USES AND POTENTIALLY EXPOSED POPULATIONS	9
3.2 SITE CONCEPTUAL MODEL SUMMARY	9
3.3 EXPOSURE ROUTES	11
3.4 EXPOSURE PATHWAYS – PRELIMINARY SCREENING	11
3.4.1 Soil	13
3.4.2 Groundwater	14
3.4.3 Sub-slab Soil Gas	15
3.5 EXPOSURE PATHWAYS – DETAILED EVALUATION	16
3.5.1 Sub-Slab Soil Gas	17
3.5.2 Groundwater	19
3.6 EXPOSURE PATHWAYS - CONCLUSIONS	22
4. Uncertainty Analysis	23
5. HHRA Summary and Conclusions	29
References	31

TABLE OF CONTENTS
(Continued)

Page

Tables

Figures

Appendix A - Data Sets Used in HHRA

Appendix B - Selection of Groundwater Data for Vapor Intrusion Assessment

Appendix C - Vapor Intrusion Screening Level Calculations

Appendix D - Derivation of Site-Specific Vapor Intrusion Attenuation Factors

List of Tables

Table No.	Title
1	Summary of Soil Analytical Data and Initial Pathway Screening
2	Summary of Groundwater Analytical Data – Area within Central Area
3	Summary of Groundwater Analytical Data and Initial Pathway Screening – Area Outside of Central Area
4	Summary of Sub-Slab Soil Gas and Indoor Air Sampling and Mitigation Status
5	Summary of Sub-Slab Soil Gas Analytical Data and Initial Pathway Screening – Area Outside of Central Area
6	Summary of Sub-Slab Soil Gas and Indoor Air Sampling and Mitigation Status – Properties with Sub-Slab Soil Gas TCE > 20 ug/m ³
7	Summary of Sub-Slab Soil Gas and Indoor Air Sampling and Mitigation Status – Properties in NE Area

List of Figures

Figure No.	Title
1	Location Map
2	Study Area
3	Investigation Locations
4	Mitigation Status
5	Groundwater to Sub-slab Soil Gas Vapor Intrusion Potential
6	Groundwater to Indoor Air Vapor Intrusion Potential

List of Acronyms

bgs	Below Ground Surface
BTEX	Benzene, Toluene, Ethylbenzene, and Xylenes
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COPC	Chemical of Potential Concern
CVOCs	Chlorinated Volatile Organic Chemicals
DNAPL	Dense Non-Aqueous Phase Liquid
ELCR	Excess Lifetime Cancer Risk
EPCs	Exposure Point Concentrations
FS	Feasibility Study
ft	feet
g/kg/day	grams/kilogram/day
HHRA	Human Health Risk Assessment
HQ	Hazard Quotient
IRIS	Integrated Risk Information System
ISV	Intrusion Screening Value
kg	Kilogram
kg/yr	Kilogram per Year
µg/L	Micrograms per Liter
mg/L	Milligrams per Liter
mg/kg	Milligrams per Kilogram
MDH	Minnesota Department of Health
MCL	Maximum Contaminant Level
MPCA	Minnesota Pollution Control Agency
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NCP	National Contingency Plan
10 ⁻⁶	One in a Million
10 ⁻⁵	One in One-Hundred Thousand
10 ⁻⁴	One in Ten-Thousand
PCE	Perchloroethylene (aka tetrachloroethylene)
QAPP	Quality Assurance Project Plan
QA/QC	Quality Assurance/Quality Control

List of Acronyms
(continued)

RAGS	Risk Assessment Guidance for Superfund
RfC	Reference Concentration
RSLs	Regional Screening Levels
SCM	Site Conceptual Model
SQL	Sample Quantitation Limit
TCE	Trichloroethylene
TCL	Target Compound List
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Chemicals

1. Introduction

This document presents the Human Health Risk Assessment (HHRA) for the East Hennepin Avenue Study Area in Minneapolis, Minnesota. The objective of the HHRA is to characterize health risks to human populations under the current and foreseeable future uses of the Study Area. However, there are multiple sources of contamination within the Study Area. In many parts of the Study Area there is uncertainty (and potentially disagreement among the stakeholders) regarding which parties are responsible for any releases. In order to provide a comprehensive risk assessment report, this report addresses volatile organic chemical (VOC) impacts in the Study Area, regardless of source.

The HHRA is being performed as a component of the Vapor Intrusion Pathway Investigation for the Site pursuant to the Remedial Action Plan Modification #1 (RAP Modification #1) to the Response Order by Consent between General Mills and the Minnesota Pollution Control Agency (MPCA), dated October 23, 1984 (Consent Order; MPCA, 1984). This HHRA is a companion document to the Vapor Intrusion Pathway Investigation Report (Investigation Report; Barr, 2015a). Whereas that report provides detailed discussions of the investigation, analytical data, and mitigation activities, as well as the site conceptual model (SCM), the HHRA provides analysis of that information in the context of potential exposures and health risks.

The Consent Order uses the term “Site” to refer to the former General Mills property at 2010 East Hennepin Avenue (Figure 1). This terminology is retained in this document, and thus references to the Site are intended to refer only to the property at 2010 East Hennepin Avenue. In the Vapor Intrusion Pathway Work Plan (Investigation Work Plan), General Mills also investigated soil, groundwater, and soil gas at locations northeast, south and southwest of the Site. This larger area is referred to in this report as the Study Area.

In its most recent Five-Year Review for the Site (MPCA, 2014a), MPCA recommended performing an updated risk characterization that considers all potential exposure pathways, including vapor intrusion. Vapor intrusion is the process whereby volatile constituents in subsurface media such as groundwater can partition to soil gas, and then migrate in soil gas to air inside buildings that overlie the subsurface sources of volatile constituents. This document presents the risk assessment.

The HHRA is performed using USEPA guidance for risk assessment, including the *Risk Assessment Guidance for Superfund* guidance document series (USEPA, 1989; 2004; 2009) and the *OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Sources to Indoor Air* (USEPA, 2015a). A complete list of references that are used to complete the HHRA is included at the end of this report.

1.1 PROJECT OVERVIEW

The Site is located at 2010 East Hennepin Avenue in Minneapolis, Hennepin County, Minnesota (Figure 1). It is situated along the southern edge of the almost 700-acre Mid-City Industrial area which stretches from Interstate I-35W to the north, Highway 280 to the east and Johnson Street to the west. East Hennepin Avenue marks the approximate southern boundary of this industrial area.

1.1.1 Site History

From approximately 1930 until the 1970s, General Mills and, later, General Mills Chemicals, Inc. operated a technical center and research laboratory at the Site. Laboratory wastes reportedly were disposed in a disposal area in the southeast portion of the Site. In 1977, Henkel, Inc. (Henkel) acquired General Mills Chemicals, Inc. and, with it, the property at 2010 East Hennepin Avenue. Henkel continued much of the research and chemical business at the Site.

The former disposal area was used to manage wastes at the property in a manner that was generally consistent with industry practices at the time. Liquid wastes were reportedly placed into a conveyance feature constructed using three empty 55-gallon drums that were perforated, stacked one on top of another, and constructed with the bottom of the deepest drum about 10 to 12 feet below the ground surface (Barr, 1983). The disposal area reportedly was used from approximately 1947 to 1962. Site characterization work associated with the former disposal area began in 1981. The drums were reportedly excavated in 1981, and the bottom of the excavation is believed to have been about 12 feet deep (Barr, 1983).

1.1.2 Response Action History

Multiple investigations have been conducted at the Site since the early 1980s to characterize soil and groundwater conditions at and near the Site. These early investigations detected VOCs, primarily benzene, toluene, ethyl benzene and xylenes (BTEX), and to a lesser extent chlorinated VOCs (cVOCs), including trichloroethylene (TCE), tetrachloroethylene (PCE), and 1,1,1-trichloroethane, in soil and shallow groundwater at a former disposal area in the southeastern corner of the Site. In contrast, further from the former disposal area, TCE was the predominant constituent detected in groundwater (Barr, 1983). Early investigations determined shallow groundwater flowed in a southwesterly direction.

General Mills agreed to install and operate a groundwater extraction and treatment system beginning in 1985. The groundwater treatment system operated for 25 years and annual groundwater sampling and reporting was completed. After achieving the remedial action objectives set forth in the Consent Order, MPCA approved shutting down the system in 2010.

In November 2013, General Mills began implementing the Sub-Slab Investigation and Building Mitigation Work Plan (Mitigation Work Plan; Barr; 2014b) under MPCA oversight. General Mills collected sub-slab soil gas samples at 339 properties and installed building mitigation systems at 188¹ properties between November 2013 and April 2015. The sub-slab sampling results at various locations pointed to the likely existence of TCE sources unrelated to the Site. This work is documented in the Sub-Slab Sampling and Building Mitigation Implementation Report (Implementation Report; Barr, 2015b)

In April 2014, as part of its ongoing evaluation of the vapor intrusion pathway, General Mills also conducted soil, groundwater and soil gas sampling to evaluate areas northeast, south and southwest of the Site (Barr, 2014a). TCE was detected in groundwater and soil gas at multiple locations northeast of the Site, providing further evidence of the presence of off-Site TCE sources including sources up-gradient of the Site.

¹ MPCA has installed a mitigation system in at least one additional property in the Study Area in connection with the newly established East Hennepin Groundwater and Vapor Site, SA249.

MPCA is presently conducting another sub-slab soil gas sampling and mitigation effort in connection with a separate site that MPCA has identified and named the SE Hennepin Area Groundwater and Vapor site (SA249), which may include the southwest, south, and/or northeast portions of the Study Area that has been investigated by General Mills; this information has been included in this HHRA. One additional property within these areas has been mitigated for potential vapor intrusion by MPCA.

The most recent Five-Year Review for the Site (MPCA, 2014a) acknowledged that the majority of the exposure pathways associated with constituents detected in soil and groundwater were incomplete, including use of groundwater as a source of drinking water because all properties within the Study Areas use the municipal public water supply. However, the Five Year Review noted that risk characterization of the vapor intrusion pathway had not been completed.

1.2 STUDY AREA DESCRIPTION

The Study Area includes several city blocks generally to the south of East Hennepin Avenue. Within this area, the Site is an approximately 6.7-acre wedge-shaped parcel located on the south side of East Hennepin Avenue between 19th Avenue SE and 21st Avenue SE. The Site is currently occupied by a variety of commercial businesses with reported residential use at the top floor of one building.

The Study Area is primarily urban residential development on approximately 0.1-acre lots. Some commercial properties and multi-family residential properties are interspersed throughout the Study Area. In addition, numerous properties within the Study Area are used as rentals. Industrial properties border the Study Area to the north and that area is zoned commercial/industrial. Drinking water throughout the Study Area is supplied by a public water distribution system. The land uses of the Study Area are unlikely to change in the foreseeable future.

The nearest surface water body to the Study Area is the Mississippi River, which is located approximately 1.25 miles to the southwest of the Site. Topographically, the entire Study Area is relatively flat, and exhibits only 30 feet of elevation relief between the Site and the bank of the Mississippi River.

Groundwater beneath the Study Area occurs in glacial drift. Glacial drift is underlain by a discontinuous glacial till and bedrock at the Site and portions of the Study Area. Groundwater within the glacial drift is present at depths of 15 to 25 feet below ground surface (bgs). The shallow groundwater flow direction is and has consistently been to the southwest, with little to no seasonal variation, since at least the early 1980s, including the periods before and during operation of the groundwater extraction system (Barr, 2015a). Based on the investigation results, the area of affected groundwater does not extend to the Mississippi River.

A network of wells and vapor ports were installed for the purpose of assessing TCE concentrations in groundwater and soil gas at the perimeter of the area where most of the mitigation work occurred. The function of the network is to identify potential trends in TCE concentrations in soil gas and groundwater that may be indicative of contaminant migration or attenuation. The area bounded by this monitoring network is referred to as the Soil Gas Monitoring Area. Based on the location of investigation and mitigation activities relative to the Soil Gas Monitoring Area, the Study Area has been defined by four separate areas, as shown in Figure 2:

- The Central Area is the portion of the Study Area that is bounded by the Soil Gas Monitoring Area, excluding the Site. The Central Area includes primarily residential properties and some commercial properties. Nearly all of the properties within the Central Area had sub-slab depressurization systems installed to mitigate the potential vapor intrusion pathway.
- The Northeast Area (NE Area) is the portion of the Study Area that is hydraulically upgradient from the Soil Gas Monitoring Area. The NE area includes a portion of the 700-acre Mid-City Industrial neighborhood and limited residential properties along and south of East Hennepin Avenue. Some of the properties within the NE Area have had sub-slab depressurization systems installed to mitigate the potential vapor intrusion pathway.
- The Southwest Area (SW Area) is the portion of the Study Area that is hydraulically downgradient from the Soil Gas Monitoring Area to the southwest. The SW Area includes a mix of industrial, commercial and residential properties and Van Cleve Park on 15th Avenue SE. Some of the properties within the SW Area have had sub-slab depressurization systems installed to mitigate the potential vapor intrusion pathway.
- The Site is the location of the 6.7-acre wedge-shaped parcel located at 2010 East Hennepin Avenue.

1.3 CONTENT OF THE HHRA

The HHRA is completed using a four-step process, consistent with the framework for risk assessment described in *Risk Assessment Guidance for Superfund* (USEPA, 1989). Generally, the four steps include Data Evaluation, Exposure Assessment, and as appropriate, Toxicity Assessment, and Risk Characterization. Supporting documentation of the risk assessment methods, inputs, and results are provided in tables, figures, and appendices to the document. The organization of the HHRA follows these steps in the following sections.

2. Data Evaluation

The data evaluation identifies the data available for use in HHRA and documents the selection or exclusion of particular data for use in the risk assessment, provides the rationale for the way data will be grouped for evaluation in the risk assessment, and documents the methods used to summarize data using statistical descriptors.

2.1 STUDY AREA INVESTIGATION SUMMARY

Investigation activities have occurred at the Study Area since the mid-1980s, including the following:

- Soil samples collected at the Site to define potential vadose zone sources
- Soil samples collected in portions of the Study Area
- Groundwater samples collected from monitoring wells during historic annual sampling and sampling conducted as part of the Vapor Intrusion Pathway Investigation
- Groundwater samples collected from temporary wells to help define nature and extent of affected groundwater
- Soil gas samples collected from soil gas monitoring wells to help define the extent of VOCs in soil vapor
- Sub-slab soil gas samples collected from beneath buildings to help characterize potential vapor intrusion
- Indoor air samples collected at select locations to help characterize potential vapor intrusion and/or to evaluate effectiveness of vapor intrusion mitigation

The more recent (e.g., post 2010) investigation activities and the RAP Modification #1 have identified TCE as the principal constituent for potential vapor intrusion. Although other VOCs, including BTEX, were reported during the original investigation activities at the Site in the 1980s, these other VOCs are not primary constituents of concern at the Study Area.

2.2 DATA SOURCES AND DATA QUALITY

The HHRA is based on the data collected in support of the Investigation Report and the Implementation Report. Activities described in these reports were conducted in accordance with the RAP Modification #1. Investigation activities were guided by the Investigation Work Plan and Mitigation Work Plan approved by the MPCA (MPCA, 2014c). The data selected for use in the HHRA are a product of sample collection and handling, laboratory analyses, and data Quality Assurance/Quality Control (QA/QC) procedures performed in accordance with USEPA methods, as described in the Quality Assurance Project Plan (QAPP). The Investigation Report provides a detailed description of the sampling and analytical methods that were used to generate the data for the Study Area.

2.2.1 Data Used in HHRA

Samples selected for evaluation in the HHRA are for analyses performed since shut down of the groundwater pump out system in 2010. The majority of data within this time frame were collected between 2012 and early 2015. Data collected prior to shut down of the groundwater pump out system are limited to soil at the Site and groundwater. More recent investigation activities conducted at the Study Area in 2014 and 2015 provide data that are more representative of current conditions. Groundwater data collected prior to pump out system shut down are not considered representative of current conditions.

The following data sets are compiled for use in the HHRA, and were selected following the general procedures outlined in USEPA guidance (USEPA, 1992). Samples included in each of the data sets, as well as the analytical data for the samples, are identified in Appendix A.

Soil

Soil samples were collected from direct push borings (e.g., Geoprobe® or equivalent) and drilled borings from locations throughout the Study Area (Figure 3). In most cases, soil samples were collected as discrete samples and were not composited over depth intervals. Samples were analyzed for VOCs using USEPA Method 8260.

Soil data are used in the HHRA to evaluate potential direct contact (incidental ingestion and dermal contact) and inhalation (particulate and vapor) risks that may occur if people were to contact soil under current or future use conditions. The soil data for the Study Area are represented by samples collected during the 2014 Disposal Area Investigation (Barr, 2014c) and the Investigation Report. Soil data were collected during this investigation to help identify potential VOC sources, and as such samples were generally collected from depths near or within the groundwater table. Analytical data are provided in Appendix A.

Groundwater

Groundwater samples were collected using low-flow sampling techniques from monitoring wells. In addition, some groundwater samples were collected as grab samples using direct push methods. The purpose of the direct push groundwater sampling was to obtain vertical profile information on VOCs in groundwater within the glacial drift. Monitoring well and direct push locations are shown in Figure 3. Groundwater samples were analyzed for VOCs using USEPA Method 8260.

Groundwater data are used in the HHRA to evaluate where the potential vapor intrusion pathway could potentially be complete in areas where VOCs are present in glacial drift groundwater. Therefore, groundwater within the Central Area, where vapor intrusion mitigation activities have been completed, and groundwater outside of the Central Area are summarized separately. At least two rounds of groundwater samples were collected from each of the monitoring wells.

All groundwater data collected after 2010 are used in the HHRA. However, for locations with multiple rounds of groundwater data, only the most recent rounds were generally used in the risk assessment, as explained more detail in Section 3 and Appendix B.

Sub-slab soil gas

Sub-slab soil gas samples were collected from soil vapor probes installed through foundation floors using 1 liter Summa canisters; canisters withdrew soil gas over an approximately 5 to 15 minute time frame. Soil vapor samples were analyzed for VOCs using Method TO-15.

The sub-slab soil gas data set is comprised of samples collected by General Mills in support of the Implementation Report and data collected by MPCA in support of the SE Hennepin Area Groundwater and Vapor Site (SA249) investigation. The following table provides a summary of the sub-slab soil gas sampling program. 362 properties have been investigated and sub-slab soil gas sampling has been performed at 356 properties.

Property Participation	Total	Sub-slab Soil Gas Sampling
Properties participating in investigation conducted by General Mills	343	339
Properties participating in investigation conducted by MPCA	19	17 ^[a]
Additional properties pending investigation by MPCA	20 ^[a]	0
Properties declining participation	16	0
Total properties in Study Area	398	356

^[a] As of 6/15/2015

Throughout these investigations, sub-slab soil gas samples have been used to identify properties where mitigation of potential vapor intrusion would be offered. Consequently, the sub-slab soil gas data for properties where mitigation has been performed are not used in this HHRA to evaluate potential exposures. Sub-slab soil gas data for properties where mitigation has not been performed are used in the HHRA to further evaluate the potential vapor intrusion pathway. In addition, sub-slab soil gas data are used in conjunction with groundwater data and indoor air data to derive Study Area-specific subsurface to indoor air attenuation factors, as described in Section 3. Sub-slab soil gas data for unmitigated properties is provided in Appendix A.

Indoor Air

Indoor air samples were collected using six-liter Summa canisters; canisters withdrew soil gas over a 24-hour time frame. Indoor air samples were analyzed for VOCs using Method TO-15.

Indoor air samples were collected from 14 properties within the Study Area. At one of these properties, indoor air samples were collected in lieu of sub-slab soil gas samples. At the remaining 13 properties, indoor air samples were collected along with paired sub-slab soil gas samples to further evaluate the completeness of the potential vapor intrusion pathway.

The indoor air data are used in the HHRA to evaluate potential vapor intrusion pathway completeness.

Outdoor Air

Outdoor air samples were collected using six liter Summa canisters; canisters withdrew soil gas over a 24-hour time frame. Outdoor air samples were analyzed for VOCs using Method TO-15.

Outdoor air samples were collected from properties within the Study Area in conjunction with indoor air sampling to help evaluate ambient outdoor air conditions. The outdoor air data are used in the HHRA

Uncertainty Analysis to help place perspective on the exposures estimated for the potential vapor intrusion pathway.

2.2.2 Data Not Used in HHRA

The following types of data were not evaluated in the HHRA:

- Groundwater data collected prior to shut-down of the pump out system (i.e., prior to 2010) because that data is not representative of current conditions at the Study Area; and
- Soil vapor data collected from soil vapor monitoring wells (Figure 3), because that data represents exterior soil gas that generally was not collected adjacent to buildings. Sub-slab soil gas data provide a better representation of potential subsurface sources for assessment of the potential vapor intrusion pathway.

2.2.3 Data Quality

Quality control data were reviewed to assess the integrity and validity of the analytical data obtained from the analyses of the soil, groundwater, and soil gas samples collected in 2014 and 2015 for the Slab Sampling and Building Mitigation Implementation Report and the Vapor Intrusion Pathway Investigation. The analytical data were reviewed based upon the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Organic and Inorganic Data Review. Barr also performed full data validation on at least 10% of the data packages as described in the QAPP. According to the Vapor Intrusion Pathway Investigation, the data were compliant with the project data quality objectives. No data were rejected from consideration and all data are considered useable for this risk assessment, with the data qualifiers assigned during the data evaluation process.

2.3 DATA SUMMARIZATION METHODS

The analytical data for each data group developed in support of the HHRA is summarized into descriptors which identify:

- Frequency of detection (number of positively detected results/total number of results)
- Range of detected concentrations
- Range of non-detected results (range of sample quantitation limits)
- Arithmetic mean concentration

The following procedures were applied when summarizing the analytical data for the HHRA:

- For samples in which both an original and a field duplicate result are available, both results were included in the HHRA data sets.
- Rejected data ("R" qualified results), if any, were not used in the risk assessment.
- Results qualified as estimated ("J" qualified) were used in the risk assessment.
- For samples in which analyte concentrations are detected outside the calibration range, and the samples are diluted and reanalyzed, only the re-analysis results were used in the risk assessment.
- When calculating the arithmetic mean concentrations, the value reported as the non-detect value (usually the SQL) was used for results reported as not-detected.

3. Exposure Assessment

The exposure assessment is conducted to evaluate the populations of humans that may potentially use or access the Study Area under the current and possible future land use conditions, the mechanisms or exposure pathways by which those humans may be potentially exposed to constituents at the Study Area, and the magnitude of exposure that may occur through the potential exposure pathways. This process involves three steps:

1. Characterization of the exposure setting in terms of physical characteristics, current and future uses of the Study Area, and the populations that may be potentially exposed to constituents under the current and possible future land uses;
2. Identification of potential exposure pathways and exposure points to which the populations may be exposed; and
3. Quantification of exposure for each population from all exposure pathways. Exposures are quantified by developing receptor exposure scenarios, identifying exposure point concentrations, and then calculating chemical intakes.

3.1 LAND USES AND POTENTIALLY EXPOSED POPULATIONS

The existing land use of the central and southwest portions of the Study Area is primarily residential development. Multi-family residential properties (e.g., apartments or condominiums), single family rental properties, commercial properties (e.g., retail stores), and industrial properties (e.g., warehousing or manufacturing) are interspersed throughout the Study Area and particularly prevalent in the northeastern portion of the Study Area. All properties are connected to municipal drinking water and sewer systems. Land uses are not expected to change in the foreseeable future.

Based on these land uses, the following populations of receptors would be expected to reside or work within the Study Area:

- Long-term residents, including young children, older children, adults, and elderly
- Short-term residents, including occupants of rental properties such as college students (as discussed in Section 4, the residents in the Como area are more transient than in the Minneapolis area)
- Commercial workers such as employees at commercial and industrial establishments
- Visitors and patrons
- Service industry employees (e.g., delivery, property repair and maintenance, landscape)
- Construction workers (e.g., supporting property renovations)
- Utility workers repairing and maintaining underground utilities

3.2 SITE CONCEPTUAL MODEL SUMMARY

An SCM is used to describe the potential migration pathways through which contaminants may have been transported and/or trans-located from source or release areas to other environmental media where possible human exposure may occur. The SCM for the Study Area is described in detail in the Investigation Report. This section provides a summary of the major aspects of the SCM.

Sources

TCE was a commonly-used industrial and household solvent between the 1930s and the 1990s and is still in use today. Documented releases of TCE to shallow groundwater in the Northeast Area, and potential users of TCE are noted throughout the Study Area.

No evidence of dense non-aqueous phase liquid (DNAPL) has been found at the Site and TCE has not been detected in the unsaturated soil at the Site. Only low concentrations of TCE (less than 1 mg/kg) are present in the soil below the water table at the Site. These low concentrations are consistent with the dissolved TCE concentrations measured in the shallow groundwater and do not indicate the presence of dense non-aqueous phase liquid (DNAPL). The Site does not represent an ongoing source of TCE to groundwater that would contribute to the potential vapor intrusion pathway in the Study Area.

TCE is present in groundwater at various locations and varying levels within the Study Area. The varying distribution, presence, and concentrations of TCE within the Study Area indicate multiple sources. The highest TCE concentrations in the groundwater are in the NE Area. The magnitude and extent of TCE in the groundwater in the NE Area are undefined and the presence of DNAPL or other continuing sources of groundwater impacts in the Northeast Area is unknown. The down-gradient extent of TCE in groundwater is defined in the Central Area. The investigation results show an area of separation in groundwater and soil gas TCE concentrations between the Central and Southwest Areas. This separation, coupled with elevated soil gas TCE concentrations at 1410 Rollins Avenue and 823 15th Avenue SE, indicate that the TCE in the Southwest Area is unrelated to the Site.

Migration Pathways

From groundwater, TCE can migrate as soil vapor. Based on the results of the various investigations conducted to date, the primary transport mechanism for soil vapor within the Study Area is diffusion of vapors from groundwater into the shallow glacial sediments. Diffusion of vapors from groundwater occurs as a result of a concentration gradient between the groundwater and glacial sediments above.

Vapor migration through preferential pathways may occur via natural and man-made pathways in the subsurface (e.g., buried utilities) such that the feature creates a pathway from a source to a receptor. Although utility plans indicate that sanitary sewers and other utilities are present, this potential pathway is unlikely since the utility bedding materials are likely similar to the native sandy soils. In addition, no preferential pathways were identified based on the results of the extensive sub-slab sampling performed throughout the Study Area.

Evaluated Media

The Investigation Report and Implementation Report have evaluated the following media:

- Subsurface soil
- Glacial Drift Groundwater
- Soil Vapor and Sub-Slab Soil Gas
- Indoor Air
- Outdoor Air

3.3 EXPOSURE ROUTES

An exposure route defines the mechanism by which constituents in a receiving medium can interact with tissues or organs to potentially elicit an adverse health effect. There are three exposure routes by which humans can be exposed to Study Area contaminants in environmental media. The exposure routes include ingestion, dermal contact, and inhalation. More than one exposure route may be applicable to each of the exposure media evaluated in the HHRA.

- Ingestion. Ingestion exposures occur when substances are swallowed. When an environmental medium such as soil or groundwater that contains chemicals is swallowed, the chemicals can be absorbed into the blood stream from the gastrointestinal tract and/or directly interact with tissues within the gastrointestinal tract. Most ingestion exposures to environmental media are incidental in nature, meaning that they are non-intentional. For example, soil can be incidentally ingested if it is touched and adheres to the hand, and the hand (fingers) is then placed into the mouth, where the soil can be transferred to the mouth and swallowed. Examples of ingestion exposures to environmental media that are *not* incidental (but are intentional) could include groundwater that is used as a source of drinking water.
- Dermal Contact. Dermal exposures occur when a substance is absorbed through the skin following direct contact with the substance in an environmental medium. For soil, this process requires adherence of the soil or sediment to the skin, desorption of a chemical from the soil, and subsequent absorption through the skin. For water, this process involves direct absorption of a chemical from water, through the skin.
- Inhalation. Inhalation exposures can occur when a substance is present in an individual's breathing zone. Inhalation exposures can occur by inhaling dust or particulates to which the substances are adsorbed, or by inhaling vapors in air. Inhalation of dust or particulates can occur if soil is disturbed by wind, vehicle traffic, or human activity, and releases dust into the breathing zone of the air. Generally, only the particulate fraction in air that is 10 micrometers or smaller, termed the PM10 fraction of particulates, is available for inhalation.

Inhalation of vapors can occur whenever volatile substances are present in the breathing zone. This can occur when VOCs are released from groundwater or soil to ambient (outdoor) air, when VOCs migrate from groundwater or soil to air within an occupied building (vapor intrusion), when VOCs migrate from open groundwater to ambient air (e.g., during excavation activities that intersect the groundwater table), when VOCs are released from tap water during household uses of the water, and from ambient air background sources of VOCs, including emissions from industrial sources (see Section 4, Uncertainty Analysis).

Once inhaled, a substance can be either exhaled or retained in the pulmonary system. Retained substances can diffuse through respiratory-tract surfaces into the blood stream, interact directly with lung cells, or in the case of larger particulates, become entrained in airway mucus, translocate up to the pharynx, and be swallowed into the gastrointestinal tract.

3.4 EXPOSURE PATHWAYS – PRELIMINARY SCREENING

Sections 3.1 through 3.3 provided information concerning land uses, receptors, transport media, exposure media, and exposure routes. This section assimilates that information to define exposure pathways and to then identify exposure pathways that are of potential significance from a health risk perspective.

An exposure pathway describes the course a chemical takes from the source to the exposed individual. Exposure pathway analysis links the sources, locations, and types of environmental releases with population locations and activity patterns to determine the significant pathways of human exposure. Exposure pathways generally consist of four elements: (1) a source and mechanism of chemical release, (2) a retention or transport medium, (3) a point of potential human contact with the contaminated medium (known as the exposure point), and (4) an exposure route at the contact point (e.g., ingestion of soil, inhalation of volatiles) (USEPA, 1989). In order for the exposure pathway to be considered potentially complete, all four elements must be present. Exposure pathways are identified by considering the activities performed by each potential receptor (e.g., indoor work, excavating soil), the location of Study Area-related constituents (e.g., surface soil, groundwater), and the fate and transport characteristics of those constituents (e.g., volatile, fixed).

Defining whether a pathway is ‘*of potential significance from a health risk perspective*’ is grounded in regulatory definitions of what constitutes acceptable and unacceptable risk. According to the National Contingency Plan (NCP; USEPA, 1990) and the USEPA guidance “Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions” (USEPA, 1991) EPA uses the general 10^{-4} (one in ten-thousand) to 10^{-6} (one in a million) risk range as a “target range” within which the Agency strives to manage risks as part of a Superfund cleanup. Once a decision has been made to take a response action, the Agency has expressed a preference for cleanups achieving the more protective end of the range (i.e., one in a million or 10^{-6}). Although a risk manager may decide that a baseline risk level of less than 10^{-4} is unacceptable due to site-specific concerns, EPA states that “where the cumulative carcinogenic site risk to an individual based on reasonable maximum exposure for both current and future land use is less than 10^{-4} and the non-carcinogenic hazard quotient is less than 1, action generally is not warranted” (USEPA, 1991). In accordance with this guidance, the following criteria are typically used by USEPA to make response action decisions based on the results of the HHRA:

- A response action is not warranted when cancer risk values are 10^{-6} or lower, and Hazard Quotient (HQ) values are 1 or less.
- A response action may be warranted when cancer risk values are greater than 10^{-4} or HQ values are greater than 1.

MPCA uses an incremental cancer risk threshold of one in one-hundred thousand (10^{-5}) and a non-cancer HQ value of 1 in its risk management decision-making.

Consistent with these definitions, USEPA also uses a threshold of 10^{-6} and a HQ of 1 in determining when risks are *de minimis* (insignificant). Building on this concept, much of USEPA’s site and risk characterization guidance is predicated on the use of risk-based screening levels that are protective for these *de minimis* risk levels, to evaluate whether constituents, pathways, or media can be eliminated from further consideration on the grounds of posing insignificant health risks. An important concept embedded in risk-based screening is that an exposure pathway can be complete because all four elements of pathway completeness described above are present, but still be considered insignificant because constituents are not detected at concentrations high enough to pose more than negligible health risk (USEPA, 1989; 2002; 2015a; 2015b).

In this HHRA, exposure pathways are evaluated using two approaches:

- 1) The elements of exposure pathway completeness described above are used to determine if exposure pathways may be complete.
- 2) Screening is used to determine if potentially complete exposure pathways are insignificant, through comparison of analytical data to risk-based screening levels that are established at *de minimis* risk levels.

Based on this approach, reference to exposure pathways as being ‘incomplete’ or ‘insignificant’ is synonymous with risks that are below the lower boundary of USEPA’s target risk range (cancer risk of 10^{-6} or HQ of 1), as well as risks below the MPCA risk thresholds of a cancer risk of 10^{-5} and a HQ of 1.

3.4.1 Soil

Exposure pathways to soil include direct contact (incidental ingestion and dermal contact) and dust and vapor inhalation. These pathways could potentially be complete if soil containing VOCs was present at a location and depth where contact could occur. Because the residual sources of VOCs within the Study Area are subsurface, all soil samples evaluated in this HHRA are from depth intervals representative of subsurface soil. No surface soil samples (e.g., soil samples collected at depths shallower than four feet bgs) were collected because field screening provided no evidence of VOC contamination within that depth interval. Consequently, exposure pathways to soil could potentially be complete only:

- During intrusive soil excavation activities in support of construction or utility work, whereby construction or utility workers could be exposed to soil by direct contact or dust or vapor inhalation;
- As a result of intrusive excavation activities where soil is re-located to the ground surface, thereby resulting in possible direct contact, dust, and vapor inhalation exposures to residential and commercial receptor populations;
- If VOCs were present in vadose zone soils in close proximity to (e.g., within 100 feet of) occupied buildings, thereby potentially resulting in vapor intrusion exposures.

The majority of soil samples evaluated in this HHRA were collected from depths that are greater than those that would typically be contacted during intrusive soil excavation activities (e.g., greater than 10 feet bgs). In addition, many of the soil samples were collected from within the groundwater table, which is present at 15 to 25 ft bgs. Soils within the saturated zone are not a source of vapor emissions to air because in saturated soils the soil gas within the soil pore space has been displaced by water.

To help evaluate if exposure to VOCs in soil would result in a potentially significant exposure pathway, a concentration-toxicity screening was used to identify those constituents that would potentially pose more than a *de minimis* health risk (USEPA, 1989). The screening was performed by comparing the maximum detected concentrations of constituents in soil to the USEPA Regional Screening Level (RSL) for residential soils (USEPA, 2015b). This procedure is consistent with USEPA methodology for selecting chemicals of potential concern (COPCs) (USEPA, 2015b).

The RSLs are protective for direct contact (ingestion and dermal contact) exposures, as well as for inhalation of constituents that may be released to air, under the assumption that residential populations contact the soil daily over a 30-year period. The RSLs are derived for a 10^{-6} cancer risk level or a non-cancer HQ of 1.

Table 1 provides a summary of the analytical data for the soil samples evaluated in this HHRA and comparison of the maximum detected concentrations to the residential RSL values. As indicated in Table 1, three VOCs were detected in soil at maximum concentrations in excess of residential RSL values. Further evaluation of these VOCs indicates the following:

- Two of the VOCs (ethylbenzene and naphthalene) were detected at concentrations greater than the residential RSL values in only two samples: the original and field duplicate collected at 17.5 ft bgs from location 311. This sample location is within the Site and the soil sample was collected at a depth that is greater than depths typically encountered during excavation activities (e.g., 10 feet or less). Consequently, there are no complete exposure pathways to VOCs detected at concentrations greater than the residential RSL values in these two samples; the VOCs are not indicative of a potential exposure pathway of significance.
- Trichlorofluoromethane was detected in several soil samples collected from depths 39 ft bgs and greater. Due to the depth of these samples and being in the saturated zone, both direct contact and vapor pathways are incomplete.

The remaining VOCs were detected at concentrations below residential RSL values and are therefore indicative of insignificant exposure pathway to soil. In summary, potential exposure pathways to VOCs detected in soil are incomplete (i.e., no exposure occurs) or insignificant (i.e., associated with risks below a HQ of 1 and a cancer risk of 10^{-6}). Therefore, soil does not require further assessment for potential health risks in this HHRA.

3.4.2 Groundwater

Exposure pathways to groundwater can include ingestion, dermal contact and inhalation of vapors during potable uses; incidental ingestion, dermal contact and vapor inhalation during excavation activities; incidental ingestion, dermal contact, and vapor inhalation if groundwater discharges to surface water; and vapor intrusion.

As discussed previously:

- Groundwater beneath the Study Area is not used as a source of drinking water; drinking water is municipally supplied. In addition, two well surveys completed in 1997 and 2012 have demonstrated that there are no drinking water wells within or downgradient of the Study Area (MPCA, 2014a). Institutional controls are also in place to prevent use of groundwater as drinking water. Therefore, there is no exposure to groundwater as drinking water.
- Groundwater is present at depths greater than the depths that excavations are typically advanced to; therefore there are no incidental contact exposures to groundwater.
- VOCs detected in groundwater beneath the Study Area do not migrate to within close proximity of any surface water bodies; therefore there is no exposure to groundwater via discharge to surface water.

Groundwater is a potential source of VOCs for vapor intrusion. However, a large portion of the Study Area has been evaluated for the potential vapor intrusion pathway using sub-slab soil gas and/or indoor air data, as described below. Based on the sub-slab soil gas data, sub-slab depressurization systems have been installed at 189 properties to effectively eliminate the potential vapor intrusion pathway (Figure 4). The majority of these properties are located in the Soil Gas Monitoring Area, and some are located in the NE Area and SW Area (Figure 4). A summary of the analytical data for groundwater

beneath the Central Area is provided in Table 2. However, as described above, there are no complete exposure pathways to groundwater within the Central Area.

Groundwater beneath the portion of the Study Area that surrounds the Central Area was evaluated for potential vapor intrusion pathway completeness using a concentration-toxicity screening similar to the screening used for soil (Section 3.4.1). Specifically, the screening was performed by comparing the maximum detected concentrations of constituents in groundwater from sample locations outside of the Central Area to screening levels as follows:

1. Maximum Contaminant Levels (MCLs; USEPA, 2014a), which are federal drinking water standards. Although the groundwater is not used as a source of drinking water, groundwater quality that meets MCLs is deemed safe for all uses and all potential exposure pathways.
2. EPA's groundwater Vapor Intrusion Screening Levels (VISLs) for residential uses (USEPA, 2014b), which are risk-based concentrations that are protective for vapor intrusion exposures from VOCs in groundwater. The groundwater VISLs are derived using residential air RSL values, established for a one in a million (10^{-6}) cancer risk level or a non-cancer HQ of 1, and applying a groundwater to indoor air attenuation factor of 0.001, representing EPA's default screening-level attenuation factor. VISLs were used to screen groundwater data for VOCs for which MCLs were not available. VISLs are documented in Appendix C.

As shown in Table 3, 1,1-dichloroethene, cis-1,2-dichloroethene, PCE, TCE, and vinyl chloride were detected in groundwater outside the Central Area (e.g., northeast and southwest of the Central Area) at concentrations greater than screening levels. The potential vapor intrusion pathway was evaluated further for these VOCs in Section 3.5.

3.4.3 Sub-slab Soil Gas

Sub-slab soil gas data provide a direct measure of VOC concentrations in vapor directly beneath building floors. Sub-slab soil gas sampling results for TCE were compared to a sub-slab soil gas screening value of 20 ug/m^3 TCE. This sub-slab soil gas screening value was derived by MDH and MPCA by applying a 0.1 attenuation factor to the MDH/MPCA residential interim Intrusion Screening Value (ISV) for TCE of 2 ug/m^3 in indoor air. The ISV is a conservative risk-based value that is protective for a HQ of 1 assuming continuous exposure to the indoor air (i.e., 24 hours per day, 365 days per year, over a 30-year period). The MPCA 0.1 attenuation factor assumes that 1/10 of the sub-slab source TCE concentration may potentially be identified in indoor air. The 0.1 attenuation factor used by MPCA is over three times more conservative than the 95th percentile attenuation factor of 0.03 recommended by the USEPA based on its vapor intrusion guidance (USEPA, 2015a).

MPCA vapor intrusion guidance states that no further action is necessary at buildings with reported sub-slab soil gas concentrations less than 10 times the applicable ISV (i.e., less than 20 ug/m^3 for TCE; MPCA, 2008). For residential buildings with sub-slab soil gas concentrations between ten-times the ISV and 100-times the ISV, MPCA guidance recommends collecting indoor air samples to gather additional data or preemptively installing a mitigation system (MPCA, 2008). As a protective measure, General Mills offered mitigation systems to property owners with reported TCE concentrations in sub-slab soil gas greater than 20 ug/m^3 (i.e., ten-times the ISV), with limited certain exceptions. As described in Section 3.5, indoor air sampling was conducted at certain properties with reported TCE concentrations in sub-slab soil gas greater than ten-times the ISV to gather additional data, as allowed by MPCA guidance.

Table 4 provides a summary of the sub-slab soil gas sampling and mitigation status for the 362 properties investigated within the Study Area. As indicated in Table 4, with certain limited exceptions (e.g., where indoor air samples were taken in lieu of mitigation), all residential properties with sub-slab soil gas TCE concentrations greater than 20 ug/m³ were offered mitigation, and all but two of those properties accepted the offer. In addition, 31 properties with sub-slab TCE concentrations less than 20 ug/m³ were offered mitigation because those properties were in areas where the majority of the surrounding properties were offered mitigation, and all but two of those properties accepted the offer. Collectively, 189 properties have been mitigated, as shown in Figure 4. The potential vapor intrusion pathway is not complete at properties that have been mitigated (i.e., almost all properties within the Central Area and some properties in the NE Area and SW Area). Accordingly, sub-slab soil gas data for those properties is not evaluated in this HHRA.

Sub-slab soil gas data for properties that have not been mitigated is summarized in Table 5. As indicated in Table 5, a number of VOCs were detected in one or more of the 430 sub-slab soil gas samples collected from properties that were not mitigated. However, based on the SCM, the only source of VOCs in sub-slab soil gas that could be related to the Site is groundwater. Therefore, in order for there to be significant levels of VOCs in sub-slab soil gas that could potentially be attributable to groundwater sources within the Study Area, the VOCs must also be detected in groundwater at a concentration that exceeds a groundwater screening level.

As shown in Table 5, the majority of VOCs detected in sub-slab soil gas at unmitigated properties were not detected in nearby groundwater samples. Of the 13 VOCs that were detected in sub-slab soil gas and in groundwater, only five were detected in groundwater at concentrations greater than groundwater screening values (Table 3). This indicates that all but five of the VOCs detected in sub-slab soil gas cannot be attributed to groundwater as a source medium, and therefore cannot be attributed to VOC sources in groundwater within the Study Area or the Site.

Sub-slab soil gas concentrations of the five VOCs that could potentially be attributable to groundwater sources were evaluated for pathway significance using sub-slab soil gas VISLs that are protective for residential use. The sub-slab soil gas VISLs were derived using residential air RSL values, established for a 10⁻⁶ cancer risk level or a non-cancer HQ of 1, and applying a sub-slab to indoor air attenuation factor of 0.1; this approach is consistent with the approach used by MPCA to establish the TCE sub-slab soil gas screening level of 20 ug/m³.

As shown in Table 5, only PCE, TCE, and vinyl chloride were detected in sub-slab soil gas at maximum concentrations that exceeded sub-slab soil gas screening values. The potential vapor intrusion pathway was evaluated further for these VOCs in Section 3.5.

3.5 EXPOSURE PATHWAYS – DETAILED EVALUATION

Based on the preliminary exposure pathway screening evaluations described in Section 3.4, the only potentially complete exposure pathway at the Study Area is inhalation of vapors via potential vapor intrusion at unmitigated properties. This section provides a detailed analysis of the potential vapor intrusion pathway for VOCs and potential source media that were carried forward from the preliminary screening evaluation, specifically:

- Sub-slab soil gas a potential source of vapor intrusion of PCE, TCE, and vinyl chloride; and

- Groundwater as a potential source of vapor intrusion of 1,1-dichloroethene, cis-1,2-dichloroethene, PCE, TCE, and vinyl chloride.

As documented in Section 3.4.3, although 1,1-dichloroethane and cis-1,2-dichloroethene were detected in groundwater at concentrations greater than screening levels, evaluation of sub-slab soil gas data indicates that these two VOCs are not associated with a significant vapor intrusion exposure pathway. Therefore this analysis considers potential vapor intrusion of TCE, PCE, and vinyl chloride.

3.5.1 Sub-Slab Soil Gas

Sub-slab soil gas data for unmitigated properties outside of the Central Area was further evaluated to determine if VOCs reported in the sub-slab soil gas sampling data could be indicative of a potentially significant vapor intrusion pathway. As indicated in Table 5, PCE, TCE, and vinyl chloride were identified as VOCs in sub-slab soil gas that warranted further evaluation. Vinyl chloride was detected in sub-slab soil gas samples in excess of the sub-slab soil gas VISLs at only one property, and PCE was detected in sub-slab soil gas samples in excess of the sub-slab soil gas VISLs at only two properties:

- Vinyl chloride: Property ID 8840
- PCE: the Site and Property ID 5948

Vinyl Chloride

Vinyl chloride was detected in only 2 out of 198 sub-slab soil gas samples analyzed for vinyl chloride. Vinyl chloride is a degradation product of PCE and TCE. At Property ID 8840, located in the SW Area, vinyl chloride was reported at a concentration of 27.3 ug/m³ in sub-slab soil gas. Vinyl chloride was not detected in groundwater in the vicinity of this property. In addition, TCE was reported in the sub-slab soil gas sample at Property ID 8840 at a concentration of only 6.1 ug/m³, which is lower the vinyl chloride concentration, indicating that the profile of VOCs in the sub-slab soil gas sample collected at this property is different than other properties in the Study Area.

The residential sub-slab soil VISL for vinyl chloride is 1.7 ug/m³. That VISL is based on the sub-slab to indoor air attenuation factor of 0.1 and on a target cancer risk of 10⁻⁶. As described in subsection 3.5.2, a Study Area-specific sub slab soil gas to indoor air attenuation factor of 0.00525 has been derived. Using this attenuation factor, the residential sub-slab soil gas VISL for vinyl chloride would be 32 ug/m³, which is above the measured sub-slab soil gas concentration of vinyl chloride at Property ID 8840. Based on this analysis, vinyl chloride is unlikely to be associated with a significant potential vapor intrusion pathway.

PCE

As indicated above, PCE was detected in sub-slab soil gas at the Site at concentrations greater than the residential sub-slab soil gas VISL of 110 ug/m³. The Site consists of a series of several large commercial buildings, and numerous sub-slab soil gas samples were collected from beneath those buildings. Indoor air samples were also collected at this property. PCE was detected infrequently in indoor air, at a maximum concentration of only 3.1 ug/m³, which is well below the MDH commercial interim ISV for PCE of 30 ug/m³ (MDH, 2014)².

² One residential unit is also located at the Site in the second floor of one of the buildings. Indoor air sampling in that residence demonstrated that PCE and TCE were below residential ISVs.

Property ID 5948 is a commercial property with an auto repair service. The concentration of PCE in sub-slab soil gas (505 ug/m³) is slightly in excess of the commercial sub-slab soil gas VISL of 470 ug/m³, derived based on an attenuation factor of 0.1 and a target cancer risk of 10⁻⁶. Applying USEPA's 95th percentile attenuation factor for of 0.03, the commercial sub-slab soil gas VISL would be 1566 ug/m³, which is well above the measured sub-slab soil gas concentration.

Based on this analysis, the potential vapor intrusion pathway for PCE is not significant.

TCE

Based on review of sub-slab soil gas sampling results individually against sub-slab soil gas VISLs (Appendix A), TCE was detected in excess of the 20 ug/m³ residential sub-slab soil gas screening value at 15 properties that have not been mitigated (Table 6). As indicated in Table 6, TCE concentrations reported in indoor air samples collected at six of the properties were below the 2 ug/m³ ISV³. The indoor air samples results indicate that the potential vapor intrusion pathway at these six properties is not significant.

At four additional properties, TCE concentrations reported in indoor air samples slightly exceeded the 2 ug/m³ ISV (Table 6). Further analysis of these properties indicates that:

- An indoor air source was present at one property; TCE concentrations in indoor air samples in other rooms (where the indoor air source was not present) were below the ISV.
- A basement sump at one property was providing a direct migration pathway to indoor air; the sump was sealed, thereby eliminating the migration pathway.
- TCE concentrations in indoor air samples at two properties located within the SW Area were only marginally above the indoor air screening level, with concentrations ranging from 2.1 to 2.3 ug/m³. Given the conservative nature of the TCE indoor air screening level as described in Section 4, MDH has determined that indoor air at these concentrations does not pose an unacceptable health risk (MDH, MPCA, 2015).

At two additional properties, potential vapor intrusion pathways are incomplete because there is either A) no building present, or B) a vapor barrier and parking garage are integral with the building construction (Table 6).

Although the sub-slab soil gas TCE concentrations at one additional property (Property ID 5948) exceed the 20 ug/m³ screening level, this property is a commercial use property (Table 6). The highest detected TCE concentration in sub-slab soil gas (33 ug/m³) is below the commercial/industrial sub-slab soil gas VISL of 84 ug/m³. Therefore, the potential vapor intrusion pathway is not significant at this property.

Finally, as indicated in Table 6, two properties with TCE concentrations in sub-slab soil vapor in excess of 20 ug/m³ were offered mitigation, but declined. Discussion of the vapor intrusion pathway at these properties is provided in Section 4.

³ Within the commercial use areas of the Site (property ID 3954), TCE was detected at a maximum concentration of 2.9 ug/m³, which is below the commercial ISV of 8.4 ug/m³.

3.5.2 Groundwater

Evaluation of the potential vapor intrusion pathway using sub-slab soil gas and indoor air sampling data, as described in section 3.5.1, demonstrates that the pathway is incomplete or insignificant at nearly all properties in the Study Area where potential vapor intrusion was evaluated. To provide additional perspective on groundwater as a potential source for vapor intrusion, the groundwater data for sampling points outside of the Central Area was further evaluated to determine if VOCs in the groundwater could be associated with a potentially significant vapor intrusion pathway. The evaluation was performed by calculating sub-slab soil gas and indoor air concentrations of TCE that could hypothetically occur following potential vapor intrusion from groundwater.

Groundwater to Sub-Slab Soil Gas

This analysis was initially performed for each groundwater sampling point outside of the Central Area by combining the TCE concentrations in groundwater with Study Area-specific attenuation factors according to the following algorithm:

$$\text{Sub-slab soil gas (ug/m}^3\text{)} = \text{GW (ug/L)} \times H \text{ (unitless)} \times AF_{\text{gw-sssg}} \text{ (unitless)} \times 1000 \text{ L/m}^3$$

The variables used in this calculation are described below.

Groundwater Concentration (GW). Groundwater data were selected to be representative of current conditions of shallow groundwater within the glacial drift. Therefore, the following groundwater data were excluded from the evaluation:

- Deep groundwater wells;
- Temporary well points sampled in a single round during earlier investigations (e.g., 2010, 2012); in most cases a permanent monitoring well was also installed in the vicinity of these sampling points, providing current data that are representative for that location; and
- Groundwater from the Site because the large number of groundwater and sub-slab soil gas samples collected at the Site would generate a substantial number of attenuation factors that could potentially bias the data set.

In addition, although all post-2010 monitoring well data were initially assessed, data were refined to use the most recent round of groundwater data. Similarly, for recently installed groundwater sampling points that were sampled only in 2014 and 2015, the highest concentrations among the two rounds were evaluated. Appendix B provides documentation of the data selected for this analysis.

Henrys Law (H). The dimensionless Henrys Law for a groundwater temperature of 10 Celsius was used.

Attenuation Factor for groundwater to sub-slab soil gas ($AF_{\text{gw-sssg}}$). Study Area-specific attenuation factors were derived using groundwater and sub-slab soil gas data for TCE collected during the investigations. Appendix D provides documentation of the attenuation factor derivation. In summary, the sub-slab soil gas and groundwater data were geographically paired and used to derive attenuation factors for each combination of groundwater well, sub-slab soil gas sample, and sampling round. The attenuation factors were then screened as follows:

- Values derived for groundwater sampling points where TCE was not detected (e.g. division by zero) were removed.

- Values calculated to equal a value of 1 or greater were removed.
- Attenuation factors for properties with TCE sub-slab soil gas concentrations greater than 20 ug/m³ were removed. The rationale for application of this screen is that nearly all properties with TCE sub-slab soil gas concentrations greater than 20 ug/m³ have been mitigated, and the purpose of deriving the Study Area-specific attenuation factors is to evaluate the vapor intrusion potential of groundwater near properties that have *not* been mitigated; un-mitigated properties that have been studied have TCE sub-slab soil gas concentrations of 20 ug/m³ or less. Therefore, this approach aligns the data sets used to derive the groundwater to sub-slab soil gas attenuation factors with the sub-slab soil gas concentrations that would be expected in areas that are not mitigated. Furthermore, as summarized in Table 6, unmitigated properties with sub-slab soil gas concentrations greater than 20 ug/m³ were all determined to be commercial properties, properties where indoor air data demonstrated that the vapor intrusion pathways were insignificant, or properties where mitigation was declined, as described in subsection 3.5.1.

From the remaining data set of 676 attenuation factors, the average, 50th percentile, 90th percentile, and 95th percentile attenuation factors were derived as shown in Appendix D.

Sub-slab soil gas concentrations for TCE were calculated for each of the groundwater sampling locations and each of the Study Area-specific groundwater to sub-slab attenuation factors. The calculated TCE sub-slab soil gas concentrations were compared to the 20 ug/m³ TCE sub-slab soil gas screening level (Appendix D, Tables D-1 through D-3). Groundwater sample locations with TCE concentrations that are estimated to potentially result in sub-slab TCE concentrations in excess of 20 ug/m³ are shown in Figure 5. As shown in Figure 5, with only one exception (DP-040), these locations are located in the SW Area and the NE Area. Location DP-040 is in an area where MPCA evaluations are continuing.

Sub-slab to Indoor Air

To further evaluate the potential significance of groundwater as a potential vapor intrusion source, the calculated sub-slab soil gas concentrations were combined with Study Area-specific sub-slab soil gas to indoor air attenuation factors to derive estimated indoor air concentrations, according to the following algorithm:

$$\text{Indoor Air (ug/m}^3\text{)} = \text{Sub-slab soil gas (ug/m}^3\text{)} \times AF_{\text{sssg-IA}} \text{ (unitless)}$$

The variables used in this calculation are described below.

Sub-slab Soil Gas. The 95th percentile estimated sub-slab soil gas concentrations derived as described above were used as the sub-slab soil gas concentration from which migration to indoor air was estimated (Appendix D, Tables D-1 through D-3).

Attenuation Factor for sub-slab soil gas to indoor air (AF_{sssg-IA}). Study Area-specific attenuation factors were derived using sub-slab soil gas and indoor air data for TCE collected during the investigations. Appendix D provides documentation of the attenuation factor derivation. In summary, data were culled for available unmitigated sub-slab/near-slab soil gas and paired indoor air data to derive attenuation factors. Data were identified from paired measurements for samples collected on the Study Area (46 paired samples) on properties 1191, 1420, 2143, 5906, 8222, 5419, 7084, 7187, 2857, 9895, 7358, 3954, and 3559, as well as property 8193 which had the highest sub-slab concentrations. Although some of these properties appear to be impacted by other potential groundwater sources, all

were initially retained for the evaluation since subsurface conditions and building types would generally be expected to be similar.

Although USEPA approaches to evaluate attenuation factors give preference to source strength (e.g. using only higher sub-slab soil gas concentrations), paired measurements with sub-slab soil gas data values that were greater residential ISV ($>2 \mu\text{g}/\text{m}^3$) were initially included in the assessment, regardless of whether the properties were residential or non-residential.

Of 46 paired measurements, TCE was detected at concentrations that were greater than the sub-slab soil gas screening level of $20 \mu\text{g}/\text{m}^3$ in 42 sub-slab soil gas samples, but TCE was not detected in corresponding indoor air in 25 out of the 46 paired measurements. Accordingly, the attenuation factors were screened as shown in Appendix D to remove sample pairs where TCE was not detected in indoor air. Some of the paired measurements were also removed from consideration for six properties (which may also include sample pairs where TCE was not detected in indoor air) as follows: At one Southwest Area location (property 7084), TCE was detected at slightly above the residential sub-slab soil gas screening level in sub-slab soil gas and at slightly above the residential ISV in indoor air. An open sump was present during sampling at this location, which was subsequently sealed. In addition to other groundwater sources of TCE in this area, consumer products containing various solvents were observed in residential property 8222 sampled as part of the sub-slab investigation work in the Southwest Area, including Zep 45 penetrating lubricant (30-60% TCE by weight). Some paired measurements for four properties (1191, 5906, 3954, and 9895) reported the detection of TCE in associated outdoor air samples, including where it was not detected in corresponding indoor air samples. Therefore, the attenuation factors were also screened to remove sample pairs where TCE was also identified in outdoor air.

From the resulting paired data set, attenuation factors ranged from $2.82\text{E-}02$ to $8.97\text{E-}04$, with an average attenuation of $5.25\text{E-}03$. Of these, the average attenuation factor ($5.25\text{E-}03$) was selected, which is expected to over predict the measured indoor air concentrations in most of the paired measurements considered, including property 8193 where the highest sub-slab concentrations were detected.

Indoor air concentrations for TCE were calculated for each of the groundwater sampling locations. The calculated TCE indoor air concentrations were compared to the $2 \mu\text{g}/\text{m}^3$ TCE indoor air ISV. Calculations are documented in Appendix D. Groundwater sample locations with TCE concentrations that are estimated to potentially result in indoor air TCE concentrations in excess of $2 \mu\text{g}/\text{m}^3$ are shown in Figure 6.

As shown in Figure 6, groundwater sampling points with TCE concentrations that could potentially result in vapor intrusion of TCE at indoor air concentrations greater than $2 \mu\text{g}/\text{m}^3$ are limited to the NE Area. However, within this area, a potentially complete vapor intrusion pathway would exist only for properties that are unmitigated. Table 7 provides a list of properties that are within this area (i.e., generally between 1080 and 1112 23rd Ave SE). These properties are being evaluated by MPCA as part of the SE Hennepin Area Groundwater and Vapor site (SA249). As indicated in Table 7, sub-slab vapor sampling has been performed at six properties and in all cases TCE concentrations in the sub-slab soil gas samples are below $20 \mu\text{g}/\text{m}^3$. As of June 15, 2015, sub-slab soil gas sampling is planned by MPCA at an additional nine properties within this area.

3.6 EXPOSURE PATHWAYS - CONCLUSIONS

Based on the exposure pathway analysis presented in Sections 3.1 through 3.5, the only potentially complete exposure pathways at the Study Area that could not be screened out as insignificant are associated with:

- Potential vapor intrusion exposures to VOCs in groundwater in the NE Area, upgradient of the Site; and
- Potential vapor intrusion exposures at two properties within the Central Area where property owners have declined mitigation.

Properties in the NE Area are undergoing vapor intrusion pathway evaluations conducted by MPCA; vapor mitigation will be offered to properties where a potentially significant vapor intrusion pathway may exist. Consequently, no further evaluation of properties in the NE Area is conducted as part of this HHRA.

As indicated in Table 6, two properties with TCE concentrations in sub-slab soil vapor in excess of 20 ug/m³ were offered mitigation, but declined. Sub-slab soil gas TCE concentrations at the two properties at which owners declined mitigation were 36.5 ug/m³ and 389 ug/m³. Application of the Study Area-specific sub-slab soil gas to indoor air attenuation factor presented in Section 3.5.2 indicates that TCE concentrations in indoor air at these two properties would not exceed the TCE residential ISV of 2 ug/m³, and therefore associated with an HQ that does not exceed 1.

The absence of complete or significant exposure pathways at the Study Area, indicate that risks do not exceed an excess lifetime cancer risk of 10⁻⁶ or a HQ of 1. Consequently, quantification of exposures and health risks is not required, and a *Toxicity Assessment* and a *Risk Characterization* are not included in this HHRA.

4. Uncertainty Analysis

This section identifies and discusses uncertainties in the risk assessment. These uncertainties are identified in order to place the results of the HHRA in context or perspective. Unlike some other assessments, risk assessments rely not just on measured or certain facts, but also on assumptions and policy decisions, in the face of limited or nonexistent data. Historically, risk assessments have used highly conservative assumptions in the place of unavailable data, with the net result often being a substantial overestimation of potential risks. Consequently, the interpretation of risk assessment should be performed with the understanding that risk estimates are conservative values resulting from multiple layers of assumptions inherent in the risk assessment process, with the objective of erring on the side of overestimating risks, rather than underestimating risks, in the interest of protecting public health.

The following types of uncertainties should be considered in any human-health risk evaluation:

- uncertainties in characterizing the nature and extent of the release of a constituent;
- uncertainties associated with estimating the frequency, duration, and magnitude of possible exposure;
- uncertainties in estimating measures of toxicity for the constituents evaluated;
- uncertainties about possible synergistic or antagonistic chemical interactions of a chemical mixture.

These generic uncertainties, which are applicable to all risk assessments, are not further evaluated in this uncertainty analysis. Rather, this uncertainty analysis evaluates Study Area-specific uncertainties that could have a bearing on the interpretation of the risk assessment results for this Study Area.

Use of TCE Concentrations as Indicator of Vapor Intrusion Pathway Significance

In accordance with the Mitigation Work Plan, sub-slab soil gas concentrations of TCE were used to determine if properties were eligible for vapor mitigation. For properties that have been mitigated, the potential vapor intrusion pathway has been eliminated for all constituents in sub-slab soil gas. Consequently, if constituents other than TCE were present in sub-slab soil gas, they are not an exposure concern.

Within the portion of the Study Area where properties have not been mitigated, modeling of glacial drift groundwater for vapor intrusion potential was performed for TCE only, in order to maintain consistency with the Mitigation Work Plan (which used TCE in sub-slab soil gas as an indicator of potential vapor intrusion pathway significance). As presented in Table 5, only PCE, TCE, and vinyl chloride were detected in groundwater and sub-slab soil gas outside of the Central Area at concentrations greater than VISLs. A review of the analytical data for groundwater (Appendix D, Tables D-1 through D-3) indicates that where vinyl chloride and/or PCE were detected at concentrations in excess of groundwater VISLs, TCE was also detected at concentrations suggestive of a potentially significant vapor intrusion pathway. The groundwater locations where this circumstance occurred are all within the NE Area and are being investigated by MPCA.

Properties not Participating in Study

As indicated in Table 4, 16 properties did not participate in the Vapor Intrusion Pathway Investigation. No data are available for those properties to evaluate vapor intrusion potential. Therefore the vapor intrusion pathway cannot be evaluated.

Properties Declining Mitigation

As indicated in Table 4, four of the properties that were offered mitigation declined. However, two of these properties had sub-slab soil gas TCE concentrations below the MPCA screening level; those properties were offered mitigation because they were located in the general area of other properties offered mitigation. Because TCE sub-slab soil gas concentrations at those two properties were below the MPCA screening level, it is concluded that the potential vapor intrusion pathway at those properties is insignificant.

The TCE sub-slab soil gas concentrations measured at the two remaining two properties were 36.5 ug/m³ and 389 ug/m³. Application of the Study Area-specific sub-slab soil gas to indoor air attenuation factor derived in this HHRA to these sub-slab soil gas concentrations indicates that indoor air concentrations of TCE would be predicted to be below the TCE residential ISV.

Properties in SW Area under Investigation by MPCA

As a component of the SE Hennepin Area Groundwater and Vapor site (SA249), MPCA is investigating several properties in the SW Area (in addition to those in the NE Area). Results of sub-slab soil gas investigations were not available as of the date of this report. However, the evaluation of vapor intrusion potential from groundwater (Section 3.5) indicates that none of the SW Area properties being investigated by MPCA are within an area of groundwater where indoor air TCE concentrations are predicted to exceed the ISV, as shown in Figure 6 and as summarized in the following table.

Summary of Properties in SW Area Being Evaluated by MPCA

727 13th Avenue SE	SW Area; within area of predicted IA < 2 ug/m ³
727 15th Avenue SE	SW Area; within area of predicted IA < 2 ug/m ³
800 14th Ave SE	SW Area; commercial property; within area of predicted IA < 2ug/m ³
808 14th Ave SE	SW Area; commercial property; within area of predicted IA < 2ug/m ³
832 19th Ave SE	Outside of Study Area; within area of predicted IA < 2 ug/m ³
837 20th Ave SE	Outside of Study Area; within area of predicted IA < 2 ug/m ³
841 20th Ave SE	Outside of Study Area; within area of predicted IA < 2 ug/m ³
1324 8th St SE	SW Area; within area of predicted IA < 2 ug/m ³
1410 8th St SE	SW Area; within area of predicted IA < 2 ug/m ³
1503 8th Street SE	SW Area; within area of predicted IA < 2 ug/m ³

Property ID 7084 is also within the SW Area and the measured indoor air TCE concentration slightly greater than 2 ug/m³ (the measured concentration was 2.9 ug/m³). However, that property had an open sump creating a preferential pathway for vapor intrusion. The sump has since been sealed and this property is within the group of properties being evaluated by MPCA.

Sub-surface to Indoor Air Attenuation Factors

MPCA used a sub-slab soil gas to indoor air attenuation factor of 0.1 to establish the TCE sub-slab soil gas screening level for use in determining when mitigation could be offered to property owners. An attenuation factor of 0.1 indicates that the indoor air concentration within a residential dwelling is estimated to be 10% of the sub-slab soil gas concentration. This attenuation factor is based on USEPA’s Draft Vapor Intrusion Data Base (2008), which has been superseded by USEPA’s Final Vapor Intrusion Data Base (EPA VI Database; USEPA, 2012). The EPA VI Database recommends a 95th percentile sub-slab soil gas to indoor air attenuation factor of 0.03 and a 50th percentile attenuation factor of 0.0028; values that are 3.5 to 35 times lower than the value used by MPCA to establish the TCE sub-slab soil gas screening level. Due to the highly conservative nature of the sub-slab soil gas to indoor air attenuation

factor used by MPCA, a Study Area-specific sub-slab soil gas to indoor air attenuation factor was derived in this HHRA to evaluate groundwater beneath unmitigated properties as a potential source of vapor intrusion. The attenuation factors were derived by pairing of measured sub-slab soil gas and indoor air TCE concentrations. The Study Area-specific soil gas to indoor air attenuation factor derived in this HHRA is 0.00525 and is based on Study Area-specific measurements of unmitigated sub-slab/near-slab soil gas and paired indoor air data as previously described. This value corresponds to a value between the 50th and 75th percentile of sub-slab soil gas to indoor air attenuation factors in the EPA VI Database.

Similarly, EPA publishes generic groundwater to indoor air attenuation factor of 0.001, which is based on the 95th percentile attenuation factor for buildings overlying coarse vadose zone soils. Study Area-specific groundwater to sub-slab soil gas attenuation factors were derived in this HHRA based on pairing of measured groundwater and sub-slab soil gas TCE concentrations. The attenuation factors are summarized in the table below, and are compared to attenuation factors from the EPA VI Database (note that USEPA does not publish groundwater to sub-slab soil gas attenuation factors; therefore the groundwater to indoor air attenuation factors published in the EPA VI Database were adjusted with sub-slab to indoor air attenuation factor to provide approximate groundwater to sub-slab attenuation factors for use in comparing to the Study Area-specific values in the table below).

Comparison of USEPA Groundwater to Indoor Air Attenuation Factors to Study Area-Specific Attenuation Factors

Statistic	Soil type	EPA VI Attenuation Factor Database [a]		Study Area-specific Fine to medium
		Fine	Coarse	
Mean		1.3E-03	3.3E-03	4.1E-03
50th percentile		4.6E-04	1.0E-03	8.2E-04
90th percentile		NA	NA	8.6E-03
95th percentile		4.5E-03	1.4E-02	1.8E-02

[a] Derived as EPA groundwater to indoor air attenuation factor divided by EPA generic sub-slab to indoor air attenuation factor of 0.1.

As shown, Study Area-specific attenuation factors compare reasonably well to the attenuation factors published in EPA VI Database.

Toxicity Values for TCE

In September 2011, USEPA published final toxicity values for TCE in the Integrated Risk Information System (USEPA, 2015c). One implication of the final toxicity values was that the carcinogenic potency of TCE was determined by EPA to be lower than that which had been represented by previous toxicity values (e.g., USEPA’s draft toxicity values released in 2001). Conversely the non-carcinogenic threshold level was determined by EPA to be lower (more conservative) than that which had been represented by previous toxicity values (e.g., toxicity values derived by California EPA or the Agency for Toxic Substances and Disease Registry, which were commonly in-use prior to EPA’s publication of the 2011 toxicity values). Based on the final toxicity values, it can be concluded that the threshold TCE concentration in air that would be protective for non-cancer health effects is equivalent to an excess lifetime cancer risk of about 4x10⁻⁶, which is at the lower end of risk range used by EPA to manage excess lifetime cancer

risks⁴. This has led to a paradigm shift in the way that health risks associated with potential exposures to TCE are managed. Whereas prior to publication of the final toxicity values, risk management of TCE was typically focused on mitigating excess lifetime cancer risk, focus has now been placed on management of non-cancer risks.

The non-cancer toxicity value for TCE is based on exposure concentrations that did not cause any adverse effects in laboratory animals (mice) that were administered TCE in drinking water. EPA derived the non-cancer toxicity value using dose-response data for three separate toxicity endpoints; two of the endpoints concerned immunological effects, and one of the endpoints concerned developmental effects (i.e., cardiac defects in fetuses of pregnant mice)). When EPA evaluated the dose-response data from each of the three studies in the context of applicable uncertainty factors, approximately the same numerical toxicity value (2 ug/m³ in air) was derived from all three studies.

Because one of the toxicity value endpoints used to derive the non-cancer toxicity value for TCE concerns developmental toxicity, the value is being used by some regulatory risk managers to evaluate “short-term” exposures and in turn make risk management decisions. There has been considerable debate within the scientific community concerning the toxicity study (known as the Johnson study) that was used to support EPA’s position that TCE can be associated with developmental toxicity (Geosyntec/Exponent, 2012; HSIA, 2013; 2014a, 2014b). Notably, the Johnson study was the only study that provided quantitative dose-response data for this health effect. The study used a non-standardized method of quantifying cardiac defects, and the results of the study have not been reproducible by other laboratories. In addition, the study administered TCE in drinking water; other studies that administered TCE by inhalation exposure did not find evidence of developmental effects.

Consequently, key questions have been raised regarding how strong the weight of evidence is to support the contention that TCE causes developmental toxicity and whether the Johnson study is appropriate to use as a basis for derivation of a toxicity value. To that end, USEPA published the TCE Developmental Cardiac Toxicity Assessment Update, prepared by a panel of EPA experts, which attempted to address both of these questions. Although the TCE Update weighs evidence both supporting and questioning this toxicity endpoint, the panel was comprised only of EPA staff (USEPA, 2015d). The major conclusions of EPA’s expert panel include:

- Concurrence that there is enough evidence (epidemiological and laboratory bioassay) to consider cardiac defects/development toxicity as *one* of the hazards associated with exposure to TCE. On these grounds, the panel concluded that consideration of this endpoint should be factored into derivation of toxicity values for TCE. However, 1 panel member concluded there is not enough evidence to support cardiac malformations as a hazard associated with TCE, 6 of 9 panel members concluded that confidence in this conclusion was ‘low-medium’, and only 3 of 9 concluded that confidence is ‘medium-high’.
- Regarding choice of the Johnson study as a basis for a toxicity value, the expert panel concluded that the Johnson study is the only study that contained enough key study design elements to be used for quantitative derivation of a toxicity value based on cardiac malformations. However, 7 of 11 panel members concluded that confidence in the study was ‘low’, only 4 of 11 concluded

⁴ The USEPA residential air RSL based on at 10⁻⁶ target cancer risk is 0.48 ug/m³. The cancer risk associated with a concentration of 2 ug/m³ is, therefore, 4x10⁻⁶ (1x10⁻⁶ x 2/0.48)

that confidence in the study was ‘medium’, and none of the panel members considered confidence in the study to be ‘high’.

In summary, the weight of evidence suggests that it is a highly conservative approach to use of a threshold value of 2 ug/m³ TCE in air to gauge whether there may be potential concern regarding developmental toxicity.

Exposure Assumptions used to Derive Screening Levels

All screening levels used in this HHRA are derived to be protective for the premise that people are continuously exposed to air containing TCE at 2 ug/m³, 24 hours per day, 365 days per year, over a 30-year period. In other words, the screening values are protective for a situation where a person never leaves the indoor environment of their home for a continuous 30-year period. Such exposure conditions are implausible; people leave their homes daily to attend school, work, recreation, and numerous other out of the home activities. Even people who are retired or are generally home bound leave their homes occasionally.

For example, recent data indicate that residents of the Como neighborhood are more transient than the average resident of Minneapolis. A 2011 survey found that 46.6% of Como neighborhood residents had moved residences during the previous year (the corresponding value for the whole city of Minneapolis was 25.6%). In other words, only about half of the neighborhood residents had lived in the same residence for two years or longer. Also suggestive of high residential turnover, only 24.5% of neighborhood households owned their residences in 2010, a rate that had declined from greater than 38% in 1990 and 36% in 2000 (Minnesota Compass, 2011).

Consequently, screening levels that offer the same level of health protection, but are based on more realistic assumptions about how much time people spend indoors at their homes, would be higher than those used in this HHRA.

Outdoor air and other sources

Current industrial sources of ambient air TCE have been documented near the Study Area. For example, Greatbatch Medical is located at 730 24th Ave SE, less than ¾-mile southeast of the Site and close to the Study Area. Publicly available information was reviewed from USEPA and from the ComoGreenVillage.org website for Greatbatch. The USEPA documentation for 2006 through 2012 indicates that Greatbatch total air emissions (releases of TCE to ambient air) in the Como neighborhood area are provided below:

Year	Annual Release of TCE to Ambient Air
2012	26,995 pounds/year
2011	20,668 pounds/year
2010	21,270 pounds/year
2009	21,855 pounds/year
2008	30,,960 pounds/year
2007	26,180 pounds/year
2006	29,460 pounds/year

Similar releases were documented for 2004 and 2005 (26,660 and 28,890 pounds per year, respectively). Therefore, an estimated total of 232,938 pounds of TCE has been released to ambient air over a nine year period from one single industrial facility in the Como area alone. Although dispersion modeling has

not been performed, to put these releases into perspective, the 26,995 pounds of TCE released all at once to ambient air would result in an ambient air concentration of greater than 50,000 $\mu\text{g}/\text{m}^3$ over the approximate 550 meter by 275 meter Study Area to a height of 1 mile.

TCE has been also measured in ambient air in the Minneapolis area:

- Data culled from the USEPA Ambient Monitoring Archive (AMA) database indicates that numerous sample locations have been monitored by USEPA, including seven ambient air monitoring stations located within approximately a four mile radius around the Site. The USEPA samples were collected over an approximate 24 hour period. Review of the AMA data shows there historically have been detections of TCE in ambient air at concentrations that exceed the indoor air screening level ($2 \mu\text{g}/\text{m}^3$) at several monitoring stations surrounding the Site. For example, USEPA data indicated that the maximum TCE concentration of $3.89 \mu\text{g}/\text{m}^3$ (USEPA monitoring station 270530050, located west-northwest of the Site) was detected on 12 November 2005. USEPA data indicated that the maximum TCE concentration of $10.3 \mu\text{g}/\text{m}^3$ (USEPA monitoring station 270530053, located southwest of the Site and closer to and directly west of Greatbatch) was detected on 18 December 1997.
- Similarly, the City of Minneapolis Environmental Management and Safety department conducted a limited study to assess air quality across the city in May 2005, August 2005, October 2005 and January 2006. Concentrations of TCE detected during the study from each of the four seasons ranged to $3.04 \mu\text{g}/\text{m}^3$. More recent data from a separate City of Minneapolis study indicates that concentrations of TCE detected from November 2013 and February 2014 sampling events ranged to $79.8 \mu\text{g}/\text{m}^3$.

Based on Haley & Aldrich experience, outdoor air excursions of indoor air regulatory screening levels due to residential and commercial SSD systems have not been identified, consistent with evaluations conducted by others. Therefore, unacceptable ambient air quality impacts from the mitigation of sub-slab concentrations of TCE in the Study Area would not be expected. However, in consideration of the USEPA and City of Minneapolis ambient air monitoring data and the USEPA documentation that indicates that one single industrial facility alone is releasing over 25,000 pounds of TCE per year (average over 9 years) in the Como area, other ambient air sources of TCE may result in episodic outdoor air excursions of the $2 \mu\text{g}/\text{m}^3$ indoor air residential ISV.

5. HHRA Summary and Conclusions

The Human Health Risk Assessment (HHRA) characterized potential exposures to soil, groundwater, and indoor air associated with the existing residential and commercial uses of the Study Area. These uses are not anticipated to change in the foreseeable future. The HHRA used analytical data for soil, groundwater, sub-slab soil gas, and indoor air to evaluate if exposure pathways to these media could be potentially complete or significant from a health risk perspective. Based on the results of the HHRA, it is concluded that the only exposure pathway at the Study Area that may be potentially complete and of potential significance is vapor intrusion of VOCs from glacial drift groundwater within the NE Area. The NE Area is hydraulically upgradient of both the Site and the Soil Gas Monitoring Area and is being investigated by MPCA as part of the SE Hennepin Area Groundwater and Vapor site (SA249). Because all other exposure pathways are either incomplete or insignificant, as demonstrated by application of risk-based screening, risks are below the lower (most protective) boundary of USEPA's target risk range of 10^{-6} or a HQ of 1, and below the MPCA risk thresholds based on an incremental cancer risk of 10^{-5} and a HQ of 1. The conclusions of the HHRA are based on the following:

- Direct contact, vapor inhalation, and dust inhalation exposures to soil by residential, commercial, and construction worker populations are either incomplete or insignificant. Specifically:
 - The majority of constituents were detected in soil at depths greater than those that would be encountered during typical construction or utility repair excavation activities and there is no evidence of Site-related or Study Area-related constituents in surface soil, thereby eliminating direct contact as a possible exposure pathway;
 - Constituents were detected within the saturated zone, thereby eliminating vapor migration as a potential exposure pathway;
 - Constituents in soil samples collected from shallower depths where soils could become accessible through excavation activities were detected at concentrations below residential risk-based screening values, indicating that exposures to these soils would be associated with negligible risks.
- Direct exposures to groundwater by residential, commercial, and construction worker populations are incomplete because:
 - Groundwater beneath the Study Area is not used as a source of potable water; all properties within the Study Area receive public municipal water, there are no supply wells, and institutional controls prohibit use of groundwater;
 - The depth to groundwater (15 to 25 feet below ground surface) is greater than the depth of typical construction or utility repair excavation activities, thereby eliminating incidental direct contact and vapor migration exposures to excavation workers;
 - Groundwater associated with the Study Area does not migrate or discharge to any surface water bodies, thereby eliminating exposure to constituents in groundwater via recreational uses of surface water as a potential exposure pathway.
- Potential vapor intrusion exposures to Study Area VOCs in groundwater by residential and commercial populations are incomplete in all areas except the NE Area; within the NE Area the vapor intrusion pathway is potentially complete. Specifically:

- The majority of properties with sub-slab soil gas TCE concentrations in excess of the MPCA residential screening level of 20 ug/m³ have had sub-slab depressurization systems installed, thereby eliminating the potential vapor intrusion pathway.
- At properties with sub-slab soil gas TCE concentration in excess of the 20 ug/m³ MPCA residential screening level that have not been mitigated, the potential vapor intrusion pathway is insignificant because TCE concentrations measured in indoor air do not exceed risk-based screening levels, the properties are commercial use and sub-slab soil gas concentrations do not exceed screening values applicable for commercial use, or application of the Study Area-specific attenuation factors derived in this report indicate that indoor air concentrations would not exceed risk-based screening levels.
- At properties with sub-slab soil gas TCE concentrations below the 20 ug/m³ MPCA screening level, potential vapor intrusion is considered to be an insignificant exposure pathway. This is supported by an evaluation of groundwater within areas of the Study Area where mitigation has not been required; the evaluation demonstrates that the groundwater in these areas is unlikely to be associated with a potential vapor intrusion pathway of significance.
- Within the NE Area, TCE concentrations in groundwater could be associated with a potentially significant potential vapor intrusion pathway. MPCA is evaluating potential vapor intrusion within this area; sub-slab soil gas sampling performed by MPCA has not yet identified TCE concentrations in sub-slab soil gas that exceed the 20 ug/m³ screening level. However, several properties within the NE Area are pending sub-slab soil gas sampling and vapor intrusion evaluation by MPCA. MPCA will offer mitigation to properties identified as having a potentially significant potential vapor intrusion pathway.

References

1. Barr Engineering Co. (Barr), 1983. Site Characterization Study and Remedial Action Plan, General Mills Solvent Disposal Site, 2010 East Hennepin Ave. Prepared for General Mills, Inc. June 1983.
2. Barr, 2012. Groundwater Pump-out System Shutdown Summary Report and 2011 Annual Report, East Hennepin Avenue Site. Prepared for General Mills, Inc. March 2012
3. Barr, 2014a. Letter to Edward Olson (MPCA) from Mary Sands and Sara Gaffin (Barr Engineering Co.) regarding the final version of Vapor Intrusion Pathway Investigation and Feasibility Study Work Plan. Prepared by Barr Engineering Co., [date of final work plan]. August 18, 2014.
4. Barr, 2014b. Final Sub-Slab Sampling and Building Mitigation Work Plan, East Hennepin Avenue Site. Prepared for General Mills, Inc. February 2014.
5. Barr, 2014c. Disposal Area Investigation Results, East Hennepin Avenue Site. Prepared for General Mills, Inc. May 2014.
6. Barr, 2015a. Vapor Intrusion Pathway Investigation Report, East Hennepin Avenue Site. Prepared for General Mills, Inc. July 2015
7. Barr, 2015b. Sub-Slab Sampling and Building Mitigation Implementation Report, East Hennepin Avenue Site. Prepared for General Mills, Inc. June 2015
8. Geosyntec/Exponent, 2012. TCE Interim Short Term Action Level White Paper. Prepared by Geosyntec and Exponent. April 27, 2012.
9. HSIA, 2013. Letter to Information Quality Guidelines Staff (EPA) from Fay Gaul (Halogenated Solvents Industry Alliance) regarding Request for Correction – IRIS Assessment for TCE. Prepared by HSIA, November 5, 2013.
10. HSIA, 2014a. Letter to Information Quality Guidelines Staff (EPA) from Fay Gaul (Halogenated Solvents Industry Alliance) regarding Supplemental Request for Correction – IRIS Assessment for TCE. Prepared by HSIA, July 3, 2014.
11. HSIA, 2014b. Letter to Information Quality Guidelines Staff (EPA) from Fay Gaul (Halogenated Solvents Industry Alliance) regarding Request for Correction – IRIS Assessment for TCE. Prepared by HSIA, September 8, 2014.
12. Minnesota Department of Health (MDH), 2014. Interim Intrusion Screening Levels for Tetrachloroethylene in Air. Minnesota Department of Health Site Assessment and Consultation Unit. October.
13. MDH/MPCA, 2015. Letter to Mark Theiroff (General Mills) from Hans Neve (MPCA) and David Jones (MDH) regarding General Mills/Henkel Corp Superfund Site, 916 8th St SE Minneapolis, MN. June 5, 2015.

14. Minnesota Pollution Control Agency (MPCA), 1984. Response Order By Consent (Order) between General Mills and the Minnesota Pollution Control Agency (MPCA). October 1984.
15. MPCA, 2008. Risk-Based Guidance for the Vapor Intrusion Pathway, Superfund RCRA and Voluntary Cleanup Section, MPCA Document Number c-s4-06. September 2008.
16. MPCA, 2014a. Final General Mills/Henkel Corp Superfund Site, Minneapolis, Minnesota Five Year Review. Version 01. December.
17. MPCA, 2014b. Remedial Action Plan Modification #1 (Exhibit B) to the Response Order By Consent (Order) between General Mills and the Minnesota Pollution Control Agency (MPCA), October 1984. March 11, 2014.
18. MPCA, 2014c. Letter to Larry Deeney (General Mills) from Edward Olson (MPCA) regarding Vapor Intrusion Pathway Investigation and Feasibility Study Work Plan (dated August 2014) and revised Figure 18 (dated September 17, 2014). Prepared by Barr Engineering Co. September 18, 2014
19. United States Environmental Protection Agency (USEPA), 1989. "Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part A)"; Office of Emergency and Remedial Response; EPA-540/1-89/002 (interim final); Washington, D.C., December.
20. USEPA, 1990. "Code of Federal Regulations, Title 40, Part 300, National Oil and Hazardous Substances Pollution Contingency Plan"; Federal Register; March 8.
21. USEPA, 1991. "Role of the Baseline Risk Assessment in Superfund Remedy Decisions"; Office of Emergency and Remedial Response; OSWER 9355.0-30. April 22.
22. USEPA, 1992. "Guidance for Data Usability in Risk Assessment (Parts A and B)"; Office of Emergency and Remedial Response; Publication 9285.7-09A; Washington, D.C.; April.
23. USEPA, 2002. "Supplemental Guidance for Developing Soil Screening Levels for Superfund Sites". Office of Solid Waste and Emergency Response/Office of Solid Waste and Remedial Response; OSWER 9355.4-24; December.
24. USEPA, 2004. "RAGS, Volume I, Part E, Dermal Risk Assessment Guidance", Office of Emergency and Remedial Response, 2001.
25. USEPA, 2009. "Risk Assessment Guidance for Superfund, Volume 1, Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment, Final)"; Office of Emergency and Remedial Response; EPA/540/R/070/002; Washington, D.C.
26. USEPA, 2012. "EPA's Vapor Intrusion Database: Evaluation and Characterization of Attenuation Factors for Chlorinated Volatile Organic Compounds and Residential Buildings" ; EPA 530-R-10-002 March 16, 2012
27. USEPA, 2014a. 2042 Edition of the Drinking Water Standards and Health Advisories, EPA 822-S-12-001, Spring 2014. <http://water.epa.gov/action/advisories/drinking/upload/dwstandards2012.pdf>
28. USEPA, 2014b. "Vapor Intrusion Screening Levels"; EPA Office of Solid Waste and Remedial Response. May

References

(Continued)

29. USEPA, 2015a. "OSWER Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Sources to Indoor Air" OSWER 9200.2-154. June
30. USEPA, 2015b. "Regional Screening Levels for Chemical Contaminants at Superfund Sites"; EPA Office of Superfund. May.
31. USEPA, 2015c. "Integrated Risk Information System (IRIS)"; on-line data-base search www.epa.gov/iris.
32. USEPA, 2015d. Letter to Ms. Faye Graul (Halogenated Solvents Industry Alliance) from Lek Kadeli (EPA) regarding Request for Correction on EPA's Toxicological Review of TCE. Prepared by USEPA, Washington, DC. March 19, 2015.

Z:\41064_General Mills\risk\Risk Assessment\FINAL PDF 7.31.15\2015-0731-HAI-Hennepin-HHRA-F1.docx

Table 1
Summary of Soil Analytical Data and Initial Pathway Screening
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	Frequency of Detection	Range of Reporting Limits for Non-Detects	Range of Detected Concentrations	Average of All Samples	Industrial Soil RSL HQ = 1.0 (mg/Kg)	Residential Soil RSL HQ = 1.0 (mg/Kg)	Maximum Greater than Residential Soil RSL HQ =1?
Volatile Organics (mg/Kg)							
1,2,4-Trimethylbenzene	4 / 44	0.051 - 0.18	0.36 - 42	1.7	240	58	No
1,3,5-Trimethylbenzene	4 / 44	0.051 - 0.18	0.13 - 6.5	0.33	12000	780	No
2-Phenylbutane (sec-Butylbenzene)	3 / 44	0.051 - 0.18	0.59 - 2.5	0.14	120000	7800	No
Benzene	5 / 44	0.020 - 0.10	0.11 - 0.88	0.056	5.1	1.2	No
Chlorobenzene	1 / 44	0.051 - 0.18	4.4 - 4.4	0.13	1300	280	No
cis-1,2-Dichloroethene	7 / 44	0.051 - 0.18	0.060 - 0.14	0.044	2300	160	No
Cymene (p-Isopropyltoluene)	4 / 44	0.051 - 0.18	0.45 - 2.9	0.20	-	-	No
Ethylbenzene	4 / 44	0.051 - 0.18	1.1 - 39	1.8	25	5.8	Yes
Isopropylbenzene	3 / 44	0.051 - 0.18	0.53 - 3.1	0.17	9900	1900	No
m,p-Xylenes	1 / 1	- -	28 - 28	28	2500	580	No
Naphthalene	3 / 44	0.20 - 0.71	0.68 - 6.7	0.43	17	3.8	Yes
n-Butylbenzene	4 / 44	0.051 - 0.18	0.085 - 5.7	0.30	58000	3900	No
n-Propylbenzene	4 / 44	0.051 - 0.18	0.072 - 5.5	0.28	22000	3300	No
tert-Butylbenzene	25 / 25	- -	0.056 - 346	31	120000	7800	No
Tetrahydrofuran	3 / 44	0.051 - 0.18	0.067 - 0.10	0.036	100	24	No
trans-1,2-Dichloroethene	2 / 44	0.051 - 0.18	5.1 - 7.5	0.32	47000	4900	No
trans-1,3-Dichloropropene	2 / 44	0.051 - 0.18	0.063 - 0.12	0.035	23000	1600	No
Trichlorofluoromethane (CFC-11)	19 / 44	0.051 - 0.18	0.056 - 4.2	0.52	6	0.94	Yes

NOTES:
mg/Kg: milligram per kilogram
RSL: USEPA Regional Screening Levels for Chemical Contaminants RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015
HQ: Hazard Quotient
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Average (arithmetic mean) levels were calculated using a value of the reporting limit for analytical values reported as "Not Detected" (ND)

Table 2
Summary of Groundwater Analytical Data - Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	Frequency of Detection	Range of Reporting Limits for Non-Detects	Range of Detected Concentrations	Average of All Samples
Volatile Organics (mg/L)				
1,1,1-Trichloroethane	5 / 56	0.001 - 0.005	0.0016 - 0.0024	0.00093
1,1-Dichloroethane	9 / 56	0.001 - 0.005	0.0011 - 0.0019	0.00094
Bromodichloromethane	2 / 48	0.001 - 0.005	0.001 - 0.0011	0.00086
Chloroform (Trichloromethane)	11 / 48	0.001 - 0.005	0.0013 - 0.0131	0.0023
cis-1,2-Dichloroethene	45 / 56	0.001 - 0.001	0.0019 - 0.164	0.062
Tetrachloroethene	48 / 56	0.001 - 0.001	0.0012 - 0.013	0.0055
trans-1,2-Dichloroethene	29 / 56	0.001 - 0.005	0.001 - 0.0059	0.0019
Trichloroethene	73 / 73	NA - NA	0.00044 - 0.514	0.15
Vinyl chloride	1 / 56	0.0004 - 0.002	0.00043 - 0.00043	0.00037

NOTES:
mg/L: milligram per liter
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Table 3
Summary of Groundwater Analytical Data and Initial Pathway Screening - Groundwater Outside of Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	Frequency of Detection	Range of Reporting Limits for Non-Detects	Range of Detected Concentrations	Average of All Samples	Maximum of All Samples	MCL (mg/L)	Maximum Greater Than MCL?	EPA VISL (mg/L)	Maximum Greater Than EPA VISL?
Volatile Organics (mg/L)									
1,1,1-Trichloroethane	24 / 130	0.0010 - 0.020	0.0010 - 0.0031	0.0011	0.0031	0.2	No	-	-
1,1-Dichloroethane	16 / 130	0.0010 - 0.020	0.0011 - 0.0067	0.0011	0.0067	-	-	0.015	No
1,1-Dichloroethene	11 / 93	0.0010 - 0.020	0.0013 - 0.023	0.0015	0.023	0.007	Yes	-	-
2-Butanone (Methyl Ethyl Ketone)	1 / 93	0.0050 - 0.10	0.0064 - 0.0064	0.0048	0.0064	-	-	4800	No
Acetone	1 / 93	0.020 - 0.40	0.023 - 0.023	0.019	0.023	-	-	44000	No
Benzene	3 / 130	0.0010 - 0.020	0.0016 - 0.0048	0.00087	0.0048	0.005	No	-	-
Bromodichloromethane	1 / 93	0.0010 - 0.020	0.0025 - 0.0025	0.0010	0.0025	0.08	No	-	-
Chloroform (Trichloromethane)	5 / 93	0.0010 - 0.020	0.0018 - 0.012	0.0012	0.012	0.08	No	-	-
cis-1,2-Dichloroethene	62 / 130	0.0010 - 0.0010	0.0011 - 0.91	0.072	0.91	0.07	Yes	-	-
Tetrachloroethene	30 / 130	0.0010 - 0.020	0.0013 - 0.053	0.0045	0.053	0.005	Yes	-	-
trans-1,2-Dichloroethene	30 / 130	0.0010 - 0.020	0.0011 - 0.021	0.0022	0.021	0.1	No	-	-
Trichloroethene	114 / 171	0.00040 - 0.0010	0.00051 - 4.3	0.16	4.3	0.005	Yes	-	-
Vinyl chloride	12 / 130	0.00040 - 0.0080	0.00058 - 0.0128	0.00075	0.013	0.002	Yes	-	-

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014 RSLs (Appendix C).
VISLs are based on a hazard quotient of 1 or a cancer risk of 1E-06.
-: Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Average (arithmetic mean) levels were calculated using a value of the reporting limit for analytical values reported as "Not Detected" (ND)

Table 4
Summary of Sub-Slab Soil Gas and Indoor Air Sampling and Mitigation Status
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Unique ID	Study Participation		Sub-Slab Sampled	Subslab soil gas TCE concentration > 20 ug/m³?	Indoor Air Sampled	Indoor air TCE concentration > 2 ug/m³?	Mitigation				Post- Mitigation Indoor Air Sampled
	Participated	Did Not Participate					Mitigation Eligible	Additional Properties Offered Mitigation	System Installed	Mitigation Declined by Property Owner	
6750	x		x								
3559	x		x	x							
9244	x		x								
7107	x		x								
8222	x		x	x	x	x					
8760	x		x	x							
6841	x		x	x							
4311	x		x	x			x		x		
9700	x		x								
7027	x		x	x			x		x		
6650		x									
2591	x		x	x			x		x		
4035	x		x								
9934	x		x								
2033	x		x								
7431	x		x								
3339	x		x								
2355	x		x								
3470	x		x								
2958	x		x								
7742	x		x								
3486	x		x								
6178	x		x								
1245	x		x								
4569	x		x								
3915	x		x								
5116	x		x								
6396	x		x								
9381	x		x								
9356	x		x	x			x		x		
9772	x		x								
2225	x		x								
5192	x		x								
3302	x		x	x			x		x		
6091	x		x								
4109	x		x								
6066	x		x								
3027	x		x	x			x		x		
8604	x		x								
2635	x		x	x			x		x		
5399	x		x								
3125		x									
2345	x		x	x			x		x		
3949		x									
1499	x		x								
8561	x		x	x			x		x		
3914	x		x	x			x		x		
6990	x		x								
3260	x		x	x			x		x		
8288	x		x								
9701	x		x	x			x		x		
7042	x		x	x			x		x		
4537	x		x								
2177	x		x	x			x		x		
4523	x		x	x			x		x		
5083	x		x	x			x			x	
2705	x		x								
4148	x		x	x			x		x		
2212	x		x	x			x		x		
7263	x		x	x			x		x		
5893	x		x	x			x		x		
4420	x		x								
9312	x		x	x			x		x		
6291	x		x	x			x		x		
8206	x		x	x			x		x		
1289	x		x	x			x		x		
2239	x		x								
5877	x		x					x	x		
8063	x		x	x			x		x		
3963	x		x	x			x		x		x
9460	x		x					x	x		
5892		x									
6441	x		x								
4214	x		x					x	x		

Table 4
Summary of Sub-Slab Soil Gas and Indoor Air Sampling and Mitigation Status
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Unique ID	Study Participation		Sub-Slab Sampled	Subslab soil gas TCE concentration > 20 ug/m³?	Indoor Air Sampled	Indoor air TCE concentration > 2 ug/m³?	Mitigation				Post- Mitigation Indoor Air Sampled
	Participated	Did Not Participate					Mitigation Eligible	Additional Properties Offered Mitigation	System Installed	Mitigation Declined by Property Owner	
3703	x		x					x	x		
6699	x		x	x			x		x		x
6606	x		x					x	x		
2437	x		x								
6390	x		x								
7923	x		x					x	x		
7191	x		x					x	x		
4031	x		x	x			x		x		x
2501	x		x					x	x		
5873	x		x								
8876	x		x					x	x		
1291	x		x					x	x		
4172	x		x	x			x		x		
5846	x		x	x			x		x		x
9670	x		x					x	x		
9048	x		x								
7855		x									
4559	x		x								
4433	x		x	x			x		x		x
2868	x		x	x			x		x		
2785	x		x								
2575	x		x	x			x		x		
5220	x		x	x			x		x		
8193	x		x	x	x		x		x		x
5793	x		x	x			x		x		
3839	x		x								
9311	x		x	x			x		x		
4268	x		x	x			x		x		
4961	x		x								
6637	x		x	x			x		x		
2470	x		x	x			x		x		x
7243		x									
1995	x		x								
6601	x		x	x			x		x		
8226	x		x								
5715	x		x								
5141	x		x								
1762	x		x	x			x		x		x
9239	x		x	x			x		x		
7088	x		x								
2921	x		x								
9366	x		x	x			x		x		x
8306	x		x	x			x		x		
8315	x		x	x			x		x		
8556	x		x	x			x		x		
7792	x		x								
5853	x		x	x			x		x		
7750	x		x	x			x		x		
8995	x		x								
9993	x		x	x			x		x		
8464	x		x								
6733	x		x	x			x		x		
1096	x		x	x			x		x		
4263	x		x								
3432	x		x	x			x		x		
9895	x				x						
4753	x		x					x	x		
9938	x		x								
4987	x		x	x			x		x		
7794	x		x	x			x		x		
9363	x		x								
1927	x		x	x			x		x		
8176	x		x	x			x		x		
8145	x		x	x			x		x		
5251	x		x					x	x		
1532	x		x	x			x		x		
9164	x		x								
5419	x		x	x	x						
6570	x		x	x			x		x		
6710	x		x	x			x		x		
8773	x		x								
5909	x		x								
8340	x		x	x			x		x		
8721	x		x	x			x		x		

Table 4
Summary of Sub-Slab Soil Gas and Indoor Air Sampling and Mitigation Status
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Unique ID	Study Participation		Sub-Slab Sampled	Subslab soil gas TCE concentration > 20 ug/m³?	Indoor Air Sampled	Indoor air TCE concentration > 2 ug/m³?	Mitigation				Post- Mitigation Indoor Air Sampled
	Participated	Did Not Participate					Mitigation Eligible	Additional Properties Offered Mitigation	System Installed	Mitigation Declined by Property Owner	
9469	x		x								
2894	x		x	x			x		x		
7158	x		x								
9619	x		x	x			x		x		
1153		x									
6347	x		x	x			x		x		
7914	x		x								
9436	x		x								
8698	x		x	x			x		x		
8446	x		x								
7625	x		x	x			x		x		
9555	x		x								
1651	x		x	x			x		x		
7958	x		x								
6354	x		x					x	x		
5340	x		x								
5403	x		x								
1191	x		x	x	x						
4237	x		x								
2322	x		x	x			x		x		
7329	x		x	x			x		x		
3293	x		x	x			x		x		x
1002	x		x								
5517	x		x	x			x		x		
8878	x		x	x			x		x		
2422	x		x	x			x			x	
6173	x		x								
4383	x		x	x			x		x		
6297	x		x								
7942	x		x	x			x		x		
2803	x		x	x			x		x		x
7087	x		x	x			x		x		
8039	x		x	x			x		x		
2312	x		x	x			x		x		
7232	x		x	x			x		x		x
4748	x		x	x			x		x		
9316	x		x	x			x		x		x
6513	x		x					x	x		
6068	x		x	x			x		x		
3136	x		x					x	x		
4913	x		x								
3799	x		x								
9265	x		x	x			x		x		
5567	x		x	x			x		x		
2569	x		x	x			x		x		
2592	x		x	x			x		x		
1953	x		x								
8946	x		x	x			x		x		
6016	x		x					x		x	
9444	x		x	x			x		x		
6073	x		x					x		x	
4270	x		x	x			x		x		
6551	x		x								
1874	x		x								
6385	x		x					x	x		
9060	x		x	x			x		x		
4038	x		x					x	x		
7274	x		x	x			x		x		
4267	x		x								
2277	x		x								
3816	x		x								
9035	x		x								
2249	x		x					x	x		
5714	x		x	x			x		x		
5359	x		x	x			x		x		
4150	x		x	x			x		x		x
8761	x		x	x			x		x		
5300	x		x								
4083	x		x								
1028	x		x	x			x		x		
3135	x		x					x	x		
4390		x									
3180	x		x	x			x		x		x
5159	x		x								

Table 4
Summary of Sub-Slab Soil Gas and Indoor Air Sampling and Mitigation Status
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Unique ID	Study Participation		Sub-Slab Sampled	Subslab soil gas TCE concentration > 20 ug/m³?	Indoor Air Sampled	Indoor air TCE concentration > 2 ug/m³?	Mitigation				Post- Mitigation Indoor Air Sampled
	Participated	Did Not Participate					Mitigation Eligible	Additional Properties Offered Mitigation	System Installed	Mitigation Declined by Property Owner	
5342	x		x	x			x		x		
1000	x		x	x			x		x		
4836	x		x					x	x		
1277	x		x	x			x		x		
5015	x		x	x			x		x		
4920	x		x					x	x		
8281	x		x	x			x		x		x
4789	x		x	x			x		x		
3662	x		x	x			x		x		
6138	x		x								
7690	x		x	x			x		x		
3422	x		x	x			x		x		
2188	x		x								
1831	x		x					x	x		
5378	x		x								
7015	x		x	x			x		x		
6217	x		x								
5595	x		x					x	x		
5547	x		x								
2757	x		x								
5943	x		x	x			x		x		
8745	x		x	x			x		x		
6440	x		x	x			x		x		
4788	x		x	x			x		x		
1194	x		x	x			x		x		
4767	x							x	x		
6544	x		x								
9538		x									
1065	x		x	x			x		x		x
3978	x		x	x			x		x		
7358	x		x	x	x		x		x		
2118	x		x	x			x		x		
4659	x		x	x			x		x		
7409	x		x	x			x		x		
2228	x		x	x			x		x		
1806	x		x	x			x		x		
9189	x		x					x	x		
3593	x		x	x			x		x		
5255	x		x								
9852	x		x	x			x		x		
1812	x		x	x			x		x		
2483	x		x	x			x		x		
6787	x		x								
4985	x		x	x			x		x		
2014	x		x	x			x		x		
4099	x		x								
6512	x		x	x			x		x		
9266	x		x								
4558	x		x								
1141	x		x								
2660	x		x								
3584	x		x								
2479	x		x								
1420	x		x	x	x						
4519		x									
5252		x									
3553	x		x								
2143	x			x	x						
5906	x		x	x	x	x					
4314		x									
7084	x		x	x	x	x					
7187	x		x		x						
8840	x		x								
4566	x		x	x			x		x		x
2857	x		x	x	x	x					
7166	x		x								
2675	x		x								
7201	x		x								
1524	x		x								
4988		x									
9678	x		x								
5602	x		x								
3895	x		x								
2756	x		x								

Table 4
Summary of Sub-Slab Soil Gas and Indoor Air Sampling and Mitigation Status
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Unique ID	Study Participation		Sub-Slab Sampled	Subslab soil gas TCE concentration > 20 ug/m³?	Indoor Air Sampled	Indoor air TCE concentration > 2 ug/m³?	Mitigation				Post- Mitigation Indoor Air Sampled
	Participated	Did Not Participate					Mitigation Eligible	Additional Properties Offered Mitigation	System Installed	Mitigation Declined by Property Owner	
9831	x		x					x	x		
3348	x		x	x			x		x		
3033	x		x	x			x		x		
5476	x		x								
8269		x									
2411	x		x								
1696	x		x	x			x		x		
2310	x		x	x			x		x		
3775	x		x								
9499	x		x								
8631	x		x	x			x		x		
3872	x		x								
5477	x		x	x			x		x		
9335	x		x								
5230	x		x								
1617	x		x								
3665		x									
5404	x		x								
6445	x		x	x			x		x		
2169	x		x	x			x		x		
8667	x		x	x			x		x		
5197	x		x	x			x		x		
1738	x		x								
3506	x		x	x			x		x		
3078	x		x	x			x		x		
3808	x		x								
1295	x		x								
3182	x		x	x			x		x		x
9172	x		x	x			x		x		
3834		x									
1749	x		x	x			x		x		
1391	x		x								
4723	x		x	x			x		x		
8931	x		x	x			x		x		
4080	x		x								
8753	x		x	x			x		x		
1657	x		x	x			x		x		
7496	x		x								
3965	x		x	x			x		x		
6818	x		x	x			x		x		
2702	x		x	x			x		x		
6561	x		x	x			x		x		
3310	x		x	x			x		x		
4730	x		x	x			x		x		
3239	x		x								
6272	x		x								
5902	x		x	x			x		x		
3954	x		x	x	x						
7355	x		x					x	x		
6001	x		x	x			x		x		
7275	x		x								
2614	x		x								
4160	x		x								
6072	x		x					x	x		
7953	x		x								
5948	x		x	x							
4051	x		x	x			x		x		
5431	x		x								
5816	x		x								
3589	x		x	x			x		x		x
3462	x		x	x			x		x		
6335	x		x								
1196	x		x								
727 13th Avenue SE ³	(4)										
727 15th Avenue SE ³	(4)										
2200 Hennepin Ave E ³	x		x								
728 14th Ave SE ³	x		x								
800 14th Ave SE ³	(4)										
808 14th Ave SE ³	(4)										
829 20th Ave SE ³	x										
832 19th Ave SE ³	(4)										
833 20th Ave SE ³	x		x								
836 19th Ave SE ³	x		x	x			x		x		
837 20th Ave SE ³	(4)										

Table 4
Summary of Sub-Slab Soil Gas and Indoor Air Sampling and Mitigation Status
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Unique ID	Study Participation		Sub-Slab Sampled	Subslab soil gas TCE concentration > 20 ug/m³?	Indoor Air Sampled	Indoor air TCE concentration > 2 ug/m³?	Mitigation				Post- Mitigation Indoor Air Sampled
	Participated	Did Not Participate					Mitigation Eligible	Additional Properties Offered Mitigation	System Installed	Mitigation Declined by Property Owner	
840 19th Ave SE ³	x		x				x				
841 20th Ave SE ³	(4)										
844 19th Ave SE ³	x		x				x				
1053 23rd Ave SE ³	x		x				x				
1064 23rd Ave SE ³	x		x								
1068 23rd Ave SE ³	(4)										
1072 23rd Ave SE ³	x		x								
1076 23rd Ave SE ³	x										
1080 23rd Ave SE ³	x		x								
1084 23rd Ave SE ³	(4)										
1088 23rd Ave SE ³	(4)										
1092 23rd Ave SE ³	x		x								
1095 23rd Ave SE ³	(4)										
1096 23rd Ave SE ³	x		x								
1100 22nd Ave SE ³	(4)										
1100 23rd Ave SE ³	(4)										
1101 23rd Ave SE ³	(4)										
1103 23rd Ave SE ³	x		x				x				
1104 23rd Ave SE ³	(4)										
1104 22nd Ave SE ³	(4)										
1108 22nd Ave SE ³	x		x								
1109 23rd Ave SE ³	x		x								
1112 23rd Ave SE ³	(4)										
1324 8th St SE ³	(4)										
1326 8th St SE ³	x		x								
1410 8th St SE ³	(4)										
1412 8th St SE ³	x		x								
1503 8th Street SE ³	(4)										
Sum	362	16	357	175	14	4	166	31	189	4	20

¹ There is no building located on the property. Soil vapor samples collected.
² Additional pre-mitigation sampling work was completed at the property.
³ These properties are being investigated by MPCA as a component of the SE Hennepin Area Groundwater and Vapor site (SA249)
⁴ Properties identified for investigation by MPCA; no results available as of 6/10/15.

Table 5
Summary of Sub-Slab Soil Gas Analytical Data and Initial Pathway Screening - Unmitigated Properties
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	Frequency of Detection	Range of Reporting Limits for Non-Detects	Range of Detected Concentrations	Average of All Samples	Maximum of All Samples	Detected in Groundwater?	Detected in Groundwater Above Screening Level?	Residential Sub-slab VISL HQ = 1 (µg/m³)	Industrial Sub-slab VISL HQ = 1 (µg/m³)	Maximum Greater Than Residential VISL?
Volatile Organics (µg/m³)										
1,1,1-Trichloroethane	85 / 198	1.9 - 7.5	2.1 - 690	22	690	Yes	No	-	-	-
1,1-Dichloroethane	19 / 198	1.3 - 5.6	1.5 - 57	1.6	57	Yes	No	-	-	-
1,1-Dichloroethene	4 / 198	1.3 - 5.5	12 - 162	2.4	162	Yes	Yes	2100	8800	No
1,2,4-Trichlorobenzene	2 / 198	2.4 - 12	4.2 - 4.2	1.9	4	No	-	-	-	-
1,2,4-Trimethylbenzene	92 / 198	1.7 - 7.3	1.8 - 481	12	481	No	-	-	-	-
1,2-Dichlorobenzene	2 / 198	1.9 - 8.3	3.5 - 12	1.3	12	No	-	-	-	-
1,2-Dichloroethane	5 / 198	0.64 - 2.8	0.75 - 3.1	0.48	3	No	-	-	-	-
1,3,5-Trimethylbenzene	38 / 198	1.6 - 7.8	1.9 - 171	4.6	171	No	-	-	-	-
1,3-Butadiene	1 / 198	0.71 - 3.4	3.2 - 3.2	0.51	3	No	-	-	-	-
1,3-Dichlorobenzene	2 / 198	1.9 - 9.6	5.0 - 6.1	1.4	6	No	-	-	-	-
1,4-Dichlorobenzene	6 / 198	1.9 - 9.6	2.8 - 9.9	1.4	10	No	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	182 / 198	1.0 - 3.4	1.2 - 11000	70	11000	Yes	No	-	-	-
2-Hexanone	66 / 198	1.4 - 5.6	1.4 - 22	1.8	22	No	-	-	-	-
4-Ethyl toluene	41 / 198	1.6 - 7.8	2.1 - 205	4.7	205	No	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	58 / 198	1.4 - 6.1	1.3 - 16	1.9	16	No	-	-	-	-
Acetone	190 / 198	4.2 - 45	2.9 - 2220	91	2220	Yes	No	-	-	-
Benzene	96 / 198	0.55 - 3	0.60 - 112	4.4	112	Yes	No	-	-	-
Bromodichloromethane	5 / 198	2.1 - 9.2	3.1 - 12	1.5	12	Yes	No	-	-	-
Bromomethane (Methyl Bromide)	2 / 198	1.2 - 5.4	1.5 - 3.4	0.87	3	No	-	-	-	-
Carbon disulfide	93 / 198	1.1 - 3.8	1.1 - 139	4.3	139	No	-	-	-	-
Carbon tetrachloride	20 / 198	1.0 - 6	1.3 - 37	1.4	37	No	-	-	-	-
Chlorobenzene	23 / 198	1.5 - 6.4	1.6 - 463	4.6	463	No	-	-	-	-
Chloroform (Trichloromethane)	97 / 198	0.86 - 6.7	0.93 - 324	12	324	Yes	No	-	-	-
Chloromethane (Methyl Chloride)	13 / 198	0.66 - 2.9	0.81 - 3.3	0.50	3	No	-	-	-	-
cis-1,2-Dichloroethene	24 / 198	1.3 - 4.9	1.5 - 67	2.4	67	Yes	Yes	NA	NA	NA
Cyclohexane	53 / 198	1.2 - 11	1.3 - 82	3.3	82	No	-	-	-	-
Dichlorodifluoromethane (CFC-12)	150 / 198	1.8 - 6.9	1.9 - 54500	468	54500	No	-	-	-	-
Ethanol	194 / 198	1.7 - 1.8	2.4 - 5180	156	5180	No	-	-	-	-
Ethyl acetate	38 / 198	1.2 - 5	1.4 - 74	2.4	74	No	-	-	-	-
Ethylbenzene	70 / 198	1.5 - 6.9	1.6 - 1110	11	1110	No	-	-	-	-
Hexachlorobutadiene	1 / 198	3.5 - 16	8.0 - 8.0	2.6	8	No	-	-	-	-
Hexane	129 / 198	1.2 - 3.3	1.3 - 294	6.3	294	No	-	-	-	-
Isopropyl Alcohol	104 / 198	0.87 - 3.8	1.9 - 1770	25	1770	No	-	-	-	-
m,p-Xylenes	92 / 198	3.0 - 16	3.1 - 4360	46	4360	No	-	-	-	-
Methylene chloride	107 / 198	1.2 - 64	1.4 - 479	17	479	No	-	-	-	-
Naphthalene	189 / 198	1.9 - 8.3	2.0 - 401	19	401	No	-	-	-	-
N-Heptane	71 / 198	1.4 - 6.3	1.4 - 82	3.0	82	No	-	-	-	-
o-Xylene	80 / 198	1.5 - 6.5	1.6 - 1350	15	1350	No	-	-	-	-
Propylene (Propene)	58 / 198	0.59 - 2.1	0.71 - 61	1.9	61	No	-	-	-	-
Styrene	30 / 198	1.5 - 6.8	1.4 - 610	6.0	610	No	-	-	-	-
Tetrachloroethene	142 / 198	1.2 - 6.2	1.3 - 883	36	883	Yes	Yes	110	470	Yes
Tetrahydrofuran	37 / 198	0.94 - 5.4	1.1 - 5190	28	5190	No	-	-	-	-
Toluene	161 / 198	1.3 - 3.4	1.5 - 7430	81	7430	No	-	-	-	-
trans-1,2-Dichloroethene	19 / 198	1.3 - 5.5	2.1 - 39	1.6	39	Yes	No	-	-	-
Trichloroethene (TCE)	260 / 430	0.86 - 3.1	1.0 - 3320	93	3320	Yes	Yes	20*	84	Yes
Trichlorofluoromethane (CFC-11)	46 / 198	1.8 - 7.7	2.0 - 87	2.9	87	No	-	-	-	-
Trifluorotrichloroethane (Freon 113)	30 / 198	2.5 - 11	2.9 - 86	3.6	86	No	-	-	-	-
Vinyl acetate	48 / 198	1.1 - 28	1.3 - 17	1.7	17	No	-	-	-	-
Vinyl chloride	2 / 198	0.41 - 1.8	1.4 - 27	0.43	27	Yes	Yes	1.7	28	Yes

NOTES:
µg/m³: Micrograms per Cubic Meter of Air
HQ: Hazard Quotient
VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or cancer risk of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
-: Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Average (arithmetic mean) levels were calculated using a value of the reporting limit for analytical values reported as "Not Detected" (ND).
* TCE subslab soil gas action level established by MPCA, based on a sub-slab soil gas to indoor air attenuation factor of 0.1 and a hazard quotient of 1 for residential use.

Table 6
Summary of Sub-Slab Soil Gas and Indoor Air Sampling and Mitigation Status - Unmitigated Properties with Sub-Slab Soil Gas TCE > 20 ug/m³
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

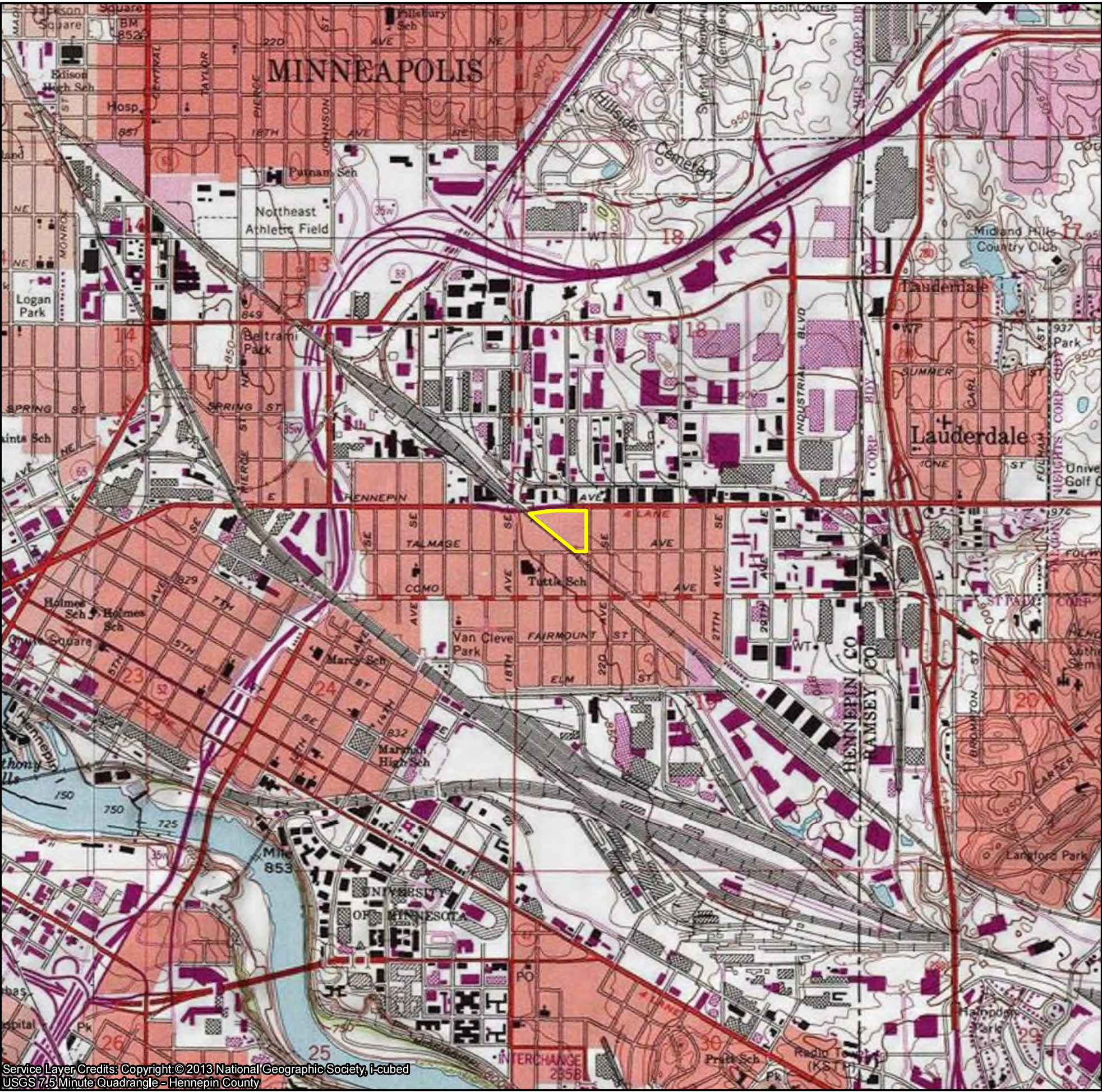
Unique ID	Study Participation		Sub-Slab Sampled	Subslab soil gas TCE concentration > 20 ug/m³?	Indoor Air Sampled	Indoor air TCE concentration > 2 ug/m³?	Mitigation				Post-Mitigation Indoor Air Sampled	Comments
	Participated	Did Not Participate					Mitigation Eligible	Additional Properties Offered Mitigation	System Installed	Mitigation Declined by Property Owner		
3559	x		x	x	x							IA less than 2 ug/m3
5419	x		x	x	x							IA less than 2 ug/m3
1191	x		x	x	x							IA less than 2 ug/m3
1420	x		x	x	x							IA less than 2 ug/m3
2143	x		x	x	x							IA less than 2 ug/m3
3954	x		x	x	x							IA less than 2 ug/m3
8222	x		x	x	x	x						Indoor air source of TCE in maintenance room; all other IA samples < 2 ug/m3
5906	x		x	x	x	x						SW Area; Indoor air TCE result (12/16/2014) = 2.3 ug/m3.
7084	x		x	x	x	x						SW Area; Sump cover sealing conducted.
2857	x		x	x	x	x						SW Area; Indoor air TCE result (11/21/2014) = 2.1 ug/m3.
8760	x		x	x								SW Area; Vapor barrier and parking garage present - no further action based on 6/27/14 MPCA letter.
6841 ¹	x		x	x								No buildings present; Soil gas sampling conducted.
5948	x		x	x								Commercial/industrial property use; sub-slab sampling TCE results are below commercial/industrial VISL.
5083	x		x	x			x			x		Mitigation eligible based on sub-slab results, owner declined to provide access to install mitigation system.
2422	x		x	x			x			x		Mitigation eligible based on sub-slab results, owner declined to provide access to install mitigation system.
Sum	15	0	15	15	10	4	2	0	0	2	0	

¹ There is no building located on the property. Soil vapor samples collected.

Table 7
Summary of Sub-Slab Soil Gas and Indoor Air Sampling and Mitigation Status - Properties in NE Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Unique ID ¹	Study Participation		Sub-Slab Sampled	Subslab soil gas TCE concentration > 20 ug/m³?	Indoor Air Sampled	Indoor air TCE concentration > 2 ug/m³?	Mitigation				Post-Mitigation Indoor Air Sampled	Comments (4)
	Participated	Did Not Participate					Mitigation Eligible	Additional Properties Offered Mitigation	System Installed	Mitigation Declined by Property Owner		
Properties in NE AREA												
1080 23rd Ave SE ³	x		x									
1084 23rd Ave SE ³	(2)											NE Area; not within area of predicted IA < 2 ug/m3 (4)
1088 23rd Ave SE ³	(2)											NE Area; not within area of predicted IA < 2 ug/m3 (4)
1092 23rd Ave SE ³	x		x									
1095 23rd Ave SE ³	(2)											NE Area; not within area of predicted IA < 2 ug/m3 (4)
1096 23rd Ave SE ³	x		x									
1100 22nd Ave SE ³	(2)											NE Area; not within area of predicted IA < 2 ug/m3 (4)
1100 23rd Ave SE ³	(2)											NE Area; not within area of predicted IA < 2 ug/m3 (4)
1101 23rd Ave SE ³	(2)											NE Area; not within area of predicted IA < 2 ug/m3 (4)
1103 23rd Ave SE ³	x		x				x					
1104 23rd Ave SE ³	(2)											NE Area; not within area of predicted IA < 2 ug/m3 (4)
1104 22nd Ave SE ³	(2)											NE Area; not within area of predicted IA < 2 ug/m3 (4)
1108 23rd Ave SE ³	x		x									
1109 23rd Ave SE ³	x		x									
1112 23rd Ave SE ³	(2)											NE Area; not within area of predicted IA < 2 ug/m3 (4)
Sum	21	0	19	3	0	0	7	0	3	0	1	

¹ Sampling and mitigation status for these properties were provided by MPCA.
² Properties identified for investigation by MPCA; no results available as of 6/10/15.
³ These properties are being investigated by MPCA as a component of the SE Hennepin Area Groundwater and Vapor site (SA249)



2010 East Hennepin Ave

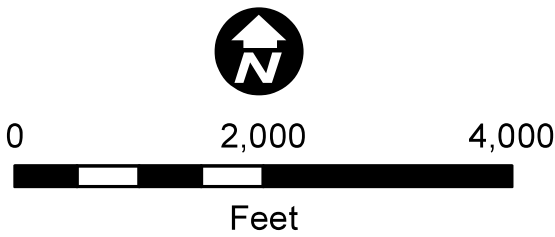
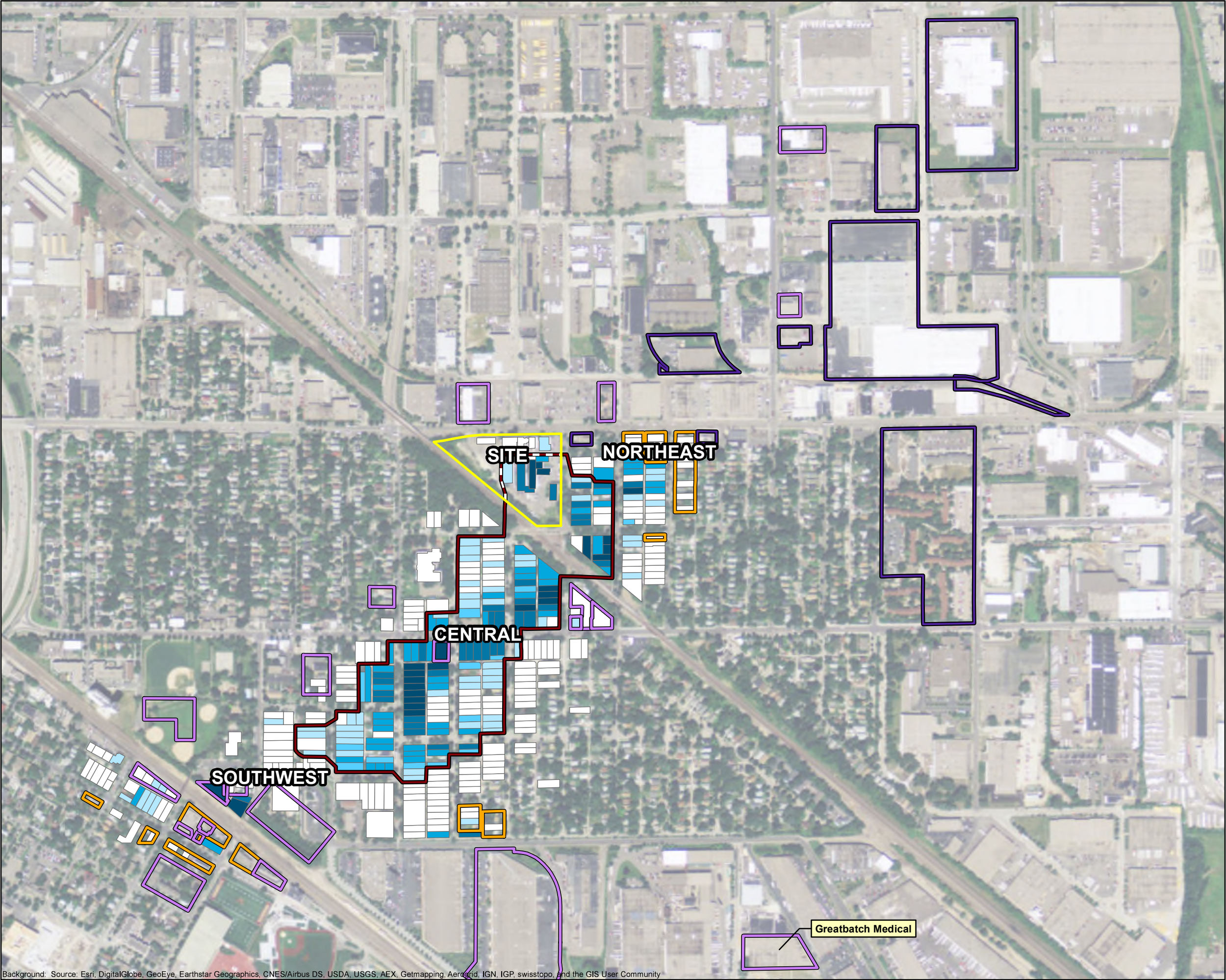


Figure 1

LOCATION MAP
East Hennepin Avenue Site
Minneapolis, Minnesota

Note: Pink shaded areas in USGS map indicate residential areas.



- 2010 East Hennepin Ave
- Property with Documented TCE in Groundwater Based on Review of MPCA Files
- Property with Potential Solvent Use, Approximate Location of Current and/or Historic Business
- Property Included in MPCA's SA249 Study as of May 28, 2015
- Soil Gas Monitoring Area

Sub-slab TCE Vapor Concentrations

- < 20 ug/m³
- 20 - 60 ug/m³
- 60 - 100 ug/m³
- 100 - 500 ug/m³
- 500 - 2000 ug/m³
- > 2000 ug/m³

Maximum sub-slab TCE vapor concentration at each building shown.

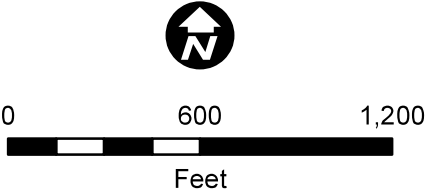
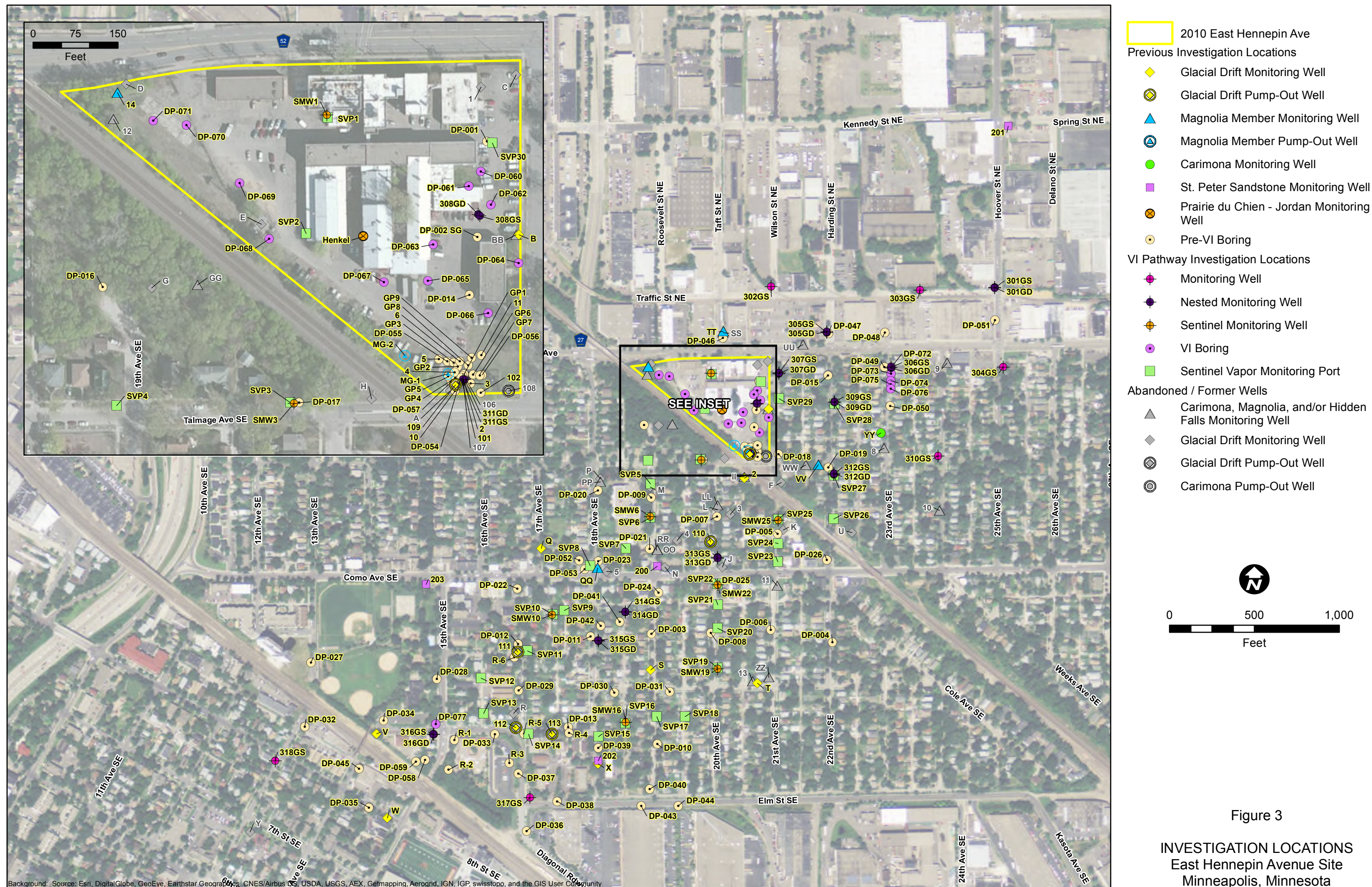
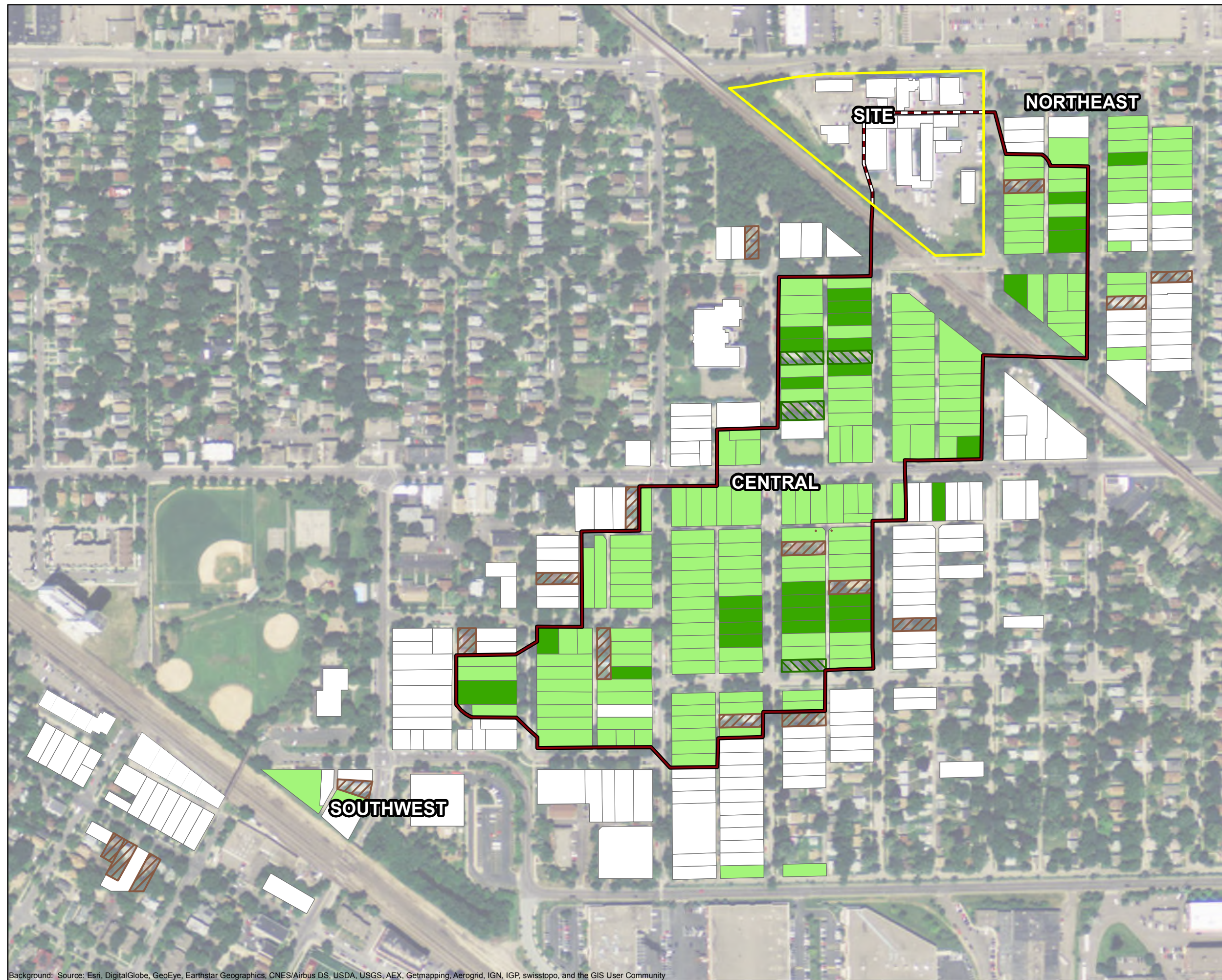


Figure 2
STUDY AREA
East Hennepin Avenue Site
Minneapolis, Minnesota





Background: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

- 2010 E Hennepin Ave
- Soil Gas Monitoring Area
- Building Mitigation System Installed - Mitigation Eligible
- Building Mitigation System Installed - Additional Properties Offered Mitigation
- Not Eligible for Mitigation
- Mitigation Declined by Property Owner
- Did Not Participate in Study

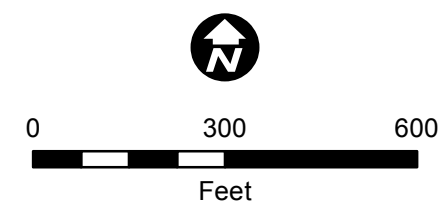


Figure 4
BUILDING MITIGATION
STATUS
East Hennepin Avenue Site
Minneapolis, Minnesota

APPENDIX A

Data Sets Used in HHRA

Appendix A - Table 1
Summary of Soil Analytical Data used in HHRA
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	Industrial Soil RSL HQ = 1.0 (mg/Kg)	Residential Soil RSL HQ = 1.0 (mg/Kg)	Maximum Greater than Residential Soil RSL HQ = 0.1?	301_35- 35_12022014 12/02/2014 35 - 35 (ft)	301_42- 42_12022014 12/02/2014 42 - 42 (ft)	311 PILOT_17.5- 17.5_10232014 10/23/2014 17.5 - 17.5 (ft)	311 PILOT_17.5- 17.5_10232014_FD 10/23/2014 17.5 - 17.5 (	313 Pilot Boring_39- 39_10312014 10/31/2014 39 - 39 (ft)	314_39- 39_12112014 12/11/2014 39 - 39 (ft)
Volatile Organics (mg/Kg)									
1,2,4-Trimethylbenzene	240	58	Yes	0.0555 U	0.0549 U	41.8	27.5	0.0568 U	0.0569 U
1,3,5-Trimethylbenzene	12000	780	No	0.0555 U	0.0549 U	5.42	6.48	0.0568 U	0.0569 U
2-Phenylbutane (sec-Butylbenzene)	120000	7800	No	0.0555 U	0.0549 U	1.9	2.54	0.0568 U	0.0569 U
Benzene	5.1	1.2	No	0.0222 U	0.0219 U	0.114	0.136	0.0227 U	0.0228 U
Chlorobenzene	1300	280	No	0.0555 U	0.0549 U	0.0534 U	0.0506 U	0.0568 U	0.0569 U
cis-1,2-Dichloroethene	2300	160	No	0.0555 U	0.0744	0.0534 U	0.0506 U	0.11	0.142
Cymene (p-Isopropyltoluene)	-	-	No	0.0555 U	0.0549 U	2.26	2.88	0.0568 U	0.0569 U
Ethylbenzene	25	5.8	Yes	0.0555 U	0.0549 U	30.4	38.5	0.0568 U	0.0569 U
Isopropylbenzene	9900	1900	No	0.0555 U	0.0549 U	2.5	3.13	0.0568 U	0.0569 U
m,p-Xylenes	2500	580	Yes	-	-	-	-	-	-
Naphthalene	17	3.8	Yes	0.222 U	0.219 U	6.67	6.38	0.227 U	0.228 U
n-Butylbenzene	58000	3900	No	0.0555 U	0.0549 U	4.56	5.67	0.0568 U	0.0569 U
n-Propylbenzene	22000	3300	No	0.0555 U	0.0549 U	4.35	5.5	0.0568 U	0.0569 U
tert-Butylbenzene	120000	7800	No	0.243	2.6744	305.044	346.2963	1.87	2.711
Tetrahydrofuran	100	24	No	0.0555 U	0.0549 U	0.0534 U	0.0803	0.0568 U	0.0569 U
trans-1,2-Dichloroethene	47000	4900	No	0.0555 U	0.0549 U	5.07	7.5	0.0568 U	0.0569 U
trans-1,3-Dichloropropene	23000	1600	No	0.0555 U	0.0549 U	0.0534 U	0.0506 U	0.0568 U	0.119
Trichlorofluoromethane (CFC-11)	6	0.94	Yes	0.243	2.6	0.0534 U	0.0506 U	1.76	2.45 C0 M1

ABBREVIATIONS AND NOTES:
mg/Kg: milligram per kilogram
RSL: USEPA Regional Screening Levels for Chemical
Contaminants RSL values were obtained from the
USEPA Regional Screening Levels Table, updated
January 2015.
HI: Hazard Index
U: not detected, value is the reporting limit
C0: Result confirmed by second analysis
M1: Matrix spike recovery exceeded QC limits. Batch
accepted based on laboratory control sample (LCS
)recovery.
- Analytes detected in at least one sample are reported
herein. For a complete list of analytes see the
laboratory data sheets.

Appendix A - Table 1
Summary of Soil Analytical Data used in HHRA
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	314_39- 39_12112014_FD 12/11/2014 39 - 39 (ft)	315_45.5- 45.5_11112014 11/11/2014 45.5 - 45.5 (ft)	DP-045_37.5- 37.5_04042014 04/04/2014 37.5 - 37.5 (ft)	DP-046_43- 43_04022014 04/02/2014 43 - 43 (ft)	DP-047_54.5- 54.5_04042014 04/04/2014 54.5 - 54.5 (ft)	DP-048_48- 48_04032014 04/03/2014 48 - 48 (ft)	DP-049_40- 40.5_04012014 04/01/2014 40 - 40.5 (ft)	DP-051_26.5- 26.5_04022014 04/02/2014 26.5 - 26.5 (ft)	DP-054_13.5- 13.5_05072014 05/07/2014 13.5 - 13.5 (ft)
Volatile Organics (mg/Kg)									
1,2,4-Trimethylbenzene	0.0534 U	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	4.96 M1
1,3,5-Trimethylbenzene	0.0534 U	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	1.39
2-Phenylbutane (sec-Butylbenzene)	0.0534 U	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	0.585
Benzene	0.0214 U	0.0247 U	0.0216 U	0.0214 U	0.0218 U	0.0233 U	0.0215 U	0.0217 U	0.161
Chlorobenzene	0.0534 U	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	0.0584 U
cis-1,2-Dichloroethene	0.0601	0.0763	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	0.0584 U
Cymene (p-Isopropyltoluene)	0.0534 U	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	1.89 M1
Ethylbenzene	0.0534 U	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	7.13 M1
Isopropylbenzene	0.0534 U	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	0.529
m,p-Xylenes	-	-	-	-	-	-	-	-	28
Naphthalene	0.214 U	0.247 U	0.216 U	0.214 U	0.218 U	0.233 U	0.215 U	0.217 U	0.681
n-Butylbenzene	0.0534 U	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	1.38 M1
n-Propylbenzene	0.0534 U	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	0.889
tert-Butylbenzene	0.9196	2.4963	0.0662	-	-	-	0.364	-	87.295
Tetrahydrofuran	0.0534 U	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	0.0584 U
trans-1,2-Dichloroethene	0.0534 U	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	0.0584 U
trans-1,3-Dichloropropene	0.0625	0.0618 U	0.0539 U	0.0534 U	0.0544 U	0.0581 U	0.0539 U	0.0542 U	0.0584 U
Trichlorofluoromethane (CFC-11)	0.797 D6 C0	2.42	0.0662	0.0534 U	0.0544 U	0.0581 U	0.364	0.0542 U	0.0584 U

ABBREVIATIONS AND NOTES:
mg/Kg: milligram per kilogram
RSL: USEPA Regional Screening Levels for Chemical Contaminants RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
HI: Hazard Index
U: not detected, value is the reporting limit
C0: Result confirmed by second analysis
M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS)recovery.
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 1
Summary of Soil Analytical Data used in HHRA
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-054_41-41_05072014 05/07/2014 41 - 41 (ft)	DP-054_52-52_05072014 05/07/2014 52 - 52 (ft)	DP-055_10.5-10.5_05082014 05/08/2014 10.5 - 10.5 (ft)	DP-055_42-42_05082014 05/08/2014 42 - 42 (ft)	DP-056_36-36_05062014 05/06/2014 36 - 36 (ft)	DP-056_39-39_05062014 05/06/2014 39 - 39 (ft)	DP-056_52.5-52.5_05062014 05/06/2014 52.5 - 52.5 (ft)	DP-056_9.5-9.5_05062014 05/06/2014 9.5 - 9.5 (ft)	DP-057_10-10_05072014 05/07/2014 10 - 10 (ft)
Volatile Organics (mg/Kg)									
1,2,4-Trimethylbenzene	0.0573 U	0.0579 U	0.361	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
1,3,5-Trimethylbenzene	0.0573 U	0.0579 U	0.13	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
2-Phenylbutane (sec-Butylbenzene)	0.0573 U	0.0579 U	0.0647 U	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
Benzene	0.0229 U	0.0232 U	0.54	0.0211 U	0.0235 U	0.024 U	0.0231 U	0.033 U	0.877
Chlorobenzene	0.0573 U	0.0579 U	0.0647 U	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
cis-1,2-Dichloroethene	0.0573 U	0.0579 U	0.0647 U	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
Cymene (p-Isopropyltoluene)	0.0573 U	0.0579 U	0.453	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
Ethylbenzene	0.0573 U	0.0579 U	1.11	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
Isopropylbenzene	0.0573 U	0.0579 U	0.0647 U	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
m,p-Xylenes	-	-	-	-	-	-	-	-	-
Naphthalene	0.229 U	0.232 U	0.259 U	0.211 U	0.235 U	0.24 U	0.231 U	0.33 U	0.623 U
n-Butylbenzene	0.0573 U	0.0579 U	0.0847	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
n-Propylbenzene	0.0573 U	0.0579 U	0.0717	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
tert-Butylbenzene	0.0645	-	4.9804	0.0558	-	0.0982	0.848	-	0.877
Tetrahydrofuran	0.0573 U	0.0579 U	0.0647 U	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
trans-1,2-Dichloroethene	0.0573 U	0.0579 U	0.0647 U	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
trans-1,3-Dichloropropene	0.0573 U	0.0579 U	0.0647 U	0.0528 U	0.0588 U	0.06 U	0.0577 U	0.0825 U	0.156 U
Trichlorofluoromethane (CFC-11)	0.0645 D6	0.0579 U	0.0647 U	0.0558	0.0588 U	0.0982	0.848	0.0825 U	0.156 U

ABBREVIATIONS AND NOTES:
mg/Kg: milligram per kilogram
RSL: USEPA Regional Screening Levels for Chemical Contaminants RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
HI: Hazard Index
U: not detected, value is the reporting limit
C0: Result confirmed by second analysis
M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS)recovery.
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 1
Summary of Soil Analytical Data used in HHRA
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-057_41.5-41.5_05072014 05/07/2014 41.5 - 41.5 (ft)	DP-061_6.5-6.5_10142014 10/14/2014 6.5 - 6.5 (ft)	DP-064_16-16_10132014 10/13/2014 16 - 16 (ft)	DP-064_3.5-3.5_10132014 10/13/2014 3.5 - 3.5 (ft)	DP-066_44-44_10172014 10/17/2014 44 - 44 (ft)	DP-066_44-44_10172014.FD 10/17/2014 44 - 44 (ft)	DP-066_52.5-52.5_10172014 10/17/2014 52.5 - 52.5 (ft)	DP-067_19-19_10202014 10/20/2014 19 - 19 (ft)	DP-067_3-3_10202014 10/20/2014 3 - 3 (ft)	DP-068_12-12_10202014 10/20/2014 12 - 12 (ft)
Volatile Organics (mg/Kg)										
1,2,4-Trimethylbenzene	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0665 U	0.102 U
1,3,5-Trimethylbenzene	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0665 U	0.102 U
2-Phenylbutane (sec-Butylbenzene)	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0665 U	0.102 U
Benzene	0.0231 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0266 U	0.102 U
Chlorobenzene	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0665 U	4.42 D6
cis-1,2-Dichloroethene	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.134	0.0517 U	0.0665 U	0.102 U
Cymene (p-Isopropyltoluene)	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0665 U	0.102 U
Ethylbenzene	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0665 U	0.102 U
Isopropylbenzene	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0665 U	0.102 U
m,p-Xylenes	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.231 U	0.224 U	0.208 U	0.219 U	0.222 U	0.217 U	0.234 U	0.207 U	0.266 U	0.406 U
n-Butylbenzene	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0665 U	0.102 U
n-Propylbenzene	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0665 U	0.102 U
tert-Butylbenzene	0.0662	-	-	-	1.29	1.1	2.2814	-	-	4.42
Tetrahydrofuran	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0674	0.0517 U	0.0665 U	0.102 U
trans-1,2-Dichloroethene	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0665 U	0.102 U
trans-1,3-Dichloropropene	0.0578 U	0.0561 U	0.0519 U	0.0547 U	0.0554 U	0.0543 U	0.0586 U	0.0517 U	0.0665 U	0.102 U
Trichlorofluoromethane (CFC-11)	0.0662	0.0561 U	0.0519 U	0.0547 U	1.29	1.1	2.08	0.0517 U	0.0665 U	0.102 U

ABBREVIATIONS AND NOTES:
mg/Kg: milligram per kilogram
RSL: USEPA Regional Screening Levels for Chemical Contaminants RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
HI: Hazard Index
U: not detected, value is the reporting limit
C0: Result confirmed by second analysis
M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS)recovery.
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 1
Summary of Soil Analytical Data used in HHRA
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-069_11-11_10212014 10/21/2014 11 - 11 (ft)	DP-070_10-10_10212014 10/21/2014 10 - 10 (ft)	DP-071_9.5-9.5_10222014 10/22/2014 9.5 - 9.5 (ft)	DP-071_9.5-9.5_10222014_FD 10/22/2014 9.5 - 9.5 (ft)	DP-073_11-11_10272014 10/27/2014 11 - 11 (ft)	DP-073_40.5-40.5_10272014 10/27/2014 40.5 - 40.5 (ft)	DP-074_4.5-4.5_10282014 10/28/2014 4.5 - 4.5 (ft)	SMW-3_40.5-40.5_11042014 11/04/2014 40.5 - 40.5 (ft)	SMW-6_41-41_11042014 11/04/2014 41 - 41 (ft)	SVP-26_8-8_11032014 11/03/2014 8 - 8 (ft)
Volatile Organics (mg/Kg)										
1,2,4-Trimethylbenzene	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0564 U	0.0524 U
1,3,5-Trimethylbenzene	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0564 U	0.0524 U
2-Phenylbutane (sec-Butylbenzene)	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0564 U	0.0524 U
Benzene	0.0321 U	0.0709 U	0.0333 U	0.0354 U	0.0204 U	0.0224 U	0.0221 U	0.0226 U	0.0226 U	0.021 U
Chlorobenzene	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0564 U	0.0524 U
cis-1,2-Dichloroethene	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.112	0.0524 U
Cymene (p-Isopropyltoluene)	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0564 U	0.0524 U
Ethylbenzene	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0564 U	0.0524 U
Isopropylbenzene	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0564 U	0.0524 U
m,p-Xylenes	-	-	-	-	-	-	-	-	-	-
Naphthalene	0.321 U	0.709 U	0.333 U	0.354 U	0.204 U	0.224 U	0.221 U	0.226 U	0.226 U	0.21 U
n-Butylbenzene	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0564 U	0.0524 U
n-Propylbenzene	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0564 U	0.0524 U
tert-Butylbenzene	-	-	-	-	-	0.449	-	0.812	4.4371	-
Tetrahydrofuran	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0951	0.0524 U
trans-1,2-Dichloroethene	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0564 U	0.0524 U
trans-1,3-Dichloropropene	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.0561 U	0.0552 U	0.0564 U	0.0564 U	0.0524 U
Trichlorofluoromethane (CFC-11)	0.0803 U	0.177 U	0.0832 U	0.0886 U	0.051 U	0.449	0.0552 U	0.812	4.23	0.0524 U

ABBREVIATIONS AND NOTES:
mg/Kg: milligram per kilogram
RSL: USEPA Regional Screening Levels for Chemical Contaminants RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
HI: Hazard Index
U: not detected, value is the reporting limit
C0: Result confirmed by second analysis
M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS)recovery.
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	Maximum of All Samples	MCL (mg/L)	Maximum Greater Than MCL?	EPA VISL (mg/L)	Maximum Greater Than EPA VISL?	10_09202010 09/20/2010	11_09202010 09/20/2010	111_01162013 01/16/2013	111_03032015 03/03/2015
Volatile Organics (mg/L)									
1,1,1-Trichloroethane	0.0031	0.2	No	-	-	0.001 U	0.001 U	0.0024	0.0031
1,1-Dichloroethane	0.0067	-	-	0.015	No	0.001 U	0.0016	0.001 U	0.001 U
1,1-Dichloroethene	0.023	0.007	Yes	-	-	-	-	-	0.001 U
2-Butanone (Methyl Ethyl Ketone)	0.0064	-	-	4800	No	-	-	-	0.005 U
Acetone	0.023	-	-	44000	No	-	-	-	0.02 U
Benzene	0.0048	0.005	No	-	-	0.001 U	0.0022	0.001 U	0.001 U
Bromodichloromethane	0.0025	0.08	No	-	-	-	-	-	0.001 U
Chloroform (Trichloromethane)	0.012	0.08	No	-	-	-	-	-	0.001 U
cis-1,2-Dichloroethene	0.91	0.07	Yes	-	-	0.001 U	0.13	0.001 U	0.0012
Tetrachloroethene	0.053	0.005	Yes	-	-	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	0.021	0.1	No	-	-	0.001 U	0.0026	0.001 U	0.001 U
Trichloroethene	4.3	0.005	Yes	-	-	0.013	0.065	0.001 U	0.0048
Vinyl chloride	0.013	0.002	Yes	-	-	0.001 U	0.001 U	0.001 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014 RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	111_03292011 03/29/2011	111_06152011 06/15/2011	111_09222010 09/22/2010	111_12082014 12/08/2014	111_12232010 12/23/2010	112_01162013 01/16/2013	112_03032015 03/03/2015	112_03032015_ FD 03/03/2015
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.0024	0.0021	0.002	0.0022	0.0021	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	-	-	-	0.001 U	-	-	0.001 U	0.001 U
2-Butanone (Methyl Ethyl Ketone)	-	-	-	0.005 U	-	-	0.005 U	0.005 U
Acetone	-	-	-	0.02 U	-	-	0.02 U	0.02 U
Benzene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	-	-	-	0.001 U	-	-	0.001 U	0.001 U
Chloroform (Trichloromethane)	-	-	-	0.001 U	-	-	0.001 U	0.001 U
cis-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.0012	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	0.001 U	0.001 U	0.001 U	0.0053	0.001 U	0.0054	0.0048	0.0045
Vinyl chloride	0.001 U	0.001 U	0.001 U	0.0004 U	0.001 U	0.001 U	0.0004 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	112_03042011 03/04/2011	112_06152011 06/15/2011	112_12082014 12/08/2014	112_12202010 12/20/2010	112-15_8- 16_8_11142011 11/14/2011 15_8 - 16_8 (ft)	112-15_8- 16_8_11142011 _FD 11/14/2011 15_8 - 16_8 (ft)	112-16_8- 17_8_11142011 11/14/2011 16_8 - 17_8 (ft)	112-20_8- 22_8_11142011 11/14/2011 20_8 - 22_8 (ft)
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	-	-	-	-
1,1-Dichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	-	-	-	-
1,1-Dichloroethene	-	-	0.001 U	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	-	-	0.005 U	-	-	-	-	-
Acetone	-	-	0.02 U	-	-	-	-	-
Benzene	0.001 U	0.001 U	0.001 U	0.001 U	-	-	-	-
Bromodichloromethane	-	-	0.001 U	-	-	-	-	-
Chloroform (Trichloromethane)	-	-	0.001 U	-	-	-	-	-
cis-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	-	-	-	-
Tetrachloroethene	0.001 U	0.001 U	0.001 U	0.0013	-	-	-	-
trans-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	-	-	-	-
Trichloroethene	0.029	0.014	0.004	0.042	0.008	0.0063	0.0088	0.01
Vinyl chloride	0.001 U	0.001 U	0.0004 U	0.001 U	-	-	-	-

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	112-27_8- 29_8_11142011 11/14/2011 27_8 - 29_8 (ft)	112-33_8- 35_8_11142011 11/14/2011 33_8 - 35_8 (ft)	113_03042011 03/04/2011	113_03042015 03/04/2015	113_06152011 06/15/2011	113_09222010 09/22/2010	113_12082014 12/08/2014	113_12182012 12/18/2012
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	-	-	-	0.001 U	-	-	0.001 U	-
2-Butanone (Methyl Ethyl Ketone)	-	-	-	0.005 U	-	-	0.005 U	-
Acetone	-	-	-	0.02 U	-	-	0.02 U	-
Benzene	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	-	-	-	0.001 U	-	-	0.001 U	-
Chloroform (Trichloromethane)	-	-	-	0.001 U	-	-	0.001 U	-
cis-1,2-Dichloroethene	-	-	0.001 U	0.001 U	0.0019	0.013	0.001 U	0.0013
Tetrachloroethene	-	-	0.001 U	0.001 U	0.001 U	0.0023	0.001 U	0.001 U
trans-1,2-Dichloroethene	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	0.0068	0.0078	0.0045	0.0018	0.0048	0.078	0.00098	0.0045
Vinyl chloride	-	-	0.001 U	0.0004 U	0.001 U	0.001 U	0.0004 U	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	113_12202010 12/20/2010	203_09222010 09/22/2010	203_12182012 12/18/2012	301_17_5- 21_5_12022014 12/02/2014 17_5 - 21_5 (ft)	301_48- 50_12032014 12/03/2014 48 - 50 (ft)	301GD_0312201 5 03/12/2015	301GD_1218201 4 12/18/2014	301GS_0312201 5 03/12/2015
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001 U	-	0.01 U	0.02 U	0.02	0.001 U	0.01
1,1-Dichloroethane	0.001 U	0.001 U	-	0.01 U	0.02 U	0.02	0.0067	0.01
1,1-Dichloroethene	-	-	-	0.01 U	0.02 U	0.0232	0.0208	0.01
2-Butanone (Methyl Ethyl Ketone)	-	-	-	0.05 U	0.1 U	0.1	0.005 U	0.05
Acetone	-	-	-	0.2 U	0.4 U	0.4	0.02 U	0.2
Benzene	0.001 U	0.001 U	-	0.01 U	0.02 U	0.02	0.0016	0.01
Bromodichloromethane	-	-	-	0.01 U	0.02 U	0.02	0.001 U	0.01
Chloroform (Trichloromethane)	-	-	-	0.01 U	0.02 U	0.02	0.001 U	0.01
cis-1,2-Dichloroethene	0.0014	0.0016	-	0.615	0.424	0.909	0.639 h	0.732
Tetrachloroethene	0.001 U	0.001 U	-	0.0335	0.02 U	0.02	0.0017	0.0528
trans-1,2-Dichloroethene	0.001 U	0.001 U	-	0.0128	0.02 U	0.02	0.0097	0.0209
Trichloroethene	0.012	0.021	0.019	1.04	1.94	4.27	3.29 h	1.37
Vinyl chloride	0.001 U	0.001 U	-	0.004 U	0.008 U	0.0081	0.0128	0.004

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	301GS_1218201 4 12/18/2014	302 GS_12222014 12/22/2014	302GS_0312201 5 03/12/2015	303_15_5- 19_5_12042014 12/04/2014 15_5 - 19_5 (ft)	303_32- 34_12042014 12/04/2014 32 - 34 (ft)	303GS_0312201 5 03/12/2015	303GS_1219201 4 12/19/2014	304 (49- 51FT)_12082014 12/08/2014 49 - 51 (ft)
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001 U	0.001	0.001 U	0.001 U	0.005	0.01 Uh	0.001 U
1,1-Dichloroethane	0.0015	0.001 U	0.001	0.0012	0.0049	0.005	0.01 Uh	0.001 U
1,1-Dichloroethene	0.0032	0.001 U	0.001	0.001 U	0.0015	0.005	0.01 Uh	0.001 U
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005 U	0.005	0.005 U	0.005 U	0.025	0.05 Uh	0.0064
Acetone	0.02 U	0.02 U	0.02	0.02 U	0.02 U	0.1	0.2 Uh	0.0225
Benzene	0.001 U	0.001 U	0.001	0.001 U	0.001 U	0.005	0.01 Uh	0.001 U
Bromodichloromethane	0.001 U	0.001 U	0.001	0.001 U	0.001 U	0.005	0.01 Uh	0.001 U
Chloroform (Trichloromethane)	0.001 U	0.001 U	0.001	0.001 U	0.001 U	0.005	0.01 Uh	0.0018
cis-1,2-Dichloroethene	0.712 h	0.001 U	0.001	0.106	0.308	0.308	0.339 h	0.0011
Tetrachloroethene	0.0489	0.001 U	0.001	0.004	0.0133	0.0091	0.01 Uh	0.001 U
trans-1,2-Dichloroethene	0.0173	0.004 U	0.001	0.0024	0.0101	0.0069	0.01 Uh	0.001 U
Trichloroethene	1.08 h	0.0004 U	0.00098	0.255	1.02	0.693	0.718 h	0.0016
Vinyl chloride	0.0033	0.0004 U	0.0004	0.0021	0.0004 U	0.002	0.004 Uh	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014 RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	304_13_5- 17_5_12052014 12/05/2014 13_5 - 17_5 (ft)	304GS_0312201 5 03/12/2015	304GS_1219201 4 12/19/2014	305 (15_5- 19_5FT)_120820 14 12/08/2014 15_5 - 19_5 (ft)	305 (52- 54FT)_12082014 12/08/2014 52 - 54 (ft)	305 GD_12222014 12/22/2014	305 GS_12222014 12/22/2014	305GD_0312201 5 03/12/2015
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001	0.001 Uh	0.001 U	0.0025	0.0022 h	0.0011 h	0.0022
1,1-Dichloroethane	0.001 U	0.001	0.001 Uh	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
1,1-Dichloroethene	0.001 U	0.001	0.001 Uh	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005	0.005 Uh	0.005 U	0.005 U	0.005 Uh	0.005 Uh	0.005
Acetone	0.02 U	0.02	0.02 Uh	0.02 U	0.02 U	0.02 Uh	0.02 Uh	0.02
Benzene	0.001 U	0.001	0.001 Uh	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
Bromodichloromethane	0.001 U	0.001	0.001 Uh	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
Chloroform (Trichloromethane)	0.001 U	0.001	0.001 Uh	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
cis-1,2-Dichloroethene	0.007	0.0183	0.0112 h	0.0107	0.001 U	0.001 Uh	0.0659 h	0.001
Tetrachloroethene	0.016	0.03	0.0205 h	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
trans-1,2-Dichloroethene	0.001 U	0.001	0.001 Uh	0.001 U	0.001 U	0.004 Uh	0.004 Uh	0.001
Trichloroethene	0.0512	0.111	0.0635 h	0.0738	0.00086	0.00051 h	0.302 h	0.0004
Vinyl chloride	0.0004 U	0.0004	0.0004 Uh	0.0004 U	0.0004 U	0.0004 Uh	0.0004 Uh	0.0004

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	305GS_0312201 5 03/12/2015	305GS_0312201 5_FD 03/12/2015	306GD_0311201 5 03/11/2015	306GD_1218201 4 12/18/2014	306GS_0311201 5 03/11/2015	306GS_1218201 4 12/18/2014	307GD_0311201 5 03/11/2015	307GD_1217201 4 12/17/2014
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.002	0.002	0.005	0.001 U	0.005	0.001 U	0.0024	0.0019
1,1-Dichloroethane	0.002	0.002	0.005	0.0032	0.005	0.002	0.001	0.001 U
1,1-Dichloroethene	0.002	0.002	0.005	0.001 U	0.005	0.001 U	0.001	0.001 U
2-Butanone (Methyl Ethyl Ketone)	0.01	0.01	0.025	0.005 U	0.025	0.005 U	0.005	0.005 U
Acetone	0.04	0.04	0.1	0.02 U	0.1	0.02 U	0.02	0.02 U
Benzene	0.002	0.002	0.005	0.001 U	0.005	0.001 U	0.001	0.001 U
Bromodichloromethane	0.002	0.002	0.005	0.001 U	0.005	0.001 U	0.001	0.001 U
Chloroform (Trichloromethane)	0.002	0.002	0.005	0.001 U	0.005	0.001 U	0.001	0.001 U
cis-1,2-Dichloroethene	0.0442	0.0459	0.149	0.213	0.188	0.166	0.001	0.001 U
Tetrachloroethene	0.002	0.002	0.005	0.0075	0.008	0.0077	0.001	0.001 U
trans-1,2-Dichloroethene	0.002	0.0022	0.0054	0.0051	0.0051	0.004 U	0.001	0.001 U
Trichloroethene	0.231	0.247	0.387	0.573 h	0.47	0.373 h	0.00051	0.00083
Vinyl chloride	0.0008	0.0008	0.002	0.0004 U	0.002	0.00097	0.0004	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014 RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	307GS_0311201 5 03/11/2015	307GS_1217201 4 12/17/2014	310GS_0309201 5 03/09/2015	310GS_1217201 4 12/17/2014	316 GD_12092014 12/09/2014	316GD_0304201 5 03/04/2015	316GS_0304201 5 03/04/2015	316GS_1209201 4 12/09/2014
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.0023	0.0015	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl Ethyl Ketone)	0.005	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Acetone	0.02	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzene	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	0.001	0.001 U	0.0022	0.0041	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	0.001	0.001 U	0.0085	0.0094	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	0.001	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	0.00065	0.0004 U	0.0074	0.0103	0.0004 U	0.0004 U	0.0004 U	0.0004 U
Vinyl chloride	0.0004	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014 RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	316GS_1209201 4_FD 12/09/2014	317GS_0303201 5 03/03/2015	317GS_1208201 4 12/08/2014	318GS_0303201 5 03/03/2015	318GS_1208201 4 12/08/2014	9_09202010 09/20/2010	DP004-15- 20_12122012 12/12/2012 15 - 20 (ft)	DP006-13- 18_12132012 12/13/2012 13 - 18 (ft)
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	-
1,1-Dichloroethane	0.001 U	0.001 U M1	0.001 U	0.001 U	0.001 U	0.0011	-	-
1,1-Dichloroethene	0.001 U	0.001 U M1	0.001 U	0.001 U	0.001 U	-	-	-
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	-	-	-
Acetone	0.02 U	0.02 U M1	0.02 U	0.02 U	0.02 U	-	-	-
Benzene	0.001 U	0.001 U M1	0.001 U	0.001 U	0.001 U	0.0048	-	-
Bromodichloromethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	-	-
Chloroform (Trichloromethane)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	-	-
cis-1,2-Dichloroethene	0.001 U	0.001 U M1	0.001 U	0.001 U	0.001 U	0.0016	-	-
Tetrachloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	-
trans-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	-
Trichloroethene	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0033	0.001 U	0.001 U
Vinyl chloride	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.001 U	-	-

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP009-15- 20_12122012 12/12/2012 15 - 20 (ft)	DP010-15- 20_12132012 12/13/2012 15 - 20 (ft)	DP012_20- 25_12172012 12/17/2012 20 - 25 (ft)	DP-016_14- 19_09132013 09/13/2013 14 - 19 (ft)	DP-026_12_6- 17_6_09162013 09/16/2013 12_6 - 17_6 (ft)	DP-027_14- 19_09092013 09/09/2013 14 - 19 (ft)	DP-032_15- 20_09172013 09/17/2013 15 - 20 (ft)	DP-033_10- 20_09102013 09/10/2013 10 - 20 (ft)
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	-	-	-	-	-	-	-
1,1-Dichloroethene	-	-	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	-	-	-	-	-	-	-	-
Acetone	-	-	-	-	-	-	-	-
Benzene	-	-	-	-	-	-	-	-
Bromodichloromethane	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	-	-	-	-	-	-	-
Tetrachloroethene	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-
Trichloroethene	0.0059	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0016	0.001 U
Vinyl chloride	-	-	-	-	-	-	-	-

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-036_15-20_09102013 09/10/2013 15 - 20 (ft)	DP-036_15-20_09102013_F D 09/10/2013 15 - 20 (ft)	DP-040_15-20_09112013 09/11/2013 15 - 20 (ft)	DP-043_15-20_04032014 04/03/2014 15 - 20 (ft)	DP-044_10_2-20_2_04032014 04/03/2014 10_2 - 20_2 (ft)	DP-045_14_5-24_5_04042014 04/04/2014 14_5 - 24_5 (ft)	DP-046_15-20_04022014 04/02/2014 15 - 20 (ft)	DP-047_15-20_03312014 03/31/2014 15 - 20 (ft)
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	-	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	-	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	-	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl Ethyl Ketone)	-	-	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Acetone	-	-	-	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzene	-	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	-	-	-	0.0025	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	-	-	-	0.012	0.0036	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	-	-	-	0.001 U	0.0272	0.001 U	0.001 U	0.0261
Tetrachloroethene	-	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	-	-	-	0.001 U	0.0011	0.001 U	0.001 U	0.0017
Trichloroethene	0.001 U	0.001 U	0.014	0.0004 U	0.0338	0.0119	0.0004 U	0.406
Vinyl chloride	-	-	-	0.0004 U	0.0004 U	0.001 U	0.0004 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-048_15-20_03312014 03/31/2014 15 - 20 (ft)	DP-049_15-20_04012014 04/01/2014 15 - 20 (ft)	DP-050_14_0-24_0_04012014 04/01/2014 14 - 24 (ft)	DP-051_15-20_04022014 04/02/2014 15 - 20 (ft)	DP-072_14_3-18_3_10242014 10/24/2014 14_3 - 18_3 (ft)	DP-072_36-38_10272014 10/27/2014 36 - 38 (ft)	DP-073_13-17_10272014 10/27/2014 13 - 17 (ft)	DP-073_25-27_10282014 10/28/2014 25 - 27 (ft)
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U
1,1-Dichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004	0.001 U	0.005 U
1,1-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0013	0.001 U	0.005 U
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.025 U
Acetone	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.1 U
Benzene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U
Bromodichloromethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U
Chloroform (Trichloromethane)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.005 U
cis-1,2-Dichloroethene	0.001 U	0.0099	0.0086	0.0251	0.0469	0.256	0.001 U	0.156
Tetrachloroethene	0.001 U	0.0014	0.0022	0.0025	0.0021	0.0108	0.001 U	0.0112
trans-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.0024	0.0011	0.0086	0.001 U	0.005 U
Trichloroethene	0.0016	0.0835	0.0404	0.0896	0.181	0.937	0.0045	0.559
Vinyl chloride	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.002 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-073_38_3-40_3_10282014 10/28/2014 38_3 - 40_3 (ft)	DP-074_13_5-17_5_10282014 10/28/2014 13_5 - 17_5 (ft)	DP-074_44_5-46_5_10282014 10/28/2014 44_5 - 46_5 (ft)	DP-075_14-18_10282014 10/28/2014 14 - 18 (ft)	DP-075_35-37_10292014 10/29/2014 35 - 37 (ft)	DP-075_44-46_10292014 10/29/2014 44 - 46 (ft)	DP-075_44-46_10292014_F D 10/29/2014 44 - 46 (ft)	DP-076_13_8-17_8_10292014 10/29/2014 13_8 - 17_8 (ft)
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	0.0041	0.001 U	0.0023	0.001 U	0.0017	0.0018	0.002	0.001 U
1,1-Dichloroethene	0.0017	0.001 U	0.0024	0.001 U	0.0015	0.0021	0.0023	0.001 U
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Acetone	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	0.001 U	0.0037	0.001 U	0.0028	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	0.349	0.0013	0.509	0.001 U	0.269	0.401	0.392	0.001 U
Tetrachloroethene	0.0251	0.001 U	0.0368	0.001 U	0.0329	0.038	0.042	0.001 U
trans-1,2-Dichloroethene	0.0108	0.001 U	0.0127	0.001 U	0.0082	0.0111	0.0119	0.001 U
Trichloroethene	1.03	0.0061	1.21	0.0028	0.728	0.945	0.925	0.0004 U
Vinyl chloride	0.007	0.0004 U	0.004	0.0004 U	0.002	0.0029	0.0031	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014 RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-076_42-44_10292014 10/29/2014 42 - 44 (ft)	DP-077_13-17_11052014 11/05/2014 13 - 17 (ft)	DP-077_34-36_11052014 11/05/2014 34 - 36 (ft)	DP-077_34-36_11052014_F D 11/05/2014 34 - 36 (ft)	Q_03032015 03/03/2015	Q_09212010 09/21/2010	Q_12102014 12/10/2014	Q_12172012 12/17/2012
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.0018	-	0.0018	0.0019
1,1-Dichloroethane	0.0016	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U
1,1-Dichloroethene	0.0019	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	-
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	-	0.005 U	-
Acetone	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	-	0.02 U	-
Benzene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U
Bromodichloromethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	-
Chloroform (Trichloromethane)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	-
cis-1,2-Dichloroethene	0.257	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U
Tetrachloroethene	0.0285	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U
trans-1,2-Dichloroethene	0.0081	0.001 U	0.001 U	0.001 U	0.001 U	-	0.001 U	0.001 U
Trichloroethene	0.761	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0012	0.00078	0.001 U
Vinyl chloride	0.0025	0.0004 U	0.0004 U	0.0004 U	0.0004 U	-	0.0004 U	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	QQ_09212010 09/21/2010	QQ_09212010_F D 09/21/2010	QQ_12192012 12/19/2012	SMW19_030520 15 03/05/2015	SMW19_030520 15_FD 03/05/2015	SMW19_120820 14 12/08/2014	SMW6_0306201 5 03/06/2015	SMW- 6_12122014 12/12/2014
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001
1,1-Dichloroethane	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	-	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl Ethyl Ketone)	-	-	-	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Acetone	-	-	-	0.02 U	0.02 U L3	0.02 U	0.02 U	0.02 U
Benzene	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	-	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	-	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	-	-	0.0017	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	-	-	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	0.0018	0.0017	0.0021	0.0004 U	0.0004 U	0.0004 U	0.0028	0.0024
Vinyl chloride	-	-	0.001 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	SS_09212010 09/21/2010	T_03052015 03/05/2015	T_09212010 09/21/2010	T_12162014 12/16/2014	T_12172012 12/17/2012	T-16- 18_11142011 11/14/2011 16 - 18 (ft)	TT_03032011 03/03/2011	TT_06162011 06/16/2011
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001 U	-	0.001 U	0.001 U	-	-	0.0019
1,1-Dichloroethane	0.003	0.001 U	-	0.001 U	0.001 U	-	-	0.001 U
1,1-Dichloroethene	-	0.001 U	-	0.001 U	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	-	0.005 U	-	0.005 U	-	-	-	-
Acetone	-	0.02 U L3	-	0.02 U	-	-	-	-
Benzene	0.001 U	0.001 U	-	0.001 U	0.001 U	-	-	0.001 U
Bromodichloromethane	-	0.001 U	-	0.001 U	-	-	-	-
Chloroform (Trichloromethane)	-	0.001 U	-	0.001 U	-	-	-	-
cis-1,2-Dichloroethene	0.0022	0.001 U	-	0.001 U	0.0011	-	-	0.001 U
Tetrachloroethene	0.001 U	0.001 U	-	0.001 U	0.001 U	-	-	0.001 U
trans-1,2-Dichloroethene	0.001 U	0.001 U	-	0.001 U	0.001 U	-	-	0.001 U
Trichloroethene	0.001 U	0.0004 U	0.001 U	0.0004 U	0.001 U	0.001 U	0.001 U	0.001 U
Vinyl chloride	0.001 U	0.0004 U	-	0.0004 U	0.001 U	-	-	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014 RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	TT_09212010 09/21/2010	TT_12172010 12/17/2010	TT_12172010_F D 12/17/2010	TT_12192012 12/19/2012	UU_09212010 09/21/2010	V_03032011 03/03/2011	V_03032011_FD 03/03/2011	V_03032015 03/03/2015
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	-	0.0022	0.0019	0.0019	0.001	-	-	0.001 U
1,1-Dichloroethane	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U
1,1-Dichloroethene	-	-	-	-	-	-	-	0.001 U
2-Butanone (Methyl Ethyl Ketone)	-	-	-	-	-	-	-	0.005 U
Acetone	-	-	-	-	-	-	-	0.02 U
Benzene	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U
Bromodichloromethane	-	-	-	-	-	-	-	0.001 U
Chloroform (Trichloromethane)	-	-	-	-	-	-	-	0.001 U
cis-1,2-Dichloroethene	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.0019
Tetrachloroethene	-	0.001 U	0.001 U	0.001 U	0.0015	-	-	0.001 U
trans-1,2-Dichloroethene	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.001 U
Trichloroethene	0.0014	0.0012	0.001 U	0.001 U	0.047	0.058	0.057	0.0292
Vinyl chloride	-	0.001 U	0.001 U	0.001 U	0.001 U	-	-	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	V_06162011 06/16/2011	V_09212010 09/21/2010	V_12092014 12/09/2014	V_12172010 12/17/2010	V_12172012 12/17/2012	V-19_5- 20_5_11142011 11/14/2011 19_5 - 20_5 (ft)	V-20_5- 21_5_11142011 11/14/2011 20_5 - 21_5 (ft)	V-22- 24_11142011 11/14/2011 22 - 24 (ft)
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	-	0.001 U	0.001 U	0.001 U	-	-	-
1,1-Dichloroethane	0.001 U	-	0.001 U	0.001 U	0.001 U	-	-	-
1,1-Dichloroethene	-	-	0.001 U	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	-	-	0.005 U	-	-	-	-	-
Acetone	-	-	0.02 U	-	-	-	-	-
Benzene	0.001 U	-	0.001 U	0.001 U	0.001 U	-	-	-
Bromodichloromethane	-	-	0.001 U	-	-	-	-	-
Chloroform (Trichloromethane)	-	-	0.001 U	-	-	-	-	-
cis-1,2-Dichloroethene	0.0052	-	0.001 U	0.0066	0.0021	-	-	-
Tetrachloroethene	0.001 U	-	0.001 U	0.001 U	0.001 U	-	-	-
trans-1,2-Dichloroethene	0.001 U	-	0.001 U	0.001 U	0.001 U	-	-	-
Trichloroethene	0.058	0.056	0.0213	0.055	0.031	0.001 U	0.0017	0.03
Vinyl chloride	0.001 U	-	0.0004 U	0.001 U	0.001 U	-	-	-

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014
RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	V-25- 27_11142011 11/14/2011 25 - 27 (ft)	W_03032011 03/03/2011	W_03032015 03/03/2015	W_06162011 06/16/2011	W_09212010 09/21/2010	W_12092014 12/09/2014	W_12092014_F D 12/09/2014	W_12172010 12/17/2010
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	-	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	-	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	-	-	0.001 U	-	-	0.001 U	0.001 U	-
2-Butanone (Methyl Ethyl Ketone)	-	-	0.005 U	-	-	0.005 U	0.005 U	-
Acetone	-	-	0.02 U	-	-	0.02 U	0.02 U	-
Benzene	-	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U
Bromodichloromethane	-	-	0.001 U	-	-	0.001 U	0.001 U	-
Chloroform (Trichloromethane)	-	-	0.001 U	-	-	0.001 U	0.001 U	-
cis-1,2-Dichloroethene	-	-	0.0804	0.051	-	0.0471	0.0483	0.03
Tetrachloroethene	-	-	0.001 U	0.001 U	-	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	-	-	0.0038	0.0028	-	0.0027	0.0025	0.0021
Trichloroethene	0.038	0.0034	0.0084	0.0052	0.0034	0.0067	0.0067	0.0042
Vinyl chloride	-	-	0.00058	0.001 U	-	0.0004 U	0.0004 U	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014 RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	W_12172012 12/17/2012	W_12172012_F D 12/17/2012	W-12- 13_11142011 11/14/2011 12 - 13 (ft)	W-13- 14_11142011 11/14/2011 13 - 14 (ft)	W-16_5- 18_5_11142011 11/14/2011 16_5 - 18_5 (ft)	X_03032011 03/03/2011	X_03042015 03/04/2015	X_06162011 06/16/2011
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001 U	-	-	-	-	0.001 U	0.001 U
1,1-Dichloroethane	0.001 U	0.001 U	-	-	-	-	0.001 U	0.001 U
1,1-Dichloroethene	-	-	-	-	-	-	0.001 U	-
2-Butanone (Methyl Ethyl Ketone)	-	-	-	-	-	-	0.005 U	-
Acetone	-	-	-	-	-	-	0.02 U	-
Benzene	0.001 U	0.001 U	-	-	-	-	0.001 U	0.001 U
Bromodichloromethane	-	-	-	-	-	-	0.001 U	-
Chloroform (Trichloromethane)	-	-	-	-	-	-	0.001 U	-
cis-1,2-Dichloroethene	0.054	0.053	-	-	-	-	0.001 U	0.001 U
Tetrachloroethene	0.001 U	0.001 U	-	-	-	-	0.001 U	0.001 U
trans-1,2-Dichloroethene	0.0027	0.0029	-	-	-	-	0.001 U	0.001 U
Trichloroethene	0.0068	0.0066	0.0024	0.0033	0.0066	0.001 U	0.0007	0.001 U
Vinyl chloride	0.001 U	0.001 U	-	-	-	-	0.0004 U	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014 RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Appendix A - Table 2
Summary of Groundwater Data used in HHRA
Area Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	X_09212010 09/21/2010	X_12092014 12/09/2014	X_12172010 12/17/2010	X_12172012 12/17/2012
Volatile Organics (mg/L)				
1,1,1-Trichloroethane	-	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	-	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	-	0.001 U	-	-
2-Butanone (Methyl Ethyl Ketone)	-	0.005 U	-	-
Acetone	-	0.02 U	-	-
Benzene	-	0.001 U	0.001 U	0.001 U
Bromodichloromethane	-	0.001 U	-	-
Chloroform (Trichloromethane)	-	0.001 U	-	-
cis-1,2-Dichloroethene	-	0.001 U	0.001 U	0.001 U
Tetrachloroethene	-	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	-	0.001 U	0.001 U	0.001 U
Trichloroethene	0.001 U	0.00061	0.001 U	0.001 U
Vinyl chloride	-	0.0004 U	0.001 U	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
MCL: USEPA Maximum Contaminant Levels. MCL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.
VISL: USEPA Vapor Intrusion Screening Level. VISL values were obtained from the OSWER Vapor Intrusion Screening Level (VISL) Calculator, Version 3.3.1, May 2014 RSLs. (Appendix C)
U: not detected, value is the reporting limit
"-": Not applicable or not sampled
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

Location Name Sample Name	Residential Sub-slab VISL HQ = 1 (µg/m³)	Industrial Sub- slab VISL HQ = 1 (µg/m³)	1002 1002_11272013	1141 1141_A_02172014	1141 1141_B_02172014	1141 1141_C_02172014	1191 1191_01212014	1191 1191_06122014	1196 1196_A_03252014	1196 1196_B_03252014	1196 1196_A_04072014	1196 1196_B_04072014	1245 1245_05022014	1295 1295_02182014	1391 1391_01082014
Sample Date	January 2015	January 2015	11/27/2013	02/17/2014	02/17/2014	02/17/2014	01/21/2014	06/12/2014	03/25/2014	03/25/2014	04/07/2014	04/07/2014	05/02/2014	02/18/2014	01/08/2014
Lab Sample ID			10250860001	10257891001	10257891003	10257891005	10255492001	10270545001	10261307001	10261307003	10262557001	10262557003	10265652001	10258024001	10254227001
Volatile Organic Compounds (µg/m³)															
1,1,1-Trichloroethane	52000	220000	5.8	-	-	-	-	3.3 U	-	-	-	-	2 U	44.5	13.2
1,1-Dichloroethane	180	77	1.5 U	-	-	-	-	2.4 U	-	-	-	-	1.5 U	3.5 U	1.4 U
1,1-Dichloroethene	2100	8800	1.5 U	-	-	-	-	2.4 U	-	-	-	-	1.5 U	3.5 U	1.4 U
1,2,4-Trichlorobenzene	21	88	2.8 U	-	-	-	-	4.4 U	-	-	-	-	6.8 U	6.5 U	2.6 U
1,2,4-Trimethylbenzene	73	310	2.3	-	-	-	-	2.9 U	-	-	-	-	1.8 U	4.3 U	1.7 U
1,2-Dichlorobenzene	2100	8800	2.3 U	-	-	-	-	3.6 U	-	-	-	-	2.2 U	5.3 U	2.1 U
1,2-Dichloroethane	1.1	4.7	0.77 U	-	-	-	-	1.2 U	-	-	-	-	0.74 U	1.8 U	0.71 U
1,3,5-Trimethylbenzene	NA	NA	1.9 U	-	-	-	-	2.9 U	-	-	-	-	4.5 U	4.3 U	1.7 U
1,3-Butadiene	0.94	4.1	0.84 U	-	-	-	-	1.3 U	-	-	-	-	0.81 U	1.9 U	0.78 U
1,3-Dichlorobenzene	NA	NA	2.3 U	-	-	-	-	3.6 U	-	-	-	-	2.2 U	5.3 U	2.1 U
1,4-Dichlorobenzene	2.6	11	2.3 U	-	-	-	-	3.6 U	-	-	-	-	2.2 U	5.3 U	2.1 U
2-Butanone (Methyl Ethyl Ketone)	52000	220000	2	-	-	-	-	2.8	-	-	-	-	8.9	6.9	6.2
2-Hexanone	310	1300	1.6 U	-	-	-	-	4.6	-	-	-	-	1.8	3.6 U	1.4 U
4-Ethyl toluene	NA	NA	1.9 U	-	-	-	-	2.9 U	-	-	-	-	4.5 U	4.3 U	1.7 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	31000	130000	1.6 U	-	-	-	-	6.1 U	-	-	-	-	1.5 U	3.6 U	1.4 U
Acetone	320000	1400000	30	-	-	-	-	26.5	-	-	-	-	34.9	63.7	19.7
Benzene	36	16	0.61 U	-	-	-	-	0.96 U	-	-	-	-	0.58 U	95.7	0.94
Bromodichloromethane	0.76	3.3	2.5 U	-	-	-	-	4 U	-	-	-	-	2.4 U	5.9 U	2.4 U
Bromomethane (Methyl Bromide)	52	220	1.5 U	-	-	-	-	2.3 U	-	-	-	-	1.4 U	3.4 U	1.4 U
Carbon disulfide	7300	31000	1.2 U	-	-	-	-	1.9 U	-	-	-	-	1.1 U	5.4	1.1 U
Carbon tetrachloride	4.7	20	1.2 U	-	-	-	-	3.8 U	-	-	-	-	1.2 U	2.8 U	1.1 U
Chlorobenzene	520	2200	1.8 U	-	-	-	-	2.8 U	-	-	-	-	1.7 U	4.1 U	1.6 U
Chloroform (Trichloromethane)	1.2	5.3	1.9 U	-	-	-	-	2.9 U	-	-	-	-	20.9	4.3 U	1.7 U
Chloromethane (Methyl Chloride)	940	3900	0.79 U	-	-	-	-	1.2 U	-	-	-	-	0.76 U	1.8 U	0.73 U
cis-1,2-Dichloroethene	NA	NA	1.5 U	-	-	-	-	10.9	-	-	-	-	1.5 U	3.5 U	1.4 U
Cyclohexane	63000	260000	2.2	-	-	-	-	2.1 U	-	-	-	-	1.3 U	3 U	1.2 U
Dichlorodifluoromethane (CFC-12)	1000	4400	2.4	-	-	-	-	3 U	-	-	-	-	4	4.5	1.8 U
Ethanol	NA	NA	17.9	-	-	-	-	14	-	-	-	-	16.5	38	32
Ethyl acetate	730	3100	3.4	-	-	-	-	2.1 U	-	-	-	-	1.3 U	3.2 U	1.3 U
Ethylbenzene	11	49	1.6 U	-	-	-	-	2.6 U	-	-	-	-	1.6 U	11.5	1.5 U
Hexachlorobutadiene	1.3	5.6	4.1 U	-	-	-	-	6.5 U	-	-	-	-	4 U	9.5 U	3.8 U
Hexane	7300	31000	20.3	-	-	-	-	2.1 U	-	-	-	-	1.3 U	25.6	2.4
Isopropyl Alcohol	73000	310000	4.8	-	-	-	-	3.7 U	-	-	-	-	6.3	2.2 U	0.87 U
m,p-Xylenes	NA	NA	3.7	-	-	-	-	5.2 U	-	-	-	-	3.2 U	64.3	3.8
Methylene chloride	1000	12000	34.6	-	-	-	-	10.4 U	-	-	-	-	6.4 U	100	32.3
Naphthalene	0.83	3.6	4	-	-	-	-	11.3	-	-	-	-	7.8	4.6 U	15.7
N-Heptane	NA	NA	1.6 U	-	-	-	-	2.4 U	-	-	-	-	1.5 U	12.5	1.4 U
o-Xylene	1000	4400	1.6 U	-	-	-	-	6.5 U	-	-	-	-	1.6 U	9.5	1.5 U
Propylene (Propene)	31000	130000	0.65 U	-	-	-	-	1 U	-	-	-	-	0.63 U	1.5 U	0.61 U
Styrene	10000	44000	1.6 U	-	-	-	-	2.6 U	-	-	-	-	3.9 U	3.8 U	1.5 U
Tetrachloroethene	110	470	2	-	-	-	-	4.9	-	-	-	-	1.2 U	9.3	2.3
Tetrahydrofuran	21000	88000	1.2	-	-	-	-	1.8 U	-	-	-	-	1.1 U	2.6 U	1 U
Toluene	52000	220000	16.6	-	-	-	-	2.3 U	-	-	-	-	1.4 U	277	3.4
trans-1,2-Dichloroethene	NA	NA	1.5 U	-	-	-	-	2.4 U	-	-	-	-	1.5 U	3.5 U	1.4 U
Trichloroethene	20	84	1.5	1 U	1.7 U	0.96 U	62.1	53.9	7.3	17.8	7	13.2	0.99 U	0.99 U	2.5
Trichlorofluoromethane (CFC-11)	7300	31000	2.1 U	-	-	-	-	3.4 U	-	-	-	-	4.5	4.9 U	2 U
Trifluorotrichloroethane (Freon 113)	310000	1300000	3 U	-	-	-	-	4.7 U	-	-	-	-	2.9 U	6.9 U	2.8 U
Vinyl acetate	2100	8800	1.3 U	-	-	-	-	2.1 U	-	-	-	-	2.6	3.1 U	1.2 U
Vinyl chloride	1.7	28	0.49 U	-	-	-	-	0.76 U	-	-	-	-	0.47 U	1.1 U	0.45 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	1391	1420	1420	1420	1420	1499	1499	1524	1524	1524	1524	1617	1617	1617
Sample Name	1391_01292014	1420_A_05192014	1420_B_05192014	1420_A_07092014	1420-A-P_12192014	1499_A_12052013	1499_B_12052013	1524_A_06032014	1524_B_06032014	1524_A_12162014	1524_B_12162014	1617_A_12022013	1617_B_12022013	1617_C_12022013
Sample Date	01/29/2014	05/19/2014	05/19/2014	07/09/2014	12/19/2014	12/05/2013	12/05/2013	06/03/2014	06/03/2014	12/16/2014	12/16/2014	12/02/2013	12/02/2013	12/02/2013
Lab Sample ID	10256255001	10267640001	10267640003	10273350001	10292332001	10251388001	10251388003	10269289001	10269289003	10291759001	10291759003	10250974001	10250974003	10250974005
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	13.5	2.1 U	2 U	2 U	2 U	-	-	2 U	6.4	1.9 U	5.1	-	-	-
1,1-Dichloroethane	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	1.5 U	1.5 U	1.4 U	1.5 U	-	-	-
1,1-Dichloroethene	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	1.5 U	1.5 U	1.4 U	1.5 U	-	-	-
1,2,4-Trichlorobenzene	2.6 U	2.8 U	2.7 U	2.7 U	2.7 U	-	-	2.7 U	2.7 U	2.6 U	2.7 U	-	-	-
1,2,4-Trimethylbenzene	2.6	4.7	1.8 U	1.8 U	1.8 U	-	-	1.8 U	3.2	1.7 U	1.8 U	-	-	-
1,2-Dichlorobenzene	2.1 U	2.3 U	2.2 U	2.2 U	2.2 U	-	-	2.2 U	2.2 U	2.1 U	2.2 U	-	-	-
1,2-Dichloroethane	0.71 U	0.77 U	0.74 U	0.74 U	0.74 U	-	-	0.74 U	0.74 U	0.71 U	0.74 U	-	-	-
1,3,5-Trimethylbenzene	1.7 U	1.9 U	1.8 U	1.8 U	1.8 U	-	-	1.8 U	1.8 U	1.7 U	1.8 U	-	-	-
1,3-Butadiene	0.78 U	0.84 U	0.81 U	0.81 U	0.81 U	-	-	0.81 U	0.81 U	0.78 U	0.81 U	-	-	-
1,3-Dichlorobenzene	2.1 U	2.3 U	2.2 U	2.2 U	2.2 U	-	-	2.2 U	2.2 U	2.1 U	2.2 U	-	-	-
1,4-Dichlorobenzene	2.1 U	2.3 U	2.2 U	2.2 U	2.2 U	-	-	2.2 U	2.2 U	2.1 U	2.2 U	-	-	-
2-Butanone (Methyl Ethyl Ketone)	1 U	27.9	7.1	22	3.3 U	-	-	24.9	11.6	1 U	2.3	-	-	-
2-Hexanone	1.4 U	2.8	2.7 U	1.5 U	1.5 U	-	-	3.3	3.3	1.4 U	1.5 U	-	-	-
4-Ethyl toluene	1.7 U	1.9 U	1.8 U	1.8 U	1.8 U	-	-	1.8 U	1.8 U	1.7 U	1.8 U	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1.4 U	2.4	1.5 U	5.2	1.5 U	-	-	1.7	2.5	1.4 U	1.5 U	-	-	-
Acetone	2.9	303	489	106	5.7	-	-	104	104	4.2 U	4.4	-	-	-
Benzene	0.57 U	1.2	1.5	0.58 U	0.58 U	-	-	0.58 U	0.58 U	0.57 U	0.58 U	-	-	-
Bromodichloromethane	2.4 U	2.5 U	2.4 U	2.4 U	2.4 U	-	-	2.4 U	2.4 U	2.4 U	2.4 U	-	-	-
Bromomethane (Methyl Bromide)	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	-	-	1.4 U	1.4 U	1.4 U	1.4 U	-	-	-
Carbon disulfide	1.1 U	1.7	139	1.1 U	1.3	-	-	1.1 U	1.1 U	1.2	1.1 U	-	-	-
Carbon tetrachloride	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	-	-	1.2 U	1.2 U	1.1 U	1.2 U	-	-	-
Chlorobenzene	1.6 U	1.8 U	1.7 U	1.7 U	1.7 U	-	-	1.7 U	1.7 U	4.3	4.1	-	-	-
Chloroform (Trichloromethane)	1.7 U	1.9 U	1.8 U	0.89 U	0.93	-	-	1.8 U	1.8 U	0.86 U	3.8	-	-	-
Chloromethane (Methyl Chloride)	0.73 U	0.79 U	1.5	0.76 U	0.76 U	-	-	0.76 U	0.76 U	0.73 U	0.76 U	-	-	-
cis-1,2-Dichloroethene	1.4 U	2.4	1.5 U	1.5 U	1.5 U	-	-	1.5 U	1.5 U	3.1 U	2.9 U	-	-	-
Cyclohexane	1.2 U	2.2	1.6	1.3 U	1.3 U	-	-	1.3 U	1.8	1.2 U	1.3 U	-	-	-
Dichlorodifluoromethane (CFC-12)	2	3.8	4.4	1.8 U	1.8 U	-	-	3	3.3	2.7	2.4	-	-	-
Ethanol	10.7	461	224	13.6	5.9	-	-	12.4	235	8.5	6.8	-	-	-
Ethyl acetate	1.3 U	1.4 U	1.3 U	5.7	1.3 U	-	-	1.3 U	1.3 U	1.3 U	1.3 U	-	-	-
Ethylbenzene	1.5 U	1.6 U	1.6	1.6 U	1.6 U	-	-	1.6 U	2	1.5 U	1.6 U	-	-	-
Hexachlorobutadiene	3.8 U	4.1 U	4 U	4 U	4 U	-	-	4 U	4 U	3.8 U	4 U	-	-	-
Hexane	1.3 U	2.7	33.9	1.3 U	1.3 U	-	-	2.5	1.3 U	2.3	2.3	-	-	-
Isopropyl Alcohol	0.87 U	24.7	7.4	2.2 U	2.2 U	-	-	13	15.3	2.2 U	2.2 U	-	-	-
m,p-Xylenes	3.1 U	6.3	3.2 U	3.2 U	3.2 U	-	-	5.1	9.1	3.1 U	3.2 U	-	-	-
Methylene chloride	8.5	6.6 U	63.5 U	19.9	6.4 U	-	-	9.8	6.4 U	7	6.9	-	-	-
Naphthalene	18.2	23.8	4.8 U	9.4	6.1	-	-	24.9	30.6	11.9	12.3	-	-	-
N-Heptane	1.4 U	1.7	1.5 U	1.5 U	1.5 U	-	-	1.5 U	1.5 U	2.7	2.8	-	-	-
o-Xylene	1.5 U	2.5	1.6 U	1.6 U	1.6 U	-	-	1.6 U	2.7	1.5 U	1.6 U	-	-	-
Propylene (Propene)	0.61 U	0.65 U	0.63 U	0.63 U	0.63 U	-	-	0.63 U	0.63 U	0.61 U	1.7	-	-	-
Styrene	1.5 U	4 U	3.9 U	1.6 U	1.6 U	-	-	1.6	3	1.5 U	1.6 U	-	-	-
Tetrachloroethene	1.5	3.9	1.2 U	3.4	3.9	-	-	10.4	6.9	9.4	11.8	-	-	-
Tetrahydrofuran	1 U	1.1 U	1.1 U	1.1 U	1.1 U	-	-	1.1 U	1.6	1 U	1.1 U	-	-	-
Toluene	1.3 U	3.3	21	2.6	1.4 U	-	-	1.8	4.3	2.4	2.5	-	-	-
trans-1,2-Dichloroethene	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	1.5 U	1.5 U	1.4 U	1.5 U	-	-	-
Trichloroethene	0.96 U	363	10	463	377	0.99 U	0.99 U	0.99 U	2.7	2.7	5	1.8	1 U	1.2
Trichlorofluoromethane (CFC-11)	2 U	2.1 U	2.2	2.1 U	2.1 U	-	-	2.9	2.1 U	2 U	2.1 U	-	-	-
Trifluorotrichloroethane (Freon 113)	2.8 U	3 U	2.9 U	2.9 U	2.9 U	-	-	2.9 U	2.9 U	2.8 U	2.9 U	-	-	-
Vinyl acetate	1.2 U	1.3 U	1.3 U	1.3 U	1.4	-	-	1.3 U	1.3 U	1.2 U	1.3 U	-	-	-
Vinyl chloride	0.45 U	0.49 U	0.47 U	0.47 U	0.47 U	-	-	0.47 U	0.47 U	0.45 U	0.47 U	-	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	1617	1617	1617	1617	1617	1617	1617	1738	1874	1953	1995	2033	2143	2143	2188
Sample Name	1617_D_12022013	1617_E_12022013	1617_A_01162014	1617_B_01162014	1617_C_01162014	1617_D_01162014	1617_E_01162014	1738_03182014	1874_01292014	1953_03032014	1995_12272013	2033_03132014	2143_A_08122014	2143_A_12302014	2188_12302013
Sample Date	12/02/2013	12/02/2013	01/16/2014	01/16/2014	01/16/2014	01/16/2014	01/16/2014	03/18/2014 10260625001	01/29/2014	03/03/2014	12/27/2013	03/13/2014	08/12/2014 10277275001	12/30/2014	12/30/2013
Lab Sample ID	10250974007	10250974009	10255093001	10255093003	10255093005	10255093007	10255093009	10260627001	10256310001	10259176001	10253570001	10260221001	10277276001	10293034001	10253711001
Volatile Organic Compounds (µg/m³)															
1,1,1-Trichloroethane	-	-	-	-	-	-	-	1.9 U	-	-	-	-	2.1 U	2 U	-
1,1-Dichloroethane	-	-	-	-	-	-	-	1.4 U	-	-	-	-	1.5 U	1.5 U	-
1,1-Dichloroethene	-	-	-	-	-	-	-	1.4 U	-	-	-	-	1.5 U	1.5 U	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	2.6 U	-	-	-	-	2.8 U	2.7 U	-
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	1.7 U	-	-	-	-	5.2	1.8 U	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	2.1 U	-	-	-	-	2.3 U	2.2 U	-
1,2-Dichloroethane	-	-	-	-	-	-	-	0.71 U	-	-	-	-	0.77 U	0.74 U	-
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	1.7 U	-	-	-	-	2.9	1.8 U	-
1,3-Butadiene	-	-	-	-	-	-	-	0.78 U	-	-	-	-	0.84 U	0.81 U	-
1,3-Dichlorobenzene	-	-	-	-	-	-	-	2.1 U	-	-	-	-	2.3 U	2.2 U	-
1,4-Dichlorobenzene	-	-	-	-	-	-	-	2.1 U	-	-	-	-	2.3 U	2.2 U	-
2-Butanone (Methyl Ethyl Ketone)	-	-	-	-	-	-	-	1.3	-	-	-	-	65.7	3.3 U	-
2-Hexanone	-	-	-	-	-	-	-	2.6 U	-	-	-	-	3.5	1.5 U	-
4-Ethyl toluene	-	-	-	-	-	-	-	1.7 U	-	-	-	-	2.4	1.8 U	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	-	-	-	-	1.4 U	-	-	-	-	3.4	3.7 U	-
Acetone	-	-	-	-	-	-	-	27.2	-	-	-	-	449	7.9	-
Benzene	-	-	-	-	-	-	-	0.77	-	-	-	-	7	0.95	-
Bromodichloromethane	-	-	-	-	-	-	-	2.4 U	-	-	-	-	2.5 U	2.4 U	-
Bromomethane (Methyl Bromide)	-	-	-	-	-	-	-	1.4 U	-	-	-	-	1.5 U	1.4 U	-
Carbon disulfide	-	-	-	-	-	-	-	1.1 U	-	-	-	-	4.3	2	-
Carbon tetrachloride	-	-	-	-	-	-	-	1.1 U	-	-	-	-	1.2 U	5.8 U	-
Chlorobenzene	-	-	-	-	-	-	-	1.6 U	-	-	-	-	1.8 U	13.4	-
Chloroform (Trichloromethane)	-	-	-	-	-	-	-	1.7 U	-	-	-	-	0.93 U	0.89 U	-
Chloromethane (Methyl Chloride)	-	-	-	-	-	-	-	0.73 U	-	-	-	-	0.79 U	0.76 U	-
cis-1,2-Dichloroethene	-	-	-	-	-	-	-	1.4 U	-	-	-	-	1.5 U	3.6 U	-
Cyclohexane	-	-	-	-	-	-	-	1.2 U	-	-	-	-	3.3	1.3 U	-
Dichlorodifluoromethane (CFC-12)	-	-	-	-	-	-	-	2.4	-	-	-	-	1.9 U	1.8 U	-
Ethanol	-	-	-	-	-	-	-	6.4	-	-	-	-	439	45.8	-
Ethyl acetate	-	-	-	-	-	-	-	1.3 U	-	-	-	-	1.4 U	3.3 U	-
Ethylbenzene	-	-	-	-	-	-	-	1.5 U	-	-	-	-	3.6	1.6 U	-
Hexachlorobutadiene	-	-	-	-	-	-	-	9.4 U	-	-	-	-	4.1 U	4 U	-
Hexane	-	-	-	-	-	-	-	2	-	-	-	-	2.5	1.3 U	-
Isopropyl Alcohol	-	-	-	-	-	-	-	0.87 U	-	-	-	-	72.5	2.2 U	-
m,p-Xylenes	-	-	-	-	-	-	-	3.1 U	-	-	-	-	9.9	3.2 U	-
Methylene chloride	-	-	-	-	-	-	-	16.9	-	-	-	-	6.6 U	6.4 U	-
Naphthalene	-	-	-	-	-	-	-	2	-	-	-	-	26.9	22.1	-
N-Heptane	-	-	-	-	-	-	-	1.4 U	-	-	-	-	3.5	1.5 U	-
o-Xylene	-	-	-	-	-	-	-	1.5 U	-	-	-	-	5	1.6 U	-
Propylene (Propene)	-	-	-	-	-	-	-	0.61 U	-	-	-	-	1.6 U	1.2	-
Styrene	-	-	-	-	-	-	-	1.5 U	-	-	-	-	2.3	1.6 U	-
Tetrachloroethene	-	-	-	-	-	-	-	1.2 U	-	-	-	-	1.3 U	1.2 U	-
Tetrahydrofuran	-	-	-	-	-	-	-	1 U	-	-	-	-	1.1 U	2.7 U	-
Toluene	-	-	-	-	-	-	-	7.9	-	-	-	-	11.6	1.4 U	-
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	1.4 U	-	-	-	-	1.5 U	1.5 U	-
Trichloroethene	12.1	1.9 U	1.3	1.6 U	0.99 U	1.9 U	0.99 U	1.2	0.96 U	0.92 U	0.99 U	0.96 U	24.7	12.8	1.3
Trichlorofluoromethane (CFC-11)	-	-	-	-	-	-	-	2 U	-	-	-	-	4.3	2.6	-
Trifluorotrichloroethane (Freon 113)	-	-	-	-	-	-	-	2.8 U	-	-	-	-	3 U	2.9 U	-
Vinyl acetate	-	-	-	-	-	-	-	1.2 U	-	-	-	-	1.3 U	1.3 U	-
Vinyl chloride	-	-	-	-	-	-	-	0.45 U	-	-	-	-	0.49 U	0.47 U	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	2225	2225	2239	2277	2355	2411	2411	2411	2422	2422	2437	2479	2614	2614	2660
Sample Name	2225_11202013	2225_03282014	2239_02262014	2277_03072014	2355_12032013	2411_A_06182014	2411_B_06182014	2411_C_06182014	2422_A_01222014	2422_B_01222014	2437_12172013	2479_08152014	2614_02052014	2614_02182014	2660_A_06092014
Sample Date	11/20/2013	03/28/2014	02/26/2014	03/07/2014	12/03/2013	06/18/2014 10271157001	06/18/2014 10271157003	06/18/2014 10271168001	01/22/2014	01/22/2014	12/17/2013	08/15/2014	02/05/2014	02/18/2014	06/09/2014
Lab Sample ID	10249949001	10261633001	10258803001	10259650001	10251036001	10271162001	10271162003	10271169001	10255748001	10255748003	10252530001	10277938001	10256920001	10258083001	10270036001
Volatile Organic Compounds (µg/m³)															
1,1,1-Trichloroethane	-	-	-	-	-	2 U	2 U	2.1 U	-	-	-	2.1 U	-	-	2 U
1,1-Dichloroethane	-	-	-	-	-	1.5 U	1.5 U	1.5 U	-	-	-	1.5 U	-	-	1.5 U
1,1-Dichloroethene	-	-	-	-	-	1.5 U	1.5 U	1.5 U	-	-	-	1.5 U	-	-	1.5 U
1,2,4-Trichlorobenzene	-	-	-	-	-	2.7 U	2.7 U	2.8 U	-	-	-	2.8 U	-	-	6.8 U
1,2,4-Trimethylbenzene	-	-	-	-	-	1.8 U	1.8 U	2.1	-	-	-	3.7	-	-	7.4
1,2-Dichlorobenzene	-	-	-	-	-	2.2 U	2.2 U	2.3 U	-	-	-	2.3 U	-	-	2.2 U
1,2-Dichloroethane	-	-	-	-	-	0.74 U	0.74 U	0.77 U	-	-	-	0.77 U	-	-	1.5 U
1,3,5-Trimethylbenzene	-	-	-	-	-	1.8 U	1.8 U	1.9 U	-	-	-	1.9	-	-	2.6
1,3-Butadiene	-	-	-	-	-	0.81 U	0.81 U	0.84 U	-	-	-	0.84 U	-	-	2 U
1,3-Dichlorobenzene	-	-	-	-	-	2.2 U	2.2 U	2.3 U	-	-	-	2.3 U	-	-	2.2 U
1,4-Dichlorobenzene	-	-	-	-	-	2.2 U	2.2 U	2.3 U	-	-	-	2.3 U	-	-	2.2 U
2-Butanone (Methyl Ethyl Ketone)	-	-	-	-	-	6.9	5.7	8	-	-	-	9	-	-	7.4
2-Hexanone	-	-	-	-	-	2.7 U	2.7 U	2.8 U	-	-	-	1.6 U	-	-	2.7 U
4-Ethyl toluene	-	-	-	-	-	1.8 U	1.8 U	1.9 U	-	-	-	3.1	-	-	2.7
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	-	-	1.5 U	1.8	1.6 U	-	-	-	1.6 U	-	-	3.7 U
Acetone	-	-	-	-	-	57.9	57.5	44.6	-	-	-	43.1	-	-	37.6
Benzene	-	-	-	-	-	1.2 U	1.2 U	1.2 U	-	-	-	25	-	-	2.9 U
Bromodichloromethane	-	-	-	-	-	2.4 U	2.4 U	2.5 U	-	-	-	2.5 U	-	-	3.1
Bromomethane (Methyl Bromide)	-	-	-	-	-	1.4 U	1.4 U	1.5 U	-	-	-	1.5 U	-	-	3.6 U
Carbon disulfide	-	-	-	-	-	1.1 U	1.1 U	1.2 U	-	-	-	55.2	-	-	1.2
Carbon tetrachloride	-	-	-	-	-	1.2 U	1.2 U	1.2 U	-	-	-	1.2 U	-	-	5.8 U
Chlorobenzene	-	-	-	-	-	1.7 U	1.7 U	1.8 U	-	-	-	1.8 U	-	-	4.2 U
Chloroform (Trichloromethane)	-	-	-	-	-	2.7	1.8 U	2	-	-	-	21.9	-	-	22.6
Chloromethane (Methyl Chloride)	-	-	-	-	-	0.76 U	0.76 U	0.79 U	-	-	-	1.2	-	-	0.76 U
cis-1,2-Dichloroethene	-	-	-	-	-	1.5 U	1.5 U	1.5 U	-	-	-	1.5 U	-	-	1.5 U
Cyclohexane	-	-	-	-	-	1.3 U	1.3 U	2.8	-	-	-	12.3	-	-	3.1 U
Dichlorodifluoromethane (CFC-12)	-	-	-	-	-	118	2.2	3.5	-	-	-	1.9 U	-	-	2.3
Ethanol	-	-	-	-	-	305	149	222	-	-	-	21.1	-	-	27.7
Ethyl acetate	-	-	-	-	-	1.3 U	1.3 U	1.4 U	-	-	-	1.8	-	-	3.3 U
Ethylbenzene	-	-	-	-	-	1.6 U	1.6 U	1.6 U	-	-	-	7.5	-	-	13.4
Hexachlorobutadiene	-	-	-	-	-	4 U	4 U	4.1 U	-	-	-	4.1 U	-	-	9.8 U
Hexane	-	-	-	-	-	1.5	1.5	2.5	-	-	-	15.2	-	-	3.2 U
Isopropyl Alcohol	-	-	-	-	-	2.2 U	2.2 U	2.3 U	-	-	-	16.8	-	-	3.5
m,p-Xylenes	-	-	-	-	-	3.2 U	3.2 U	3.3 U	-	-	-	14.8	-	-	44.3
Methylene chloride	-	-	-	-	-	6.4 U	6.4 U	8.3	-	-	-	6.6 U	-	-	6.4 U
Naphthalene	-	-	-	-	-	16.5	11.4	11.7	-	-	-	24.5	-	-	17.1
N-Heptane	-	-	-	-	-	1.5 U	1.5 U	1.6 U	-	-	-	12	-	-	3.8
o-Xylene	-	-	-	-	-	1.7	1.9	1.8	-	-	-	2.2	-	-	16.5
Propylene (Propene)	-	-	-	-	-	0.63 U	0.95	2.6	-	-	-	0.65 U	-	-	1.6 U
Styrene	-	-	-	-	-	1.6 U	1.6 U	1.6 U	-	-	-	1.6 U	-	-	2.2
Tetrachloroethene	-	-	-	-	-	25	23.4	26.1	-	-	-	1.3 U	-	-	2.5 U
Tetrahydrofuran	-	-	-	-	-	24.7	1.1 U	1.1 U	-	-	-	1.1 U	-	-	2.7 U
Toluene	-	-	-	-	-	1.8	2.1	1.8	-	-	-	19.6	-	-	6.7
trans-1,2-Dichloroethene	-	-	-	-	-	1.5 U	1.5 U	1.5 U	-	-	-	8.4	-	-	1.5 U
Trichloroethene	17.2	18.5	0.99 U	0.96 U	0.99 U	0.99 U	1.2	1 U	7.6	36.5	0.99 U	1 U	4.8	6.9	2 U
Trichlorofluoromethane (CFC-11)	-	-	-	-	-	2.1 U	2.1 U	2.1 U	-	-	-	2.1 U	-	-	2.1 U
Trifluorotrichloroethane (Freon 113)	-	-	-	-	-	2.9 U	2.9 U	3 U	-	-	-	3 U	-	-	2.9 U
Vinyl acetate	-	-	-	-	-	1.3 U	1.3 U	1.3 U	-	-	-	1.3 U	-	-	6.6
Vinyl chloride	-	-	-	-	-	0.47 U	0.47 U	0.49 U	-	-	-	0.49 U	-	-	0.94 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	2660	2660	2675	2705	2756	2756	2756	2756	2756	2757	2757	2785	2857	2857
Sample Name	2660_B_06092014	2660_C_06092014	2675_05132014	2705_01272014	2756_A_11182013	2756_B_11182013	2756_C_11182013	2756_D_11182013	2756_E_11182013	2757_A_04012014	2757_B_04012014	2785_12302013	2857_A_10292014	2857_B_10292014
Sample Date	06/09/2014	06/09/2014	05/13/2014	01/27/2014	11/18/2013	11/18/2013	11/18/2013	11/18/2013	11/18/2013	04/01/2014	04/01/2014	12/30/2013	10/29/2014	10/29/2014
Lab Sample ID	10270036003	10270036005	10266945001	10256029001	10249647001	10249645003	10249645005	10249645007	10249645009	10261937001	10261937003	10253737001	10286912005	10286912001
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	2 U	2.1 U	2.1 U	-	2 U	-	-	-	-	1.9 U	2 U	-	2 U	2 U
1,1-Dichloroethane	1.5 U	1.5 U	1.5 U	-	1.5 U	-	-	-	-	1.4 U	1.5 U	-	1.5 U	1.5 U
1,1-Dichloroethene	1.5 U	1.5 U	1.5 U	-	1.5 U	-	-	-	-	1.4 U	1.5 U	-	1.5 U	1.5 U
1,2,4-Trichlorobenzene	6.8 U	7.1 U	2.8 U	-	2.7 U	-	-	-	-	2.6 U	2.7 U	-	2.7 U	2.7 U
1,2,4-Trimethylbenzene	3.7	2.2	1.9 U	-	1.8 U	-	-	-	-	2	1.8 U	-	1.8 U	5
1,2-Dichlorobenzene	2.2 U	2.3 U	2.3 U	-	2.2 U	-	-	-	-	2.1 U	2.2 U	-	2.2 U	2.2 U
1,2-Dichloroethane	1.5 U	1.5 U	0.77 U	-	0.74 U	-	-	-	-	0.71 U	0.74 U	-	0.74 U	0.74 U
1,3,5-Trimethylbenzene	2.4	1.9 U	1.9 U	-	1.8 U	-	-	-	-	1.7 U	1.8 U	-	1.8 U	1.8 U
1,3-Butadiene	2 U	2.1 U	0.84 U	-	0.81 U	-	-	-	-	0.78 U	0.81 U	-	0.81 U	0.81 U
1,3-Dichlorobenzene	2.2 U	2.3 U	2.3 U	-	2.2 U	-	-	-	-	2.1 U	2.2 U	-	2.2 U	2.2 U
1,4-Dichlorobenzene	2.2 U	2.3 U	2.3 U	-	2.2 U	-	-	-	-	2.1 U	2.2 U	-	2.2 U	2.2 U
2-Butanone (Methyl Ethyl Ketone)	8.4	5.9	6.6	-	3.9	-	-	-	-	6.9	4.7	-	7.6	4.1
2-Hexanone	3.2	2.8 U	1.6 U	-	1.5 U	-	-	-	-	1.4 U	1.5 U	-	1.5 U	1.5 U
4-Ethyl toluene	2.5	1.9 U	1.9 U	-	1.8 U	-	-	-	-	1.7 U	1.8 U	-	1.8 U	3.8
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	3.7 U	3.9 U	1.6 U	-	1.5 U	-	-	-	-	3.2	1.6	-	1.5 U	1.5 U
Acetone	32.4	33	66.4	-	82.7	-	-	-	-	43.7	43.5 U	-	41.6	46.8
Benzene	2.9 U	3 U	7.1	-	0.58 U	-	-	-	-	11.2	1.1	-	0.76	5.4
Bromodichloromethane	2.4 U	2.5 U	2.5 U	-	2.4 U	-	-	-	-	2.4 U	2.4 U	-	2.4 U	2.4 U
Bromomethane (Methyl Bromide)	3.6 U	3.7 U	1.5 U	-	1.4 U	-	-	-	-	1.4 U	1.4 U	-	1.4 U	1.4 U
Carbon disulfide	1.1 U	2.4	1.2 U	-	12.2	-	-	-	-	1.1 U	1.1 U	-	1.1 U	10.4
Carbon tetrachloride	5.8 U	6 U	1.2 U	-	1.2 U	-	-	-	-	1.1 U	1.2 U	-	2.3 U	2.3 U
Chlorobenzene	4.2 U	4.4 U	1.8 U	-	1.7 U	-	-	-	-	1.6 U	1.7	-	1.7 U	1.7 U
Chloroform (Trichloromethane)	7.1	7.1	1.9 U	-	1.8 U	-	-	-	-	1.7 U	1.8 U	-	0.89 U	3.2
Chloromethane (Methyl Chloride)	0.76 U	0.79 U	0.79 U	-	0.76 U	-	-	-	-	0.73 U	0.76 U	-	0.76 U	0.76 U
cis-1,2-Dichloroethene	1.5 U	1.5 U	1.5 U	-	1.5 U	-	-	-	-	1.4 U	1.5 U	-	1.5 U	1.5 U
Cyclohexane	3.5	3.3 U	6.4	-	1.3 U	-	-	-	-	6.9	1.3 U	-	1.3 U	1.3 U
Dichlorodifluoromethane (CFC-12)	2.4	2.5	2.7	-	54500	-	-	-	-	2.6	2.7	-	33.1	27.8
Ethanol	74.5	36.1	162	-	1260	-	-	-	-	93.6	5180	-	22.9	52.2
Ethyl acetate	3.3 U	3.4 U	1.4 U	-	1.3 U	-	-	-	-	4.2	52.7	-	1.3 U	1.3 U
Ethylbenzene	4 U	4.1 U	1.6 U	-	1.6 U	-	-	-	-	1.5 U	1.6 U	-	1.6 U	4.6
Hexachlorobutadiene	9.8 U	10.1 U	4.1 U	-	4 U	-	-	-	-	3.8 U	4 U	-	4 U	4 U
Hexane	3.2 U	3.3 U	6.6	-	3.2	-	-	-	-	5.1	1.3 U	-	1.4	3.9
Isopropyl Alcohol	3.9	2.6	18.9	-	59.6	-	-	-	-	771	0.9 U	-	4.4	2.2 U
m,p-Xylenes	14.3	3.3 U	3.3 U	-	3.8	-	-	-	-	5	3.2 U	-	3.2 U	7.4
Methylene chloride	6.4 U	6.6 U	6.6 U	-	16.4	-	-	-	-	99.2	6.4 U	-	6.4 U	11.2
Naphthalene	13.1	15.8	7	-	1.9 U	-	-	-	-	17.6	12.6	-	17.4	20.9
N-Heptane	3.8	3.9 U	4.4	-	1.5 U	-	-	-	-	2.3	1.5 U	-	1.5 U	1.5 U
o-Xylene	5.3	1.7	1.6 U	-	1.7	-	-	-	-	1.5 U	1.6 U	-	1.6 U	2.2
Propylene (Propene)	2.4	1.6 U	0.65 U	-	0.63 U	-	-	-	-	0.61 U	0.63 U	-	3.4	0.63 U
Styrene	2	2	1.6 U	-	1.6 U	-	-	-	-	1.5 U	1.6 U	-	1.6 U	1.6 U
Tetrachloroethene	2.5 U	2.6 U	1.3 U	-	3.3	-	-	-	-	1.2 U	1.2 U	-	1.2 U	5.5
Tetrahydrofuran	2.7 U	2.8 U	1.1 U	-	1.1 U	-	-	-	-	1 U	1.1 U	-	1.1 U	1.1 U
Toluene	8.5	1.7	6	-	6.7	-	-	-	-	-	2.9	-	1.9	4.7
trans-1,2-Dichloroethene	1.5 U	1.5 U	1.5 U	-	1.5 U	-	-	-	-	1.4 U	1.5 U	-	1.5 U	1.5 U
Trichloroethene	2 U	1 U	1 U	1 U	0.99 U	1.1 U	0.99 U	0.99 U	0.96 U	0.96 U	1.8	0.99 U	1.5	13.3
Trichlorofluoromethane (CFC-11)	2.1 U	2.1 U	2.1 U	-	3.5	-	-	-	-	2 U	2.1 U	-	2.1 U	2.1 U
Trifluorotrichloroethane (Freon 113)	2.9 U	3 U	3 U	-	2.9 U	-	-	-	-	2.8 U	2.9 U	-	2.9 U	2.9 U
Vinyl acetate	5.6	4.4	2.3	-	1.3 U	-	-	-	-	1.2 U	1.3 U	-	3.2 U	3.2 U
Vinyl chloride	0.94 U	0.97 U	0.49 U	-	0.47 U	-	-	-	-	0.45 U	0.47 U	-	0.47 U	0.47 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	2857	2857	2857	2921	2921	2958	3239	3239	3339	3339	3339	3339	3339	3339
Sample Name	2857_C_10292014	2857_D_10292014	2857-C-P_11212014	2921_02192014	2921_03042014	2958_11272013	3239_12172013	3239_01072014	3339_A_01212014	3339_B_01212014	3339_C_01212014	3339_A_02072014	3339_B_02072014	3339_C_02072014
Sample Date	10/29/2014 10286910003	10/29/2014	11/21/2014 10289502001	02/19/2014	03/04/2014	11/27/2013	12/17/2013	01/07/2014	01/21/2014	01/21/2014	01/21/2014	02/07/2014	02/07/2014	02/07/2014
Lab Sample ID	10286912003	10286912007	10289503001	10258206001	10259260001	10250773001	10252605001	10254128001	10255526001	10255526005	10255526003	10257202001	10257202003	10257202005
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	2 U	2 U	2 U	-	-	2.2 U	-	-	-	-	-	-	-	-
1,1-Dichloroethane	1.5 U	1.5 U	1.5 U	-	-	1.6 U	-	-	-	-	-	-	-	-
1,1-Dichloroethene	1.5 U	1.5 U	3.6 U	-	-	1.6 U	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	2.7 U	2.7 U	6.8 U	-	-	2.9 U	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	1.8 U	2.6	4.5 U	-	-	1.9 U	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	2.2 U	2.2 U	5.5 U	-	-	2.4 U	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.74 U	0.74 U	1.5 U	-	-	0.8 U	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	1.8 U	1.8 U	4.5 U	-	-	1.9 U	-	-	-	-	-	-	-	-
1,3-Butadiene	0.81 U	2 U	2 U	-	-	0.87 U	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	2.2 U	2.2 U	5.5 U	-	-	2.4 U	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	2.2 U	2.2 U	5.5 U	-	-	2.4 U	-	-	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	10.6	3	7	-	-	15.2	-	-	-	-	-	-	-	-
2-Hexanone	1.5 U	1.5 U	3.9	-	-	1.6 U	-	-	-	-	-	-	-	-
4-Ethyl toluene	1.8 U	2.3	4.5 U	-	-	1.9 U	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1.5 U	1.5 U	3.7 U	-	-	1.6 U	-	-	-	-	-	-	-	-
Acetone	50.6	40.4	20.9	-	-	24.8	-	-	-	-	-	-	-	-
Benzene	0.7	0.58 U	0.81	-	-	0.63 U	-	-	-	-	-	-	-	-
Bromodichloromethane	2.4 U	2.4 U	2.4 U	-	-	2.6 U	-	-	-	-	-	-	-	-
Bromomethane (Methyl Bromide)	1.4 U	1.4 U	1.4 U	-	-	1.5 U	-	-	-	-	-	-	-	-
Carbon disulfide	1.4	1.7	1.9	-	-	2.8	-	-	-	-	-	-	-	-
Carbon tetrachloride	2.3 U	2.3 U	1.2 U	-	-	1.2 U	-	-	-	-	-	-	-	-
Chlorobenzene	1.7 U	1.7 U	4.9	-	-	1.8 U	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	12	0.89 U	14	-	-	1.9 U	-	-	-	-	-	-	-	-
Chloromethane (Methyl Chloride)	0.76 U	0.76 U	1.9 U	-	-	0.81 U	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	1.5 U	1.5 U	3.6 U	-	-	5.4	-	-	-	-	-	-	-	-
Cyclohexane	1.3 U	1.3 U	3.1 U	-	-	1.4 U	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	145	223	101	-	-	3.2	-	-	-	-	-	-	-	-
Ethanol	9.4	19	9.1	-	-	19	-	-	-	-	-	-	-	-
Ethyl acetate	1.3 U	1.3 U	3.3 U	-	-	36.8	-	-	-	-	-	-	-	-
Ethylbenzene	1.6 U	1.6 U	4 U	-	-	1.7 U	-	-	-	-	-	-	-	-
Hexachlorobutadiene	4 U	4 U	9.8 U	-	-	4.3 U	-	-	-	-	-	-	-	-
Hexane	2.2	1.3 U	6.1	-	-	1.7	-	-	-	-	-	-	-	-
Isopropyl Alcohol	3.1	3.7	2.2 U	-	-	7.3	-	-	-	-	-	-	-	-
m,p-Xylenes	3.2 U	5	7.9 U	-	-	3.4 U	-	-	-	-	-	-	-	-
Methylene chloride	6.4 U	6.4 U	13.1	-	-	12	-	-	-	-	-	-	-	-
Naphthalene	35.2	22.3	21.4	-	-	3.8	-	-	-	-	-	-	-	-
N-Heptane	1.9	1.5 U	4	-	-	1.6 U	-	-	-	-	-	-	-	-
o-Xylene	1.6 U	1.7	4 U	-	-	1.7 U	-	-	-	-	-	-	-	-
Propylene (Propene)	0.63 U	0.63 U	0.63 U	-	-	0.68 U	-	-	-	-	-	-	-	-
Styrene	1.6 U	1.6 U	3.9 U	-	-	1.7 U	-	-	-	-	-	-	-	-
Tetrachloroethene	3.3	1.2 U	8.3	-	-	22.9	-	-	-	-	-	-	-	-
Tetrahydrofuran	1.1 U	1.1 U	1.1 U	-	-	3.1	-	-	-	-	-	-	-	-
Toluene	1.8	2.2	3.4 U	-	-	21.2	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.5 U	1.5 U	3.6 U	-	-	1.6 U	-	-	-	-	-	-	-	-
Trichloroethene	441	1.8	877	5.2	6.4	1.7	16.4	6.4	1.1 U	0.96 U	15.1	0.99 U	0.92 U	15.4
Trichlorofluoromethane (CFC-11)	2.1 U	2.1 U	2.1 U	-	-	2.2 U	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	2.9 U	2.9 U	2.9 U	-	-	3.1 U	-	-	-	-	-	-	-	-
Vinyl acetate	3.2 U	3.2 U	3.2 U	-	-	2.1	-	-	-	-	-	-	-	-
Vinyl chloride	0.47 U	0.47 U	0.94 U	-	-	0.5 U	-	-	-	-	-	-	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	3339	3339	3339	3339	3470	3486	3486	3486	3486	3553	3559	3559	3584	3775
Sample Name	3339_D_02072014	3339_E_02072014	3339_D_03132014	3339_E_03132014	3470_12032013	3486_A_11302013	3486_B_11302013	3486_A_12312013	3486_B_12312013	3553_10242014	3559_10222014	3559-P_11212014	3584_02062014	3775_01242014
Sample Date	02/07/2014	02/07/2014	03/13/2014	03/13/2014	12/03/2013	11/30/2013	11/30/2013	12/31/2013	12/31/2013	10/24/2014	10/22/2014 10286050001	11/21/2014	02/06/2014	01/24/2014
Lab Sample ID	10257202007	10257202009	10260256001	10260256003	10251038001	10250933001	10250933003	10253786001	10253786003	10286332001	10286051001	10289557001	10256992001	10255934001
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-	-	2 U	3.4 U	2 U	-	-
1,1-Dichloroethane	-	-	-	-	-	-	-	-	-	1.5 U	2.5 U	1.5 U	-	-
1,1-Dichloroethene	-	-	-	-	-	-	-	-	-	1.5 U	2.5 U	3.6 U	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-	2.7 U	4.6 U	6.8 U	-	-
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-	1.8 U	3 U	4.5 U	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-	2.2 U	3.7 U	5.5 U	-	-
1,2-Dichloroethane	-	-	-	-	-	-	-	-	-	0.74 U	1.2 U	1.5 U	-	-
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	-	1.8 U	3 U	4.5 U	-	-
1,3-Butadiene	-	-	-	-	-	-	-	-	-	0.81 U	1.4 U	2 U	-	-
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-	2.2 U	3.7 U	5.5 U	-	-
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-	2.2 U	3.7 U	5.5 U	-	-
2-Butanone (Methyl Ethyl Ketone)	-	-	-	-	-	-	-	-	-	13.5	1.8 U	9.3	-	-
2-Hexanone	-	-	-	-	-	-	-	-	-	1.8	2.5 U	4.2	-	-
4-Ethyl toluene	-	-	-	-	-	-	-	-	-	1.8 U	3 U	4.5 U	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	-	-	-	-	-	-	2.2	2.5 U	3.7 U	-	-
Acetone	-	-	-	-	-	-	-	-	-	49.5	13.3	23.1	-	-
Benzene	-	-	-	-	-	-	-	-	-	0.92	0.98 U	0.58 U	-	-
Bromodichloromethane	-	-	-	-	-	-	-	-	-	2.4 U	6.9	5.9	-	-
Bromomethane (Methyl Bromide)	-	-	-	-	-	-	-	-	-	1.4 U	2.4 U	1.4 U	-	-
Carbon disulfide	-	-	-	-	-	-	-	-	-	4	1.9 U	1.1 U	-	-
Carbon tetrachloride	-	-	-	-	-	-	-	-	-	1.2 U	1.9 U	1.2 U	-	-
Chlorobenzene	-	-	-	-	-	-	-	-	-	1.7 U	2.8 U	4.3	-	-
Chloroform (Trichloromethane)	-	-	-	-	-	-	-	-	-	0.89 U	324	250	-	-
Chloromethane (Methyl Chloride)	-	-	-	-	-	-	-	-	-	0.76 U	1.5	1.9 U	-	-
cis-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-	1.5 U	2.5 U	3.6 U	-	-
Cyclohexane	-	-	-	-	-	-	-	-	-	2.2	2.1 U	3.1 U	-	-
Dichlorodifluoromethane (CFC-12)	-	-	-	-	-	-	-	-	-	1.8 U	3.1 U	4.9	-	-
Ethanol	-	-	-	-	-	-	-	-	-	73.9	6.2	9.1	-	-
Ethyl acetate	-	-	-	-	-	-	-	-	-	1.3 U	2.2 U	3.3 U	-	-
Ethylbenzene	-	-	-	-	-	-	-	-	-	1.6 U	2.7 U	4 U	-	-
Hexachlorobutadiene	-	-	-	-	-	-	-	-	-	4 U	6.7 U	9.8 U	-	-
Hexane	-	-	-	-	-	-	-	-	-	3.7	2.2 U	3.2 U	-	-
Isopropyl Alcohol	-	-	-	-	-	-	-	-	-	2.2 U	3.8 U	2.2 U	-	-
m,p-Xylenes	-	-	-	-	-	-	-	-	-	4.6	5.3 U	7.9 U	-	-
Methylene chloride	-	-	-	-	-	-	-	-	-	6.4 U	10.7 U	6.4 U	-	-
Naphthalene	-	-	-	-	-	-	-	-	-	22.2	20.8	11.9	-	-
N-Heptane	-	-	-	-	-	-	-	-	-	1.5 U	2.5 U	4.7	-	-
o-Xylene	-	-	-	-	-	-	-	-	-	1.6 U	2.7 U	4 U	-	-
Propylene (Propene)	-	-	-	-	-	-	-	-	-	2.7	1.1 U	0.63 U	-	-
Styrene	-	-	-	-	-	-	-	-	-	1.6	2.6 U	3.9 U	-	-
Tetrachloroethene	-	-	-	-	-	-	-	-	-	1.2 U	3.1	7.1	-	-
Tetrahydrofuran	-	-	-	-	-	-	-	-	-	1.1 U	1.8 U	1.1 U	-	-
Toluene	-	-	-	-	-	-	-	-	-	10.2	8.4	3.4 U	-	-
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-	1.5 U	2.5 U	3.6 U	-	-
Trichloroethene	4.7	1.9	7.6	2.3	0.99 U	4.4	0.96 U	6.7	0.99 U	0.99 U	52.7	68.9	0.99 U	1.5
Trichlorofluoromethane (CFC-11)	-	-	-	-	-	-	-	-	-	2.1 U	3.5 U	2.1 U	-	-
Trifluorotrichloroethane (Freon 113)	-	-	-	-	-	-	-	-	-	2.9 U	-	2.9 U	-	-
Vinyl acetate	-	-	-	-	-	-	-	-	-	1.3 U	2.2 U	3.2 U	-	-
Vinyl chloride	-	-	-	-	-	-	-	-	-	0.47 U	0.79 U	0.94 U	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	3799	3808	3816	3839	3839	3895	3915	3954	3954	3954	3954	3954	3954	3954
Sample Name	3799_12142013	3808_02132014	3816_04072014	3839_A_11242013	3839_B_11242013	3895_11202013	3915_11212013	3954_A_12312013	3954_B_12312013	3954_A_01312014	3954_B_01312014	3954_C_01312014	3954_E_01312014	3954_D_02032014
Sample Date	12/14/2013	02/13/2014	04/07/2014	11/24/2013	11/24/2013	11/20/2013	11/21/2013	12/31/2013	12/31/2013	01/31/2014	01/31/2014	01/31/2014	01/31/2014	02/03/2014
Lab Sample ID	10252404001	10257635001	10262531001	10250496001	10250496003	10249978001	10250183001	10253748003	10253748001	10256517001	10256517003	10256524003	10256524001	10256656001 10256664001
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	-	-	2 U	-	-	-	-	-	-	2 U	2.1 U	4.8	9.1	19.4
1,1-Dichloroethane	-	-	1.5 U	-	-	-	-	-	-	1.5 U	2.7	3.8	1.5 U	5.7
1,1-Dichloroethene	-	-	1.5 U	-	-	-	-	-	-	1.5 U	1.5 U	1.4 U	1.5 U	2.2 U
1,2,4-Trichlorobenzene	-	-	2.7 U	-	-	-	-	-	-	2.7 U	2.8 U	2.6 U	2.7 U	4.1 U
1,2,4-Trimethylbenzene	-	-	1.8 U	-	-	-	-	-	-	2.2	2.5	2.4	2	2.7 U
1,2-Dichlorobenzene	-	-	2.2 U	-	-	-	-	-	-	2.2 U	2.3 U	2.1 U	2.2 U	3.3 U
1,2-Dichloroethane	-	-	0.74 U	-	-	-	-	-	-	0.74 U	0.77 U	0.71 U	0.74 U	1.1 U
1,3,5-Trimethylbenzene	-	-	1.8 U	-	-	-	-	-	-	1.8 U	1.9 U	1.7 U	1.8 U	2.7 U
1,3-Butadiene	-	-	0.81 U	-	-	-	-	-	-	0.81 U	0.84 U	0.78 U	0.81 U	1.2 U
1,3-Dichlorobenzene	-	-	2.2 U	-	-	-	-	-	-	2.2 U	2.3 U	2.1 U	2.2 U	3.3 U
1,4-Dichlorobenzene	-	-	2.2 U	-	-	-	-	-	-	2.2 U	2.3 U	2.1 U	2.2 U	3.3 U
2-Butanone (Methyl Ethyl Ketone)	-	-	7.5	-	-	-	-	-	-	2.2	5.3	3.4	3.3	8.5
2-Hexanone	-	-	1.7	-	-	-	-	-	-	1.5 U	1.6 U	1.4 U	1.5 U	2.3 U
4-Ethyl toluene	-	-	1.8 U	-	-	-	-	-	-	1.8 U	1.9 U	1.7 U	1.8 U	4.8
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	1.5 U	-	-	-	-	-	-	1.5 U	1.6 U	1.4 U	1.5 U	2.3 U
Acetone	-	-	48.8	-	-	-	-	-	-	5.8	12.4	36.2	23.3	162
Benzene	-	-	0.58 U	-	-	-	-	-	-	0.58 U	0.82	0.57 U	0.58 U	1
Bromodichloromethane	-	-	2.4 U	-	-	-	-	-	-	2.4 U	2.5 U	2.4 U	2.4 U	3.7 U
Bromomethane (Methyl Bromide)	-	-	1.4 U	-	-	-	-	-	-	1.4 U	1.5 U	1.4 U	1.4 U	2.2 U
Carbon disulfide	-	-	10.7	-	-	-	-	-	-	1.1 U	1.2 U	1.1 U	1.1 U	5.5
Carbon tetrachloride	-	-	1.2 U	-	-	-	-	-	-	1.2 U	1.2 U	1.1 U	1.4	3.9
Chlorobenzene	-	-	1.7 U	-	-	-	-	-	-	1.7 U	1.8 U	1.6 U	1.7 U	2.6 U
Chloroform (Trichloromethane)	-	-	59.5	-	-	-	-	-	-	1.8 U	16.1	3.6	6.2	4.9
Chloromethane (Methyl Chloride)	-	-	0.76 U	-	-	-	-	-	-	0.76 U	0.79 U	0.73 U	0.76 U	1.1 U
cis-1,2-Dichloroethene	-	-	1.5 U	-	-	-	-	-	-	1.5 U	9	23.3	1.5 U	14.9
Cyclohexane	-	-	1.3 U	-	-	-	-	-	-	1.3 U	1.3 U	1.2 U	1.3 U	1.9 U
Dichlorodifluoromethane (CFC-12)	-	-	2.1	-	-	-	-	-	-	36.7	30.1	7	9.5	24.8
Ethanol	-	-	71.2	-	-	-	-	-	-	10.3	5.7	28.5	53.3	85.4
Ethyl acetate	-	-	1.3 U	-	-	-	-	-	-	1.3 U	1.4 U	1.3 U	1.3 U	2 U
Ethylbenzene	-	-	1.6 U	-	-	-	-	-	-	1.6 U	1.6 U	2	1.6 U	2.4 U
Hexachlorobutadiene	-	-	4 U	-	-	-	-	-	-	4 U	4.1 U	3.8 U	4 U	6 U
Hexane	-	-	1.3 U	-	-	-	-	-	-	1.5	1.7	1.9	1.3 U	3.6
Isopropyl Alcohol	-	-	4	-	-	-	-	-	-	0.9 U	0.94 U	0.87 U	4.6	1.4 U
m,p-Xylenes	-	-	3.2 U	-	-	-	-	-	-	3.2 U	3.3 U	3.1 U	3.2 U	4.8 U
Methylene chloride	-	-	2.7	-	-	-	-	-	-	13.7	9.4	19.9	7.5	23.4
Naphthalene	-	-	6.3	-	-	-	-	-	-	5.5	6	6.8	6.4	17
N-Heptane	-	-	1.5 U	-	-	-	-	-	-	1.5 U	1.6 U	1.4 U	1.5 U	2.3 U
o-Xylene	-	-	1.6 U	-	-	-	-	-	-	1.6 U	1.6 U	1.5 U	1.6 U	2.4 U
Propylene (Propene)	-	-	0.63 U	-	-	-	-	-	-	0.63 U	0.65 U	2.4	0.63 U	0.96 U
Styrene	-	-	1.6 U	-	-	-	-	-	-	1.6 U	1.6 U	1.5 U	1.6 U	2.4 U
Tetrachloroethene	-	-	1.2 U	-	-	-	-	-	-	3.3	28.7	-	34.5	169
Tetrahydrofuran	-	-	1.1 U	-	-	-	-	-	-	1.1 U	1.1 U	1 U	1.1 U	1.6 U
Toluene	-	-	5.8	-	-	-	-	-	-	1.4 U	1.6	2.3	1.4 U	116
trans-1,2-Dichloroethene	-	-	1.5 U	-	-	-	-	-	-	1.5 U	2.1	6.3	1.5 U	6.7
Trichloroethene	0.96 U	1 U	0.99 U	0.92 U	1.5 U	0.99 U	1.1 U	5.7	791	9.6	639	1400	298	2940
Trichlorofluoromethane (CFC-11)	-	-	2.6	-	-	-	-	-	-	2.1 U	2.1 U	2 U	2.1 U	3.1 U
Trifluorotrichloroethane (Freon 113)	-	-	2.9 U	-	-	-	-	-	-	2.9 U	3 U	2.8 U	2.9 U	4.7
Vinyl acetate	-	-	3	-	-	-	-	-	-	1.3 U	1.3 U	1.2 U	1.3 U	2 U
Vinyl chloride	-	-	0.47 U	-	-	-	-	-	-	0.47 U	0.49 U	0.45 U	0.47 U	0.71 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954
Sample Name	3954_F_02132014	3954_G_02132014	3954_H_02142014	3954_I_02142014	3954_J_02142014	3954_K_02142014	3954_L_02142014	3954_M_02142014	3954_N_02142014	3954_O_02142014	3954_Q_02142014	3954_AA_03122014	3954_BB_03122014
Sample Date	02/13/2014	02/13/2014	02/14/2014	02/14/2014	02/14/2014	02/14/2014	02/14/2014	02/14/2014	02/14/2014	02/14/2014	02/14/2014	03/12/2014	03/12/2014
Lab Sample ID	10257682001	10257682003	10257847001	10257847003	10257847005	10257847007	10257847009	10257847009	10257847011	10257847013	10257847015	10257847017	10260224017
Volatile Organic Compounds (µg/m³)													
1,1,1-Trichloroethane	5.6	3.5	446	24.5	18	58.6	48.2	34.2	98	11.3	551	-	-
1,1-Dichloroethane	2.5 U	1.5 U	39.4	3.1	1.4 U	2.3 U	1.5 U	2.5 U	1.7	1.6 U	9.7	-	-
1,1-Dichloroethene	2.4 U	1.5 U	122	1.4 U	1.4 U	2.3 U	1.5 U	2.4 U	1.4 U	1.6 U	23.4	-	-
1,2,4-Trichlorobenzene	4.6 U	2.7 U	2.6 U	2.5 U	2.6 U	4.3 U	2.7 U	4.6 U	2.7 U	2.6 U	7.5 U	-	-
1,2,4-Trimethylbenzene	60.5	1.8 U	1.7 U	111	481	10.1	5.8	3 U	1.7 U	6.8	5 U	-	-
1,2-Dichlorobenzene	3.7 U	2.2 U	2.1 U	2 U	2.1 U	3.5 U	2.2 U	3.7 U	2.1 U	2.4 U	6.1 U	-	-
1,2-Dichloroethane	1.2 U	0.74 U	0.71 U	2.3	0.71 U	1.2 U	0.74 U	1.2 U	0.71 U	0.8 U	2 U	-	-
1,3,5-Trimethylbenzene	14.9	1.8 U	1.7 U	43	107	3.2	1.8 U	3 U	1.7 U	1.9 U	5 U	-	-
1,3-Butadiene	1.4 U	0.81 U	0.78 U	0.76 U	0.78 U	1.3 U	0.81 U	0.76 U	1.4 U	0.87 U	2.2 U	-	-
1,3-Dichlorobenzene	3.7 U	2.2 U	2.1 U	2 U	2.1 U	3.5 U	2.2 U	3.7 U	2.1 U	2.4 U	6.1 U	-	-
1,4-Dichlorobenzene	3.7 U	2.2 U	2.1 U	2 U	2.1 U	3.5 U	2.2 U	3.7 U	2.1 U	2.4 U	6.1 U	-	-
2-Butanone (Methyl Ethyl Ketone)	15.1	994	7.5	7.8	7.7	11.6	15.3	12.5	7.4	11.6	15.5	-	-
2-Hexanone	3.6	1.5 U	1.4 U	1.7	1.6	2.3 U	1.5 U	2.5 U	1.4 U	2.1	4.1 U	-	-
4-Ethyl toluene	16.6	1.8 U	1.7 U	46.2	205	5.6	2.6	3 U	1.7 U	2.2	5 U	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	7.4	1.5 U	1.4 U	1.4 U	1.4 U	2.3 U	2.9	2.5 U	1.4 U	6.2	4.1 U	-	-
Acetone	58	71.6	45.1	2220	280	142	210	76.9	43.2	58.9	44.2	-	-
Benzene	4	1.6	0.57 U	6.9	0.57 U	10.4	1.4	2.2	0.57 U	0.98	1.6 U	-	-
Bromodichloromethane	4.1 U	2.4 U	2.4 U	2.3 U	2.4 U	3.8 U	2.4 U	4.1 U	2.4 U	2.6 U	6.8 U	-	-
Bromomethane (Methyl Bromide)	2.4 U	1.4 U	1.4 U	1.3 U	1.4 U	2.2 U	1.4 U	2.4 U	1.4 U	1.5 U	3.9 U	-	-
Carbon disulfide	2.5	1.1 U	1.2	3.1	1.1 U	4.2	1.1 U	8.9	1.1 U	1.2 U	3.1 U	-	-
Carbon tetrachloride	1.9 U	1.2 U	3.8	1.1 U	1.1 U	1.8 U	4.3	36.6	1.1 U	3.4	3.4	-	-
Chlorobenzene	2.8 U	1.7 U	1.6 U	1.6 U	1.6 U	2.7 U	1.7 U	2.8 U	1.6 U	1.8 U	4.7 U	-	-
Chloroform (Trichloromethane)	12.7	1.8	6.4	6	9.4	157	5.2	10	6.9	11.8	6.5	-	-
Chloromethane (Methyl Chloride)	1.3 U	0.76 U	0.73 U	0.71 U	0.73 U	1.2 U	0.76 U	1.3 U	0.73 U	0.81 U	2.1 U	-	-
cis-1,2-Dichloroethene	2.4 U	1.5 U	4.3	4	1.4 U	2.3 U	1.5 U	2.4 U	1.4 U	1.6 U	4 U	-	-
Cyclohexane	2.6	1.3 U	1.2 U	1.2 U	1.2 U	8	1.3 U	2.1 U	1.2 U	2.8	3.5 U	-	-
Dichlorodifluoromethane (CFC-12)	11.1	1.8 U	8	2.9	3.7	3.4	3.7	4.2	6.5	2 U	16.7	-	-
Ethanol	32.3	16.6	83.8	33.4	35.7	224	232	103	139	52.6	76.5	-	-
Ethyl acetate	2.2 U	1.3 U	1.3 U	1.2 U	1.3 U	2.1 U	1.3 U	2.2 U	1.3 U	1.4 U	3.6 U	-	-
Ethylbenzene	65	1.6 U	1.5 U	1110	283	7.3	2.8	2.7	1.5 U	1.7 U	4.4 U	-	-
Hexachlorobutadiene	6.6 U	4 U	3.8 U	3.7 U	3.8 U	6.2 U	4 U	6.6 U	3.8 U	4.3 U	10.9 U	-	-
Hexane	5.1	1.3 U	6.5	6.2	4.6	16.9	6	5.2	1.3 U	2	4.9	-	-
Isopropyl Alcohol	40.9	0.9 U	4.8	1770	536	1.4 U	38.9	1.5 U	20.9	12.5	2.5 U	-	-
m,p-Xylenes	255	3.2 U	3.4	4360	1590	19.1	8.4	8.9	3.1 U	5.6	8.7 U	-	-
Methylene chloride	114	16.9	29.7	8.9	7.6	13.1	15.3	37.5	3.7	2.8	108	-	-
Naphthalene	9.7	7.9	25.3	6.1	15.9	18	23.6	13.7	23	21.9	5.3 U	-	-
N-Heptane	4	1.8	1.4 U	3.6	1.4 U	10.7	1.7	2.9	1.4 U	1.6 U	4.1 U	-	-
o-Xylene	84.3	1.6 U	1.5 U	1350	536	6.5	3	2.9	1.5 U	2.9	4.4 U	-	-
Propylene (Propene)	1.1 U	0.63 U	0.61 U	6.4	4.5	32	1.8	9.4	0.61 U	2.7	4.9	-	-
Styrene	2.6 U	1.6 U	1.5 U	1.5 U	1.5 U	2.5 U	1.6 U	2.6 U	1.5 U	1.7 U	4.3 U	-	-
Tetrachloroethene	13.6	28.7	50.6	111	92.4	89.5	102	883	68.9	211	52.6	-	-
Tetrahydrofuran	1.8 U	11.2	1 U	1 U	1 U	1.7 U	1.1 U	1.8 U	1.2	1.2 U	3 U	-	-
Toluene	66.7	38.8	4.1	40.1	17.9	26.4	13.2	14.8	1.8	6	14.9	-	-
trans-1,2-Dichloroethene	2.4 U	1.5 U	1.4 U	3.4	1.4 U	2.3 U	1.5 U	2.4 U	1.4 U	1.6 U	4 U	-	-
Trichloroethene	57.4	470	263	3320	2210	38	15.4	1.7 U	14.2	25.4	182	700	1320
Trichlorofluoromethane (CFC-11)	3.4 U	2.1 U	3.2	3	2 U	3.2 U	2.1 U	3.4 U	2 U	2.2 U	5.7 U	-	-
Trifluorotrichloroethane (Freon 113)	4.8 U	2.9 U	49.8	3.6	3	6.3	4.9	4.8 U	6.3	3.1 U	69.9	-	-
Vinyl acetate	2.2 U	1.3 U	1.2 U	1.2 U	1.2 U	2 U	1.3 U	2.2 U	1.2 U	1.4 U	4	-	-
Vinyl chloride	0.79 U	0.47 U	0.45 U	0.44 U	0.45 U	0.74 U	0.47 U	0.79 U	0.45 U	0.5 U	1.3 U	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954
Sample Name	3954_CC_03122014	3954_DD_03122014	3954_EE_03122014	3954_R_03122014	3954_S_03122014	3954_T_03122014	3954_U_03122014	3954_V_03122014	3954_W_03122014	3954_X_03122014	3954_Y_03122014	3954_Z_03122014	3954_FF_03132014
Sample Date	03/12/2014	03/12/2014	03/12/2014	03/12/2014	03/12/2014	03/12/2014	03/12/2014	03/12/2014	03/12/2014	03/12/2014	03/12/2014	03/12/2014	03/13/2014
Lab Sample ID	10260224019	10260224023	10260224025	10260224003	10260224001	10260224007	10260224005	10260224009	10260224011	10260224013	10260224027	10260224021	10260263001
Volatile Organic Compounds (µg/m³)													
1,1,1-Trichloroethane	-	-	-	13.4	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	-	-	1.3 U	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	-	-	-	1.3 U	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	2.4 U	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	-	-	-	2.6	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	1.9 U	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	-	-	-	0.64 U	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	1.6 U	-	-	-	-	-	-	-	-	-
1,3-Butadiene	-	-	-	0.71 U	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	-	-	-	1.9 U	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	-	-	-	1.9 U	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	-	-	-	28.6	-	-	-	-	-	-	-	-	-
2-Hexanone	-	-	-	1.5	-	-	-	-	-	-	-	-	-
4-Ethyl toluene	-	-	-	1.6 U	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	1.3	-	-	-	-	-	-	-	-	-
Acetone	-	-	-	110	-	-	-	-	-	-	-	-	-
Benzene	-	-	-	2.1	-	-	-	-	-	-	-	-	-
Bromodichloromethane	-	-	-	2.1 U	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl Bromide)	-	-	-	1.2 U	-	-	-	-	-	-	-	-	-
Carbon disulfide	-	-	-	2.6	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	-	-	-	1 U	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	-	-	1.5 U	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	-	-	-	1.6 U	-	-	-	-	-	-	-	-	-
Chloromethane (Methyl Chloride)	-	-	-	0.66 U	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	-	-	1.3 U	-	-	-	-	-	-	-	-	-
Cyclohexane	-	-	-	2	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	-	-	-	10.5	-	-	-	-	-	-	-	-	-
Ethanol	-	-	-	37.3	-	-	-	-	-	-	-	-	-
Ethyl acetate	-	-	-	2.1	-	-	-	-	-	-	-	-	-
Ethylbenzene	-	-	-	3.8	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	-	-	-	3.5 U	-	-	-	-	-	-	-	-	-
Hexane	-	-	-	4.7	-	-	-	-	-	-	-	-	-
Isopropyl Alcohol	-	-	-	9.8	-	-	-	-	-	-	-	-	-
m,p-Xylenes	-	-	-	13.1	-	-	-	-	-	-	-	-	-
Methylene chloride	-	-	-	4.1	-	-	-	-	-	-	-	-	-
Naphthalene	-	-	-	11.9	-	-	-	-	-	-	-	-	-
N-Heptane	-	-	-	2.9	-	-	-	-	-	-	-	-	-
o-Xylene	-	-	-	4	-	-	-	-	-	-	-	-	-
Propylene (Propene)	-	-	-	7.4	-	-	-	-	-	-	-	-	-
Styrene	-	-	-	1.4	-	-	-	-	-	-	-	-	-
Tetrachloroethene	-	-	-	48.1	-	-	-	-	-	-	-	-	-
Tetrahydrofuran	-	-	-	0.94 U	-	-	-	-	-	-	-	-	-
Toluene	-	-	-	139	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	-	-	-	1.3 U	-	-	-	-	-	-	-	-	-
Trichloroethene	78.1	3.3	1700	0.86 U	0.99 U	2.6	1.3	0.99 U	0.96 U	1	2.8	1 U	2.1
Trichlorofluoromethane (CFC-11)	-	-	-	1.8 U	-	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	-	-	-	2.5 U	-	-	-	-	-	-	-	-	-
Vinyl acetate	-	-	-	1.1 U	-	-	-	-	-	-	-	-	-
Vinyl chloride	-	-	-	0.41 U	-	-	-	-	-	-	-	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954
Sample Name	3954_GG_03132014	3954_HH_03132014	3954_II_03132014	3954_JJ_03132014	3954_KK_04032014	3954_LL_04032014	3954_MM_04032014	3954_NN_04032014	3954_OO_04032014	3954_PP_04032014	3954_QQ_04032014	3954_RR_04032014
Sample Date	03/13/2014	03/13/2014	03/13/2014	03/13/2014	04/03/2014	04/03/2014	04/03/2014	04/03/2014	04/03/2014	04/03/2014	04/03/2014	04/03/2014
Lab Sample ID	10260263003	10260263005	10260263007	10260263009	10262278003	10262319001	10262319003	10262319005	10262278005	10262278007	10262319011	10262319007
Volatile Organic Compounds (µg/m³)												
1,1,1-Trichloroethane	-	-	-	-	2 U	2 U	5	17.9	4.9	43.1	58	77.7
1,1-Dichloroethane	-	-	-	-	1.5 U	1.5 U	2.8 U	1.5 U	2.6 U	2.5 U	1.5 U	1.5 U
1,1-Dichloroethene	-	-	-	-	1.5 U	1.5 U	2.7 U	1.5 U	2.5 U	2.4 U	1.5 U	1.5 U
1,2,4-Trichlorobenzene	-	-	-	-	6.8 U	6.8 U	5.1 U	6.8 U	11.8 U	11.4 U	6.8 U	6.8 U
1,2,4-Trimethylbenzene	-	-	-	-	150	3.9	3.4 U	4.8	3.1 U	3 U	2.4	4.2
1,2-Dichlorobenzene	-	-	-	-	2.2 U	2.2 U	4.1 U	2.2 U	3.8 U	3.7 U	2.2 U	2.2 U
1,2-Dichloroethane	-	-	-	-	0.74 U	0.74 U	1.4 U	0.74 U	1.3 U	2.7	0.74 U	0.74 U
1,3,5-Trimethylbenzene	-	-	-	-	35	4.5 U	3.4 U	4.5 U	7.8 U	7.5 U	4.5 U	4.5 U
1,3-Butadiene	-	-	-	-	0.81 U	3.2	1.5 U	0.81 U	1.4 U	1.4 U	0.81 U	0.81 U
1,3-Dichlorobenzene	-	-	-	-	5.5 U	5.5 U	4.1 U	5.5 U	9.6 U	9.2 U	5.5 U	5.5 U
1,4-Dichlorobenzene	-	-	-	-	5.5 U	5.5 U	4.1 U	5.5 U	9.6 U	9.2 U	5.5 U	5.5 U
2-Butanone (Methyl Ethyl Ketone)	-	-	-	-	16.9	9.2	11000	36.8	12.3	14.8	36	16.3
2-Hexanone	-	-	-	-	2.7 U	2.7 U	2.8 U	4.9	4.7 U	4.5 U	3	3.5
4-Ethyl toluene	-	-	-	-	50.5	4.5 U	3.4 U	4.5 U	7.8 U	7.5 U	4.5 U	4.5 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	-	1.5 U	1.5 U	4.9	1.5 U	2.6 U	2.5 U	5.6	1.7
Acetone	-	-	-	-	103	68.8	929	84.3	21.8	176	1160	110
Benzene	-	-	-	-	1.3	9.9	6.3	4.9	1 U	0.98 U	2	2.5
Bromodichloromethane	-	-	-	-	2.4 U	2.4 U	4.6 U	2.4 U	4.3 U	4.1 U	2.4 U	2.4 U
Bromomethane (Methyl Bromide)	-	-	-	-	1.4 U	1.4 U	2.7 U	1.4 U	2.5 U	2.4 U	1.4 U	1.4 U
Carbon disulfide	-	-	-	-	1.1 U	2.1 U	2.1 U	3.8	6.5	1.9 U	2.6	1.1 U
Carbon tetrachloride	-	-	-	-	1.2 U	1.2 U	2.2 U	3.8	2 U	1.9 U	1.2 U	1.2 U
Chlorobenzene	-	-	-	-	1.7 U	117	3.2 U	1.7 U	2.9 U	2.8 U	1.7 U	1.7 U
Chloroform (Trichloromethane)	-	-	-	-	1.8 U	1.8 U	5	20.7	3.1 U	3 U	3.6	1.8 U
Chloromethane (Methyl Chloride)	-	-	-	-	0.76 U	0.76 U	1.4 U	0.76 U	1.3 U	1.3 U	0.76 U	0.76 U
cis-1,2-Dichloroethene	-	-	-	-	1.5 U	1.5 U	2.7 U	1.5 U	2.5 U	2.4 U	1.5 U	1.5 U
Cyclohexane	-	-	-	-	1.3 U	1.3 U	12.4	17.6	2.2 U	2.1 U	1.3 U	1.3 U
Dichlorodifluoromethane (CFC-12)	-	-	-	-	2.4	2.4	3.4 U	2.7	3.2 U	3.1 U	3.8	4.2
Ethanol	-	-	-	-	95.8	47.9	4.7	33.6	14.6	27.2	41	45.7
Ethyl acetate	-	-	-	-	1.3 U	1.3 U	2.5 U	1.3 U	2.3 U	2.2 U	1.3 U	1.3 U
Ethylbenzene	-	-	-	-	29.7	4	3 U	4 U	6.9 U	6.7 U	4 U	4 U
Hexachlorobutadiene	-	-	-	-	4 U	4 U	7.4 U	4 U	6.9 U	6.6 U	4 U	4 U
Hexane	-	-	-	-	4.2	3.3	294	6.4	2.3 U	7.9	2.9	2.2
Isopropyl Alcohol	-	-	-	-	52.8	15.5	17.4	21.3	4	9.6	5.8	7.1
m,p-Xylenes	-	-	-	-	131	8	5.9 U	7.9	6.9 U	6.7 U	11.5	7.1
Methylene chloride	-	-	-	-	19.2	25.7	25.6	28.7	31.2	9.2	6.7	8.2
Naphthalene	-	-	-	-	124	28.9	21.7	11.9	8.3 U	8.8	6.7	7.2
N-Heptane	-	-	-	-	2	1.7	2.8 U	1.5 U	2.6 U	6.9	1.5 U	2.4
o-Xylene	-	-	-	-	66	2.8	3 U	3.1	2.8 U	4.3	4	2.9
Propylene (Propene)	-	-	-	-	0.63 U	0.63 U	1.2 U	0.63 U	1.1 U	1.1 U	0.63 U	6.5
Styrene	-	-	-	-	7.1	3.9 U	2.9 U	3.9 U	6.8 U	6.5 U	3.9 U	3.9 U
Tetrachloroethene	-	-	-	-	1.7	1.2 U	197	11.1	2.2 U	4.9	11.1	7.1
Tetrahydrofuran	-	-	-	-	2.7	1.1 U	5190	1.1 U	3.5	5.2	1.9	1.1 U
Toluene	-	-	-	-	44.4	9.2	3	10.5	7	3	54.3	6.2
trans-1,2-Dichloroethene	-	-	-	-	1.5 U	1.5 U	2.7 U	1.5 U	2.5 U	2.4 U	1.5 U	1.5 U
Trichloroethene	50.5	48.3	0.99 U	0.96 U	0.99 U	0.99 U	1 U	1.4	1.7 U	1.7 U	1.8	0.99 U
Trichlorofluoromethane (CFC-11)	-	-	-	-	3.4	2.1 U	3.8 U	2.1 U	3.6 U	4.6	2.1 U	2.1 U
Trifluorotrichloroethane (Freon 113)	-	-	-	-	2.9 U	2.9 U	5.4 U	2.9 U	5 U	4.8 U	3.5	3.8
Vinyl acetate	-	-	-	-	1.3 U	1.3 U	2.4 U	1.3 U	2.2 U	2.2 U	1.3 U	1.3 U
Vinyl chloride	-	-	-	-	0.47 U	0.47 U	1.4	0.47 U	0.81 U	0.79 U	0.47 U	0.47 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954
Sample Name	3954_SS_04032014	3954_TT_04032014	3954_UU_04032014	3954_VV_04032014	3954_WW_04032014	3954_FF_04112014	3954_GG_04112014	3954_HH_04112014	3954_K_04112014	3954_L_04112014	3954_DD_06102014	3954_M_06102014	3954_N_06102014
Sample Date	04/03/2014	04/03/2014	04/03/2014	04/03/2014	04/03/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	04/11/2014	06/10/2014	06/10/2014	06/10/2014
Lab Sample ID	10262315009	10262277009	10262277013	10262277011	10262278001	10263065009	10263065007	10263065003	10263592001	10263065005	10270206013	10270199015	10270199011
	10262319009	10262278009	10262278013	10262278011	10262278001	10263065009	10263065007	10263065003	10263592001	10263065005	10270206013	10270206015	10270206011
Volatile Organic Compounds (µg/m³)													
1,1,1-Trichloroethane	54.3	6.8 U	2 U	29.7	2 U	27	120	41.1	51.7	56.5	74.6	40.9	11.3
1,1-Dichloroethane	1.4 U	5 U	1.5 U	1.5 U	1.5 U	1.5 U	3.6	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
1,1-Dichloroethene	1.4 U	4.9 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
1,2,4-Trichlorobenzene	6.6 U	9.2 U	6.8 U	6.8 U	6.8 U	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	6.8 U	6.8 U	7.1 U
1,2,4-Trimethylbenzene	2.9	32.9	116	55.7	1.8 U	4	1.8 U	4.3	2.6	1.8 U	6.4	7.4	1.9 U
1,2-Dichlorobenzene	2.1 U	7.5 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.3 U
1,2-Dichloroethane	0.71 U	2.5 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	0.74 U	1.5 U	1.5 U	1.5 U
1,3,5-Trimethylbenzene	4.3 U	6.1 U	28.7	21.4	4.5 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.9	3.2	1.9 U
1,3-Butadiene	0.78 U	2.7 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	0.81 U	2 U	2 U	2.1 U
1,3-Dichlorobenzene	5.3 U	7.5 U	5.5 U	5.5 U	5.5 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.3 U
1,4-Dichlorobenzene	5.3 U	7.5 U	5.5 U	5.5 U	5.5 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	2.2 U	3.3	2.3 U
2-Butanone (Methyl Ethyl Ketone)	12.3	21.8	10.4	6.7	5.3	21.2	2.2	1.4	10.2	2.5	3.6	4.7	3.4 U
2-Hexanone	2.6 U	5.1 U	2.7 U	2.7 U	2.7 U	5.3	1.5 U	1.5 U	1.5 U	1.5 U	2.7 U	2.7 U	2.8 U
4-Ethyl toluene	4.3 U	6.1 U	33.3	20.9	4.5 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	2.6	2.9	1.9 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1.9	13.8	9.4	1.5 U	1.5 U	2.8	1.5 U	1.5 U	1.5 U	1.5 U	3.7 U	3.7 U	3.9 U
Acetone	83.5	143	94	19.4	31.4	104	17.7	8.2	31.9	4.5	10.2	17.4	4.5 U
Benzene	0.57 U	7.5	0.58 U	112	0.95	0.58 U	0.67	1	0.84	0.58 U	2.9 U	2.9 U	3 U
Bromodichloromethane	2.4 U	8.3 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	3.8	2.4 U	2.5 U
Bromomethane (Methyl Bromide)	1.4 U	4.8 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	3.6 U	3.6 U	3.7 U
Carbon disulfide	2.2	3.8 U	1.1 U	8.9	1.1 U	5.4	6.7	7.2	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U
Carbon tetrachloride	1.1 U	3.9 U	1.2 U	1.2 U	1.2 U	1.2 U	2.3	6	1.4	4	5.8 U	19	6 U
Chlorobenzene	1.6 U	5.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	1.7 U	4.2 U	4.2 U	4.4 U
Chloroform (Trichloromethane)	4.8	6 U	1.8 U	9.1	1.8 U	2.6	30.8	4.8	168	5.8	109	17.1	1.9 U
Chloromethane (Methyl Chloride)	0.73 U	2.6 U	0.76 U	0.76 U	1.3	0.93	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.79 U
cis-1,2-Dichloroethene	1.4 U	4.9 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	2.9	1.5 U	1.5 U
Cyclohexane	1.2 U	5	1.3 U	12.5	1.3 U	1.3 U	1.3 U	1.3 U	1.3	1.3 U	3.1 U	3.1 U	3.3 U
Dichlorodifluoromethane (CFC-12)	32	829	8450	1260	2.2	10.2	8.9	6.9	5	1.8 U	9.6	13.7	6.2
Ethanol	126	101	188	17.4	49.5	12.4	13.1	10.8	14	20.3	6	7.3	1.8 U
Ethyl acetate	1.3 U	4.5 U	1.3 U	1.3 U	1.3 U	1.7	1.3 U	1.3 U	1.3 U	1.3 U	3.3 U	3.3 U	3.4 U
Ethylbenzene	3.8 U	12.1	30.7	56.1	6.6	1.6 U	1.6 U	3.4	1.6 U	1.6 U	4 U	4 U	4.1 U
Hexachlorobutadiene	3.8 U	13.4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	9.8 U	9.8 U	10.1 U
Hexane	3.1	8.4	1.3 U	26	2.2	1.4	2.7	2.6	2.1	3.2	3.2 U	3.2 U	3.3 U
Isopropyl Alcohol	68.2	144	41.5	4.8	21.1	3.9	1.9	0.9 U	0.9 U	0.9 U	2.2 U	3.2	2.3 U
m,p-Xylenes	4.2	56.7	139	363	22.2	6	3.2	14.4	4.4	3.6	3.2 U	9.1	3.3 U
Methylene chloride	61.2	28.4	8.3	49.4	23.9	4	7.1	12	14.8	14.4	6.4 U	6.4 U	6.6 U
Naphthalene	8.7	30.1	163	23	13.3	8.8	5.1	10.2	3.3	11.4	20.5	9.4	5 U
N-Heptane	1.4 U	7.7	1.5 U	29.9	1.5 U	1.6	1.5 U	1.5 U	1.5 U	1.5 U	3.7 U	3.7 U	3.9 U
o-Xylene	1.5 U	27.6	85.4	33.8	5	2.3	1.6 U	5.2	1.6 U	1.6 U	1.6 U	3.8	1.6 U
Propylene (Propene)	0.61 U	2.1 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	0.63 U	1.6 U	1.6 U	1.6 U
Styrene	3.8 U	7.4	10.8	3.9 U	3.9 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.8	1.6 U
Tetrachloroethene	26.5	4.6	1.2 U	10.6	1.2 U	35.7	80.3	90.6	57.3	88.5	252	547	7.1
Tetrahydrofuran	1 U	3.7 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	2.7 U	2.7 U	2.8 U
Toluene	7.3	26.9	46.7	18.9	6	3	4.3	10	4.5	6.7	1.4 U	5.4	1.7
trans-1,2-Dichloroethene	1.4 U	4.9 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U
Trichloroethene	0.96 U	2 U	0.99 U	20	0.99 U	1.7	48.7	33.1	32.5	16.9	10.4	3.2	10
Trichlorofluoromethane (CFC-11)	2 U	7 U	2.1 U	2.1 U	2.1 U	2.5	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U
Trifluorotrichloroethane (Freon 113)	6.3	9.8 U	2.9 U	5.8	2.9 U	2.9 U	11.2	6	7.3 U	5.2	4.1	2.9 U	3 U
Vinyl acetate	1.2 U	4.4 U	1.3 U	1.3 U	1.3 U	1.3 U	2.3	1.7	2.4	1.3 U	4.6	3.2 U	3.3 U
Vinyl chloride	0.45 U	1.6 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.94 U	0.94 U	0.97 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954
Sample Name	3954_TT_06102014	3954_UU_06102014	3954_VV_06102014	3954_W_06102014	3954_X_06102014	3954_C_07302014	3954_D_07302014	3954_E_07302014	3954_EE_07302014	3954_I_07302014	3954_J_07302014	3954_B_07312014	3954_B_02122015
Sample Date	06/10/2014 10270199001	06/10/2014 10270199009	06/10/2014	06/10/2014 10270199003	06/10/2014 10270199005	07/30/2014 10275751001	07/30/2014 10275749001	07/30/2014 10275760001	07/30/2014 10275746001	07/30/2014 10275757001	07/30/2014 10275754001	07/31/2014 10275890001	02/12/2015 10296708007
Lab Sample ID	10270206001	10270206009	10270206007	10270206003	10270206005	10275752001	10275750001	10275761001	10275747001	10275758001	10275755001	10275891001	10296714007
Volatile Organic Compounds (µg/m³)													
1,1,1-Trichloroethane	1.9 U	2 U	2 U	3.1	45.3	7.1	18.1	10.7	43.1	62.3	39.6	4.8	3.7
1,1-Dichloroethane	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5	4.2	1.5 U	1.5 U	4.2	1.5 U	2.5	3.3
1,1-Dichloroethene	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.4 U
1,2,4-Trichlorobenzene	6.6 U	6.8 U	6.8 U	7.1 U	6.8 U	2.7 U	2.7 U	2.8 U	2.7 U	2.8 U	2.7 U	2.7 U	2.6 U
1,2,4-Trimethylbenzene	2.2	1.8	1.8 U	2	6.2	1.8 U	1.8 U	1.9 U	1.8 U	1.9 U	84.6	1.8 U	49.7
1,2-Dichlorobenzene	2.1 U	2.2 U	2.2 U	2.3 U	2.2 U	2.2 U	2.2 U	2.3 U	2.2 U	2.3 U	2.2 U	2.2 U	2.1 U
1,2-Dichloroethane	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	0.74 U	0.74 U	0.77 U	0.74 U	0.77 U	0.74 U	0.74 U	0.72 U
1,3,5-Trimethylbenzene	1.7 U	1.8 U	1.8 U	1.9 U	2.7	1.8 U	1.8 U	1.9 U	1.8 U	3.4	21.6	1.8 U	14.2
1,3-Butadiene	2 U	2 U	2 U	2.1 U	2 U	0.81 U	0.81 U	0.84 U	0.81 U	0.84 U	0.81 U	0.81 U	0.78 U
1,3-Dichlorobenzene	2.1 U	2.2 U	2.2 U	2.3 U	2.2 U	2.2 U	2.2 U	2.3 U	2.2 U	2.3 U	2.2 U	2.2 U	2.1 U
1,4-Dichlorobenzene	2.1 U	2.2 U	2.2 U	2.3 U	2.2 U	2.2 U	2.2 U	2.3 U	2.2 U	2.3 U	2.2 U	2.2 U	2.1 U
2-Butanone (Methyl Ethyl Ketone)	3.2 U	3.8	3.3 U	6.1	5.3	7.2	6.9	8.9	6.5	2.9	4.3	6.9	3.2 U
2-Hexanone	2.6 U	2.7 U	2.7 U	2.9	2.8	2	1.5 U	2.4	1.9	1.6 U	1.5 U	1.5 U	1.4 U
4-Ethyl toluene	1.7 U	1.8 U	1.8 U	1.9 U	2.6	1.8 U	1.8 U	1.9 U	1.8 U	2.9	34.9	1.8 U	15.4
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	3.6 U	3.7 U	3.7 U	3.9 U	3.7 U	1.5 U	1.5 U	2.4	1.5 U	1.6 U	1.5 U	1.5 U	3.6 U
Acetone	5	13.6	5.6	31	18.8	23.2	18.2	22.3	17.6	14.1	22.9	24.7	4.2
Benzene	2.8 U	2.9 U	2.9 U	3 U	2.9 U	0.83	0.74	0.61 U	0.58 U	1.4	2.9	0.64	1.4
Bromodichloromethane	2.4 U	2.4 U	2.4 U	2.5 U	2.4 U	2.4 U	2.4 U	2.5 U	2.4 U	2.5 U	2.4 U	2.4 U	2.4 U
Bromomethane (Methyl Bromide)	3.4 U	3.6 U	3.6 U	3.7 U	3.6 U	1.4 U	1.4 U	1.5	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U
Carbon disulfide	1.9	1.1 U	1.1 U	1.2 U	6.1	1.1 U	1.1 U	1.2 U	1.1 U	1.2 U	1.1 U	1.1 U	3.4
Carbon tetrachloride	5.6 U	5.8 U	5.8 U	6 U	5.8 U	1.2 U	3.4	1.7	1.4	3.7	3.1	1.3	5.6 U
Chlorobenzene	4.1 U	4.2 U	4.2 U	4.4 U	4.2 U	1.7 U	1.7 U	1.8 U	1.7 U	1.8 U	1.7 U	1.7 U	1.6 U
Chloroform (Trichloromethane)	1.7 U	1.8 U	1.8 U	1.9 U	1.8 U	1.4	6.6	33.1	49.4	32.9	31.2	26.4	18.6
Chloromethane (Methyl Chloride)	0.73 U	0.76 U	0.76 U	0.79 U	0.76 U	0.76 U	0.76 U	2.5	0.76 U	1.3	0.76 U	0.76 U	0.73 U
cis-1,2-Dichloroethene	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	10.3	10.4	1.5 U	1.5 U	6.6	1.9	10.4	13.9
Cyclohexane	3 U	3.1 U	3.1 U	3.3 U	3.1 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.5
Dichlorodifluoromethane (CFC-12)	2620	14300	53.6	557	8050	146	111	102	4.9	4.1	5	246	35.1
Ethanol	4	18	9.7	12.2	8.4	4.4	11.6	13.7	41.3	37.1	48.5	10.5	11.1
Ethyl acetate	3.2 U	3.3 U	3.3 U	3.4 U	3.3 U	1.3 U	1.3 U	1.4 U	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U
Ethylbenzene	3.8 U	4 U	4 U	4.1 U	7.2	1.6 U	1.6 U	1.6 U	1.6 U	23	54.2	1.6 U	7.3
Hexachlorobutadiene	9.4 U	9.8 U	9.8 U	10.1 U	9.8 U	4 U	4 U	4.1 U	4 U	4.1 U	4 U	4 U	3.8 U
Hexane	3.1 U	3.2 U	3.5	3.3 U	3.2 U	3.4	1.3 U	1.3 U	1.3 U	2.3	2.3	3.3	1.3 U
Isopropyl Alcohol	2.2	6.4	2.2 U	10.1	8.1	2.2 U	2.2 U	2.3 U	2.2 U	2.3 U	53.5	2.7	2.2 U
m,p-Xylenes	3.1	3.2 U	3.2 U	3.3 U	23.6	3.2 U	3.2 U	3.3 U	3.2 U	10.1	252	3.2 U	53.7
Methylene chloride	6.1 U	6.4 U	26.1	6.6 U	6.4 U	8.6	6.4 U	7.3	8	6.6 U	6.6	32	6.1 U
Naphthalene	21.3	14.9	4.8 U	14.7	14.3	20.5	13.9	9.8	23.4	15.1	17.9	28.3	38.2
N-Heptane	3.6 U	3.7 U	3.7 U	3.9 U	4	1.5 U	1.5 U	1.6 U	1.5 U	1.6 U	1.5 U	1.5 U	1.4 U
o-Xylene	1.7	1.6 U	1.6 U	1.6 U	9.1	1.6 U	1.6 U	1.6 U	1.6 U	32	107	1.6 U	20
Propylene (Propene)	1.5 U	1.6 U	1.7	1.6 U	1.6 U	0.63 U	0.63 U	0.65 U	0.63 U	0.65 U	0.63 U	0.63 U	1.4
Styrene	1.5 U	1.6 U	1.6 U	2	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.5 U
Tetrachloroethene	2.7	2.5 U	2.5 U	2.6 U	12.3	60.7	231	65.4	162	404	307	52.2	39.2
Tetrahydrofuran	2.6 U	2.7 U	2.7 U	2.8 U	2.7 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1 U
Toluene	1.5	1.4 U	1.4 U	1.9	2	1.4 U	1.4 U	76.8	1.4 U	2.9	6.5	1.4 U	21.9
trans-1,2-Dichloroethene	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	4	4.5	1.5 U	1.5 U	5.8	2.6	2.6	2.8
Trichloroethene	1.9 U	2 U	2 U	1 U	2 U	493	2140	190	505	3240	2640	441	534
Trichlorofluoromethane (CFC-11)	2 U	2.1 U	2.1 U	2.1 U	2.1 U	2.4	3.5	4.9	64.4	7.4	12.2	2.2	2 U
Trifluorotrichloroethane (Freon 113)	2.8 U	2.9 U	2.9 U	3 U	2.9 U	4.6	3	18.7	18.7	10.7	6.4	2.9 U	2.8 U
Vinyl acetate	3.1 U	3.5	3.2 U	4.2	4.4	1.3 U	2.6	6.6	3.4	1.9	1.3 U	1.3 U	1.2 U
Vinyl chloride	0.9 U	0.94 U	0.94 U	0.97 U	0.94 U	0.47 U	0.47 U	0.49 U	0.47 U	0.49 U	0.47 U	0.47 U	0.9 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	3954	3954	3954	3954	3954	3954	3954	3954	3954	3954	4035	4035	4080	4080
Sample Name	3954_C_02122015	3954_CC_02122015	3954_E_02122015	3954_EE_02122015	3954_F_02122015	3954_G_02122015	3954_H_02122015	3954_I_02122015	3954_J_02122015	3954_Q_02122015	4035_12092013	4035_01132014	4080_05202014	4080_06172014
Sample Date	02/12/2015	02/12/2015	02/12/2015	02/12/2015	02/12/2015	02/12/2015	02/12/2015	02/12/2015	02/12/2015	02/12/2015	12/09/2013	01/13/2014	05/20/2014	06/17/2014
Lab Sample ID	10296708006	10296714009	10296714010	10296714004	10296708008	10296714011	10296714005	10296714001	10296714002	10296714003	10251652001	10254660001	10267777001	10270960001
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	4.8	7.8	8.5	78	2.1	3.8	690	22.7	20.3	480	-	-	58	48
1,1-Dichloroethane	6.3	1.4 U	1.4 U	2.2	1.5 U	1.5	56.6	2.8	1.4 U	10.6	-	-	1.5 U	1.5 U
1,1-Dichloroethene	1.4 U	1.4 U	1.4 U	1.5 U	1.5 U	1.4 U	162	1.4 U	1.4 U	12.2	-	-	1.5 U	1.5 U
1,2,4-Trichlorobenzene	2.6 U	2.6 U	2.6 U	2.7 U	2.8 U	2.6 U	2.6 U	2.6 U	2.6 U	2.6 U	-	-	2.7 U	2.7 U
1,2,4-Trimethylbenzene	1.7 U	1.8	1.7 U	11.2	6.4	4.8	1.7 U	1.7 U	49.9	1.7 U	-	-	2	2
1,2-Dichlorobenzene	2.1 U	2.1 U	2.1 U	2.2 U	2.3 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	-	-	3.5	2.2 U
1,2-Dichloroethane	0.72 U	0.72 U	0.72 U	0.74 U	0.77 U	0.72 U	0.72 U	0.72 U	0.72 U	0.72 U	-	-	0.74 U	0.74 U
1,3,5-Trimethylbenzene	1.7 U	1.7 U	1.7 U	6.8	2.9	2	1.7 U	1.7 U	13.6	1.7 U	-	-	1.8 U	1.8 U
1,3-Butadiene	0.78 U	0.78 U	0.78 U	0.81 U	0.84 U	0.78 U	0.78 U	0.78 U	0.78 U	0.78 U	-	-	0.81 U	0.81 U
1,3-Dichlorobenzene	2.1 U	2.1 U	2.1 U	2.2 U	2.3 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	-	-	2.2 U	2.2 U
1,4-Dichlorobenzene	2.1 U	2.1 U	2.1 U	2.2 U	2.3 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	-	-	3	2.2 U
2-Butanone (Methyl Ethyl Ketone)	10.8	3.2 U	3.2 U	17.1	4.1	11.1	5.3	3.2 U	3.2 U	17.9	-	-	18.2	3.9
2-Hexanone	1.4 U	1.4 U	1.4 U	1.5 U	2.7	2.8	2.2	1.4 U	2.1	3	-	-	5.4	2.7 U
4-Ethyl toluene	1.7 U	1.7 U	1.7 U		4	2.9	1.7 U	1.7 U	20.1	1.7 U	-	-	1.8 U	1.8 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	3.6 U	3.6 U	3.6 U	3.7 U	3.9 U	3.6 U	3.6 U	3.6 U	3.6 U	4.4	-	-	6.9	1.5 U
Acetone	79.3	12.4	4.7	4.3 U	26.1	82.6	31.2	12.3	6.5	124	-	-	91.2	17.2
Benzene	1.1 U	1.1 U	1.1 U	50.8	24	1.1 U	1.1 U	1.1 U	2.7	1.1 U	-	-	60	1.2 U
Bromodichloromethane	2.4 U	2.4 U	2.4 U	2.4 U	2.5 U	2.4 U	2.4 U	2.4 U	2.4 U	2.4 U	-	-	2.4 U	2.4 U
Bromomethane (Methyl Bromide)	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	-	-	1.4 U	1.4 U
Carbon disulfide	2.7	1.6	2.3	1.3	1.2 U	2.2	13.5	1.1 U	1.1 U	6	-	-	32.2	13.8
Carbon tetrachloride	5.6 U	5.6 U	5.6 U	5.8 U	6 U	5.6 U	5.9	5.6 U	5.6 U	5.6 U	-	-	1.2 U	1.2 U
Chlorobenzene	1.6 U	1.6 U	1.6 U	1.7 U	1.8 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	-	-	47.5	1.7 U
Chloroform (Trichloromethane)	4.3	12.5	6	20	40.3	3.2	26.2	10.7	12.5	7.6	-	-	1.8 U	1.8 U
Chloromethane (Methyl Chloride)	0.73 U	0.73 U	0.73 U	0.76 U	0.79 U	0.73 U	0.73 U	0.73 U	0.73 U	0.73 U	-	-	0.76 U	0.76 U
cis-1,2-Dichloroethene	48	3.5 U	3.5 U	3.6 U	3.8 U	3.5 U	4	3.5 U	3.5 U	3.5 U	-	-	1.5 U	1.5 U
Cyclohexane	1.2 U	1.2 U	1.2 U	82.2	66.8	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	-	-	1.3 U	1.3 U
Dichlorodifluoromethane (CFC-12)	10	2.9	9.8	4.7	6.1	16.5	7.5	3.9	3.9	14.3	-	-	2.2	2.5
Ethanol	4.6	21	5.2	10.9	5.4	8.6	23.1	2.4	4.9	4.5	-	-	91.1	37.8
Ethyl acetate	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U	1.3 U	2.6	1.3 U	1.3 U	1.3 U	-	-	1.3 U	1.3 U
Ethylbenzene	1.5 U	1.5 U	1.5 U	2	21.3	3.1	1.5 U	3.1	25.2	1.5 U	-	-	2.2	1.6 U
Hexachlorobutadiene	3.8 U	3.8 U	3.8 U	4 U	4.1 U	3.8 U	3.8 U	3.8 U	3.8 U	3.8 U	-	-	4 U	4 U
Hexane	2.6	1.3 U	1.3 U	26.7	23.4	2.5	1.5	1.3 U	1.3 U	4.7	-	-	1.3 U	1.4
Isopropyl Alcohol	53.3	35.2	2.2 U	2.2 U	2.3 U	2.2 U	105	2.2 U	18.1	2.4	-	-	2.2 U	2.2 U
m,p-Xylenes	3.1 U	3.1 U	3.1 U	73	63.7	6.3	3.1 U	3.1 U	127	3.1 U	-	-	3.2 U	3.2 U
Methylene chloride	6.1 U	6.1 U	6.1 U	6.4 U	6.6 U	6.1 U	6.1 U	6.1 U	6.1 U	6.1 U	-	-	7.6	6.4 U
Naphthalene	6.5	8.3	6.7	9.3	11.2	7.8	11.6	11.1	14.9	8.8	-	-	7.4	15.2
N-Heptane	1.4 U	1.4 U	1.4 U	4.1	24.8	2.2	1.4 U	1.4 U	1.4 U	1.4 U	-	-	1.5 U	1.5
o-Xylene	1.5 U	1.5 U	1.5 U	2.7	14.6	1.5 U	1.5 U	2.7	49.4	1.5 U	-	-	1.6	1.6 U
Propylene (Propene)	2.1	2.2	0.99	4.3	1.4	2.5	2.2	1.1	0.81	4	-	-	0.63 U	0.63 U
Styrene	1.5 U	1.5 U	1.5 U	1.6 U	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	1.6 U	1.6 U
Tetrachloroethene	93.2	323	38	142	19.6	37.2	71.8	118	111	67.4	-	-	10.8	10.2
Tetrahydrofuran	3.6	1 U	1 U	1.1 U	1.1 U	1 U	1 U	1 U	1 U	1 U	-	-	9.2	1.1 U
Toluene	5.6	1.3 U	1.3 U	17.1	28.1	1.3 U	1.3 U	1.3 U	13.4	1.3 U	-	-	5.9	1.4 U
trans-1,2-Dichloroethene	10.1	1.4 U	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	2.8	1.4 U	1.4 U	-	-	1.5 U	1.5 U
Trichloroethene	1390	77.2	193	700	20.6	302	232	857	849	165	9.2	11.4	5.6	6.4
Trichlorofluoromethane (CFC-11)	2 U	2 U	8.4	12.5	2.1 U	2 U	3.8	3.8	9.4	4.2	-	-	2.1 U	2.1 U
Trifluorotrichloroethane (Freon 113)	2.8 U	2.8 U	2.9	14.8	3 U	2.8 U	75.3	3.7	3	85.9	-	-	3.5	2.9 U
Vinyl acetate	9.6	1.2 U	1.2 U	1.3 U	1.3 U	8.5	16.8	1.2 U	1.2 U	12.6	-	-	1.3 U	1.3 U
Vinyl chloride	0.9 U	0.9 U	0.9 U	0.94 U	0.97 U	0.9 U	0.9 U	0.9 U	0.9 U	0.9 U	-	-	0.47 U	0.47 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

	Location Name	4083	4083	4099	4109	4109	4160	4237	4237	4263	4263	4263	4263	4267	4420	4420
	Sample Name	4083_03142014	4083_04112014	4099_04142014	4109_12162013	4109_01152014	4160_01252014	4237_01122015	4237_02042015	4263_A_05022014	4263_B_05022014	4263_A_05202014	4263_B_05202014	4267_04042014	4420_12132013	4420_01062014
	Sample Date	03/14/2014	04/11/2014	04/14/2014	12/16/2013	01/15/2014	01/25/2014	01/12/2015	02/04/2015	05/02/2014	05/02/2014	05/20/2014	05/20/2014	04/04/2014	12/13/2013	01/06/2014
	Lab Sample ID	10260297001	10263062001	10263304001	10252515001	10254967001	10256010001	10293737001	10295904001	10265806001	10265806003	10267834001	10267834003	10262410001	10252350001	10254027001
Volatile Organic Compounds (µg/m³)																
1,1,1-Trichloroethane	-	-	2.1 U	-	-	-	-	14.4	23.5	2 U	2 U	2.1 U	2 U	3.1 U	-	-
1,1-Dichloroethane	-	-	1.5 U	-	-	-	-	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	2.3 U	-	-
1,1-Dichloroethene	-	-	1.5 U	-	-	-	-	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	2.3 U	-	-
1,2,4-Trichlorobenzene	-	-	2.8 U	-	-	-	-	2.7 U	2.7 U	4.5 U	4.5 U	2.8 U	2.7 U	4.3 U	-	-
1,2,4-Trimethylbenzene	-	-	3.5	-	-	-	-	1.8 U	1.8 U	1.8 U	16.4	1.9 U	1.8 U	2.8 U	-	-
1,2-Dichlorobenzene	-	-	2.3 U	-	-	-	-	2.2 U	2.2 U	2.2 U	2.2 U	2.3 U	2.2 U	3.5 U	-	-
1,2-Dichloroethane	-	-	0.77 U	-	-	-	-	0.74 U	0.74 U	0.74 U	0.74 U	0.77 U	0.74 U	1.2 U	-	-
1,3,5-Trimethylbenzene	-	-	1.9 U	-	-	-	-	1.8 U	1.8 U	1.8 U	6.5	1.9 U	1.8 U	2.8 U	-	-
1,3-Butadiene	-	-	0.84 U	-	-	-	-	0.81 U	0.81 U	0.81 U	0.81 U	0.84 U	0.81 U	1.3 U	-	-
1,3-Dichlorobenzene	-	-	2.3 U	-	-	-	-	2.2 U	2.2 U	2.2 U	2.2 U	2.3 U	2.2 U	3.5 U	-	-
1,4-Dichlorobenzene	-	-	2.3 U	-	-	-	-	2.2 U	2.2 U	2.2 U	2.2 U	2.3 U	2.2 U	3.5 U	-	-
2-Butanone (Methyl Ethyl Ketone)	-	-	12.8	-	-	-	-	5.2	3	10.5	3.1	2.3	1.1 U	16.4	-	-
2-Hexanone	-	-	1.6 U	-	-	-	-	4.9	1.5 U	2	1.5 U	2.8 U	2.7 U	2.3 U	-	-
4-Ethyl toluene	-	-	1.9 U	-	-	-	-	1.8 U	1.8 U	1.8 U	5.1	1.9 U	1.8 U	2.8 U	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	4.3	-	-	-	-	3.7 U	3.7 U	1.5 U	1.5 U	1.6 U	1.5 U	2.3 U	-	-
Acetone	-	-	167	-	-	-	-	13.5	11.1	197	43.5 U	14.4	12.6	80	-	-
Benzene	-	-	0.61 U	-	-	-	-	0.58 U	0.58 U	0.58 U	32.3	0.61 U	13.2	0.92 U	-	-
Bromodichloromethane	-	-	2.5 U	-	-	-	-	2.4 U	2.4 U	2.4 U	2.4 U	2.5 U	2.4 U	3.8 U	-	-
Bromomethane (Methyl Bromide)	-	-	1.5 U	-	-	-	-	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.4 U	2.2 U	-	-
Carbon disulfide	-	-	1.2 U	-	-	-	-	1.1 U	1.1 U	1.9	3.5	1.2 U	1.1 U	11.9	-	-
Carbon tetrachloride	-	-	1.2 U	-	-	-	-	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.8 U	-	-
Chlorobenzene	-	-	1.8 U	-	-	-	-	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.7 U	2.7 U	-	-
Chloroform (Trichloromethane)	-	-	1.9 U	-	-	-	-	0.89 U	1	1.8 U	1.8 U	1.9 U	1.8 U	62.8	-	-
Chloromethane (Methyl Chloride)	-	-	0.79 U	-	-	-	-	0.76 U	0.76 U	0.76 U	0.76 U	0.79 U	0.76 U	1.2 U	-	-
cis-1,2-Dichloroethene	-	-	1.5 U	-	-	-	-	3.6 U	3.6 U	1.5 U	1.5 U	1.5 U	1.5 U	2.3 U	-	-
Cyclohexane	-	-	1.3 U	-	-	-	-	1.3 U	1.3 U	1.5	5.3	1.3 U	11.1	2 U	-	-
Dichlorodifluoromethane (CFC-12)	-	-	2.6	-	-	-	-	2.5	2.1	2.2	1.8 U	2.7	2.7	2.9 U	-	-
Ethanol	-	-	85.2	-	-	-	-	3.5	6.5	36.8	2680	6.4	6.8	17.6	-	-
Ethyl acetate	-	-	1.4 U	-	-	-	-	1.3 U	1.3 U	4.5	2.6	1.4 U	1.3 U	2.1 U	-	-
Ethylbenzene	-	-	2.8	-	-	-	-	1.6 U	1.6 U	1.6 U	14.6	1.6 U	4.8	2.5 U	-	-
Hexachlorobutadiene	-	-	4.1 U	-	-	-	-	4 U	4 U	9.8 U	9.8 U	4.1 U	4 U	6.2 U	-	-
Hexane	-	-	1.8	-	-	-	-	1.3 U	1.3 U	1.3 U	6.7	10.3	2.9	2 U	-	-
Isopropyl Alcohol	-	-	0.94 U	-	-	-	-	2.2 U	2.2 U	2.2 U	2.2 U	2.3 U	2.2 U	3.4	-	-
m,p-Xylenes	-	-	11.2	-	-	-	-	3.2 U	3.2 U	4.1	69.7	97.3	3.2 U	5 U	-	-
Methylene chloride	-	-	1.3 U	-	-	-	-	63.8 U	6.4 U	6.4 U	6.4 U	7.3	13.9	7.7	-	-
Naphthalene	-	-	9.9	-	-	-	-	30.2	11.8	8.2	9.2	5.6	9.6	5.9	-	-
N-Heptane	-	-	2.8	-	-	-	-	1.5 U	1.5 U	1.5 U	9.8	1.6 U	2.2	2.3 U	-	-
o-Xylene	-	-	3.7	-	-	-	-	1.6 U	1.6 U	1.6 U	7.7	1.6 U	1.6 U	2.5 U	-	-
Propylene (Propene)	-	-	1.6 U	-	-	-	-	2.5	2.3	1.5	0.63 U	0.65 U	0.63 U	0.99 U	-	-
Styrene	-	-	1.6 U	-	-	-	-	1.6 U	1.6 U	1.6 U	1.6 U	4 U	3.9 U	2.6	-	-
Tetrachloroethene	-	-	1.3 U	-	-	-	-	6.7	16.4	1.2 U	1.2 U	1.8	1.8	1.9 U	-	-
Tetrahydrofuran	-	-	1.1 U	-	-	-	-	1.1 U	1.5	1.1 U	1.1 U	1.1 U	1.1 U	1.7 U	-	-
Toluene	-	-	18.7	-	-	-	-	1.4 U	1.4 U	1.5	3.7	2	1.4 U	6.2	-	-
trans-1,2-Dichloroethene	-	-	1.5 U	-	-	-	-	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	2.3 U	-	-
Trichloroethene	2.7	0.99 U	1.5	17.4	7.2	1.4	1.4	3	10.2	0.99 U	4.3	1 U	0.99 U	1	3.1 U	0.99 U
Trichlorofluoromethane (CFC-11)	-	-	2.1 U	-	-	-	-	2.1 U	2.1	2.1 U	2.1 U	2.1 U	2.1 U	3.2 U	-	-
Trifluorotrichloroethane (Freon 113)	-	-	3 U	-	-	-	-	2.9 U	2.9 U	2.9 U	2.9 U	3 U	2.9 U	4.5 U	-	-
Vinyl acetate	-	-	1.3 U	-	-	-	-	1.3 U	1.3 U	3.7	1.3 U	1.3 U	4.6	3.6	-	-
Vinyl chloride	-	-	0.49 U	-	-	-	-	0.47 U	0.47 U	0.47 U	0.47 U	0.49 U	0.47 U	0.74 U	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	4537	4558	4558	4559	4569	4569	4913	4961	5083	5116	5141	5141	5141	5141	5141
Sample Name	4537_03142014	4558_A_01232014	4558_B_01232014	4559_01072014	4569_12092013	4569_01202014	4913_03032014	4961_01132014	5083_11212013	5116_02152014	5141_A_12032013	5141_B_12032013	5141_C_12032013	5141_D_12032013	5141_E_12032013
Sample Date	03/14/2014	01/23/2014	01/23/2014	01/07/2014	12/09/2013	01/20/2014	03/03/2014	01/13/2014	11/21/2013	02/15/2014	12/03/2013	12/03/2013	12/03/2013	12/03/2013	12/03/2013
Lab Sample ID	10260294001	10255836001	10255836003	10254095001	10251684001	10255359001	10259169001	10254578001	10250025001 10250029002	10257895001	10251107001	10251107003	10251107005	10251107007	10251107009
Volatile Organic Compounds (µg/m³)															
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-
1,1-Dichloroethane	-	-	-	-	-	-	-	-	1.5 U	-	-	-	-	-	-
1,1-Dichloroethene	-	-	-	-	-	-	-	-	1.5 U	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	4.2	-	-	-	-	-	-
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	4.4	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	2.2 U	-	-	-	-	-	-
1,2-Dichloroethane	-	-	-	-	-	-	-	-	0.74 U	-	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
1,3-Butadiene	-	-	-	-	-	-	-	-	0.81 U	-	-	-	-	-	-
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	2.2 U	-	-	-	-	-	-
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	2.2 U	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	-	-	-	-	-	-	-	-	6.1	-	-	-	-	-	-
2-Hexanone	-	-	-	-	-	-	-	-	1.5 U	-	-	-	-	-	-
4-Ethyl toluene	-	-	-	-	-	-	-	-	2.1	-	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	-	-	-	-	-	1.5 U	-	-	-	-	-	-
Acetone	-	-	-	-	-	-	-	-	56.7	-	-	-	-	-	-
Benzene	-	-	-	-	-	-	-	-	0.96	-	-	-	-	-	-
Bromodichloromethane	-	-	-	-	-	-	-	-	2.4 U	-	-	-	-	-	-
Bromomethane (Methyl Bromide)	-	-	-	-	-	-	-	-	1.4 U	-	-	-	-	-	-
Carbon disulfide	-	-	-	-	-	-	-	-	1.1 U	-	-	-	-	-	-
Carbon tetrachloride	-	-	-	-	-	-	-	-	1.2 U	-	-	-	-	-	-
Chlorobenzene	-	-	-	-	-	-	-	-	1.7 U	-	-	-	-	-	-
Chloroform (Trichloromethane)	-	-	-	-	-	-	-	-	24.2	-	-	-	-	-	-
Chloromethane (Methyl Chloride)	-	-	-	-	-	-	-	-	0.76 U	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	-	-	-	-	-	-	-	4.6	-	-	-	-	-	-
Cyclohexane	-	-	-	-	-	-	-	-	2.7	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	-	-	-	-	-	-	-	-	3.1	-	-	-	-	-	-
Ethanol	-	-	-	-	-	-	-	-	54.1	-	-	-	-	-	-
Ethyl acetate	-	-	-	-	-	-	-	-	1.4	-	-	-	-	-	-
Ethylbenzene	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Hexachlorobutadiene	-	-	-	-	-	-	-	-	4 U	-	-	-	-	-	-
Hexane	-	-	-	-	-	-	-	-	2.8	-	-	-	-	-	-
Isopropyl Alcohol	-	-	-	-	-	-	-	-	12.8	-	-	-	-	-	-
m,p-Xylenes	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-
Methylene chloride	-	-	-	-	-	-	-	-	11.3	-	-	-	-	-	-
Naphthalene	-	-	-	-	-	-	-	-	7.3	-	-	-	-	-	-
N-Heptane	-	-	-	-	-	-	-	-	2.1	-	-	-	-	-	-
o-Xylene	-	-	-	-	-	-	-	-	2.3	-	-	-	-	-	-
Propylene (Propene)	-	-	-	-	-	-	-	-	0.63 U	-	-	-	-	-	-
Styrene	-	-	-	-	-	-	-	-	1.6 U	-	-	-	-	-	-
Tetrachloroethene	-	-	-	-	-	-	-	-	39.5	-	-	-	-	-	-
Tetrahydrofuran	-	-	-	-	-	-	-	-	1.1 U	-	-	-	-	-	-
Toluene	-	-	-	-	-	-	-	-	8.2	-	-	-	-	-	-
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-	2.3	-	-	-	-	-	-
Trichloroethene	0.99 U	1.7 U	1.7 U	0.99 U	3.6	3.7	0.96 U	1 U	389	0.99 U	0.99 U	0.96 U	0.99 U	1.1 U	1 U
Trichlorofluoromethane (CFC-11)	-	-	-	-	-	-	-	-	2.7	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	-	-	-	-	-	-	-	-	2.9 U	-	-	-	-	-	-
Vinyl acetate	-	-	-	-	-	-	-	-	1.3 U	-	-	-	-	-	-
Vinyl chloride	-	-	-	-	-	-	-	-	0.47 U	-	-	-	-	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	5159	5192	5230	5230	5255	5300	5300	5340	5340	5378	5378	5378	5378	5399	5403
Sample Name	5159_03052014	5192_12272013	5230_A_12022013	5230_B_12022013	5255_01212014	5300_02092014	5300_03202014	5340_02132014	5340_02222014	5378_A_03112014	5378_B_03112014	5378_A_04012014	5378_B_04012014	5399_02172014	5403_01202014
Sample Date	03/05/2014	12/27/2013	12/02/2013	12/02/2013	01/21/2014	02/09/2014	03/20/2014	02/13/2014	02/22/2014	03/11/2014	03/11/2014	04/01/2014	04/01/2014	02/17/2014	01/20/2014
Lab Sample ID	10259372001	10253567001	10250949001	10250949003	10255560001	10257302001	10260835001	10257706001	10258537001	10259921001	10259921003	10261898001	10261898003	10257928001	10255385001
Volatile Organic Compounds (µg/m³)															
1,1,1-Trichloroethane	-	-	-	-	-	-	-	1.9 U	-	-	-	-	-	-	-
1,1-Dichloroethane	-	-	-	-	-	-	-	1.4 U	-	-	-	-	-	-	-
1,1-Dichloroethene	-	-	-	-	-	-	-	1.4 U	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	2.6 U	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	51.4	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	-	-	2.1 U	-	-	-	-	-	-	-
1,2-Dichloroethane	-	-	-	-	-	-	-	0.75	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	57.6	-	-	-	-	-	-	-
1,3-Butadiene	-	-	-	-	-	-	-	0.78 U	-	-	-	-	-	-	-
1,3-Dichlorobenzene	-	-	-	-	-	-	-	2.1 U	-	-	-	-	-	-	-
1,4-Dichlorobenzene	-	-	-	-	-	-	-	2.1 U	-	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	-	-	-	-	-	-	-	6.5	-	-	-	-	-	-	-
2-Hexanone	-	-	-	-	-	-	-	1.4 U	-	-	-	-	-	-	-
4-Ethyl toluene	-	-	-	-	-	-	-	11.2	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	-	-	-	-	1.4 U	-	-	-	-	-	-	-
Acetone	-	-	-	-	-	-	-	24.7	-	-	-	-	-	-	-
Benzene	-	-	-	-	-	-	-	6.8	-	-	-	-	-	-	-
Bromodichloromethane	-	-	-	-	-	-	-	2.4 U	-	-	-	-	-	-	-
Bromomethane (Methyl Bromide)	-	-	-	-	-	-	-	1.4 U	-	-	-	-	-	-	-
Carbon disulfide	-	-	-	-	-	-	-	1.1 U	-	-	-	-	-	-	-
Carbon tetrachloride	-	-	-	-	-	-	-	1.1 U	-	-	-	-	-	-	-
Chlorobenzene	-	-	-	-	-	-	-	1.6 U	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	-	-	-	-	-	-	-	1.7 U	-	-	-	-	-	-	-
Chloromethane (Methyl Chloride)	-	-	-	-	-	-	-	0.73 U	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	-	-	-	-	-	-	1.4 U	-	-	-	-	-	-	-
Cyclohexane	-	-	-	-	-	-	-	27.1	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	-	-	-	-	-	-	-	2.3	-	-	-	-	-	-	-
Ethanol	-	-	-	-	-	-	-	28.5	-	-	-	-	-	-	-
Ethyl acetate	-	-	-	-	-	-	-	1.3 U	-	-	-	-	-	-	-
Ethylbenzene	-	-	-	-	-	-	-	14.9	-	-	-	-	-	-	-
Hexachlorobutadiene	-	-	-	-	-	-	-	3.8 U	-	-	-	-	-	-	-
Hexane	-	-	-	-	-	-	-	8.1	-	-	-	-	-	-	-
Isopropyl Alcohol	-	-	-	-	-	-	-	0.87 U	-	-	-	-	-	-	-
m,p-Xylenes	-	-	-	-	-	-	-	75.8	-	-	-	-	-	-	-
Methylene chloride	-	-	-	-	-	-	-	14	-	-	-	-	-	-	-
Naphthalene	-	-	-	-	-	-	-	10.3	-	-	-	-	-	-	-
N-Heptane	-	-	-	-	-	-	-	6.7	-	-	-	-	-	-	-
o-Xylene	-	-	-	-	-	-	-	28.8	-	-	-	-	-	-	-
Propylene (Propene)	-	-	-	-	-	-	-	2.4	-	-	-	-	-	-	-
Styrene	-	-	-	-	-	-	-	1.5 U	-	-	-	-	-	-	-
Tetrachloroethene	-	-	-	-	-	-	-	1.2 U	-	-	-	-	-	-	-
Tetrahydrofuran	-	-	-	-	-	-	-	1 U	-	-	-	-	-	-	-
Toluene	-	-	-	-	-	-	-	111	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	1.4 U	-	-	-	-	-	-	-
Trichloroethene	1.1 U	1.2	0.99 U	0.99 U	1 U	7.5	2.5	3.4	1.7	2.3	0.92 U	0.99 U	6.2	0.92 U	0.99 U
Trichlorofluoromethane (CFC-11)	-	-	-	-	-	-	-	2 U	-	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	-	-	-	-	-	-	-	2.8 U	-	-	-	-	-	-	-
Vinyl acetate	-	-	-	-	-	-	-	1.2 U	-	-	-	-	-	-	-
Vinyl chloride	-	-	-	-	-	-	-	0.45 U	-	-	-	-	-	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	5404	5404	5404	5404	5419	5419	5419	5419	5431	5431	5431	5431	5431	5476
Sample Name	5404_A_12032013	5404_B_12032013	5404_A_01152014	5404_B_01152014	5419_07292014	5419_08132014	5419_09302014	5419-P_01162015	5431_A_01142014	5431_B_01142014	5431_C_01142014	5431_D_01142014	5431_E_01142014	5476_01172014
Sample Date	12/03/2013	12/03/2013	01/15/2014	01/15/2014	07/29/2014	08/13/2014	09/30/2014	01/16/2015	01/14/2014	01/14/2014	01/14/2014	01/14/2014	01/14/2014	01/17/2014
Lab Sample ID	10251074001	10251074003	10254971001	10254971003	10275726001	10277503001	10283466001	10294170001	10254804009	10254804001	10254804007	10254804003	10254804005	10255233001
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	2 U	-	-	-	9.7	11	6.3	5.8	-	-	-	-	-	-
1,1-Dichloroethane	1.5 U	-	-	-	1.4 U	1.5 U	1.5 U	1.5 U	-	-	-	-	-	-
1,1-Dichloroethene	1.5 U	-	-	-	1.4 U	1.5 U	1.5 U	1.5 U	-	-	-	-	-	-
1,2,4-Trichlorobenzene	2.7 U	-	-	-	2.6 U	2.8 U	2.7 U	2.7 U	-	-	-	-	-	-
1,2,4-Trimethylbenzene	3.4	-	-	-	96.8	1.9 U	2.8	1.8 U	-	-	-	-	-	-
1,2-Dichlorobenzene	2.2 U	-	-	-	2.1 U	2.3 U	2.2 U	2.2 U	-	-	-	-	-	-
1,2-Dichloroethane	0.74 U	-	-	-	0.71 U	0.77 U	0.74 U	0.74 U	-	-	-	-	-	-
1,3,5-Trimethylbenzene	1.8 U	-	-	-	29.1	1.9 U	1.8 U	1.8 U	-	-	-	-	-	-
1,3-Butadiene	0.81 U	-	-	-	0.78 U	0.84 U	0.81 U	0.81 U	-	-	-	-	-	-
1,3-Dichlorobenzene	5	-	-	-	2.1 U	2.3 U	2.2 U	2.2 U	-	-	-	-	-	-
1,4-Dichlorobenzene	2.2 U	-	-	-	2.1 U	2.3 U	2.2 U	2.2 U	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	1.7	-	-	-	8.7	10.5	9.7	2.4	-	-	-	-	-	-
2-Hexanone	1.5 U	-	-	-	1.4 U	1.6 U	3	1.5 U	-	-	-	-	-	-
4-Ethyl toluene	1.8 U	-	-	-	28.5	1.9 U	1.8 U	1.8 U	-	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1.5 U	-	-	-	1.8	1.6 U	1.5 U	3.7 U	-	-	-	-	-	-
Acetone	13.2	-	-	-	53.4	19.7	87.7	6.2	-	-	-	-	-	-
Benzene	1.4	-	-	-	1.5	0.61 U	2.8	0.58 U	-	-	-	-	-	-
Bromodichloromethane	2.4 U	-	-	-	2.4 U	2.5 U	2.4 U	2.4 U	-	-	-	-	-	-
Bromomethane (Methyl Bromide)	1.4 U	-	-	-	1.4 U	1.5 U	1.4 U	1.4 U	-	-	-	-	-	-
Carbon disulfide	1.1 U	-	-	-	12.2	1.2 U	1.1 U	17.7	-	-	-	-	-	-
Carbon tetrachloride	1.2 U	-	-	-	1.1 U	1.2 U	1.2 U	1.2 U	-	-	-	-	-	-
Chlorobenzene	1.7 U	-	-	-	1.6 U	1.8 U	4.2 U	1.7 U	-	-	-	-	-	-
Chloroform (Trichloromethane)	1.8 U	-	-	-	2.4	2.2	1.8 U	0.89 U	-	-	-	-	-	-
Chloromethane (Methyl Chloride)	0.76 U	-	-	-	0.81	0.79 U	0.76 U	0.76 U	-	-	-	-	-	-
cis-1,2-Dichloroethene	1.5 U	-	-	-	1.4 U	1.5 U	1.5 U	3.6 U	-	-	-	-	-	-
Cyclohexane	3	-	-	-	1.2 U	1.3 U	3.1 U	1.3 U	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	2.4	-	-	-	1.8 U	1.9 U	3.4	2.5	-	-	-	-	-	-
Ethanol	42.8	-	-	-	61.3	1.8 U	131	6.2	-	-	-	-	-	-
Ethyl acetate	1.3 U	-	-	-	1.3 U	1.4 U	1.3 U	1.3 U	-	-	-	-	-	-
Ethylbenzene	1.6 U	-	-	-	12.6	1.6 U	6.2	1.6 U	-	-	-	-	-	-
Hexachlorobutadiene	4 U	-	-	-	3.8 U	4.1 U	4 U	4 U	-	-	-	-	-	-
Hexane	6.6	-	-	-	7.1	1.3 U	4.4	1.5	-	-	-	-	-	-
Isopropyl Alcohol	0.9 U	-	-	-	16.5	2.3 U	2.2 U	2.2 U	-	-	-	-	-	-
m,p-Xylenes	3.2 U	-	-	-	74.4	3.3 U	22	3.2 U	-	-	-	-	-	-
Methylene chloride	8.1	-	-	-	116	6.6 U	6.4 U	63.8 U	-	-	-	-	-	-
Naphthalene	5.4	-	-	-	83.7	18.2	50.7	17.3	-	-	-	-	-	-
N-Heptane	4.9	-	-	-	1.4 U	1.6 U	5.9	1.5 U	-	-	-	-	-	-
o-Xylene	1.6 U	-	-	-	36.2	1.6 U	8.2	1.6 U	-	-	-	-	-	-
Propylene (Propene)	0.63 U	-	-	-	3.5	0.65 U	5.5	0.63 U	-	-	-	-	-	-
Styrene	1.6 U	-	-	-	1.8	1.6 U	1.6	1.6 U	-	-	-	-	-	-
Tetrachloroethene	2.9	-	-	-	5.5	6	5	3.6	-	-	-	-	-	-
Tetrahydrofuran	1.1 U	-	-	-	1 U	1.1 U	1.1 U	1.1 U	-	-	-	-	-	-
Toluene	78	-	-	-	7430	1.4 U	7.6	1.4 U	-	-	-	-	-	-
trans-1,2-Dichloroethene	1.5 U	-	-	-	1.4 U	1.5 U	1.5 U	1.5 U	-	-	-	-	-	-
Trichloroethene	1.4	11.5	2.3 U	10	18.9	20.6	9.1	9.7	0.92 U	1.3	1.1 U	0.99 U	0.96 U	1.3
Trichlorofluoromethane (CFC-11)	2.1 U	-	-	-	2	2.1 U	2.1 U	2.1 U	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	2.9 U	-	-	-	2.8 U	3 U	2.9 U	2.9 U	-	-	-	-	-	-
Vinyl acetate	1.3 U	-	-	-	3.2	1.3 U	1.3 U	1.3 U	-	-	-	-	-	-
Vinyl chloride	0.47 U	-	-	-	0.45 U	0.49 U	0.47 U	0.47 U	-	-	-	-	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	5547	5602	5816	5873	5906	5906	5906	5906	5909	5909	5948	5948	5948	5948
Sample Name	5547_01282014	5602_05162014	5816_12182013	5873_01272014	5906_A_05192014	5906_B_05192014	5906_B_07092014	5906-B-P_12162014	5909_01152014	5909_01312014	5948_A_01152014	5948_B_01152014	5948_C_01152014	5948_A_01282014
Sample Date	01/28/2014	05/16/2014	12/18/2013	01/27/2014	05/19/2014	05/19/2014	07/09/2014	12/16/2014	01/15/2014	01/31/2014	01/15/2014	01/15/2014	01/15/2014	01/28/2014
Lab Sample ID	10256143001	10267473001	10252758001	10256064001	10267646001	10267646003	10273348001	10291777001	10254896001	10256468001	10254902001	10254902003	10254902005	10256087001
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	-	1.9 U	-	-	2 U	2 U	2 U	2.1 U	-	-	-	7.5 U	-	-
1,1-Dichloroethane	-	1.4 U	-	-	1.5 U	1.5 U	1.5 U	1.5 U	-	-	-	5.6 U	-	-
1,1-Dichloroethene	-	1.4 U	-	-	1.5 U	1.5 U	1.5 U	1.5 U	-	-	-	5.5 U	-	-
1,2,4-Trichlorobenzene	-	2.6 U	-	-	2.7 U	2.7 U	2.7 U	2.8 U	-	-	-	10.3 U	-	-
1,2,4-Trimethylbenzene	-	3.7	-	-	1.8 U	1.8 U	1.8 U	4	-	-	-	29.1	-	-
1,2-Dichlorobenzene	-	2.1 U	-	-	2.2 U	2.2 U	2.2 U	2.3 U	-	-	-	8.3 U	-	-
1,2-Dichloroethane	-	0.71 U	-	-	0.74 U	0.74 U	0.74 U	0.77 U	-	-	-	2.8 U	-	-
1,3,5-Trimethylbenzene	-	2.2	-	-	1.8 U	1.8 U	1.8 U	1.9 U	-	-	-	13.2	-	-
1,3-Butadiene	-	0.78 U	-	-	0.81 U	0.81 U	0.81 U	0.84 U	-	-	-	3.1 U	-	-
1,3-Dichlorobenzene	-	2.1 U	-	-	2.2 U	2.2 U	2.2 U	2.3 U	-	-	-	8.3 U	-	-
1,4-Dichlorobenzene	-	2.1 U	-	-	2.2 U	2.2 U	2.2 U	2.3 U	-	-	-	8.3 U	-	-
2-Butanone (Methyl Ethyl Ketone)	-	6	-	-	23.6	6.9	11.9	3.4	-	-	-	9.1	-	-
2-Hexanone	-	1.4 U	-	-	5.7	2.7 U	6	1.6 U	-	-	-	5.6 U	-	-
4-Ethyl toluene	-	2.2	-	-	1.8 U	1.8 U	1.8 U	1.9 U	-	-	-	6.8 U	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	1.4 U	-	-	3.7	1.5 U	2.9	1.6 U	-	-	-	5.6 U	-	-
Acetone	-	29	-	-	230	365	73.3	22.1	-	-	-	93.4	-	-
Benzene	-	27.2	-	-	0.67	2.6	0.58 U	1.3	-	-	-	12.3	-	-
Bromodichloromethane	-	2.4 U	-	-	2.4 U	2.4 U	2.4 U	2.5 U	-	-	-	9.2 U	-	-
Bromomethane (Methyl Bromide)	-	1.4 U	-	-	1.4 U	1.4 U	1.4 U	1.5 U	-	-	-	5.4 U	-	-
Carbon disulfide	-	18.7	-	-	1.6	2	1.5	12.9	-	-	-	32.9	-	-
Carbon tetrachloride	-	1.1 U	-	-	1.2 U	1.2 U	1.2 U	1.2 U	-	-	-	4.3 U	-	-
Chlorobenzene	-	1.6 U	-	-	1.7 U	1.7 U	1.7 U	3.7	-	-	-	6.4 U	-	-
Chloroform (Trichloromethane)	-	1.7 U	-	-	1.8 U	96.6	21.8	6.7	-	-	-	6.7 U	-	-
Chloromethane (Methyl Chloride)	-	0.84	-	-	0.76 U	0.76 U	0.76 U	0.79 U	-	-	-	2.9 U	-	-
cis-1,2-Dichloroethene	-	1.4 U	-	-	1.5 U	1.5 U	1.5 U	2.5 U	-	-	-	39.6	-	-
Cyclohexane	-	12.4	-	-	1.3	2.6	1.3 U	1.3 U	-	-	-	20.1	-	-
Dichlorodifluoromethane (CFC-12)	-	2.9	-	-	3.8	1.8 U	1.8 U	1.9 U	-	-	-	6.9 U	-	-
Ethanol	-	525	-	-	370	3790	386	44.4	-	-	-	28.4	-	-
Ethyl acetate	-	74.2	-	-	1.3 U	1.8	2.7	1.4 U	-	-	-	5 U	-	-
Ethylbenzene	-	10.8	-	-	1.6 U	4.5	1.6 U	3	-	-	-	15.2	-	-
Hexachlorobutadiene	-	3.8 U	-	-	4 U	4 U	4 U	4.1 U	-	-	-	14.9 U	-	-
Hexane	-	17.8	-	-	2.4	1.6	1.3 U	13.8	-	-	-	38.7	-	-
Isopropyl Alcohol	-	7.6	-	-	9.5	23	2.2 U	2.3 U	-	-	-	19.8	-	-
m,p-Xylenes	-	17.3	-	-	3.2 U	3.2 U	3.2 U	6.3	-	-	-	82.6	-	-
Methylene chloride	-	30.7	-	-	6.4 U	6.4 U	6.5	188	-	-	-	13	-	-
Naphthalene	-	15.8	-	-	14.7	12.6	6.7	10.2	-	-	-	29	-	-
N-Heptane	-	11.8	-	-	1.5 U	14.2	1.5 U	4.3	-	-	-	22.1	-	-
o-Xylene	-	1.8	-	-	1.6 U	1.6 U	1.6 U	4.3	-	-	-	38	-	-
Propylene (Propene)	-	0.61 U	-	-	0.63 U	0.63 U	0.63 U	0.65 U	-	-	-	39.1	-	-
Styrene	-	1.5 U	-	-	3.9 U	610	96.3	9.9	-	-	-	5.9 U	-	-
Tetrachloroethene	-	1.2 U	-	-	1.2 U	1.2 U	1.2 U	9.4	-	-	-	505	-	-
Tetrahydrofuran	-	1 U	-	-	3	1.1 U	1.1 U	1.1 U	-	-	-	4.1 U	-	-
Toluene	-	5.1	-	-	2.6	21.5	3.7	4.6	-	-	-	121	-	-
trans-1,2-Dichloroethene	-	1.4 U	-	-	1.5 U	1.5 U	1.5 U	1.5 U	-	-	-	5.5 U	-	-
Trichloroethene	1.1	0.96 U	0.96 U	0.96 U	8.4	27.8	44	29.9	5.6	5.4	0.96 U	33	21.1	0.92 U
Trichlorofluoromethane (CFC-11)	-	2 U	-	-	2.1 U	86.9	2.2	2.8	-	-	-	7.7 U	-	-
Trifluorotrichloroethane (Freon 113)	-	2.8 U	-	-	2.9 U	2.9 U	2.9 U	3 U	-	-	-	10.9 U	-	-
Vinyl acetate	-	3.4	-	-	3.2	2	1.3 U	1.3 U	-	-	-	4.9 U	-	-
Vinyl chloride	-	0.45 U	-	-	0.47 U	0.47 U	0.47 U	0.49 U	-	-	-	1.8 U	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	5948	5948	6016	6016	6066	6072	6072	6073	6091	6091	6138	6138	6173	6178	6217
Sample Name	5948_B_01282014	5948_C_01282014	6016_01222014	6016_02052014	6066_12182013	6072_A_04252014	6072_B_04252014	6073_04012014	6091_11292013	6091_01162014	6138_02062014	6138_03182014	6173_03312014	6178_12022013	6217_A_01042014
Sample Date	01/28/2014	01/28/2014	01/22/2014	02/05/2014	12/18/2013	04/25/2014	04/25/2014	04/01/2014	11/29/2013	01/16/2014	02/06/2014	03/18/2014	03/31/2014	12/02/2013	01/04/2014
Lab Sample ID	10256087003	10256087005	10255585001	10256861001	10252682001	10264783001	10264781003	10264783003	10250909001	10255115001	10256977001	10260591001	10261806001	10250939001	10253965001
Volatile Organic Compounds (µg/m³)															
1,1,1-Trichloroethane	-	-	2.7	-	-	2 U	2 U	2.1 U	-	-	-	-	11.7	-	-
1,1-Dichloroethane	-	-	1.5 U	-	-	1.5 U	1.5 U	1.5 U	-	-	-	-	1.4 U	-	-
1,1-Dichloroethene	-	-	1.5 U	-	-	1.5 U	1.5 U	1.5 U	-	-	-	-	1.4 U	-	-
1,2,4-Trichlorobenzene	-	-	2.7 U	-	-	2.7 U	2.7 U	2.8 U	-	-	-	-	2.6 U	-	-
1,2,4-Trimethylbenzene	-	-	1.8 U	-	-	1.8 U	2.7	2.9	-	-	-	-	1.7 U	-	-
1,2-Dichlorobenzene	-	-	2.2 U	-	-	2.2 U	2.2 U	2.3 U	-	-	-	-	2.1 U	-	-
1,2-Dichloroethane	-	-	0.74 U	-	-	0.74 U	0.74 U	0.77 U	-	-	-	-	0.71 U	-	-
1,3,5-Trimethylbenzene	-	-	1.8 U	-	-	1.8 U	1.8 U	1.9 U	-	-	-	-	1.7 U	-	-
1,3-Butadiene	-	-	0.81 U	-	-	0.81 U	0.81 U	0.84 U	-	-	-	-	0.78 U	-	-
1,3-Dichlorobenzene	-	-	2.2 U	-	-	2.2 U	2.2 U	2.3 U	-	-	-	-	2.1 U	-	-
1,4-Dichlorobenzene	-	-	2.2 U	-	-	2.2 U	2.2 U	2.3 U	-	-	-	-	2.1 U	-	-
2-Butanone (Methyl Ethyl Ketone)	-	-	1.2	-	-	9.5	5.4	7.7	-	-	-	-	8	-	-
2-Hexanone	-	-	1.5 U	-	-	2.2	1.5 U	2.6	-	-	-	-	2.2	-	-
4-Ethyl toluene	-	-	1.8 U	-	-	1.8 U	1.8 U	1.9 U	-	-	-	-	1.7 U	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	1.5 U	-	-	2.4	2.1	2.3	-	-	-	-	1.7	-	-
Acetone	-	-	17.6	-	-	78.4	97.7	45.1 U	-	-	-	-	85.1	-	-
Benzene	-	-	0.58 U	-	-	2.9 U	2.9 U	6.1	-	-	-	-	0.57 U	-	-
Bromodichloromethane	-	-	2.4 U	-	-	2.4 U	2.4 U	2.5 U	-	-	-	-	2.4 U	-	-
Bromomethane (Methyl Bromide)	-	-	1.4 U	-	-	1.4 U	1.4 U	1.5 U	-	-	-	-	1.4 U	-	-
Carbon disulfide	-	-	1.1 U	-	-	1.1 U	16.1	2.4	-	-	-	-	1.1 U	-	-
Carbon tetrachloride	-	-	1.2 U	-	-	1.2 U	1.2 U	1.2 U	-	-	-	-	1.1 U	-	-
Chlorobenzene	-	-	1.7 U	-	-	1.7 U	1.7	3.7	-	-	-	-	1.6 U	-	-
Chloroform (Trichloromethane)	-	-	1.8 U	-	-	0.89 U	0.89 U	1.9 U	-	-	-	-	2.3	-	-
Chloromethane (Methyl Chloride)	-	-	0.76 U	-	-	0.76 U	0.76 U	0.79 U	-	-	-	-	0.73 U	-	-
cis-1,2-Dichloroethene	-	-	1.5 U	-	-	1.5 U	1.5 U	1.5 U	-	-	-	-	1.4 U	-	-
Cyclohexane	-	-	1.3 U	-	-	1.3 U	1.3 U	1.5	-	-	-	-	1.2 U	-	-
Dichlorodifluoromethane (CFC-12)	-	-	2.3	-	-	39	9.8	2.7	-	-	-	-	6.5	-	-
Ethanol	-	-	5	-	-	133	77.9	8.2	-	-	-	-	9.1	-	-
Ethyl acetate	-	-	1.3 U	-	-	5.8	1.3 U	6.6	-	-	-	-	2	-	-
Ethylbenzene	-	-	1.6 U	-	-	1.6 U	1.6 U	6.4	-	-	-	-	1.5 U	-	-
Hexachlorobutadiene	-	-	4 U	-	-	4 U	4 U	4.1 U	-	-	-	-	3.8 U	-	-
Hexane	-	-	1.3 U	-	-	1.3	1.3 U	3.8	-	-	-	-	1.3	-	-
Isopropyl Alcohol	-	-	0.9 U	-	-	7.7	2.2 U	11.6	-	-	-	-	0.87 U	-	-
m,p-Xylenes	-	-	3.2 U	-	-	6.4	6.5	19.9	-	-	-	-	3.1 U	-	-
Methylene chloride	-	-	6	-	-	6.4 U	6.4 U	27.2	-	-	-	-	74.5	-	-
Naphthalene	-	-	6	-	-	23.4	16.1	11.1	-	-	-	-	10.1	-	-
N-Heptane	-	-	1.5 U	-	-	1.5 U	2.3	1.8	-	-	-	-	1.4 U	-	-
o-Xylene	-	-	1.6 U	-	-	1.7	1.6 U	5.5	-	-	-	-	1.5 U	-	-
Propylene (Propene)	-	-	0.79	-	-	1.6	0.63 U	0.65 U	-	-	-	-	0.61 U	-	-
Styrene	-	-	1.6 U	-	-	1.6 U	1.6 U	1.6 U	-	-	-	-	1.7	-	-
Tetrachloroethene	-	-	1.8	-	-	6.2 U	28.8	1.3 U	-	-	-	-	5.4	-	-
Tetrahydrofuran	-	-	1.1 U	-	-	1.1 U	1.1 U	1.1 U	-	-	-	-	1.3	-	-
Toluene	-	-	60.9	-	-	2.3	4	40.5	-	-	-	-	38.3	-	-
trans-1,2-Dichloroethene	-	-	1.5 U	-	-	1.5 U	1.5 U	1.5 U	-	-	-	-	1.4 U	-	-
Trichloroethene	21.8	12.9	7.4	4.5	0.99 U	0.99 U	0.99 U	1.4	2.9	4.3	2.7	1.5	1.6	0.99 U	1 U
Trichlorofluoromethane (CFC-11)	-	-	2.1 U	-	-	2.1 U	2.2	2.1 U	-	-	-	-	2 U	-	-
Trifluorotrichloroethane (Freon 113)	-	-	2.9 U	-	-	2.9 U	2.9 U	3 U	-	-	-	-	2.8 U	-	-
Vinyl acetate	-	-	1.3 U	-	-	1.3 U	1.3 U	1.3 U	-	-	-	-	1.8	-	-
Vinyl chloride	-	-	0.47 U	-	-	0.47 U	0.47 U	0.49 U	-	-	-	-	0.45 U	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	6217	6272	6272	6297	6297	6297	6297	6335	6335	6335	6335	6390	6390	6390
Sample Name	6217_B_01042014	6272_05092014	6272_05302014	6297_A_01312014	6297_B_01312014	6297_A_04142014	6297_B_04142014	6335_A_01242014	6335_B_01242014	6335_C_01242014	6335_D_01242014	6390_A_12112013	6390_F_12112013	6390_B_12172013
Sample Date	01/04/2014	05/09/2014	05/30/2014	01/31/2014	01/31/2014	04/14/2014	04/14/2014	01/24/2014	01/24/2014	01/24/2014	01/24/2014	12/11/2013	12/11/2013	12/17/2013
Lab Sample ID	10253965003	10266540001	10269201001	10256474001	10256474003	10263302001	10263302003	10255979001	10255979003	10255979005	10255979007	10251938001	10251938003	10252556001
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	-	2 U	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	-	1.5 U	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	-	1.5 U	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	-	6.8 U	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	-	6.3	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	2.2 U	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	-	0.74 U	-	-	-	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	-	4.5 U	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Butadiene	-	2 U	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	-	2.2 U	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	-	2.2 U	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	-	21.6	-	-	-	-	-	-	-	-	-	-	-	-
2-Hexanone	-	3.3	-	-	-	-	-	-	-	-	-	-	-	-
4-Ethyl toluene	-	4.5 U	-	-	-	-	-	-	-	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	3.7 U	-	-	-	-	-	-	-	-	-	-	-	-
Acetone	-	43.4	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	-	5.5	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	-	2.4 U	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane (Methyl Bromide)	-	3.6 U	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	-	22.1	-	-	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride	-	1.2 U	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	-	1.7 U	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform (Trichloromethane)	-	1.8 U	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane (Methyl Chloride)	-	0.76 U	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	-	1.5 U	-	-	-	-	-	-	-	-	-	-	-	-
Cyclohexane	-	13	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	-	1.8 U	-	-	-	-	-	-	-	-	-	-	-	-
Ethanol	-	16.5	-	-	-	-	-	-	-	-	-	-	-	-
Ethyl acetate	-	1.3 U	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	-	6.6	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	-	9.8 U	-	-	-	-	-	-	-	-	-	-	-	-
Hexane	-	5.6	-	-	-	-	-	-	-	-	-	-	-	-
Isopropyl Alcohol	-	4.8	-	-	-	-	-	-	-	-	-	-	-	-
m,p-Xylenes	-	23.9	-	-	-	-	-	-	-	-	-	-	-	-
Methylene chloride	-	9	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	-	11.5	-	-	-	-	-	-	-	-	-	-	-	-
N-Heptane	-	8.1	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	-	7.5	-	-	-	-	-	-	-	-	-	-	-	-
Propylene (Propene)	-	0.63 U	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	-	3.9 U	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	-	2.8	-	-	-	-	-	-	-	-	-	-	-	-
Tetrahydrofuran	-	5.4 U	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	-	10.1	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	-	1.5 U	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	0.99 U	7.8	9.7	15.3	12.3	18.6	4.3	1 U	0.99 U	0.99 U	1 U	0.99 U	1.8	0.99 U
Trichlorofluoromethane (CFC-11)	-	5.1 U	-	-	-	-	-	-	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	-	2.9 U	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl acetate	-	1.3 U	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	-	0.47 U	-	-	-	-	-	-	-	-	-	-	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	6390	6390	6390	6390	6390	6390	6390	6390	6390	6396	6441	6544	6551	6750	6787
Sample Name	6390_C_12172013	6390_D_12172013	6390_E2_12172013	6390_A_01072014	6390_B_01072014	6390_C_01072014	6390_D_01072014	6390_E_01072014	6390_F_01072014	6396_12182013	6441_11212013	6544_05302014	6551_03032014	6750_10092014	6787_04072014
Sample Date	12/17/2013	12/17/2013	12/17/2013	01/07/2014	01/07/2014	01/07/2014	01/07/2014	01/07/2014	01/07/2014	12/18/2013	11/21/2013	05/30/2014	03/03/2014	10/09/2014	04/07/2014
Lab Sample ID	10252556003	10252556005	10252556007	10254093001	10254093003	10254093005	10254093007	10254093009	10254093007	10252681001	10250159001	10269073001	10259168001	10284517001	10262642001
Volatile Organic Compounds (µg/m ³)															
1,1,1-Trichloroethane	-	-	-	-	-	-	-	-	-	-	-	1.9 U	-	2 U	2 U
1,1-Dichloroethane	-	-	-	-	-	-	-	-	-	-	-	1.4 U	-	1.5 U	1.5 U
1,1-Dichloroethene	-	-	-	-	-	-	-	-	-	-	-	1.4 U	-	1.5 U	1.5 U
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	-	-	-	-	2.6 U	-	6.8 U	2.7 U
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-	-	1.7 U	-	1.8 U	1.8 U
1,2-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	-	2.1 U	-	5.5 U	2.2 U
1,2-Dichloroethane	-	-	-	-	-	-	-	-	-	-	-	0.71 U	-	0.74 U	0.74 U
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	-	-	-	-	1.7 U	-	1.8 U	1.8 U
1,3-Butadiene	-	-	-	-	-	-	-	-	-	-	-	0.78 U	-	0.81 U	0.81 U
1,3-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	-	2.1 U	-	2.2 U	2.2 U
1,4-Dichlorobenzene	-	-	-	-	-	-	-	-	-	-	-	2.1 U	-	2.2 U	2.2 U
2-Butanone (Methyl Ethyl Ketone)	-	-	-	-	-	-	-	-	-	-	-	6.2	-	7.8	27
2-Hexanone	-	-	-	-	-	-	-	-	-	-	-	2.3	-	2.6	1.5 U
4-Ethyl toluene	-	-	-	-	-	-	-	-	-	-	-	1.7 U	-	1.8 U	1.8 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	-	-	-	-	-	-	-	-	1.4 U	-	1.8	1.9
Acetone	-	-	-	-	-	-	-	-	-	-	-	47	-	110	903
Benzene	-	-	-	-	-	-	-	-	-	-	-	0.57 U	-	0.93	0.58 U
Bromodichloromethane	-	-	-	-	-	-	-	-	-	-	-	2.4 U	-	2.4 U	2.4 U
Bromomethane (Methyl Bromide)	-	-	-	-	-	-	-	-	-	-	-	1.4 U	-	1.4 U	1.4 U
Carbon disulfide	-	-	-	-	-	-	-	-	-	-	-	1.1 U	-	1.1 U	1.1 U
Carbon tetrachloride	-	-	-	-	-	-	-	-	-	-	-	1.1 U	-	1.2 U	1.2 U
Chlorobenzene	-	-	-	-	-	-	-	-	-	-	-	1.6 U	-	1.7 U	1.7 U
Chloroform (Trichloromethane)	-	-	-	-	-	-	-	-	-	-	-	1.7 U	-	1.5	1.8 U
Chloromethane (Methyl Chloride)	-	-	-	-	-	-	-	-	-	-	-	0.73 U	-	0.76 U	0.76 U
cis-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-	-	-	1.4 U	-	1.5 U	1.5 U
Cyclohexane	-	-	-	-	-	-	-	-	-	-	-	1.7	-	2.4	1.3 U
Dichlorodifluoromethane (CFC-12)	-	-	-	-	-	-	-	-	-	-	-	2	-	2.4	2.1
Ethanol	-	-	-	-	-	-	-	-	-	-	-	210	-	123	56.5
Ethyl acetate	-	-	-	-	-	-	-	-	-	-	-	3.4	-	1.3 U	4.4
Ethylbenzene	-	-	-	-	-	-	-	-	-	-	-	1.5 U	-	1.6 U	1.6 U
Hexachlorobutadiene	-	-	-	-	-	-	-	-	-	-	-	3.8 U	-	4 U	4 U
Hexane	-	-	-	-	-	-	-	-	-	-	-	1.3 U	-	2.9	1.3 U
Isopropyl Alcohol	-	-	-	-	-	-	-	-	-	-	-	3.1	-	11.8	14.4
m,p-Xylenes	-	-	-	-	-	-	-	-	-	-	-	3.1 U	-	3.2 U	3.2
Methylene chloride	-	-	-	-	-	-	-	-	-	-	-	12.5	-	6.4 U	2.3
Naphthalene	-	-	-	-	-	-	-	-	-	-	-	17	-	13.7	12
N-Heptane	-	-	-	-	-	-	-	-	-	-	-	1.4 U	-	1.5 U	1.5 U
o-Xylene	-	-	-	-	-	-	-	-	-	-	-	1.5 U	-	1.6 U	1.6 U
Propylene (Propene)	-	-	-	-	-	-	-	-	-	-	-	0.61 U	-	5.3	0.63 U
Styrene	-	-	-	-	-	-	-	-	-	-	-	2	-	1.6 U	1.6 U
Tetrachloroethene	-	-	-	-	-	-	-	-	-	-	-	1.2 U	-	3.8	1.2 U
Tetrahydrofuran	-	-	-	-	-	-	-	-	-	-	-	1 U	-	55.8	1.1 U
Toluene	-	-	-	-	-	-	-	-	-	-	-	2.7	-	2.3	25
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	-	-	-	-	1.4 U	-	1.5 U	1.5 U
Trichloroethene	0.99 U	10.2	0.99 U	0.96 U	0.99 U	0.99 U	0.99 U	1 U	0.99 U	0.99 U	0.99 U	1.5	0.96 U	0.99 U	0.99 U
Trichlorofluoromethane (CFC-11)	-	-	-	-	-	-	-	-	-	-	-	2 U	-	2.1 U	2.1 U
Trifluorotrichloroethane (Freon 113)	-	-	-	-	-	-	-	-	-	-	-	2.8 U	-	2.9 U	2.9 U
Vinyl acetate	-	-	-	-	-	-	-	-	-	-	-	2.4	-	2.5	1.3 U
Vinyl chloride	-	-	-	-	-	-	-	-	-	-	-	0.45 U	-	0.47 U	0.47 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	6841	6841	6990	6990	7084	7084	7084	7088	7107	7107	7107	7107	7158
Sample Name	6841_DP-058_8-8_07212014	6841_DP-059_8-8_07212014	6990_A_01132014	6990_B_01132014	7084_A_10102014	7084_B_10102014	7084_11142014	7088_01142014	7107_A_01072014	7107_B_01072014	7107_A_02012014	7107_B_02012014	7158_12232013
Sample Date	07/21/2014 10274601001	07/21/2014 10274601003	01/13/2014	01/13/2014	10/10/2014 10284726001	10/10/2014 10284726003	11/14/2014	01/14/2014	01/07/2014	01/07/2014	02/01/2014	02/01/2014	12/23/2013
Lab Sample ID	10274602001	10274602003	10254620001	10254620003	10284727001	10284727003	10288785001	10254713001	10254115001	10254115003	10256585001	10256585003	10253399001
Volatile Organic Compounds (µg/m³)													
1,1,1-Trichloroethane	2.1 U	2.2 U	-	-	2 U	2 U	2 U	-	-	-	-	-	-
1,1-Dichloroethane	1.5 U	1.6 U	-	-	1.5 U	1.5 U	1.5 U	-	-	-	-	-	-
1,1-Dichloroethene	1.5 U	1.6 U	-	-	1.5 U	1.5 U	1.5 U	-	-	-	-	-	-
1,2,4-Trichlorobenzene	2.8 U	2.9 U	-	-	6.8 U	6.8 U	6.8 U	-	-	-	-	-	-
1,2,4-Trimethylbenzene	7.1 U	7.3 U	-	-	1.8 U	1.8 U	4.5 U	-	-	-	-	-	-
1,2-Dichlorobenzene	2.3 U	2.4 U	-	-	2.2 U	2.2 U	5.5 U	-	-	-	-	-	-
1,2-Dichloroethane	0.77 U	0.8 U	-	-	0.74 U	0.74 U	0.74 U	-	-	-	-	-	-
1,3,5-Trimethylbenzene	-	1.9 U	-	-	1.8 U	1.8 U	4.5 U	-	-	-	-	-	-
1,3-Butadiene	0.84 U	0.87 U	-	-	0.81 U	0.81 U	0.81 U	-	-	-	-	-	-
1,3-Dichlorobenzene	2.3 U	2.4 U	-	-	2.2 U	2.2 U	5.5 U	-	-	-	-	-	-
1,4-Dichlorobenzene	2.3 U	2.4 U	-	-	2.2 U	2.2 U	5.5 U	-	-	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	19.1	41.2	-	-	6.2	4.1	4.1	-	-	-	-	-	-
2-Hexanone	1.6 U	7.5	-	-	3.6	21.5	1.5 U	-	-	-	-	-	-
4-Ethyl toluene	1.9 U	1.9 U	-	-	1.8 U	1.8 U	4.5 U	-	-	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	2.8	3	-	-	1.5 U	1.6	3.7 U	-	-	-	-	-	-
Acetone	133	145	-	-	84.7	253	27.4	-	-	-	-	-	-
Benzene	8.9	10.1	-	-	0.58 U	5.9	1.2 U	-	-	-	-	-	-
Bromodichloromethane	2.5 U	2.6 U	-	-	2.4 U	2.4 U	2.4 U	-	-	-	-	-	-
Bromomethane (Methyl Bromide)	1.5 U	1.5 U	-	-	1.4 U	1.4 U	1.4 U	-	-	-	-	-	-
Carbon disulfide	5	10.1	-	-	1.1 U	4.6	4.5	-	-	-	-	-	-
Carbon tetrachloride	1.2 U	1.2 U	-	-	1.2 U	1.2 U	1.2 U	-	-	-	-	-	-
Chlorobenzene	8.1	16.9	-	-	1.7 U	1.7 U	1.7 U	-	-	-	-	-	-
Chloroform (Trichloromethane)	32.2	0.96 U	-	-	0.89 U	0.89 U	0.89 U	-	-	-	-	-	-
Chloromethane (Methyl Chloride)	0.79 U	0.81 U	-	-	0.76 U	0.76 U	0.76 U	-	-	-	-	-	-
cis-1,2-Dichloroethene	67.1	1.6 U	-	-	1.5 U	1.5 U	1.5 U	-	-	-	-	-	-
Cyclohexane	6.7	11	-	-	1.3 U	4.6	1.3 U	-	-	-	-	-	-
Dichlorodifluoromethane (CFC-12)	3.3	2 U	-	-	1.8 U	3.3	2.5	-	-	-	-	-	-
Ethanol	52.3	12.2	-	-	593	764	56.2	-	-	-	-	-	-
Ethyl acetate	1.4 U	32.9	-	-	1.3 U	1.3 U	1.3 U	-	-	-	-	-	-
Ethylbenzene	1.8	10.9	-	-	2.2	2	4 U	-	-	-	-	-	-
Hexachlorobutadiene	4.1 U	4.3 U	-	-	9.8 U	9.8 U	9.8 U	-	-	-	-	-	-
Hexane	4.5	14.7	-	-	1.3 U	2.3	1.3 U	-	-	-	-	-	-
Isopropyl Alcohol	2.3 U	2.4 U	-	-	2.2 U	2.2 U	2.2 U	-	-	-	-	-	-
m,p-Xylenes	4.1 U	7.9	-	-	6.4	3.2 U	15.9 U	-	-	-	-	-	-
Methylene chloride	11.3	9.8	-	-	6.4 U	6.4 U	6.4 U	-	-	-	-	-	-
Naphthalene	5 U	5.2 U	-	-	30.3	17.5	11.8	-	-	-	-	-	-
N-Heptane	11.1	26.7	-	-	1.5 U	5.9	4.1	-	-	-	-	-	-
o-Xylene	1.6 U	3	-	-	2.2	1.6 U	4 U	-	-	-	-	-	-
Propylene (Propene)	38.4	61	-	-	1.6 U	1.6 U	0.93	-	-	-	-	-	-
Styrene	1.6 U	1.7 U	-	-	1.6 U	1.6 U	3.9 U	-	-	-	-	-	-
Tetrachloroethene	53.5	12.4	-	-	1.2 U	1.5	4.7	-	-	-	-	-	-
Tetrahydrofuran	1.1 U	1.2 U	-	-	1.1 U	1.1 U	1.1 U	-	-	-	-	-	-
Toluene	9.4	20.5	-	-	2.2	3.9	1.9	-	-	-	-	-	-
trans-1,2-Dichloroethene	18.9	1.6 U	-	-	1.5 U	1.5 U	1.5 U	-	-	-	-	-	-
Trichloroethene	3270	97.4	1.5 U	0.99 U	19.7	35.9	29.4	0.99 U	14.4	12.8	16.5	15.1	3.3
Trichlorofluoromethane (CFC-11)	15.9	2.2 U	-	-	2.2	2.1 U	2.1 U	-	-	-	-	-	-
Trifluorotrichloroethane (Freon 113)	3 U	3.1 U	-	-	2.9 U	2.9 U	2.9 U	-	-	-	-	-	-
Vinyl acetate	28.4 U	17.6 U	-	-	1.3 U	1.3 U	1.3 U	-	-	-	-	-	-
Vinyl chloride	0.49 U	0.5 U	-	-	0.47 U	0.47 U	0.47 U	-	-	-	-	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	7158	7166	7166	7187	7201	7201	7275	7275	7275	7275	7431	7431	7496	7496
Sample Name	7158_01102014	7166_A_01062014	7166_B_01062014	7187_11142014	7201_A_05122014	7201_B_06042014	7275_A_08152014	7275_B_08152014	7275_A_09262014	7275_B_09262014	7431_A_11212013	7431_B_11212013	7496_01112014	7496_03132014
Sample Date	01/10/2014	01/06/2014	01/06/2014	11/14/2014	05/12/2014	06/04/2014	08/15/2014	08/15/2014	09/26/2014	09/26/2014	11/21/2013	11/21/2013	01/11/2014	03/13/2014
Lab Sample ID	10254403001	10253993001	10253993003	10288804001	10266734001	10269521001	10277882001	10277882003	10282977001	10282977003	10250089001	10250090001	10254580001	10260262001
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	-	-	-	2.1 U	2 U	2.1 U	2.1 U	2.1 U	2.1 U	2 U	-	-	51.6	54.3
1,1-Dichloroethane	-	-	-	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	1.5 U	1.5 U
1,1-Dichloroethene	-	-	-	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	1.5 U	1.5 U
1,2,4-Trichlorobenzene	-	-	-	7.1 U	2.7 U	2.8 U	2.8 U	2.8 U	2.8 U	2.7 U	-	-	2.8 U	2.8 U
1,2,4-Trimethylbenzene	-	-	-	23.4	1.8 U	7.2	2.2	1.9 U	1.9 U	1.8 U	-	-	1.9 U	1.9 U
1,2-Dichlorobenzene	-	-	-	12	2.2 U	2.3 U	2.3 U	2.3 U	2.3 U	2.2 U	-	-	2.3 U	2.3 U
1,2-Dichloroethane	-	-	-	0.77 U	0.74 U	0.77 U	0.77 U	0.77 U	0.77 U	0.74 U	-	-	0.77 U	3.1
1,3,5-Trimethylbenzene	-	-	-	11.9	1.8 U	7.6	1.9 U	1.9 U	1.9 U	1.8 U	-	-	1.9 U	1.9 U
1,3-Butadiene	-	-	-	0.84 U	0.81 U	0.84 U	0.84 U	0.84 U	0.84 U	0.81 U	-	-	0.84 U	0.84 U
1,3-Dichlorobenzene	-	-	-	5.7 U	2.2 U	2.3 U	2.3 U	2.3 U	2.3 U	2.2 U	-	-	2.3 U	2.3 U
1,4-Dichlorobenzene	-	-	-	9.9	2.2 U	2.3 U	2.3 U	2.3 U	2.3 U	2.2 U	-	-	2.3 U	2.3 U
2-Butanone (Methyl Ethyl Ketone)	-	-	-	3.2	7.2	4.4	4.2	6.5	3.7	2.1	-	-	8.9	1.2
2-Hexanone	-	-	-	1.6 U	1.5 U	1.7	3	3.2	1.6 U	1.5 U	-	-	1.6 U	1.6 U
4-Ethyl toluene	-	-	-	8.9	1.8 U	2.7	1.9 U	1.9 U	1.9 U	1.8 U	-	-	1.9 U	1.9 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	3.9 U	1.8	1.6 U	3.9 U	3.9 U	1.6 U	1.5 U	-	-	1.6 U	1.6 U
Acetone	-	-	-	76.3	81.7	33.3	16.4	19	20.8	8.6	-	-	38.5	4.5 U
Benzene	-	-	-	97.1	0.77	1.3	1	1.2	3.3	1.4	-	-	1.2	0.61 U
Bromodichloromethane	-	-	-	2.5 U	2.4 U	2.5 U	2.5 U	2.5 U	2.5 U	2.4 U	-	-	2.5 U	2.5 U
Bromomethane (Methyl Bromide)	-	-	-	1.5 U	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.4 U	-	-	1.5 U	1.5 U
Carbon disulfide	-	-	-	6.7	1.1 U	1.8	1.2 U	1.2 U	32.7	4.6	-	-	14.1	1.2
Carbon tetrachloride	-	-	-	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	-	-	1.2 U	1.2 U
Chlorobenzene	-	-	-	12.6	1.7 U	1.8 U	3.7	4.3	2.8	2.3	-	-	1.8 U	1.8 U
Chloroform (Trichloromethane)	-	-	-	35.4	1.8 U	1.9 U	0.93 U	0.93 U	0.93 U	0.89 U	-	-	1.9 U	1.9 U
Chloromethane (Methyl Chloride)	-	-	-	0.79 U	0.76 U	0.79 U	0.79 U	0.79 U	0.79 U	0.76 U	-	-	0.79 U	0.79 U
cis-1,2-Dichloroethene	-	-	-	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5	1.5 U	-	-	1.5 U	1.5 U
Cyclohexane	-	-	-	1.3 U	1.3 U	61.1	3.3 U	7.7	3.3 U	3.1 U	-	-	2.1	1.3 U
Dichlorodifluoromethane (CFC-12)	-	-	-	1.9 U	2.6	3	2.5	2.6	2.6	2.5	-	-	2.4	2.1
Ethanol	-	-	-	530	537	236	16	115	17.6	10.3	-	-	114	15.1
Ethyl acetate	-	-	-	1.4 U	1.3 U	1.4	1.4 U	1.4 U	1.4 U	1.3 U	-	-	1.4 U	1.4 U
Ethylbenzene	-	-	-	67.9	1.6 U	6.7	1.6 U	1.6 U	1.6 U	2.5	-	-	1.6 U	1.6 U
Hexachlorobutadiene	-	-	-	10.1 U	4 U	4.1 U	4.1 U	4.1 U	4.1 U	4 U	-	-	4.1 U	4.1 U
Hexane	-	-	-	16	2.7	3.6	3.3 U	5.2	2.4	2.5	-	-	8.7	1.3 U
Isopropyl Alcohol	-	-	-	2.3 U	5.1	3.1	2.3 U	2.3 U	4.9	2.2 U	-	-	3.3	2.1
m,p-Xylenes	-	-	-	55.3	5	28.1	3.3 U	3.4	5.4	13	-	-	3.3 U	3.3 U
Methylene chloride	-	-	-	6.6 U	6.4 U	14	6.6 U	6.6 U	6.6 U	6.4 U	-	-	29	2.7
Naphthalene	-	-	-	64.4	23.6	60.1	31.2	18.8	40.8	27.6	-	-	14.6	5.7
N-Heptane	-	-	-	3.3	1.5 U	2.9	4.8	6.5	2.1	3.2	-	-	4	1.6 U
o-Xylene	-	-	-	31.3	1.6 U	9.1	4.1 U	4.1 U	1.6 U	3.1	-	-	1.6 U	1.6 U
Propylene (Propene)	-	-	-	0.65 U	0.63 U	0.65 U	0.65 U	0.65 U	10.5	4	-	-	0.65 U	0.65 U
Styrene	-	-	-	199	2.1	2.1	4 U	4 U	4 U	3.9 U	-	-	1.6 U	1.6 U
Tetrachloroethene	-	-	-	5.6	1.2 U	1.7	9.1	5.6	14.5	7.3	-	-	9.4	11.7
Tetrahydrofuran	-	-	-	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	-	-	1.1 U	1.1 U
Toluene	-	-	-	87.7	4.4	17.4	3.8	20.7	6.9	38.1	-	-	2.8	2.9
trans-1,2-Dichloroethene	-	-	-	1.5 U	1.5 U	1.5 U	2.1	1.5 U	1.5 U	1.5 U	-	-	1.5 U	1.5 U
Trichloroethene	2.6	0.99 U	0.99 U	3	1.5	1 U	5.1	2	3.6	2	0.99 U	1 U	4.8	4.3
Trichlorofluoromethane (CFC-11)	-	-	-	44.6	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	-	-	2.1 U	2.1 U
Trifluorotrichloroethane (Freon 113)	-	-	-	3 U	2.9 U	3 U	3 U	3 U	3 U	2.9 U	-	-	4.2	3.9
Vinyl acetate	-	-	-	1.3 U	1.3 U	1.3 U	3.3 U	3.3 U	1.3 U	1.3 U	-	-	1.3 U	1.3 U
Vinyl chloride	-	-	-	0.49 U	0.47 U	0.49 U	0.49 U	0.49 U	0.49 U	0.47 U	-	-	0.49 U	0.49 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	7742	7742	7792	7792	7914	7914	7914	7914	7953	7953	7958	7958	8222	8222
Sample Name	7742_12022013	7742_01072014	7792_A_08132014	7792_B_08132014	7914_A_01152014	7914_B_01152014	7914_B_02162014	7914_A_02212014	7953_A_02212014	7953_B_02212014	7958_02202014	7958_03202014	8222_A_12182013	8222_B_12182013
Sample Date	12/02/2013	01/07/2014	08/13/2014	08/13/2014	01/15/2014	01/15/2014	02/16/2014	02/21/2014	02/21/2014	02/21/2014	02/20/2014	03/20/2014	12/18/2013	12/18/2013
Lab Sample ID	10251005001	10254142001	10277450001	10277450003	10254884001	10254884003	10257894001	10258538001	10258416001	10258416003	10258415001	10260966001	10252771001	10252771003
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	-	-	2 U	2 U	-	-	-	-	-	-	-	-	26.1	18.3
1,1-Dichloroethane	-	-	1.5 U	1.5 U	-	-	-	-	-	-	-	-	2.5 U	2.4 U
1,1-Dichloroethene	-	-	1.5 U	1.5 U	-	-	-	-	-	-	-	-	2.4 U	2.4 U
1,2,4-Trichlorobenzene	-	-	2.7 U	2.7 U	-	-	-	-	-	-	-	-	4.6 U	4.4 U
1,2,4-Trimethylbenzene	-	-	1.8 U	2.4	-	-	-	-	-	-	-	-	3 U	2.9 U
1,2-Dichlorobenzene	-	-	2.2 U	2.2 U	-	-	-	-	-	-	-	-	3.7 U	3.6 U
1,2-Dichloroethane	-	-	0.74 U	0.74 U	-	-	-	-	-	-	-	-	1.2 U	1.2 U
1,3,5-Trimethylbenzene	-	-	1.8 U	1.8 U	-	-	-	-	-	-	-	-	3 U	2.9 U
1,3-Butadiene	-	-	0.81 U	0.81 U	-	-	-	-	-	-	-	-	1.4 U	1.3 U
1,3-Dichlorobenzene	-	-	2.2 U	2.2 U	-	-	-	-	-	-	-	-	3.7 U	3.6 U
1,4-Dichlorobenzene	-	-	2.2 U	2.2 U	-	-	-	-	-	-	-	-	3.7 U	3.6 U
2-Butanone (Methyl Ethyl Ketone)	-	-	17.5	24.4	-	-	-	-	-	-	-	-	34.4	7.8
2-Hexanone	-	-	3.7	3.8	-	-	-	-	-	-	-	-	2.5 U	2.4 U
4-Ethyl toluene	-	-	1.8 U	1.8 U	-	-	-	-	-	-	-	-	3 U	2.9 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	1.5 U	1.5 U	-	-	-	-	-	-	-	-	2.5 U	2.4 U
Acetone	-	-	72.5	171	-	-	-	-	-	-	-	-	139	32.3
Benzene	-	-	0.58 U	0.6	-	-	-	-	-	-	-	-	0.98 U	0.95 U
Bromodichloromethane	-	-	2.4 U	2.4 U	-	-	-	-	-	-	-	-	4.1 U	4 U
Bromomethane (Methyl Bromide)	-	-	1.4 U	1.4 U	-	-	-	-	-	-	-	-	2.4 U	2.3 U
Carbon disulfide	-	-	1.1 U	1.1 U	-	-	-	-	-	-	-	-	1.9 U	1.8 U
Carbon tetrachloride	-	-	1.2 U	1.2 U	-	-	-	-	-	-	-	-	1.9 U	1.9 U
Chlorobenzene	-	-	1.7 U	1.7 U	-	-	-	-	-	-	-	-	2.8 U	2.7 U
Chloroform (Trichloromethane)	-	-	1.3	1.8	-	-	-	-	-	-	-	-	7.6	13
Chloromethane (Methyl Chloride)	-	-	0.76 U	0.76 U	-	-	-	-	-	-	-	-	1.3 U	1.2 U
cis-1,2-Dichloroethene	-	-	1.5 U	1.5 U	-	-	-	-	-	-	-	-	2.4 U	2.4 U
Cyclohexane	-	-	1.3 U	1.3 U	-	-	-	-	-	-	-	-	2.1 U	2 U
Dichlorodifluoromethane (CFC-12)	-	-	1.8 U	1.8 U	-	-	-	-	-	-	-	-	3.1 U	2.9 U
Ethanol	-	-	118	86.8	-	-	-	-	-	-	-	-	134	33.4
Ethyl acetate	-	-	1.3 U	11.8	-	-	-	-	-	-	-	-	2.2 U	2.1 U
Ethylbenzene	-	-	1.6 U	1.9	-	-	-	-	-	-	-	-	2.7 U	2.6 U
Hexachlorobutadiene	-	-	4 U	4 U	-	-	-	-	-	-	-	-	6.6 U	6.4 U
Hexane	-	-	4.9	3.6	-	-	-	-	-	-	-	-	4	3.1
Isopropyl Alcohol	-	-	2.2 U	2.2 U	-	-	-	-	-	-	-	-	1.5 U	1.5 U
m,p-Xylenes	-	-	3.2 U	4.3	-	-	-	-	-	-	-	-	5.3 U	5.1 U
Methylene chloride	-	-	6.4 U	6.4 U	-	-	-	-	-	-	-	-	6.2	5.8
Naphthalene	-	-	31.9	44.3	-	-	-	-	-	-	-	-	4.3	3.5
N-Heptane	-	-	1.5 U	1.5 U	-	-	-	-	-	-	-	-	2.5 U	2.4 U
o-Xylene	-	-	1.6 U	2.1	-	-	-	-	-	-	-	-	2.7 U	2.6 U
Propylene (Propene)	-	-	0.63 U	0.63 U	-	-	-	-	-	-	-	-	2	2.6
Styrene	-	-	1.6 U	1.6 U	-	-	-	-	-	-	-	-	2.6 U	2.5 U
Tetrachloroethene	-	-	1.2 U	1.2 U	-	-	-	-	-	-	-	-	11.5	9.6
Tetrahydrofuran	-	-	1.1 U	1.1 U	-	-	-	-	-	-	-	-	9.5	4.7
Toluene	-	-	1.8	3.2	-	-	-	-	-	-	-	-	12.9	3
trans-1,2-Dichloroethene	-	-	1.5 U	1.5 U	-	-	-	-	-	-	-	-	2.4 U	2.4 U
Trichloroethene	11.2	9.7	0.99 U	0.99 U	2.5	2.2	0.96 U	2.3	0.99 U	0.96 U	3.4	3	50.2	25.2
Trichlorofluoromethane (CFC-11)	-	-	2.1 U	2.1 U	-	-	-	-	-	-	-	-	3.4 U	3.3 U
Trifluorotrichloroethane (Freon 113)	-	-	2.9 U	2.9 U	-	-	-	-	-	-	-	-	4.8 U	4.7 U
Vinyl acetate	-	-	1.3 U	1.3 U	-	-	-	-	-	-	-	-	2.2 U	2.1 U
Vinyl chloride	-	-	0.47 U	0.47 U	-	-	-	-	-	-	-	-	0.79 U	0.76 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	8222	8222	8222	8222	8222	8222	8222	8226	8226	8288	8288	8446	8464	8464
Sample Name	8222_C_12182013	8222_D_12182013	8222_E_12182013	8222_A_04232014	8222_B_04232014	8222-A-P_12232014	8222-B-P_12232014	8226_A_12212013	8226_B_12212013	8288_A_12262013	8288_B_12262013	8446_03142014	8464_04222014	8464_05122014
Sample Date	12/18/2013	12/18/2013	12/18/2013	04/23/2014	04/23/2014	12/23/2014	12/23/2014	12/21/2013	12/21/2013	12/26/2013	12/26/2013	03/14/2014	04/22/2014	05/12/2014
Lab Sample ID	10252766001 10252771005	10252768001 10252771007	10252769001 10252771009	10264415001 10264416001	10264416003	10292610001	10292612001	10253253001	10253253003	10253515001	10253515003	10260377001 10260379001	10264228001	10266781001
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	2 U	4	2 U	13.4	11.7	28.4	19.4	-	-	-	-	2 U	1.9 U	-
1,1-Dichloroethane	1.5 U	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	1.5 U	-	1.5 U	1.4 U	-
1,1-Dichloroethene	1.5 U	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	-	-	1.5 U	1.4 U	-
1,2,4-Trichlorobenzene	2.7 U	3 U	2.7 U	2.8 U	2.8 U	2.7 U	4.2	-	-	-	-	2.7 U	2.6 U	-
1,2,4-Trimethylbenzene	1.8 U	2.3	1.8 U	1.9 U	2.8	1.8 U	1.8 U	-	-	-	-	1.8 U	1.7 U	-
1,2-Dichlorobenzene	2.2 U	2.4 U	2.2 U	2.3 U	2.3 U	2.2 U	2.2 U	-	-	-	-	2.2 U	2.1 U	-
1,2-Dichloroethane	0.74 U	0.82 U	0.74 U	0.77 U	0.77 U	0.74 U	1.3	-	-	-	-	0.74 U	0.71 U	-
1,3,5-Trimethylbenzene	1.8 U	2 U	1.8 U	1.9 U	1.9 U	1.8 U	1.8 U	-	-	-	-	1.8 U	1.7 U	-
1,3-Butadiene	0.81 U	0.9 U	0.81 U	0.84 U	0.84 U	0.81 U	0.81 U	-	-	-	-	0.81 U	0.78 U	-
1,3-Dichlorobenzene	2.2 U	2.4 U	2.2 U	2.3 U	2.3 U	2.2 U	2.2 U	-	-	-	-	2.2 U	2.1 U	-
1,4-Dichlorobenzene	2.2 U	2.4 U	2.2 U	2.3 U	2.8	2.2 U	2.2 U	-	-	-	-	3.6	2.1 U	-
2-Butanone (Methyl Ethyl Ketone)	18.8	3.6	7.4	20.8	6.1	26.8	4.5	-	-	-	-	4	3.5	-
2-Hexanone	1.5 U	1.7 U	1.5 U	1.6 U	1.6 U	1.5 U	1.5 U	-	-	-	-	5.4 U	1.4 U	-
4-Ethyl toluene	1.8 U	2 U	1.8 U	1.9 U	1.9 U	1.8 U	1.8 U	-	-	-	-	1.8 U	1.7 U	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1.7	1.7 U	3.3	1.6 U	1.6 U	3.7 U	3.7 U	-	-	-	-	2	1.4 U	-
Acetone	412	26.8	302	134	12.5	120	4.3 U	-	-	-	-	60.4	12.9	-
Benzene	0.58 U	2.1	25.6	0.61 U	0.61 U	0.58 U	0.58 U	-	-	-	-	3.4	0.57 U	-
Bromodichloromethane	2.4 U	2.7 U	2.4 U	2.5 U	2.5 U	2.4 U	2.4 U	-	-	-	-	2.4 U	2.4 U	-
Bromomethane (Methyl Bromide)	1.4 U	1.6 U	1.4 U	1.5 U	1.5 U	1.4 U	1.4 U	-	-	-	-	1.4 U	1.4 U	-
Carbon disulfide	1.1 U	8.3	10	1.8	3.4	1.8	1.1 U	-	-	-	-	7.3	1.1 U	-
Carbon tetrachloride	1.2 U	1.3 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	-	-	-	-	1.2 U	1.1 U	-
Chlorobenzene	1.7 U	1.9 U	1.7 U	1.8 U	1.8 U	1.7 U	1.7 U	-	-	-	-	463	1.6 U	-
Chloroform (Trichloromethane)	1.8 U	2 U	1.8 U	20.2	8.6	6.6	10.6	-	-	-	-	1.8 U	1.7 U	-
Chloromethane (Methyl Chloride)	0.76 U	0.84 U	0.76 U	1.1	0.79 U	0.76 U	0.76 U	-	-	-	-	0.76 U	0.73 U	-
cis-1,2-Dichloroethene	1.5 U	1.6 U	1.5 U	1.5 U	1.5 U	3.6 U	3.6 U	-	-	-	-	1.7	1.4 U	-
Cyclohexane	1.3 U	1.4 U	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	-	-	-	-	1.3	1.2 U	-
Dichlorodifluoromethane (CFC-12)	2.3	2 U	2	2.3	2.1	1.8 U	1.8 U	-	-	-	-	2.6	4.3	-
Ethanol	74.3	15.6	52.8	106	61.6	93.4	1.7 U	-	-	-	-	90	31	-
Ethyl acetate	1.3 U	1.5 U	1.3 U	1.4 U	1.4 U	3.3 U	3.3 U	-	-	-	-	1.3 U	1.3 U	-
Ethylbenzene	1.6 U	1.8 U	1.6 U	1.6 U	3.2	1.6 U	1.6 U	-	-	-	-	1.6 U	1.5 U	-
Hexachlorobutadiene	4 U	4.4 U	4 U	4.1 U	4.1 U	8	8	-	-	-	-	9.8 U	3.8 U	-
Hexane	1.6	18.2	1.9	7.5	1.3 U	6	1.3 U	-	-	-	-	13.6	1.3 U	-
Isopropyl Alcohol	81.4	2.7	62.4	8.8	7.9	2.2 U	2.2 U	-	-	-	-	13	0.87 U	-
m,p-Xylenes	3.2 U	3.5 U	3.2 U	3.3 U	5.8	3.2 U	3.2 U	-	-	-	-	3.2 U	3.1 U	-
Methylene chloride	6.4	479	9.9	9.6	1.4	7.8	6.4 U	-	-	-	-	37	1.2 U	-
Naphthalene	4.7	4.8	10.3	4.1	13.4	7.3	8.5	-	-	-	-	5.9	3.4	-
N-Heptane	1.5 U	1.7 U	1.5 U	1.6 U	1.6 U	1.5 U	1.5 U	-	-	-	-	1.5 U	1.4 U	-
o-Xylene	1.6 U	1.8 U	1.6 U	1.6 U	2.4	1.6 U	1.6 U	-	-	-	-	1.6 U	1.5 U	-
Propylene (Propene)	0.87	0.7 U	1.3	0.65 U	0.65 U	2.3	0.63 U	-	-	-	-	0.63 U	1.5 U	-
Styrene	1.6 U	1.7 U	1.6 U	4 U	4 U	1.6 U	1.6 U	-	-	-	-	1.6 U	1.5 U	-
Tetrachloroethene	1.2 U	2.2	1.2 U	12.7	9.8	14.5	22.2	-	-	-	-	3.1	1.2 U	-
Tetrahydrofuran	5.4	1.2 U	1.1 U	4.6	3.2	5.8	1.1 U	-	-	-	-	1.1	1 U	-
Toluene	12	10.4	9.9	5470	2.9	9.7	1.4 U	-	-	-	-	4.9	1.3 U	-
trans-1,2-Dichloroethene	1.5 U	1.6 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	-	-	1.5 U	1.4 U	-
Trichloroethene	1.4	4.5	0.99 U	58.2	24.8	60.9	30.8	0.99 U	0.99 U	0.96 U	0.99 U	0.99 U	12.1	16.4
Trichlorofluoromethane (CFC-11)	2.1 U	2.3 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	-	-	-	-	2.1 U	2 U	-
Trifluorotrichloroethane (Freon 113)	2.9 U	3.2 U	2.9 U	3 U	3 U	2.9 U	2.9 U	-	-	-	-	2.9 U	2.8 U	-
Vinyl acetate	1.3	1.4 U	1.5	1.3 U	1.3 U	1.3 U	1.3 U	-	-	-	-	3.2 U	1.2 U	-
Vinyl chloride	0.47 U	0.52 U	0.47 U	0.49 U	0.49 U	0.47 U	0.47 U	-	-	-	-	0.47 U	0.45 U	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

	Location Name	8604	8604	8760	8760	8760	8760	8760	8773	8773	8840	8840	8995	9035	9035
	Sample Name	8604_12172013	8604_01132014	8760_A_04172014	8760_B_04172014	8760_C_04172014	8760_D_04172014	8760_E_04172014	8773_08142014	8773_09262014	8840_A_10092014	8840_B_10092014	8995_06122014	9035_A_01032014	9035_B_01032014
	Sample Date	12/17/2013	01/13/2014	04/17/2014	04/17/2014	04/17/2014	04/17/2014	04/17/2014	08/14/2014	09/26/2014	10/09/2014	10/09/2014	06/12/2014	01/03/2014	01/03/2014
	Lab Sample ID	10252609001	10254577001	10263800001	10263800003	10263800005	10263800007	10263800009	10277647001	10282900001	10284522001	10284522003	10270612001	10253894001	10253894003
Volatile Organic Compounds (µg/m³)															
1,1,1-Trichloroethane	-	-	-	1.9 U	1.9 U	4	15.1	4.5	2 U	2.1 U	2 U	2 U	2 U	2 U	-
1,1-Dichloroethane	-	-	-	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-
1,1-Dichloroethene	-	-	-	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-
1,2,4-Trichlorobenzene	-	-	-	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.7 U	2.8 U	6.8 U	6.8 U	2.7 U	2.7 U	-
1,2,4-Trimethylbenzene	-	-	-	17.8	1.7 U	1.7 U	1.7 U	1.7 U	3.2	1.9 U	1.8 U	2.9	2.4	1.8 U	-
1,2-Dichlorobenzene	-	-	-	2 U	2 U	2 U	2 U	2 U	2.2 U	2.3 U	5.5 U	5.5 U	2.2 U	2.2 U	-
1,2-Dichloroethane	-	-	-	0.69 U	0.69 U	0.69 U	0.69 U	0.69 U	0.74 U	0.77 U	0.74 U	0.74 U	0.74 U	0.74 U	-
1,3,5-Trimethylbenzene	-	-	-	3.4	1.7 U	1.7 U	1.7 U	1.7 U	2.1	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	-
1,3-Butadiene	-	-	-	0.76 U	0.76 U	0.76 U	0.76 U	0.76 U	0.81 U	0.84 U	0.81 U	0.81 U	0.81 U	0.81 U	-
1,3-Dichlorobenzene	-	-	-	2 U	2 U	2 U	2 U	2 U	2.2 U	2.3 U	2.2 U	2.2 U	2.2 U	2.2 U	-
1,4-Dichlorobenzene	-	-	-	2 U	2 U	2 U	2 U	2 U	2.2 U	2.3 U	2.2 U	2.2 U	2.2 U	2.2 U	-
2-Butanone (Methyl Ethyl Ketone)	-	-	-	6.1	8.4	10.7	8.4	8.4	13.6	65.8	7.4	7.2	4.4	2.4	-
2-Hexanone	-	-	-	1.9	1.4 U	1.6	1.4	1.4 U	2.4	7.3	2.2	1.8	3.8	1.5 U	-
4-Ethyl toluene	-	-	-	5.3	1.7 U	1.7 U	1.7 U	1.7 U	1.8 U	1.9 U	1.8 U	1.8 U	1.8 U	1.8 U	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	13.9	6.8	16.3	9.9	9.8	1.5 U	5.4	1.7	1.7	3.7 U	1.6	-
Acetone	-	-	-	45.4	53.9	80.6	63.1	59.9	48.7	148	59	90.5	21.7	11.2	-
Benzene	-	-	-	0.66	0.55 U	0.55 U	0.55 U	0.55 U	0.98	1.5	1	3.1	0.58 U	0.58 U	-
Bromodichloromethane	-	-	-	2.3 U	2.3 U	2.3 U	2.3 U	2.3 U	2.4 U	2.5 U	2.4 U	2.4 U	2.4 U	2.4 U	-
Bromomethane (Methyl Bromide)	-	-	-	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	1.4 U	1.5 U	1.4 U	1.4 U	1.4 U	1.4 U	-
Carbon disulfide	-	-	-	1.3	1.1 U	1.1 U	1.1 U	1.1 U	3.7	1.5	1.1 U	2.1	1.1 U	1.6	-
Carbon tetrachloride	-	-	-	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.2 U	1.2 U	1.2 U	1.2 U	2.3 U	1.2 U	-
Chlorobenzene	-	-	-	1.7	1.6	1.6 U	1.6 U	1.6 U	1.7 U	4.2	1.7 U	1.7 U	1.7 U	1.7 U	-
Chloroform (Trichloromethane)	-	-	-	2.1	4	4.4	4.8	2.9	1.1	0.93 U	1.6	3.3	1.8 U	1.8 U	-
Chloromethane (Methyl Chloride)	-	-	-	0.71 U	0.71 U	0.71 U	0.71 U	0.71 U	0.76 U	0.79 U	0.76 U	0.76 U	0.76 U	0.76 U	-
cis-1,2-Dichloroethene	-	-	-	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.5 U	1.5 U	1.5 U	7.4	1.5 U	-
Cyclohexane	-	-	-	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	5.7	3.3 U	2.6	1.9	1.3 U	1.3 U	-
Dichlorodifluoromethane (CFC-12)	-	-	-	5.9	10.9	17	7.1	2.8	1.8 U	4.9	1.8 U	1.8 U	1.9	22	-
Ethanol	-	-	-	184	141	166	150	119	13.1	26.7	790	825	1160	47.5	-
Ethyl acetate	-	-	-	4	5.4	6.7	5.6	5.7	1.3 U	1.4 U	1.3 U	1.3 U	4.4	2.6	-
Ethylbenzene	-	-	-	4.1	1.5 U	1.5 U	1.5 U	1.5 U	1.6 U	1.6 U	3	3.4	1.6 U	1.6 U	-
Hexachlorobutadiene	-	-	-	3.7 U	3.7 U	3.7 U	3.7 U	3.7 U	4 U	4.1 U	4 U	4 U	4 U	4 U	-
Hexane	-	-	-	1.3	1.9	2.4	2.8	1.2 U	3.9	4.6	3.2	3.9	1.4	1.3 U	-
Isopropyl Alcohol	-	-	-	5.8	6.2	7.3	9	6.5	2.2 U	39.9	23.3	31.9	2.2 U	5	-
m,p-Xylenes	-	-	-	16.2	4.8	3 U	3 U	3 U	3.2 U	4.1	3.2 U	3.8	4.1	3.2 U	-
Methylene chloride	-	-	-	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	6.4 U	6.6 U	6.4 U	6.4 U	6.4 U	2.6	-
Naphthalene	-	-	-	30.7	10.3	5.8	3.2	5.6	18.5	24.9	16	30.1	11.4	7.4	-
N-Heptane	-	-	-	2.5	1.4	1.7	1.5	1.5	1.5 U	17.9	1.6	3.1	2.8	1.5 U	-
o-Xylene	-	-	-	6.3	1.5 U	1.5 U	1.5 U	1.5 U	1.6 U	1.6 U	1.6 U	1.8	4 U	1.6 U	-
Propylene (Propene)	-	-	-	0.59 U	1.9	2.8	0.59 U	0.59 U	0.63 U	0.65 U	3.3	7.4	0.63 U	0.63 U	-
Styrene	-	-	-	1.5 U	3.5	1.5 U	1.5 U	1.5 U	1.8	4 U	2.4	4.5	1.6 U	1.6 U	-
Tetrachloroethene	-	-	-	3.5	3.3	4.5	6.4	4.3	1.2 U	8.3	1.2 U	1.2 U	1.2 U	3.5	-
Tetrahydrofuran	-	-	-	5.2	5	3	2.9	3.3	1.1 U	1.1 U	1.1 U	2.1	3	1.1 U	-
Toluene	-	-	-	7.3	1.6	1.5	1.6	1.3 U	1.5	4.1	2.1	5.9	1.8	2.6	-
trans-1,2-Dichloroethene	-	-	-	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U	39.4	28.6	1.5 U	1.5 U	1.5 U	1.5 U	-
Trichloroethene	11.3	7.2	6.9	33.3	23.6	5.6	1.5	11.7	5.3	0.99 U	6.1	0.99 U	1	0.99 U	-
Trichlorofluoromethane (CFC-11)	-	-	-	5.6	7.1	7.2	8.5	2.4	2.1 U	2.1 U	2.1	2.1 U	2.1 U	2.1 U	-
Trifluorotrichloroethane (Freon 113)	-	-	-	2.7 U	2.7 U	2.7 U	2.7 U	2.7 U	2.9 U	3 U	2.9 U	2.9 U	2.9 U	2.9 U	-
Vinyl acetate	-	-	-	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.3 U	1.3 U	3.9	1.3 U	1.3 U	1.3 U	-
Vinyl chloride	-	-	-	0.44 U	0.44 U	0.44 U	0.44 U	0.44 U	0.47 U	0.49 U	0.47 U	27.3	0.47 U	0.47 U	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	9035	9035	9035	9048	9164	9164	9244	9244	9244	9244	9266	9266	9266	9266
Sample Name	9035_C_01032014	9035_D_01032014	9035_E_01032014	9048_05172014	9164_08252014	9164_09042014	9244_A_01102014	9244_B_01102014	9244_A_02042014	9244_B_02042014	9266_A_04082014	9266_B_04082014	9266_A_04222014	9266_B_04222014
Sample Date	01/03/2014	01/03/2014	01/03/2014	05/17/2014	08/25/2014	09/04/2014	01/10/2014	01/10/2014	02/04/2014	02/04/2014	04/08/2014	04/08/2014	04/22/2014	04/22/2014
Lab Sample ID	10253894005	10253894007	10253894009	10267618001	10278944001	10280083001	10254419003	10254419001	10256747001	10256747003	10262645001	10262645003	10264206001	10264207001
Lab Sample ID	10253894005	10253894007	10253894009	10267619001	10278944001	10280083001	10254419003	10254419001	10256747001	10256747003	10262645001	10262645003	10264207001	10264207003
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	-	-	-	1.9 U	3.4 U	2 U	-	7.5	-	-	2 U	2 U	3.5 U	1.9 U
1,1-Dichloroethane	-	-	-	1.4 U	2.5 U	1.5 U	-	2.9 U	-	-	1.5 U	1.5 U	2.6 U	1.4 U
1,1-Dichloroethene	-	-	-	1.4 U	2.4 U	1.5 U	-	2.8 U	-	-	1.5 U	1.5 U	2.5 U	1.4 U
1,2,4-Trichlorobenzene	-	-	-	2.6 U	4.6 U	2.7 U	-	5.3 U	-	-	2.7 U	2.7 U	4.7 U	2.6 U
1,2,4-Trimethylbenzene	-	-	-	1.7 U	3.2	1.8 U	-	3.5 U	-	-	24.8	1.8 U	3.1 U	1.7 U
1,2-Dichlorobenzene	-	-	-	2.1 U	3.7 U	2.2 U	-	4.3 U	-	-	2.2 U	2.2 U	3.8 U	2.1 U
1,2-Dichloroethane	-	-	-	0.71 U	1.2 U	0.74 U	-	1.4 U	-	-	0.74 U	0.74 U	1.3 U	0.71 U
1,3,5-Trimethylbenzene	-	-	-	1.7 U	3 U	1.8 U	-	3.5 U	-	-	5.9	1.8 U	3.1 U	1.7 U
1,3-Butadiene	-	-	-	0.78 U	3.4 U	0.81 U	-	1.6 U	-	-	0.81 U	0.81 U	1.4 U	0.78 U
1,3-Dichlorobenzene	-	-	-	2.1 U	3.7 U	2.2 U	-	4.3 U	-	-	2.2 U	2.2 U	3.8 U	2.1 U
1,4-Dichlorobenzene	-	-	-	2.1 U	3.7 U	2.2 U	-	4.3 U	-	-	2.2 U	2.2 U	3.8 U	2.1 U
2-Butanone (Methyl Ethyl Ketone)	-	-	-	5.9	3.5	4.2	-	2.1 U	-	-	2.4	12.4	2.1	3.7
2-Hexanone	-	-	-	2.6 U	2.5 U	2.3	-	2.9 U	-	-	1.5 U	1.5 U	2.6 U	1.4 U
4-Ethyl toluene	-	-	-	1.7 U	3 U	1.8 U	-	3.5 U	-	-	6	1.8 U	3.1 U	1.7 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	1.4 U	2.5 U	1.5 U	-	2.9 U	-	-	1.5 U	1.5	2.6 U	1.4 U
Acetone	-	-	-	34.2	27.2	8	-	8	-	-	26.7	175	201	15.2
Benzene	-	-	-	0.57 U	1.9	0.58 U	-	1.1 U	-	-	0.58 U	0.58 U	6.3	0.57 U
Bromodichloromethane	-	-	-	2.4 U	4.1 U	2.4 U	-	4.7 U	-	-	2.4 U	2.4 U	4.3 U	2.4 U
Bromomethane (Methyl Bromide)	-	-	-	1.4 U	2.4 U	1.4 U	-	2.8 U	-	-	1.4 U	1.4 U	2.5 U	1.4 U
Carbon disulfide	-	-	-	1.1 U	8.6	1.1 U	-	2.2 U	-	-	1.1	1.1 U	2 U	1.1 U
Carbon tetrachloride	-	-	-	1.1 U	1.9 U	1.2 U	-	2.2 U	-	-	1.2 U	1.2 U	2 U	1.1 U
Chlorobenzene	-	-	-	1.6 U	2.8 U	1.7 U	-	3.3 U	-	-	1.7 U	1.7 U	3 U	1.6 U
Chloroform (Trichloromethane)	-	-	-	1.7 U	1.7	2.1	-	3.5 U	-	-	1.8 U	1.8 U	3.1 U	1.7 U
Chloromethane (Methyl Chloride)	-	-	-	0.73 U	1.3 U	0.76 U	-	1.5 U	-	-	0.76 U	0.76 U	1.3 U	0.73 U
cis-1,2-Dichloroethene	-	-	-	1.4 U	2.4 U	1.5 U	-	2.8 U	-	-	1.5 U	1.5 U	6.1	1.4 U
Cyclohexane	-	-	-	1.2 U	10.6 U	3.1 U	-	2.4 U	-	-	1.3 U	1.3 U	7	1.2 U
Dichlorodifluoromethane (CFC-12)	-	-	-	2.7	3.1 U	4.5 U	-	3.5 U	-	-	2.1	2.2	4	2.5
Ethanol	-	-	-	75.7	27.1	5.9	-	16.3	-	-	17.6	199	78.1	144
Ethyl acetate	-	-	-	2.7	2.2 U	1.3 U	-	2.5 U	-	-	1.3 U	1.3 U	3.2	1.3 U
Ethylbenzene	-	-	-	1.5 U	2.7	1.7	-	3.1 U	-	-	3.2	1.6 U	3.3	1.5 U
Hexachlorobutadiene	-	-	-	3.8 U	16.4 U	4 U	-	7.7 U	-	-	4 U	4 U	6.9 U	3.8 U
Hexane	-	-	-	1.4	18.6	1.3 U	-	2.5 U	-	-	1.6	1.3 U	96.1	1.3 U
Isopropyl Alcohol	-	-	-	5.7	5.8	2.2 U	-	2.8	-	-	4.9	10.4	12.1	0.87 U
m,p-Xylenes	-	-	-	3.3	5.3 U	3.2 U	-	6.1 U	-	-	20.8	3.2 U	7.8	3.1 U
Methylene chloride	-	-	-	6.1 U	123	8.4	-	6.8	-	-	20.9	2.5	230	1.5
Naphthalene	-	-	-	16.3	10.3	9.3	-	4.5	-	-	20.1	7.9	3.6	8
N-Heptane	-	-	-	1.4 U	6.3 U	1.5 U	-	2.9 U	-	-	1.5 U	1.5 U	5.7	1.4 U
o-Xylene	-	-	-	1.5 U	2.7 U	1.8	-	3.1 U	-	-	9.4	1.6 U	2.8 U	1.5 U
Propylene (Propene)	-	-	-	0.61 U	1.1 U	1.6 U	-	1.2 U	-	-	0.63 U	0.63 U	1.1 U	1.5 U
Styrene	-	-	-	3.8 U	6.5 U	3.9 U	-	3 U	-	-	1.6 U	1.6 U	6.8 U	1.5 U
Tetrachloroethene	-	-	-	1.2 U	4.8	1.8	-	3.7	-	-	2	4.2	2.2 U	5.3
Tetrahydrofuran	-	-	-	2.7	1.8 U	1.1 U	-	5.2	-	-	1.1 U	1.1 U	1.9 U	1 U
Toluene	-	-	-	3.5	4.6	1.4 U	-	7	-	-	440	21.6	48.8	1.3 U
trans-1,2-Dichloroethene	-	-	-	1.4 U	2.4 U	1.5 U	-	2.8 U	-	-	1.5 U	1.5 U	2.5 U	1.4 U
Trichloroethene	2.1	1 U	2.1	1.3	2.6	2.2	7.7	16.3	13.4	17.8	0.99 U	5.9	3	10.5
Trichlorofluoromethane (CFC-11)	-	-	-	2 U	3.4 U	2.8	-	4 U	-	-	2.1 U	2.1 U	3.6 U	2 U
Trifluorotrichloroethane (Freon 113)	-	-	-	2.8 U	4.8 U	2.9 U	-	5.6 U	-	-	2.9 U	2.9 U	5 U	2.8 U
Vinyl acetate	-	-	-	1.9	2.2 U	2.1	-	2.5 U	-	-	1.3 U	1.3 U	2.2 U	1.2 U
Vinyl chloride	-	-	-	0.45 U	0.79 U	0.47 U	-	0.91 U	-	-	0.47 U	0.47 U	0.82 U	0.45 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

	Location Name	9335	9335	9363	9363	9363	9363	9363	9363	9381	9381	9381	9381	9436	9469
	Sample Name	9335_08152014	9335_09262014	9363_A_07102014	9363_B_07102014	9363_C_07102014	9363_A_08132014	9363_B_08132014	9363_C_08132014	9381_A_11272013	9381_B_11272013	9381_A_01212014	9381_B_01212014	9436_02012014	9469_03062014
	Sample Date	08/15/2014	09/26/2014	07/10/2014	07/10/2014	07/10/2014	08/13/2014	08/13/2014	08/13/2014	11/27/2013	11/27/2013	01/21/2014	01/21/2014	02/01/2014	03/06/2014
	Lab Sample ID	10277933001	10282928001	10273594001	10273594003	10273594005	10277499001	10277499003	10277499005	10250767001	10250767003	10255453003	10255453001	10256570001	10259499001
Volatile Organic Compounds (µg/m³)															
	1,1,1-Trichloroethane	20.2	15.4	2 U	2 U	2 U	2.1 U	2.1 U	2.1 U	-	-	-	-	-	51
	1,1-Dichloroethane	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	-	-	-	3 U
	1,1-Dichloroethene	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	-	-	-	-
	1,2,4-Trichlorobenzene	2.8 U	2.7 U	2.7 U	2.7 U	2.7 U	2.8 U	2.8 U	2.8 U	-	-	-	-	-	5.5 U
	1,2,4-Trimethylbenzene	2.1	1.8 U	8.5	5.2	17.6	1.9 U	2	5.5	-	-	-	-	-	257
	1,2-Dichlorobenzene	2.3 U	2.2 U	2.2 U	2.2 U	2.2 U	2.3 U	2.3 U	2.3 U	-	-	-	-	-	4.5 U
	1,2-Dichloroethane	0.77 U	0.74 U	0.74 U	0.74 U	0.74 U	0.77 U	0.77 U	0.77 U	-	-	-	-	-	1.5 U
	1,3,5-Trimethylbenzene	1.9 U	1.8 U	2.9	2	3.6	1.9 U	1.9 U	2.2	-	-	-	-	-	171
	1,3-Butadiene	0.84 U	0.81 U	0.81 U	0.81 U	0.81 U	0.84 U	0.84 U	0.84 U	-	-	-	-	-	1.6 U
	1,3-Dichlorobenzene	2.3 U	2.2 U	2.2 U	2.2 U	2.2 U	2.3 U	2.3 U	2.3 U	-	-	-	-	-	4.5 U
	1,4-Dichlorobenzene	2.3 U	2.2 U	2.2 U	2.2 U	2.2 U	2.3 U	2.3 U	2.3 U	-	-	-	-	-	4.5 U
	2-Butanone (Methyl Ethyl Ketone)	8.1	3	8.5	14.2	4.7	4.4	17.6	6.9	-	-	-	-	-	3
	2-Hexanone	1.6 U	1.5 U	4.1	5	3.9	1.6 U	3.6	1.6 U	-	-	-	-	-	3 U
	4-Ethyl toluene	1.9 U	1.8 U	5.4	5.1	7.6	1.9 U	1.9 U	1.9 U	-	-	-	-	-	95.4
	4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	1.6 U	1.5 U	1.9	2.4	1.5 U	1.6 U	1.6 U	1.6 U	-	-	-	-	-	3 U
	Acetone	44.9	15.5	63.4	68.9	30.2	12	58.8	41.7	-	-	-	-	-	22.9
	Benzene	0.65	0.8	0.58 U	0.75	1.5	0.61 U	0.61 U	0.61 U	-	-	-	-	-	1.2 U
	Bromodichloromethane	2.5 U	2.4 U	2.4 U	2.4 U	2.4 U	2.5 U	2.5 U	2.5 U	-	-	-	-	-	5 U
	Bromomethane (Methyl Bromide)	3.4	1.4 U	1.4 U	1.4 U	1.4 U	1.5 U	1.5 U	1.5 U	-	-	-	-	-	2.9 U
	Carbon disulfide	3.2	1.1 U	1.1 U	6.8	2.1	1.2 U	1.2 U	3.1	-	-	-	-	-	2.3 U
	Carbon tetrachloride	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	-	-	-	-	-	2.3 U
	Chlorobenzene	1.8 U	3.9	1.7 U	1.7 U	1.7 U	1.8 U	1.8 U	1.8 U	-	-	-	-	-	3.4 U
	Chloroform (Trichloromethane)	4	0.89 U	0.89 U	0.89 U	0.89 U	0.93 U	0.93 U	0.93 U	-	-	-	-	-	3.6 U
	Chloromethane (Methyl Chloride)	2.6	0.76 U	0.76 U	0.76 U	3.3	0.79 U	0.79 U	0.79 U	-	-	-	-	-	1.5 U
	cis-1,2-Dichloroethene	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	-	-	-	3 U
	Cyclohexane	7.1	3.1 U	1.3 U	2.2	2.4	1.3 U	1.3 U	1.3 U	-	-	-	-	-	2.6 U
	Dichlorodifluoromethane (CFC-12)	1.9 U	2.9	2.7	3	3.7	1.9 U	1.9 U	1.9 U	-	-	-	-	-	3.7 U
	Ethanol	12.4	15.8	9.6	12.2	15.7	4.3	11.3	13.2	-	-	-	-	-	13.2
	Ethyl acetate	1.4 U	1.3 U	1.3 U	1.5	1.5	1.4 U	1.4 U	1.4 U	-	-	-	-	-	2.7 U
	Ethylbenzene	1.6 U	1.6 U	1.6 U	7.2	1.6 U	1.6 U	2.2	2	-	-	-	-	-	40.4
	Hexachlorobutadiene	4.1 U	4 U	4 U	4 U	4 U	4.1 U	4.1 U	4.1 U	-	-	-	-	-	8 U
	Hexane	1.3 U	3.9	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	2.6	-	-	-	-	-	2.6 U
	Isopropyl Alcohol	4.8	3	2.2 U	2.2 U	2.2 U	9.1	5.4	2.3 U	-	-	-	-	-	6.2
	m,p-Xylenes	3.3 U	3.2 U	3.2 U	40.9	6.3	3.3 U	5.5	3.3 U	-	-	-	-	-	193
	Methylene chloride	6.6 U	6.4 U	6.4 U	6.4 U	6.4 U	6.6 U	6.6 U	8.2	-	-	-	-	-	34.9
	Naphthalene	27.4	8.2	7.3	22.6	95.2	12.7	26.7	42.3	-	-	-	-	-	4
	N-Heptane	1.6 U	4.3	1.5 U	5.4	1.5 U	1.6 U	1.6 U	1.6 U	-	-	-	-	-	3 U
	o-Xylene	1.6 U	1.6 U	1.6 U	14.7	2.9	1.6 U	1.6 U	1.9	-	-	-	-	-	66.5
	Propylene (Propene)	0.65 U	2.4	0.63 U	0.71	1.1	0.65 U	0.65 U	0.65 U	-	-	-	-	-	1.3 U
	Styrene	1.6 U	3.9 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	1.6 U	-	-	-	-	-	3.2 U
	Tetrachloroethene	8.4	15.4	1.2 U	2	1.2 U	1.6	2.3	1.7	-	-	-	-	-	4.8
	Tetrahydrofuran	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	-	-	-	-	-	2.2 U
	Toluene	2.3	2.5	1.4 U	62.6	8.1	1.4 U	1.4 U	12.7	-	-	-	-	-	10.1
	trans-1,2-Dichloroethene	9.6	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	1.5 U	-	-	-	-	-	3 U
	Trichloroethene	7.5	8.8	0.99 U	5.5	9.1	1.1	6.1	14.3	5.1	14.9	3.3	7.4	1.3	7.1
Trichlorofluoromethane (CFC-11)	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.1 U	2.2	2.6	-	-	-	-	-	4.2 U	
Trifluorotrichloroethane (Freon 113)	3 U	2.9 U	2.9 U	2.9 U	2.9 U	3 U	3 U	3 U	-	-	-	-	-	5.8 U	
Vinyl acetate	4.6	1.3 U	1.3 U	1.3 U	1.3 U	1.3 U	3.3	10.7	-	-	-	-	-	2.6 U	
Vinyl chloride	0.49 U	0.47 U	0.47 U	0.47 U	0.47 U	0.47 U	0.49 U	0.49 U	-	-	-	-	-	0.95 U	

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	9469	9499	9499	9555	9555	9555	9555	9678	9700	9700	9772	9772	9772	9772
Sample Name	9469_03312014	9499_12052013	9499_01142014	9555_A_02212014	9555_B_02212014	9555_A_03042014	9555_B_03042014	9678_05132014	9700_01102014	9700_03132014	9772_A_01132014	9772_B_01132014	9772_A_01222014	9772_B_01222014
Sample Date	03/31/2014	12/05/2013	01/14/2014	02/21/2014	02/21/2014	03/04/2014	03/04/2014	05/13/2014	01/10/2014	03/13/2014	01/13/2014	01/13/2014 10254716003	01/22/2014	01/22/2014
Lab Sample ID	10261792001	10251339001	10254731001	10258493001	10258493003	10259323001	10259323003	10266925001	10254492001	10260239001	10254716001	10262723003	10255749001	10255749003
Volatile Organic Compounds (µg/m³)														
1,1,1-Trichloroethane	-	-	-	-	-	-	-	2 U	-	2.2 U	2 U	3 U	3.1 U	2.2 U
1,1-Dichloroethane	-	-	-	-	-	-	-	1.5 U	-	1.6 U	1.5 U	2.2 U	2.3 U	1.6 U
1,1-Dichloroethene	-	-	-	-	-	-	-	1.5 U	-	1.6 U	1.5 U	2.2 U	2.3 U	1.6 U
1,2,4-Trichlorobenzene	-	-	-	-	-	-	-	2.7 U	-	2.9 U	2.7 U	2.7 U	4.3 U	2.9 U
1,2,4-Trimethylbenzene	-	-	-	-	-	-	-	1.8 U	-	1.9 U	5	3.4	4.7	1.9 U
1,2-Dichlorobenzene	-	-	-	-	-	-	-	2.2 U	-	2.4 U	2.2 U	2.2 U	3.5 U	2.4 U
1,2-Dichloroethane	-	-	-	-	-	-	-	0.74 U	-	0.8 U	0.74 U	1.1 U	1.2 U	0.8 U
1,3,5-Trimethylbenzene	-	-	-	-	-	-	-	1.8 U	-	1.9 U	1.8 U	1.8 U	2.8 U	1.9 U
1,3-Butadiene	-	-	-	-	-	-	-	0.81 U	-	0.87 U	0.81 U	1.2 U	1.3 U	0.87 U
1,3-Dichlorobenzene	-	-	-	-	-	-	-	2.2 U	-	2.4 U	6.1	2.2 U	3.5 U	2.4 U
1,4-Dichlorobenzene	-	-	-	-	-	-	-	2.2 U	-	2.4 U	2.2 U	2.2 U	3.5 U	2.4 U
2-Butanone (Methyl Ethyl Ketone)	-	-	-	-	-	-	-	4.5	-	1.7	21	20.3	1.7 U	2.3
2-Hexanone	-	-	-	-	-	-	-	1.5 U	-	1.6 U	1.5 U	1.5 U	2.3 U	1.6 U
4-Ethyl toluene	-	-	-	-	-	-	-	1.8 U	-	1.9 U	1.8 U	1.8 U	2.8 U	1.9 U
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	-	-	-	-	-	1.5 U	-	1.6 U	1.5 U	2.7	2.3 U	1.6 U
Acetone	-	-	-	-	-	-	-	16.8	-	4.8	259	75.3	4.8	15.1
Benzene	-	-	-	-	-	-	-	0.58 U	-	0.63 U	0.58 U	1.2	3.6	0.63 U
Bromodichloromethane	-	-	-	-	-	-	-	2.4 U	-	2.6 U	12.3	3.6 U	3.8 U	2.6 U
Bromomethane (Methyl Bromide)	-	-	-	-	-	-	-	1.4 U	-	1.5 U	1.4 U	2.1 U	2.2 U	1.5 U
Carbon disulfide	-	-	-	-	-	-	-	1.2	-	1.2 U	1.1 U	22.5	1.8 U	1.8
Carbon tetrachloride	-	-	-	-	-	-	-	1.2 U	-	1.2 U	1.2 U	1.7 U	1.8 U	1.2 U
Chlorobenzene	-	-	-	-	-	-	-	1.7 U	-	1.8 U	1.7 U	1.7 U	2.7 U	1.8 U
Chloroform (Trichloromethane)	-	-	-	-	-	-	-	1.8 U	-	32.9	55.3	2.6 U	9.4	1.9 U
Chloromethane (Methyl Chloride)	-	-	-	-	-	-	-	0.76 U	-	0.81 U	0.76 U	1.1 U	1.2 U	0.81 U
cis-1,2-Dichloroethene	-	-	-	-	-	-	-	1.5 U	-	1.6 U	1.5 U	2.2 U	2.3 U	1.6 U
Cyclohexane	-	-	-	-	-	-	-	1.3 U	-	1.4 U	1.3 U	1.9 U	8.2	1.4 U
Dichlorodifluoromethane (CFC-12)	-	-	-	-	-	-	-	1.9	-	2 U	6.2	4.4	4.3	4.7
Ethanol	-	-	-	-	-	-	-	16.2	-	5.4	1.7 U	68.3	6	9.3
Ethyl acetate	-	-	-	-	-	-	-	1.3 U	-	1.4 U	13.4	1.9 U	2.1 U	1.4 U
Ethylbenzene	-	-	-	-	-	-	-	1.6 U	-	1.7 U	2	1.6 U	2.5 U	1.7 U
Hexachlorobutadiene	-	-	-	-	-	-	-	4 U	-	4.3 U	4 U	4 U	6.2 U	4.3 U
Hexane	-	-	-	-	-	-	-	2	-	1.4 U	2.8	2.6	4.5	1.4 U
Isopropyl Alcohol	-	-	-	-	-	-	-	2.9	-	0.97 U	2.2 U	1.3 U	1.4 U	0.97 U
m,p-Xylenes	-	-	-	-	-	-	-	3.2 U	-	3.4 U	5.6	3.2 U	9.1	3.4 U
Methylene chloride	-	-	-	-	-	-	-	6.4 U	-	4.4	9.7	7.8	9	4.9
Naphthalene	-	-	-	-	-	-	-	24.2	-	6.5	9	4.6	4.6	4.9
N-Heptane	-	-	-	-	-	-	-	1.5 U	-	1.6 U	1.5 U	2.2 U	5.7	1.6 U
o-Xylene	-	-	-	-	-	-	-	1.6 U	-	1.7 U	4	2.6	2.5 U	1.7 U
Propylene (Propene)	-	-	-	-	-	-	-	0.63 U	-	0.68 U	0.63 U	0.93 U	0.99 U	0.68 U
Styrene	-	-	-	-	-	-	-	1.6 U	-	1.7 U	2.3	1.6 U	2.5 U	1.7 U
Tetrachloroethene	-	-	-	-	-	-	-	1.2 U	-	2.3	2.2	12.1	1.9 U	1.3 U
Tetrahydrofuran	-	-	-	-	-	-	-	1.1 U	-	1.2 U	4.9	3.7	1.7 U	1.2 U
Toluene	-	-	-	-	-	-	-	6.8	-	1.5 U	14	2.7	4.2	6.3
trans-1,2-Dichloroethene	-	-	-	-	-	-	-	1.5 U	-	1.6 U	1.5 U	2.2 U	2.3 U	1.6 U
Trichloroethene	4.2	13.6	18.3	0.99 U	4.4	0.96 U	4.6	0.99 U	3.4	1.1 U	4.6	1.5 U	2.3	1.1 U
Trichlorofluoromethane (CFC-11)	-	-	-	-	-	-	-	2.1 U	-	2.2 U	3.8	3 U	3.2 U	4.1
Trifluorotrichloroethane (Freon 113)	-	-	-	-	-	-	-	2.9 U	-	3.1 U	2.9 U	4.3 U	4.5 U	3.1 U
Vinyl acetate	-	-	-	-	-	-	-	1.9	-	1.4 U	1.3 U	1.9 U	2 U	1.4 U
Vinyl chloride	-	-	-	-	-	-	-	0.47 U	-	0.5 U	0.47 U	0.69 U	0.74 U	0.5 U

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

Location Name	9934	9934	9938	9938	9938	9938	9938	9938	9938	9938
Sample Name	9934_12122013	9934_01242014	9938_A_05012014	9938_B_05012014	9938_C_05012014	9938_D_05012014	9938_A_05192014	9938_B_05192014	9938_C_05192014	9938_D_05192014
Sample Date	12/12/2013	01/24/2014	05/01/2014	05/01/2014	05/01/2014	05/01/2014	05/19/2014	05/19/2014	05/19/2014	05/19/2014
Lab Sample ID	10252064001	10255886001	10265463001	10265464003	10265464005	10265464007	10267603001	10267603003	10267603005	10267603007
Volatile Organic Compounds (µg/m³)										
1,1,1-Trichloroethane	-	-	1.9 U	2 U	2.6	3.8	-	-	-	-
1,1-Dichloroethane	-	-	1.4 U	1.5 U	1.6 U	1.5 U	-	-	-	-
1,1-Dichloroethene	-	-	1.4 U	1.5 U	1.6 U	1.5 U	-	-	-	-
1,2,4-Trichlorobenzene	-	-	6.6 U	6.8 U	7.3 U	7.1 U	-	-	-	-
1,2,4-Trimethylbenzene	-	-	268	2.1	22.7	2.1	-	-	-	-
1,2-Dichlorobenzene	-	-	2.1 U	2.2 U	2.4 U	2.3 U	-	-	-	-
1,2-Dichloroethane	-	-	0.71 U	0.74 U	0.8 U	0.77 U	-	-	-	-
1,3,5-Trimethylbenzene	-	-	69.1	4.5 U	4.8 U	4.7 U	-	-	-	-
1,3-Butadiene	-	-	0.78 U	0.81 U	0.87 U	0.84 U	-	-	-	-
1,3-Dichlorobenzene	-	-	2.1 U	2.2 U	2.4 U	2.3 U	-	-	-	-
1,4-Dichlorobenzene	-	-	2.1 U	2.2 U	2.4 U	2.3 U	-	-	-	-
2-Butanone (Methyl Ethyl Ketone)	-	-	7	4.7	9.5	11.2	-	-	-	-
2-Hexanone	-	-	1.4 U	1.5 U	1.6 U	2.1	-	-	-	-
4-Ethyl toluene	-	-	52.4	4.5 U	4.8 U	4.7 U	-	-	-	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	-	-	1.4 U	1.6	4.3	2.8	-	-	-	-
Acetone	-	-	121	57.4	58.3	85.1	-	-	-	-
Benzene	-	-	4.2	0.58 U	19.8	0.65	-	-	-	-
Bromodichloromethane	-	-	2.4 U	2.4 U	2.6 U	2.5 U	-	-	-	-
Bromomethane (Methyl Bromide)	-	-	1.4 U	1.4 U	1.5 U	1.5 U	-	-	-	-
Carbon disulfide	-	-	21.7	9.6	1.2 U	1.2 U	-	-	-	-
Carbon tetrachloride	-	-	1.1 U	1.2 U	1.2 U	1.2 U	-	-	-	-
Chlorobenzene	-	-	1.6 U	1.7 U	1.8 U	1.8 U	-	-	-	-
Chloroform (Trichloromethane)	-	-	1.7 U	1.8 U	1.9 U	4	-	-	-	-
Chloromethane (Methyl Chloride)	-	-	0.73 U	0.76 U	0.81 U	0.79 U	-	-	-	-
cis-1,2-Dichloroethene	-	-	1.4 U	1.5 U	1.6 U	1.5 U	-	-	-	-
Cyclohexane	-	-	1.2 U	1.3 U	33.1	1.3 U	-	-	-	-
Dichlorodifluoromethane (CFC-12)	-	-	2.5	2.1	2.3	2.4	-	-	-	-
Ethanol	-	-	985	149	59.1	33.1	-	-	-	-
Ethyl acetate	-	-	2.5	1.3 U	3.7	1.4 U	-	-	-	-
Ethylbenzene	-	-	7.9	1.6 U	7.5	1.6 U	-	-	-	-
Hexachlorobutadiene	-	-	3.8 U	4 U	4.3 U	4.1 U	-	-	-	-
Hexane	-	-	3.8	1.3 U	76.9	1.4	-	-	-	-
Isopropyl Alcohol	-	-	21.3	7.3	8.9	12.6	-	-	-	-
m,p-Xylenes	-	-	77.5	3.2 U	28.6	3.3 U	-	-	-	-
Methylene chloride	-	-	11.4	6.4 U	6.8 U	6.6 U	-	-	-	-
Naphthalene	-	-	401	9.2	22.9	7.2	-	-	-	-
N-Heptane	-	-	1.4 U	1.5 U	81.8	1.6 U	-	-	-	-
o-Xylene	-	-	43.1	1.6	11.8	1.9	-	-	-	-
Propylene (Propene)	-	-	0.61 U	0.85	3.1	0.65 U	-	-	-	-
Styrene	-	-	3.8 U	3.9 U	4.5	4 U	-	-	-	-
Tetrachloroethene	-	-	1.2 U	1.9	1.3 U	1.9	-	-	-	-
Tetrahydrofuran	-	-	1 U	1.1 U	20.2	1.2	-	-	-	-
Toluene	-	-	26.4	1.6	33.6	3.7	-	-	-	-
trans-1,2-Dichloroethene	-	-	1.4 U	1.5 U	1.6 U	1.5 U	-	-	-	-
Trichloroethene	8.7	11.6	0.96 U	2.1	4.4	18.4	0.96 U	16.6	5	2.4
Trichlorofluoromethane (CFC-11)	-	-	2 U	2.1 U	2.2 U	2.1 U	-	-	-	-
Trifluorotrichloroethane (Freon 113)	-	-	2.8 U	2.9 U	3.1 U	3 U	-	-	-	-
Vinyl acetate	-	-	1.2 U	1.5	1.4 U	5.7	-	-	-	-
Vinyl chloride	-	-	0.45 U	0.47 U	0.5 U	0.49 U	-	-	-	-

ABBREVIATIONS AND NOTES:
"-": Not Analyzed
µg/m³: micrograms per cubic meter
U: not detected, value is the reporting limit
NA: Not Applicable

VISL: Vapor Intrusion Screening Level. VISL were calculated using air Regional Screening Level (RSL) values based on an HQ of 1 or ELCR of 1E-6 divided by a screening level subslab soil gas to indoor air alpha factor of 0.1. RSL values were obtained from the USEPA Regional Screening Levels Table, updated January 2015.

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Pink highlighted trichloroethene values indicate the detected concentration exceeds the screening value of 20 µg/m³.

APPENDIX B

Selection of Groundwater Data for Vapor Intrusion Assessment

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	10_09202010	11_09202010	111_01162013	111_03032015	111_03292011	111_06152011	111_09222010	111_12082014
	09/20/2010	09/20/2010	01/16/2013	03/03/2015	03/29/2011	06/15/2011	09/22/2010	12/08/2014
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001 U	0.0024	0.0031	0.0024	0.0021	0.002	0.0022
1,1-Dichloroethane	0.001 U	0.0016	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene				0.001 U				0.001 U
2-Butanone (Methyl Ethyl Ketone)				0.005 U				0.005 U
Acetone				0.02 U				0.02 U
Benzene	0.001 U	0.0022	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane				0.001 U				0.001 U
Chloroform (Trichloromethane)				0.001 U				0.001 U
cis-1,2-Dichloroethene	0.001 U	0.13	0.001 U	0.0012	0.001 U	0.001 U	0.001 U	0.0012
Tetrachloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	0.001 U	0.0026	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	0.013	0.065	0.001 U	0.0048	0.001 U	0.001 U	0.001 U	0.0053
Vinyl chloride	0.001 U	0.001 U	0.001 U	0.0004 U	0.001 U	0.001 U	0.001 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter			112_03032015_F					
	111_12232010 12/23/2010	112_01162013 01/16/2013	112_03032015 03/03/2015	D 03/03/2015	112_03042011 03/04/2011	112_06152011 06/15/2011	112_12082014 12/08/2014	112_12202010 12/20/2010
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.0021	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene			0.001 U	0.001 U			0.001 U	
2-Butanone (Methyl Ethyl Ketone)			0.005 U	0.005 U			0.005 U	
Acetone			0.02 U	0.02 U			0.02 U	
Benzene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane			0.001 U	0.001 U			0.001 U	
Chloroform (Trichloromethane)			0.001 U	0.001 U			0.001 U	
cis-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Tetrachloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0013
trans-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	0.001 U	0.0054	0.0048	0.0045	0.029	0.014	0.004	0.042
Vinyl chloride	0.001 U	0.001 U	0.0004 U	0.0004 U	0.001 U	0.001 U	0.0004 U	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	112-15_8- 16_8_11142011 11/14/2011 15_8 - 16_8 (ft)	112-15.8- 16.8_11142011_FD 11/14/2011 15.8 - 16.8 (ft)	112-16_8- 17_8_11142011 11/14/2011 16_8 - 17_8 (ft)	112-20_8- 22_8_11142011 11/14/2011 20_8 - 22_8 (ft)	112-27_8- 29_8_11142011 11/14/2011 27_8 - 29_8 (ft)	112-33_8- 35_8_11142011 11/14/2011 33_8 - 35_8 (ft)	113_03042011 03/04/2011	113_03042015 03/04/2015
Volatile Organics (mg/L)								
1,1,1-Trichloroethane							0.001 U	0.001 U
1,1-Dichloroethane							0.001 U	0.001 U
1,1-Dichloroethene								0.001 U
2-Butanone (Methyl Ethyl Ketone)								0.005 U
Acetone								0.02 U
Benzene							0.001 U	0.001 U
Bromodichloromethane								0.001 U
Chloroform (Trichloromethane)								0.001 U
cis-1,2-Dichloroethene							0.001 U	0.001 U
Tetrachloroethene							0.001 U	0.001 U
trans-1,2-Dichloroethene							0.001 U	0.001 U
Trichloroethene	0.008	0.0063	0.0088	0.01	0.0068	0.0078	0.0045	0.0018
Vinyl chloride							0.001 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter								310GS_0309201	310GS_1217201
	113_06152011	113_09222010	113_12082014	113_12182012	113_12202010	203_09222010	203_12182012	5	4
	06/15/2011	09/22/2010	12/08/2014	12/18/2012	12/20/2010	09/22/2010	12/18/2012	03/09/2015	12/17/2014
Volatile Organics (mg/L)									
1,1,1-Trichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
1,1-Dichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
1,1-Dichloroethene			0.001 U					0.001 U	0.001 U
2-Butanone (Methyl Ethyl Ketone)			0.005 U					0.005 U	0.005 U
Acetone			0.02 U					0.02 U	0.02 U
Benzene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Bromodichloromethane			0.001 U					0.001 U	0.001 U
Chloroform (Trichloromethane)			0.001 U					0.001 U	0.001 U
cis-1,2-Dichloroethene	0.0019	0.013	0.001 U	0.0013	0.0014	0.0016		0.0022	0.0041
Tetrachloroethene	0.001 U	0.0023	0.001 U	0.001 U	0.001 U	0.001 U		0.0085	0.0094
trans-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U
Trichloroethene	0.0048	0.078	0.00098	0.0045	0.012	0.021	0.019	0.0074	0.0103
Vinyl chloride	0.001 U	0.001 U	0.0004 U	0.001 U	0.001 U	0.001 U		0.0004 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	316	316GD_030420	316GS_0304201	316GS_1209201	316GS_1209201	317GS_0303201	317GS_1208201	318GS_0303201	318GS_1208201
	GD_12092014	15	5	4	4_FD	5	4	5	4
	12/09/2014	03/04/2015	03/04/2015	12/09/2014	12/09/2014	03/03/2015	12/08/2014	03/03/2015	12/08/2014
Volatile Organics (mg/L)									
1,1,1-Trichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U M1	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U M1	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Acetone	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U M1	0.02 U	0.02 U	0.02 U
Benzene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U M1	0.001 U	0.001 U	0.001 U
Bromodichloromethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U M1	0.001 U	0.001 U	0.001 U
Tetrachloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U
Vinyl chloride	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP004-15- 20_12122012 12/12/2012 15 - 20 (ft)	DP006-13- 18_12132012 12/13/2012 13 - 18 (ft)	DP009-15- 20_12122012 12/12/2012 15 - 20 (ft)	DP010-15- 20_12132012 12/13/2012 15 - 20 (ft)	DP012_20- 25_12172012 12/17/2012 20 - 25 (ft)	DP-016_14- 19_09132013 09/13/2013 14 - 19 (ft)	DP-026_12_6- 17_6_09162013 09/16/2013 12_6 - 17_6 (ft)	DP-027_14- 19_09092013 09/09/2013 14 - 19 (ft)	DP-032_15- 20_09172013 09/17/2013 15 - 20 (ft)
Volatile Organics (mg/L)									
1,1,1-Trichloroethane									
1,1-Dichloroethane									
1,1-Dichloroethene									
2-Butanone (Methyl Ethyl Ketone)									
Acetone									
Benzene									
Bromodichloromethane									
Chloroform (Trichloromethane)									
cis-1,2-Dichloroethene									
Tetrachloroethene									
trans-1,2-Dichloroethene									
Trichloroethene	0.001 U	0.001 U	0.0059	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0016
Vinyl chloride									

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-033_10- 20_09102013 09/10/2013 10 - 20 (ft)	DP-036_15- 20_09102013 09/10/2013 15 - 20 (ft)	DP-036_15- 20_09102013_FD 09/10/2013 20 (ft)	DP-040_15- 20_09112013 09/11/2013 15 - 20 (ft)	DP-043_15- 20_04032014 04/03/2014 15 - 20 (ft)	DP-044_10_2- 20_2_04032014 04/03/2014 10_2 - 20_2 (ft)	DP-045_14_5- 24_5_04042014 04/04/2014 14_5 - 24_5 (ft)	DP-077_13- 17_11052014 11/05/2014 13 - 17 (ft)
Volatile Organics (mg/L)								
1,1,1-Trichloroethane					0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane					0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethene					0.001 U	0.001 U	0.001 U	0.001 U
2-Butanone (Methyl Ethyl Ketone)					0.005 U	0.005 U	0.005 U	0.005 U
Acetone					0.02 U	0.02 U	0.02 U	0.02 U
Benzene					0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane					0.0025	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)					0.012	0.0036	0.001 U	0.001 U
cis-1,2-Dichloroethene					0.001 U	0.0272	0.001 U	0.001 U
Tetrachloroethene					0.001 U	0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene					0.001 U	0.0011	0.001 U	0.001 U
Trichloroethene	0.001 U	0.001 U	0.001 U	0.014	0.0004 U	0.0338	0.0119	0.0004 U
Vinyl chloride					0.0004 U	0.0004 U	0.001 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-077_34- 36_11052014 11/05/2014 34 - 36 (ft)	DP-077_34- 36_11052014_FD 11/05/2014 36 (ft)	Q_03032015 03/03/2015				QQ_09212010_ FD	
				Q_09212010 09/21/2010	Q_12102014 12/10/2014	Q_12172012 12/17/2012	QQ_09212010 09/21/2010	09/21/2010
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U	0.001 U	0.0018		0.0018	0.0019		
1,1-Dichloroethane	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U		
1,1-Dichloroethene	0.001 U	0.001 U	0.001 U		0.001 U			
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005 U	0.005 U		0.005 U			
Acetone	0.02 U	0.02 U	0.02 U		0.02 U			
Benzene	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U		
Bromodichloromethane	0.001 U	0.001 U	0.001 U		0.001 U			
Chloroform (Trichloromethane)	0.001 U	0.001 U	0.001 U		0.001 U			
cis-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U		
Tetrachloroethene	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U		
trans-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U		0.001 U	0.001 U		
Trichloroethene	0.0004 U	0.0004 U	0.0004 U	0.0012	0.00078	0.001 U	0.0018	0.0017
Vinyl chloride	0.0004 U	0.0004 U	0.0004 U		0.0004 U	0.001 U		

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	QQ_12192012 12/19/2012	SMW19_03052 015 03/05/2015	SMW19_03052 015_FD 03/05/2015	SMW19_12082 014 12/08/2014	SMW6_030620 15 03/06/2015	SMW- 6_12122014 12/12/2014	T_03052015 03/05/2015	T_09212010 09/21/2010	T_12162014 12/16/2014
Volatile Organics (mg/L)									
1,1,1-Trichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001	0.001 U		0.001 U
1,1-Dichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U
1,1-Dichloroethene		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U
2-Butanone (Methyl Ethyl Ketone)		0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U		0.005 U
Acetone		0.02 U	0.02 U L3	0.02 U	0.02 U	0.02 U	0.02 U L3		0.02 U
Benzene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U
Bromodichloromethane		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U
Chloroform (Trichloromethane)		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U
cis-1,2-Dichloroethene	0.0017	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U
Tetrachloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U
trans-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U		0.001 U
Trichloroethene	0.0021	0.0004 U	0.0004 U	0.0004 U	0.0028	0.0024	0.0004 U	0.001 U	0.0004 U
Vinyl chloride	0.001 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U		0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter		T-16- 18_11142011 11/14/2011 16 - 18 (ft)							
	T_12172012 12/17/2012		V_03032011 03/03/2011	V_03032011_FD 03/03/2011	V_03032015 03/03/2015	V_06162011 06/16/2011	V_09212010 09/21/2010	V_12092014 12/09/2014	V_12172010 12/17/2010
Volatile Organics (mg/L)									
1,1,1-Trichloroethane	0.001 U				0.001 U	0.001 U		0.001 U	0.001 U
1,1-Dichloroethane	0.001 U				0.001 U	0.001 U		0.001 U	0.001 U
1,1-Dichloroethene					0.001 U			0.001 U	
2-Butanone (Methyl Ethyl Ketone)					0.005 U			0.005 U	
Acetone					0.02 U			0.02 U	
Benzene	0.001 U				0.001 U	0.001 U		0.001 U	0.001 U
Bromodichloromethane					0.001 U			0.001 U	
Chloroform (Trichloromethane)					0.001 U			0.001 U	
cis-1,2-Dichloroethene	0.0011				0.0019	0.0052		0.001 U	0.0066
Tetrachloroethene	0.001 U				0.001 U	0.001 U		0.001 U	0.001 U
trans-1,2-Dichloroethene	0.001 U				0.001 U	0.001 U		0.001 U	0.001 U
Trichloroethene	0.001 U	0.001 U	0.058	0.057	0.0292	0.058	0.056	0.0213	0.055
Vinyl chloride	0.001 U				0.0004 U	0.001 U		0.0004 U	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter		V-19_5- 20_5_11142011	V-20_5- 21_5_11142011	V-22- 24_11142011	V-25- 27_11142011			
	V_12172012	11/14/2011	11/14/2011	11/14/2011	11/14/2011	W_03032011	W_03032015	W_06162011
	12/17/2012	19_5 - 20_5 (ft)	20_5 - 21_5 (ft)	22 - 24 (ft)	25 - 27 (ft)	03/03/2011	03/03/2015	06/16/2011
Volatile Organics (mg/L)								
1,1,1-Trichloroethane	0.001 U						0.001 U	0.001 U
1,1-Dichloroethane	0.001 U						0.001 U	0.001 U
1,1-Dichloroethene							0.001 U	
2-Butanone (Methyl Ethyl Ketone)							0.005 U	
Acetone							0.02 U	
Benzene	0.001 U						0.001 U	0.001 U
Bromodichloromethane							0.001 U	
Chloroform (Trichloromethane)							0.001 U	
cis-1,2-Dichloroethene	0.0021						0.0804	0.051
Tetrachloroethene	0.001 U						0.001 U	0.001 U
trans-1,2-Dichloroethene	0.001 U						0.0038	0.0028
Trichloroethene	0.031	0.001 U	0.0017	0.03	0.038	0.0034	0.0084	0.0052
Vinyl chloride	0.001 U						0.00058	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	W_12092014_F						W-12-	W-13-	W-16_5-
	W_09212010	W_12092014	D	W_12172010	W_12172012	D	13_11142011	14_11142011	18_5_11142011
	09/21/2010	12/09/2014	12/09/2014	12/17/2010	12/17/2012	12/17/2012	11/14/2011	11/14/2011	11/14/2011
							12 - 13 (ft)	13 - 14 (ft)	16_5 - 18_5 (ft)
Volatile Organics (mg/L)									
1,1,1-Trichloroethane		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			
1,1-Dichloroethane		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			
1,1-Dichloroethene		0.001 U	0.001 U						
2-Butanone (Methyl Ethyl Ketone)		0.005 U	0.005 U						
Acetone		0.02 U	0.02 U						
Benzene		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			
Bromodichloromethane		0.001 U	0.001 U						
Chloroform (Trichloromethane)		0.001 U	0.001 U						
cis-1,2-Dichloroethene		0.0471	0.0483	0.03	0.054	0.053			
Tetrachloroethene		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U			
trans-1,2-Dichloroethene		0.0027	0.0025	0.0021	0.0027	0.0029			
Trichloroethene	0.0034	0.0067	0.0067	0.0042	0.0068	0.0066	0.0024	0.0033	0.0066
Vinyl chloride		0.0004 U	0.0004 U	0.001 U	0.001 U	0.001 U			

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	X_03032011 03/03/2011	X_03042015 03/04/2015	X_06162011 06/16/2011	X_09212010 09/21/2010	X_12092014 12/09/2014	X_12172010 12/17/2010	X_12172012 12/17/2012	301_17.5- 21.5_12022014 12/02/2014 17.5 - 21.5 (ft)
Volatile Organics (mg/L)								
1,1,1-Trichloroethane		0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.01 U
1,1-Dichloroethane		0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.01 U
1,1-Dichloroethene		0.001 U			0.001 U*			0.01 U
2-Butanone (Methyl Ethyl Ketone)		0.005 U			0.005 U			0.05 U
Acetone		0.02 U			0.02 U			0.2 U
Benzene		0.001 U	0.001 U		0.001 U*	0.001 U	0.001 U	0.01 U
Bromodichloromethane		0.001 U			0.001 U*			0.01 U
Chloroform (Trichloromethane)		0.001 U			0.001 U			0.01 U
cis-1,2-Dichloroethene		0.001 U	0.001 U		0.001 U*	0.001 U	0.001 U	0.615
Tetrachloroethene		0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.0335
trans-1,2-Dichloroethene		0.001 U	0.001 U		0.001 U	0.001 U	0.001 U	0.0128
Trichloroethene	0.001 U	0.0007	0.001 U	0.001 U	0.00061 *	0.001 U	0.001 U	1.04
Vinyl chloride		0.0004 U	0.001 U		0.0004 U	0.001 U	0.001 U	0.004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	301_48-50_12032014			301GS_03122015 03/12/2015			302GS_03122015 03/12/2015
	12/03/2014 - 50 (ft)	48 301GD_03122015 03/12/2015	301GD_12182014 12/18/2014		301GS_12182014 12/18/2014	302 GS_12222014 12/22/2014	
Volatile Organics (mg/L)							
1,1,1-Trichloroethane	0.02 U	0.02	0.001 U	0.01	0.001 U	0.001 U	0.001
1,1-Dichloroethane	0.02 U	0.02	0.0067	0.01	0.0015	0.001 U	0.001
1,1-Dichloroethene	0.02 U	0.0232	0.0208	0.01	0.0032	0.001 U	0.001
2-Butanone (Methyl Ethyl Ketone)	0.1 U	0.1	0.005 U	0.05	0.005 U	0.005 U	0.005
Acetone	0.4 U	0.4	0.02 U	0.2	0.02 U	0.02 U	0.02
Benzene	0.02 U	0.02	0.0016	0.01	0.001 U	0.001 U	0.001
Bromodichloromethane	0.02 U	0.02	0.001 U	0.01	0.001 U	0.001 U	0.001
Chloroform (Trichloromethane)	0.02 U	0.02	0.001 U	0.01	0.001 U	0.001 U	0.001
cis-1,2-Dichloroethene	0.424	0.909	0.639 h	0.732	0.712 h	0.001 U	0.001
Tetrachloroethene	0.02 U	0.02	0.0017	0.0528	0.0489	0.001 U	0.001
trans-1,2-Dichloroethene	0.02 U	0.02	0.0097	0.0209	0.0173	0.004 U	0.001
Trichloroethene	1.94	4.27	3.29 h	1.37	1.08 h	0.0004 U	0.00098
Vinyl chloride	0.008 U	0.0081	0.0128	0.004	0.0033	0.0004 U	0.0004

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	303_15.5-19.5_12042014 12/04/2014 15.5 - 19.5 (ft)	303_32-34_12042014 12/04/2014 32 - 34 (ft)	303GS_03122015 03/12/2015	303GS_12192014 12/19/2014	304 (49-51FT)_12082014 12/08/2014 49 - 51 (ft)	304_13.5-17.5_12052014 12/05/2014 13.5 - 17.5 (ft)
Volatile Organics (mg/L)						
1,1,1-Trichloroethane	0.001 U	0.001 U	0.005	0.01 Uh	0.001 U	0.001 U
1,1-Dichloroethane	0.0012	0.0049	0.005	0.01 Uh	0.001 U	0.001 U
1,1-Dichloroethene	0.001 U	0.0015	0.005	0.01 Uh	0.001 U	0.001 U
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005 U	0.025	0.05 Uh	0.0064	0.005 U
Acetone	0.02 U	0.02 U	0.1	0.2 Uh	0.0225	0.02 U
Benzene	0.001 U	0.001 U	0.005	0.01 Uh	0.001 U	0.001 U
Bromodichloromethane	0.001 U	0.001 U	0.005	0.01 Uh	0.001 U	0.001 U
Chloroform (Trichloromethane)	0.001 U	0.001 U	0.005	0.01 Uh	0.0018	0.001 U
cis-1,2-Dichloroethene	0.106	0.308	0.308	0.339 h	0.0011	0.007
Tetrachloroethene	0.004	0.0133	0.0091	0.01 Uh	0.001 U	0.016
trans-1,2-Dichloroethene	0.0024	0.0101	0.0069	0.01 Uh	0.001 U	0.001 U
Trichloroethene	0.255	1.02	0.693	0.718 h	0.0016	0.0512
Vinyl chloride	0.0021	0.0004 U	0.002	0.004 Uh	0.0004 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	304GS_03122015 03/12/2015	304GS_12192014 12/19/2014	305 (15_5-19_5FT) _12082014 12/08/2014 15_5 - 19_5 (ft)	305 (52-54FT) _12082014 12/08/2014 54 (ft)	52 - 305 GD_12222014 12/22/2014	305 GS_12222014 12/22/2014	305GD_03122015 03/12/2015
Volatile Organics (mg/L)							
1,1,1-Trichloroethane	0.001	0.001 Uh	0.001 U	0.0025	0.0022 h	0.0011 h	0.0022
1,1-Dichloroethane	0.001	0.001 Uh	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
1,1-Dichloroethene	0.001	0.001 Uh	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
2-Butanone (Methyl Ethyl Ketone)	0.005	0.005 Uh	0.005 U	0.005 U	0.005 Uh	0.005 Uh	0.005
Acetone	0.02	0.02 Uh	0.02 U	0.02 U	0.02 Uh	0.02 Uh	0.02
Benzene	0.001	0.001 Uh	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
Bromodichloromethane	0.001	0.001 Uh	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
Chloroform (Trichloromethane)	0.001	0.001 Uh	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
cis-1,2-Dichloroethene	0.0183	0.0112 h	0.0107	0.001 U	0.001 Uh	0.0659 h	0.001
Tetrachloroethene	0.03	0.0205 h	0.001 U	0.001 U	0.001 Uh	0.001 Uh	0.001
trans-1,2-Dichloroethene	0.001	0.001 Uh	0.001 U	0.001 U	0.004 Uh	0.004 Uh	0.001
Trichloroethene	0.111	0.0635 h	0.0738	0.00086	0.00051 h	0.302 h	0.0004
Vinyl chloride	0.0004	0.0004 Uh	0.0004 U	0.0004 U	0.0004 Uh	0.0004 Uh	0.0004

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	305GS_03122015 03/12/2015	305GS_03122015_FD 03/12/2015	306GD_03112015 03/11/2015	306GD_12182014 12/18/2014	306GS_03112015 03/11/2015	306GS_12182014 12/18/2014	307GD_03112015 03/11/2015
Volatile Organics (mg/L)							
1,1,1-Trichloroethane	0.002	0.002	0.005	0.001 U	0.005	0.001 U	0.0024
1,1-Dichloroethane	0.002	0.002	0.005	0.0032	0.005	0.002	0.001
1,1-Dichloroethene	0.002	0.002	0.005	0.001 U	0.005	0.001 U	0.001
2-Butanone (Methyl Ethyl Ketone)	0.01	0.01	0.025	0.005 U	0.025	0.005 U	0.005
Acetone	0.04	0.04	0.1	0.02 U	0.1	0.02 U	0.02
Benzene	0.002	0.002	0.005	0.001 U	0.005	0.001 U	0.001
Bromodichloromethane	0.002	0.002	0.005	0.001 U	0.005	0.001 U	0.001
Chloroform (Trichloromethane)	0.002	0.002	0.005	0.001 U	0.005	0.001 U	0.001
cis-1,2-Dichloroethene	0.0442	0.0459	0.149	0.213	0.188	0.166	0.001
Tetrachloroethene	0.002	0.002	0.005	0.0075	0.008	0.0077	0.001
trans-1,2-Dichloroethene	0.002	0.0022	0.0054	0.0051	0.0051	0.004 U	0.001
Trichloroethene	0.231	0.247	0.387	0.573 h	0.47	0.373 h	0.00051
Vinyl chloride	0.0008	0.0008	0.002	0.0004 U	0.002	0.00097	0.0004

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	307GD_12172014 12/17/2014	307GS_03112015 03/11/2015	307GS_12172014 12/17/2014	9_09202010 09/20/2010	DP-046_15- 20_04022014 04/02/2014 20 (ft)	DP-047_15- 20_03312014 15 - 03/31/2014 20 (ft)	15 -
Volatile Organics (mg/L)							
1,1,1-Trichloroethane	0.0019	0.0023	0.0015	0.001 U	0.001 U	0.001 U	
1,1-Dichloroethane	0.001 U	0.001	0.001 U	0.0011	0.001 U	0.001 U	
1,1-Dichloroethene	0.001 U	0.001	0.001 U		0.001 U	0.001 U	
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005	0.005 U		0.005 U	0.005 U	
Acetone	0.02 U	0.02	0.02 U		0.02 U	0.02 U	
Benzene	0.001 U	0.001	0.001 U	0.0048	0.001 U	0.001 U	
Bromodichloromethane	0.001 U	0.001	0.001 U		0.001 U	0.001 U	
Chloroform (Trichloromethane)	0.001 U	0.001	0.001 U		0.001 U	0.001 U	
cis-1,2-Dichloroethene	0.001 U	0.001	0.001 U	0.0016	0.001 U	0.0261	
Tetrachloroethene	0.001 U	0.001	0.001 U	0.001 U	0.001 U	0.001 U	
trans-1,2-Dichloroethene	0.001 U	0.001	0.001 U	0.001 U	0.001 U	0.0017	
Trichloroethene	0.00083	0.00065	0.0004 U	0.0033	0.0004 U	0.406	
Vinyl chloride	0.0004 U	0.0004	0.0004 U	0.001 U	0.0004 U	0.0004 U	

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-048_15- 20_03312014	DP-049_15- 20_04012014	DP-050_14_0- 24_0_04012014	DP-051_15- 20_04022014	DP-072_14_3- 18_3_10242014	DP-072_36- 38_10272014
	03/31/2014	15 - 04/01/2014	15 - 04/01/2014	14 - 04/02/2014	15 - 10/24/2014	10/27/2014 36 -
	20 (ft)	20 (ft)	24 (ft)	20 (ft)	14_3 - 18_3 (ft)	38 (ft)
Volatile Organics (mg/L)						
1,1,1-Trichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.004
1,1-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.0013
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U
Acetone	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Benzene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Chloroform (Trichloromethane)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
cis-1,2-Dichloroethene	0.001 U	0.0099	0.0086	0.0251	0.0469	0.256
Tetrachloroethene	0.001 U	0.0014	0.0022	0.0025	0.0021	0.0108
trans-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.0024	0.0011	0.0086
Trichloroethene	0.0016	0.0835	0.0404	0.0896	0.181	0.937
Vinyl chloride	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-073_13- 17_10272014 10/27/2014	13 - DP-073_25- 27_10282014 10/28/2014	25 - DP-073_38_3- 40_3_10282014 10/28/2014	38_3 - 40_3 (ft)	DP-074_13_5- 17_5_10282014 10/28/2014	13_5 - 17_5 (ft)	DP-074_44_5- 46_5_10282014 10/28/2014	44_5 - 46_5 (ft)	DP-075_14- 18_10282014 10/28/2014	14 - 18 (ft)
	17 (ft)	27 (ft)	38_3 - 40_3 (ft)		13_5 - 17_5 (ft)		44_5 - 46_5 (ft)		18 (ft)	
Volatile Organics (mg/L)										
1,1,1-Trichloroethane	0.001 U	0.005 U	0.001 U		0.001 U		0.001 U		0.001 U	
1,1-Dichloroethane	0.001 U	0.005 U	0.0041		0.001 U		0.0023		0.001 U	
1,1-Dichloroethene	0.001 U	0.005 U	0.0017		0.001 U		0.0024		0.001 U	
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.025 U	0.005 U		0.005 U		0.005 U		0.005 U	
Acetone	0.02 U	0.1 U	0.02 U		0.02 U		0.02 U		0.02 U	
Benzene	0.001 U	0.005 U	0.001 U		0.001 U		0.001 U		0.001 U	
Bromodichloromethane	0.001 U	0.005 U	0.001 U		0.001 U		0.001 U		0.001 U	
Chloroform (Trichloromethane)	0.001 U	0.005 U	0.001 U		0.0037		0.001 U		0.0028	
cis-1,2-Dichloroethene	0.001 U	0.156	0.349		0.0013		0.509		0.001 U	
Tetrachloroethene	0.001 U	0.0112	0.0251		0.001 U		0.0368		0.001 U	
trans-1,2-Dichloroethene	0.001 U	0.005 U	0.0108		0.001 U		0.0127		0.001 U	
Trichloroethene	0.0045	0.559	1.03		0.0061		1.21		0.0028	
Vinyl chloride	0.0004 U	0.002 U	0.007		0.0004 U		0.004		0.0004 U	

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-075_35- 37_10292014 10/29/2014 37 (ft)	DP-075_44- 46_10292014 35 - 10/29/2014 46 (ft)	DP-075_44- 46_10292014_FD 44 - 10/29/2014 46 (ft)	DP-076_13_8- 17_8_10292014 10/29/2014 13_8 - 17_8 (ft)	DP-076_42- 44_10292014 10/29/2014 42 - 44 (ft)	SS_09212010 09/21/2010
Volatile Organics (mg/L)						
1,1,1-Trichloroethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
1,1-Dichloroethane	0.0017	0.0018	0.002	0.001 U	0.0016	0.003
1,1-Dichloroethene	0.0015	0.0021	0.0023	0.001 U	0.0019	
2-Butanone (Methyl Ethyl Ketone)	0.005 U	0.005 U	0.005 U	0.005 U	0.005 U	
Acetone	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	
Benzene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Bromodichloromethane	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Chloroform (Trichloromethane)	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
cis-1,2-Dichloroethene	0.269	0.401	0.392	0.001 U	0.257	0.0022
Tetrachloroethene	0.0329	0.038	0.042	0.001 U	0.0285	0.001 U
trans-1,2-Dichloroethene	0.0082	0.0111	0.0119	0.001 U	0.0081	0.001 U
Trichloroethene	0.728	0.945	0.925	0.0004 U	0.761	0.001 U
Vinyl chloride	0.002	0.0029	0.0031	0.0004 U	0.0025	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	TT_03032011 03/03/2011	TT_06162011 06/16/2011	TT_09212010 09/21/2010	TT_12172010 12/17/2010	TT_12172010_FD 12/17/2010	TT_12192012 12/19/2012
Volatile Organics (mg/L)						
1,1,1-Trichloroethane		0.0019		0.0022	0.0019	0.0019
1,1-Dichloroethane		0.001 U		0.001 U	0.001 U	0.001 U
1,1-Dichloroethene						
2-Butanone (Methyl Ethyl Ketone)						
Acetone						
Benzene		0.001 U		0.001 U	0.001 U	0.001 U
Bromodichloromethane						
Chloroform (Trichloromethane)						
cis-1,2-Dichloroethene		0.001 U		0.001 U	0.001 U	0.001 U
Tetrachloroethene		0.001 U		0.001 U	0.001 U	0.001 U
trans-1,2-Dichloroethene		0.001 U		0.001 U	0.001 U	0.001 U
Trichloroethene	0.001 U	0.001 U	0.0014	0.0012	0.001 U	0.001 U
Vinyl chloride		0.001 U		0.001 U	0.001 U	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

Appendix B - Table 1
Selection of Groundwater Data for Vapor Intrusion Assessment
Groundwater Outside of the Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	UU_09212010 09/21/2010
Volatile Organics (mg/L)	
1,1,1-Trichloroethane	0.001
1,1-Dichloroethane	0.001 U
1,1-Dichloroethene	
2-Butanone (Methyl Ethyl Ketone)	
Acetone	
Benzene	0.001 U
Bromodichloromethane	
Chloroform (Trichloromethane)	
cis-1,2-Dichloroethene	0.001 U
Tetrachloroethene	0.0015
trans-1,2-Dichloroethene	0.001 U
Trichloroethene	0.047
Vinyl chloride	0.001 U

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
U: not detected, value is the reporting limit
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Green highlighted cells indicate the data was not used in the vapor intrusion assessment as more recent groundwater data are available for this location.
- Pink highlighted cells indicate the data was not used in the vapor intrusion assessment because the data are from deep wells that are not considered to affect vapor intrusion.
- Orange highlighted cells indicate the data was not used in the vapor intrusion assessment because the data is from an older direct push well that has been superceded by monitoring well data.

APPENDIX C

Vapor Intrusion Screening Level Calculations

1 of 1

Parameter	Symbol	Value	Instructions
Exposure Scenario	Scenario	Residential	Select residential or commercial scenario from pull down list
Target Risk for Carcinogens	TCR	1.00E-06	Enter target risk for carcinogens
Target Hazard Quotient for Non-Carcinogens	THQ	1	Enter target hazard quotient for non-carcinogens
Average Groundwater Temperature (°C)	Tgw	10	Enter average of the stabilized groundwater temperature to correct Henry's Law Constant for groundwater target concentrations

CAS	Chemical Name	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Soil Source?	Is Chemical Sufficiently Volatile and Toxic to Pose Inhalation Risk Via Vapor Intrusion from Groundwater Source?	Target Indoor Air Conc. @ TCR = 1E-06 or THQ = 1	Toxicity Basis	Target Sub-Slab and Exterior Soil Gas Conc. @ TCR = 1E-06 or THQ = 1	Target Ground Water Conc. @ TCR = 1E-06 or THQ = 1	Is Target Ground Water Conc. < MCL?	Temperature for Groundwater Vapor Conc.	Lower Explosive Limit**	LEL Source	Inhalation Unit Risk	IUR Source*	Reference Concentration	RFC Source*	Mutagenic Indicator	Target Indoor Air Conc. for Carcinogens @ TCR = 1E-06	Target Indoor Air Conc. for Non-Carcinogens @ THQ = 1
		Cvp > Cia,target?	Chc > Cia,target?	MIN(Cia,c,Cia,nc)		Csq	Cgw	Cgw<MCL?	Tgw or 25	LEL		IUR		RIC		i	Cia,c	Cia,nc
		Yes/No	Yes/No	(ug/m ³)	C/NC	(ug/m ³)	(ug/L)	(MCL ug/L)	C	(% by vol)		(ug/m ³) ⁻¹		(mg/m ³)				(ug/m ³)
67-64-1	Acetone	Yes	Yes	3.2E+04	NC	3.2E+05	4.4E+07	--	10	2.6	E			3.10E+01	A			3.2E+04
75-35-4	Dichloroethylene, 1,1-	Yes	Yes	2.1E+02	NC	2.1E+03	3.5E+02	No (7)	10	6.5	N			2.00E-01	I			2.1E+02
78-93-3	Methyl Ethyl Ketone (2-Butanone)	Yes	Yes	5.2E+03	NC	5.2E+04	4.8E+06	--	10	1.4	N			5.00E+00	I			5.2E+03

Selected (based on scenario in cell E5)

Averaging time for carcinogens	(yrs)	ATc_R	70	ATc_C	70	ATc	70
Averaging time for non-carcinogens	(yrs)	ATnc_R	26	ATnc_C	25	ATnc	26
Exposure duration	(yrs)	ED_R	26	ED_C	25	ED	26
Exposure frequency	(days/yr)	EF_R	350	EF_C	250	EF	350
Exposure time	(hr/day)	ET_R	24	ET_C	8	ET	24

Selected (based on scenario in cell E5)

Groundwater	(-)	AFgw_R	0.001	AFgw_C	0.001	AFgw	0.001
Sub-Slab and Exterior Soil Gas	(-)	AFss_R	0.1	AFss_C	0.1	AFss	0.1

$$\text{Cia,nc (ug/m3)} = \text{THQ} \times \text{ATnc} \times (365 \text{ days/yr}) \times (24 \text{ hrs/day}) \times \text{RfC} \times (1000 \text{ ug/mg}) / (\text{ED} \times \text{EF} \times \text{ET})$$

Selected (based on scenario in cell E5)

mIURTCE_R	1.00E-06	mIURTCE_C	0.00E+00	mIURTCE	1.00E-06
IURTCE_R	3.10E-06	IURTCE_C	4.10E-06	IURTCE	3.10E-06

The exposure durations and age-dependent adjustment factors for mutagenic-mode-of-action are listed in the table below:

	Age Cohort	Exposure Duration (years)	Age-dependent adjustment factor
Note: This section applies to trichloroethylene and other mutagenic chemicals, but not to vinyl chloride.	0 - 2 years	2	10
	2 - 6 years	4	3
	6 - 16 years	10	3
	16 - 26 years	10	1

This factor is used in the equations for mutagenic chemicals.

See the Navigation Guide equation for $C_{ia,c}$ for vinyl chloride.

<http://www.cdc.gov/niosh/npg/default.html>

APPENDIX D

Derivation of Site-Specific Vapor Intrusion Attenuation Factors

Table D-1
Predicted Sub-Slab Soil Gas and Indoor Air Concentrations
from Groundwater in the NE Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	310GS_030920	301GS_0312201	302GS_0312201	303GS_0312201	304GS_0312201	305GS_0312201	305GS_0312201	306GS_0311201	307GS_031120	DP-046_15- 20_04022014
	15	5	5	5	5	5	5_FD	5	15	04/02/2014
	03/09/2015	03/12/2015	03/12/2015	03/12/2015	03/12/2015	03/12/2015	03/12/2015	03/11/2015	03/11/2015	15 - 20 (ft)
Volatile Organics (mg/L)										
cis-1,2-Dichloroethene	0.0022	0.732	0.001	0.308	0.0183	0.0442	0.0459	0.188	0.001	0.001 U
Tetrachloroethene	0.0085	0.0528	0.001	0.0091	0.03	0.002	0.002	0.008	0.001	0.001 U
Trichloroethene	0.0074	1.37	0.00098	0.693	0.111	0.231	0.247	0.47	0.00065	0.0004 U
Vinyl chloride	0.0004 U	0.004	0.0004	0.002	0.0004	0.0008	0.0008	0.002	0.0004	0.0004 U
Predicted TCE Subslab and Indoor Air Concentrations (ug/m³)										
Calculated sub-slab soil gas concentration using an alpha factor* of:										
Average (0.0043)	6.0	1102	0.79	557	89	186	199	378	0.52	
50th percentile (0.00092)	1.3	236	0.17	119	19	40	42	81	0.11	
90th percentile (0.009)	12.5	2306	2	1166	187	389	416	791	1.09	
95th percentile (0.018)	25	4611	3.3	2333	374	778	831	1582	2.2	
Calculated indoor air concentration using an alpha factor* of:										
0.00525	0.13	24	0.017	12	2.0	4.1	4.4	8.3	0.011	

ABBREVIATIONS AND NOTES:

mg/L: milligram per liter
COPC: Contaminant of Potential Concern
U: not detected, value is the reporting limit
TCE: Trichloroethene
NC: Not calculated because more recent groundwater data are available for this location

-Yellow highlighted cells indicated an exceedance of the TCE subslab screening level of 20 ug/m³ or indoor air screening level of 2 ug/m³
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Average (arithmetic mean) levels were calculated using a value of the reporting limit for analytical values reported as "Not Detected" (ND).

*Subslab soil gas (µg/m³) = TCE GW conc. (mg/L) x attenuation factor x Henry's law (0.187 @ 10 C) x conversion factor (1X10⁺⁶). Indoor air (µg/m³) = Highest predicted sub-slab soil gas concentration (µg/m³) x attenuation factor (0.00525). See Table D-4 and D-5 for an explanation of the derivation of attenuation factors.

Table D-1
Predicted Sub-Slab Soil Gas and Indoor Air Concentrations
from Groundwater in the NE Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-050_14_0-									
	DP-047_15-	DP-048_15-	DP-049_15-	24_0_0401201	DP-051_15-	DP-072_14_3-	DP-073_13-	DP-074_13_5-	DP-075_14-	DP-076_13_8-
	20_03312014	20_03312014	20_04012014	4	20_04022014	18_3_10242014	17_10272014	17_5_10282014	18_10282014	17_8_10292014
	03/31/2014	03/31/2014	04/01/2014	04/01/2014	04/02/2014	10/24/2014	10/27/2014	10/28/2014	10/28/2014	10/29/2014
	15 - 20 (ft)	15 - 20 (ft)	15 - 20 (ft)	14 - 24 (ft)	15 - 20 (ft)	14_3 - 18_3 (ft)	13 - 17 (ft)	13_5 - 17_5 (ft)	14 - 18 (ft)	13_8 - 17_8 (ft)
Volatile Organics (mg/L)										
cis-1,2-Dichloroethene	0.0261	0.001 U	0.0099	0.0086	0.0251	0.0469	0.001 U	0.0013	0.001 U	0.001 U
Tetrachloroethene	0.001 U	0.001 U	0.0014	0.0022	0.0025	0.0021	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	0.406	0.0016	0.0835	0.0404	0.0896	0.181	0.0045	0.0061	0.0028	0.0004 U
Vinyl chloride	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U
Predicted TCE Subslab and Indoor Air Concentrations (ug/m³)										
Calculated sub-slab soil gas concentration using an alpha factor* of:										
Average (0.0043)	326	1.3	67	32	72	146	3.6	4.9	2.3	
50th percentile (0.00092)	70	0.28	14	7.0	15	31	0.77	1.05	0.48	
90th percentile (0.009)	683	2.7	141	68	151	305	8	10	4.7	
95th percentile (0.018)	1367	5.4	281	136	302	609	15	21	9.4	
Calculated indoor air concentration using an alpha factor* of:										
0.00525	7.2	0.028	1.5	0.71	1.6	3.2	0.080	0.11	0.049	

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
COPC: Contaminant of Potential Concern
U: not detected, value is the reporting limit
TCE: Trichloroethene
NC: Not calculated because more recent groundwater data are available for this location

-Yellow highlighted cells indicated an exceedance of the TCE subslab screening level of 20 ug/m³ or indoor air screening level of 2 ug/m³
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.
- Average (arithmetic mean) levels were calculated using a value of the reporting limit for analytical values reported as "Not Detected" (ND).

*Subslab soil gas (µg/m³) = TCE GW conc. (mg/L) x attenuation factor x Henry's law (0.187 @ 10 C) x conversion factor (1X10⁺⁶). Indoor air (µg/m³) = Highest predicted sub-slab soil gas concentration (µg/m³) x attenuation factor (0.00525). See Table D-4 and D-5 for an explanation of the derivation of attenuation factors.

Table D-2
Predicted Sub-Slab Soil Gas and Indoor Air Concentrations
from Groundwater in Areas North and South of Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP004-15- 20_12122012 111_03032015 03/03/2015	DP006-13- 18_12132012 12/12/2012 15 - 20 (ft)	DP009-15- 20_12122012 12/13/2012 13 - 18 (ft)	DP010-15- 20_12132012 12/12/2012 15 - 20 (ft)	DP012_20- 25_12172012 12/13/2012 15 - 20 (ft)	DP-016_14- 19_09132013 12/17/2012 20 - 25 (ft)	DP-016_14- 19_09132013 09/13/2013 14 - 19 (ft)	DP-026_12_6- 17_6_09162013 09/16/2013 12_6 - 17_6 (ft)	DP-040_15- 20_09112013 09/11/2013 15 - 20 (ft)	DP-043_15- 20_04032014 04/03/2014 15 - 20 (ft)
Volatile Organics (mg/L)										
cis-1,2-Dichloroethene	0.0012									0.001 U
Tetrachloroethene	0.001 U									0.001 U
Trichloroethene	0.0048	0.001 U	0.001 U	0.0059	0.001 U	0.001 U	0.001 U	0.001 U	0.014	0.0004 U
Vinyl chloride	0.0004 U									0.0004 U
Predicted TCE Subslab and Indoor Air Concentrations (ug/m ³)										
Calculated sub-slab soil gas concentration using an alpha factor* of:										
Average (0.0043)	3.9			4.7					11	
50th percentile (0.00092)	0.83			1.02					2.4	
90th percentile (0.009)	8			10					24	
95th percentile (0.018)	16			20					47	
Calculated indoor air concentration using an alpha factor* of:										
0.00525	0.085			0.10					0.25	

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
COPC: Contaminant of Potential Concern
U: not detected, value is the reporting limit
TCE: Trichloroethene
NC: Not calculated because more recent groundwater data are available for this location

-Yellow highlighted cells indicated an exceedance of the TCE subslab screening level of 20 ug/m³ or indoor air screening level of 2 ug/m³
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

- Average (arithmetic mean) levels were calculated using a value of the reporting limit for analytical values reported as "Not Detected" (ND).
*Subslab soil gas (ug/m³) = TCE GW conc. (mg/L) x attenuation factor x Henry's law (0.187 @ 10 C) x conversion factor (1X10⁻⁶). Indoor air (ug/m³) = Highest predicted sub-slab soil gas concentration (ug/m³) x attenuation factor (0.00525). See Table D-4 and D-5 for an explanation of the derivation of attenuation factors.

Table D-2
Predicted Sub-Slab Soil Gas and Indoor Air Concentrations
from Groundwater in Areas North and South of Central Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	SMW19_030520 SMW19_030520 SMW6_0306201					T-16- 18_11142011
	Q_03032015	15	15_FD	5	T_03052015	11/14/2011
	03/03/2015	03/05/2015	03/05/2015	03/06/2015	03/05/2015	16 - 18 (ft)
Volatile Organics (mg/L)						
cis-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Tetrachloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	
Trichloroethene	0.0004 U	0.0004 U	0.0004 U	0.0028	0.0004 U	0.001 U
Vinyl chloride	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	
Predicted TCE Subslab and Indoor Air Concentrations (ug/m³)						
Calculated sub-slab soil gas concentration using an alpha factor* of:						
Average (0.0043)				2.3		
50th percentile (0.00092)				0.48		
90th percentile (0.009)				4.7		
95th percentile (0.018)				9.4		
Calculated indoor air concentration using an alpha factor* of:						
0.00525				0.049		

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
COPC: Contaminant of Potential Concern
U: not detected, value is the reporting limit
TCE: Trichloroethene
NC: Not calculated because more recent groundwater data are available for this location

-Yellow highlighted cells indicated an exceedance of the TCE subslab screening level of 20 ug/m³ or indoor air screening level of 2 ug/m³
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

- Average (arithmetic mean) levels were calculated using a value of the reporting limit for analytical values reported as "Not Detected" (ND).
*Subslab soil gas (ug/m³) = TCE GW conc. (mg/L) x attenuation factor x Henry's law (0.187 @ 10 C) x conversion factor (1X10⁻⁶). Indoor air (ug/m³) = Highest predicted sub-slab soil gas concentration (ug/m³) x attenuation factor (0.00525). See Table D-4 and D-5 for an explanation of the derivation of attenuation factors.

Table D-3
Predicted Sub-Slab Soil Gas and Indoor Air Concentrations
from Groundwater at the SW Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	112_03032015_		316GS_0304201		317GS_0303201	318GS_0303201	DP-027_14-	DP-032_15-	DP-033_10-	DP-036_15-
	112_03032015	FD	113_03042015	5	5	5	19_09092013	20_09172013	20_09102013	20_09102013
	03/03/2015	03/03/2015	03/04/2015	03/04/2015	03/03/2015	03/03/2015	09/09/2013 14 - 19 (ft)	09/17/2013 15 - 20 (ft)	09/10/2013 10 - 20 (ft)	09/10/2013 15 - 20 (ft)
Volatile Organics (mg/L)										
cis-1,2-Dichloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U M1	0.001 U				
Tetrachloroethene	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U	0.001 U				
Trichloroethene	0.0048	0.0045	0.0018	0.0004 U	0.0004 U	0.0004 U	0.001 U	0.0016	0.001 U	0.001 U
Vinyl chloride	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U	0.0004 U				
Predicted TCE Subslab and Indoor Air Concentrations (ug/m³)										
Calculated sub-slab soil gas concentration using an alpha factor* of:										
Average (0.0043)	3.9	3.6	1.4					1.3		
50th percentile (0.00092)	0.83	0.77	0.31					0.28		
90th percentile (0.009)	8	8	3.0					2.7		
95th percentile (0.018)	16	15	6.1					5.4		
Calculated indoor air concentration using an alpha factor* of:										
0.00525	0.085	0.080	0.032					0.028		

ABBREVIATIONS AND NOTES:

mg/L: milligram per liter

COPC: Contaminant of Potential Concern

U: not detected, value is the reporting limit

TCE: Trichloroethene

NC: Not calculated because more recent groundwater data are available for this location

-Yellow highlighted cells indicated an exceedance of the TCE subslab screening level of 20 ug/m³ or indoor air screening level of 2 ug/m³

- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

- Average (arithmetic mean) levels were calculated using a value of the reporting limit for analytical values reported as "Not Detected" (ND).

*Subslab soil gas (µg/m³) = TCE GW conc. (mg/L) x attenuation factor x Henry's law (0.187 @ 10 C) x conversion factor (1X10⁺⁶). Indoor air (µg/m³) = Highest predicted sub-slab soil gas concentration (µg/m³) x attenuation factor (0.00525). See Table D-4 and D-5 for an explanation of the derivation of attenuation factors.

Table D-3
Predicted Sub-Slab Soil Gas and Indoor Air Concentrations
from Groundwater at the SW Area
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Parameter	DP-036_15- 20_09102013_F D 09/10/2013 15 - 20 (ft)	DP-045_14_5- 24_5_04042014 04/04/2014 14_5 - 24_5 (ft)	DP-077_13- 17_11052014 11/05/2014 13 - 17 (ft)	V_03032015 03/03/2015	W_03032015 03/03/2015	X_03042015 03/04/2015
Volatile Organics (mg/L)						
cis-1,2-Dichloroethene		0.001 U	0.001 U	0.0019	0.0804	0.001 U
Tetrachloroethene		0.001 U	0.001 U	0.001 U	0.001 U	0.001 U
Trichloroethene	0.001 U	0.0119	0.0004 U	0.0292	0.0084	0.0007
Vinyl chloride		0.001 U	0.0004 U	0.0004 U	0.00058	0.0004 U
Predicted TCE Subslab and Indoor Air Concentrations (ug/m³)						
Calculated sub-slab soil gas concentration using an alpha factor* of:						
Average (0.0043)		10		23	6.8	0.6
50th percentile (0.00092)		2.0		5.0	1.4	0.12
90th percentile (0.009)		20		49	14	1
95th percentile (0.018)		40		98	28	2.4
Calculated indoor air concentration using an alpha factor* of:						
0.00525		0.21		0.52	0.15	0.012

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter
COPC: Contaminant of Potential Concern
U: not detected, value is the reporting limit
TCE: Trichloroethene
NC: Not calculated because more recent groundwater data are available for this location

-Yellow highlighted cells indicated an exceedance of the TCE subslab screening level of 20 ug/m³ or indoor air screening level of 2 ug/m³
- Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

- Average (arithmetic mean) levels were calculated using a value of the reporting limit for analytical values reported as "Not Detected" (ND).

*Subslab soil gas (µg/m³) = TCE GW conc. (mg/L) x attenuation factor x Henry's law (0.187 @ 10 C) x conversion factor (1X10⁺⁶). Indoor air (µg/m³) = Highest predicted sub-slab soil gas concentration (µg/m³) x attenuation factor (0.00525). See Table D-4 and D-5 for an explanation of the derivation of attenuation factors.

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data							
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	GW:SS Attenuation Factor [b]	
No	X	12/9/2014			N	0.00061 1	3339	2/7/2014 N		0.92 0	0.43	2.6E+02	1.8E-03	
No	X	3/4/2015			N	0.0007 1	3339	2/7/2014 N		0.92 0	0.43	3.0E+02	1.5E-03	
No	DP-008 GW	12/13/2012	15	20	N	0.0066 1	3839	11/24/2013 N		0.92 0	0.43	2.8E+03	1.6E-04	
No	310GS	3/9/2015			N	0.0074 1	1953	3/3/2014 N		0.92 0	0.43	3.2E+03	1.4E-04	
No	310GS	12/17/2014			N	0.0103 1	1953	3/3/2014 N		0.92 0	0.43	4.4E+03	1.0E-04	
No	10	9/20/2010			N	0.013 1	1953	3/3/2014 N		0.92 0	0.43	5.6E+03	8.2E-05	
No	DP-005 GW	12/11/2012	14	19	FD	0.033 1	5431	1/14/2014 N		0.92 0	0.43	1.4E+04	3.2E-05	
No	DP-005 GW	12/11/2012	14	19	FD	0.033 1	5948	1/28/2014 N		0.92 0	0.43	1.4E+04	3.2E-05	
No	DP-005 GW	12/11/2012	14	19	N	0.034 1	5431	1/14/2014 N		0.92 0	0.43	1.5E+04	3.1E-05	
No	DP-005 GW	12/11/2012	14	19	N	0.034 1	5948	1/28/2014 N		0.92 0	0.43	1.5E+04	3.1E-05	
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	5378	3/11/2014 N		0.92 0	0.43	1.7E+04	2.6E-05	
No	11	9/20/2010			N	0.065 1	5948	1/28/2014 N		0.92 0	0.43	2.8E+04	1.6E-05	
Yes	DP-009 GW	12/12/2012	15	20	N	0.0059 1	6385	1/27/2014 N		0.92 0	0.43	2.5E+03	1.8E-04	
No	X	12/9/2014			N	0.00061 1	3339	1/21/2014 N		0.96 0	0.43	2.6E+02	1.8E-03	
No	X	3/4/2015			N	0.0007 1	3339	1/21/2014 N		0.96 0	0.43	3.0E+02	1.6E-03	
No	113	12/8/2014			N	0.00098 1	5141	12/3/2013 N		0.96 0	0.43	4.2E+02	1.1E-03	
No	SMW10	12/16/2014			FD	0.0015 1	9555	3/4/2014 N		0.96 0	0.43	6.5E+02	7.4E-04	
No	SMW10	12/16/2014			FD	0.0015 1	7914	2/16/2014 N		0.96 0	0.43	6.5E+02	7.4E-04	
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	1141	2/17/2014 N		0.96 0	0.43	6.9E+02	7.0E-04	
No	SMW10	3/4/2015			N	0.0016 1	9555	3/4/2014 N		0.96 0	0.43	6.9E+02	7.0E-04	
No	SMW10	3/4/2015			N	0.0016 1	7914	2/16/2014 N		0.96 0	0.43	6.9E+02	7.0E-04	
No	SMW10	12/16/2014			N	0.0017 1	9555	3/4/2014 N		0.96 0	0.43	7.3E+02	6.6E-04	
No	SMW10	12/16/2014			N	0.0017 1	7914	2/16/2014 N		0.96 0	0.43	7.3E+02	6.6E-04	
No	113	3/4/2015			N	0.0018 1	5141	12/3/2013 N		0.96 0	0.43	7.7E+02	6.2E-04	
No	SMW3	3/6/2015			N	0.0038 1	1391	1/29/2014 N		0.96 0	0.43	1.6E+03	2.9E-04	
No	113	12/18/2012			N	0.0045 1	5141	12/3/2013 N		0.96 0	0.43	1.9E+03	2.5E-04	
No	111	3/3/2015			N	0.0048 1	9938	5/1/2014 N		0.96 0	0.43	2.1E+03	2.3E-04	
No	111	3/3/2015			N	0.0048 1	9938	5/19/2014 N		0.96 0	0.43	2.1E+03	2.3E-04	
No	111	12/8/2014			N	0.0053 1	9938	5/1/2014 N		0.96 0	0.43	2.3E+03	2.1E-04	
No	111	12/8/2014			N	0.0053 1	9938	5/19/2014 N		0.96 0	0.43	2.3E+03	2.1E-04	
No	SMW3	12/12/2014			N	0.0054 1	1391	1/29/2014 N		0.96 0	0.43	2.3E+03	2.1E-04	
No	DP-008 GW	12/13/2012	15	20	N	0.0066 1	5873	1/27/2014 N		0.96 0	0.43	2.8E+03	1.7E-04	
No	310GS	3/9/2015			N	0.0074 1	6551	3/3/2014 N		0.96 0	0.43	3.2E+03	1.5E-04	
No	310GS	3/9/2015			N	0.0074 1	4913	3/3/2014 N		0.96 0	0.43	3.2E+03	1.5E-04	
No	310GS	12/17/2014			N	0.0103 1	6551	3/3/2014 N		0.96 0	0.43	4.4E+03	1.1E-04	
No	310GS	12/17/2014			N	0.0103 1	4913	3/3/2014 N		0.96 0	0.43	4.4E+03	1.1E-04	
No	203	12/18/2012			N	0.019 1	6390	1/7/2014 N		0.96 0	0.43	8.2E+03	5.9E-05	
No	DP-005 GW	12/11/2012	14	19	FD	0.033 1	5431	1/14/2014 N		0.96 0	0.43	1.4E+04	3.4E-05	
No	DP-005 GW	12/11/2012	14	19	FD	0.033 1	5948	1/15/2014 N		0.96 0	0.43	1.4E+04	3.4E-05	
No	DP-005 GW	12/11/2012	14	19	N	0.034 1	5431	1/14/2014 N		0.96 0	0.43	1.5E+04	3.3E-05	
No	DP-005 GW	12/11/2012	14	19	N	0.034 1	5948	1/15/2014 N		0.96 0	0.43	1.5E+04	3.3E-05	

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data							
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	GW:SS Attenuation Factor [b]	
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	2757	4/1/2014	N	0.96 0	0.43	1.7E+04	2.8E-05	
No	312GS	3/9/2015			N	0.0483 1	6551	3/3/2014	N	0.96 0	0.43	2.1E+04	2.3E-05	
No	312GS	3/9/2015			N	0.0483 1	2277	3/7/2014	N	0.96 0	0.43	2.1E+04	2.3E-05	
No	312GS	3/9/2015			N	0.0483 1	1874	1/29/2014	N	0.96 0	0.43	2.1E+04	2.3E-05	
No	312GS	3/9/2015			N	0.0483 1	3799	12/14/2013	N	0.96 0	0.43	2.1E+04	2.3E-05	
No	312GS	12/10/2014			N	0.0539 1	6551	3/3/2014	N	0.96 0	0.43	2.3E+04	2.1E-05	
No	312GS	12/10/2014			N	0.0539 1	2277	3/7/2014	N	0.96 0	0.43	2.3E+04	2.1E-05	
No	312GS	12/10/2014			N	0.0539 1	1874	1/29/2014	N	0.96 0	0.43	2.3E+04	2.1E-05	
No	312GS	12/10/2014			N	0.0539 1	3799	12/14/2013	N	0.96 0	0.43	2.3E+04	2.1E-05	
No	11	9/20/2010			N	0.065 1	5816	12/18/2013	N	0.96 0	0.43	2.8E+04	1.7E-05	
No	11	9/20/2010			N	0.065 1	5948	1/15/2014	N	0.96 0	0.43	2.8E+04	1.7E-05	
No	11	9/20/2010			N	0.065 1	7953	2/21/2014	N	0.96 0	0.43	2.8E+04	1.7E-05	
Yes	DP-003 GW	4/25/2012			FD	0.0018 1	8876	1/9/2014	N	0.96 0	0.43	7.7E+02	6.2E-04	
Yes	DP-003 GW	4/25/2012			FD	0.0018 1	8876	1/9/2014	N	0.96 0	0.43	7.7E+02	6.2E-04	
Yes	DP-003 GW	4/25/2012			N	0.0022 1	8876	1/9/2014	N	0.96 0	0.43	9.5E+02	5.1E-04	
Yes	DP-003 GW	4/25/2012			N	0.0022 1	8876	1/9/2014	N	0.96 0	0.43	9.5E+02	5.1E-04	
Yes	SMW3	12/12/2014			N	0.0054 1	7690	12/16/2013	N	0.96 0	0.43	2.3E+03	2.1E-04	
Yes	DP-050 GW	4/1/2014	14	24	N	0.0404 1	1194	3/12/2014	N	0.96 0	0.43	1.7E+04	2.8E-05	
Yes	309GS	3/11/2015			N	0.0747 1	1194	3/12/2014	N	0.96 0	0.43	3.2E+04	1.5E-05	
Yes	309GS	12/12/2014			N	0.0843 1	1194	3/12/2014	N	0.96 0	0.43	3.6E+04	1.3E-05	
Yes	DP-007 GW	12/11/2012	15	20	N	0.1 1	4038	2/27/2014	N	0.96 0	0.43	4.3E+04	1.1E-05	
No	SMW16	12/23/2014			N	0.00044 1	5116	2/15/2014	N	0.99 0	0.43	1.9E+02	2.6E-03	
No	SMW16	3/4/2015			N	0.00058 1	5116	2/15/2014	N	0.99 0	0.43	2.5E+02	2.0E-03	
No	X	12/9/2014			N	0.00061 1	6178	12/2/2013	N	0.99 0	0.43	2.6E+02	1.9E-03	
No	X	12/9/2014			N	0.00061 1	3339	2/7/2014	N	0.99 0	0.43	2.6E+02	1.9E-03	
No	X	12/9/2014			N	0.00061 1	1617	1/16/2014	N	0.99 0	0.43	2.6E+02	1.9E-03	
No	X	12/9/2014			N	0.00061 1	1617	1/16/2014	N	0.99 0	0.43	2.6E+02	1.9E-03	
No	307GS	3/11/2015			N	0.00065 1	6787	4/7/2014	N	0.99 0	0.43	2.8E+02	1.8E-03	
No	X	3/4/2015			N	0.0007 1	6178	12/2/2013	N	0.99 0	0.43	3.0E+02	1.6E-03	
No	X	3/4/2015			N	0.0007 1	3339	2/7/2014	N	0.99 0	0.43	3.0E+02	1.6E-03	
No	X	3/4/2015			N	0.0007 1	1617	1/16/2014	N	0.99 0	0.43	3.0E+02	1.6E-03	
No	X	3/4/2015			N	0.0007 1	1617	1/16/2014	N	0.99 0	0.43	3.0E+02	1.6E-03	
No	113	12/8/2014			N	0.00098 1	5141	12/3/2013	N	0.99 0	0.43	4.2E+02	1.2E-03	
No	113	12/8/2014			N	0.00098 1	5141	12/3/2013	N	0.99 0	0.43	4.2E+02	1.2E-03	
No	113	12/8/2014			N	0.00098 1	2411	6/18/2014	N	0.99 0	0.43	4.2E+02	1.2E-03	
No	SMW10	12/16/2014			FD	0.0015 1	9555	2/21/2014	N	0.99 0	0.43	6.5E+02	7.7E-04	
No	SMW10	12/16/2014			FD	0.0015 1	8446	3/14/2014	N	0.99 0	0.43	6.5E+02	7.7E-04	
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	8222	12/18/2013	N	0.99 0	0.43	6.9E+02	7.2E-04	
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	3584	2/6/2014	N	0.99 0	0.43	6.9E+02	7.2E-04	
No	SMW10	3/4/2015			N	0.0016 1	9555	2/21/2014	N	0.99 0	0.43	6.9E+02	7.2E-04	
No	SMW10	3/4/2015			N	0.0016 1	8446	3/14/2014	N	0.99 0	0.43	6.9E+02	7.2E-04	

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data						GW:SS Attenuation Factor [b]
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	
No	SMW10	12/16/2014			N	0.0017 1	9555	2/21/2014	N	0.99 0	0.43	7.3E+02	6.8E-04
No	SMW10	12/16/2014			N	0.0017 1	8446	3/14/2014	N	0.99 0	0.43	7.3E+02	6.8E-04
No	113	3/4/2015			N	0.0018 1	5141	12/3/2013	N	0.99 0	0.43	7.7E+02	6.4E-04
No	113	3/4/2015			N	0.0018 1	5141	12/3/2013	N	0.99 0	0.43	7.7E+02	6.4E-04
No	113	3/4/2015			N	0.0018 1	2411	6/18/2014	N	0.99 0	0.43	7.7E+02	6.4E-04
No	QQ	12/19/2012			N	0.0021 1	5403	1/20/2014	N	0.99 0	0.43	9.0E+02	5.5E-04
No	DP-013 GW	12/17/2012	15	20	N	0.0032 1	5230	12/2/2013	N	0.99 0	0.43	1.4E+03	3.6E-04
No	DP-013 GW	12/17/2012	15	20	N	0.0032 1	5230	12/2/2013	N	0.99 0	0.43	1.4E+03	3.6E-04
No	113	12/18/2012			N	0.0045 1	5141	12/3/2013	N	0.99 0	0.43	1.9E+03	2.6E-04
No	113	12/18/2012			N	0.0045 1	5141	12/3/2013	N	0.99 0	0.43	1.9E+03	2.6E-04
No	113	12/18/2012			N	0.0045 1	2411	6/18/2014	N	0.99 0	0.43	1.9E+03	2.6E-04
No	111	3/3/2015			N	0.0048 1	9363	7/10/2014	N	0.99 0	0.43	2.1E+03	2.4E-04
No	111	3/3/2015			N	0.0048 1	4263	5/2/2014	N	0.99 0	0.43	2.1E+03	2.4E-04
No	111	3/3/2015			N	0.0048 1	4263	5/20/2014	N	0.99 0	0.43	2.1E+03	2.4E-04
No	111	3/3/2015			N	0.0048 1	8995	6/12/2014	N	0.99 0	0.43	2.1E+03	2.4E-04
No	111	3/3/2015			N	0.0048 1	1524	6/3/2014	N	0.99 0	0.43	2.1E+03	2.4E-04
No	111	12/8/2014			N	0.0053 1	9363	7/10/2014	N	0.99 0	0.43	2.3E+03	2.2E-04
No	111	12/8/2014			N	0.0053 1	4263	5/2/2014	N	0.99 0	0.43	2.3E+03	2.2E-04
No	111	12/8/2014			N	0.0053 1	4263	5/20/2014	N	0.99 0	0.43	2.3E+03	2.2E-04
No	111	12/8/2014			N	0.0053 1	8995	6/12/2014	N	0.99 0	0.43	2.3E+03	2.2E-04
No	111	12/8/2014			N	0.0053 1	1524	6/3/2014	N	0.99 0	0.43	2.3E+03	2.2E-04
No	DP-009 GW	12/12/2012	15	20	N	0.0059 1	9035	1/3/2014	N	0.99 0	0.43	2.5E+03	2.0E-04
No	DP-008 GW	12/13/2012	15	20	N	0.0066 1	1995	12/27/2013	N	0.99 0	0.43	2.8E+03	1.7E-04
No	DP-008 GW	12/13/2012	15	20	N	0.0066 1	2785	12/30/2013	N	0.99 0	0.43	2.8E+03	1.7E-04
No	DP-008 GW	12/13/2012	15	20	N	0.0066 1	2437	12/17/2013	N	0.99 0	0.43	2.8E+03	1.7E-04
No	310GS	3/9/2015			N	0.0074 1	4083	4/11/2014	N	0.99 0	0.43	3.2E+03	1.6E-04
No	310GS	3/9/2015			N	0.0074 1	3816	4/7/2014	N	0.99 0	0.43	3.2E+03	1.6E-04
No	310GS	12/17/2014			N	0.0103 1	4083	4/11/2014	N	0.99 0	0.43	4.4E+03	1.1E-04
No	310GS	12/17/2014			N	0.0103 1	3816	4/7/2014	N	0.99 0	0.43	4.4E+03	1.1E-04
No	DP-045 GW	4/4/2014	14.5	24.5	N	0.0119 1	3553	10/24/2014	N	0.99 0	0.43	5.1E+03	9.7E-05
No	DP-040 GW	9/11/2013	15	20	N	0.014 1	2355	12/3/2013	N	0.99 0	0.43	6.0E+03	8.2E-05
No	DP-040 GW	9/11/2013	15	20	N	0.014 1	7431	11/21/2013	N	0.99 0	0.43	6.0E+03	8.2E-05
No	203	12/18/2012			N	0.019 1	6390	12/17/2013	N	0.99 0	0.43	8.2E+03	6.1E-05
No	203	12/18/2012			N	0.019 1	6390	12/17/2013	N	0.99 0	0.43	8.2E+03	6.1E-05
No	203	12/18/2012			N	0.019 1	6390	1/7/2014	N	0.99 0	0.43	8.2E+03	6.1E-05
No	203	12/18/2012			N	0.019 1	6390	1/7/2014	N	0.99 0	0.43	8.2E+03	6.1E-05
No	203	12/18/2012			N	0.019 1	6390	1/7/2014	N	0.99 0	0.43	8.2E+03	6.1E-05
No	DP-005 GW	12/11/2012	14	19	FD	0.033 1	5431	1/14/2014	N	0.99 0	0.43	1.4E+04	3.5E-05
No	DP-005 GW	12/11/2012	14	19	N	0.034 1	5431	1/14/2014	N	0.99 0	0.43	1.5E+04	3.4E-05
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	5378	4/1/2014	N	0.99 0	0.43	1.7E+04	2.8E-05
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	6217	1/4/2014	N	0.99 0	0.43	1.7E+04	2.8E-05

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data						GW:SS Attenuation Factor [b]
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	
No	312GS	3/9/2015			N	0.0483 1	4083	4/11/2014	N	0.99 0	0.43	2.1E+04	2.4E-05
No	312GS	12/10/2014			N	0.0539 1	4083	4/11/2014	N	0.99 0	0.43	2.3E+04	2.1E-05
No	B	3/10/2015			N	0.0555 1	6787	4/7/2014	N	0.99 0	0.43	2.4E+04	2.1E-05
No	11	9/20/2010			N	0.065 1	8226	12/21/2013	N	0.99 0	0.43	2.8E+04	1.8E-05
No	11	9/20/2010			N	0.065 1	8226	12/21/2013	N	0.99 0	0.43	2.8E+04	1.8E-05
No	11	9/20/2010			N	0.065 1	1995	12/27/2013	N	0.99 0	0.43	2.8E+04	1.8E-05
No	11	9/20/2010			N	0.065 1	7953	2/21/2014	N	0.99 0	0.43	2.8E+04	1.8E-05
No	309GS	3/11/2015			N	0.0747 1	9266	4/8/2014	N	0.99 0	0.43	3.2E+04	1.5E-05
No	SMW22	12/22/2014			N	0.0748 1	7088	1/14/2014	N	0.99 0	0.43	3.2E+04	1.5E-05
No	B	12/11/2014			N	0.082 1	6787	4/7/2014	N	0.99 0	0.43	3.5E+04	1.4E-05
No	SMW22	3/5/2015			N	0.0829 1	7088	1/14/2014	N	0.99 0	0.43	3.6E+04	1.4E-05
No	309GS	12/12/2014			N	0.0843 1	9266	4/8/2014	N	0.99 0	0.43	3.6E+04	1.4E-05
Offered	DP-019 GW	9/13/2013	17	22	N	0.037 1	6072	4/25/2014	N	0.99 0	0.43	1.6E+04	3.1E-05
Offered	DP-019 GW	9/13/2013	17	22	N	0.037 1	6072	4/25/2014	N	0.99 0	0.43	1.6E+04	3.1E-05
Pending	DP-045 GW	4/4/2014	14.5	24.5	N	0.0119 1	8840	10/9/2014	N	0.99 0	0.43	5.1E+03	9.7E-05
Yes	DP-019 GW	9/13/2013	17	22	N	0.037 1	1831	11/26/2013	N	0.99 0	0.43	1.6E+04	3.1E-05
Yes	DP-050 GW	4/1/2014	14	24	N	0.0404 1	1194	3/3/2014	N	0.99 0	0.43	1.7E+04	2.8E-05
Yes	309GS	3/11/2015			N	0.0747 1	1194	3/3/2014	N	0.99 0	0.43	3.2E+04	1.5E-05
Yes	309GS	12/12/2014			N	0.0843 1	1194	3/3/2014	N	0.99 0	0.43	3.6E+04	1.4E-05
Yes	309GS	12/12/2014			N	0.0843 1	1831	11/26/2013	N	0.99 0	0.43	3.6E+04	1.4E-05
No	X	12/9/2014			N	0.00061 1	1617	12/2/2013	N	1 0	0.43	2.6E+02	1.9E-03
No	X	3/4/2015			N	0.0007 1	1617	12/2/2013	N	1 0	0.43	3.0E+02	1.7E-03
No	113	12/8/2014			N	0.00098 1	5141	12/3/2013	N	1 0	0.43	4.2E+02	1.2E-03
No	113	12/8/2014			N	0.00098 1	2411	6/18/2014	N	1 0	0.43	4.2E+02	1.2E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	2479	8/15/2014	N	1 0	0.43	6.9E+02	7.3E-04
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	2660	6/9/2014	N	1 0	0.43	6.9E+02	7.3E-04
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	1141	2/17/2014	N	1 0	0.43	6.9E+02	7.3E-04
No	113	3/4/2015			N	0.0018 1	5141	12/3/2013	N	1 0	0.43	7.7E+02	6.5E-04
No	113	3/4/2015			N	0.0018 1	2411	6/18/2014	N	1 0	0.43	7.7E+02	6.5E-04
No	113	12/18/2012			N	0.0045 1	5141	12/3/2013	N	1 0	0.43	1.9E+03	2.6E-04
No	113	12/18/2012			N	0.0045 1	2411	6/18/2014	N	1 0	0.43	1.9E+03	2.6E-04
No	111	3/3/2015			N	0.0048 1	4263	5/20/2014	N	1 0	0.43	2.1E+03	2.4E-04
No	111	12/8/2014			N	0.0053 1	4263	5/20/2014	N	1 0	0.43	2.3E+03	2.2E-04
No	DP-009 GW	12/12/2012	15	20	N	0.0059 1	9035	1/3/2014	N	1 0	0.43	2.5E+03	2.0E-04
No	DP-040 GW	9/11/2013	15	20	N	0.014 1	7431	11/21/2013	N	1 0	0.43	6.0E+03	8.3E-05
No	203	12/18/2012			N	0.019 1	6390	1/7/2014	N	1 0	0.43	8.2E+03	6.1E-05
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	6217	1/4/2014	N	1 0	0.43	1.7E+04	2.9E-05
No	B	3/10/2015			N	0.0555 1	5255	1/21/2014	N	1 0	0.43	2.4E+04	2.1E-05
No	11	9/20/2010			N	0.065 1	4961	1/13/2014	N	1 0	0.43	2.8E+04	1.8E-05
No	B	12/11/2014			N	0.082 1	5255	1/21/2014	N	1 0	0.43	3.5E+04	1.4E-05
No	X	12/9/2014			N	0.00061 1	3339	1/21/2014	N	1.1 0	0.43	2.6E+02	2.1E-03

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data								
Mitigated	sys_loc_code	sample_date	start_depth	end_depth	sample_type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_date	sample_type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	GW:SS Attenuation Factor [b]		
No	X	3/4/2015			N	0.0007	1	3339	1/21/2014	N	1.1	0	0.43	3.0E+02	1.8E-03
No	113	12/8/2014			N	0.00098	1	5141	12/3/2013	N	1.1	0	0.43	4.2E+02	1.3E-03
No	113	3/4/2015			N	0.0018	1	5141	12/3/2013	N	1.1	0	0.43	7.7E+02	7.1E-04
No	113	12/18/2012			N	0.0045	1	5141	12/3/2013	N	1.1	0	0.43	1.9E+03	2.8E-04
No	DP-040 GW	9/11/2013	15	20	N	0.014	1	9700	3/13/2014	N	1.1	0	0.43	6.0E+03	9.1E-05
No	DP-005 GW	12/11/2012	14	19	FD	0.033	1	5431	1/14/2014	N	1.1	0	0.43	1.4E+04	3.9E-05
No	DP-005 GW	12/11/2012	14	19	N	0.034	1	5431	1/14/2014	N	1.1	0	0.43	1.5E+04	3.8E-05
No	DP-050 GW	4/1/2014	14	24	N	0.0404	1	5159	3/5/2014	N	1.1	0	0.43	1.7E+04	3.2E-05
No	312GS	3/9/2015			N	0.0483	1	5159	3/5/2014	N	1.1	0	0.43	2.1E+04	2.6E-05
No	312GS	12/10/2014			N	0.0539	1	5159	3/5/2014	N	1.1	0	0.43	2.3E+04	2.4E-05
Yes	DP-009 GW	12/12/2012	15	20	N	0.0059	1	6385	1/27/2014	N	1.1	0	0.43	2.5E+03	2.2E-04
Yes	S	12/10/2014			N	0.0637	1	4214	11/21/2013	N	1.1	0	0.43	2.7E+04	2.0E-05
Yes	S	3/4/2015			N	0.0665	1	4214	11/21/2013	N	1.1	0	0.43	2.9E+04	1.9E-05
Yes	S	12/19/2012			N	0.073	1	4214	11/21/2013	N	1.1	0	0.43	3.1E+04	1.8E-05
No	DP-008 GW	12/13/2012	15	20	N	0.0066	1	3839	11/24/2013	N	1.5	0	0.43	2.8E+03	2.6E-04
Yes	DP-007 GW	12/11/2012	15	20	N	0.1	1	3136	1/14/2014	N	1.5	0	0.43	4.3E+04	1.7E-05
No	X	12/9/2014			N	0.00061	1	1617	1/16/2014	N	1.6	0	0.43	2.6E+02	3.0E-03
No	X	3/4/2015			N	0.0007	1	1617	1/16/2014	N	1.6	0	0.43	3.0E+02	2.7E-03
Yes	DP-007 GW	12/11/2012	15	20	N	0.1	1	3136	1/14/2014	N	1.6	0	0.43	4.3E+04	1.9E-05
No	DP-032 GW	9/17/2013	15	20	N	0.0016	1	1141	2/17/2014	N	1.7	0	0.43	6.9E+02	1.2E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016	1	4558	1/23/2014	N	1.7	0	0.43	6.9E+02	1.2E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016	1	4558	1/23/2014	N	1.7	0	0.43	6.9E+02	1.2E-03
Yes	DP-008 GW	12/13/2012	15	20	N	0.0066	1	1291	12/13/2013	N	1.7	0	0.43	2.8E+03	3.0E-04
No	X	12/9/2014			N	0.00061	1	1617	12/2/2013	N	1.9	0	0.43	2.6E+02	3.6E-03
No	X	12/9/2014			N	0.00061	1	1617	1/16/2014	N	1.9	0	0.43	2.6E+02	3.6E-03
No	X	3/4/2015			N	0.0007	1	1617	12/2/2013	N	1.9	0	0.43	3.0E+02	3.2E-03
No	X	3/4/2015			N	0.0007	1	1617	1/16/2014	N	1.9	0	0.43	3.0E+02	3.2E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016	1	2660	6/9/2014	N	2	0	0.43	6.9E+02	1.5E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016	1	2660	6/9/2014	N	2	0	0.43	6.9E+02	1.5E-03
No	X	12/9/2014			N	0.00061	1	5404	1/15/2014	N	2.3	0	0.43	2.6E+02	4.4E-03
No	X	3/4/2015			N	0.0007	1	5404	1/15/2014	N	2.3	0	0.43	3.0E+02	3.8E-03
No	DP-013 GW	12/17/2012	15	20	N	0.0032	1	5404	1/15/2014	N	2.3	0	0.43	1.4E+03	8.4E-04
Yes	DP-003 GW	4/25/2012			FD	0.0018	1	9670	12/12/2013	N	3	0	0.43	7.7E+02	1.9E-03
Yes	DP-003 GW	4/25/2012			N	0.0022	1	9670	12/12/2013	N	3	0	0.43	9.5E+02	1.6E-03
Yes	DP-007 GW	12/11/2012	15	20	N	0.1	1	3136	12/4/2013	N	0.99	1	0.43	4.3E+04	2.3E-05
No	DP-009 GW	12/12/2012	15	20	N	0.0059	1	9035	1/3/2014	N	1	1	0.43	2.5E+03	3.9E-04
No	310GS	3/9/2015			N	0.0074	1	4267	4/4/2014	N	1	1	0.43	3.2E+03	3.1E-04
No	310GS	12/17/2014			N	0.0103	1	4267	4/4/2014	N	1	1	0.43	4.4E+03	2.3E-04
No	111	3/3/2015			N	0.0048	1	9363	8/13/2014	N	1.1	1	0.43	2.1E+03	5.3E-04
No	111	12/8/2014			N	0.0053	1	9363	8/13/2014	N	1.1	1	0.43	2.3E+03	4.8E-04
No	DP-050 GW	4/1/2014	14	24	N	0.0404	1	5547	1/28/2014	N	1.1	1	0.43	1.7E+04	6.3E-05

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data						GW:SS Attenuation Factor [b]
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	
No	X	12/9/2014			N	0.00061 1	1617	12/2/2013 N		1.2 1	0.43	2.6E+02	4.6E-03
No	X	3/4/2015			N	0.0007 1	1617	12/2/2013 N		1.2 1	0.43	3.0E+02	4.0E-03
No	113	12/8/2014			N	0.00098 1	2411	6/18/2014 N		1.2 1	0.43	4.2E+02	2.8E-03
No	113	3/4/2015			N	0.0018 1	2411	6/18/2014 N		1.2 1	0.43	7.7E+02	1.6E-03
No	QQ	12/19/2012			N	0.0021 1	1738	3/18/2014 N		1.2 1	0.43	9.0E+02	1.3E-03
No	113	12/18/2012			N	0.0045 1	2411	6/18/2014 N		1.2 1	0.43	1.9E+03	6.2E-04
Yes	2	3/9/2015			N	0.0653 1	5714	2/12/2014 N		1.2 1	0.43	2.8E+04	4.3E-05
Yes	2	12/11/2014			N	0.0822 1	5714	2/12/2014 N		1.2 1	0.43	3.5E+04	3.4E-05
No	X	12/9/2014			N	0.00061 1	1617	1/16/2014 N		1.3 1	0.43	2.6E+02	5.0E-03
No	X	3/4/2015			N	0.0007 1	1617	1/16/2014 N		1.3 1	0.43	3.0E+02	4.3E-03
No	SMW10	12/16/2014			FD	0.0015 1	5476	1/17/2014 N		1.3 1	0.43	6.5E+02	2.0E-03
No	SMW10	3/4/2015			N	0.0016 1	5476	1/17/2014 N		1.3 1	0.43	6.9E+02	1.9E-03
No	SMW10	12/16/2014			N	0.0017 1	5476	1/17/2014 N		1.3 1	0.43	7.3E+02	1.8E-03
No	QQ	12/19/2012			N	0.0021 1	5476	1/17/2014 N		1.3 1	0.43	9.0E+02	1.4E-03
No	DP-008 GW	12/13/2012	15	20	N	0.0066 1	9048	5/17/2014 N		1.3 1	0.43	2.8E+03	4.6E-04
No	DP-005 GW	12/11/2012	14	19	FD	0.033 1	5431	1/14/2014 N		1.3 1	0.43	1.4E+04	9.2E-05
No	DP-005 GW	12/11/2012	14	19	N	0.034 1	5431	1/14/2014 N		1.3 1	0.43	1.5E+04	8.9E-05
No	DP-019 GW	9/13/2013	17	22	N	0.037 1	2188	12/30/2013 N		1.3 1	0.43	1.6E+04	8.2E-05
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	2188	12/30/2013 N		1.3 1	0.43	1.7E+04	7.5E-05
No	309GS	12/12/2014			N	0.0843 1	2188	12/30/2013 N		1.3 1	0.43	3.6E+04	3.6E-05
Yes	DP-005 GW	12/11/2012	14	19	FD	0.033 1	6354	1/20/2014 N		1.3 1	0.43	1.4E+04	9.2E-05
Yes	DP-005 GW	12/11/2012	14	19	N	0.034 1	6354	1/20/2014 N		1.3 1	0.43	1.5E+04	8.9E-05
No	X	12/9/2014			N	0.00061 1	5404	12/3/2013 N		1.4 1	0.43	2.6E+02	5.3E-03
No	X	3/4/2015			N	0.0007 1	5404	12/3/2013 N		1.4 1	0.43	3.0E+02	4.7E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	8222	12/18/2013 N		1.4 1	0.43	6.9E+02	2.0E-03
No	DP-013 GW	12/17/2012	15	20	N	0.0032 1	5404	12/3/2013 N		1.4 1	0.43	1.4E+03	1.0E-03
No	11	9/20/2010			N	0.065 1	4160	1/25/2014 N		1.4 1	0.43	2.8E+04	5.0E-05
No	DP-007 GW	12/11/2012	15	20	N	0.1 1	6073	4/1/2014 N		1.4 1	0.43	4.3E+04	3.3E-05
Yes	DP-008 GW	12/13/2012	15	20	N	0.0066 1	7191	2/7/2014 N		1.4 1	0.43	2.8E+03	4.9E-04
Yes	S	12/10/2014			N	0.0637 1	4214	12/19/2013 N		1.4 1	0.43	2.7E+04	5.1E-05
Yes	S	3/4/2015			N	0.0665 1	4214	12/19/2013 N		1.4 1	0.43	2.9E+04	4.9E-05
Yes	S	12/19/2012			N	0.073 1	4214	12/19/2013 N		1.4 1	0.43	3.1E+04	4.5E-05
Eligible	W	12/17/2012			FD	0.0066 1	2857	10/29/2014 N		1.5 1	0.43	2.8E+03	5.3E-04
Eligible	W	12/9/2014			N	0.0067 1	2857	10/29/2014 N		1.5 1	0.43	2.9E+03	5.2E-04
Eligible	W	12/9/2014			FD	0.0067 1	2857	10/29/2014 N		1.5 1	0.43	2.9E+03	5.2E-04
Eligible	W	12/17/2012			N	0.0068 1	2857	10/29/2014 N		1.5 1	0.43	2.9E+03	5.1E-04
Eligible	W	3/3/2015			N	0.0084 1	2857	10/29/2014 N		1.5 1	0.43	3.6E+03	4.2E-04
No	307GS	3/11/2015			N	0.00065 1	4099	4/14/2014 N		1.5 1	0.43	2.8E+02	5.4E-03
No	SMW10	12/16/2014			FD	0.0015 1	3775	1/24/2014 N		1.5 1	0.43	6.5E+02	2.3E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	8760	4/17/2014 N		1.5 1	0.43	6.9E+02	2.2E-03
No	SMW10	3/4/2015			N	0.0016 1	3775	1/24/2014 N		1.5 1	0.43	6.9E+02	2.2E-03

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data						GW:SS Attenuation Factor [b]
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	
No	SMW10	12/16/2014			N	0.0017 1	3775	1/24/2014	N	1.5 1	0.43	7.3E+02	2.1E-03
No	QQ	12/19/2012			N	0.0021 1	1002	11/27/2013	N	1.5 1	0.43	9.0E+02	1.7E-03
No	QQ	12/19/2012			N	0.0021 1	3775	1/24/2014	N	1.5 1	0.43	9.0E+02	1.7E-03
No	V	12/9/2014			N	0.0213 1	8760	4/17/2014	N	1.5 1	0.43	9.2E+03	1.6E-04
No	V	3/3/2015			N	0.0292 1	8760	4/17/2014	N	1.5 1	0.43	1.3E+04	1.2E-04
No	V	12/17/2012			N	0.031 1	8760	4/17/2014	N	1.5 1	0.43	1.3E+04	1.1E-04
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	6544	5/30/2014	N	1.5 1	0.43	1.7E+04	8.6E-05
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	6138	3/18/2014	N	1.5 1	0.43	1.7E+04	8.6E-05
Yes	DP-019 GW	9/13/2013	17	22	N	0.037 1	1831	11/26/2013	N	1.5 1	0.43	1.6E+04	9.4E-05
Yes	2	3/9/2015			N	0.0653 1	3135	12/31/2013	N	1.5 1	0.43	2.8E+04	5.3E-05
Yes	2	12/11/2014			N	0.0822 1	3135	12/31/2013	N	1.5 1	0.43	3.5E+04	4.2E-05
Yes	309GS	12/12/2014			N	0.0843 1	1831	11/26/2013	N	1.5 1	0.43	3.6E+04	4.1E-05
Yes	DP-007 GW	12/11/2012	15	20	N	0.1 1	4038	2/16/2014	N	1.5 1	0.43	4.3E+04	3.5E-05
No	SMW6	12/12/2014			N	0.0024 1	6173	3/31/2014	N	1.6 1	0.43	1.0E+03	1.6E-03
No	SMW6	3/6/2015			N	0.0028 1	6173	3/31/2014	N	1.6 1	0.43	1.2E+03	1.3E-03
Yes	DP-003 GW	4/25/2012			FD	0.0018 1	9670	1/6/2014	N	1.6 1	0.43	7.7E+02	2.1E-03
Yes	DP-003 GW	4/25/2012			N	0.0022 1	9670	1/6/2014	N	1.6 1	0.43	9.5E+02	1.7E-03
No	QQ	12/19/2012			N	0.0021 1	5340	2/22/2014	N	1.7 1	0.43	9.0E+02	1.9E-03
Yes	309GS	3/11/2015			N	0.0747 1	5595	11/23/2013	N	1.7 1	0.43	3.2E+04	5.3E-05
Yes	309GS	12/12/2014			N	0.0843 1	5595	11/23/2013	N	1.7 1	0.43	3.6E+04	4.7E-05
Eligible	W	12/17/2012			FD	0.0066 1	2857	10/29/2014	N	1.8 1	0.43	2.8E+03	6.3E-04
Eligible	W	12/9/2014			N	0.0067 1	2857	10/29/2014	N	1.8 1	0.43	2.9E+03	6.2E-04
Eligible	W	12/9/2014			FD	0.0067 1	2857	10/29/2014	N	1.8 1	0.43	2.9E+03	6.2E-04
Eligible	W	12/17/2012			N	0.0068 1	2857	10/29/2014	N	1.8 1	0.43	2.9E+03	6.2E-04
Eligible	W	3/3/2015			N	0.0084 1	2857	10/29/2014	N	1.8 1	0.43	3.6E+03	5.0E-04
No	X	12/9/2014			N	0.00061 1	1617	12/2/2013	N	1.8 1	0.43	2.6E+02	6.9E-03
No	X	3/4/2015			N	0.0007 1	1617	12/2/2013	N	1.8 1	0.43	3.0E+02	6.0E-03
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	2757	4/1/2014	N	1.8 1	0.43	1.7E+04	1.0E-04
Yes	DP-003 GW	4/25/2012			FD	0.0018 1	4172	11/25/2013	N	1.8 1	0.43	7.7E+02	2.3E-03
Yes	DP-003 GW	4/25/2012			N	0.0022 1	4172	11/25/2013	N	1.8 1	0.43	9.5E+02	1.9E-03
No	X	12/9/2014			N	0.00061 1	3339	2/7/2014	N	1.9 1	0.43	2.6E+02	7.2E-03
No	X	3/4/2015			N	0.0007 1	3339	2/7/2014	N	1.9 1	0.43	3.0E+02	6.3E-03
No	11	9/20/2010			N	0.065 1	7275	8/15/2014	N	2 1	0.43	2.8E+04	7.2E-05
No	11	9/20/2010			N	0.065 1	7275	9/26/2014	N	2 1	0.43	2.8E+04	7.2E-05
No	111	3/3/2015			N	0.0048 1	9938	5/1/2014	N	2.1 1	0.43	2.1E+03	1.0E-03
No	111	12/8/2014			N	0.0053 1	9938	5/1/2014	N	2.1 1	0.43	2.3E+03	9.2E-04
No	DP-009 GW	12/12/2012	15	20	N	0.0059 1	9035	1/3/2014	N	2.1 1	0.43	2.5E+03	8.3E-04
No	DP-009 GW	12/12/2012	15	20	N	0.0059 1	9035	1/3/2014	N	2.1 1	0.43	2.5E+03	8.3E-04
Yes	SMW6	12/12/2014			N	0.0024 1	6513	1/6/2014	N	2.1 1	0.43	1.0E+03	2.0E-03
Yes	SMW6	3/6/2015			N	0.0028 1	6513	1/6/2014	N	2.1 1	0.43	1.2E+03	1.7E-03
Yes	111	3/3/2015			N	0.0048 1	8145	4/15/2014	N	2.1 1	0.43	2.1E+03	1.0E-03

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data						GW:SS Attenuation Factor [b]
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	
Yes	111	12/8/2014			N	0.0053 1	8145	4/15/2014	N	2.1 1	0.43	2.3E+03	9.2E-04
Yes	312GS	3/9/2015			N	0.0483 1	2592	2/1/2014	N	2.1 1	0.43	2.1E+04	1.0E-04
Yes	312GS	12/10/2014			N	0.0539 1	2592	2/1/2014	N	2.1 1	0.43	2.3E+04	9.1E-05
Yes	S	12/10/2014			N	0.0637 1	5877	1/2/2014	N	2.1 1	0.43	2.7E+04	7.7E-05
Yes	S	3/4/2015			N	0.0665 1	5877	1/2/2014	N	2.1 1	0.43	2.9E+04	7.3E-05
Yes	S	12/19/2012			N	0.073 1	5877	1/2/2014	N	2.1 1	0.43	3.1E+04	6.7E-05
Yes	DP-007 GW	12/11/2012	15	20	N	0.1 1	6513	1/6/2014	N	2.1 1	0.43	4.3E+04	4.9E-05
No	SMW10	12/16/2014			FD	0.0015 1	7914	1/15/2014	N	2.2 1	0.43	6.5E+02	3.4E-03
No	SMW10	3/4/2015			N	0.0016 1	7914	1/15/2014	N	2.2 1	0.43	6.9E+02	3.2E-03
No	SMW10	12/16/2014			N	0.0017 1	7914	1/15/2014	N	2.2 1	0.43	7.3E+02	3.0E-03
No	111	3/3/2015			N	0.0048 1	9164	9/4/2014	N	2.2 1	0.43	2.1E+03	1.1E-03
No	111	12/8/2014			N	0.0053 1	9164	9/4/2014	N	2.2 1	0.43	2.3E+03	9.7E-04
No	X	12/9/2014			N	0.00061 1	3339	3/13/2014	N	2.3 1	0.43	2.6E+02	8.8E-03
No	X	3/4/2015			N	0.0007 1	3339	3/13/2014	N	2.3 1	0.43	3.0E+02	7.6E-03
No	SMW10	12/16/2014			FD	0.0015 1	7914	2/21/2014	N	2.3 1	0.43	6.5E+02	3.6E-03
No	SMW10	3/4/2015			N	0.0016 1	7914	2/21/2014	N	2.3 1	0.43	6.9E+02	3.3E-03
No	SMW10	12/16/2014			N	0.0017 1	7914	2/21/2014	N	2.3 1	0.43	7.3E+02	3.1E-03
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	5378	3/11/2014	N	2.3 1	0.43	1.7E+04	1.3E-04
Yes	DP-008 GW	12/13/2012	15	20	N	0.0066 1	6601	1/23/2014	N	2.3 1	0.43	2.8E+03	8.1E-04
Yes	SMW22	12/22/2014			N	0.0748 1	6601	1/23/2014	N	2.3 1	0.43	3.2E+04	7.2E-05
Yes	SMW22	3/5/2015			N	0.0829 1	6601	1/23/2014	N	2.3 1	0.43	3.6E+04	6.5E-05
No	111	3/3/2015			N	0.0048 1	9938	5/19/2014	N	2.4 1	0.43	2.1E+03	1.2E-03
No	111	12/8/2014			N	0.0053 1	9938	5/19/2014	N	2.4 1	0.43	2.3E+03	1.1E-03
Yes	2	3/9/2015			N	0.0653 1	3135	11/22/2013	N	2.4 1	0.43	2.8E+04	8.5E-05
Yes	2	12/11/2014			N	0.0822 1	3135	11/22/2013	N	2.4 1	0.43	3.5E+04	6.8E-05
Yes	DP-007 GW	12/11/2012	15	20	N	0.1 1	3136	12/4/2013	N	2.4 1	0.43	4.3E+04	5.6E-05
No	SMW10	12/16/2014			FD	0.0015 1	7914	1/15/2014	N	2.5 1	0.43	6.5E+02	3.9E-03
No	SMW10	3/4/2015			N	0.0016 1	7914	1/15/2014	N	2.5 1	0.43	6.9E+02	3.6E-03
No	SMW10	12/16/2014			N	0.0017 1	7914	1/15/2014	N	2.5 1	0.43	7.3E+02	3.4E-03
No	SMW3	3/6/2015			N	0.0038 1	1391	1/8/2014	N	2.5 1	0.43	1.6E+03	1.5E-03
No	SMW3	12/12/2014			N	0.0054 1	1391	1/8/2014	N	2.5 1	0.43	2.3E+03	1.1E-03
No	312GS	3/9/2015			N	0.0483 1	5300	3/20/2014	N	2.5 1	0.43	2.1E+04	1.2E-04
No	312GS	12/10/2014			N	0.0539 1	5300	3/20/2014	N	2.5 1	0.43	2.3E+04	1.1E-04
No	111	3/3/2015			N	0.0048 1	9164	8/25/2014	N	2.6 1	0.43	2.1E+03	1.3E-03
No	111	12/8/2014			N	0.0053 1	9164	8/25/2014	N	2.6 1	0.43	2.3E+03	1.1E-03
Yes	112	12/8/2014			N	0.004 1	4753	4/15/2014	N	2.6 1	0.43	1.7E+03	1.5E-03
Yes	112	3/3/2015			FD	0.0045 1	4753	4/15/2014	N	2.6 1	0.43	1.9E+03	1.3E-03
Yes	111	3/3/2015			N	0.0048 1	1927	4/15/2014	N	2.6 1	0.43	2.1E+03	1.3E-03
Yes	112	3/3/2015			N	0.0048 1	4753	4/15/2014	N	2.6 1	0.43	2.1E+03	1.3E-03
Yes	111	12/8/2014			N	0.0053 1	1927	4/15/2014	N	2.6 1	0.43	2.3E+03	1.1E-03
Yes	112	1/16/2013			N	0.0054 1	4753	4/15/2014	N	2.6 1	0.43	2.3E+03	1.1E-03

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data							
			start_de	end_	sample_	Trichloroethene				Trichloroethene	Dimensionless	GW converted	GW:SS	
Mitigated	sys_loc_code	sample_date	pth	depth	type_code	concentration	Unique	sample_	sample_	concentration	Henry's Law	SV concentration	Attenuation	
						(ug/L)	Property ID	date	type_code	(ug/m3)	Constant	[a] (ug/m3)	Factor [b]	
No	111	3/3/2015			N	0.0048 1	1524	6/3/2014 N		2.7 1	0.43	2.1E+03	1.3E-03	
No	111	3/3/2015			N	0.0048 1	1524	12/16/2014 N		2.7 1	0.43	2.1E+03	1.3E-03	
No	111	12/8/2014			N	0.0053 1	1524	6/3/2014 N		2.7 1	0.43	2.3E+03	1.2E-03	
No	111	12/8/2014			N	0.0053 1	1524	12/16/2014 N		2.7 1	0.43	2.3E+03	1.2E-03	
No	310GS	3/9/2015			N	0.0074 1	4083	3/14/2014 N		2.7 1	0.43	3.2E+03	8.5E-04	
No	310GS	12/17/2014			N	0.0103 1	4083	3/14/2014 N		2.7 1	0.43	4.4E+03	6.1E-04	
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	6138	2/6/2014 N		2.7 1	0.43	1.7E+04	1.6E-04	
No	312GS	3/9/2015			N	0.0483 1	4083	3/14/2014 N		2.7 1	0.43	2.1E+04	1.3E-04	
No	312GS	12/10/2014			N	0.0539 1	4083	3/14/2014 N		2.7 1	0.43	2.3E+04	1.2E-04	
Yes	112	12/8/2014			N	0.004 1	4753	4/28/2014 N		2.9 1	0.43	1.7E+03	1.7E-03	
Yes	112	3/3/2015			FD	0.0045 1	4753	4/28/2014 N		2.9 1	0.43	1.9E+03	1.5E-03	
Yes	112	3/3/2015			N	0.0048 1	4753	4/28/2014 N		2.9 1	0.43	2.1E+03	1.4E-03	
Yes	112	1/16/2013			N	0.0054 1	4753	4/28/2014 N		2.9 1	0.43	2.3E+03	1.2E-03	
Yes	DP-009 GW	12/12/2012	15	20	N	0.0059 1	2249	2/6/2014 N		2.9 1	0.43	2.5E+03	1.1E-03	
No	QQ	12/19/2012			N	0.0021 1	7958	3/20/2014 N		3 1	0.43	9.0E+02	3.3E-03	
No	DP-045 GW	4/4/2014	14.5	24.5	N	0.0119 1	7187	11/14/2014 N		3 1	0.43	5.1E+03	5.9E-04	
No	DP-005 GW	12/11/2012	14	19	FD	0.033 1	4237	1/12/2015 N		3 1	0.43	1.4E+04	2.1E-04	
No	DP-005 GW	12/11/2012	14	19	N	0.034 1	4237	1/12/2015 N		3 1	0.43	1.5E+04	2.1E-04	
No	309GS	3/11/2015			N	0.0747 1	9266	4/22/2014 N		3 1	0.43	3.2E+04	9.3E-05	
No	309GS	12/12/2014			N	0.0843 1	9266	4/22/2014 N		3 1	0.43	3.6E+04	8.3E-05	
Yes	S	12/10/2014			N	0.0637 1	9460	1/21/2014 N		3 1	0.43	2.7E+04	1.1E-04	
Yes	S	3/4/2015			N	0.0665 1	9460	1/21/2014 N		3 1	0.43	2.9E+04	1.0E-04	
Yes	S	12/19/2012			N	0.073 1	9460	1/21/2014 N		3 1	0.43	3.1E+04	9.6E-05	
Eligible	312GS	3/9/2015			N	0.0483 1	5015	9/3/2014 N		3.4 1	0.43	2.1E+04	1.6E-04	
Eligible	312GS	12/10/2014			N	0.0539 1	5015	9/3/2014 N		3.4 1	0.43	2.3E+04	1.5E-04	
No	QQ	12/19/2012			N	0.0021 1	5340	2/13/2014 N		3.4 1	0.43	9.0E+02	3.8E-03	
No	QQ	12/19/2012			N	0.0021 1	7958	2/20/2014 N		3.4 1	0.43	9.0E+02	3.8E-03	
No	DP-040 GW	9/11/2013	15	20	N	0.014 1	9700	1/10/2014 N		3.4 1	0.43	6.0E+03	5.6E-04	
Yes	DP-025 GW	9/12/2013	15	20	N	0.033 1	7355	12/16/2013 N		3.5 1	0.43	1.4E+04	2.5E-04	
Yes	11	9/20/2010			N	0.065 1	7355	12/16/2013 N		3.5 1	0.43	2.8E+04	1.3E-04	
No	11	9/20/2010			N	0.065 1	7275	9/26/2014 N		3.6 1	0.43	2.8E+04	1.3E-04	
Yes	DP-005 GW	12/11/2012	14	19	FD	0.033 1	6354	11/25/2013 N		3.8 1	0.43	1.4E+04	2.7E-04	
Yes	DP-005 GW	12/11/2012	14	19	N	0.034 1	6354	11/25/2013 N		3.8 1	0.43	1.5E+04	2.6E-04	
No	SMW6	12/12/2014			N	0.0024 1	6297	4/14/2014 N		4.3 1	0.43	1.0E+03	4.2E-03	
No	SMW6	3/6/2015			N	0.0028 1	6297	4/14/2014 N		4.3 1	0.43	1.2E+03	3.6E-03	
No	SMW3	3/6/2015			N	0.0038 1	7496	3/13/2014 N		4.3 1	0.43	1.6E+03	2.6E-03	
No	111	3/3/2015			N	0.0048 1	4263	5/2/2014 N		4.3 1	0.43	2.1E+03	2.1E-03	
No	111	12/8/2014			N	0.0053 1	4263	5/2/2014 N		4.3 1	0.43	2.3E+03	1.9E-03	
No	SMW3	12/12/2014			N	0.0054 1	7496	3/13/2014 N		4.3 1	0.43	2.3E+03	1.9E-03	
No	SMW10	12/16/2014			FD	0.0015 1	9555	2/21/2014 N		4.4 1	0.43	6.5E+02	6.8E-03	
No	SMW10	3/4/2015			N	0.0016 1	9555	2/21/2014 N		4.4 1	0.43	6.9E+02	6.4E-03	

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data						GW:SS Attenuation Factor [b]
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	
No	SMW10	12/16/2014			N	0.0017 1	9555	2/21/2014 N		4.4 1	0.43	7.3E+02	6.0E-03
No	111	3/3/2015			N	0.0048 1	9938	5/1/2014 N		4.4 1	0.43	2.1E+03	2.1E-03
No	111	12/8/2014			N	0.0053 1	9938	5/1/2014 N		4.4 1	0.43	2.3E+03	1.9E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	8222	12/18/2013 N		4.5 1	0.43	6.9E+02	6.5E-03
No	SMW6	12/12/2014			N	0.0024 1	6016	2/5/2014 N		4.5 1	0.43	1.0E+03	4.4E-03
No	SMW6	3/6/2015			N	0.0028 1	6016	2/5/2014 N		4.5 1	0.43	1.2E+03	3.7E-03
No	SMW10	12/16/2014			FD	0.0015 1	9555	3/4/2014 N		4.6 1	0.43	6.5E+02	7.1E-03
No	SMW10	3/4/2015			N	0.0016 1	9555	3/4/2014 N		4.6 1	0.43	6.9E+02	6.7E-03
No	SMW10	12/16/2014			N	0.0017 1	9555	3/4/2014 N		4.6 1	0.43	7.3E+02	6.3E-03
Yes	DP-050 GW	4/1/2014	14	24	N	0.0404 1	1194	3/3/2014 N		4.6 1	0.43	1.7E+04	2.6E-04
Yes	309GS	3/11/2015			N	0.0747 1	1194	3/3/2014 N		4.6 1	0.43	3.2E+04	1.4E-04
Yes	309GS	12/12/2014			N	0.0843 1	1194	3/3/2014 N		4.6 1	0.43	3.6E+04	1.3E-04
No	X	12/9/2014			N	0.00061 1	3339	2/7/2014 N		4.7 1	0.43	2.6E+02	1.8E-02
No	X	3/4/2015			N	0.0007 1	3339	2/7/2014 N		4.7 1	0.43	3.0E+02	1.6E-02
No	SMW3	3/6/2015			N	0.0038 1	7496	1/11/2014 N		4.8 1	0.43	1.6E+03	2.9E-03
No	SMW3	12/12/2014			N	0.0054 1	7496	1/11/2014 N		4.8 1	0.43	2.3E+03	2.1E-03
No	11	9/20/2010			N	0.065 1	2614	2/5/2014 N		4.8 1	0.43	2.8E+04	1.7E-04
Yes	315GS	12/9/2014			N	0.164 1	5251	4/11/2014 N		4.9 1	0.43	7.1E+04	6.9E-05
Yes	315GS	3/5/2015			N	0.247 1	5251	4/11/2014 N		4.9 1	0.43	1.1E+05	4.6E-05
No	111	3/3/2015			N	0.0048 1	9938	5/19/2014 N		5 1	0.43	2.1E+03	2.4E-03
No	111	3/3/2015			N	0.0048 1	1524	12/16/2014 N		5 1	0.43	2.1E+03	2.4E-03
No	111	12/8/2014			N	0.0053 1	9938	5/19/2014 N		5 1	0.43	2.3E+03	2.2E-03
No	111	12/8/2014			N	0.0053 1	1524	12/16/2014 N		5 1	0.43	2.3E+03	2.2E-03
Yes	SMW3	3/6/2015			N	0.0038 1	4836	1/21/2014 N		5 1	0.43	1.6E+03	3.1E-03
Yes	SMW3	12/12/2014			N	0.0054 1	4836	1/21/2014 N		5 1	0.43	2.3E+03	2.2E-03
Yes	S	12/10/2014			N	0.0637 1	4214	12/19/2013 N		5 1	0.43	2.7E+04	1.8E-04
Yes	S	3/4/2015			N	0.0665 1	4214	12/19/2013 N		5 1	0.43	2.9E+04	1.7E-04
Yes	S	12/19/2012			N	0.073 1	4214	12/19/2013 N		5 1	0.43	3.1E+04	1.6E-04
No	11	9/20/2010			N	0.065 1	7275	8/15/2014 N		5.1 1	0.43	2.8E+04	1.8E-04
No	112	12/8/2014			N	0.004 1	2921	2/19/2014 N		5.2 1	0.43	1.7E+03	3.0E-03
No	112	3/3/2015			FD	0.0045 1	2921	2/19/2014 N		5.2 1	0.43	1.9E+03	2.7E-03
No	112	3/3/2015			N	0.0048 1	2921	2/19/2014 N		5.2 1	0.43	2.1E+03	2.5E-03
No	112	1/16/2013			N	0.0054 1	2921	2/19/2014 N		5.2 1	0.43	2.3E+03	2.2E-03
Yes	DP-008 GW	12/13/2012	15	20	N	0.0066 1	7191	12/18/2013 N		5.2 1	0.43	2.8E+03	1.8E-03
Yes	DP-025 GW	9/12/2013	15	20	N	0.033 1	7355	12/16/2013 N		5.2 1	0.43	1.4E+04	3.7E-04
Yes	11	9/20/2010			N	0.065 1	7355	12/16/2013 N		5.2 1	0.43	2.8E+04	1.9E-04
No	111	3/3/2015			N	0.0048 1	8773	9/26/2014 N		5.3 1	0.43	2.1E+03	2.6E-03
No	111	12/8/2014			N	0.0053 1	8773	9/26/2014 N		5.3 1	0.43	2.3E+03	2.3E-03
Yes	DP-008 GW	12/13/2012	15	20	N	0.0066 1	6806	1/7/2014 N		5.3 1	0.43	2.8E+03	1.9E-03
Yes	S	12/10/2014			N	0.0637 1	6806	1/7/2014 N		5.3 1	0.43	2.7E+04	1.9E-04
Yes	S	3/4/2015			N	0.0665 1	6806	1/7/2014 N		5.3 1	0.43	2.9E+04	1.9E-04

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data						GW:SS Attenuation Factor [b]
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	
Yes	S	12/19/2012			N	0.073 1	6806	1/7/2014	N	5.3 1	0.43	3.1E+04	1.7E-04
Yes	315GS	12/9/2014			N	0.164 1	5251	4/19/2014	N	5.3 1	0.43	7.1E+04	7.5E-05
Yes	315GS	3/5/2015			N	0.247 1	5251	4/19/2014	N	5.3 1	0.43	1.1E+05	5.0E-05
No	111	3/3/2015			N	0.0048 1	5909	1/31/2014	N	5.4 1	0.43	2.1E+03	2.6E-03
No	111	12/8/2014			N	0.0053 1	5909	1/31/2014	N	5.4 1	0.43	2.3E+03	2.4E-03
No	111	3/3/2015			N	0.0048 1	9363	7/10/2014	N	5.5 1	0.43	2.1E+03	2.7E-03
No	111	12/8/2014			N	0.0053 1	9363	7/10/2014	N	5.5 1	0.43	2.3E+03	2.4E-03
Yes	SMW3	12/12/2014			N	0.0054 1	4836	12/10/2013	N	5.5 1	0.43	2.3E+03	2.4E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	8760	4/17/2014	N	5.6 1	0.43	6.9E+02	8.1E-03
No	SMW3	3/6/2015			N	0.0038 1	4080	5/20/2014	N	5.6 1	0.43	1.6E+03	3.4E-03
No	111	3/3/2015			N	0.0048 1	5909	1/15/2014	N	5.6 1	0.43	2.1E+03	2.7E-03
No	111	12/8/2014			N	0.0053 1	5909	1/15/2014	N	5.6 1	0.43	2.3E+03	2.5E-03
No	SMW3	12/12/2014			N	0.0054 1	4080	5/20/2014	N	5.6 1	0.43	2.3E+03	2.4E-03
No	V	12/9/2014			N	0.0213 1	8760	4/17/2014	N	5.6 1	0.43	9.2E+03	6.1E-04
No	V	3/3/2015			N	0.0292 1	8760	4/17/2014	N	5.6 1	0.43	1.3E+04	4.5E-04
No	V	12/17/2012			N	0.031 1	8760	4/17/2014	N	5.6 1	0.43	1.3E+04	4.2E-04
No	309GS	3/11/2015			N	0.0747 1	9266	4/8/2014	N	5.9 1	0.43	3.2E+04	1.8E-04
No	309GS	12/12/2014			N	0.0843 1	9266	4/8/2014	N	5.9 1	0.43	3.6E+04	1.6E-04
Yes	DP-007 GW	12/11/2012	15	20	N	0.1 1	4038	2/27/2014	N	6 1	0.43	4.3E+04	1.4E-04
No	111	3/3/2015			N	0.0048 1	9363	8/13/2014	N	6.1 1	0.43	2.1E+03	3.0E-03
No	111	12/8/2014			N	0.0053 1	9363	8/13/2014	N	6.1 1	0.43	2.3E+03	2.7E-03
Pending	DP-045 GW	4/4/2014	14.5	24.5	N	0.0119 1	8840	10/9/2014	N	6.1 1	0.43	5.1E+03	1.2E-03
No	DP-050 GW	4/1/2014	14	24	N	0.0404 1	5378	4/1/2014	N	6.2 1	0.43	1.7E+04	3.6E-04
Yes	S	12/10/2014			N	0.0637 1	4214	11/21/2013	N	6.2 1	0.43	2.7E+04	2.3E-04
Yes	S	3/4/2015			N	0.0665 1	4214	11/21/2013	N	6.2 1	0.43	2.9E+04	2.2E-04
Yes	S	12/19/2012			N	0.073 1	4214	11/21/2013	N	6.2 1	0.43	3.1E+04	2.0E-04
Yes	SMW6	12/12/2014			N	0.0024 1	6513	2/4/2014	N	6.3 1	0.43	1.0E+03	6.1E-03
Yes	SMW6	3/6/2015			N	0.0028 1	6513	2/4/2014	N	6.3 1	0.43	1.2E+03	5.2E-03
Yes	DP-007 GW	12/11/2012	15	20	N	0.1 1	6513	2/4/2014	N	6.3 1	0.43	4.3E+04	1.5E-04
No	SMW3	3/6/2015			N	0.0038 1	4080	6/17/2014	N	6.4 1	0.43	1.6E+03	3.9E-03
No	112	12/8/2014			N	0.004 1	2921	3/4/2014	N	6.4 1	0.43	1.7E+03	3.7E-03
No	112	3/3/2015			FD	0.0045 1	2921	3/4/2014	N	6.4 1	0.43	1.9E+03	3.3E-03
No	112	3/3/2015			N	0.0048 1	2921	3/4/2014	N	6.4 1	0.43	2.1E+03	3.1E-03
No	112	1/16/2013			N	0.0054 1	2921	3/4/2014	N	6.4 1	0.43	2.3E+03	2.8E-03
No	SMW3	12/12/2014			N	0.0054 1	4080	6/17/2014	N	6.4 1	0.43	2.3E+03	2.8E-03
No	DP-025 GW	9/12/2013	15	20	N	0.033 1	3239	1/7/2014	N	6.4 1	0.43	1.4E+04	4.5E-04
Yes	DP-008 GW	12/13/2012	15	20	N	0.0066 1	6806	11/26/2013	N	6.5 1	0.43	2.8E+03	2.3E-03
Yes	S	12/10/2014			N	0.0637 1	6806	11/26/2013	N	6.5 1	0.43	2.7E+04	2.4E-04
Yes	S	3/4/2015			N	0.0665 1	6806	11/26/2013	N	6.5 1	0.43	2.9E+04	2.3E-04
Yes	S	12/19/2012			N	0.073 1	6806	11/26/2013	N	6.5 1	0.43	3.1E+04	2.1E-04
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	8760	4/17/2014	N	6.9 1	0.43	6.9E+02	1.0E-02

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data							
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	GW:SS Attenuation Factor [b]	
No	V	12/9/2014			N	0.0213 1	8760	4/17/2014	N	6.9 1	0.43	9.2E+03	7.5E-04	
No	V	3/3/2015			N	0.0292 1	8760	4/17/2014	N	6.9 1	0.43	1.3E+04	5.5E-04	
No	V	12/17/2012			N	0.031 1	8760	4/17/2014	N	6.9 1	0.43	1.3E+04	5.2E-04	
No	11	9/20/2010			N	0.065 1	2614	2/18/2014	N	6.9 1	0.43	2.8E+04	2.5E-04	
No	DP-019 GW	9/13/2013	17	22	N	0.037 1	1196	4/7/2014	N	7 1	0.43	1.6E+04	4.4E-04	
No	312GS	3/9/2015			N	0.0483 1	1196	4/7/2014	N	7 1	0.43	2.1E+04	3.4E-04	
No	312GS	12/10/2014			N	0.0539 1	1196	4/7/2014	N	7 1	0.43	2.3E+04	3.0E-04	
No	SMW16	12/23/2014			N	0.00044 1	4109	1/15/2014	N	7.2 1	0.43	1.9E+02	3.8E-02	
No	SMW16	3/4/2015			N	0.00058 1	4109	1/15/2014	N	7.2 1	0.43	2.5E+02	2.9E-02	
Yes	DP-003 GW	4/25/2012			FD	0.0018 1	2868	12/4/2013	N	7.2 1	0.43	7.7E+02	9.3E-03	
Yes	DP-003 GW	4/25/2012			N	0.0022 1	2868	12/4/2013	N	7.2 1	0.43	9.5E+02	7.6E-03	
No	DP-019 GW	9/13/2013	17	22	N	0.037 1	1196	3/25/2014	N	7.3 1	0.43	1.6E+04	4.6E-04	
No	312GS	3/9/2015			N	0.0483 1	1196	3/25/2014	N	7.3 1	0.43	2.1E+04	3.5E-04	
No	312GS	12/10/2014			N	0.0539 1	1196	3/25/2014	N	7.3 1	0.43	2.3E+04	3.1E-04	
No	SMW6	12/12/2014			N	0.0024 1	6016	1/22/2014	N	7.4 1	0.43	1.0E+03	7.2E-03	
No	SMW6	3/6/2015			N	0.0028 1	6016	1/22/2014	N	7.4 1	0.43	1.2E+03	6.1E-03	
No	QQ	12/19/2012			N	0.0021 1	9335	8/15/2014	N	7.5 1	0.43	9.0E+02	8.3E-03	
No	312GS	3/9/2015			N	0.0483 1	5300	2/9/2014	N	7.5 1	0.43	2.1E+04	3.6E-04	
No	312GS	12/10/2014			N	0.0539 1	5300	2/9/2014	N	7.5 1	0.43	2.3E+04	3.2E-04	
Eligible	110	12/10/2014			N	0.214 1	2422	1/22/2014	N	7.6 1	0.43	9.2E+04	8.3E-05	
Eligible	110	1/17/2013			N	0.23 1	2422	1/22/2014	N	7.6 1	0.43	9.9E+04	7.7E-05	
Eligible	110	3/5/2015			FD	0.272 1	2422	1/22/2014	N	7.6 1	0.43	1.2E+05	6.5E-05	
Eligible	110	3/5/2015			N	0.275 1	2422	1/22/2014	N	7.6 1	0.43	1.2E+05	6.4E-05	
No	X	12/9/2014			N	0.00061 1	3339	3/13/2014	N	7.6 1	0.43	2.6E+02	2.9E-02	
No	X	3/4/2015			N	0.0007 1	3339	3/13/2014	N	7.6 1	0.43	3.0E+02	2.5E-02	
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	9244	1/10/2014	N	7.7 1	0.43	6.9E+02	1.1E-02	
Yes	111	3/3/2015			N	0.0048 1	8145	4/15/2014	N	7.7 1	0.43	2.1E+03	3.7E-03	
Yes	111	12/8/2014			N	0.0053 1	8145	4/15/2014	N	7.7 1	0.43	2.3E+03	3.4E-03	
No	DP-025 GW	9/12/2013	15	20	N	0.033 1	6272	5/9/2014	N	7.8 1	0.43	1.4E+04	5.5E-04	
No	DP-045 GW	4/4/2014	14.5	24.5	N	0.0119 1	5906	5/19/2014	N	8.4 1	0.43	5.1E+03	1.6E-03	
Yes	112	12/8/2014			N	0.004 1	9993	1/25/2014	N	8.5 1	0.43	1.7E+03	4.9E-03	
Yes	112	3/3/2015			FD	0.0045 1	9993	1/25/2014	N	8.5 1	0.43	1.9E+03	4.4E-03	
Yes	112	3/3/2015			N	0.0048 1	9993	1/25/2014	N	8.5 1	0.43	2.1E+03	4.1E-03	
Yes	112	1/16/2013			N	0.0054 1	9993	1/25/2014	N	8.5 1	0.43	2.3E+03	3.7E-03	
Yes	S	12/10/2014			N	0.0637 1	4214	12/19/2013	N	8.5 1	0.43	2.7E+04	3.1E-04	
Yes	S	3/4/2015			N	0.0665 1	4214	12/19/2013	N	8.5 1	0.43	2.9E+04	3.0E-04	
Yes	S	12/19/2012			N	0.073 1	4214	12/19/2013	N	8.5 1	0.43	3.1E+04	2.7E-04	
No	DP-040 GW	9/11/2013	15	20	N	0.014 1	9934	12/12/2013	N	8.7 1	0.43	6.0E+03	1.4E-03	
No	QQ	12/19/2012			N	0.0021 1	9335	9/26/2014	N	8.8 1	0.43	9.0E+02	9.7E-03	
Yes	112	12/8/2014			N	0.004 1	4753	4/15/2014	N	8.9 1	0.43	1.7E+03	5.2E-03	
Yes	112	3/3/2015			FD	0.0045 1	4753	4/15/2014	N	8.9 1	0.43	1.9E+03	4.6E-03	

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data							
Mitigated	sys_loc_code	sample_date	start_depth	end_depth	sample_type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_date	sample_type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	GW:SS Attenuation Factor [b]	
Yes	112	3/3/2015			N	0.0048 1	4753	4/15/2014	N	8.9 1	0.43	2.1E+03	4.3E-03	
Yes	112	1/16/2013			N	0.0054 1	4753	4/15/2014	N	8.9 1	0.43	2.3E+03	3.8E-03	
Yes	S	12/10/2014			N	0.0637 1	5877	11/25/2013	N	9 1	0.43	2.7E+04	3.3E-04	
Yes	S	3/4/2015			N	0.0665 1	5877	11/25/2013	N	9 1	0.43	2.9E+04	3.1E-04	
Yes	S	12/19/2012			N	0.073 1	5877	11/25/2013	N	9 1	0.43	3.1E+04	2.9E-04	
No	111	3/3/2015			N	0.0048 1	5419	9/30/2014	N	9.1 1	0.43	2.1E+03	4.4E-03	
No	111	3/3/2015			N	0.0048 1	9363	7/10/2014	N	9.1 1	0.43	2.1E+03	4.4E-03	
No	111	12/8/2014			N	0.0053 1	5419	9/30/2014	N	9.1 1	0.43	2.3E+03	4.0E-03	
No	111	12/8/2014			N	0.0053 1	9363	7/10/2014	N	9.1 1	0.43	2.3E+03	4.0E-03	
No	DP-040 GW	9/11/2013	15	20	N	0.014 1	4035	12/9/2013	N	9.2 1	0.43	6.0E+03	1.5E-03	
Yes	DP-003 GW	4/25/2012			FD	0.0018 1	2501	12/12/2013	N	9.3 1	0.43	7.7E+02	1.2E-02	
Yes	DP-003 GW	4/25/2012			N	0.0022 1	2501	12/12/2013	N	9.3 1	0.43	9.5E+02	9.8E-03	
Yes	DP-008 GW	12/13/2012	15	20	N	0.0066 1	2501	12/12/2013	N	9.3 1	0.43	2.8E+03	3.3E-03	
Yes	S	12/10/2014			N	0.0637 1	2501	12/12/2013	N	9.3 1	0.43	2.7E+04	3.4E-04	
Yes	S	3/4/2015			N	0.0665 1	2501	12/12/2013	N	9.3 1	0.43	2.9E+04	3.3E-04	
Yes	S	12/19/2012			N	0.073 1	2501	12/12/2013	N	9.3 1	0.43	3.1E+04	3.0E-04	
Yes	DP-013 GW	12/17/2012	15	20	N	0.0032 1	8176	11/19/2013	N	9.5 1	0.43	1.4E+03	6.9E-03	
No	X	12/9/2014			N	0.00061 1	7742	1/7/2014	N	9.7 1	0.43	2.6E+02	3.7E-02	
No	X	3/4/2015			N	0.0007 1	7742	1/7/2014	N	9.7 1	0.43	3.0E+02	3.2E-02	
No	111	3/3/2015			N	0.0048 1	5419	1/16/2015	N	9.7 1	0.43	2.1E+03	4.7E-03	
No	111	12/8/2014			N	0.0053 1	5419	1/16/2015	N	9.7 1	0.43	2.3E+03	4.3E-03	
No	DP-025 GW	9/12/2013	15	20	N	0.033 1	6272	5/30/2014	N	9.7 1	0.43	1.4E+04	6.8E-04	
No	X	12/9/2014			N	0.00061 1	5404	1/15/2014	N	10 1	0.43	2.6E+02	3.8E-02	
No	X	3/4/2015			N	0.0007 1	5404	1/15/2014	N	10 1	0.43	3.0E+02	3.3E-02	
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	1420	5/19/2014	N	10 1	0.43	6.9E+02	1.5E-02	
No	DP-013 GW	12/17/2012	15	20	N	0.0032 1	5404	1/15/2014	N	10 1	0.43	1.4E+03	7.3E-03	
Yes	DP-009 GW	12/12/2012	15	20	N	0.0059 1	2249	2/27/2014	N	10.1 1	0.43	2.5E+03	4.0E-03	
No	203	12/18/2012			N	0.019 1	6390	12/17/2013	N	10.2 1	0.43	8.2E+03	1.2E-03	
No	DP-005 GW	12/11/2012	14	19	FD	0.033 1	4237	2/4/2015	N	10.2 1	0.43	1.4E+04	7.2E-04	
No	DP-005 GW	12/11/2012	14	19	N	0.034 1	4237	2/4/2015	N	10.2 1	0.43	1.5E+04	7.0E-04	
Yes	111	3/3/2015			N	0.0048 1	1927	4/15/2014	N	10.4 1	0.43	2.1E+03	5.0E-03	
Yes	111	12/8/2014			N	0.0053 1	1927	4/15/2014	N	10.4 1	0.43	2.3E+03	4.6E-03	
No	309GS	3/11/2015			N	0.0747 1	9266	4/22/2014	N	10.5 1	0.43	3.2E+04	3.3E-04	
No	309GS	12/12/2014			N	0.0843 1	9266	4/22/2014	N	10.5 1	0.43	3.6E+04	2.9E-04	
Yes	112	12/8/2014			N	0.004 1	4753	4/28/2014	N	10.9 1	0.43	1.7E+03	6.3E-03	
Yes	112	3/3/2015			FD	0.0045 1	4753	4/28/2014	N	10.9 1	0.43	1.9E+03	5.6E-03	
Yes	112	3/3/2015			N	0.0048 1	4753	4/28/2014	N	10.9 1	0.43	2.1E+03	5.3E-03	
Yes	112	1/16/2013			N	0.0054 1	4753	4/28/2014	N	10.9 1	0.43	2.3E+03	4.7E-03	
No	X	12/9/2014			N	0.00061 1	7742	12/2/2013	N	11.2 1	0.43	2.6E+02	4.3E-02	
No	X	3/4/2015			N	0.0007 1	7742	12/2/2013	N	11.2 1	0.43	3.0E+02	3.7E-02	
Yes	112	12/8/2014			N	0.004 1	4753	4/15/2014	N	11.3 1	0.43	1.7E+03	6.6E-03	

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data							
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	GW:SS Attenuation Factor [b]	
Yes	112	3/3/2015			FD	0.0045 1	4753	4/15/2014 N		11.3 1	0.43	1.9E+03	5.8E-03	
Yes	112	3/3/2015			N	0.0048 1	4753	4/15/2014 N		11.3 1	0.43	2.1E+03	5.5E-03	
Yes	112	1/16/2013			N	0.0054 1	4753	4/15/2014 N		11.3 1	0.43	2.3E+03	4.9E-03	
No	DP-040 GW	9/11/2013	15	20	N	0.014 1	4035	1/13/2014 N		11.4 1	0.43	6.0E+03	1.9E-03	
Yes	DP-003 GW	4/25/2012			N	0.0022 1	7923	12/23/2013 N		11.4 1	0.43	9.5E+02	1.2E-02	
No	X	12/9/2014			N	0.00061 1	5404	12/3/2013 N		11.5 1	0.43	2.6E+02	4.4E-02	
No	X	3/4/2015			N	0.0007 1	5404	12/3/2013 N		11.5 1	0.43	3.0E+02	3.8E-02	
No	DP-013 GW	12/17/2012	15	20	N	0.0032 1	5404	12/3/2013 N		11.5 1	0.43	1.4E+03	8.4E-03	
Yes	112	12/8/2014			N	0.004 1	4753	4/28/2014 N		11.5 1	0.43	1.7E+03	6.7E-03	
Yes	112	3/3/2015			FD	0.0045 1	4753	4/28/2014 N		11.5 1	0.43	1.9E+03	5.9E-03	
Yes	112	3/3/2015			N	0.0048 1	4753	4/28/2014 N		11.5 1	0.43	2.1E+03	5.6E-03	
Yes	112	1/16/2013			N	0.0054 1	4753	4/28/2014 N		11.5 1	0.43	2.3E+03	5.0E-03	
No	DP-040 GW	9/11/2013	15	20	N	0.014 1	9934	1/24/2014 N		11.6 1	0.43	6.0E+03	1.9E-03	
Yes	112	12/8/2014			N	0.004 1	4753	4/28/2014 N		11.6 1	0.43	1.7E+03	6.7E-03	
Yes	112	3/3/2015			FD	0.0045 1	4753	4/28/2014 N		11.6 1	0.43	1.9E+03	6.0E-03	
Yes	112	3/3/2015			N	0.0048 1	4753	4/28/2014 N		11.6 1	0.43	2.1E+03	5.6E-03	
Yes	112	1/16/2013			N	0.0054 1	4753	4/28/2014 N		11.6 1	0.43	2.3E+03	5.0E-03	
Yes	DP-008 GW	12/13/2012	15	20	N	0.0066 1	7191	12/18/2013 N		11.6 1	0.43	2.8E+03	4.1E-03	
No	111	3/3/2015			N	0.0048 1	8773	8/14/2014 N		11.7 1	0.43	2.1E+03	5.7E-03	
No	111	12/8/2014			N	0.0053 1	8773	8/14/2014 N		11.7 1	0.43	2.3E+03	5.1E-03	
Yes	DP-003 GW	4/25/2012			FD	0.0018 1	2501	1/6/2014 N		11.7 1	0.43	7.7E+02	1.5E-02	
Yes	DP-003 GW	4/25/2012			N	0.0022 1	2501	1/6/2014 N		11.7 1	0.43	9.5E+02	1.2E-02	
Yes	SMW6	12/12/2014			N	0.0024 1	6513	1/6/2014 N		11.7 1	0.43	1.0E+03	1.1E-02	
Yes	SMW6	3/6/2015			N	0.0028 1	6513	1/6/2014 N		11.7 1	0.43	1.2E+03	9.7E-03	
Yes	DP-008 GW	12/13/2012	15	20	N	0.0066 1	2501	1/6/2014 N		11.7 1	0.43	2.8E+03	4.1E-03	
Yes	S	12/10/2014			N	0.0637 1	2501	1/6/2014 N		11.7 1	0.43	2.7E+04	4.3E-04	
Yes	S	3/4/2015			N	0.0665 1	2501	1/6/2014 N		11.7 1	0.43	2.9E+04	4.1E-04	
Yes	S	12/19/2012			N	0.073 1	2501	1/6/2014 N		11.7 1	0.43	3.1E+04	3.7E-04	
Yes	DP-007 GW	12/11/2012	15	20	N	0.1 1	6513	1/6/2014 N		11.7 1	0.43	4.3E+04	2.7E-04	
Yes	DP-008 GW	12/13/2012	15	20	N	0.0066 1	7191	2/7/2014 N		11.9 1	0.43	2.8E+03	4.2E-03	
No	X	12/9/2014			N	0.00061 1	1617	12/2/2013 N		12.1 1	0.43	2.6E+02	4.6E-02	
No	X	3/4/2015			N	0.0007 1	1617	12/2/2013 N		12.1 1	0.43	3.0E+02	4.0E-02	
No	112	12/8/2014			N	0.004 1	8464	4/22/2014 N		12.1 1	0.43	1.7E+03	7.0E-03	
No	112	3/3/2015			FD	0.0045 1	8464	4/22/2014 N		12.1 1	0.43	1.9E+03	6.3E-03	
No	112	3/3/2015			N	0.0048 1	8464	4/22/2014 N		12.1 1	0.43	2.1E+03	5.9E-03	
No	112	1/16/2013			N	0.0054 1	8464	4/22/2014 N		12.1 1	0.43	2.3E+03	5.2E-03	
Yes	SMW6	12/12/2014			N	0.0024 1	6513	2/4/2014 N		12.2 1	0.43	1.0E+03	1.2E-02	
Yes	SMW6	3/6/2015			N	0.0028 1	6513	2/4/2014 N		12.2 1	0.43	1.2E+03	1.0E-02	
Yes	DP-007 GW	12/11/2012	15	20	N	0.1 1	6513	2/4/2014 N		12.2 1	0.43	4.3E+04	2.8E-04	
No	SMW6	12/12/2014			N	0.0024 1	6297	1/31/2014 N		12.3 1	0.43	1.0E+03	1.2E-02	
No	SMW6	3/6/2015			N	0.0028 1	6297	1/31/2014 N		12.3 1	0.43	1.2E+03	1.0E-02	

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data						GW:SS Attenuation Factor [b]
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	
Yes	S	12/10/2014			N	0.0637 1	9460	11/25/2013 N		12.7 1	0.43	2.7E+04	4.6E-04
Yes	S	3/4/2015			N	0.0665 1	9460	11/25/2013 N		12.7 1	0.43	2.9E+04	4.4E-04
Yes	S	12/19/2012			N	0.073 1	9460	11/25/2013 N		12.7 1	0.43	3.1E+04	4.0E-04
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	7107	1/7/2014 N		12.8 1	0.43	6.9E+02	1.9E-02
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	2143	12/30/2014 N		12.8 1	0.43	6.9E+02	1.9E-02
No	DP-045 GW	4/4/2014	14.5	24.5	N	0.0119 1	2143	12/30/2014 N		12.8 1	0.43	5.1E+03	2.5E-03
No	DP-005 GW	12/11/2012	14	19	FD	0.033 1	5948	1/28/2014 N		12.9 1	0.43	1.4E+04	9.1E-04
No	DP-005 GW	12/11/2012	14	19	N	0.034 1	5948	1/28/2014 N		12.9 1	0.43	1.5E+04	8.8E-04
No	11	9/20/2010			N	0.065 1	5948	1/28/2014 N		12.9 1	0.43	2.8E+04	4.6E-04
Yes	DP-003 GW	4/25/2012			N	0.0022 1	7923	11/22/2013 N		13 1	0.43	9.5E+02	1.4E-02
No	DP-019 GW	9/13/2013	17	22	N	0.037 1	1196	4/7/2014 N		13.2 1	0.43	1.6E+04	8.3E-04
No	312GS	3/9/2015			N	0.0483 1	1196	4/7/2014 N		13.2 1	0.43	2.1E+04	6.4E-04
No	312GS	12/10/2014			N	0.0539 1	1196	4/7/2014 N		13.2 1	0.43	2.3E+04	5.7E-04
Eligible	W	12/17/2012			FD	0.0066 1	2857	10/29/2014 N		13.3 1	0.43	2.8E+03	4.7E-03
Eligible	W	12/9/2014			N	0.0067 1	2857	10/29/2014 N		13.3 1	0.43	2.9E+03	4.6E-03
Eligible	W	12/9/2014			FD	0.0067 1	2857	10/29/2014 N		13.3 1	0.43	2.9E+03	4.6E-03
Eligible	W	12/17/2012			N	0.0068 1	2857	10/29/2014 N		13.3 1	0.43	2.9E+03	4.5E-03
Eligible	W	3/3/2015			N	0.0084 1	2857	10/29/2014 N		13.3 1	0.43	3.6E+03	3.7E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	9244	2/4/2014 N		13.4 1	0.43	6.9E+02	1.9E-02
No	113	12/8/2014			N	0.00098 1	9499	12/5/2013 N		13.6 1	0.43	4.2E+02	3.2E-02
No	113	3/4/2015			N	0.0018 1	9499	12/5/2013 N		13.6 1	0.43	7.7E+02	1.8E-02
No	DP-013 GW	12/17/2012	15	20	N	0.0032 1	9499	12/5/2013 N		13.6 1	0.43	1.4E+03	9.9E-03
No	113	12/18/2012			N	0.0045 1	9499	12/5/2013 N		13.6 1	0.43	1.9E+03	7.0E-03
Yes	S	12/10/2014			N	0.0637 1	4214	11/21/2013 N		13.8 1	0.43	2.7E+04	5.0E-04
Yes	S	3/4/2015			N	0.0665 1	4214	11/21/2013 N		13.8 1	0.43	2.9E+04	4.8E-04
Yes	S	12/19/2012			N	0.073 1	4214	11/21/2013 N		13.8 1	0.43	3.1E+04	4.4E-04
Yes	S	12/10/2014			N	0.0637 1	9460	1/21/2014 N		14.2 1	0.43	2.7E+04	5.2E-04
Yes	S	3/4/2015			N	0.0665 1	9460	1/21/2014 N		14.2 1	0.43	2.9E+04	5.0E-04
Yes	S	12/19/2012			N	0.073 1	9460	1/21/2014 N		14.2 1	0.43	3.1E+04	4.5E-04
No	111	3/3/2015			N	0.0048 1	9363	8/13/2014 N		14.3 1	0.43	2.1E+03	6.9E-03
No	111	12/8/2014			N	0.0053 1	9363	8/13/2014 N		14.3 1	0.43	2.3E+03	6.3E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	7107	1/7/2014 N		14.4 1	0.43	6.9E+02	2.1E-02
Yes	111	3/3/2015			N	0.0048 1	9831	12/21/2013 N		14.9 1	0.43	2.1E+03	7.2E-03
Yes	111	12/8/2014			N	0.0053 1	9831	12/21/2013 N		14.9 1	0.43	2.3E+03	6.5E-03
No	X	12/9/2014			N	0.00061 1	3339	1/21/2014 N		15.1 1	0.43	2.6E+02	5.8E-02
No	X	3/4/2015			N	0.0007 1	3339	1/21/2014 N		15.1 1	0.43	3.0E+02	5.0E-02
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	7107	2/1/2014 N		15.1 1	0.43	6.9E+02	2.2E-02
No	SMW6	12/12/2014			N	0.0024 1	6297	1/31/2014 N		15.3 1	0.43	1.0E+03	1.5E-02
No	SMW6	3/6/2015			N	0.0028 1	6297	1/31/2014 N		15.3 1	0.43	1.2E+03	1.3E-02
Yes	DP-007 GW	12/11/2012	15	20	N	0.1 1	4038	2/16/2014 N		15.3 1	0.43	4.3E+04	3.6E-04
No	X	12/9/2014			N	0.00061 1	3339	2/7/2014 N		15.4 1	0.43	2.6E+02	5.9E-02

Table D-4
Derivation of Groundwater to Sub-Slab Soil Gas Attenuation Factors
Human Health Risk Assessment Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Groundwater Data							Sub-Slab Soil Gas Data						GW:SS Attenuation Factor [b]
Mitigated	sys_loc_code	sample_date	start_de pth	end_ depth	sample_ type_code	Trichloroethene concentration (ug/L)	Unique Property ID	sample_ date	sample_ type_code	Trichloroethene concentration (ug/m3)	Dimensionless Henry's Law Constant	GW converted SV concentration [a] (ug/m3)	
No	X	3/4/2015			N	0.0007 1	3339	2/7/2014 N		15.4 1	0.43	3.0E+02	5.1E-02
Yes	112	12/8/2014			N	0.004 1	4753	4/28/2014 N		15.5 1	0.43	1.7E+03	9.0E-03
Yes	112	12/8/2014			N	0.004 1	4753	4/15/2014 N		15.5 1	0.43	1.7E+03	9.0E-03
Yes	112	3/3/2015			FD	0.0045 1	4753	4/28/2014 N		15.5 1	0.43	1.9E+03	8.0E-03
Yes	112	3/3/2015			FD	0.0045 1	4753	4/15/2014 N		15.5 1	0.43	1.9E+03	8.0E-03
Yes	112	3/3/2015			N	0.0048 1	4753	4/28/2014 N		15.5 1	0.43	2.1E+03	7.5E-03
Yes	112	3/3/2015			N	0.0048 1	4753	4/15/2014 N		15.5 1	0.43	2.1E+03	7.5E-03
Yes	112	1/16/2013			N	0.0054 1	4753	4/28/2014 N		15.5 1	0.43	2.3E+03	6.7E-03
Yes	112	1/16/2013			N	0.0054 1	4753	4/15/2014 N		15.5 1	0.43	2.3E+03	6.7E-03
Yes	DP-005 GW	12/11/2012	14	19	FD	0.033 1	6001	12/7/2013 N		15.7 1	0.43	1.4E+04	1.1E-03
Yes	DP-005 GW	12/11/2012	14	19	N	0.034 1	6001	12/7/2013 N		15.7 1	0.43	1.5E+04	1.1E-03
Yes	313GS	12/9/2014			N	0.327 1	6001	12/7/2013 N		15.7 1	0.43	1.4E+05	1.1E-04
Yes	DP-009 GW	12/12/2012	15	20	N	0.0059 1	1277	3/7/2014 N		16 1	0.43	2.5E+03	6.3E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	9244	1/10/2014 N		16.3 1	0.43	6.9E+02	2.4E-02
No	112	12/8/2014			N	0.004 1	8464	5/12/2014 N		16.4 1	0.43	1.7E+03	9.5E-03
No	112	3/3/2015			FD	0.0045 1	8464	5/12/2014 N		16.4 1	0.43	1.9E+03	8.5E-03
No	112	3/3/2015			N	0.0048 1	8464	5/12/2014 N		16.4 1	0.43	2.1E+03	7.9E-03
No	112	1/16/2013			N	0.0054 1	8464	5/12/2014 N		16.4 1	0.43	2.3E+03	7.1E-03
No	DP-025 GW	9/12/2013	15	20	N	0.033 1	3239	12/17/2013 N		16.4 1	0.43	1.4E+04	1.2E-03
Yes	SMW3	3/6/2015			N	0.0038 1	4920	11/18/2013 N		16.4 1	0.43	1.6E+03	1.0E-02
Yes	SMW3	12/12/2014			N	0.0054 1	4920	11/18/2013 N		16.4 1	0.43	2.3E+03	7.1E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	7107	2/1/2014 N		16.5 1	0.43	6.9E+02	2.4E-02
No	111	3/3/2015			N	0.0048 1	9938	5/19/2014 N		16.6 1	0.43	2.1E+03	8.0E-03
No	111	12/8/2014			N	0.0053 1	9938	5/19/2014 N		16.6 1	0.43	2.3E+03	7.3E-03
Yes	309GS	3/11/2015			N	0.0747 1	9189	4/21/2014 N		16.7 1	0.43	3.2E+04	5.2E-04
Yes	309GS	12/12/2014			N	0.0843 1	9189	4/21/2014 N		16.7 1	0.43	3.6E+04	4.6E-04
Yes	111	3/3/2015			N	0.0048 1	9831	1/4/2014 N		16.9 1	0.43	2.1E+03	8.2E-03
Yes	111	12/8/2014			N	0.0053 1	9831	1/4/2014 N		16.9 1	0.43	2.3E+03	7.4E-03
Yes	112	12/8/2014			N	0.004 1	4753	4/15/2014 N		17.1 1	0.43	1.7E+03	9.9E-03
Yes	112	3/3/2015			FD	0.0045 1	4753	4/15/2014 N		17.1 1	0.43	1.9E+03	8.8E-03
Yes	112	3/3/2015			N	0.0048 1	4753	4/15/2014 N		17.1 1	0.43	2.1E+03	8.3E-03
Yes	112	1/16/2013			N	0.0054 1	4753	4/15/2014 N		17.1 1	0.43	2.3E+03	7.4E-03
Yes	S	12/10/2014			N	0.0637 1	9460	11/25/2013 N		17.1 1	0.43	2.7E+04	6.2E-04
Yes	S	3/4/2015			N	0.0665 1	9460	11/25/2013 N		17.1 1	0.43	2.9E+04	6.0E-04
Yes	S	12/19/2012			N	0.073 1	9460	11/25/2013 N		17.1 1	0.43	3.1E+04	5.4E-04
No	SMW16	12/23/2014			N	0.00044 1	2225	11/20/2013 N		17.2 1	0.43	1.9E+02	9.1E-02
No	SMW16	3/4/2015			N	0.00058 1	2225	11/20/2013 N		17.2 1	0.43	2.5E+02	6.9E-02
Yes	SMW3	12/12/2014			N	0.0054 1	4920	12/16/2013 N		17.3 1	0.43	2.3E+03	7.5E-03
No	SMW16	12/23/2014			N	0.00044 1	4109	12/16/2013 N		17.4 1	0.43	1.9E+02	9.2E-02
Yes	DP-008 GW	12/13/2012	15	20	N	0.0066 1	5220	12/12/2013 N		17.6 1	0.43	2.8E+03	6.2E-03
No	DP-032 GW	9/17/2013	15	20	N	0.0016 1	9244	2/4/2014 N		17.8 1	0.43	6.9E+02	2.6E-02

Table D-5
Derivation of Sub-Slab Soil Gas to Indoor Air Attenuation Factors
East Hennepin Avenue Site
Minneapolis, Minnesota

Unique ID	Sub-slab ug/m3	Date Sampled	Indoor Air ug/m3	Date Sampled	Attenuation Factor	Notes
1191	53.9	06/12/14	ND (1.1)	06/12/14	IA not detected	excluded; TCE detected in OA
1420	463	07/09/14	ND (0.85)	07/09/14	IA not detected	
1420	377	12/19/14	1.4	12/19/14	3.71E-03	
2143	24.7	08/12/14	ND (0.89)	08/12/14	IA not detected	
2143	12.8	12/30/14	ND (0.82)	12/30/14	IA not detected	
5906	44	07/09/14	ND (0.79)	07/09/14	IA not detected	
5906	29.9	12/16/14	2.3	12/16/14	7.69E-02	excluded; TCE detected in OA
3954-8	232	02/12/15	2.9	02/12/15	1.25E-02	
3954-8	165	02/12/15	ND (1.6)	02/12/15	IA not detected	
3954-10	20.6	02/12/15	ND (1.5)	02/12/15	IA not detected	
3954-10	302	02/12/15	ND (1.5)	02/12/15	IA not detected	
3954-10	77.2	02/12/15	2.2	02/12/15	2.85E-02	
3954-11	2140	07/30/14	1.1	07/30/14	5.14E-04	excluded; TCE detected in OA
3954-11	190	07/30/14	1.1	07/30/14	5.79E-03	excluded; TCE detected in OA
3954-11	193	02/12/15	ND (1.5)	02/12/15	IA not detected	
3954-11	505	07/30/15	1.2	07/30/14	2.38E-03	excluded; TCE detected in OA
3954-11	700	02/12/15	1.8	02/12/15	2.57E-03	
3954-11	700	02/12/15	1.7	02/12/15	2.43E-03	
3954-12	3240	07/30/14	ND (0.82)	07/30/14	IA not detected	excluded; TCE detected in OA
3954-12	3240	07/30/14	ND (0.82)	07/30/14	IA not detected	excluded; TCE detected in OA
3954-12	857	02/12/15	ND (1.4)	02/12/15	IA not detected	
3954-12	2640	07/30/14	ND (0.82)	07/30/14	IA not detected	
3954-12	849	02/12/15	ND (1.6)	02/12/15	IA not detected	
3954-14	441	07/31/14	ND (0.85)	07/31/14	IA not detected	
3954-14	534	02/12/15	ND (1.6)	02/12/15	IA not detected	
3954-14	493	07/30/14	ND (0.76)	07/30/14	IA not detected	excluded; TCE detected in OA
3954-14	1390	02/12/15	ND (1.5)	02/12/15	IA not detected	
8222	58.2	04/23/14	5.2	04/23/14	8.93E-02	excluded; TCE indoor sources
8222	24.8	04/23/14	ND (0.82)	04/23/14	IA not detected	excluded; TCE indoor sources
8222	60.9	12/23/14	0.86	12/23/14	1.41E-02	excluded; TCE indoor sources
8222	30.8	12/23/14	6.2	12/23/14	2.01E-01	excluded; TCE indoor sources
9895	see note 3	see note 3	0.9	08/09/14	no subslab data	excluded; TCE detected in OA
9895	see note 3	see note 3	ND (0.79)	12/23/14	no subslab data	excluded; TCE detected in OA
5419	9.1	09/30/14	ND (1.6)	09/30/14	IA not detected	
5419	9.7	01/16/15	ND (0.79)	01/16/15	IA not detected	
7084	29.4	11/14/14	2.9	11/14/14	9.86E-02	excluded; sump sealed
7187	3	11/14/14	ND (0.74)	11/14/14	IA not detected	
2857	877	11/21/14	2.1	11/21/14	2.39E-03	
7358	353	04/18/14	0.86	04/18/14	2.44E-03	
7358	72.6	04/18/14	ND (0.92)	04/18/14	IA not detected	
3559	68.9	11/21/14	ND (0.74)	11/21/14	IA not detected	
8193	22300	02/27/14	20	02/27/14	8.97E-04	
8193	15100	02/27/14	20	02/27/14	1.32E-03	
8193	14500	02/27/14	20	02/27/14	1.38E-03	
8193	8030	02/27/14	20	02/27/14	2.49E-03	
8193	8390	02/27/14	20	02/27/14	2.38E-03	

Average attenuation factor where TCE was detected in IA	5.25E-03
Maximum attenuation factor where TCE was detected in IA	2.85E-02
Minimum attenuation factor where TCE was detected in IA	8.97E-04

Notes and abbreviations:
1. SS: Sub-slab: IA: Indoor Air OA: Outdoor Air
2. Attenuation Factor: IA/SS
3. Sub-slab not sampled for property 9895 due to sub-slab barrier.