FIVE-YEAR REVIEW REPORT FOR

GENERAL MILLS/HENKEL CORP SUPERFUND SITE
MINNEAPOLIS, MINNESOTA

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Version 00

Prepared by

Minnesota Pollution Control Agency
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List of Acronyms

µg/L.....micrograms per liter
µg/m^3 .....micrograms per cubic meter
AMR.....Annual Monitoring Report
ARAR.....applicable or relevant and appropriate requirement
ATSDR .....Agency for Toxic Substances and Disease Registry
Bay West .....Bay West LLC
bgs.....below ground surface
BMP.....Best Management Practice
CERCLA .....Comprehensive Environmental Response, Compensation, and Liability Act
CFR .....Code of Federal Regulations
Consent Order ..Response Order by Consent
FS .....Feasibility Study
ft .....feet or foot
FYR .....Five-Year Review
GIS .....geographic information system
GMI.....General Mills Incorporated
IC.....institutional control
ISV.....intrusion screening level
lb/yr.....pounds per year
LTM .....long-term monitoring
MDH .....Minnesota Department of Health
mg/kg.....milligrams per kilogram
MPCA .....Minnesota Pollution Control Agency
msl.....mean sea level
NCP.....National Oil and Hazardous Substances Pollution Contingency Plan
NPDES.....National Pollutant Discharge Elimination System
NPL .....National Priorities List
O&M .....operations and maintenance
OU.....operable unit
PAL .....Project Action Limit
PLP .....Permanent List of Priorities
PSR.....Property Summary Report
RA .....remedial action
RAO .....remedial action objectives
RAP.....Remedial Action Plan
Restrictive Covenant.....Declaration of Restrictions and Covenants and Affidavit Concerning Real Property Contaminated with Hazardous Substance
RI.....Remedial Investigation
SE .....southeast
SECIA.....Southeast Como Improvement Association
Site .....General Mills/Henkel Corporation Site
SLV .....Soil Leaching Value
SRV.....Soil Reference Value
SWCA.....Special Well and Boring Construction Area
TCA.....trichloroethane
TCAAP .....Twin Cities Army Ammunition Plant
TCE.....trichloroethylene
UECA .....Uniform Environmental Covenants Act
USEPA .....U.S. Environmental Protection Agency
UU/UE .....unrestricted use/unlimited exposure
VOC .....volatile organic compounds

EXECUTIVE SUMMARY

The Minnesota Pollution Control Agency (MPCA) has completed this Five-Year Review (FYR) of the remedial action (RA) implemented at the General Mills/Henkel Corp. Superfund Site (Site) located at 2010 East Hennepin Avenue, Minneapolis, Minnesota. This is the Sixth FYR Report for the Site, which evaluates the effectiveness of the RA to date.

In 1981, General Mills Incorporated (GMI) initiated an investigation into a former soil absorption pit located on the southern portion of the Site. The soil absorption pit was constructed of three stacked and perforated 55-gallon drums buried to an approximate depth of 12 feet (ft). From approximately 1947 to 1962 the soil absorption pit was utilized to dispose of an estimated 1,000 gallons of laboratory solvents per year.

In 1984, GMI and the MPCA finalized a Response Order by Consent (Consent Order), which established the RAs for groundwater at the Site. One of the objectives in the Consent Order is to remediate groundwater in the glacial drift capture zone with TCE concentrations exceeding 270 micrograms per liter (µg/L). The selected remedy addressing groundwater was groundwater pump-out and treatment, along with containment by means of groundwater extraction. The groundwater pump-out and treatment systems were placed into operation in late 1985. After 25 years of pump-out and treatment system operation, the groundwater cleanup concentrations specified in the Consent Order were achieved. In accordance with an MPCA-approved RA plan, the pump-out and treatment systems were temporarily shut down on September 13, 2010. These groundwater pump-out wells and the monitoring well network remained in place in the event system startup became warranted.

From 2014–2016, groundwater monitoring detected TCE at concentrations exceeding 270 µg/L in several monitoring wells that are screened in the glacial drift capture zone downgradient of the former GMI facility. These exceedances indicate a rebound in shallow TCE groundwater concentrations and that the Consent Order objective regarding groundwater remediation is no longer being met. In addition, GMI did not conduct the long-term monitoring (LTM) scheduled for 2019. In summary, the remedial action objectives (RAOs) and groundwater cleanup levels, as specified in the Consent Order, are no longer being met.

On June 3, 2019, a FYR site visit was conducted. During the FYR site visit the groundwater pump-out control building was overgrown with vegetation and the fence around the system was in disrepair. Repair of the fence, vegetation control, and posting the area with a “No Trespassing” sign is needed.

In addition, some monitoring and pump-out wells require maintenance and several of the wells were overgrown with brush and were difficult to access. Notably, these wells are only inspected during the groundwater monitoring events, which are currently scheduled every five years. Because the LTM event scheduled for 2019 did not occur and is not scheduled, the last full well inspection and maintenance event occurred in May of 2014. Annual well inspection and repair, as necessary, is recommended. If wells are only inspected and repaired every five years (rather than annually), the wells are more likely to require substantial repairs and/or replacement over time.

The last monitoring event including sampling of sentinel glacial drift monitoring wells and sentinel soil gas monitoring points was conducted by GMI in December 2016. Continued LTM of the sentinel groundwater/soil gas monitoring network and the glacial drift network is necessary to monitor increasing groundwater concentrations in the glacial drift aquifer and to ensure that the vapor intrusion area of concern is not expanding.

Since 2013, GMI, its contractors, and the MPCA have completed sub-slab and/or indoor air sampling at 354 properties in the Soil Gas Monitoring Area to evaluate the vapor intrusion

pathway, as stipulated in the 2014 Remedial Action Plan (RAP) Modification #1. Vapor mitigation systems have been installed in 189 buildings. However, 20 properties (containing 25 buildings) still require a vapor mitigation system, including five buildings located on the former GMI facility property at 2010 East Hennepin Avenue. These 20 properties either had sub slab results with TCE concentrations exceeding 20 micrograms per cubic meter ($\mu g/m^3$) or are within the "mitigation area" and did not participate in or denied access for the vapor intrusion assessment. Four properties still require additional vapor assessment. GMI has not submitted a long-term operation and maintenance plan for the vapor mitigation systems installed as required by the 2014 RAP Modification #1. There is currently no plan in place to make sure the vapor mitigation systems installed by GMI in the 189 buildings are operated and maintained into the future. A long term operation and maintenance plan is also necessary to ensure notification to potential future property owners so they are aware of the need to maintain the active vapor mitigation system.

Additional detail on the FYR is provided in the FYR Summary Form on the following pages, including issues identified, recommendations to address those issues, and protectiveness statements.

1.0 INTRODUCTION

This Sixth Five-Year Review (FYR) Report has been developed for the General Mills/Henkel Corp. Superfund Site (Site), located in Minneapolis, Minnesota.

1.1 The Purpose of the Review

The purpose of a FYR is to evaluate the implementation and performance of a remedy in order to determine if the remedy will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

1.2 Authority for Conducting the Five-Year Review

The Minnesota Pollution Control Agency (MPCA), as delegated by the U.S. Environmental Protection Agency (USEPA), is preparing this FYR Report pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121 consistent with the National Contingency Plan (NCP) (40 CFR Section 300.430(f)(4)(ii)) and considering USEPA policy.

1.3 Who Conducted the Five-Year Review

The MPCA, in consultation with the USEPA Region 5, has conducted this Sixth FYR of the remedial actions implemented at the Site. The MPCA is the lead environmental regulatory agency for the implementation and oversight of response actions at the Site. USEPA has not signed the Site decision documents, as this Site is part of an Enforcement Deferral Pilot Project whereby MPCA leads management of the Site.

The FYR was conducted by Bay West LLC (Bay West) of St. Paul, Minnesota, under direction from the MPCA. Relevant entities, including General Mills Incorporated (GMI), were notified of the initiation of the FYR activities, which began on May 13, 2019.

1.4 Other Review Characteristics

This is the Sixth FYR for the Site. The triggering action for this policy review is the completion date of the Fifth FYR (September 21, 2014). The FYR has been prepared because hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The Site consists of one Operable Unit (OU): OU 01 – GROUNDWATER PUMP & TREAT. Groundwater investigation and remediation activities specified in the Remedial Action Plan (RAP) culminated in the temporary shutdown of the groundwater extraction and treatment system in 2010. GMI initiated investigation of the soil vapor pathway in 2010. The 2014 RAP Modification #1 actions included investigating and mitigating vapor intrusion risk through installation of vapor mitigation systems.

1.5 Site Chronology and Background

1.5.1 Physical Characteristics

The Site property is located at 2010 East Hennepin Avenue in Minneapolis, Minnesota (**Figure 1**). The Site property is approximately 7 acres in size and was originally owned by GMI and utilized as a food and chemical research facility from 1930 through 1977. The property was purchased by the Henkel Corporation in 1977, by BDD Holding in 1989, and by First & First LLC in 2012.

1.5.2 Land and Resource Use

The Site property has historically been used for industrial purposes and is currently zoned as industrial, as shown in **Figure 2**, attached hereto and incorporated by reference. The majority of the Site property is covered either by paved surface or buildings. The Site property is currently occupied by various commercial businesses and is managed by First & First LLC.

Figure 2 also presents the zoning of the surrounding area. The land use to the north of the Site is primarily industrial and commercial. The land use directly east and south of the Site is residential, while the west side is bordered by railroad and beyond that by additional residential property. Approximately 5,000 people live within 1 mile of the Site.

Buildings at the Site and surrounding properties are currently connected to the Minneapolis municipal water supply. Water for the municipal system is obtained from the Mississippi River north of the city, upstream of the Site.

1.5.3 History of Contamination

The Site was primarily utilized as a technical research facility from 1930 until 1977. GMI primarily conducted food research at the Site from 1930 to 1947. In 1947, GMI began chemical research at the Site. From approximately 1947 through 1962, GMI disposed of laboratory solvents in a soil absorption pit located in the southeastern area of the Site property. The absorption pit was constructed from three, perforated, 55-gallon drums, stacked and buried to a depth of approximately 12 feet (ft) below ground surface (bgs). On or about June 12, 1981, GMI notified the MPCA that it disposed of approximately 1,000 gallons of laboratory solvent in the absorption pit each year during its operation.

Since 1981, GMI has conducted investigation of soil, groundwater and soil vapor contamination associated with the Site.

1.5.4 Initial Response

In 1981, GMI conducted a subsurface investigation at the former soil absorption pit. The 1981 investigation, and a subsequent investigation in 1983, identified volatile organic compound (VOC)-impacted soil and groundwater in the area of the former absorption pit.

From 1982 through 1984, GMI installed 27 monitoring wells at and near the Site property. Laboratory analysis of groundwater samples collected indicated that VOCs were present in the glacial drift aquifer, the Platteville Formation, St. Peter Sandstone, and the Prairie du Chien Group. The predominant VOC detected was trichloroethene (trichloroethylene; TCE).

1.5.5 Basis for Taking Action

The initial investigation work conducted in the early 1980s identified VOC contaminants in the soil and groundwater at the Site in the area of the former absorption pit, including TCE, benzene, toluene, xylene, methyl isobutyl ketone, ethylbenzene, methylene chloride, 1,1,1-trichloroethane, 1,1,2,2-tetrachlorothane, 1,1,2-trichloroethane, 1,1,2,2-tetrachloroethene, and chlorobenzene. As noted in the 1984 Consent Order, "(3) "hazardous substances" as defined by Minnesota Statute § 115B.02 have been detected at the Site; [and] (4) the migration and threatened migration of these hazardous substances into the groundwater beneath the Site constitutes a "release or threat of release" as that term is defined in Minn. Stat. § 115B.02, subd. 15." (MPCA, 1984)

Starting in 2012, GMI conducted vapor investigation to determine the risk of vapor intrusion to building receptors associated with VOC contamination from the Site. A primary source of VOC vapor intrusion risk to building receptors is the VOC-contaminated shallow groundwater. GMI prepared the 2014 RAP Modification #1 to investigate and mitigate vapor intrusion risks associated with the VOC contamination from the Site.

Table 1 provides a chronological summary of the investigation remedial action activities performed at the Site. A list of documents submitted since the last FYR that were reviewed for the sixth FYR are included in **Appendix A,** attached hereto and incorporated by reference.

Table 1: Chronology of Site Events

Event	Date
Initial discovery of problem or contamination; investigation performed by GMI	1981
Pre-National Priorities List (NPL) response: General Mills installed 27 monitoring wells	1982–1984
Remedial Investigation/Feasibility (RI/FS) Study complete: GMI completed "Summary of Remedial Actions"	1983
NPL listing	September 21, 1984
Response Order by Consent (Consent Order) for the Site is finalized establishing the Remedial Action (RA) for the Site as "Groundwater Pump-out Systems"	October 23, 1984
Six groundwater containment wells were installed	1985
Containment wells began operation/begin pump-out & treatment/construction completion date	November/December 1985
Two additional containment wells were installed and additional RA construction completed	August 1992
First FYR Report	September 1994
Second FYR Report	September 23, 1999
GMI completed additional soil assessment at the soil absorption pit	May 2001
USEPA Addendum to Second FYR Report	October 24, 2001
Third FYR Report	September 2004
Site Soil and Groundwater Restrictive Covenant signed by MPCA and BBD Holdings, property owner of record at that time, on September 23, 2004, and recorded in Hennepin County on November 11, 2004	November 11, 2004
Draft Fourth FYR Report (not-finalized or signed)	September 21, 2009
GMI continued operation, maintenance, and monitoring of the pump-out and treatment systems	1985 through September 13, 2010
GMI temporarily discontinued groundwater pump-out and treatment systems	September 13, 2010
Groundwater monitoring and maintenance of pump-out and treatment systems	September 2010 through December 2016
GMI conducted soil gas survey to determine potential vapor intrusion risk	April 2012
GMI conducted vapor intrusion investigation and mitigation activities at properties and building receptors	2013 through December 2016
Phase 2E Vapor Intrusion Evaluation completed	November 11, 2013
MPCA and Minnesota Department of Health (MDH) issued notification to tenants, residents, and property owners of vapor intrusion risks	November 6, 2013
GMI prepared RAP Modification #1 to the Consent Order for vapor intrusion	March 11, 2014
GMI completed the Phase 2G Vapor Intrusion Evaluation	May 5, 2014

Table 1: Chronology of Site Events

Event	Date
GMI completed additional soil assessment at the soil absorption pit	May 23, 2014
MPCA commented on the Draft VI Pathway Investigation and FS Work Plan	July 1, 2014
GMI completed the Vapor Intrusion Pathway Investigation and FS Work Plan Sampling and Monitoring Work Plan	August 1, 2014
GMI finalizes Vapor Intrusion Pathway Investigation and FS Work Plan Sampling and Monitoring Work Plan finalized	August 2014
Vapor Intrusion Pathway Investigation and FS Work Plan Sampling and Monitoring Work Plan approved by MPCA	September 18, 2014
Barr Engineering Company (Barr), on behalf of GMI, submits Indoor Air Sampling Report for the buildings located at the 2010 East Hennepin Avenue property. Barr conducted indoor air sampling in July 2014 and February 2015	May 13, 2015
GMI completed sub-slab and/or indoor air sampling at 344 properties and installed vapor mitigation systems at 189 properties. This work is summarized in the Barr Sub-Slab Sampling and Building Mitigation Implementation Report (Barr, 2015a)	June 22, 2015
GMI submits a Human Health Risk Assessment Report prepared by Haley and Aldrich (dated July 2015)	July 31, 2015
GMI completed an investigation of the VI pathway including installation of 28 monitoring wells in the glacial drift, off-site and upgradient; 12 borings and 4 monitoring wells at the Site and quarterly sampling of the sentinel network for one year. Results are summarized in the Barr Vapor Intrusion Pathway Investigation Report (Barr, 2015b)	July 2, 2015
MDH initiated a health consultation on the Human Health Risk Assessment presented in the VI Pathway Investigation Report	November 1, 2015
MPCA responds to the Haley and Aldrich Human Health Risk Assessment Report (dated July 31, 2015) submitted by GMI	November 12, 2015
GMI completed quarterly monitoring of the sentinel monitoring wells and results are summarized in the Barr Sentinel Monitoring Network Report (Barr, 2015c)	December 1, 2015
MPCA approves GMI's December 2015 Sentinel Monitoring Report	January 28, 2016
GMI submits to MPCA the Vapor Intrusion Pathway Feasibility Study (Barr, 2016)	April 1, 2016
GMI submits to MPCA the 2016 Glacial Drift Monitoring Plan	April 6, 2016
MPCA response letter to the GMI Vapor Intrusion Pathway Feasibility Study directing GMI to submit a plan for additional work (MCPA, 2016)	November 28, 2016
Evaluation of Remedy Completeness at the General Mills/Henkel Corp. Superfund Site report prepared by GSI Environmental Inc. (GSI, 2017) submitted to MPCA	March 14, 2017
GMI completed 2016 quarterly monitoring and soil gas monitoring of the sentinel wells and groundwater monitoring of the glacial drift network. Results are summarized in the Barr 2016 Sentinel and Glacial Drift Monitoring Network Report	March 15, 2017

Table 1: Chronology of Site Events

Event	Date
GMI submits a letter to MPCA stating that GMI's remediation efforts have fully cleaned up the Site and no further response actions are necessary. The letter also requests to delist the General Mills/Henkel Corp. Superfund Site from the Minnesota Permanent List of Priorities (PLP) and NPL	March 15, 2017
GMI submits Supplemental Report on VOC Sources and Remediation prepared by Geosyntec (Geosyntec, 2017)	March 15, 2017
GMI submits a letter to the MPCA indicating TCE contamination at the Southeast Hennepin groundwater and vapor intrusion site has a possible role in contamination at the General Mills/Henkel Corp. Superfund Site with Geosyntec/GSI report attached (Geosyntec and GSI, 2017)	August 25, 2017
MPCA provides an interim response to the March 15, 2017, and August 25, 2017, GMI letters indicating that MPCA is awaiting USEPA comments	September 29, 2017
USEPA provides MPCA with their review comments on the Evaluation of Remedy Completeness at the General Mills/Henkel Corp. Superfund Site Report prepared by GSI Environmental, Inc. (March 2017)	October 17, 2017
MPCA provides a response letter to the GMI March 15, 2017, and August 25, 2017 letters. The MPCA letter provided technical comments on the March 2017 GMI documents and reiterated MPCA's directives stated in the MPCA's November 28, 2016, letter	October 31, 2017
GMI submits to MPCA a letter dated November 16, 2017 reiterating their request for the Site to be delisted from the NPL and associated comments prepared by GeoSyntec and GSI responding to MPCA's October 31, 2017 letter	November 16, 2017
In person meeting between MPCA, GMI and EPA to discuss GMI's November 16, 2017 letter and expectations regarding the path forward for the Site	January 26, 2018
MPCA's contractor (Bay West) conducts a vapor intrusion assessment including paired sub-slab and indoor air sampling at five buildings located on the 2010 East Hennepin Avenue property where GMI previously detected TCE above 33x intrusion screening values (ISVs) in sub-slab samples. TCE was not detected in the indoor air samples above the commercial ISV	May 31, 2018
USEPA submits a Third Party Review and Technical Support letter to Evaluate Primary Responsible Party Claims Pertaining to Remaining Contaminants of Concern at the General Mills/Henkel Corp. Superfund Site	September 27, 2018
MDH completed the General Mills/Henkel Corporation Health Consultation (MDH, 2018)	March 5, 2018

Five-Year Review Summary Form

SITE IDENTIFICATION		
Site Name: General Mills/Henkel Corporation		
EPA ID: MND051441731		
Region: 5	**State:** MN	**City/County:** City of Minneapolis/Hennepin County

SITE STATUS	
NPL Status: Final	
Multiple OUs? No	Has the site achieved construction completion? Yes

REVIEW STATUS
Lead agency: State [If “Other Federal Agency”, enter Agency name]: MPCA
Author name (Federal or State Project Manager): Tim Grape
Author affiliation: Minnesota Pollution Control Agency
Review period: 9/21/2014 – 9/21/2019
Date of site inspection: 6/3/2019
Type of review: Policy
Review number: 6
Triggering action date (end date of the last FYR period): 09/21/2014
Due date (five years after triggering action date): 09/21/2019

2.0 RESPONSE ACTION SUMMARY

Based on the findings of the initial soil and groundwater assessment, GMI analyzed different remedial alternatives in 1983 to address the Site contamination. The alternatives were presented in a document "Summary of Alternative Remedial Actions" (Barr, 1983) and are listed below:

1. No Action.
2. Excavation of contaminated soils in the vadose zone.
3. A 45-ft-diameter excavation of contaminated soils to a depth of 30 ft (vadose and saturated zone).
4. A 70-ft-diameter excavation of contaminated soils to a depth of 30 ft.
5. Venting of the vadose zone in conjunction with a groundwater pump-out system.
6. Groundwater pump-out system.
7. Slurry wall and cap.
8. Soil washing in conjunction with a groundwater pump-out system.

2.1 Remedy Selection

On October 23, 1984, GMI and the MPCA executed a Consent Order that addressed VOC contaminants found within the groundwater at and emanating from the Site through a groundwater pump-out and treatment system

The RAP, included as Exhibit A to the October 23, 1984, Consent Order (MPCA, 1984), identifies the selected remedy to address VOC contaminants in groundwater at and emanating from the Site and states the remedial action objectives (RAOs) of the selected remedy as:

> *"The purpose of Part I of this Remedial Action Plan... is to define and implement the procedures necessary for minimizing the further migration of volatile organic hydrocarbons and in particular trichloroethylene (TCE) detected near the General Mills absorption pit in the ground water in the glacial drift and the Platteville Formation, and to improve the quality of the groundwater in the glacial drift and Platteville Formation in the area of the General Mills absorption pit."*

The RAP established that the glacial drift groundwater extraction wells were to be completed within areas where identified TCE concentrations exceeded 270 micrograms per liter (µg/L). Additionally, requirements for Carimona Member extraction wells were to be completed in areas where identified TCE concentrations exceeded 27 µg/L. Magnolia member RAs were to be evaluated if performance of the Carimona Member pump-out wells did not affect the Magnolia Member groundwater. The RAP pre-dated the establishment of a federal or state drinking water standard for TCE; therefore, the cleanup levels were based on USEPA recommendation that cleanup levels at Superfund sites should result in a risk in the range of 10^{-4} to 10^{-6}.

The RAP further states additional RAOs as:

> *"The purpose of the groundwater monitoring program is to: (1) monitor the effectiveness of the groundwater pump-out systems; (2) define changes in the distribution of volatile organic hydrocarbon concentrations listed in Attachment C to this RAP after this RAP is implemented; and (3) determine when operation of the Pump-out system can be modified or terminated."*

Initial investigations conducted in the 1980s concluded there were minimal VOC impacts present in the unsaturated soil above the drift aquifer. Further investigation conducted in 2001 confirmed this assessment (Barr, 2001). The MPCA issued a letter to GMI, dated September 28, 2001, indicating that "no further action is needed to remediate soils at this point in time" (MPCA, 2001).

2.1.1 March 2014 Consent Order Modification

In April 2012 GMI conducted a soil gas survey in the vicinity of the Site and surrounding VOC plume which confirmed the presence of TCE in the soil gas above risk criteria established by the MPCA. The VOC groundwater contaminant plume was identified as the likely source of TCE present in the soil gas samples and the soil gas vapors posed, and continue to pose, risks of vapor intrusion into buildings in the vicinity of the Site. As a result, under the regulatory oversight of the MPCA, GMI took immediate investigative and interim response actions in the area near the Site to ensure the protection of human health, welfare, and the environment (MPCA, 2014). The initial steps included identifying properties with the potential for elevated vapor intrusion risks and contracting with a vapor mitigation company to install vapor mitigation systems in those homes and buildings where vapor intrusion risk was identified.

In order to address potential vapor intrusion risks associated with the VOCs, the Consent Order was amended on March 11, 2014, "RAP Modification #1" (MPCA, 2014) to read as follows:

> *"Affirm the investigative and interim actions that have been performed to date and to further address the potential vapor intrusion risks associated with VOC contamination from the Site; to conduct additional sampling and monitoring of soil, soil gas, and groundwater to collect data necessary to identify and evaluate response action alternatives as may be necessary to mitigate the vapor intrusion pathway and reduce VOC concentrations in soil, soil gas, and groundwater."*

The MPCA and GMI agree as follows:

> *"The purpose of the RAP Modification #1 is to implement the response actions set forth herein as necessary to address potential vapor intrusion risks associated with the volatile organic compounds listed on Attachment F due to General Mills' operation of its former facility at 2010 East Hennepin Ave. (the Site). The primary constituent of concern is trichloroethylene (TCE). The response actions to be performed by General Mills pursuant to this RAP Modification #1 shall include: 1) sub-slab sampling and mitigation of potential vapor intrusion from VOCs in the soil and groundwater due to General Mills' operations at the Site; and 2) to conduct additional sampling and monitoring of soil, soil gas, and groundwater to collect data necessary to identify and evaluate response action alternatives as may be necessary to reduce VOC concentrations in soil, soil gas and groundwater due to General Mills' operations at the Site to concentrations that adequately protect human health and the environment."*

Data collected for soil vapor investigations and interim response actions and vapor mitigation system installations are summarized in **Section 4.2.3**.

2.1.2 Vapor Intrusion Pathway Feasibility Study

Pursuant to the requirements of the RAP Modification #1, a Vapor Intrusion Pathway FS was prepared in April 2016 (Barr, 2016). The FS was prepared to evaluate additional actions needed to address the remaining groundwater contamination and soil vapor contamination.

Five remedial alternatives were evaluated by GMI as part of the FS:

- Alternative 1 – No further action beyond previous response actions;
- Alternative 2 – Monitored natural attenuation;

- Alternative 3 – Long-term operation and maintenance (O&M) of vapor intrusion mitigation systems;
- Alternative 4 – Enhanced groundwater bioremediation via injection events; and
- Alternative 5 – Enhanced groundwater bioremediation via recirculating system.

GMI recommended implementation of long-term O&M of SSD systems with the rationale that the alternative provided protection to human health and the environment, complied with applicable or relevant and appropriate requirements (ARARs), and was cost effective as required by CERCLA and the NCP.

The MPCA has deferred development of a proposed remedial plan for the General Mills/Henkel Corp. Superfund Site following the FS evaluation until additional investigation work is completed on the adjacent Southeast (SE) Hennepin Superfund Site (MPCA Site ID: SR0001401). Recent investigations at the SE Hennepin Superfund site identified additional potential sources of TCE north of Hennepin Avenue and up-gradient of the General Mills/Henkel Corp. Superfund site. The extent and magnitude of the additional TCE sources for the SE Hennepin Superfund Site need to be assessed in order to properly evaluate an effective remedial plan for the larger area of contamination and proceed forward with a proposed remedial plan for the entire area impacted by both Superfund sites. The SE Hennepin Superfund Site is still in the early stages of the Superfund process.

In the interim, the MPCA directed GMI to submit a plan to the MPCA for review and approval to cover the following items (MPCA letter dated November 28, 2016; MPCA, 2016):

1. Develop an O&M plan for all mitigation systems currently installed for the Site as well as any future mitigation systems installed by GMI;
2. Develop a schedule for reimbursing property owners for electrical costs associated with mitigation system operation;
3. Develop a plan to install mitigation systems for buildings in the study area that have had sub-slab VOC concentrations above 10X intrusion screening values and have not been mitigated. Installation of mitigation systems or additional ongoing vapor assessment is required for all of these buildings; and
4. Continue ongoing sentinel monitoring for the soil-gas monitoring network and ongoing groundwater monitoring of the glacial drift aquifer monitoring network. If sentinel monitoring indicates that buildings outside of the mitigation area (Central area) are at risk due to an increasing concentration trend for soil-gas and/or groundwater, additional sub-slab testing may be required.

In March 2017, GMI submitted a letter to the MPCA stating that it has demonstrated that GMI's remediation efforts have fully cleaned up the Site; therefore, no further response actions are necessary (GMI, 2017). GMI's conclusions were based on an evaluation of data collected at and surrounding the Site, in which GMI concluded that the historical disposal area on the Site is not the source area of continued TCE impacts to groundwater and soil vapor downgradient from the Site. The letter contained the following request:

> "*Because the Site has been cleaned up, nothing the MPCA does or learns in its expected study of the Southeast Hennepin Site can or will change these facts and conclusions. Therefore:*
>
> - *The 1984 Consent Order and the 2014 RAP Modification No. 1 must be terminated;*

- *The Site must be delisted from the Minnesota Permanent List of Priorities and from the National Priorities list; and*
- *Responsibility for the installed base of vapor mitigation systems ("VMSs"), sentinel network monitoring and reimbursement of electrical costs must be transferred to the parties responsible for current TCE impacts, or to the MPCA itself."*

In October 2017, the MPCA issued a response letter to GMI's request to take no further response actions at the Site (MPCA, 2017). The MPCA provided technical review comments regarding the supporting technical documents that GMI submitted to MPCA. At the request of MPCA, the USEPA also provided technical review comments on GMI's supporting documents. The MPCA provided the following responses to GMI:

1. MPCA is currently in the process of conducting site investigation activities to evaluate potential contamination sources within the Southeast Hennepin Area Groundwater and Vapor Site.
2. MPCA staff does not concur that removal of the General Mills/Henkel site from the Minnesota PLP is appropriate at this time. MPCA is in full cooperation with the US EPA in regard to the NPL listing status for this site.

Based on MPCA staff review of the technical supporting documents provided by GMI, the MPCA reiterated the directive to GMI to submit to MPCA a plan to cover the four interim directives as requested in the MPCA letter dated November 28, 2016 (MPCA, 2016; see four elements listed above in this section).

GMI submitted a response letter (dated November 26, 2017) including comments from GeoSyntec and GSI responding to MPCA's October 2017 letter and reiterating their request to delist the General Mills/Henkel Corp. Superfund site from the NPL.

An in-person meeting was held at the MPCA St. Paul office on January 26, 2018 between GMI representatives, the MPCA project team and EPA staff to discuss the Site status and path forward. Based on the in-person meeting, the EPA prepared a Third Party Review and Technical Support Letter evaluating the primary responsible party claims pertaining to remaining contaminants of concern at the Site dated September 27, 2018.

As of the preparation date of this report, GMI has not submitted a plan to the MPCA to address the four interim directives listed above.

2.1.3 Other Remedial Actions

As requested by MPCA to protect human health, welfare and the environment, GMI implemented several types of institutional controls (ICs) that limit access to impacted soil and/or groundwater at the Site. These ICs are described below in **Section 2.2.**

2.2 Institutional Controls

Institutional controls are non-engineered instruments, such as administrative and/or legal controls that minimize the potential for exposure to contamination and protect the integrity of the remedy. Compliance with ICs is required to assure long-term protectiveness for any areas of the Site where UU/UE is not allowed. The Consent Order does not require institutional controls; however, the Third FYR (MPCA, 2004) required IC implementation to ensure the remedy remained protective. **Table 2** summarizes the Institutional Controls in place at the Site. These controls are further described in the subsequent paragraphs.

Table 2: Institutional Controls Summary Table

Media, Engineered Controls, & Areas that Do Not Support UU/UE Based on Current Conditions	IC Objective	Title of IC Instrument Implemented (note if planned)
Soil greater than 4 ft bgs	Soil Impacted Area shall be used for industrial/commercial purposes only; No disturbance or alteration that would expose or disturb the subsurface soils (>4 ft bgs)	Declaration of Restrictions and Covenants and Affidavit Concerning Real Property Contaminated with Hazardous Substances Document # 8471566 as recorded by the Hennepin County Recorder Office.
Groundwater	No disturbance or dewatering of groundwater is to take place beneath the Groundwater Impacted Area without prior authorization from the MPCA.	Declaration of Restrictions and Covenants and Affidavit Concerning Real Property Contaminated With Hazardous Substances Document # 8471566 as recorded by the Hennepin County Recorder Office.
Groundwater	Requires notification to the Commissioner of proposed construction of a groundwater supply well	Minn. Rules 4725.1820 Notification for Construction of Water Supply Wells
Groundwater	Requires notification to the Commissioner of a proposed construction of a groundwater well	Minnesota Statute 103I.205 Well Construction
Groundwater	Requires MDH commissioner approval for construction and modification of wells and borings within Special Well and Boring Construction Areas (SWCAs)	Minnesota Rule 4725.3650 Special Well and Boring Construction Areas – Twin Cities Army Ammunition Plant

As noted in **Table 2**, a Declaration of Restrictions and Covenants and Affidavit Concerning Real Property Contaminated with Hazardous Substances (Restrictive Covenant) is filed with the Hennepin County Recorder's Office for the Site. Restrictive covenants are ICs that provide access and use restrictions on specific media or areas of specific media on individual properties. Restrictive covenants run with the Property and are binding on present and future owners of the Site during the time the owner holds fee title to the Property. Historically, Minnesota has required restrictive covenants be filed to ensure long-term protection of health and environment at risk-based cleanup sites. All environmental covenants filed after July 1, 2007, must conform to the Minnesota Uniform Environmental Covenants Act (UECA) in order to be approved by the State. UECA was developed to provide a uniform national approach to restrictive covenants. However, Declarations of Restrictions and Covenants and other restrictive covenants implemented under previous law remain legally valid and no significant changes would be made to the existing restrictive covenant. Modification of the restrictive covenant to UECA standards is not required.

The Site Restrictive Covenant (MPCA, 2004) restricts groundwater use within an area defined as the Groundwater Impacted Area. The Groundwater Impacted Area is located in the south-eastern portion of the Site and includes the area of the former absorption pit. The Site Restrictive Covenant also defines a Soil Impacted Area in the south east portion of the Site that indicates the land use shall be used for industrial/commercial purposes only and there shall be no disturbance or alteration that would expose or disturb the subsurface soils greater than 4 ft bgs. Legal

descriptions were provided for the soil and groundwater areas, but figures were not available at the time of this review.

In addition MDH executed a Special Well and Boring Construction Area (SWCA), sometimes called a "well advisory." An SWCA is a mechanism used by the MDH which informs the public of potential health risks, provides for the construction of safe water supplies, and prevents the spread of contamination due to improper drilling of wells or borings. In addition to the Restrictive Covenant at the Site, the SWCA designation sets restrictions for placement of wells in the SWCA and notification procedures for the Commissioner.

MDH reviews permit applications for proposed wells located in a well advisory area to ensure that well water use is appropriate (i.e., no domestic water use from wells in contaminated aquifers) and that proper drilling and construction methods are followed.

The Site is within the SWCA for the Twin Cities Army Ammunition Plant (TCAAP) and is administered by MDH. A map of the TCAAP SWCA is included in Appendix D, attached hereto and incorporated by reference. VOCs in the Hillside Sand and Prairie du Chien aquifers have been detected several miles downgradient of the TCAAP site. The TCAAP well advisory would prevent the installation of any new domestic use wells in the Hillside Sand and Prairie du Chien aquifers by licensed well drillers in the vicinity of the Site.

2.3 Operation and Maintenance Activities

Although the groundwater pump-out and treatment systems remain temporarily shut down, as noted in the 2009 Annual Monitoring Report (AMR; Barr, 2010), "The remediation system is nearly 25 years old, and remaining original equipment is beginning to wear, leading to slightly more maintenance each year. This is not affecting overall performance of the system." and "The air stripper media was not changed in 2009. Using past performance as a guide, it is likely that the media will need to be replaced early in 2010."

According to the 2011 AMR (Barr, 2012), maintenance of the pump-out systems in 2010 prior to temporary shutdown included the following:

- Repaired caps at Wells 112 and 113 and replaced a ball valve at Well 113 in January.
- Repaired flow meter and replaced gasket at Well 112 in March.
- Changed air stripper media in April and repaired leaks in the air stripper tower following media replacement.
- Cleaned flow meter at Well 112 in August.

The 2011 AMR also stated that submersible pumps are being used to sample the pump-out wells during the shutdown period, so system maintenance is still necessary. Maintenance of the pump-out systems in 2010 following shut down included the following:

- Replaced the motor and cleaned the pump for Well 112 in October (Well 112 was not sampled in September due to the broken pump). The pump was reinstalled and Well 112 was sampled in December.
- Replaced the heater in the air stripper tower in December. Well 110 was not sampled in December due a pipe break potentially caused by frozen conditions; the pipe was repaired and the well was sampled in January 2011.

The 2012 AMR (Barr, 2013) states that "The pump-out and treatment system are idled but operational. The water appropriation and NPDES (National Pollutant Discharge Elimination System) permits have been and will continue to be retained." and "Minimal maintenance was required in 2012. A new pump motor and drop pipe section was installed in well 113, the air stripper tower heater was repaired, and the pump and drop pipe were re-installed in well 112 after

being removed for work associated with the vapor intrusion investigation. The overall integrity of the pump-out and treatment systems is being maintained."

Although periodic monitoring and inspection of the pump-out system is being conducted, as recommended in the 2014 and 2019 Five-Year Reviews, in the event that the pump-out and treatment system is re-started, it is recommended that the permits be reviewed, and entire system be thoroughly inspected and repaired with upgrades as necessary. Because TCE concentrations in the glacial drift capture zone now exceed 270 µg/L in several monitoring wells, the RAOs and cleanup levels, as specified in the Consent Order are no longer being met. Additional operation, maintenance and monitoring for the remedial systems would be required if re-starting them is the selected remedial option to meet these objectives going forward.

As outlined in the Barr (2014d) Sub-Slab Sampling and Building Mitigation Work plan, home and business owners with mitigations systems were provided with a verbal description of mitigation system operation and maintenance. A placard was placed next to the manometer showing the manometer configuration under proper operating conditions. The property owners were provided with a phone number of a mitigation contractor to contact in case the system fails to operate properly. Property owners were also furnished with a Property Summary Report (PSR) documenting the vapor investigation work, along with the specifications of the vapor mitigation system installed. GMI has not provided monitoring and maintenance plans for the vapor mitigation systems installed as required by the 2014 RAP Modification #1 to the Consent Order.

3.0 PROGRESS SINCE THE LAST REVIEW

Table 3: Protectiveness Determinations/Statements from the 2014 FYR

Protectiveness Statement(s)		
Operable Unit: Groundwater	*Protectiveness Determination:* Protective	*Addendum Due Date (if applicable):* Not Applicable
Protectiveness Statement: The groundwater remedy is protective of human health and the environment because there are no known drinking water receptors and because institutional controls are in place.		

Protectiveness Statement(s)		
Operable Unit: Soil	Protectiveness Determination: Protective	Addendum Due Date (if applicable): Not Applicable
Protectiveness Statement: The no further action remedy for the soils is protective of human health and the environment.		

Protectiveness Statement(s)		
Operable Unit: Air	Protectiveness Determination: Short-term Protective	Addendum Due Date (if applicable): Next FYR
Protectiveness Statement: A new exposure pathway (vapor intrusion) has been identified. The sub-slab soil vapor mitigation systems currently protect human health and the environment because sub-slab vapor mitigation systems are preventing vapor intrusion. However, in order for the remedy to be protective in the long-term, a RI and FS, including a risk evaluation for ongoing source to soil gas/air, must be completed, and RAs implemented as needed to ensure protectiveness. This exposure pathway will be evaluated in the next FYR.		

Table 4: Status of Recommendations from the 2014 FYR

OU #	Issue	Recommendations/ Follow-up Actions	Party Responsible	Oversight Agency	Original Milestone Date	Current Status	Completion Date (if Applicable)
GW	1. The site inspection identified several wells requiring maintenance and repair. See Appendix E for a complete list of wells and repairs needed.	Repair wells.	GMI	MPCA	2/2/2015	In progress	Site inspection was completed in 2014; however, the 2019 inspection identified additional wells requiring maintenance and repair.
GW	2. Most of the wells are in high traffic areas and LTM & O&M of the wells every five years is not adequate to ensure compliance with the MN well code.	Annual LTM and O&M are recommended.	GMI	MPCA	4/15/2015	In progress	O&M was completed on the wells following the 2014 five-year review. Additional wells needing repair were noted in the 2019 FYR site inspection. This task will be on going until project close out.

OU #	Issue	Recommendations/ Follow-up Actions	Party Responsible	Oversight Agency	Original Milestone Date	Current Status	Completion Date (if Applicable)
GW	3. LTM of groundwater every five years is not adequate to monitor compliance with RAOs and cleanup levels.	Annual LTM of the existing GMI monitoring well network is necessary to protect human health and evaluate plume stability. In addition, quarterly sampling of the sentinel monitoring well network is necessary to evaluate the stability of the shallow groundwater plume in relation to the vapor intrusion area of concern and vapor mitigation area	GMI	MPCA	4/15/2015	Incomplete and not scheduled as of the date of the 2019 FYR. LTM was due in 2019 and quarterly monitoring of the sentinel well network was last conducted in 2016.	28 monitoring wells were installed in the glacial drift, up gradient and in the soil gas monitoring area as part of the VI Pathway Investigation and Feasibility Study (Barr 2016). Quarterly sampling of the sentinel network was completed from 2014 to 2015 and again in 2016.
GW	4. Groundwater monitoring network is inadequate	Monitoring well installation required as part of vapor intrusion investigation. Evaluate remedial alternatives to meet RAOs established under Issue 6.	GMI	MPCA	4/15/2015	Complete	12/1/2015

OU #	Issue	Recommendations/ Follow-up Actions	Party Responsible	Oversight Agency	Original Milestone Date	Current Status	Completion Date (if Applicable)
GW	5. Evaluation of 1,4-dioxane as a contaminant of concern associated with the Site release	1,4-dioxane was historically used as a stabilizer for the transport of 1,1,1-trichloroethane (TCA) in aluminum tankers (ATSDR, 2012). 1,1,1-TCA is a listed analytical program parameter associated with the GMI release. Evaluation of the potential for 1,4-dioxane contamination associated with the GMI release is necessary	GMI	MPCA	Proposed in the 2019 FYR	Incomplete	1,4-Dioxane analysis should be included in subsequent rounds of groundwater monitoring to determine if this compound is a contaminant of concern associated with the GMI release.
GW Soil	6. Institutional Controls. The legal description alone is not adequate to identify the "Groundwater Impacted Area", "Vapor Intrusion Area of Concern" and the "Soil Impacted Area".	Create a figure with GIS coordinates for the specific media impacted areas/areas of concern. Place figure in a readily available location for potential future needs (i.e., utility locators and construction).	GMI	MPCA	4/15/2015	Incomplete	The GIS coordinates for the groundwater, soil and vapor intrusion impacted areas/areas of concern should be provided to the current Site property owner and included as an amendment to the Environmental Covenant for the Site.

OU #	Issue	Recommendations/ Follow-up Actions	Party Responsible	Oversight Agency	Original Milestone Date	Current Status	Completion Date (if Applicable)
GW Air	7. Groundwater to indoor air pathway. Groundwater cleanup levels for vapor intrusion have not been established. The current cleanup level established in the 1984 Consent Order for TCE in the Quaternary glacial drift aquifer is 270 µg/L.	Develop groundwater RAOs and groundwater cleanup levels for vapor intrusion pathway.	GMI	MPCA	11/15/2015	Incomplete	Vapor intrusion risk associated with groundwater contamination remains at the site. Development of groundwater RAOs and cleanup levels that are protective for vapor intrusion risk are necessary
GW Soil Air	8. Human Health toxicity values for TCE have decreased.	Complete comprehensive risk assessment for all potential pathways.	GMI	MPCA	7/15/2015	Complete	MDH completed a Health Consultation on March 5, 2018.

4.0 FIVE-YEAR REVIEW PROCESS

On May 13, 2019, MPCA initiated the Sixth FYR process. The Site FYR was led by Tim Grape, Senior Hydrologist of the MPCA's Remediation Division. Katherine Thomas of the USEPA assisted in the review as the representative of the support agency. In addition, GMI representative Diana Curelli, landowners in vapor study area, and the Southeast Como Improvement Association (SECIA) were contacted on May 13, 2019, to notify them of the upcoming FYR, establish members of the review team, and develop a review schedule.

The review consisted of the following components:

- Community Notification, Involvement and Site interviews with Stakeholders;
- Data Review;
- Site Inspection; and
- FYR Report Development.

4.1 Community Notification, Involvement and Site Interviews

4.1.1 Public Notice

Activities to involve the community in the FYR process include notifying SECIA of the FYR process, inviting SECIA representatives to the June 2, 2019, Site Inspection, and publishing a public notice in the following places:

- MPCA Website; and
- Minneapolis Star Tribune.

The public notice stated that a five-year review was being initiated and invited the public to submit any comments to the MPCA by September 23, 2019. The results of the review and the report will be made available on the MPCA website. A copy of each notification is included in **Appendix B,** attached hereto and incorporated by reference. The public comment period ended on September 23, 2019. No public comments were received in response to the public notices**.**

4.1.2 Interviews

During the FYR process, the MPCA conducted interviews with interested Site stakeholders, including nearby residents, owners of businesses located on the Site, and regulatory agencies involved in Site activities or contacted by the MPCA for comment. The MPCA conducted interviews between May 13 and September 12, 2019, in order to document any perceived problems or successes with the remedy that had been implemented to date. Interviews are summarized in **Table 5** and documentation of the complete interviews is included in **Appendix C**, attached hereto and incorporated by reference.

Table 5: Interview Summary

Interviewee	Organization	Date	Key Comments
Wendy Menken	SECIA	Did not respond	NA
Jasen Mark	First and First	9/12/2019	Mr. Mark is aware of the ongoing investigation at the site and indicated that it has no impact on First and First's day to day business.
Emily Hansen	MDH	9/4/2019	MDH feels the vapor intrusion and mitigation response was well executed at a majority of the properties. Additional recommendations are included in the MDH 2018 Health Consultation.

Interviewee	Organization	Date	Key Comments
			MDH is aware of frustration in the community with a lack of remedial progress at the Site. Community members are also concerned with how well the vapor intrusion mitigation systems will perform over time, particularly if building owners/occupants are not well informed and there are no long-term O&M activities. MDH has received a handful of questions via phone/email in the last several years - regarding drinking water, vapor mitigation, gardening, and tenant notifications.
Diane Curelli*	General Mills	9/5/2019	General Mills maintains that the response actions performed to date by General Mills have cleaned up contamination resulting from its operations and that it has satisfied its obligations under the 1984 Consent Order and its 2014 addendum.

GMI responded to the submitted interview questions as summarized above and also provided a supplemental response in a written letter dated September 5, 2019 attached in **Appendix C*

4.2 Data Review

This section presents a summary of the documents and data reviewed in preparation of this FYR. Documents reviewed are summarized in the table in **Appendix A**. A summary of these reports is discussed in the following subsections. Supporting tables and figures are included in **Appendix D,** attached hereto and incorporated by reference**.** Since the 2014 FYR, the MPCA has undertaken investigation of potential off-Site sources of TCE and other potential RPs. The scope of this FYR is limited to the General Mills/Henkel Corp. Site and therefore documents associated with the potential off-site sources of TCE are not included in this review.

Generalized geologic cross sections of the Site are included in historical data located in **Appendix D** (Barr, 2013 and 2014a). As shown in the cross-sections, there are about 50 ft of unconsolidated sediment underlying the Site. As much as 10 ft of fill and peat are present near the ground surface.

Underlying the fill and peat is about 30 to 50 ft of sand alluvium, and 0 to 10 ft of clay till at the base. The uppermost bedrock is either the Decorah Shale (0-to-5-ft-thick) or the Carimona member of the Decorah Shale confining unit (note that the Carimona member was re-assigned during this review period from the Platteville Formation and is now the lower member of the Decorah Shale confining unit; Barr, 2013).

Groundwater generally flows southwest toward the Mississippi River. The water table occurs at about 830 to 840 ft above mean sea level (msl) beneath the Site, and the river is at about 725 ft above msl. There are downward gradients from the glacial deposits to the St. Peter Sandstone, and because of this, the groundwater in the Carimona Member beneath the Site flows toward the northwest. Flow in the underlying Magnolia Member is to the northwest, toward the Magnolia pump-out wells (**Appendix D**; Barr, 2013).

4.2.1 Groundwater

In accordance with the 1984 Consent Order, ground water pump out and treatment systems were installed to reduce downgradient migration of VOC contaminants. The current system consists of seven pump-out wells, a water treatment facility, and monitoring well networks in the following geologic units: the glacial drift, the Magnolia member of the Platteville Limestone, the St. Peter Sandstone, and the Prairie du Chien/Jordan aquifer. Existing groundwater extraction wells and monitoring wells installed prior to the Fourth FYR are shown in **Figure 1**. Sentinel wells and wells

installed as part of the sentinel groundwater and soil gas monitoring network are shown in **Figures 3 and 4.**

One of the objectives in the Consent Order is to remediate groundwater in the glacial drift capture zone with TCE concentrations exceeding 270 µg/L. The selected remedy to address TCE contamination in groundwater was groundwater pump-out and treatment, along with containment by means of groundwater extraction. The groundwater pump-out and treatment systems were placed into operation in late 1985. After 25 years of pump-out and treatment system operation, the groundwater cleanup concentrations specified in the Consent Order were being met. In accordance with an MPCA-approved RA plan, the pump-out and treatment systems were temporarily shut down on September 13, 2010. These groundwater pump-out wells and the monitoring well network remain in place in the event system startup became warranted.

In March 2014, groundwater samples were collected from nine temporary (temp) wells (at approximate depths ranging from 19 to 25 ft bgs) installed in soil borings surrounding the vapor monitoring area as part of an ongoing evaluation of the potential vapor pathway. TCE exceeded 270 µg/L in one of the temp well groundwater samples (DP047; 406 µg/L), located upgradient from the Site source area. (Barr, 2014b)

In May 2014, 10 groundwater samples were collected from temp wells (at approximate depths ranging from 19 to 52.5 ft bgs) installed surrounding the historical disposal area at the Site as part of the vapor intrusion pathway investigation. The groundwater samples were collected at the water table, just above the clay till layer at approximately 40 feet bgs, and one sample just above the Decorah Shale (boring DP-056; 52.5 feet bgs). The results showed TCE concentrations at the surface of the water table ranged from 1.2 to 36.5 µg/L. TCE exceeded 270 µg/L in one of the temp well groundwater samples collected from below the water table: DP-056; 37-39 ft bgs; 425 µg/L (Barr, 2014c) .

Additionally, in October through December 2014, 10 sentinel monitoring wells were installed in the glacial drift capture zone at locations surrounding the Site soil gas monitoring area (Barr, 2015c). From 2014 to 2016, quarterly groundwater monitoring was performed at the sentinel and existing monitoring wells surrounding the Site. The groundwater flow direction was to the south-southwest and southwest (consistent with historical measurements at the Site). TCE was detected at concentrations exceeding 270 µg/L in several monitoring wells that are screened in the glacial drift capture zone during the 2014 to 2016 quarterly groundwater monitoring. TCE exceeded 270 µg/L in one sentinel well, SMW25, with a maximum concentration of 290 µg/L (2016). TCE exceeded 270 µg/L in six other wells (110, 313GS, 313GD, 314GS, 314GD, 315GD) located downgradient from the Site source area, with the maximum concentrations of 498h µg/L in 2014 (314GS); 438 µg/L in 2015 (315GD); and 540 µg/L in 2016 (313GD; Barr, 2017). [Note that the laboratory qualifier “h” indicates that the EPA recommended sample preservation, extraction, or analysis holding time was exceeded.] TCE also exceeded 270 µg/L in six wells (301GS, 301GD, 303GS, 305GS, 306GS, 306GD) located upgradient from the Site source area (Barr, 2017).

These exceedances indicate that the Consent Order objective regarding groundwater remediation is no longer being met. In addition, long-term monitoring (LTM) scheduled for 2019 has not occurred and has not been scheduled. In summary, groundwater monitoring indicates that the pump-out and treatment systems that were temporarily shut down are no longer meeting the RAOs and cleanup levels, as specified in the Consent Order. In addition, development of groundwater RAOs and groundwater cleanup levels that are protective for vapor intrusion risk are necessary.

4.2.2 Soil

Several soil investigations have been performed in the former soil absorption pit area. The two most recent investigations are summarized in the 2001 report (Barr, 2001) and Disposal Area Investigation Results (Barr, 2014c). Figures were developed and presented in the *Draft Vapor Intrusion Pathway Investigation and Feasibility Study Work Plan* (Barr, 2014a) and are included in **Appendix D**, attached hereto and incorporated by reference. The figure labeled Figure 15 presents a compilation of historical boring locations. The 2001 investigation work was performed to better characterize the possible existence of contaminant in the soil within the accessible (0-4 ft bgs) and potentially accessible zones (5-12 ft bgs) in the absorption pit area. All soils were field screened for volatile organic vapors and 30 soil samples were selected for laboratory analysis. TCE was not detected above the Tier 2 Soil Reference Value (SRV) (46 milligrams per kilogram [mg/kg]) in the 30 soil samples analyzed. TCE was not detected above the Tier 1 Soil Leaching Values (SLVs) (0.14 mg/kg) in GP-1, the boring advanced nearest to the former absorption pit.

The Disposal Area Investigation Results (Barr, 2014c) summarized the results of four soil borings (DP-054 through DP-057) advanced in May of 2014 to verify whether TCE contamination is present in the soil. The four boring locations are shown on a figure in **Appendix D**. Boring DP-054 was placed as close as possible to the location of the former soil absorption pit area based on the presence of buried utilities. Borings DP-055, DP-056 and DP-057 were then placed 30 to 40 ft west, east and south of the soil absorption pit area, respectively. The stratigraphy observed in the soil borings generally consisted of 10 to 16 ft of topsoil and peat fill at the surface, underlain by sand with occasional gravel lenses. The presence of peat fill indicates that this area may have been excavated in the past. Clay till was encountered in each of the general drilling locations beginning between 39 and 42 ft bgs at elevations ranging from 816.5 to 819.5 ft above msl. This investigation did not find TCE contamination in soil samples collected in the shallow depths (upper 30 ft) of the former soil absorption pit area. Low level TCE (less than 1 mg/kg) was found in the soil at depths between approximately 40 and 53 ft bgs in the former soil absorption pit area (Barr, 2014c).

4.2.3 Vapor Intrusion Pathway

In accordance with the RA Modification #1, GMI conducted a vapor intrusion pathway investigation and installed sub-slab vapor mitigation systems in affected buildings from 2012 to 2016. However, GMI discontinued vapor investigation and mitigation work at the Site in 2016 (see **Section 2.1.2** for further discussion). Results of the vapor investigation and mitigation activities performed by GMI are summarized in the following reports:

- Sub-Slab Sampling and Building Mitigation Implementation Report (Barr, 2015a)
- Vapor Intrusion Pathway Investigation Report (Barr, 2015b)
- 2015 Sentinel Monitoring Network Report (Barr, 2015c)
- Vapor Intrusion Pathway Feasibility Study (Barr, 2016)
- 2016 Sentinel and Glacial Drift Monitoring Network Report (Barr, 2017)

Following GMI discontinuing vapor investigation and mitigation work in 2016, the MPCA performed vapor investigation and mitigation activities, as summarized in the following reports:

- Property Summary Report for property with unique ID# 17299 (includes sub-slab and completed pathway sampling results; Bay West, 2018a);
- Property Summary Report for property with unique ID# 19399 (includes sub-slab and indoor/outdoor air sampling results and mitigation system installation and confirmation sampling activities/results; Bay West, 2018b);

- Property Summary Reports for 10 properties with unique ID#s 5906, 2143, 1420, 5419, 8222, 8760, 3559, 9671, 2857, 7084 (includes sub-slab and/or indoor air sampling); and
- Fiscal Year 2020 (FY20) Vapor Intrusion Assessment Property Summary Report (includes vapor intrusion assessment work completed in 2018; Bay West, 2020).

Copies of tables and figures from the investigations are included in **Appendix D**. Vapor Intrusion Pathway assessment and mitigation work included:

- Collection of sub-slab and/or indoor air samples at 344 properties by GMI. The MPCA collected sample splits on approximately 10% of the properties that GMI collected sub-slab and/or indoor air vapor samples.
- The MPCA also completed independent initial and/or follow-up sub-slab and indoor air sampling at 10 properties (unique ID#s 5906, 2143, 1420, 5419, 8222, 8760, 3559, 9671, 2857, 7084) located in the central/southwest region under the SR#3 project identification;
- Installation of 189 vapor mitigation systems by GMI. The MPCA completed vapor mitigation system field audits on approximately 75% of the systems installed by GMI;
- The MPCA also independently installed one vapor mitigation system at an apartment complex (unique ID# 19399) and conducted Completed Pathway Evaluation activities at a commercial property (unique ID# 17299) in the southwest region as well as five buildings on the former GMI facility (unique ID# 3954). The MPCA performed these vapor intrusion assessment and mitigation activities after GMI had declined MPCA's request to do so. See **Section 2.1.2** for further discussion regarding GMI declining to perform additional response actions beginning in 2016;
- Installation of 18 borings for investigation purposes and 56 pilot borings to construct soil vapor monitoring ports and monitoring wells from which 23 soil samples and five soil gas samples were collected for laboratory analysis;
- Installation of temporary wells at 22 boring locations for groundwater sampling from which 51 groundwater samples were collected to evaluate the vapor intrusion area of concern;
- Installation of 38 permanent monitoring wells for groundwater sampling and to construct a sentinel monitoring network and collecting 102 groundwater samples from these and other existing wells to evaluate the vapor intrusion area of concern; and,
- Installation of a soil gas sentinel monitoring network comprised of 30 vapor monitoring ports from which 60 soil gas samples were collected.

The response actions implemented as part of GMI's sub-slab sampling and building mitigation project are documented in the *Sub-Slab Sampling and Building Mitigation Implementation Report* (Barr, 2015a). GMI's response actions to date include collection of sub-slab soil gas and/or indoor air samples at 344 properties and installation of building mitigation systems at 189 properties. There are currently 25 buildings at 20 properties with sub-slab results greater than 10 times the MPCA ISVs or within the mitigation area that each still require either installation of a vapor mitigation system or additional vapor investigation. In addition, post-mitigation confirmation analytical sampling, per the current MPCA VI BMPs, was not conducted in a majority of the 189 properties where vapor mitigation systems were installed. The vapor mitigation systems were installed in accordance with the 2014 RAP Modification #1 which was approved by MPCA prior to release of the current MPCA VI BMPs.

RAP Modification #1 indicates that a monitoring and maintenance plan will be submitted for mitigation systems. However, monitoring and maintenance plans for mitigation systems have not been submitted by GMI.

4.3 Site Inspection

The following parties inspected the Site on June 3, 2019: Tim Grape (MPCA), Allan Timm (MPCA), Shawn Lyman, Donovan Hannu, and Katie Larson (Bay West), Katherine Thomas (USEPA), Emily Hansen (MDH), Sara Ramsden (Barr), Alex Heller (First and First), and Wendy Menken (SECIA). The Site inspection sign in sheet is included in **Appendix E**, attached hereto and incorporated by reference. The Site inspection is summarized on the Site Inspection Form included in **Appendix E.** Key activities included:

- A tour of the interior of five Site buildings at 2010 E Hennepin with sub-slab results greater than 10X the MPCA ISVs that each still require a vapor mitigation system. Vapor monitoring ports were located. The floors of basements were inspected to determine if cracks may cause a vapor intrusion pathway to indoor air.
- A tour of the exterior of the GMI site and immediate vicinity was undertaken to inspect the condition of monitoring wells, pump out wells and the groundwater extraction system as well as general site security.
- A homeowner for the residence near SE 20th Ave and Talmadge Ave was outside during the Site inspection. He was asked if his residential mitigation system could be inspected. The residential system was inspected to determine if it was operational and the homeowner was notified of the purpose of the system, O&M procedures, and provided a contact to call in the event the system failed. The floor of the basement was also inspected for damage and cracks that could result in vapor intrusion to the interior of the house.
- A commercial system was toured at an apartment complex in the southwest region. The system components in the laundry room, utility room and two fans on the roof were inspected. The floor of the basement level was also inspected in the utility room for damage and cracks that could result in vapor intrusion to the interior of the house.
- A follow up inspection of additional monitoring wells was performed by Bay West on June 26, 2019.

The purpose of the site inspection was to assess the protectiveness of the remedy. In addition, the inspection followed up on issues identified during the 2014 Site Inspection.

A summary of key issues noted during the Site Inspection is as follows:

- As noted in the 2014 FYR, the groundwater pump-out and treatment systems were temporarily shut down in 2010. All existing pump-out and monitoring wells were located and inspected during the 2014 FYR. Several wells were damaged and were in need of repair. The 2014 FYR recommended that the wells be repaired and inspected on an annual basis moving forward. During the 2019 FYR Site Inspection, wells noted for repair were inspected to determine if repairs noted in 2014 were completed. Wells listed for repair in the 2014 FYR were repaired; however, the MPCA noted in the 2019 inspection that additional wells on Site needed repair. Additionally, several of the wells were overgrown with brush and were difficult to access.
- SECIA commented during the Site inspection that they wanted clarification regarding the extent of the groundwater treatment system impact on ICs and soil disturbance in the Community Garden southeast of the Site.
- The groundwater pump out system was overgrown with vegetation, the fence surrounding the system was sagging in places, and a breach in the fence was noted near the former water treatment system. “No Trespassing” signs were not observed on the fence.

- The homeowner and property manager interviewed during the site inspection were aware of the mitigation systems and were aware of their purposes. Both systems had manometers with placards explaining how they were to be read and who to call in the event of a malfunction. The basement floors of both buildings appeared to be intact and not a vapor intrusion pathway risk.

Photographs taken during the two Site Inspections that highlight these issues are located in **Appendix E**.

5.0 TECHNICAL ASSESSMENT

5.1 Question A: Is the remedy functioning as intended by the decision documents?

5.1.1 Remedial Action Performance

5.1.1.1 Groundwater

The pump-out and treatment systems were temporarily shut down on September 13, 2010, in accordance with an MPCA-approved plan, after 25 years of operation. The pump-out and treatment systems removed approximately 6.6 billion gallons of groundwater and removed approximately 7,000 pounds (570 gallons) of TCE from the groundwater during 25 years of operation. Annual TCE removal peaked at 660 pounds per year (lb/yr) in 1987 and decreased exponentially to a near-constant average of 150 lb/yr from 2006 to 2010 (Barr, 2012).

Groundwater monitoring conducted since the 2014 FYR indicates that the pump-out and treatment systems that were temporarily shut down are no longer meeting the RAOs and cleanup levels as specified in the Consent Order:

- The on-site glacial drift pump-out system was designed to remove groundwater with the highest TCE concentrations in the glacial drift.
- The downgradient glacial drift pump-out system was designed to remove groundwater in the glacial drift with TCE concentrations greater than 270 µg/L.
- The Magnolia pump-out system was designed to remove groundwater in the Carimona and Magnolia members with TCE concentrations greater than 27 µg/L.

From 2014-2016, groundwater monitoring detected TCE at concentrations exceeding 270 µg/L in several monitoring wells that are screened in the glacial drift capture zone. These exceedances indicate that the Consent Order objective regarding groundwater remediation is no longer being met. In addition, LTM scheduled for 2019 has not occurred and has not been scheduled. In summary, groundwater monitoring indicates that the pump-out and treatment systems that were temporarily shut down are no longer meeting the RAOs and cleanup levels, as specified in the Consent Order.

In addition, the existing groundwater cleanup levels should be re-evaluated to determine if the current 270 µg/L cleanup level established in the 1984 Consent Order for the glacial drift aquifer is protective for the identified vapor intrusion risk identified at the Site.

5.1.1.2 Soil Vapor

As documented in the Vapor Intrusion Pathway Investigation Report (Barr, 2015b), vapor intrusion assessment including sub-slab sampling and/or indoor air sampling has been conducted by GMI at 344 properties. In addition, the MPCA performed vapor intrusion assessment sampling at 10 properties within the study area. Approximately half (165 properties) of these properties required no further action because TCE concentrations in sub-slab soil gas were less than the MPCA screening value established in the RAP Modification #1.

GMI installed vapor mitigation systems in 189 of these properties. MPCA installed a vapor mitigation system in one residential property. Post-mitigation confirmation analytical sampling was conducted in general accordance with the current MPCA VI BMPs in 34 buildings. Post-mitigation confirmation analytical sampling was not conducted per the current MPCA VI BMPs in 155 properties with vapor mitigation systems installed by GMI.

There are currently 20 properties (with a total of 25 buildings) that still require vapor mitigation systems based on the mitigation criteria in RAP Modification #1. These properties are

summarized in **Section 7.0** below. Due to these remaining properties where vapor intrusion risk was identified and no mitigation has occurred, the vapor mitigation activities conducted to date do not meet the RAO established in RAP Modification #1.

RAP Modification #1 indicates that a monitoring and maintenance plan will be submitted for mitigation systems. Monitoring and maintenance plans for the vapor mitigation systems installed have not been submitted by GMI.

On March 5, 2018, the MDH issued a Health Consultation for the site indicating that vapor intrusion may be an exposure pathway of health concern at the Site.

5.1.2 System Operations/O&M

As noted in the 2014 FYR, several monitoring and pump-out wells required maintenance. Based on the 2019 Site Inspection, those wells were repaired, however additional wells were identified needing repair. The monitoring and pump-out wells are only inspected during the groundwater monitoring event (currently every five years).

The groundwater pump-out and treatment systems are temporarily shut down, but may still be operational. The water appropriation and NPDES permits have been and will continue to be retained. Based on the 2019 site inspection, sections of the fence around the treatment system are in poor condition and No Trespassing signs were not observed on the fences that are accessible to the system to the east, south and west sides of the site. Vegetation is overgrown, especially in the vicinity of the old control building.

5.1.3 Opportunities for Optimization

Annual well inspection and repair, as necessary, was recommended in 2014 and is again recommended in the sixth FYR. Although periodic monitoring, inspection and repair of the pump-out and treatment systems are being conducted (currently proposed for every five years), in the event that the pump-out and treatment systems are taken out of idled status, it is recommended that the entire system be thoroughly inspected and repaired with upgrades as necessary.

Based on the limited survey of one private home and one commercial system, it appears that homeowners and property managers are aware of the vapor mitigation systems, how they work and how to identify problems. Manometers were observed in both locations and the manometers included a placard with instructions on how they operate and who to call in the event that the system is not functioning; however, this method will not ensure that future property tenants or future property owners will understand how the vapor mitigation system works, how to verify that it is working properly and how to identify any problems with the mitigation system. An operations and maintenance plan for the vapor mitigation systems is necessary as a mechanism to communicate critical information regarding the vapor mitigation system to new property tenants and/or new property owners after property and/or occupancy transfers.

5.1.4 Early Indicators of Potential Issues

TCE groundwater concentrations in the glacial drift aquifer have continued to show an increasing trend since the pump-out and treatment systems were shut-down in 2010. Multiple glacial drift monitoring wells down-gradient of the former General Mills/Henkel Corp. Superfund Site had TCE concentrations above the Consent Order action level of 270 µg/L during the most recent quarterly monitoring events in 2015-2016.

Results of the Vapor Intrusion Pathway Investigation indicated TCE in groundwater may have an additional up-gradient source(s) migrating from the Northeast Area into the Central Area. Quarterly sampling of the sentinel groundwater and soil gas monitoring network from December of 2014 to December 2016 indicated that elevated concentrations of TCE present in groundwater and soil gas in the Northeast Area may be impacting the Central Area. GMI has not sampled the

sentinel groundwater or vapor monitoring points since December 2016 or conducted the 2019 LTM event. In addition, GMI has not conducted ongoing maintenance/inspection of the groundwater pump-out system and associated wells.

Ongoing LTM of the entire monitoring well network along with additional quarterly monitoring of the sentinel groundwater and vapor monitoring networks is necessary to monitor plume stability and evaluate plume trends from potential source areas. Migration of contaminated groundwater could result in vapor intrusion risk to properties beyond the currently defined mitigation area or vapor intrusion area of concern. Continued O&M of the pump-out systems and pump-out wells is also necessary.

5.1.5 Implementation of Institutional Controls and Other Measures

As noted in the 2014 FYR, the property is surrounded by an unsecured fence and there are no access restrictions in place or other physical measures indicating the outline of the Soil Impacted Area. In addition, figures depicting the restricted areas are not included in the IC. The legal description alone is not adequate to identify the following areas:

- Groundwater Impacted Area located in the south eastern portion of the Site, including the area of the former absorption pit; and
- Soil Impacted Area in the southeast portion of the Site.

In the 2014 FYR, the MPCA recommended that figures with geographic information system (GIS) coordinates be developed and be readily available in the event that construction within the impacted areas is proposed. GMI did not implement this recommendation. The MPCA again recommends this measure as an implementation strategy for Institutional Controls.

In addition, the MPCA recommends vegetation control around wells and near the pump-out control building to ensure the integrity of the pump out system if it should be necessary to restart it in the future. Repair of the fence surrounding the Site pump-out control building and posting the area with “No Trespassing” signs is also needed.

5.2 Question B: Are the exposure assumptions, toxicity data, cleanup levels, and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

5.2.1 Changes in Standards and Exposure Pathways

5.2.1.1 Groundwater

No changes in the federal standards were identified in this five-year period. Drinking water standards were not established at the time of the Consent Order; therefore, they are not identified as an ARAR. However, the current, drinking water standard (Maximum Contaminant Level [MCL]) for TCE is 5 µg/L. In 2015, The MDH updated the short-term, sub chronic and chronic Health Risk Limit (HRL) for TCE to 0.4 µg/L. Remedial actions at the site had previously focused on the use of groundwater, and through the imposition of ICs, groundwater use for drinking water is no longer a concern. However, there is potential for shallow groundwater to result in a source of vapor intrusion risk to buildings above the shallow groundwater plume.

The focus of the initial remedial action was the control of risks that might result from the use of groundwater as a source of drinking water. The cancer risk value for TCE in effect in 1984 resulted in a 10^{-6} (one-in-one million) cancer risk at a concentration in drinking water of 2.7 µg/L. USEPA suggested that cleanup at Superfund sites should result in a risk in the range of 10^{-4} to 10^{-6}, or

drinking water levels between 270 µg/L and 2.7 µg/L, and it seems likely that the target risk levels of 270 µg/L for shallow aquifers and 27 µg/L for deeper aquifers at the Site were based on these values. The differences between the target risk levels for the two aquifers reflects the fact that the deeper aquifer is more likely to be used as a source of potable water, and consequently, a lower target risk level would be warranted for this aquifer.

From 2014-2016, groundwater monitoring detected TCE at concentrations exceeding 270 µg/L in several monitoring wells that are screened in the glacial drift capture zone. These exceedances indicate that the Consent Order objective regarding groundwater remediation is no longer being met. In addition, LTM scheduled for 2019 has not occurred and has not been scheduled. In summary, groundwater monitoring indicates that the pump-out and treatment systems that were temporarily shut down are no longer meeting the RAOs and cleanup levels, as specified in the Consent Order.

In addition, the current Consent Order groundwater cleanup level for the glacial drift aquifer is 270 µg/L. The presence of identified vapor intrusion risk to buildings above the glacial drift aquifer with TCE concentrations at or below 270 µg/L indicates that the existing TCE groundwater cleanup level is not protective for vapor intrusion risk. Development of groundwater RAOs and updated groundwater cleanup levels that are protective for vapor intrusion risk are necessary.

The compound 1,4-dioxane was used as a stabilizer for chlorinated VOCs including 1,1,1-TCA (Agency for Toxic Substances and Disease Registry [ATSDR], 2012). 1,1,1-TCA is a listed analytical program parameter associated with the Site. Evaluation of 1,4-dioxane as a program parameter has not been completed for the General Mills/Henkel Corp. Superfund site. Evaluation of 1,4-dioxane as a program parameter release compound associated with the Site is necessary. 1,4-Dioxane should be added to the list of groundwater parameters analyzed during future groundwater monitoring events. In 2013, MDH established a HRL of 1 µg/L for 1,4-dioxane. The EPA has not yet established an MCL for 1,4-dioxane.

5.2.1.2 Vapor Intrusion

The potential for constituents in groundwater to migrate through vadose zone soils and enter the indoor air of buildings is termed vapor intrusion. This Site is located in a residential area that has TCE present in shallow groundwater. As such, the MPCA is concerned that there are potential completed vapor intrusion pathways into homes and buildings at the Site. As a result, investigation and remedial activities at the Site, addressed in RAP Modification #1 to the Consent Order, have shifted to include concerns regarding the potential for human exposure via a completed vapor intrusion or inhalation pathway.

The RAP Modification #1 was implemented with the following TCE sub-slab vapor concentration Project Action Limits (PAL):

Analyte	PAL	PAL Reference
Trichloroethylene (TCE)	20 µg/m^3	MPCA's 10x Residential Interim ISV
	2 µg/m^3	MPCA's ISV
	60 µg/m^3	MPCA's 10X Industrial Interim ISV
	6 µg/m^3	MPCA's Industrial ISV

Based on the PALs, the following decision process was used for sub-slab vapor analytical results:

- If the TCE concentration in the first sample is equal to or greater than 20 µg/m^3, GMI will offer a mitigation system to the property owner.

- If the TCE concentration in the first sample is 2 µg/m^3 or less, no further work at the property will be required and the sampling port will be removed.
- If the TCE concentration in the first sample is less than 20 µg/m^3 but greater than 2 µg/m^3, a second sample will be collected from the sampling port and analyzed for TCE. Collection efforts for the second sample will take place seven to thirty days after the first sample. If the TCE concentration from the second sample is equal to or greater than 20 µg/m^3, GMI will offer to install a mitigation system in the building. If the TCE concentration in the second sample is less than 20 µg/m^3, the MPCA will not require further work at the property and the sampling port will be removed.

In October 2017, the MPCA released *Best Management Practices (BMPs) for Vapor Investigation and Building Mitigation Decisions*. There are several notable variations in the Site PALs listed above and the BMP decision-making process, including:

- Residential ISV for TCE increased to 2.1 µg/m^3 and the industrial ISV increased to 7.0 µg/m^3.
- The sub-slab concentration attenuation factor increased from 10x (0.01) to 33x (0.03) for the corresponding residential or industrial ISV. The attenuation factor can be used if, and only if, building conditions supporting the attenuation factor as described in the MPCA VI BMPs are present.
- In order to meet the vapor investigation minimum sampling requirements for seasonal temporal sampling samples must be collected at least 30 days apart and under differing seasonal conditions as follows:
    - One sampling event in the heating season, which the MPCA defines as November 1 thru March 31.
    - One Sampling event in the non-heating season, which the MPCA defines as April 1 thru October 31.
- Buildings with sub-slab ISV exceedances cannot be cleared with indoor air sampling unless a Completed Pathway Evaluation, as outlined in the MPCA BMPs, is completed.
- Post-mitigation indoor air sampling is best management practice to confirm that vapors are not intruding into properties. Vapor mitigation systems were installed at 190 properties; however, the MPCA's currently recommended post-mitigation sampling was not conducted at 155 of these properties.

5.2.1.3 Air

There has been no change in the air exposure pathway since the 2014 FYR. In the past, an air stripper was used to remove TCE and other VOCs from groundwater that was pumped from glacial drift aquifer extraction wells at the Site, piped to the former GM facility, and passed through the air stripper to remove VOCs. Over 95% removal efficiency was typically achieved, and the VOCs removed were exhausted into the air through an exhaust stack near the former GM facility. Substantial dilution typically occurs quickly for constituents released into outdoor air, particularly when released via a stack located at least 25 ft high (as required in the Consent Order) and this pathway generally had not been considered to contribute substantially to health risks near a site. The air stripper is no longer in use at the site, and consequently exposure via this pathway no longer occurs. If future plans include the reuse of this stripper, emission modeling and exposure and risk evaluation would be warranted.

5.2.1.4 Soil

There has been no change in the soil exposure pathway since the 2014 FYR. According to the most recent investigation in the former soil absorption pit area (Barr, 2014c) TCE contamination was not detected in soil samples collected in the shallow depths (upper 30 ft) in this area. Low level TCE (less than 1 mg/kg) was found in the soil at depths between approximately 40 and 53 ft bgs in the former soil absorption pit area (Barr, 2014c). Consequently, the potential for contact with TCE and VOCs in soil has been, and remains, limited and, as a result, the potential for exposure and risk is very low. In addition, land use restrictions are in place to ensure that any future activities at the site (such as future subsurface construction) do not inadvertently result in exposure to VOCs in soil.

5.2.2 Expected Progress Toward Meeting RAOs

The primary RAOs for this site are the containment of VOCs that exceed the cleanup levels of the Consent Order and, in particular, TCE (i.e., the minimization of the further spread of VOCs in groundwater) and a decrease in the concentration of these constituents in groundwater over time. The remedial action at the Site (groundwater pump-out and treatment) originally addressed the Consent Order RAOs and cleanup levels; however, the pump-out and treatment system is temporarily shut down and TCE concentrations in the glacial drift aquifer have increased to above cleanup levels.

From 2014-2016, groundwater monitoring detected TCE at concentrations exceeding 270 µg/L in several monitoring wells that are screened in the glacial drift capture zone. These exceedances indicate that the Consent Order objective regarding groundwater remediation is no longer being met. In addition, LTM scheduled for 2019 has not occurred and has not been scheduled. In summary, groundwater monitoring indicates that the pump-out and treatment systems that were temporarily shut down are no longer meeting the RAOs and cleanup levels, as specified in the Consent Order.

There are 20 properties containing 25 buildings with either TCE sub slab concentration results exceeding 20 $\mu g/m^3$ or that are located within the "mitigation area" and did not participate in or denied access for the vapor intrusion assessment. The lack of vapor mitigation or additional vapor assessment in these buildings indicates that the RAO objectives in RAP Modification #1 are not being met. For these properties, there is either identified vapor intrusion risk that has not been addressed or there is insufficient vapor assessment information collected to make a determination that there is no vapor intrusion risk in accordance with the RAO objectives in RAP Modification #1.

5.3 Question C: Has any other information come to light that could call into question the protectiveness of the remedy?

Vapor mitigation systems were installed at 189 properties and post-mitigation verification testing was completed in accordance with RAP Modification #1. However, it should be noted that the MPCA's VI BMPs for post-mitigation system verification have been updated since the RAP Modification #1 was approved by MPCA.

GMI ceased site work and monitoring after the identification of possible up-gradient sources of groundwater contamination. Continued LTM and monitoring of the sentinel groundwater/soil gas monitoring network and the monitoring well network is necessary.

On March 5, 2018, the MDH issued a Health Consultation for the site indicating that vapor intrusion was an exposure pathway of health concern at the Site (MDH, 2018). The existing groundwater remedy and groundwater clean-up levels were established prior to our current understanding of vapor intrusion risk associated with shallow groundwater contamination.

On September 27, 2018, the USEPA Site Characterization and Monitoring Technical Support Center issued a Technical Memorandum indicating TCE at the Site may be entering the Site from upgradient sources (USEPA, 2018).

5.4 Technical Assessment Summary

One of the objectives in the Consent Order is to remediate groundwater in the glacial drift capture zone with TCE concentrations exceeding 270 µg/L. The selected remedy addressing groundwater was groundwater pump-out and treatment, along with containment by means of groundwater extraction. The groundwater pump-out and treatment systems were placed into operation in late 1985. After 25 years of pump-out and treatment system operation, the groundwater cleanup concentrations specified in the Consent Order were achieved. In accordance with an MPCA-approved RA plan, the pump-out and treatment systems were temporarily shut down on September 13, 2010. These groundwater pump-out wells and the monitoring well network remain in place in the event system startup became warranted.

From 2014-2016, groundwater monitoring detected TCE at concentrations exceeding 270 µg/L in several monitoring wells that are screened in the glacial drift capture zone. These exceedances indicate that the Consent Order objective regarding groundwater remediation is no longer being met. In addition, LTM scheduled for 2019 has not occurred and has not been scheduled. In summary, groundwater monitoring indicates that the idled pump-out and treatment systems are no longer meeting the RAOs and cleanup levels, as specified in the Consent Order.

Several monitoring and pump-out wells require maintenance, the fence around the groundwater treatment system is in poor condition, the groundwater treatment system is overgrown with vegetation and the area should be posted with no trespassing signs. These wells are only inspected during the groundwater monitoring event (currently every five years). As recommended in the 2014 FYR, annual well inspection and repair, as necessary, is recommended as well as maintenance of the fence and vegetation control measures near the treatment building.

The vapor intrusion exposure pathway has been evaluated. Vapor intrusion receptors have been appropriately evaluated per the vapor intrusion assessment standards set forth in the RAP Modification #1 and a majority of the receptors requiring protection now have vapor mitigation systems. However, there are still buildings that require mitigation based on sub-slab sampling results and/or proximity within the outlined “Mitigation Area”, also referred to as the central region throughout GMI reports. There are 25 buildings at 20 properties within the central and southwest regions that require vapor mitigation. Furthermore, there are four properties within the southwest region that still require initial vapor intrusion assessment.

As noted, GMI evaluated the vapor intrusion exposure pathway per the assessment standards set forth in the RAP Modification #1. The TCE ISV attenuation PALs used during the vapor intrusion pathway investigations were more conservative than the revised 2017 attenuation factor of 33x ISVs so the concentration evaluation remains valid with current MPCA ISV standards and vapor BMPs. However, some of the vapor intrusion exposure pathway evaluation procedures would not meet current MPCA vapor BMPs. The following procedural differences should be evaluated to determine if additional vapor intrusion assessment actions are warranted:

- The MPCA vapor BMPs require multiple sampling events to evaluate temporal and seasonal variability that can be observed in soil gas and sub-slab sampling. The vapor sampling and building mitigation decision process used by GMI required only one sub-slab sampling event per building evaluated. GMI completed sub-slab sampling at 344 properties and installed building mitigation systems at 189 of those properties. If the

decision process was followed for all properties assessed, then up to 155 properties cleared with only one sampling event.

- Per the MPCA building mitigation BMPs, upon completion of active system installation, confirmation sub-slab, indoor air, and ambient outdoor air sampling is required to evaluate whether the active system is operating effectively to prevent vapor intrusion into the building above intrusion screening values. It is an important process that can detect overlooked vapor intrusion pathways. Post-mitigation indoor air sampling was only completed at 20 properties with sub-slab TCE concentrations greater than 2,000 µg/m^3. Post mitigation confirmation sampling was not completed on 169 vapor mitigation systems installed at the site.

6.0 ISSUES/RECOMMENDATIONS AND FOLLOW-UP ACTIONS

Issues/Recommendations
OU(s) without Issues/Recommendations Identified in the Five-Year Review:
None

Issues/Recommendations				
Issues and Recommendations Identified in the Five-Year Review:				
OU(s): Groundwater	**Issue Category:** Operation and Maintenance			
	Issue 1: The site inspection identified several wells requiring maintenance and repair. The treatment system is overgrown with vegetation, the fence is failing, and the area is not posted with no trespassing signs.			
	Recommendation: Repair Wells, develop an O&M schedule for wells that is not dependent on LTM, develop a vegetation control system for the area of the treatment building, repair the fence, and post the area with No Trespassing Signs.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	Yes	GMI	MPCA	08/01/2021
OU(s): Groundwater	**Issue Category:** Monitoring			
	Issue 2: LTM of groundwater every five years is not adequate to monitor compliance with RAOs and cleanup levels. LTM was originally scheduled for 2019 but has not occurred and is not scheduled to occur.			
	Recommendation: Conduct annual LTM.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
No	Yes	GMI	MPCA	08/01/2021
OU(s): Groundwater Soil	**Issue Category:** Institutional Controls			
	Issue 3: The legal description alone is not adequate to identify the "Groundwater Impacted Area" and the "Soil Impacted Area".			
	Recommendation: Create a figure with GIS coordinates. Provide a copy to MPCA, place figure in a readily available location with current property owner for potential future needs (i.e., utility locators and construction).			
Affect Current	**Affect Future**	**Implementing**	**Oversight**	**Milestone Date**

Protectiveness	**Protectiveness**	**Party**	**Party**	
No	Yes	GMI	MPCA	08/01/2021
OU(s): Air	**Issue Category:** Vapor intrusion remediation			
	Issue 4: 25 buildings have been identified that require mitigation. These buildings are listed in **Section 7.0**, Protectiveness Statement for OU: Air.			
	Recommendation: Install vapor mitigation systems to assure protection of human health at the 25 buildings where vapor intrusion risk was identified.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
Yes	Yes	GMI	MPCA	08/01/2021
OU(s): Air	**Issue Category: Vapor Intrusion Assessment**			
	Issue 5: Four buildings have not had vapor intrusion assessment. These buildings are listed in **Section 7.0**, Protectiveness Statement for OU: Air.			
	Recommendation: Conduct a vapor intrusion assessment per current MPCA vapor intrusion BMPs.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
Yes	Yes	GMI	MPCA	08/01/2021
OU(s): Air	**Issue Category: Residential SSD system O&M**			
	Issue 6: GMI installed vapor mitigation systems in189 properties, but there is no current plan or procedure to ensure long-term remedy operation and protectiveness of human health at individual property units.			
	Recommendation: Prepare long term SSD system O&M plans			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Implementing Party**	**Oversight Party**	**Milestone Date**
Yes	Yes	GMI	MPCA	08/01/2021

7.0 PROTECTIVENESS STATEMENT

The protectiveness statements for each OU are as follows:

Protectiveness Statement(s)		
Operable Unit: Groundwater	*Protectiveness Determination:* Not Protective	*Addendum Due Date (if applicable):* Not Applicable
Protectiveness Statement: The groundwater remedy is not protective of human health due to the identified vapor intrusion risk to building receptors at the Site associated with the shallow groundwater contamination. In addition, groundwater concentrations in the glacial drift aquifer have increased to above 270 µg/L since the groundwater pump-out and treatment system was temporarily turned off in 2010. There are no identified drinking water receptors.		

One of the objectives in the Consent Order is to remediate groundwater in the glacial drift capture zone with TCE concentrations exceeding 270 µg/L. The selected remedy addressing groundwater was groundwater pump-out and treatment, along with containment by means of groundwater extraction. After 25 years of pump-out and treatment system operation, the groundwater cleanup concentrations specified in the Consent Order were being met. In accordance with an MPCA-approved RA plan, the pump-out and treatment systems were temporarily shut down on September 13, 2010. These groundwater pump-out wells and the monitoring well network remain in place in the event system startup became warranted.

From 2014-2016, groundwater monitoring detected TCE at concentrations exceeding 270 µg/L in several monitoring wells that are screened in the glacial drift capture zone. These exceedances indicate that the Consent Order objective regarding groundwater remediation is no longer being met. In addition, LTM scheduled for 2019 has not occurred and has not been scheduled.

The existing groundwater remedy and groundwater clean-up levels were established prior to our current understanding of vapor intrusion risk associated with shallow groundwater contamination.

In summary, groundwater monitoring indicates that the idled pump-out and treatment systems are no longer meeting the RAOs and cleanup levels, as specified in the Consent Order and the cleanup levels should be re-evaluated in consideration of the identified vapor intrusion risk associated with shallow groundwater contamination.

Protectiveness Statement(s)		
Operable Unit: Soil	*Protectiveness Determination:* Protective	*Addendum Due Date (if applicable):* Not Applicable
Protectiveness Statement: The no further action remedy for the soils is protective of human health and the environment.		

A restrictive covenant is in place that identifies land use restrictions and prohibits access to soils below 4 ft bgs within the Soil Impacted Area.

Protectiveness Statement(s)

Operable Unit:	*Protectiveness Determination:*	*Addendum Due Date (if applicable):*
Air – Vapor Intrusion	Not Protective	Not Applicable

Protectiveness Statement:

The vapor intrusion exposure pathway has been evaluated. GMI completed sub-slab and/or indoor air sampling at 344 properties and installed 189 vapor mitigation systems. The MPCA installed a vapor mitigation system in one residential building. The MPCA collected sample splits on approximately 10% of the properties where GMI collected sub-slab and indoor air vapor samples and completed vapor mitigation system field audits on approximately 75% of the systems installed. The MPCA also completed independent initial and/or follow-up sub-slab sampling at two properties in the central region and ten properties located in the southwest region. Vapor intrusion receptors have been appropriately evaluated and a majority of the receptors requiring protection now have vapor mitigation systems; however, there are still buildings that require mitigation based on sub-slab sampling results and/or proximity within the outlined "Mitigation Area" (also referred to as the "central region" throughout GMI reports). There are 25 buildings at 20 properties within the central and southwest regions that require vapor mitigation:

Properties that require vapor mitigation

Region	Property Unique ID	# of Buildings not Mitigated	Reason
Central Area	6016	1	Mitigation system declined by property owner
	6073	1	Mitigation system declined by property owner
	5083	1	Mitigation system declined by property owner
	9895	1	Indoor air results < residential ISVs; however, property is located in vapor mitigation area. No sub-slab testing due to passive radon system and vapor barrier.
	3954	5	Indoor air results < residential ISVs; however, property is located in vapor mitigation area and sub-slab vapor results indicate mitigation is needed
	1191	1	Indoor air results < residential ISVs; however, property is located in vapor mitigation area and sub-slab vapor results indicate mitigation is needed
	7855	1	Did not participate and/or access denied
	8269	1	Did not participate and/or access denied
	7243	1	Did not participate and/or access denied
	9538	1	Did not participate and/or access denied
	3125	1	Did not participate and/or access denied
Southwest	5906	1	Indoor air results < residential ISVs; however, sub-slab vapor results indicate mitigation is needed
	2143	1	Indoor air results < residential ISVs; however, sub-slab vapor results indicate mitigation is needed
	1420	1	Indoor air results < residential ISVs; however, sub-slab vapor results indicate mitigation is needed
	5419	1	Indoor air results < residential ISVs; however, sub-slab vapor results indicate mitigation is needed
	8222	1	Indoor air results < residential ISVs; however, sub-slab vapor results indicate mitigation is needed
	8760	1	No mitigation installed due to presence of vapor barrier

	3559	1	Indoor air results < residential ISVs; however, sub-slab vapor results indicate mitigation is needed
	9671	1	No mitigation due to new slab and vapor barrier
	2857	1	Indoor air results < residential ISVs; however, sub-slab vapor results indicate mitigation is needed
	7084	1	Indoor air results < residential ISVs; however, sub-slab vapor results indicate mitigation is needed

Properties in the SW Region that Require Initial VI Assessment

Region	Property Unique ID	# of Buildings that need VI Assessment	Reason
Southwest	16490	1	Did not participate and/or access denied
	17968	1	Did not participate and/or access denied
	12448	1	Did not participate and/or access denied
	16892	1	Did not participate and/or access denied

RI/FS studies completed since the 2014 FYR indicate that the exposure pathways in the Central area are incomplete or not expected to be significant in the future; however, additional up gradient sources of TCE may be present in the Northeast Area. Investigation of the Northeast is on-going. In the interim, additional monitoring of the Sentinel Network to monitor the perimeter of the Soil Gas Monitoring Area is recommended, as well as completion of the building mitigation and initial vapor intrusion assessment at the above identified properties.

8.0 NEXT REVIEW

The next five-year review report for the General Mills/Henkel Corp Superfund Site is required five years from the completion date of this review.

9.0 REFERENCES

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Figures

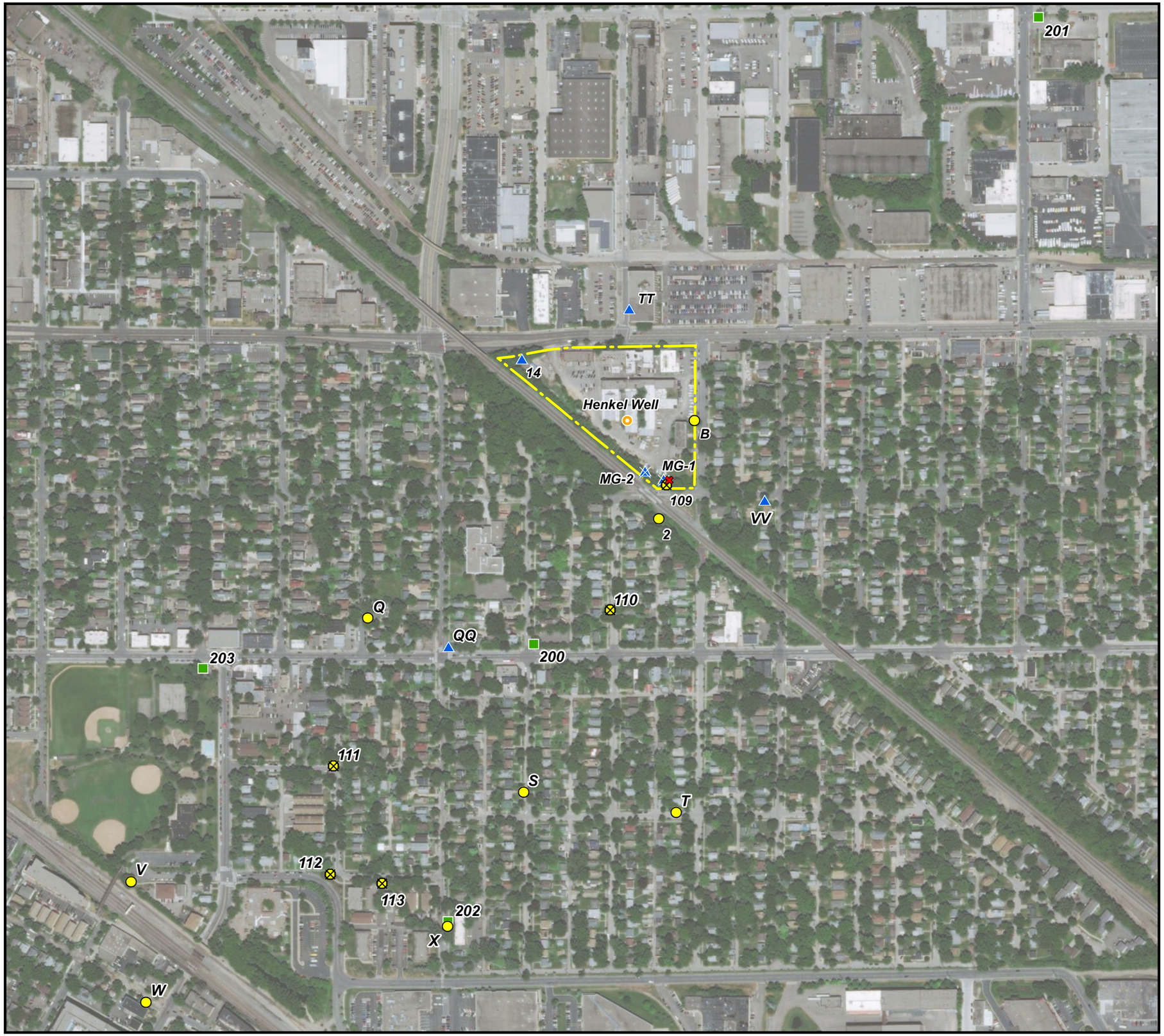
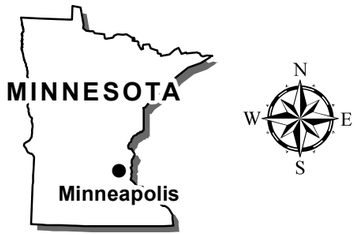


Figure 1

Site Location and Historic Groundwater Monitoring Locations

General Mills

2010 E Hennepin Avenue, Minneapolis



Map Projection: NAD 1983 UTM Zone 15N
Basemap: Bing Aerial WMS

0 400 800 Feet

0 125 250 Meters

1 Inch = 400 Feet

- Absorption Pit
- Glacial Drift Pump-Out Well
- Glacial Drift Well
- Magnolia Member Monitoring Well
- Magnolia Member Pump-Out Well
- Prairie du Chien Monitoring Well
- St. Peter Sandstone Monitoring Well
- General Mills/Henkel Superfund Site

Bay West
Customer-Focused Environmental & Industrial Solutions

Drawn By: MDH Date Drawn/Revised: 10/17/2019 Project No. J190607

Y:\Clients\MPCA\SR_3_General_Mills\MapDocs\J190607\J190607 FIG 01 Site Location and Historic Groundwater Monitoring Locations.mxd

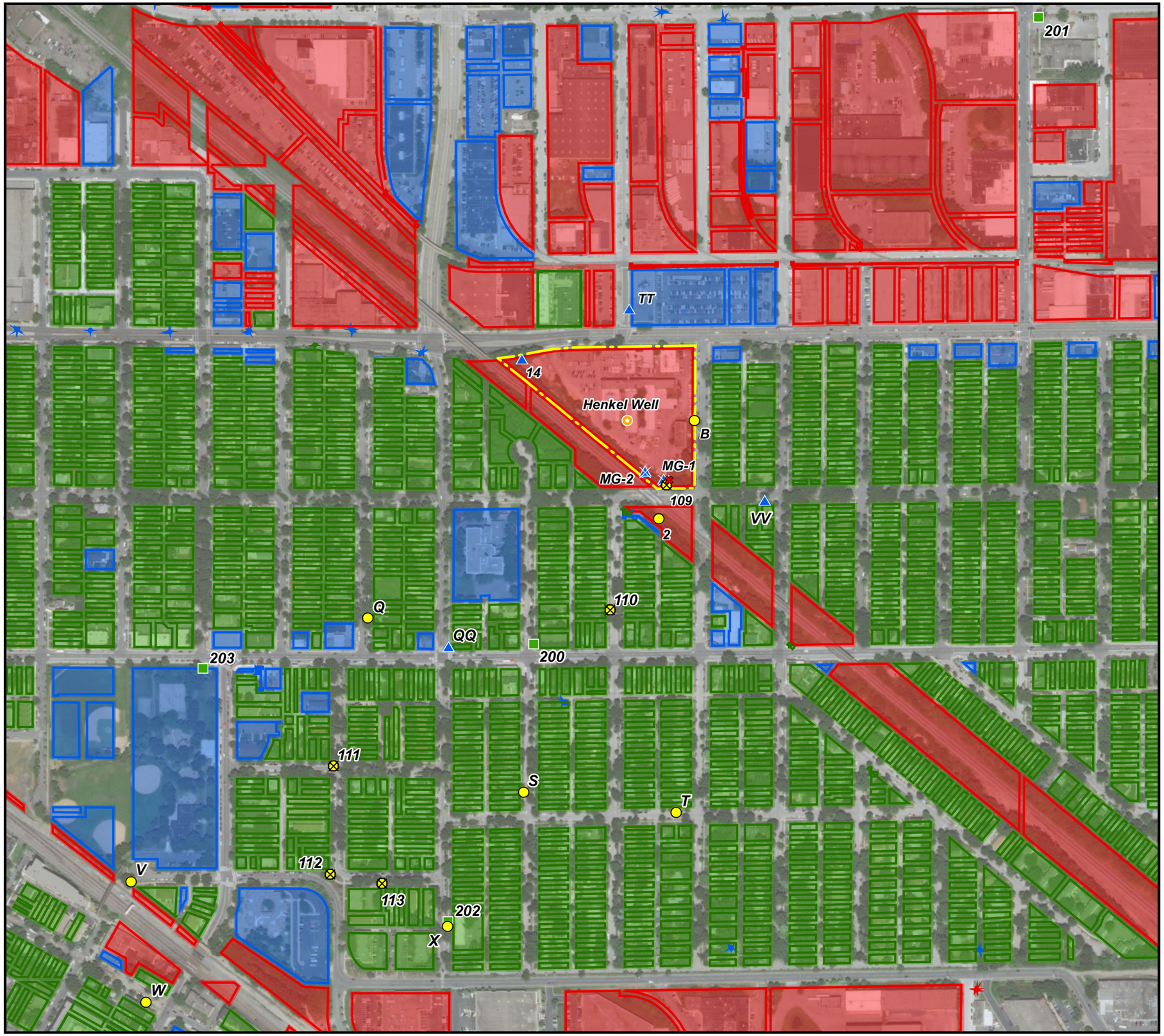
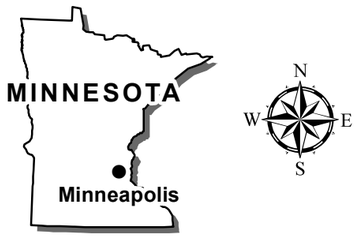


Figure 2

Zoning Map

General Mills

2010 E Hennepin Avenue, Minneapolis



Map Projection: NAD 1983 UTM Zone 15N
Basemap: Bing Aerial WMS

0 400 800 Feet

0 125 250 Meters

1 Inch = 400 Feet

- Absorption Pit
- Glacial Drift Pump-Out Well
- Glacial Drift Well
- Magnolia Member Monitoring Well
- Magnolia Member Pump-Out Well
- Prairie du Chien Monitoring Well
- St. Peter Sandstone Monitoring Well
- General Mills/Henkel Superfund Site
- Residential Zoned Parcel
- Commercial Zoned Parcel
- Industrial Zoned Parcel

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Drawn By: S.G. Date Drawn/Revised: 10/17/2019 Project No. J190151

Y:\Clients\MPCA\SR_3_General_Mills\MapDocs\J190607\J190607 FIG 02 Zoning Map.mxd

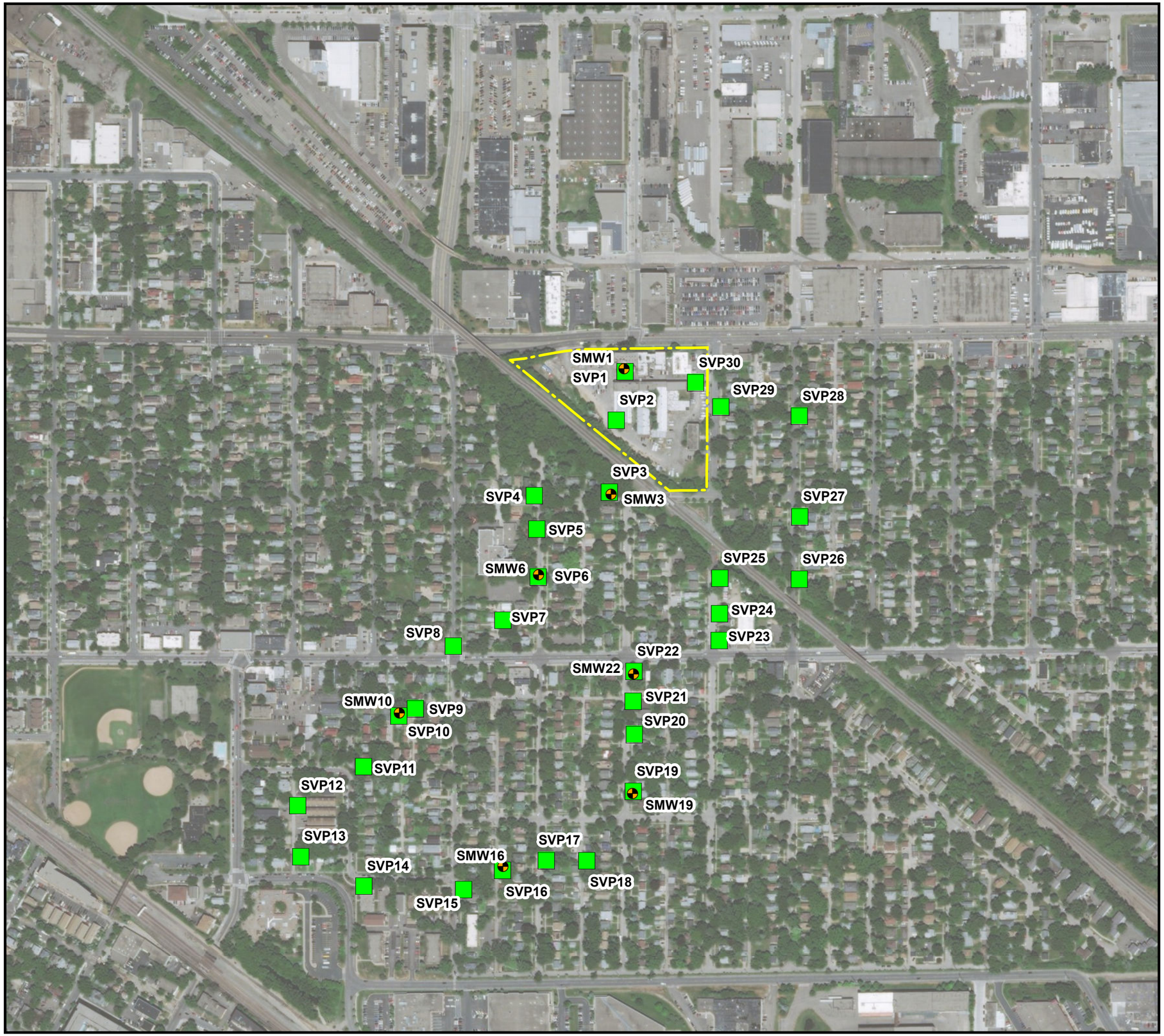
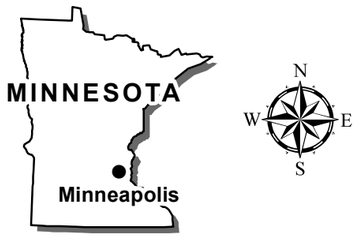


Figure 3

Sentinel Groundwater and Soil Gas Monitoring Network

General Mills

2010 E Hennepin Avenue, Minneapolis



Map Projection: NAD 1983 UTM Zone 15N
Basemap: Bing Aerial WMS

0 400 800 Feet

0 125 250 Meters

1 Inch = 400 Feet

- Sentinel Groundwater Well
- Soil Gas Montioring Location
- General Mills/Henkel Superfund Site

Bay West
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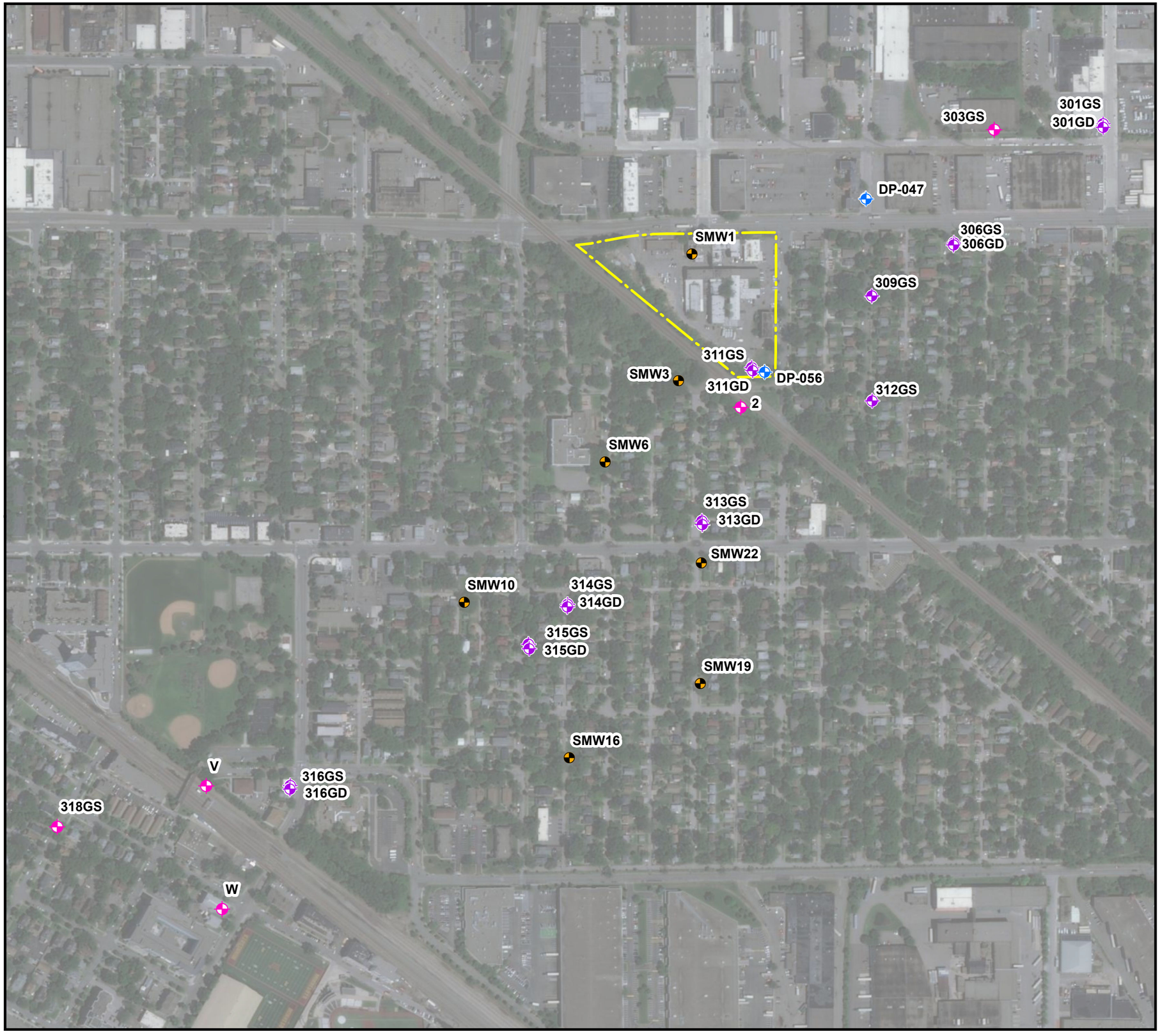
Drawn By: MDH Date Drawn/Revised: 10/17/2019 Project No. J190607

Y:\Clients\MPCA\SR_3_General_Mills\MapDocs\J190607\J190607 FIG 03 Sentinel Groundwater and Soil Gas Monitoring Network.mxd



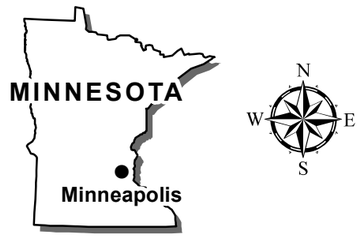
Y:\Clients\MPCA\SR_3_General_Mills\MapDocs\J201064\001_Five_Year_Review\J201064 FIG 04 Sentinel Groundwater.mxd

Figure 4

Sentinel Groundwater and Glacial Drift Groundwater Monitoring Networks

General Mills

2010 E Hennepin Avenue, Minneapolis



Map Projection: NAD 1983 UTM Zone 15N
Basemap: Bing Aerial WMS

0 400 800 Feet

0 125 250 Meters

1 Inch = 400 Feet

- Glacial Drift Groundwater Monitoring Well
- Glacial Drift Nested Monitoring Well
- Sentinel Groundwater Well
- Temporary Well (2014; only temp wells with TCE concentrations >270 µg/L are shown)
- General Mills/Henkel Superfund Site

Bay West
Customer-Focused Environmental & Industrial Solutions

Drawn By: NJ | Date Drawn/Revised: 1/28/2021 | Project No. J201064

Appendix A

Documents Reviewed

Appendix A - Documents Reviewed for Sixth Five Year Review for General Mills/Henkel Corp. Site (SR3)	
Document Title	**Document Date**
Summary of Phase 2C Vapor Intrusion Evaluation Results – East Hennepin Avenue Site	4/19/2013
Summary of Phase 2E Vapor Intrusion Evaluation Results – East Hennepin Avenue Site	10/11/2013
Quality Assurance Project Plan Sub-Slab Sampling East Hennepin Avenue Study Area Minneapolis, Minnesota	1/1/2014
POST-MITIGATION SAMPLING WORKPLAN EAST HENNEPIN AVENUE SITE MINNEAPOLIS, MINNESOTA	3/7/2014
Final Sub-Slab Sampling and Building Mitigation Work Plan	2/1/2014
Groundwater Pump-out System Shutdown Summary Report and 2011 Annual Reportwater Pump Out system	3/1/2014
Remedial Action Plan Modification #1 (Exhibit B) to the Response Order By Consent between General Mills and the Minnesota Pollution Control Agency	3/11/2014
Summary of Phase 2G Vapor Intrusion Evaluation Results- East Hennepin Avenue Site	5/5/2014
Disposal Area Investigation Results	5/23/2014
DRAFT Vapor Intrusion Pathway Investigation and Feasibility Study Work Plan Sampling and Monitoring Work Plan	6/1/2014
2014 07 MPCA Letter RE Draft VI Pathway Investigation and FS Work Plan c-s3-19c	7/1/2014
Vapor Intrusion Pathway Invesgitation and Feasibility Work Plan Sampling and Monitoring Work Plan	8/1/2014
Vapor Intrusion Pathway Invesgtigation and Feasiblity Study Work Plan - MPCA approval letter	9/18/2014
Fifth Five Year Review Report	1/6/2015
Sub-Slab Sampling and Building Mitigation Implementation Report	6/22/2015
General Mills- Vapor Intrusion Pathway Report - Letter to MPCA Request for Extension	6/30/2015
Human Health Risk Assessment Report	7/1/2015
Vapor Intrustion Pathway Investigation Report	7/2/2015
General Mills- Vapor Intrusion Pathwya Report- MPCA letter to General Mills granting extension	7/8/2015

Vapor Pathway Investigation Report- GMI status update letter to MPCA	6/30/2015
MPCA Response to the Human Health Risk Assessment Report for the General Mills/Henkel Corporation Site	11/12/2015
MDH health consultation on the HHRA	11/1/2015
MPCA Response to the VI Pathway Investigation Report	11/3/2015
2015 Sentinel Monitoring Network Report	12/1/2015
MPCA approval of the Sentinel Montioring Network Report	1/28/2016
Vapor Intrusion Pathway Feasibility Study	4/1/2016
VI Pathway Investigation GMI Response to Comments Letter	4/6/2016
2016 Glacial Drift Network Groundwater Monitoring Plan	4/6/2016
General Mills/Haley Aldrich Response to the Human Health Risk Assessment Report	4/6/2016
Minnesota Pollution Control Agency Response to the Vapor Intrusion Pathway Feasibility Study (FS) for the General Mills/Henkel Corporation Site. Site ID#: SR3	11/28/2016
2016 Sentinel and Glacial Drift Monitoring Network Report	3/1/2017
GMI Delist Request	3/1/2017
SUPPLEMENTAL REPORT ON VOC SOURCES AND REMEDIATION AT THE GENERAL MILLS/HENKEL CORP. SUPERFUND SITE	3/15/2017
No Futher Action Request- GMI	3/15/2017
General Mills letter to MPCA RE: Southeast Hennipin Groundwater and Vapor Intrusion Site	8/25/2017
MPCA Interim Response to General Mills Letters	9/29/2017
US EPA Third Party Review Comments on the "Evaluation of Remedy Completeness at the General Mills/Henkel Corp. Superfund Site Report" prepared by GSI, dated March 15, 2017	10/17/2017
MPCA Response to General Mills Inc. Letters Dated March 15, 2017 and August 25, 2017	10/31/2017
GMI Letter to MPCA with attached Geosyntec and GSI Preliminary Response to MPCA's October 31, 2017 Correspondence	11/16/2017
MDH GMI Helath Consultation	3/5/2018
US EPA Third Party Review and Technical Support to Evaluate Primary Responsible Party Claims Pertaining to Remaining Contaminants of Concern at the General Mills-Henkel Site	9/27/2018

Appendix B

Public Notice

MINNESOTA POLLUTION CONTROL AGENCY

General Mills/Henkel Corp.: Five-year review of TCE soil vapor

The Minnesota Pollution Control Agency (MPCA), with oversight from the U.S. Environmental Protection Agency, prepared a 2014 Five-Year Review. The purpose of the Review is to assess the groundwater cleanup and ensure that human health and the environment remain protected at the General Mills/Henkel Corporation NPL Site (the "Site") located in Minneapolis, Minnesota.

Site background

From 1947 through 1977 General Mills, Inc. (GMI) conducted chemical research at the site. Workers dumped waste volatile organic compound (VOC) solvents containing trichloroethylene (known as TCE), in a soil absorption pit from 1947 until 1962. GMI investigated the absorption pit in 1981, and reported to the MPCA that there was contamination of soil and groundwater in the absorption pit area.

An October 23, 1984, Response Order by Consent between the MPCA and General Mills provides the basis for remedial activities at the Site. The groundwater cleanup remedy consisted of a groundwater pump-out system to control the groundwater contaminant plume as well as remediate contaminated groundwater. Extraction and treatment of impacted groundwater to stabilize the plume of VOC contamination began in 1985 and ran until 2010.

In October 2013 the MPCA received soil gas data indicating potential soil gas vapor intrusion into buildings in the vicinity of the site. The potential for vapor intrusion was not addressed in the 1984 Response Order by Consent and is not part of this Five-Year Review.

Site documents

- General Mills: 2003 Annual Report - East Hennepin Ave. Site, Minneapolis
- General Mills: 2004 Annual Report - East Hennepin Ave. Site, Minneapolis

- General Mills: 2005 Annual Report - East Hennepin Ave. Site, Minneapolis
- General Mills: 2006 Annual Report - East Hennepin Ave. Site, Minneapolis
- General Mills: 2007 Annual Report - East Hennepin Ave. Site, Minneapolis
- General Mills: 2008 Annual Report - East Hennepin Ave. Site, Minneapolis
- General Mills: 2009 Annual Report - East Hennepin Ave. Site, Minneapolis
- General Mills: 2010 Annual Report - East Hennepin Ave. Site, Minneapolis
- General Mills: Groundwater Pump-out System Shutdown Summary Report and 2011 Annual Report - East Hennepin Ave. Site, Minneapolis
- General Mills: 2012 Annual Report - East Hennepin Ave. Site, Minneapolis
- General Mills: 2013 Annual Report - East Hennepin Ave. Site, Minneapolis
- General Mills: 2013 Monitoring Well Sealing Report - Hennepin Ave. Site, Minneapolis
- General Mills: Summary of Phase 2B Soil Vapor Results and Path Forward - East Hennepin Ave. Site, Minneapolis (6-20-12)
- General Mills: Quality Assurance Project Plan, Sub-Slab Sampling - East Hennepin Avenue Study Area
- General Mills: Five Year Review 1994
- General Mills: Five Year Review 1999
- General Mills: Five Year Review 2004
- General Mills/Henkel Corp Superfund Site: Five Year Review 2014
- Final Sub-Slab Sampling and Building Mitigation Work Plan (c-s3-15y) — January 2014
- Post-Mitigation Sampling Workplan East Hennepin Ave. Site Minneapolis, Minn. (c-s3-15z) — January 2014
- 2016 Glacial Drift Network Groundwater Monitoring Plan (c-s3-15ab) — April 2016
- No Futher Action Request- GM (c-s3-15ac) — March 2017
- 3rd Party Review_EPA ORD Report (c-s3-15aa) — September 2018

Community involvement

The Five-Year Review report will be complete in December 2019. The community can contribute by providing comments regarding any work done at the site from 1981-2019. **Comments are accepted through September 23, 2019. Please call, email or mail your comments to:**

Timothy Grape — MPCA
520 Lafayette Road North
St. Paul, MN 55155
Email: timothy.grape@state.mn.us
Phone: 651-757-2893

AFFIDAVIT OF PUBLICATION

STATE OF MINNESOTA)
COUNTY OF HENNEPIN)

StarTribune

650 3rd Ave. S, Suite 1300 | Mineapolis, MN | 55488

Terri Swanson, being first duly sworn, on oath states as follows:

1. (S)He is and during all times herein stated has been an employee of the Star Tribune Media Company LLC, a Delaware limited liability company with offices at 650 Third Ave. S., Suite 1300, Minneapolis, Minnesota 55488, or the publisher's designated agent. I have personal knowledge of the facts stated in this Affidavit, which is made pursuant to Minnesota Statutes §331A.07.

2. The newspaper has complied with all of the requirements to constitute a qualified newspaper under Minnesota law, including those requirements found in Minnesota Statutes §331A.02.

3. The dates of the month and the year and day of the week upon which the public notice attached/copied below was published in the newspaper are as follows:

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Terri Swanson

Subscribed and sworn to before me on: 08/21/2019

Jalene K. Howard

JALENE K. HOWARD
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Legal Notices

PUBLIC NOTICE: Announcement of a Five-Year Review for the Generall Mills/Henkel Corporation National Priorities List (NPL) Site
The Minnesota Pollution Control Agency (MPCA), with oversight from the U.S. Environmental Protection Agency, is preparing a 2019 Five-Year Review. The purpose of the Review is to assess the groundwater cleanup and vapor intrusion investigation/mitigation work to ensure that human health and the environment remain protected at the General Mills/Henkel Corporation NPL Site (the "Site") located in Minneapolis, Minnesota. A review of the selected remedy with regard to protection of human health and the environment will be included in the Five-Year Review Report. This Five-Year Review is being conducted as a matter of policy. The Five Year Review report will be complete in December 2019 . The community can contribute by providing comments regarding any work done at the site from 1981-2019. Comments are accepted through September 23, 2019. Please call, email or mail your comments to:
Timothy Grape, MPCA
520 Lafayette Road North St. Paul, MN 55155
Email:Timothy.Grape@state.mn.us
Phone: 651.757.2893

Legal Notices

[redacted] twenty (20) days of issuance of the Harasment Order for Relief. You may obtain a copy of the Harassment Order For Relief from the court administrator's office at the following address: 555 18th Ave SW, Cambridge, MN 55008.
Failure to appear at a scheduled hearing or to obtain a copy of the Harassment Order For Relief will not be a defense to prosecution for violation of the Court's order.
Date 8-13-19
Teresa Cheever
Court Administrator/Deputy

Notice of Dissolution
Amphora Medical, Inc. was dissolved pursuant to Sec. 275 of the General Corporation Law of the State of Delaware. Any person having a claim against Amphora Medical, Inc. may send written notice of such claim to the following address: Amphora Medical, Inc., c/o Fox Rothschild LLP, 222 S. 9th Street, Suite 2000, Minneapolis, MN 55402, Attn: Tom Moran. Any such notice must contain sufficient information reasonably to inform the corporation or successor entity of the identity of the claimant and the substance of the claim. A claim must be received by the corporation no later than October 14, 2019. Any claim against the corporation will be barred if not received by October 14, 2019. The corporation or a successor entity may make distributions to other claimants and the corporation's stockholders or persons interested as having been such without further notice to the claimant. The corporation did not make distributions to its stockholders for the past three years prior to the date the corporation dissolved.

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Mortgage Foreclosures

19-111215
NOTICE OF MORTGAGE FORECLOSURE SALE
THE RIGHT TO VERIFICATION OF THE DEBT AND IDENTITY OF THE ORIGINAL CREDITOR WITHIN THE TIME PROVIDED BY LAW IS NOT AFFECTED BY THIS ACTION.
NOTICE IS HEREBY GIVEN, that default has occurred in the conditions of the following described mortgage:
DATE OF MORTGAGE: December 22, 2017
ORIGINAL PRINCIPAL AMOUNT OF MORTGAGE: $200,000.00
MORTGAGOR(S): Denise M. Elliott, a single person
MORTGAGEE: Mortgage Electronic Registration Systems, Inc.
TRANSACTION AGENT: Mortgage Electronic Registration Systems, Inc.
MIN#: 100853701023966996
LENDER OR BROKER AND MORTGAGE ORIGINATOR STATED ON THE MORTGAGE: loanDepot.com, LLC
SERVICER: PennyMac Loan Services, LLC
DATE AND PLACE OF FILING: Filed January 2, 2018, Hennepin County Recorder, as Document Number A10516156
ASSIGNMENTS OF MORTGAGE: Assigned to: PennyMac Loan Services, LLC
LEGAL DESCRIPTION OF PROPERTY: The East 78 feet of Lot 7, Adams Rearrangement in Block 8, Rollins Second Addition to Minneapolis, Minnesota
PROPERTY ADDRESS: 3224 29th Ave S, Minneapolis, MN 55406
PROPERTY IDENTIFICATION NUMBER: 01-028-24-14-0005
COUNTY IN WHICH PROPERTY IS LOCATED: Hennepin
THE AMOUNT CLAIMED TO BE DUE ON THE MORTGAGE ON THE DATE OF THE NOTICE: $201,849.49
THAT all pre-foreclosure requirements have been complied with; that no action or proceeding has been instituted at law or otherwise to recover the debt secured by said mortgage, or any part thereof;
PURSUANT, to the power of sale contained in said mortgage, the above described property will be sold by the Sheriff of said county as follows:
DATE AND TIME OF SALE: June 21, 2019, 10:00am
PLACE OF SALE: Sheriff's Main Office, Civil Division, Room 30, Courthouse, 350 South Fifth St., Minneapolis, MN 55487 to pay the debt secured by said mortgage and taxes, if any, on said premises and the costs and disbursements, including attorneys fees allowed by law, subject to redemption within 6 months from the date of said sale by the mortgagor(s) the personal representatives or assigns.
TIME AND DATE TO VACATE PROPERTY: If the real estate is an owner-occupied, single-family dwelling, unless otherwise provided by law, the date on or before which the mortgagor(s) must vacate the property, if the mortgage is not reinstated under section 580.30 or the property is not redeemed under section 580.23, is 11:59 p.m. on December 21, 2019, or the next business day if December 21, 2019 falls on a Saturday, Sunday or legal holiday.
"THE TIME ALLOWED BY LAW FOR REDEMPTION BY THE MORTGAGOR, THE MORTGAGOR'S PERSONAL REPRESENTATIVES OR ASSIGNS, MAY BE REDUCED TO FIVE WEEKS IF A JUDICIAL ORDER IS ENTERED UNDER MINNESOTA STATUTES SECTION 582.032 DETERMINING, AMONG OTHER THINGS, THAT THE MORTGAGED PREMISES ARE IMPROVED WITH A RESIDENTIAL DWELLING OF LESS THAN 5 UNITS, ARE NOT PROPERTY USED FOR AGRICULTURAL PRODUCTION, AND ARE ABANDONED.
Dated: April 24, 2019
PennyMac Loan Services, LLC
Assignee of Mortgagee
SHAPIRO & ZIELKE, LLP
BY Lawrence P. Zielke - 152559
Melissa L. B. Porter - 0337778
Randolph W. Dawdy - 2160X
Gary J. Evers - 0134764
Tracy J. Halliday - 034610X
Attorneys for Mortgagee
Shapiro & Zielke, LLP
12550 West Frontage Road, Suite 200 Burnsville, MN 55337
(952) 831-4060
THIS IS A COMMUNICATION FROM A DEBT COLLECTOR
NOTICE OF POSTPONEMENT OF MORTGAGE FORECLOSURE SALE
The above referenced sale scheduled for June 21, 2019, at 10:00 AM, has been postponed to August 20, 2019, at 10:00 AM, and will be held at sheriffs main address Civil Division, Room 30, Courthouse, 350 South Fifth St., Minneapolis, MN 55487.
Unless the mortgage is reinstated under Minnesota Statute 580.30 or the property is redeemed under Minnesota Statute 580.23 the property must be vacated by February 20, 2020. If this date falls on a Saturday, Sunday or legal holiday, the date to vacate will be the next business day at 11:59 p.m.
THIS IS A COMMUNICATION FROM A DEBT COLLECTOR.
Dated: June 6, 2019.
PennyMac Loan Services, LLC
Assignee of Mortgagee
SHAPIRO & ZIELKE, LLP
Lawrence P. Zielke - 152559
Melissa L. B. Porter - 0337778
Randolph W. Dawdy - 2160X
Gary J. Evers - 0134764
Tracy J. Halliday - 034610X
12550 West Frontage Road, Suite 200 Burnsville, MN 55337
(952) 831-4060
19-111215
Attorney for Assignee of Mortgagee
NOTICE OF POSTPONEMENT OF MORTGAGE FORECLOSURE SALE
The above referenced sale scheduled for August 20, 2019, at 10:00 AM, has been postponed to November 18, 2019, at 10:00 AM, and will be held at sheriffs main address Civil Division, Room 30, Courthouse, 350 South Fifth St., Minneapolis, MN 55487.
Unless the mortgage is reinstated under Minnesota Statute 580.30 or the property is redeemed under Minnesota Statute 580.23 the property must be vacated by May 18, 2020. If this date falls on a Saturday, Sunday or legal holiday, the date to vacate will be the next business day at 11:59 p.m.
THIS IS A COMMUNICATION FROM A DEBT COLLECTOR.
Dated: August 16, 2019.
PennyMac Loan Services, LLC
Assignee of Mortgagee
SHAPIRO & ZIELKE, LLP
Lawrence P. Zielke - 152559
Melissa L. B. Porter - 0337778
Randolph W. Dawdy - 2160X
Gary J. Evers - 0134764
Tracy J. Halliday - 034610X
12550 West Frontage Road, Suite 200 Burnsville, MN 55337
(952) 831-4060
19-111215
Attorney for Assignee of Mortgagee
8/21/19 Star Tribune

NOTICE OF MORTGAGE FORECLOSURE SALE
THE RIGHT TO VERIFICATION OF THE DEBT AND IDENTITY OF THE ORIGINAL CREDITOR WITHIN THE TIME PROVIDED BY LAW IS NOT AFFECTED BY THIS ACTION.
NOTICE IS HEREBY GIVEN, that default has occurred in conditions of the following described mortgage:
DATE OF MORTGAGE: July 28, 2017
MORTGAGOR: Christopher Michael Williamson and Alyssa Lynn Williamson, husband and wife as joint tenants.
MORTGAGEE: Mortgage Electronic Registration Systems, Inc. as nominee for United Wholesale Mortgage.
DATE AND PLACE OF RECORDING: Recorded August 9, 2017 Hennepin County Recorder, Document No. A10468271.
ASSIGNMENTS OF MORTGAGE: Assigned to: Lakeview Loan Servicing, LLC. Dated February 20, 2019 Recorded February 25, 2019, as Document No. A10637992.
TRANSACTION AGENT: Mortgage Electronic Registration Systems, Inc.
TRANSACTION AGENT'S MORTGAGE IDENTIFICATION NUMBER ON MORTGAGE: 100032412170712365
LENDER OR BROKER AND MORTGAGE ORIGINATOR STATED ON MORTGAGE: United Wholesale Mortgage
RESIDENTIAL MORTGAGE SERVICER: LoanCare, LLC
MORTGAGED PROPERTY ADDRESS: 9992 Balsam Lane North, Maple Grove, MN 55369
TAX PARCEL I.D. #: 11-119-22-11-0064
LEGAL DESCRIPTION OF PROPERTY: Lot 10, Block 4, Fountain Park, Hennepin County, Minnesota.
COUNTY IN WHICH PROPERTY IS LOCATED: Hennepin
ORIGINAL PRINCIPAL AMOUNT OF MORTGAGE: $230,743.00
AMOUNT DUE AND CLAIMED TO BE DUE AS OF DATE OF NOTICE, INCLUDING TAXES, IF ANY, PAID BY MORTGAGEE: $234,888.69
That prior to the commencement of this mortgage foreclosure proceeding Mortgagee/Assignee of Mortgagee complied with all notice requirements as required by statute; That no action or proceeding has been instituted at law or otherwise to recover the debt secured by said mortgage, or any part thereof;
PURSUANT to the power of sale contained in said mortgage, the above described property will be sold by the Sheriff of said county as follows:
DATE AND TIME OF SALE: May 23, 2019 at 11:00 AM
PLACE OF SALE: Hennepin County Sheriff's Office, Civil Division, Room 30, 350 South 5th Street, Minneapolis, MN to pay the debt then secured by said Mortgage, and taxes, if any, on said premises, and the costs and disbursements, including attorneys' fees allowed by law subject to redemption within six (6) months from the date of said sale by the mortgagor(s), their personal representatives or assigns unless reduced to Five (5) weeks under MN Stat. §580.07.
TIME AND DATE TO VACATE PROPERTY: If the real estate is an owner-occupied, single-family dwelling, unless otherwise provided by law, the date on or before which the mortgagor(s) must vacate the property if the mortgage is not reinstated under section 580.30 or the property is not redeemed under section 580.23 is 11:59 p.m. on November 25, 2019, unless that date falls on a weekend or legal holiday, in which case it is the next weekday, and unless the redemption period is reduced to 5 weeks under MN Stat. Secs. 580.07 or 582.032.
MORTGAGOR(S) RELEASED FROM FINANCIAL OBLIGATION ON MORTGAGE: None
"THE TIME ALLOWED BY LAW FOR REDEMPTION BY THE MORTGAGOR, THE MORTGAGOR'S PERSONAL REPRESENTATIVES OR ASSIGNS, MAY BE REDUCED TO FIVE WEEKS IF A JUDICIAL ORDER IS ENTERED UNDER MINNESOTA STATUTES, SECTION 582.032, DETERMINING, AMONG OTHER THINGS, THAT THE MORTGAGED PREMISES ARE IMPROVED WITH A RESIDENTIAL DWELLING OF LESS THAN FIVE UNITS, ARE NOT PROPERTY USED IN AGRICULTURAL PRODUCTION, AND ARE ABANDONED."
Dated: March 18, 2019
Lakeview Loan Servicing, LLC
Mortgagee/Assignee of Mortgagee
USSET, WEINGARDEN AND LIEBO, P.L.L.P.
Attorneys for Mortgagee/Assignee of Mortgagee
4500 Park Glen Road #300
Minneapolis, MN 55416
(952) 925-6888
100 - 19-001965 FC
THIS IS A COMMUNICATION FROM A DEBT COLLECTOR.
NOTICE OF POSTPONEMENT OF MORTGAGE FORECLOSURE SALE
Pursuant to the provisions of Minnesota Statutes 580.07, the foregoing foreclosure sale is postponed until August 15, 2019 at 11:00 AM at the Hennepin County Sheriff's Office, Civil Division, Room 30, 350 South 5th Street, Minneapolis, MN, in said county and state.
Dated: May 23, 2019.
Lakeview Loan Servicing, LLC
Mortgagee/Assignee of Mortgagee
USSET, WEINGARDEN AND LIEBO, P.L.L.P.
Attorneys for Mortgagee/Assignee of Mortgagee
4500 Park Glen Road #300
Minneapolis, MN 55416
(952) 925-6888
100 - 19-001965 FC
THIS IS A COMMUNICATION FROM A DEBT COLLECTOR.
NOTICE OF POSTPONEMENT OF MORTGAGE FORECLOSURE SALE
Pursuant to the provisions of Minnesota Statutes 580.07, the foregoing foreclosure sale is postponed until October 3, 2019 at 11:00 AM at the Hennepin County Sheriff's Office, Civil Division, Room 30, 350 South 5th Street, Minneapolis, MN, in said county and state.
Dated: August 19, 2019.
Lakeview Loan Servicing, LLC
Mortgagee/Assignee of Mortgagee
USSET, WEINGARDEN AND LIEBO, P.L.L.P.
Attorneys for Mortgagee/Assignee of Mortgagee
4500 Park Glen Road #300
Minneapolis, MN 55416
(952) 925-6888
100 - 19-001965 FC
THIS IS A COMMUNICATION FROM A DEBT COLLECTOR.
8/21/19 Star Tribune

NOTICE OF MORTGAGE FORECLOSURE SALE
THE RIGHT TO VERIFICATION OF THE DEBT AND IDENTITY OF THE ORIGINAL CREDITOR WITHIN THE TIME PROVIDED BY LAW IS NOT AFFECTED BY THIS ACTION.
NOTICE IS HEREBY GIVEN, that default has occurred in the conditions of the following described mortgage:
Mortgagor: Sandra J. Sherman, unmarried
Mortgagee: Washington Mutual Bank, FA
Dated: 12/18/2006
Filed: 12/22/2006
Ramsey Registrar of Titles Document No. 1990149 Against Certificate of Title No.: 534992
Assigned To: Homeward Residential, Inc. its successors and/or assigns
Dated: 10/06/2012
Filed 02/19/2013
Ramsey County Registrar of Titles Document No. 2201643 Against Certificate of Title No.: 534992
Assigned To: Ocwen Loan Servicing, LLC
Dated: 08/07/2014
Filed 08/22/2014
Ramsey County Registrar of Titles Document No. T02511206 Against Certificate of Title No.: 534992
Assigned To: Residential Credit Solutions, Inc.
Dated: 11/09/2015
Filed 11/16/2015
Ramsey County Registrar of Titles Document No. T02544991 Against Certificate of Title No.: 534992
Assigned To: Wilmington Savings Fund Society, FSB, d/b/a Christiana Trust, not individually but as trustee for Pretium Mortgage Acquisition Trust
Dated: 09/12/2017
Filed 10/26/2018
Ramsey County Registrar of Titles Document No. T02626608 Against Certificate of Title No.: 534992
Assigned To: Wilmington Savings Fund Society, FSB, d/b/a Christiana Trust, not individually but as trustee for Pretium Mortgage Acquisition Trust
Dated: 03/20/2019
Filed 03/22/2019
Ramsey County Registrar of Titles Document No. T02635652 Against Certificate of Title No.: 534992
Transaction Agent: N/A
Transaction Agent Mortgage Identification Number: N/A
Lender or Broker: Washington Mutual Bank, FA
Residential Mortgage Servicer: Rushmore Loan Management Services, LLC
Mortgage Originator: Washington Mutual Bank, FA
LEGAL DESCRIPTION OF PROPERTY: Lot 10, Block 1, Crestwood Townhomes
This is Registered Property.
TAX PARCEL NO.: 11.29.22.13.0139
ADDRESS OF PROPERTY:
2052 11th Avenue E
North St Paul, MN 55109
COUNTY IN WHICH PROPERTY IS LOCATED: Ramsey
ORIGINAL PRINCIPAL AMOUNT OF MORTGAGE: $93,899.00
AMOUNT DUE AND CLAIMED TO BE DUE AS OF DATE OF NOTICE: $142,577.75
That prior to the commencement of this mortgage foreclosure proceeding Mortgagee/Assignee of Mortgagee complied with all notice requirements as required by statute; that no action or proceeding has been instituted at law or otherwise to recover the debt secured by said mortgage, or any part thereof;
PURSUANT to the power of sale contained in said mortgage, the above described property will be sold by the Sheriff of said county as follows:
DATE AND TIME OF SALE: September 25, 2019, 10:00 AM
PLACE OF SALE: Sheriff's Office, Civil Process Unit, 25 W. 4th Street, Suite 150, St. Paul, MN to pay the debt then secured by said Mortgage, and taxes, if any, on said premises, and the costs and disbursements, including attorneys' fees allowed by law subject to redemption within 6 Months from the date of said sale by the mortgagor(s), their personal representatives or assigns.
DATE TO VACATE PROPERTY: The date on or before which the mortgagor must vacate the property if the mortgage is not reinstated under Minnesota Statutes section 580.30 or the property redeemed under Minnesota Statutes section 580.23 is March 25, 2020 at 11:59 p.m. If the foregoing date is a Saturday, Sunday or legal holiday, then the date to vacate is the next business day at 11:59 p.m.
MORTGAGOR(S) RELEASED FROM FINANCIAL OBLIGATION ON MORTGAGE: NONE
THE TIME ALLOWED BY LAW FOR REDEMPTION BY THE MORTGAGOR, THE MORTGAGOR'S PERSONAL REPRESENTATIVES OR ASSIGNS, MAY BE REDUCED TO FIVE WEEKS IF A JUDICIAL ORDER IS ENTERED UNDER MINNESOTA STATUTES SECTION 582.032, DETERMINING, AMONG OTHER THINGS, THAT THE MORTGAGED PREMISES ARE IMPROVED WITH A RESIDENTIAL DWELLING OF LESS THAN FIVE UNITS, ARE NOT PROPERTY USED IN AGRICULTURAL PRODUCTION, AND ARE ABANDONED.
Dated: August 7, 2019
Wilmington Savings Fund Society, FSB, d/b/a Christiana Trust, not individually but as trustee for Pretium Mortgage Acquisition Trust, Assignee of Mortgagee
By: PFB LAW, PROFESSIONAL ASSOCIATION
Attorneys for:
Wilmington Savings Fund Society, FSB, d/b/a Christiana Trust, not individually but as trustee for Pretium Mortgage Acquisition Trust, Assignee of Mortgagee
55 East Fifth Street, Suite 800
St. Paul, MN 55101-1718
651-291-8955
651-228-1753 (fax)
THIS COMMUNICATION IS FROM A DEBT COLLECTOR ATTEMPTING TO COLLECT A DEBT. ANY INFORMATION OBTAINED WILL BE USED FOR THAT PURPOSE.
17836-14-00938-4
8/14, 8/21, 8/28, 9/4, 9/11, 9/18/19 Star Tribune

19-110717
NOTICE OF MORTGAGE FORECLOSURE SALE
THE RIGHT TO VERIFICATION OF THE DEBT AND IDENTITY OF THE ORIGINAL CREDITOR WITHIN THE TIME PROVIDED BY LAW IS NOT AFFECTED BY THIS ACTION.
NOTICE IS HEREBY GIVEN, that default has occurred in the conditions of the following described mortgage:
DATE OF MORTGAGE: May 23, 2006
ORIGINAL PRINCIPAL AMOUNT OF MORTGAGE: $133,600.00
MORTGAGOR(S): Marien Fernandez-Paris Borras, an unmarried person
MORTGAGEE: ABN AMRO Mortgage Group, Inc.
LENDER OR BROKER AND MORTGAGE ORIGINATOR STATED ON THE MORTGAGE: ABN AMRO Mortgage Group, Inc.
SERVICER: Specialized Loan Servicing LLC
DATE AND PLACE OF FILING: Filed June 22, 2006, Ramsey County Recorder, as Document Number 3958112, Thereafter modified by Loan Modification Agreement recorded on February 17, 2016 as Document Number A04595578
ASSIGNMENTS OF MORTGAGE: Assigned to: Green Tree Servicing, LLC; Dated: January 27, 2015 filed: January 28, 2015, recorded as document number A04541918; Thereafter assigned to Specialized Loan Servicing, LLC dated November 29, 2017 and recorded on December 1, 2017 as Document Number A04688323.
LEGAL DESCRIPTION OF PROPERTY: Lot 24, Block 17, Midway Heights, except the South 3 feet thereof
PROPERTY ADDRESS: 1903 Minnehaha Ave W, Saint Paul, MN 55104
PROPERTY IDENTIFICATION NUMBER: 282923340151
COUNTY IN WHICH PROPERTY IS LOCATED: Ramsey
THE AMOUNT CLAIMED TO BE DUE ON THE MORTGAGE ON THE DATE OF THE NOTICE: $162,944.26
THAT all pre-foreclosure requirements have been complied with; that no action or proceeding has been instituted at law or otherwise to recover the debt secured by said mortgage, or any part thereof;
PURSUANT, to the power of sale contained in said mortgage, the above described property will be sold by the Sheriff of said county as follows:
DATE AND TIME OF SALE: April 2, 2019, 10:00am
PLACE OF SALE: Sheriff's Main Office, The Lowry Building/City Hall Annex, 25 West 4th St., Suite 150, St. Paul, MN 55102 to pay the debt secured by said mortgage and taxes, if any, on said premises and the costs and disbursements, including attorneys fees allowed by law, subject to redemption within 6 months from the date of said sale by the mortgagor(s) the personal representatives or assigns.
TIME AND DATE TO VACATE PROPERTY: If the real estate is an owner-occupied, single-family dwelling, unless otherwise provided by law, the date on or before which the mortgagor(s) must vacate the property, if the mortgage is not reinstated under section 580.30 or the property is not redeemed under section 580.23, is 11:59 p.m. on October 2, 2019, or the next business day if October 2, 2019 falls on a Saturday, Sunday or legal holiday.
"THE TIME ALLOWED BY LAW FOR REDEMPTION BY THE MORTGAGOR, THE MORTGAGOR'S PERSONAL REPRESENTATIVES OR ASSIGNS, MAY BE REDUCED TO FIVE WEEKS IF A JUDICIAL ORDER IS ENTERED UNDER MINNESOTA STATUTES SECTION 582.032 DETERMINING, AMONG OTHER THINGS, THAT THE MORTGAGED PREMISES ARE IMPROVED WITH A RESIDENTIAL DWELLING OF LESS THAN 5 UNITS, ARE NOT PROPERTY USED FOR AGRICULTURAL PRODUCTION, AND ARE ABANDONED.
Dated: February 5, 2019
Specialized Loan Servicing LLC
Assignee of Mortgagee
SHAPIRO & ZIELKE, LLP
BY Lawrence P. Zielke - 152559
Melissa L. B. Porter - 0337778
Randolph W. Dawdy - 2160X
Gary J. Evers - 0134764
Tracy J. Halliday - 034610X
Attorneys for Mortgagee
Shapiro & Zielke, LLP
12550 West Frontage Road, Suite 200 Burnsville, MN 55337
(952) 831-4060
THIS IS A COMMUNICATION FROM A DEBT COLLECTOR
NOTICE OF POSTPONEMENT OF MORTGAGE FORECLOSURE SALE
The above reference sale scheduled for April 2, 2019, at 10:00 am, was postponed to September 3, 2019 at 10:00 am, pursuant to MN Statute 580.07, subdivision 2, that subsequently the above referenced sale was postponed to October 8, 2019, at 10:00 am, located at sheriffs main address The Lowry Building/ City Hall Annex, 25 West 4th St., Suite 150, St. Paul, MN 55102.
Unless the mortgage is reinstated under Minnesota Statute 580.30 or the property is redeemed under Minnesota Statute 580.23 the property must be vacated by November 12, 2019. If this date falls on a Saturday, Sunday or legal holiday, the date to vacate will be the next business day at 11:59 p.m.
THIS IS A COMMUNICATION FROM A DEBT COLLECTOR.
Dated: August 16, 2019.
Specialized Loan Servicing LLC
Assignee of Mortgagee
SHAPIRO & ZIELKE, LLP
Lawrence P. Zielke - 152559
Melissa L. B. Porter - 0337778
Randolph W. Dawdy - 2160X
Gary J. Evers - 0134764
Tracy J. Halliday - 034610X
12550 West Frontage Road, Suite 200 Burnsville, MN 55337
(952) 831-4060
19-110717
Attorney for Assignee of Mortgagee
8/21/19 Star Tribune

Appendix C

Interviews

INTERVIEW RECORD-LAND OWNER AND NEIGHBORS	
Site Name: General Mills//Henkel Corporation Site	Site ID Number: MND051441731
Subject: 2019 Five-Year Review	Date: September 12, 2019
Type: **Telephone** Visit E-Mail Other	Incoming **Outgoing**
Contact Made By:	
Name: Katie Larson	Organization: Bay West LLC
Title: Senior Scientist II	
Individual Contacted:	
Name Jasen Mark	Organization: First & First
Title: CFO of First & First	
Telephone Number: 612-334-9434 E-Mail Address: jasen@first-first.com	Street Address: 105 N First Street City, State, Zip: Minneapolis, MN 55401

Summary of Conversation

1. What is your overall impression of the project? (general sentiment)

They are aware of the project and it has no impact on their day to day business.

2. What effects have site operations had on the surrounding community?

They are aware of the vapor work that has been on-going. Jasen is aware of a community meeting that took place in 2013 that was sparsely attended. He is not aware of any impacts of site operations since that time.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details?

He is not aware of any community concerns and First & First has no concerns.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

No.

5. Do you feel well informed about the site's activities and progress?

Yes. He has sought out information from GMI and the state and feels he is getting the information he need.

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

No recommendations.

7. Do you have any other concerns or comments about the site?

No.

INTERVIEW RECORD-LAND OWNER AND NEIGHBORS	
Site Name: General Mills//Henkel Corporation Site	Site ID Number: MND051441731
Subject: 2019 Five-Year Review	Date: 9/4/2019
Type: Telephone Visit **E-Mail** Other	Incoming **Outgoing**
Contact Made By:	
Name: Katie Larson	Organization: Bay West LLC
Title: Senior Scientist II	
Individual Contacted:	
Name: Emily Hansen	Organization: Minnesota Department of Health
Title: Health Risk Assessor	
Telephone Number: 651-201-4602 E-Mail Address: emily.hansen@state.mn.us	Street Address: 625 N. Robert St. City, State, Zip: St. Paul, MN 55164-0975

Summary of Conversation

1. What is your overall impression of the project? (general sentiment)

Generally the vapor intrusion investigation and mitigation response was well executed and we believe the majority of properties in the area have been successfully mitigated. MDH provided additional recommendations in the 2018 Health Consultation that we would like to see addressed: https://www.health.state.mn.us/communities/environment/hazardous/docs/sites/hennepin/gmhc20180305.pdf

2. What effects have site operations had on the surrounding community?

This is best answered by members of the community.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details?

Recently we heard frustration over the desire to ultimately see the site remediated and the lack of progress of the process moving forward. MDH answered a number of questions at a SECIA meeting in 2018. A particular concern was how well the vapor intrusion mitigation systems will perform over time, particularly if building owners/occupants are not well informed regarding the systems and if there is no long term O&M activities. MDH has gotten only a handful of questions via phone/email in the last several years - regarding drinking water, vapor mitigation, gardening, and tenant notifications.

MDH has documented additional community concerns in the 2018 Health Consultation.

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

   No

5. Do you feel well informed about the site's activities and progress?

   I know that I can contact MPCA at any time for an update.

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

MDH recommendations are provided in the 2018 Health Consultation.

7. Do you have any other concerns or comments about the site?

No

MDH/EPA Specific Questions:

1. Have there been routine communications or activities (site visits, inspections, reporting activities, etc.) conducted by your office regarding the site? If so, please give purpose and results.

   MDH wrote the 2018 Health Consultation as an independent evaluation of the data and actions taken. It provides recommendations to protect public health moving forward. MDH will continue to respond to community questions that we receive.

2. Have there been any complaints, violations, or other incidents related to the site requiring a response by your office? If so, please give details of the events and results of the responses.

   No

General Mills Specific Questions:

1. Have there been unexpected O&M difficulties or costs at the site since start-up or in the last five years? If so, please give details.

2. Have there been opportunities to optimize O&M, or sampling efforts? Please describe changes and resultant or desired cost savings or improved efficiency.

From:	Diane Curelli
To:	Katie Larson
Cc:	Diane Curelli
Subject:	Delivery: General Mills" 5 Year Interview Question Responses for Site ID MND051441731
Date:	Thursday, September 5, 2019 11:29:32 AM
Attachments:	2019 Five Year Review Interview Questions_General Mills_5 Sept 2019.pdf General Mills Contamination Map Mark-Up 10-15-18.pdf

---

Katie,

Attached is General Mill's responses to your 2019 Five Year Review interview questions for the referenced site (MND051441731). Also attached is an enclosure referenced in our responses. I will follow this email with hard copies in the mail.

If you have any questions please let me know. Thank you!

Diane

Diane Curelli
GSE | Manager, Environmental Risk & Sustainability
One General Mills Blvd, M03-08 | Golden Valley, MN 55426
✉: diane.curelli@genmills.com | ☎: (763) 293.2452

Check out our story at A Taste of General Mills

General Mills
Making Food People Love

September 5, 2019

Katie Larson
Senior Scientist II
Bay West LLC
1106 88th Avenue West
Duluth, MN 55808

Re: Site ID Number: Site ID Number: MND051441731

Dear Katie:

I write to provide General Mills' responses to your 2019 Five-Year Review interview questions for the referenced site.

Overview

The evidence compiled in more than three decades of work on this response action demonstrates that General Mills has cleaned up the contamination resulting from its historic operations. General Mills has satisfied all its obligations under the applicable agreements, being the 1984 Consent Order and its 2014 Addendum. Consistent with U.S. EPA's priorities, delisting is appropriate and should be accelerated.

I. The General Mills Waste Has Been Fully Cleaned Up

As we first explained to MPCA in 2016, General Mills cleaned up the TCE in its waste material to the action level by 1991, and to a non-detectable level by 1996. MPCA has steadfastly refused to accept these conclusions, citing, variously, unspecified "uncertainty" and unsubstantiated technical arguments. These issues have been the subject of sporadic letters and meetings over the past three years.

In 2018, U.S. EPA and MPCA agreed that General Mills has cleaned up the source material at the disposal area. Even MPCA agrees that there is no General Mills TCE present in groundwater at the disposal area. However, MPCA continues to assert, without evidence, that TCE in General Mills' waste ***might have*** commingled with TCE that is known to be migrating towards the site from upgradient sources. Specifically, MPCA staff hypothesizes that TCE -- but, inexplicably, not other similarly-behaving solvents -- in the General Mills waste migrated from soil to groundwater, and mixed with TCE coming from these additional upgradient off-site sources, such that General Mills TCE is present in the contaminated groundwater plume originating from these known upgradient sources.

To try to resolve this question, last year U.S. EPA took the extraordinary step of charging its Office of Research and Development (ORD) to conduct an independent review. ORD's report concludes:

- The disposal area is not an ongoing source of TCE to the groundwater.

- The groundwater pump and treat system that General Mills operated for more than 25 years fully remediated any TCE that can be attributed to its waste disposal practices.

- TCE remaining in groundwater under the Site is entering from and solely attributable to off-Site upgradient sources in the Southeast Hennepin Area.

During a September 5, 2018 discussion of the preliminary ORD findings, both MPCA and EPA agreed that no further cleanup actions were necessary to address waste materials disposed at the disposal area.

II. General Mills Has Satisfied Its Obligations Under the Agreements

The 1984 Consent Order establishes the site as a small area covering only the former disposal site, and not the rest of the 2010 East Hennepin property, as it would appear MPCA believes. This point bears repeating: The site is confined to a less than 900 square foot area surrounding the former disposal area. The enclosed diagram shows the location of the site in the context of the nearly 300,000 square foot 2010 East Hennepin property. This tiny area at the south end of the property is the only parcel that is subject to the agreements, and the only area over which the regulators have jurisdiction over General Mills as to this matter.

General Mills' principle obligation under the agreements was to implement the Response Action Plan (RAP). The RAP initially called for General Mills to install and operate the pump and treat system, which we did from 1985 until 2010, when the cleanup standard in the Consent Order was met.

The 2014 Addendum requires General Mills to undertake response actions relative to vapor intrusion "due to" its operations at 2010 East Hennepin. We conducted sub-slab sampling and installed mitigation systems in hundreds of homes at great expense. We conducted "sentinel" groundwater monitoring. In total, these actions far exceeded the requirements of the 2014 Addendum.

Because our remediation obligations have been satisfied, we are taking appropriate steps to close out our work related to the site. We have cancelled the two DNR permits required for water acquisition to operate the pump and treat system, and cancellation of the NPDES permit is in process. We are taking additional steps to cap all 62 of the sentinel monitoring and pump out wells, as well as some 30 vapor ports in the right of way. We also intend to decommission and demolish the air stripping tower and remove it from the 2010 East Hennepin site (above and below ground).

III. MPCA Has Made an Unsupportable Policy Decision to Oppose Delisting

In the meeting on September 5, 2018, MPCA announced it has made a ***policy*** decision to oppose delisting the site. This is a policy decision that's unsupported by any facts. MPCA has asserted, without evidence, that there ***may be*** another TCE source area in buildings on the 2010 East Hennepin property and that General Mills should address this hypothetical source.

General Mills is not responsible for any additional investigation or management of environmental conditions at the 2010 East Hennepin property, for these reasons:

- Foremost, the current response action is limited to the site, which is the less than 900 square foot former disposal area. The buildings are obviously not part of the site.

- General Mills' waste disposal activities were limited to the former disposal area. There is ample evidence to support this fact.

- There is ***no evidence*** that General Mills disposed of any waste materials at locations other than the site.

- There is ***no evidence*** of a TCE release in any of the buildings during General Mills' operations.

- The evidence indicates the TCE present under the buildings originates from the Southeast Hennepin Area, not from spills within the buildings. In short, there is no separate "source area" under the 2010 buildings.

To the extent there is an actual impact under these buildings, then the source of TCE is the upgradient material in the Southeast Hennepin Area. MPCA must require the parties who are responsible for those sources – not General Mills -- to address them.

Instead of continuing to raise uncertainty, MPCA should recognize this response action as for the success story that it is. MPCA did its job successfully, causing the site to be thoroughly investigated, diligently managed, cleaned up, redeveloped and put back to productive use. As EPA has recently stated, "EPA deletes sites from the NPL when no further cleanup is required to protect human health or the environment." There is simply no justifiable basis for MPCA to stand in the way of U.S. EPA's consideration of delisting the site.

The time has come for MPCA and EPA to partner with us to agree on a process for delisting the Site from the National Priorities List and the Minnesota Permanent List of Priorities, and the steps necessary to terminate the 1984 Consent Order and 2014 Addendum.

Interview Questions

Summary Questions:

1. What is your overall impression of the project? (general sentiment)

   General Mills Response: See above.

2. What effects have site operations had on the surrounding community?

   General Mills Response: General Mills actions have cleaned up the General Mills waste to non-detect levels, which are well below the regulatory standard. Site operations have benefited the surrounding community accordingly.

3. Are you aware of any community concerns regarding the site or its operation and administration? If so, please give details?

   General Mills Response: No

4. Are you aware of any events, incidents, or activities at the site such as vandalism, trespassing, or emergency responses from local authorities? If so, please give details.

   General Mills Response: There appears to be some access by the public to the air stripper tower. The access port was open and graffiti was observed during our contractor's last visit to the site.

5. Do you feel well informed about the site's activities and progress?

   General Mills Response: Generally, yes, though activities are minimal and progress towards closure and delisting has ceased.

6. Do you have any comments, suggestions, or recommendations regarding the site's management or operation?

   General Mills Response: The site should be delisted, and the 1984 Consent Order terminated. See above.

7. Do you have any other concerns or comments about the site?

   General Mills Response: Yes. The site has reached the stage at which delisting and closure are the appropriate regulatory actions, but MPCA is inappropriately withholding its approval. See above.

<u>General Mills Specific Questions</u>:

1. Have there been unexpected O&M difficulties or costs at the site since start-up or in the last five years? If so, please give details.

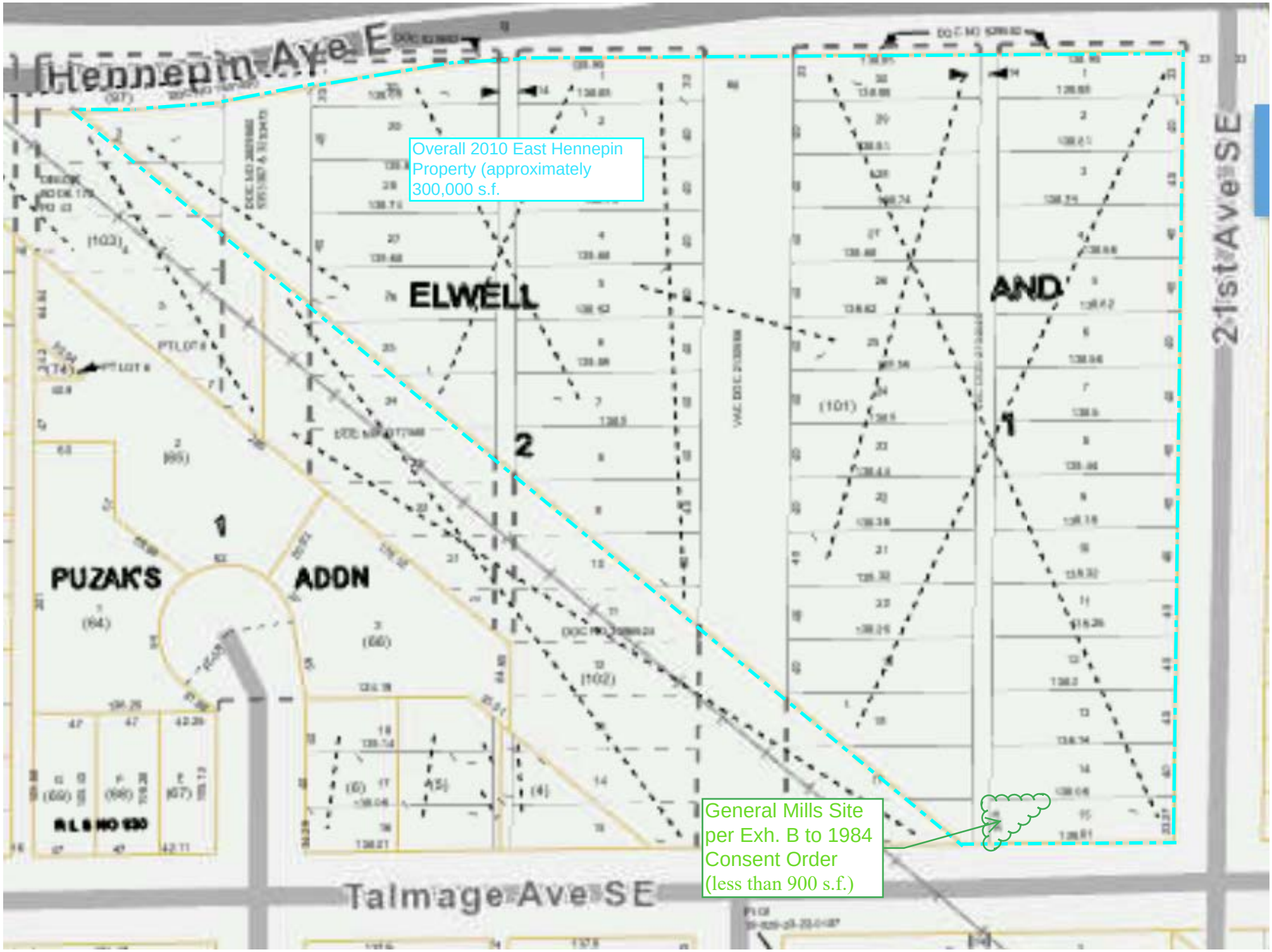
   General Mills Response: No.

2. Have there been opportunities to optimize O&M, or sampling efforts? Please describe changes and resultant or desired cost savings or improved efficiency.

   General Mills Response: No.

Sincerely,

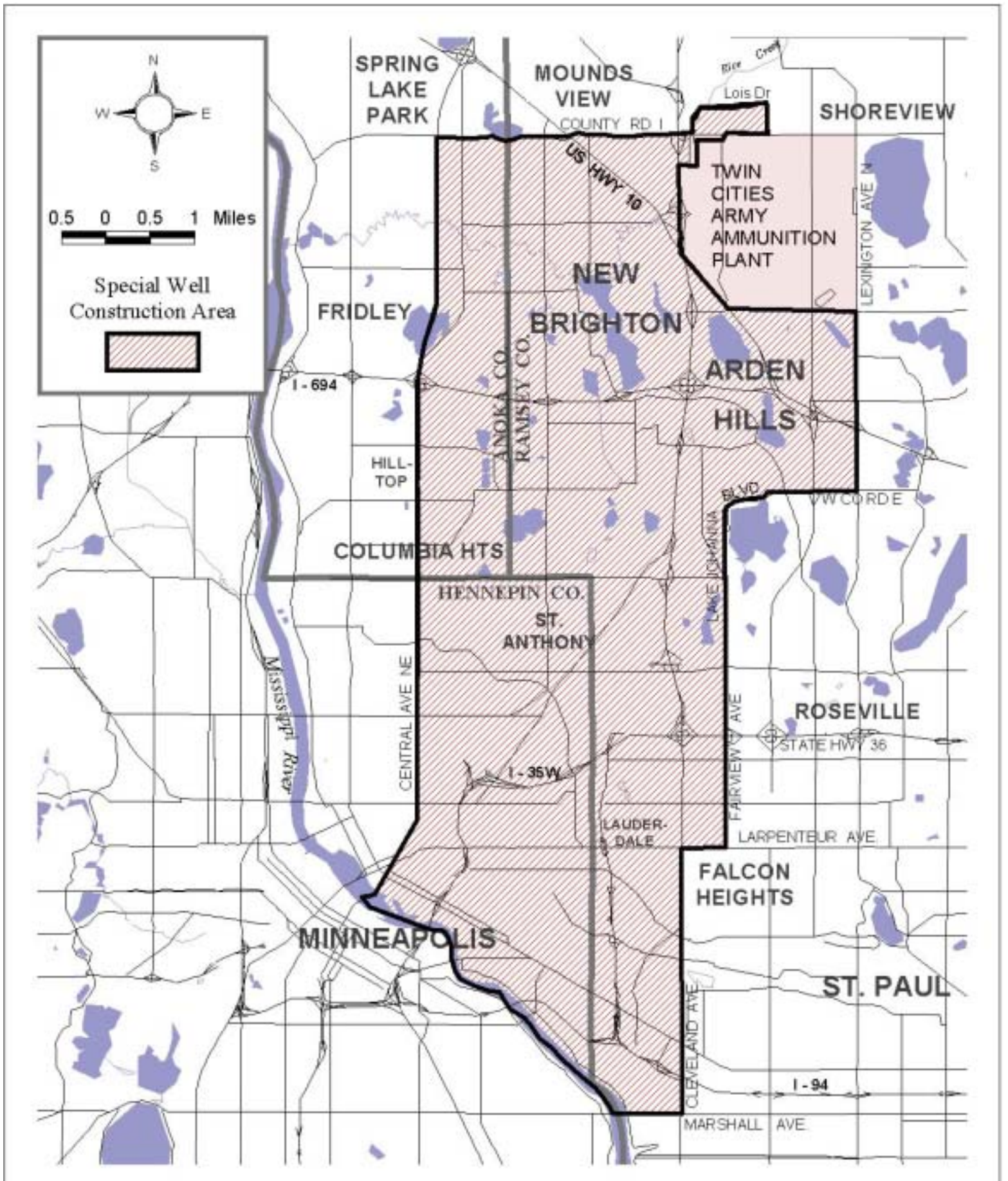
Diane Curelli
Manager, Environmental Risk & Sustainability


Hennepin Ave E
Overall 2010 East Hennepin Property (approximately 300,000 s.f.
ELWELL
AND
21st Ave SE
PUZAK'S
ADDN
General Mills Site per Exh. B to 1984 Consent Order (less than 900 s.f.)
Talmage Ave SE

Appendix D

Background Information

Special Well Constructon Area
Twin Cities Army Ammunition Plant



General Mills/Henkel Corporation Superfund Site
Minneapolis, Minnesota
10/2/2014

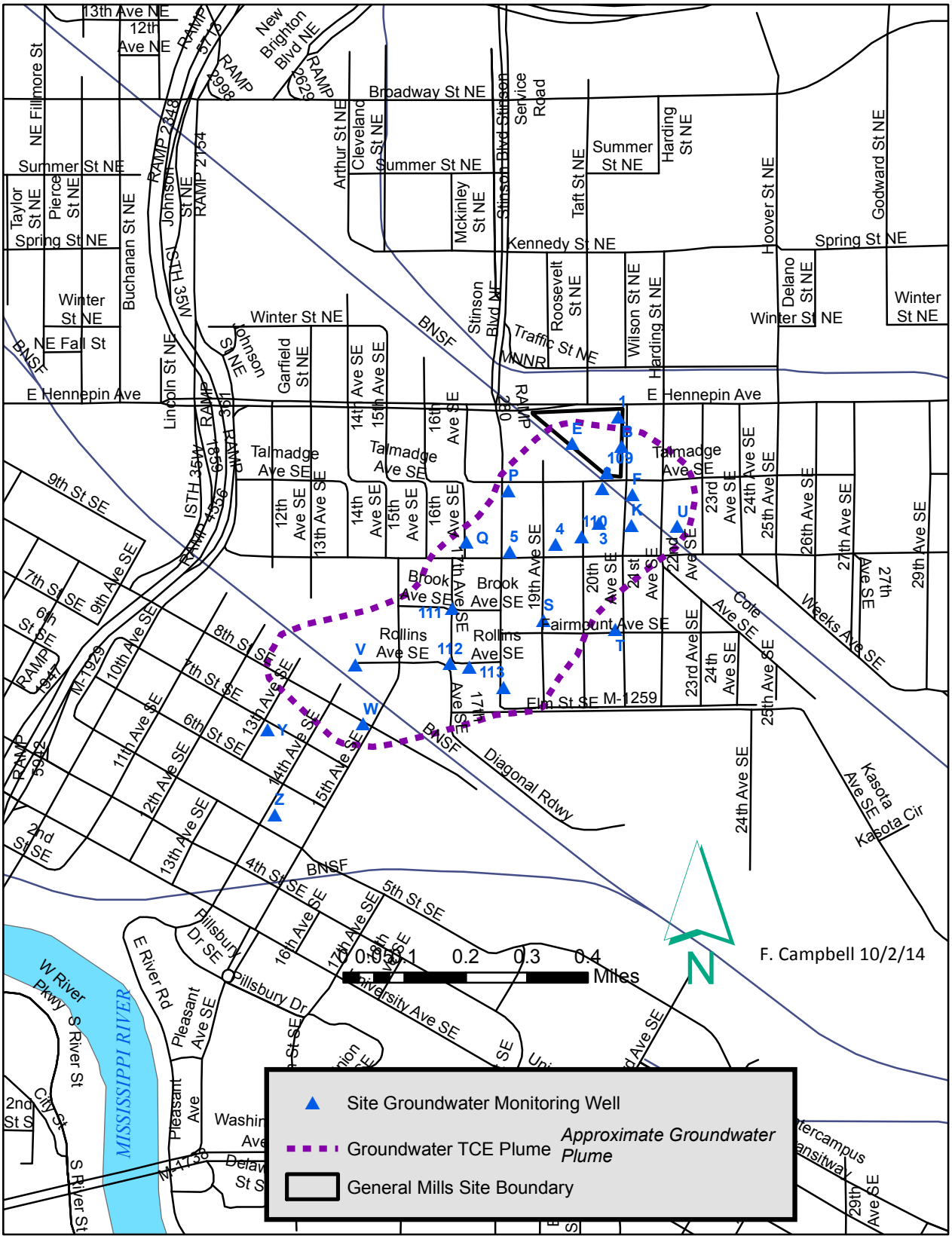
Groundwater Sample Point	Last TCE Concentration	Last Date Sampled	TCE Maximum (year)	Number of Sampling Events	Sealed
Q	<1.0 ug/L	12/17/2012	20 ug/L (1985)	33	
S	73 ug/L	12/19/2012	1100 ug/L (1987)	30	
T	<1.0 ug/L	12/17/2012	<1.0 ug/L (2012)	33	
V	31 ug/L	12/17/2012	220 ug/L (1985)	48	
W	6.8 ug/L	12/17/2012	75 ug/L (1988)	47	
X	<1.0 ug/L	12/17/2012	5.0 ug/L (1985)	31	
B	110 ug/L	1/13/2012	1300 ug/L (1986)	18	
2	720 ug/L	12/12/1983	830 ug/L (1982)	2	
110	230 ug/L	1/17/2013	1500 ug/L (1985)	38	
111	<1.0 ug/L	1/16/2013	3.3 ug/L (2000)	34	
112	5.4 ug/L	1/16/2013	120 ug/L (1998)	32	
113	4.5 ug/L	12/18/2012	310 ug/L (2008)	36	
109	160 ug/L	12/18/2012	1100 ug/L (1984)	43	
3	740 ug/L	11/22/1993	1500 ug/L (1991)	27	X
4	77 ug/L	5/16/1990	440 ug/L (1985)	13	X
1	<0.5 ug/L	11/22/1993	27 ug/L (1983)	26	X
U	0.7 ug/L	5/18/1993	16 ug/L (1986)	12	X
E	290 ug/L	12/12/1983	290 ug/L (1983)	1	X
F	94 ug/L	12/6/1983	94 ug/L (1983)	1	X
K	120 ug/L	12/9/1983	120 ug/L (1983)	1	X
P	0.4 ug/L	12/2/1983	0.4 ug/L (1983)	1	X
5	260 ug/L	12/6/1983	260 ug/L (1983)	2	X
Y	<0.2 ug/L	10/23/1986	0.5 ug/L (1986)	8	X
Z	<0.2 ug/L	10/23/1986	<0.8 ug/L (1985)	8	X

Data in this table were taken from "2012 Annual Report East Hennepin Avenue Site Minneapolis, Minnesota" dated February 2013 and prepared for General Mills, Inc. by Barr Engineering Co

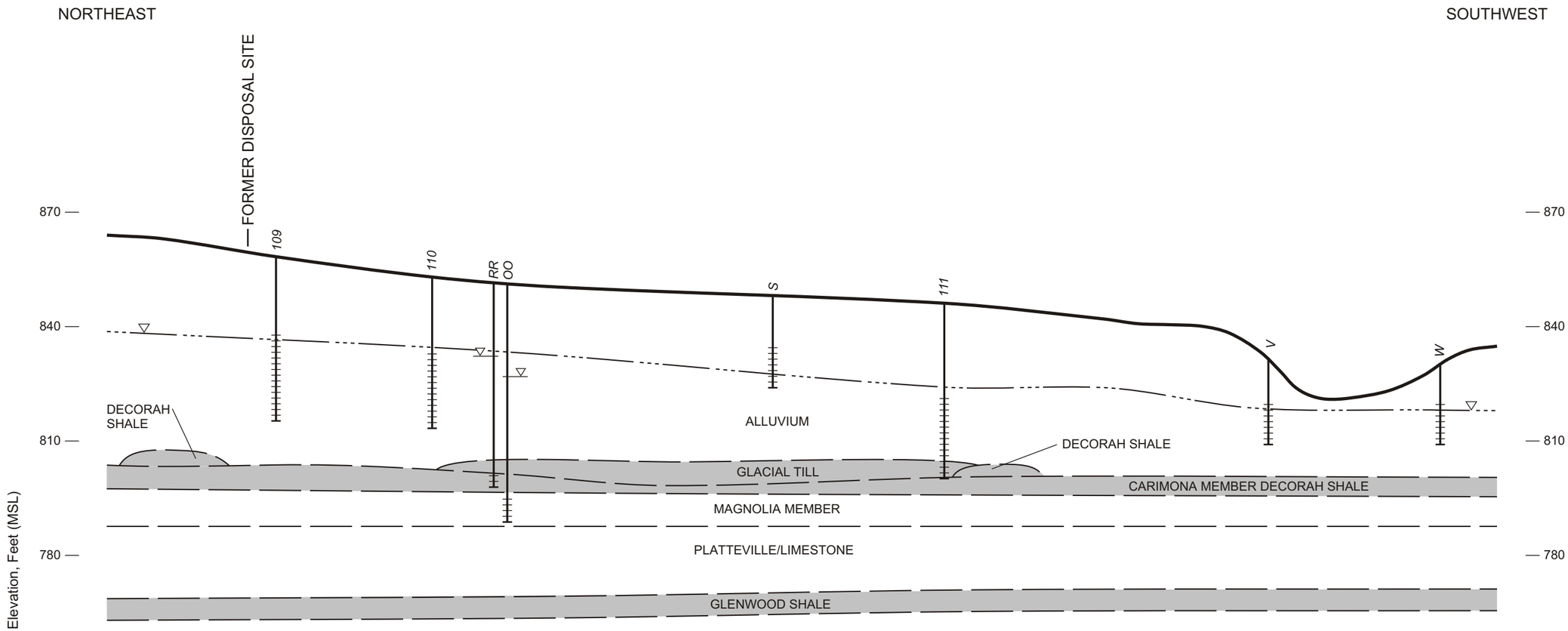
For additional information about wells located near the General Mills Superfund site, please see "2012 Receptor Well Survey East Hennepin Avenue Site, Minneapolis, Minnesota", dated February 11, 2013 and prepared for General Mills, Inc. by Barr Engineering Co.

Minnesota Pollution Control Agency

GENERAL MILLS SUPERFUND SITE



Figures



ALLUVIUM

Sand, gravelly sand and silty sand, sometimes overlain by bogs and marshes which have been drained and filled. Overlying soil is variable in composition often clayey or silty. Thickness ranges from 23 to 57 feet.

GLACIAL TILL

Gray and red tills associated with Des Moines and Superior lobes. Unsorted material with variable texture containing clay sizes and boulders. Sometimes underlain by thin layer of Alluvium. Contains sand lenses. Absent in many places, up to 20 feet thick.

DECORAH SHALE

Greenish-gray to olive-gray claystone, fissile, fossiliferous, contains several limestone layers. Patchy in this area. Thickness es range up to 50 feet.

Carimona Member: Micrite, fossiliferous, often fractured and weathered. 3.5 to 4.5 feet thick.

PLATTEVILLE/LIMESTONE

Magnolia Member: Fossiliferous micrite, calcitic shale, with rippled bedding, corroded zones, some fractures. 8.5 to 9 feet thick.
Hidden Falls: micrite, shaly, fossiliferous, 6 to 7 feet thick.
Mifflin Member: Thin beds of limestone, interbedded shale, 12 to 13 feet thick.
Pecatonica Member: Dolomite, hard, 1 to 1.5 feet thick.

GLENWOOD SHALE

Green shale, sandy at the base, 3 to 5 feet thick.

ST. PETER SANDSTONE

Light yellow or white, medium grained, massive appearing sandstone composed of rounded and subrounded grains. Thin beds of green shale are present. Ranges in thickness from 150 to 170 feet.

0 300

Approximate Horizontal Scale in Feet
10X Vertical Exaggeration

NOTE: All Features are Approximate

LEGEND

Approximate Water Table

Well and Screened Interval

Figure 3

GENERALIZED GEOLOGIC SECTION
East Hennepin Avenue Site
Minneapolis, Minnesota

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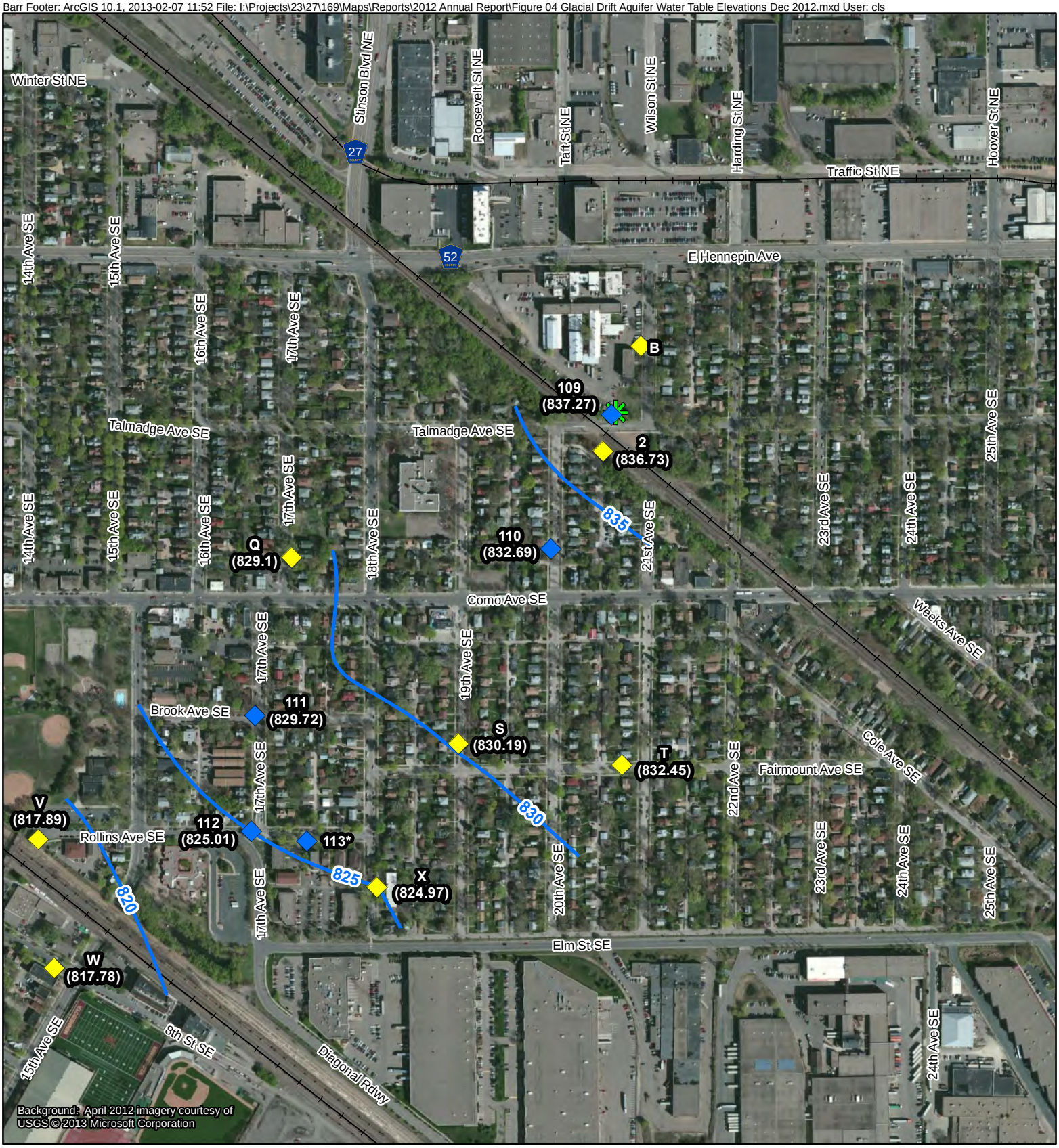


Former Disposal Site

Glacial Drift Well

Glacial Drift Pump-Out Well

Water Surface Contour

*Well 113 excluded from the water surface contour calculation based on inconsistent data

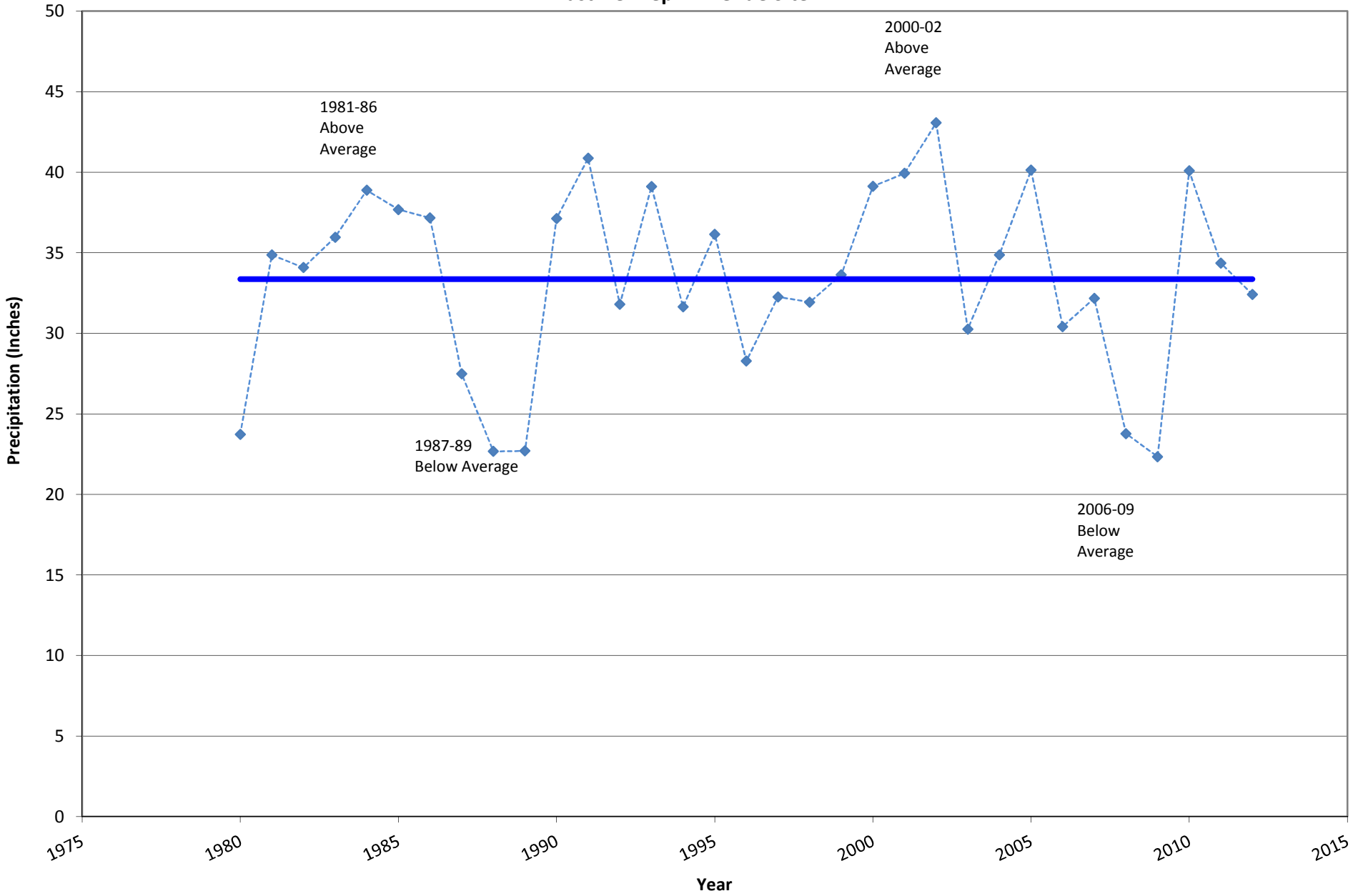
0 250 500 1,000

Feet

Figure 4

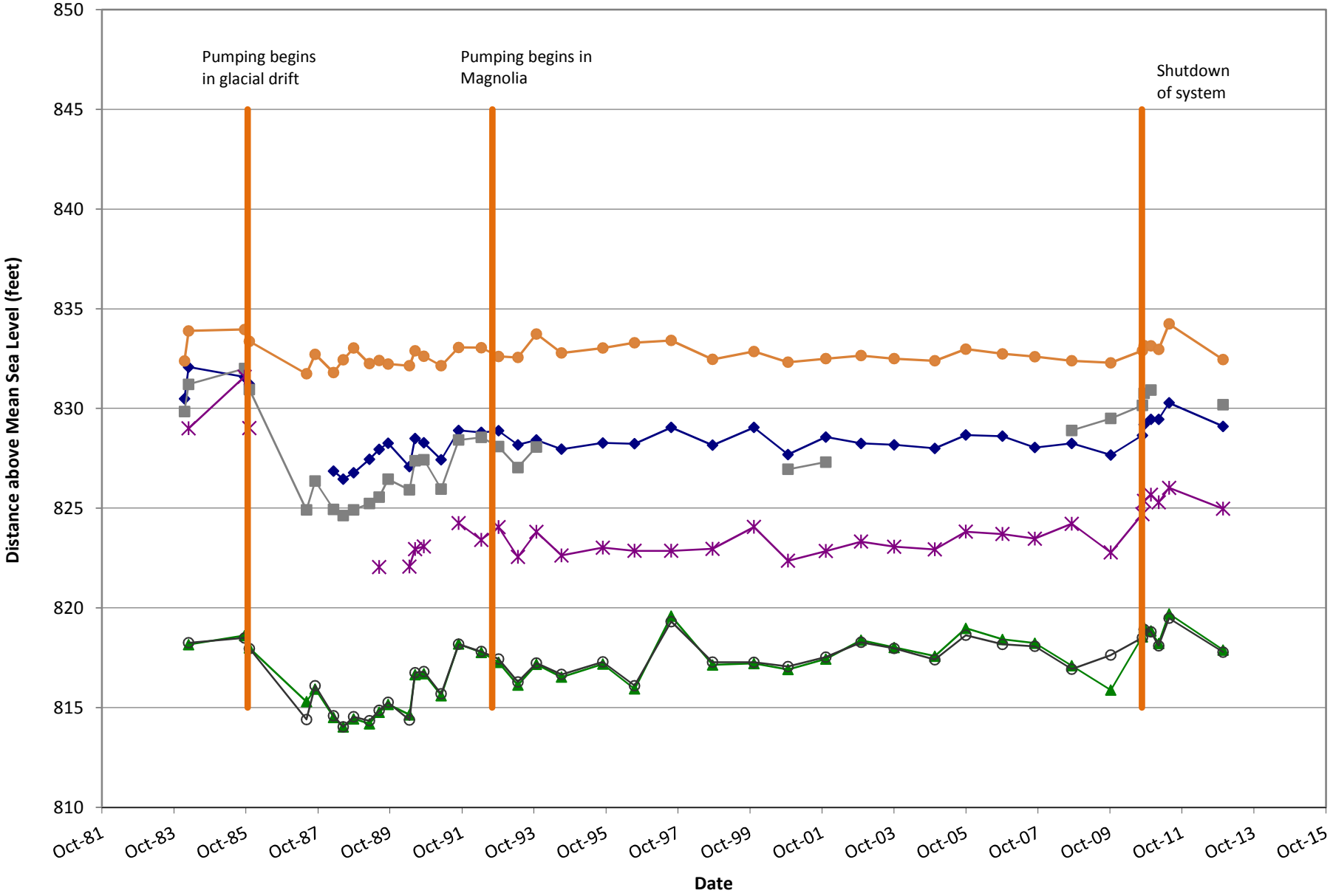
GLACIAL DRIFT AQUIFER
WATER TABLE ELEVATIONS
DECEMBER 14, 2012
East Hennepin Avenue Site
Minneapolis, Minnesota

Figure 5
Precipitation Hydrograph
East Hennepin Avenue Site

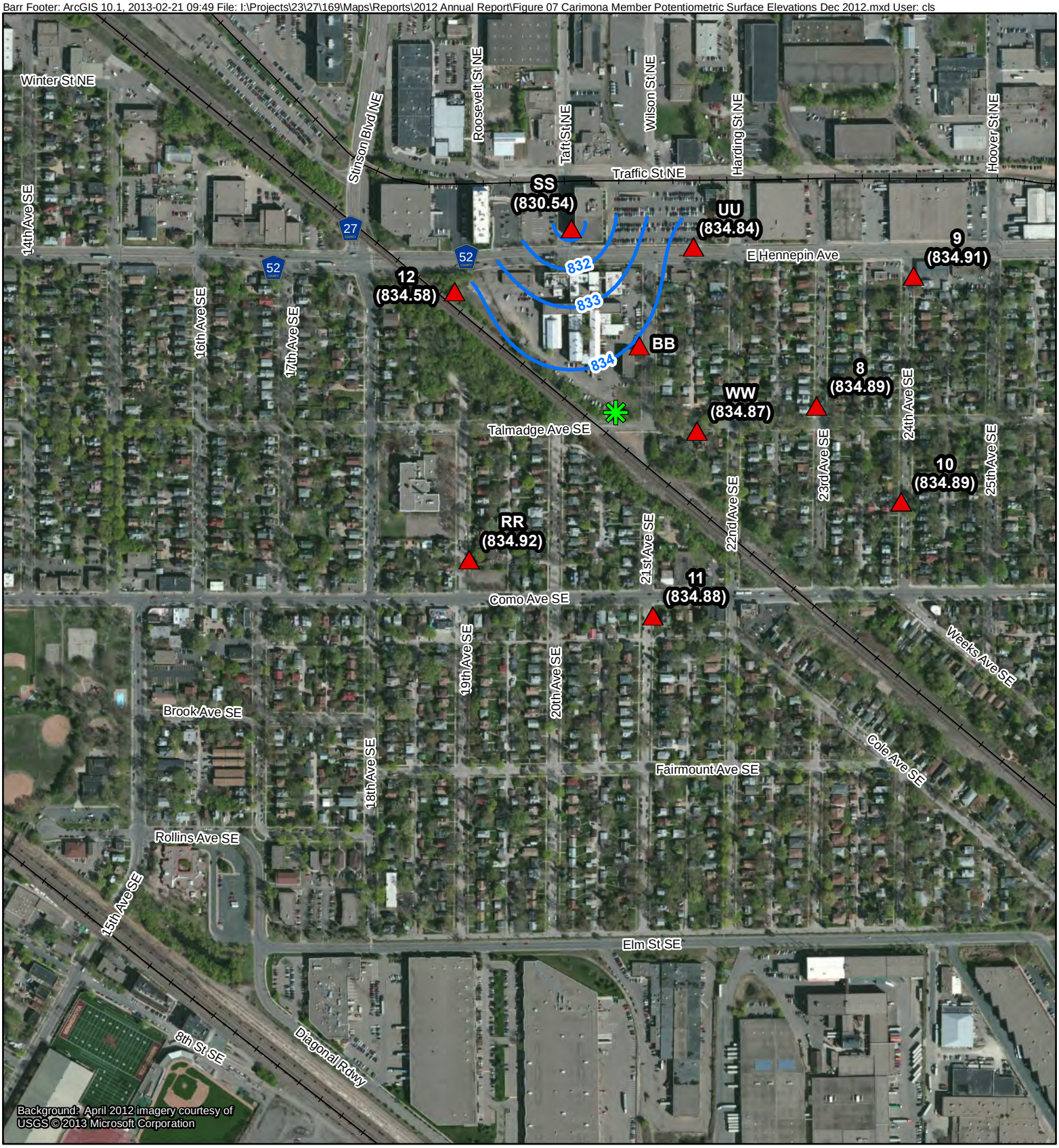


2/12/2013
P:\Mpls\23 MN\27\2327169\WorkFiles\precipitation_updated thru 2012_JKP.xls\Figure 5a

Figure 6
Glacial Drift Wells - Hydrograph
East Hennepin Avenue Site



2/12/2013
P:\Mpls\23 MN\27\2327169\WorkFiles\water table elevations_DCT.xls\Figure 5b



Former Disposal Site

Carimona Member Well

Potentiometric Surface Contour

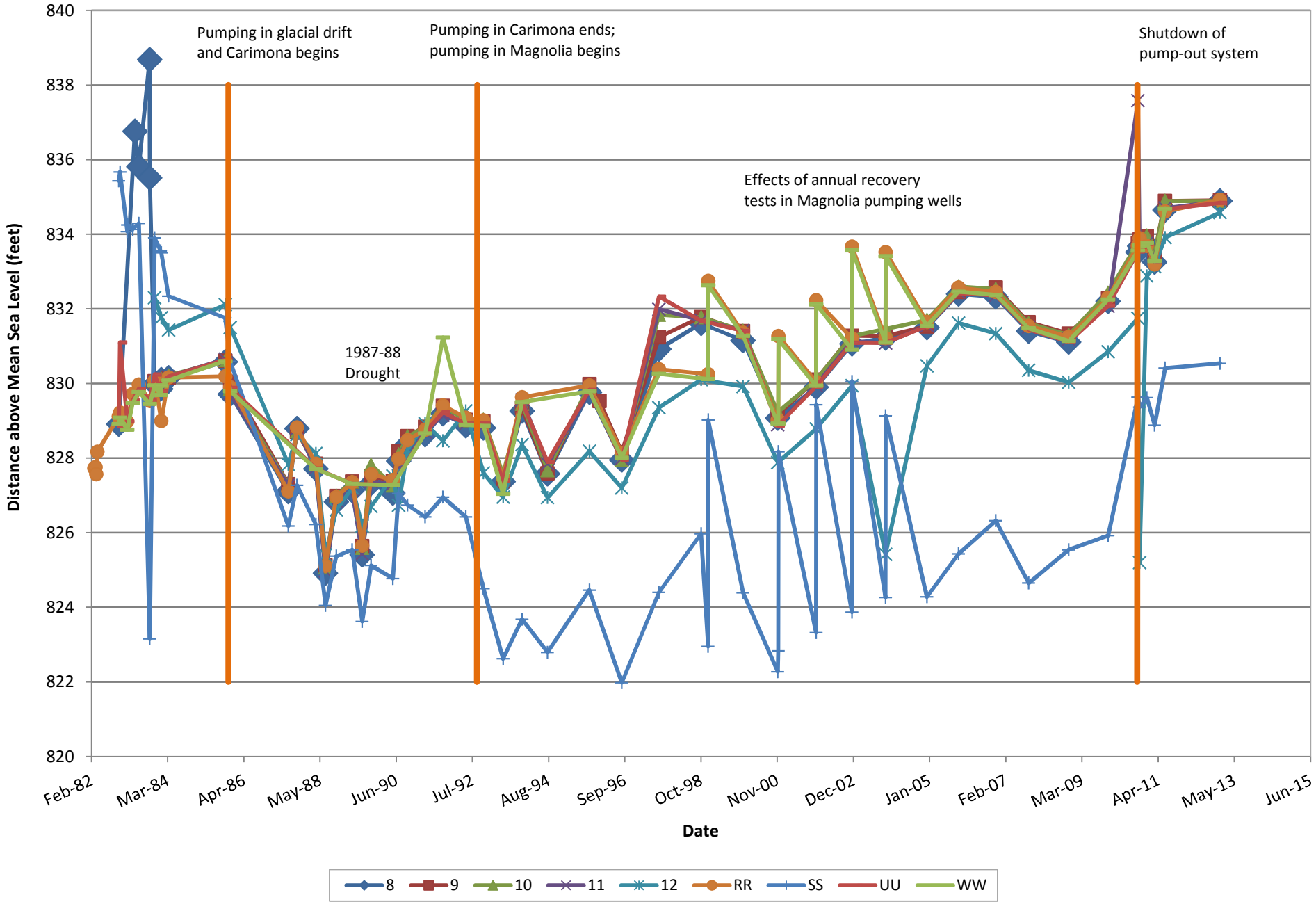
0 250 500 1,000

Feet

Figure 7

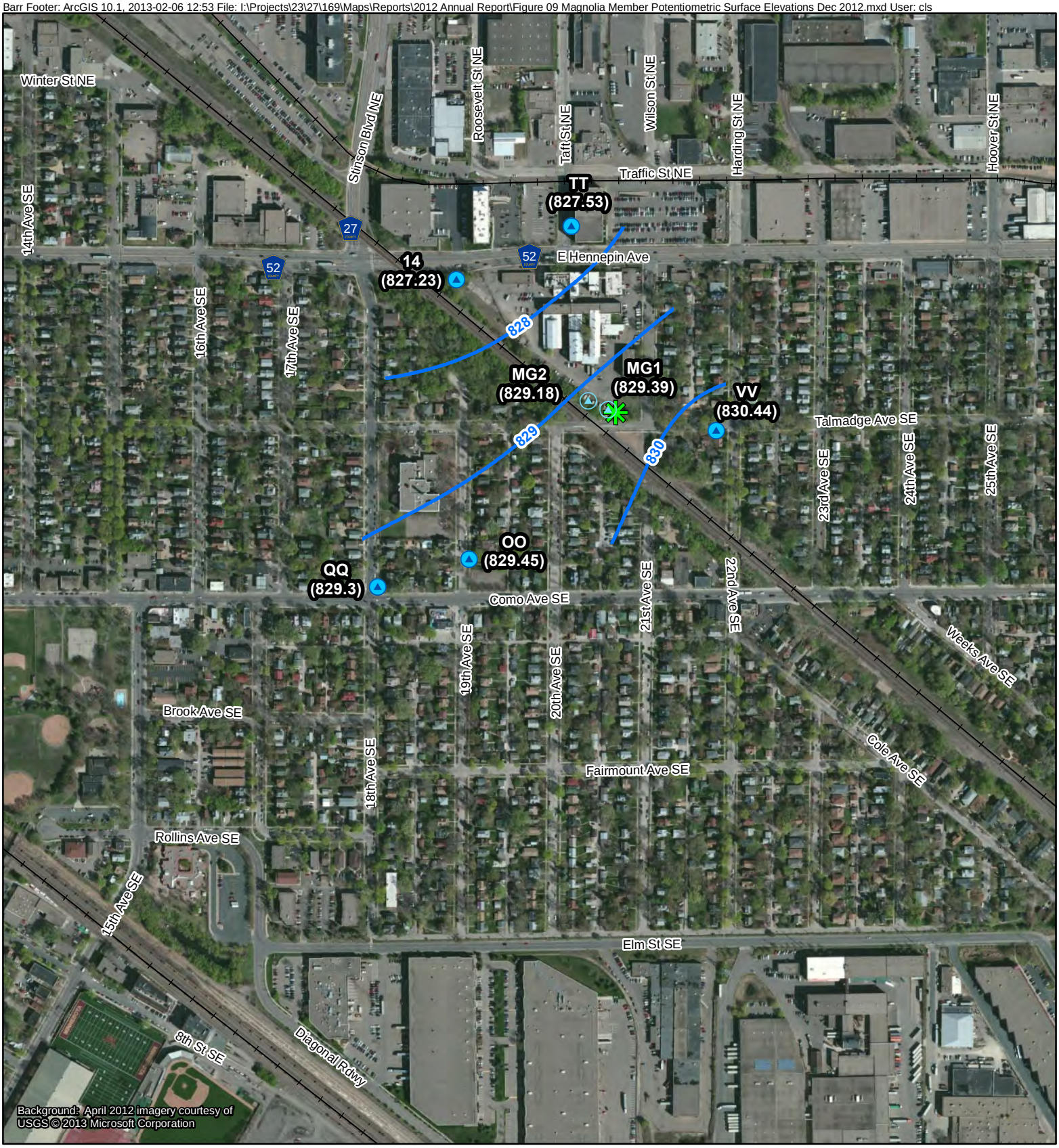
CARIMONA MEMBER
POTENTIOMETRIC
SURFACE ELEVATIONS
DECEMBER 14, 2012
East Hennepin Avenue Site
Minneapolis, Minnesota

Figure 8
Carimona Member Wells - Hydrograph
East Hennepin Avenue Site



P:\Mpls\23 MN\27\2527169\WorkFiles\carimona water levels2.xls\Figure 7

Barr Footer: ArcGIS 10.1, 2013-02-06 12:53 File: I:\Projects\23\27\169\Maps\Reports\2012 Annual Report\Figure 09 Magnolia Member Potentiometric Surface Elevations Dec 2012.mxd User: cls



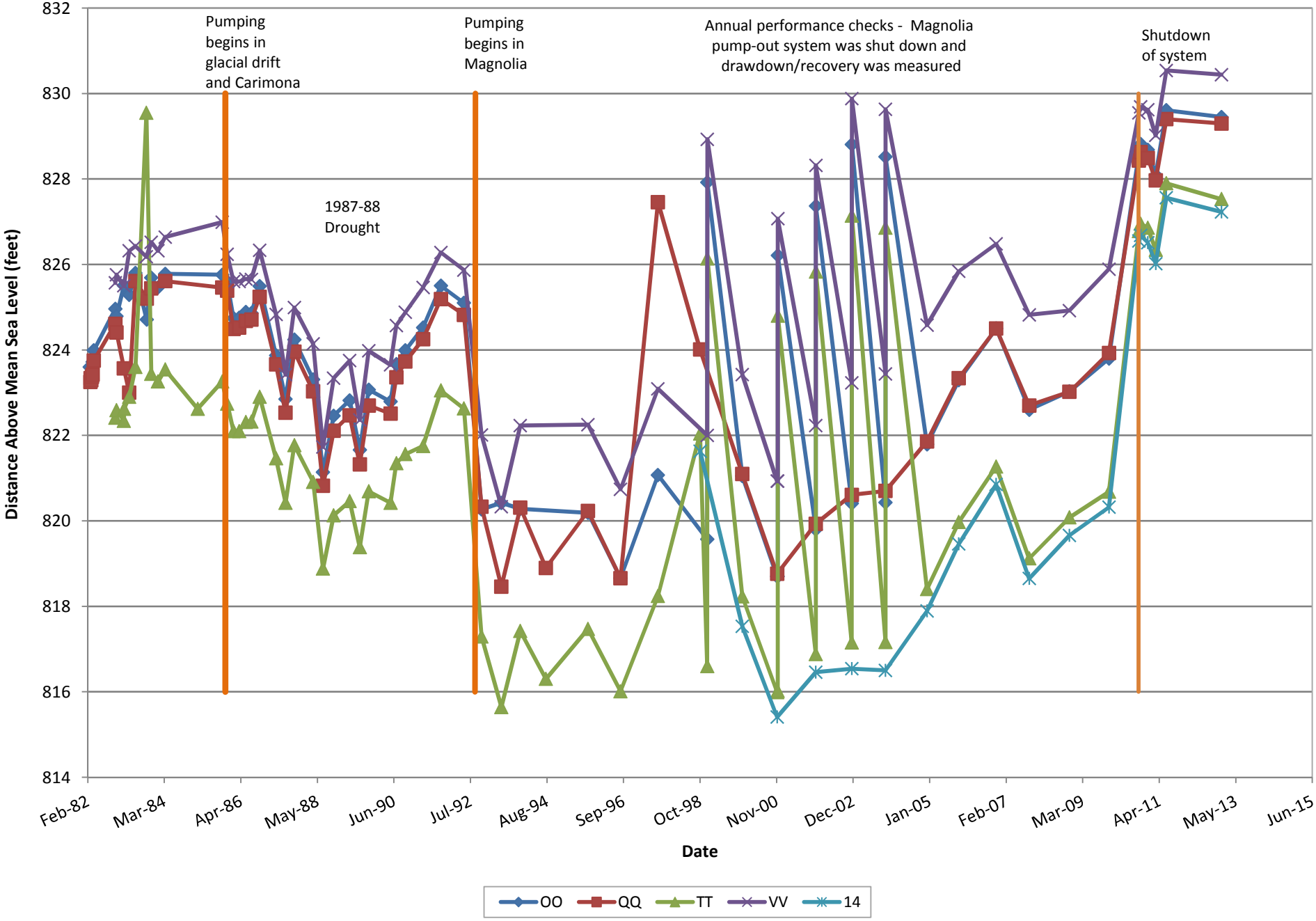
- Former Disposal Site
- Magnolia Member Well
- Magnolia Member Pump-Out Well
- Potentiometric Surface Contour

0 250 500 1,000
Feet

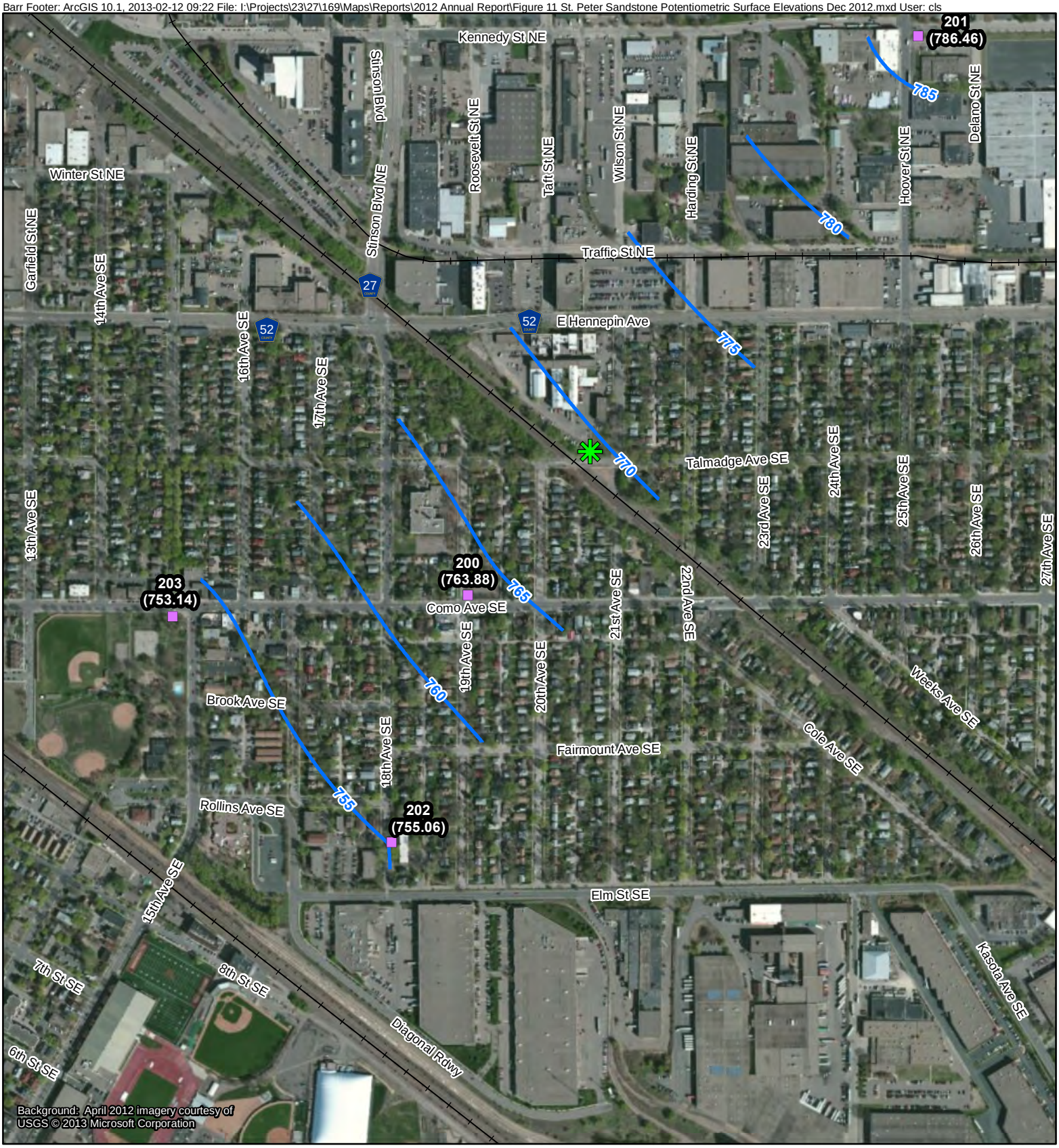
Figure 9

MAGNOLIA MEMBER
POTENTIOMETRIC
SURFACE ELEVATIONS
DECEMBER 14, 2012
East Hennepin Avenue Site
Minneapolis, Minnesota

Figure 10
Magnolia Member Wells - Hydrograph
East Hennepin Avenue Site



P:\Mpls\23 MN\27\2327169\WorkFiles\[magnolia water levels.xls]Figure 9



Former Disposal Site

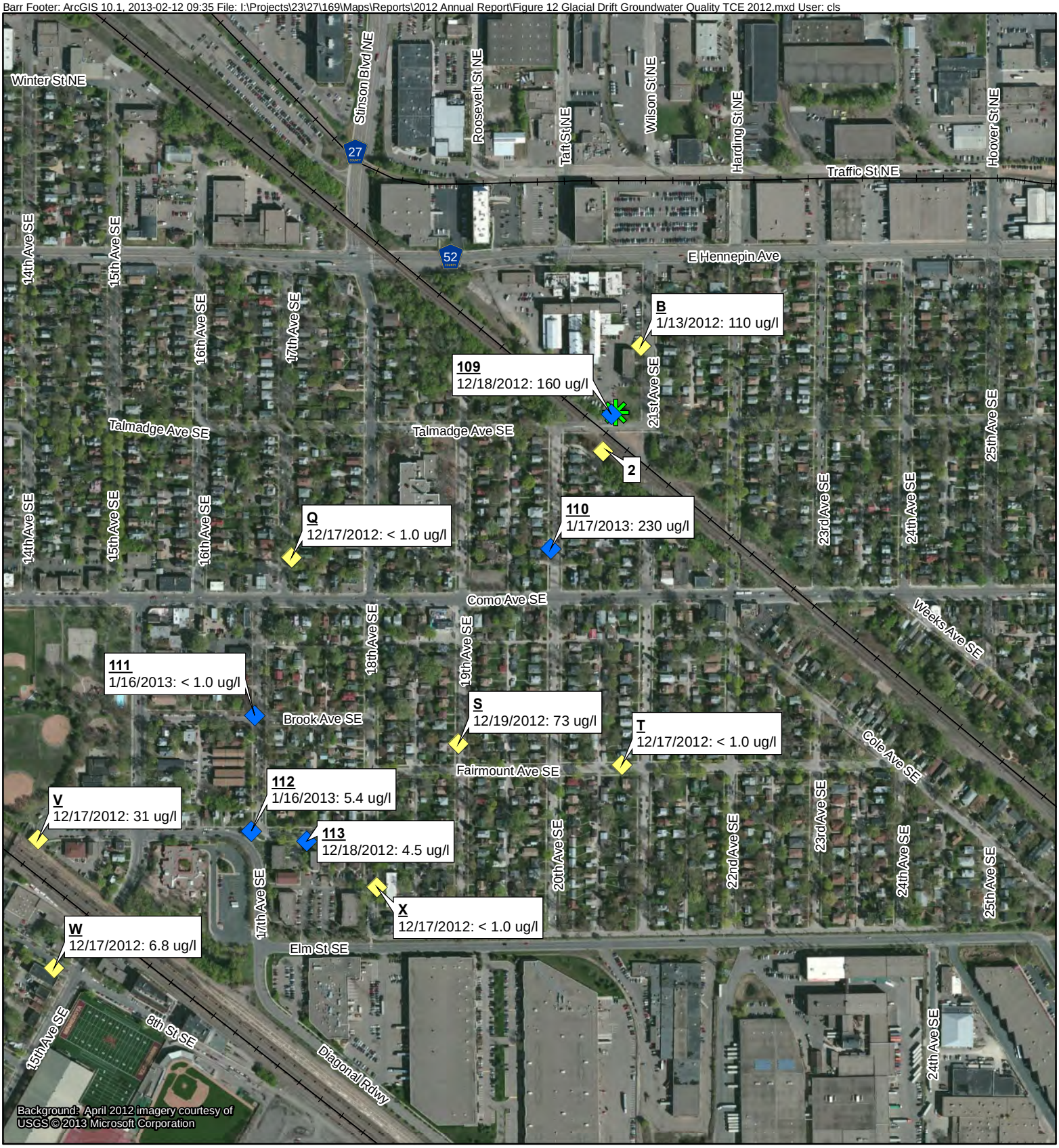
St. Peter Sandstone Monitoring Well

Potentiometric Surface Contour

Figure 11
ST. PETER SANDSTONE
POTENTIOMETRIC
SURFACE ELEVATIONS
DECEMBER 14, 2012
East Hennepin Avenue Site
Minneapolis, Minnesota

0 300 600 1,200

Feet



Former Disposal Site

Glacial Drift Well

Glacial Drift Pump-Out Well

Water Surface Contour

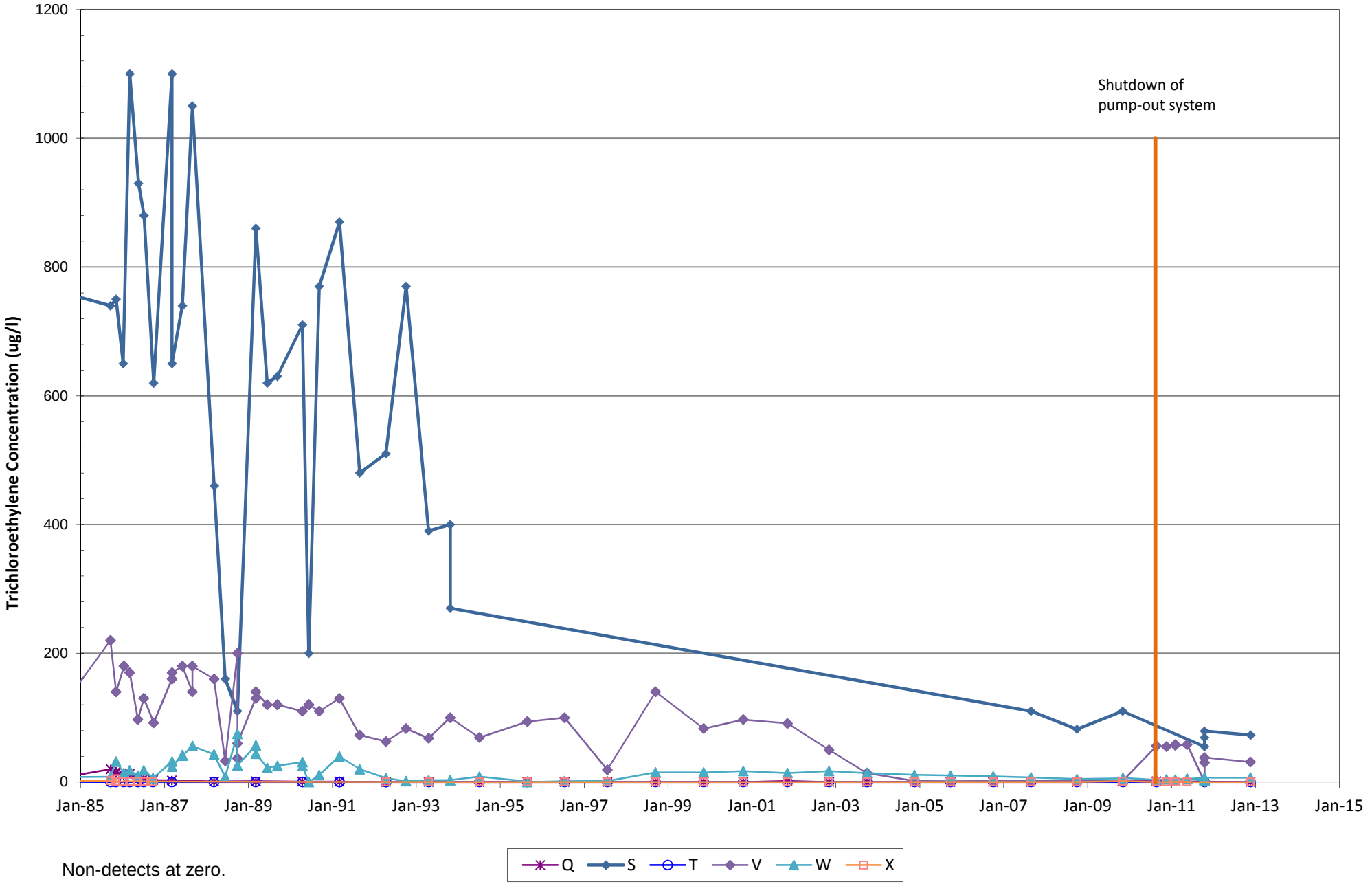
0 250 500 1,000

Feet

Figure 12

GLACIAL DRIFT GROUNDWATER QUALITY (TCE) - 2012
East Hennepin Avenue Site
Minneapolis, Minnesota

Figure 13
Glacial Drift Monitoring Wells
TCE concentrations 1985 - 2012



Non-detects at zero.

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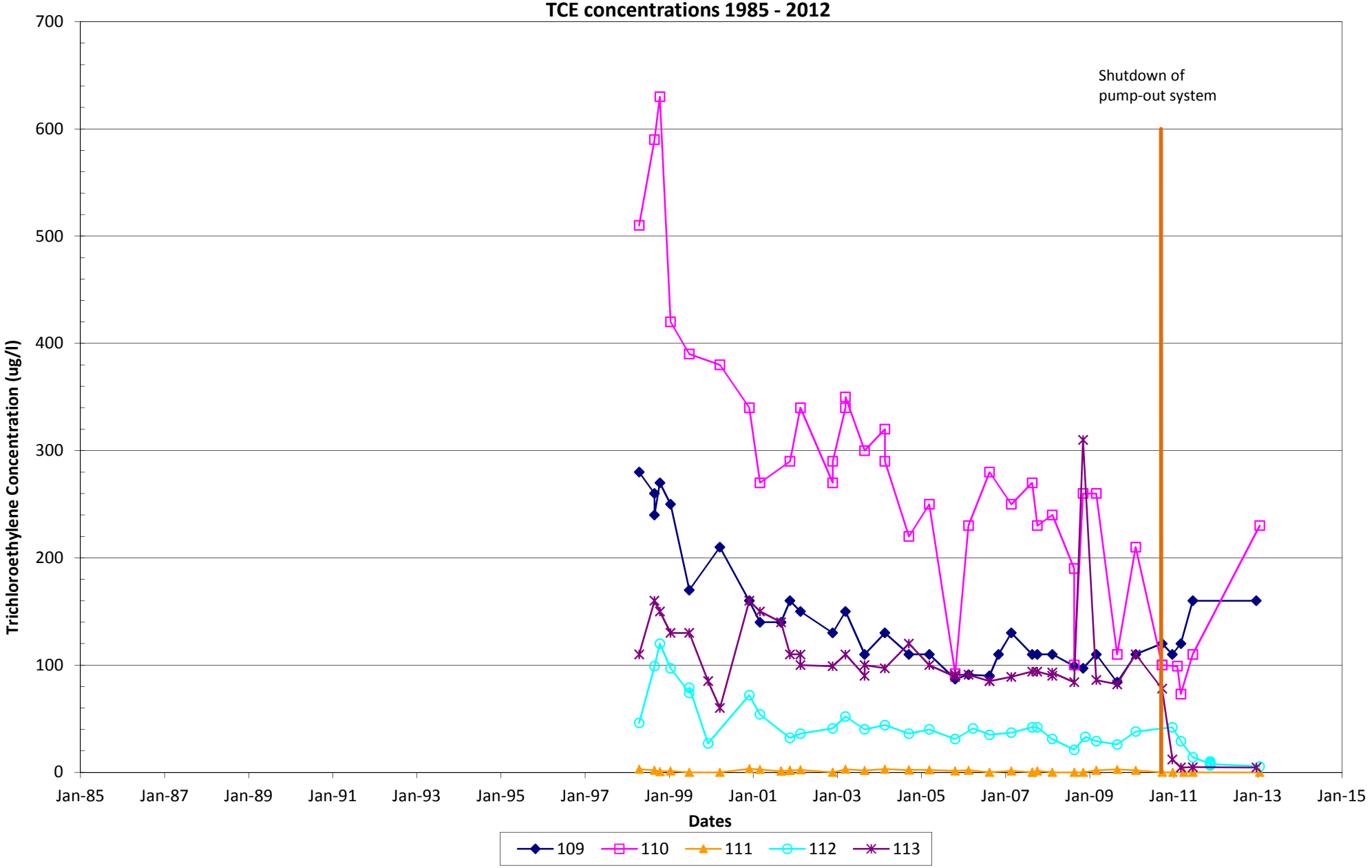
Figure 14
Glacial Drift Pump Out Wells
TCE concentrations 1985 - 2012



Non-detects at zero.
Majority of pre-1998 samples were composited by pump-out system and are not shown on this figure.

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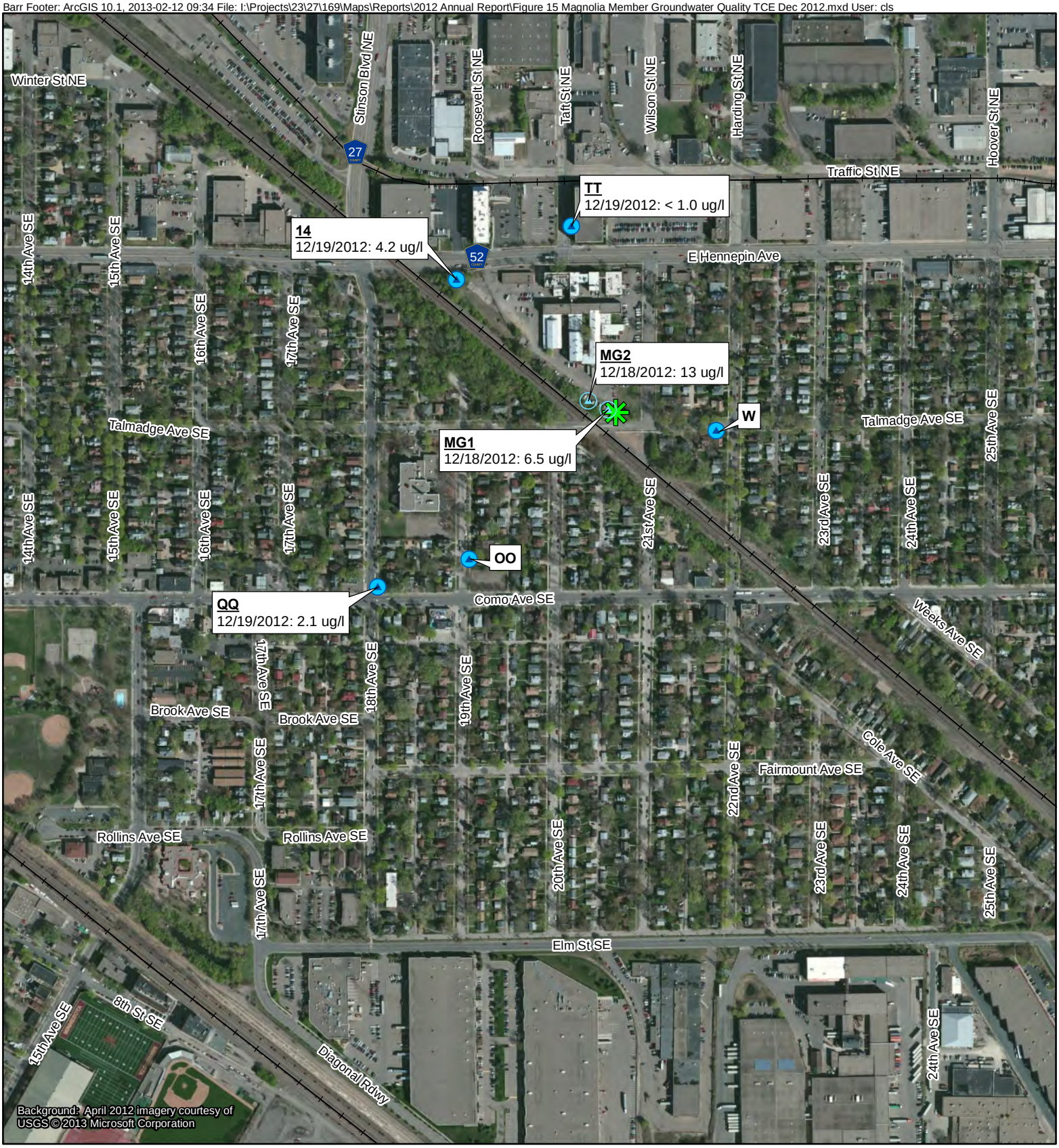


Former Disposal Site

Magnolia Member Well

Magnolia Member Pump-Out Well

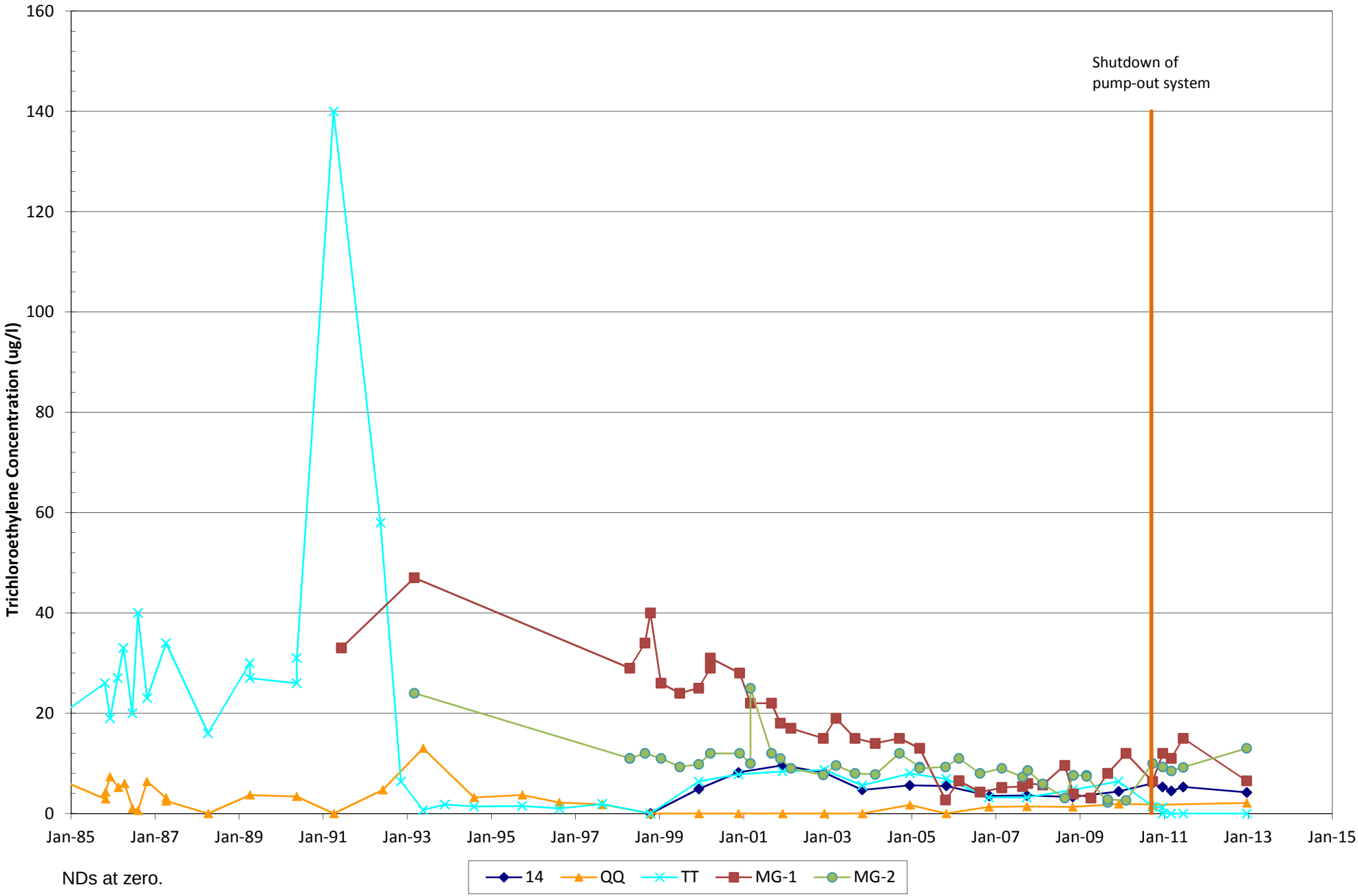
Figure 15

MAGNOLIA MEMBER GROUNDWATER QUALITY (TCE) - DECEMBER 2012
East Hennepin Avenue Site
Minneapolis, Minnesota

0 250 500 1,000

Feet

Figure 16
Magnolia Member Pump Out and Monitoring Wells
TCE Concentrations 1985 - 2012



NDs at zero.

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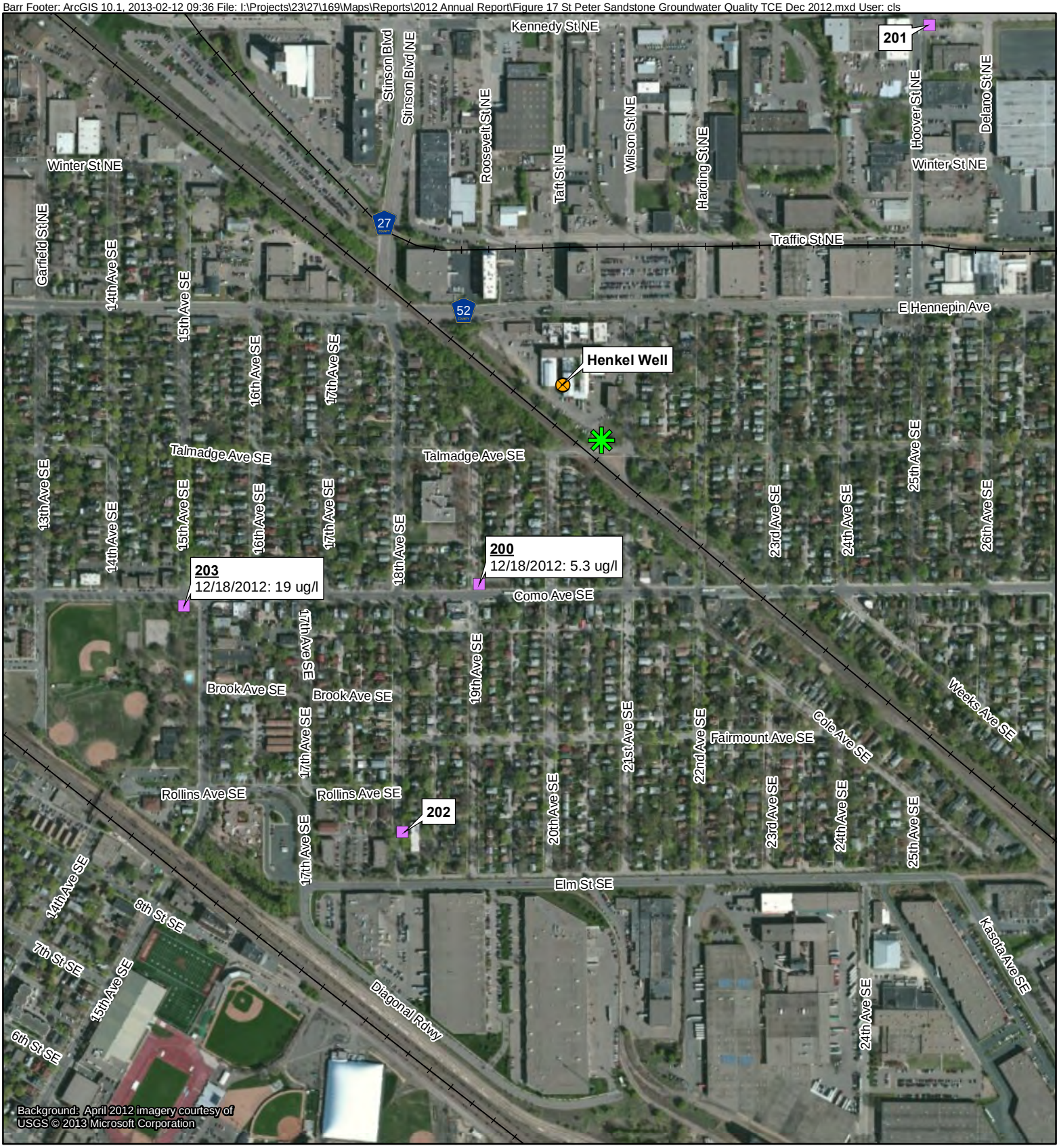


Former Disposal Site

Prairie du Chien Well

St. Peter Sandstone Well

0 300 600 1,200

Feet

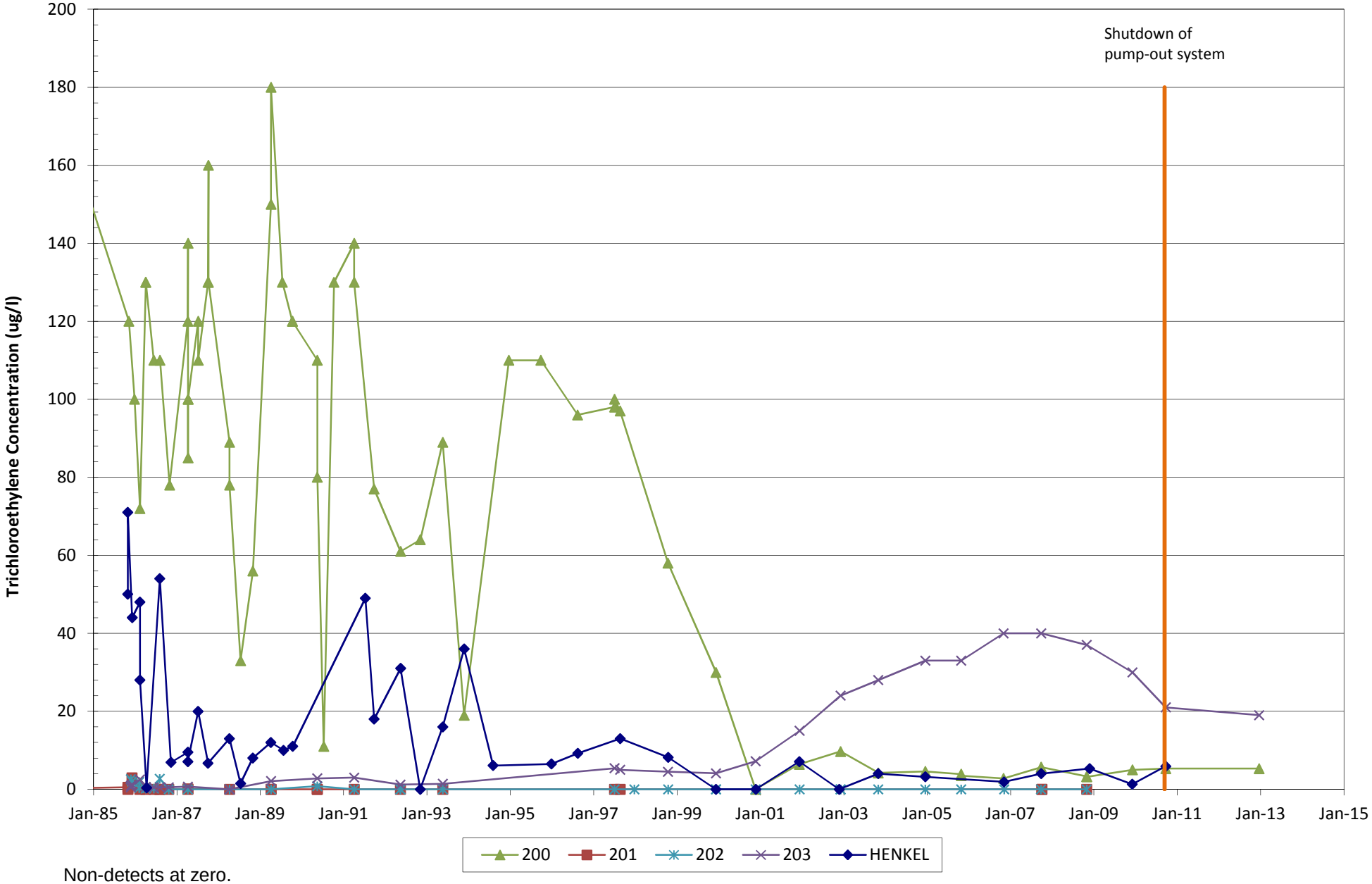
Figure 17

ST. PETER SANDSTONE AND PRAIRIE DU CHIEN/JORDAN GROUNDWATER QUALITY (TCE) - DECEMBER 2012

East Hennepin Avenue Site

Minneapolis, Minnesota

Figure 18
St. Peter Sandstone and Prairie du Chien/Jordan Wells
TCE Concentrations 1985 - 2012



Non-detects at zero.

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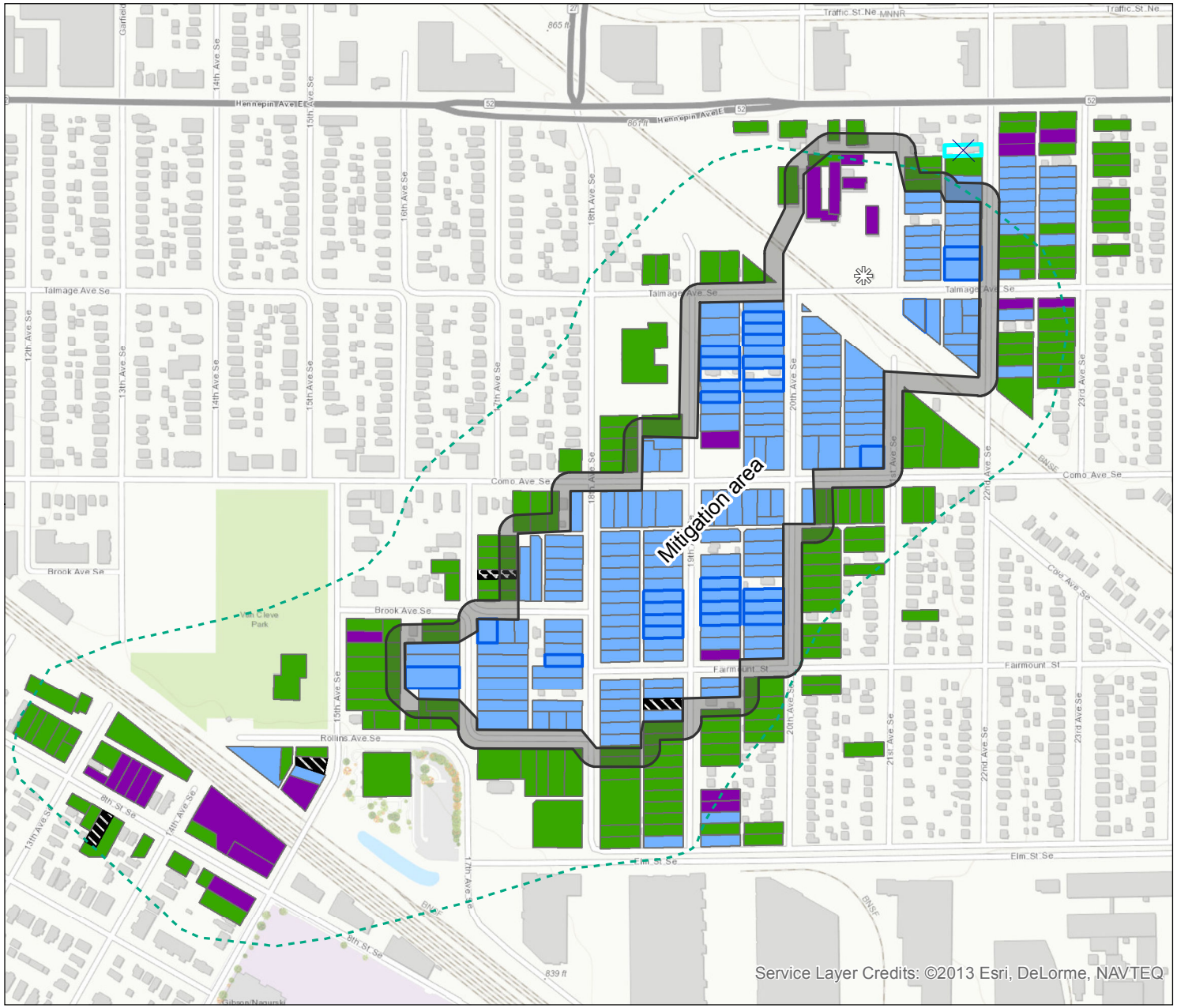
Soil Vapor: Como Neighborhood – Minneapolis

Building Mitigation Status



Minnesota Pollution Control Agency

- General Mills/Henkel Corp. Superfund Site historic disposal area
- Approximate groundwater TCE plume
- No mitigation required.
- Mitigation system required - not yet installed.
- Vapor mitigation system has been installed.
- Mitigation will be offered but is not required based on sampling results.
- Sampling access denied.
- Soil gas monitoring area
  Long-term soil gas monitoring will be conducted in the public right-of-way.

All properties within the mitigation area will be offered a vapor mitigation system.

*Sampling status current as of May 31, 2016.

Barr, 2015. Vapor Intrusion Pathway Investigation Report. East Hennepin Avenue Site. Minneapolis, MN

Tables

Table 1

Soil Boring Summary
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Study Area	Location ID	Coordinates[1]		Date Completed	Ground Elevation[2] (feet MSL)	Depth to Water (feet bgs)	Total Depth (feet bgs)	Field Screening Results[3]			Maximum PID Reading (ppm)		Sample Collection[4]		
		Northing	Easting					Discoloration	Odor	Sheen	Vadose Zone	Below GW Table	Soil	Groundwater (Temporary Well)	Soil Vapor (Temporary Port)
Site	***Investigation Borings***														
	DP-060	482404.38	4981957.06	10/14/2014	861.4	17.60	53.3				<2.0	<2.0		X	
	DP-061	482397.96	4981949.23	10/15/2014	862.0	17.38	58.0			VZ	8.7	<2.0	X	X	
	DP-062	482409.83	4981939.22	10/15/2014	861.5	17.09	59.0				<2.0	<2.0		X	
	DP-063	482378.60	4981918.01	10/16/2014	861.2	17.90	50.0				<2.0	2.1		X	
	DP-064	482424.56	4981907.86	10/13/2014	859.0	20.09	55.0				8.9	12.5	X	X	
	DP-065	482375.60	4981898.46	10/16/2014	859.4	20.75	50.0				3.2	3.6		X	
	DP-066	482408.04	4981880.97	10/17/2014	857.6	18.98	54.0				<2.0	21.0	X	X	
	DP-067	482352.05	4981897.81	10/20/2014	858.2	19.40	54.0				3.1	3.7	X	X	
	DP-068	482290.24	4981921.31	10/21/2014	858.2	18.30	40.0				19.4	<2.0	X	X	
	DP-069	482274.54	4981951.50	10/21/2014	858.4	18.40	40.0				2.3	<2.0	X	X	
	DP-070	482246.15	4981982.80	10/22/2014	857.5	17.70	40.0	GW	GW	GW	144.3	1,226	X	X	X
	DP-071	482228.23	4981985.31	10/22/2014	857.2	17.90	36.5	GW	GW		7.2	171.2	X	X	X
	Pilot Borings														
	308	482402.88	4981934.03	10/21/2014	861.8	18.00	58.0				2.1	2.5			
	311	482396.35	4981844.89	10/27/2014	857.7	19.00	54.0	VZ/GW	VZ/GW	VZ/GW	1,733	1,352	X		
	SMW1	482321.64	4981987.95	10/20/2014	859.3	17.90	39.0				<2.0	<2.0			
	SVP1	482322.07	4981986.41	10/21/2014	859.1	NA	9.0				NR	NR			
	SVP2	482310.25	4981924.12	10/23/2014	858.3	NA	9.0				2.3	<2.0			
	SVP30	482410.78	4981972.46	10/22/2014	861.5	NA	9.0				<2.0	<2.0			
Northeast Area	***Investigation Borings***														
	DP-072	482644.52	4981997.21	10/27/2014	860.0	15.00	40.0				<2.0	12.2		X	
	DP-073	482644.20	4981985.82	10/28/2014	859.7	15.10	48.0				6.1	24.4	X	X	
	DP-074	482643.81	4981972.88	10/28/2014	860.1	14.90	54.0				4.6	11.0	X	X	
	DP-075	482643.60	4981966.24	10/29/2014	859.9	15.00	52.0				4.2	8.7		X	
	DP-076	482643.63	4981958.96	10/29/2014	859.8	15.10	46.0				<2.0	5.7		X	
	Pilot Borings														
	301	482830.82	4982139.56	12/4/2014	865.1	18.50	57.8				<2.0	48.9	X	X	
	302	482429.97	4982142.78	12/10/2014	861.9	16.50	53.7				<2.0	<2.0			
	303	482697.13	4982135.67	12/5/2014	862.9	16.10	55.0				<2.0	11.3		X	
	304	482845.78	4981997.02	12/8/2014	860.7	14.30	51.1	GW			<2.0	2.4		X	
	305	482529.45	4982061.17	12/9/2014	862.4	17.50	55.0				<2.0	3.2		X	
	306	482644.57	4981995.97	11/10/2014	860.2	15.80	36.0				NR	NR			
	307	482443.07	4981986.68	10/28/2014	860.7	16.50	55.0				<2.0	<2.0			
	310	482395.25	4981845.21	10/28/2014	859.1	13.10	32.0			VZ/GW	<2.0	<2.0			

Table 1

Soil Boring Summary
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Study Area	Location ID	Coordinates[1]		Date Completed	Ground Elevation[2] (feet MSL)	Depth to Water (feet bgs)	Total Depth (feet bgs)	Field Screening Results[3]			Maximum PID Reading (ppm)		Sample Collection[4]		
		Northing	Easting					Discoloration	Odor	Sheen	Vadose Zone	Below GW Table	Soil	Groundwater (Temporary Well)	Soil Vapor (Temporary Port)
Central Area	***Pilot Borings***														
	309	482543.12	4981935.22	11/4/2014	861.1	16.50	50.0				<2.0	6.0			
	312	482541.10	4981807.11	11/6/2014	855.6	18.00	45.0				<2.0	<2.0			
	313	482331.82	4981656.44	10/31/2014	850.6	17.00	48.0				<2.0	23.0	X		X
	314	482165.74	4981559.92	12/11/2014	846.9	17.00	42.6				<2.0	11.3	X		X
	315	482116.89	4981508.89	11/11/2014	845.0	19.00	48.0				<2.0	6.9	X		X
	SMW3	482303.22	4981832.78	11/5/2014	852.8	15.60	49.5				<2.0	6.7	X		
	SMW6	482211.16	4981731.30	11/4/2014	849.9	17.10	49.0				<2.0	15.3	X		
	SMW10	482034.22	4981556.32	12/2/2014	846.2	19.10	48.2				<2.0	<2.0			
	SMW16	482165.29	4981362.97	12/12/2014	845.3	20.00	49.3				<2.0	5.7			
	SMW19	482330.66	4981457.64	11/14/2014	847.0	15.20	30.0				<2.0	<2.0			
	SMW22	482331.32	4981608.13	12/11/2014	849.6	16.50	47.5				<2.0	30.7			
	SMW25	482440.67	4981723.60	10/30/2014	853.6	16.80	23.5				<2.0	3.9			
	SVP3	482301.23	4981833.32	11/3/2014	852.8	NA	9.5				<2.0	<2.0			
	SVP4	482207.69	4981831.99	11/3/2014	851.5	NA	9.0				<2.0	<2.0			
	SVP5	482212.11	4981790.19	11/3/2014	859.8	NA	9.0				<2.0	<2.0			
	SVP6	482211.15	4981729.64	11/3/2014	850.3	NA	9.0				<2.0	<2.0			
	SVP7	482167.06	4981674.74	10/31/2014	848.4	NA	9.0				<2.0	<2.0			
	SVP8	482102.89	4981643.74	10/31/2014	848.0	NA	9.0				<2.0	<2.0			
	SVP9	482056.17	4981563.87	12/1/2014	846.9	NA	9.0				<2.0	<2.0			
	SVP10	482035.78	4981556.29	12/1/2014	845.8	NA	9.0				<2.0	<2.0			
	SVP11	481989.58	4981491.58	10/31/2014	845.5	NA	9.0				<2.0	<2.0			
	SVP12	481906.29	4981443.50	12/1/2014	843.2	NA	9.0				<2.0	<2.0			
	SVP13	481910.25	4981379.83	12/1/2014	841.1	NA	9.0				<2.0	<2.0			
	SVP14	481991.13	4981342.16	10/31/2014	850.7	NA	9.0				<2.0	<2.0			
	SVP15	482116.41	4981337.43	11/12/2014	840.8	NA	10.0				<2.0	<2.0			
	SVP16	482164.80	4981361.44	12/12/2014	845.5	NA	9.0				<2.0	<2.0			
	SVP17	482221.24	4981372.72	11/3/2014	854.1	NA	9.0				<2.0	<2.0			
	SVP18	482271.90	4981372.45	12/15/2014	845.1	NA	9.0				<2.0	<2.0			
	SVP19	482330.47	4981459.45	11/14/2014	847.3	NA	9.0				<2.0	<2.0			
	SVP20	482331.15	4981530.74	10/30/2014	848.0	NA	9.0				<2.0	<2.0			
	SVP21	482331.81	4981572.66	10/31/2014	848.4	NA	9.0				<2.0	<2.0			
	SVP22	482331.46	4981609.91	12/15/2014	849.4	NA	9.0				<2.0	<2.0			
	SVP23	482439.90	4981649.60	10/30/2014	850.3	NA	9.0				<2.0	<2.0			

Table 1

Soil Boring Summary
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Study Area	Location ID	Coordinates[1]		Date Completed	Ground Elevation[2] (feet MSL)	Depth to Water (feet bgs)	Total Depth (feet bgs)	Field Screening Results[3]			Maximum PID Reading (ppm)		Sample Collection[4]		
		Northing	Easting					Discoloration	Odor	Sheen	Vadose Zone	Below GW Table	Soil	Groundwater (Temporary Well)	Soil Vapor (Temporary Port)
Central Area	SVP24	482440.32	4981682.05	10/30/2014	850.7	NA	9.0				<2.0	<2.0			
	SVP25	482440.85	4981725.05	10/30/2014	854.1	NA	10.0				<2.0	<2.0			
	SVP26	482540.22	4981725.44	11/3/2014	848.0	NA	9.0			VZ	<2.0	<2.0	X		
	SVP27	482540.80	4981803.60	11/6/2014	848.0	NA	9.0				<2.0	<2.0			
	SVP28	482542.49	4981931.83	11/5/2014	845.5	NA	9.0				<2.0	<2.0			
	SVP29	482442.95	4981941.79	10/30/2014	859.8	NA	9.0				<2.0	<2.0			
Southwest Area	***Investigation Borings***														
	DP-077	481824.28	4981360.89	11/5/2014	836.6	13.80	42.0				<2.0	<2.0		X	
	Pilot Borings														
	316	481820.72	4981342.48	11/13/2014	835.3	16.50	39.5				<2.0	<2.0			
	317	481993.01	4981228.53	11/6/2014	839.2	15.50	46.0				<2.0	<2.0			
	318	481536.24	4981296.65	11/6/2014	835.0	15.60	40.0				<2.0	<2.0			

Notes:

1 - Northing and Easting coordinates are given in UTM Zone 15N, NAD83 (meters).

2 - Elevations are given in NGVD 29.

3 - Indicates observations of discoloration, odor, and sheen recorded in boring logs at the following locations:

VZ - vadose zone

GW - below water table

4 - See Tables 3, 4, and 5 for additional details.

NA - not applicable

NR - not recorded, field screening not completed at this location

bgs - below ground surface

ppm - parts per million

MSL - mean sea level

Table 2

Monitoring Well Details
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Study Area	Well ID	Date Installed	Unique Number	Coordinates[2]		Monitoring Well Network		Screen Details			Elevations (feet MSL)[3]			
				Northing	Easting	Glacial Drift	Sentinel	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Screen Length (feet)	Top of Casing	Ground Surface	Top of Screen	Bottom of Screen
Site	308GS	10/23/2014	810027	4981933.22	482403.80	X		14.5	24.5	10	864.23	861.8	847.3	837.3
	308GD	10/21/2014	810028	4981934.03	482402.88	X		51.0	56.0	5	864.68	861.8	810.8	805.8
	311GS	10/24/2014	810029	4981845.11	482394.33	X		14.0	24.0	10	860.18	857.7	843.7	833.7
	311GD	10/27/2014	810030	4981845.21	482395.25	X		36.5	41.5	5	860.34	857.7	821.2	816.2
	SMW1	10/20/2014	810026	4981987.95	482321.64		X	14.0	24.0	10	861.74	859.3	845.3	835.3
	109	1984	191913	4981842.46	482390.25	X		18.0	42.0	24	859.74	857.8	839.8	815.8
	B	1981	U	4981923.08	482424.81	X		16.6	26.6	10	864.16	862.4	845.8	835.8
Northeast Area	301GS	12/4/2014	810053	4982138.85	482830.86	X		14.5	24.5	10	867.81	865.0	850.5	840.5
	301GD	12/4/2014	810054	4982139.56	482830.82	X		45.0	50.0	5	868.27	865.1	820.1	815.1
	302GS	12/10/2014	810059	4982142.78	482429.97	X		12.5	22.5	10	864.04	861.9	849.4	839.4
	303GS	12/5/2014	810055	4982135.67	482697.13	X		12.5	22.5	10	865.80	862.9	850.4	840.4
	304GS	12/8/2014	810056	4981997.02	482845.78	X		10.5	20.5	10	863.47	860.7	850.2	840.2
	305GS	12/9/2014	810057	4982060.10	482529.46	X		12.5	22.5	10	864.29	862.3	849.8	839.8
	305GD	12/9/2014	810058	4982061.17	482529.45	X		49.5	54.5	5	864.25	862.4	812.9	807.9
	306GS	11/10/2014	810034	4981997.13	482644.60	X		11.0	21.0	10	862.45	860.1	849.1	839.1
	306GD	11/10/2014	810035	4981995.97	482644.57	X		31.0	36.0	5	862.77	860.2	829.2	824.2
	307GS	10/29/2014	810032	4981988.11	482443.30	X		11.0	21.0	10	863.27	860.7	849.7	839.7
	307GD	10/28/2014	810033	4981986.68	482443.07	X		47.1	52.1	5	863.28	860.7	813.6	808.6
	310GS	10/28/2014	810031	4981837.77	482727.91	X		9.5	19.5	10	861.44	859.1	849.6	839.6
Central Area	309GS	11/4/2014	810045	4981935.16	482542.08	X	X	12.5	22.5	10	863.47	861.0	848.5	838.5
	309GD	11/4/2014	810046	4981935.22	482543.12	X		42.0	47.0	5	863.55	861.1	819.1	814.1
	312GS	11/6/2014	810043	4981805.62	482540.82	X	X	13.0	23.0	10	858.28	855.5	842.5	832.5
	312GD	11/6/2014	810044	4981807.11	482541.10	X		36.5	41.5	5	858.32	855.6	819.1	814.1
	313GS	11/3/2014	810037	4981658.13	482331.61	X		13.0	23.0	10	853.14	850.6	837.6	827.6
	313GD	10/31/2014	810038	4981656.44	482331.82	X		27.5	32.5	5	853.12	850.6	823.1	818.1
	314GS	12/12/2014	810060	4981560.94	482165.80	X		13.0	23.0	10	849.67	846.9	833.9	823.9
	314GD	12/11/2014	810061	4981559.92	482165.74	X		32.5	37.5	5	850.04	846.9	814.4	809.4
	315GS	11/11/2014	810047	4981509.81	482116.80	X		15.0	25.0	10	847.94	845.1	830.1	820.1
	315GD	11/11/2014	810048	4981508.89	482116.89	X		31.5	36.5	5	848.20	845.0	813.5	808.5
	SMW3	11/5/2014	810039	4981832.78	482303.22		X	11.8	21.8	10	855.44	852.8	841.0	831.0
	SMW6	11/4/2014	810040	4981731.30	482211.16		X	13.2	23.2	10	852.22	849.9	836.7	826.7
	SMW10	12/2/2014	810052	4981556.32	482034.22		X	15.0	25.0	10	848.97	846.2	831.2	821.2
	SMW16	12/12/2014	810062	4981362.97	482165.29		X	16.0	26.0	10	847.78	845.3	829.3	819.3
	SMW19	11/14/2014	810051	4981457.64	482330.66		X	12.0	22.0	10	849.52	847.0	835.0	825.0
	SMW22	12/11/2014	810063	4981608.13	482331.32		X	12.5	22.5	10	852.37	849.6	837.1	827.1
	SMW25	10/30/2014	810036	4981723.60	482440.67		X	13.0	23.0	10	856.52	853.6	840.6	830.6
	2	1981	196722	4981799.37	482380.44	X		16.0	26.0	10	857.07	853.8	837.8	827.8
	110	1983	256171	4981685.37	482319.19	X		17.0	37.0	20	852.19	850.7	833.7	813.7
	111	1984	U	4981489.81	481972.27	X	X	20.0	40.0	20	846.81	845.9	825.9	805.9
	112	1984	U	4981354.04	481968.22	X	X	16.0	36.0	20	841.19	840.1	824.1	804.1
	113	1984	U	4981342.14	482033.15	X	X	20.0	40.0	20	841.09	840.3	820.3	800.3
	Q	1984	U	4981675.27	482015.40	X		13.9	23.9	10	850.21	848.2	834.3	824.3
	S	1984	U	4981456.76	482210.79	X		14.5	24.5	10	848.07	846.1	831.6	821.6
	T[1]	1984	U	4981431.75	482402.17	X		12.0	22.0	10	849.34	847.2	835.2	825.2
	X	1984	U	4981288.55	482115.46	X		9.0	19.0	10	842.70	840.5	831.5	821.5

Table 2

Monitoring Well Details
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Study Area	Well ID	Date Installed	Unique Number	Coordinates[2]		Monitoring Well Network		Screen Details			Elevations (feet MSL)[3]			
				Northing	Easting	Glacial Drift	Sentinel	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Screen Length (feet)	Top of Casing	Ground Surface	Top of Screen	Bottom of Screen
Southwest Area	316GS	11/14/2014	810049	4981342.51	481819.73	X		5.5	15.5	10	837.65	835.3	829.8	819.8
	316GD	11/13/2014	810050	4981342.48	481820.72	X		34.0	39.0	5	837.88	835.3	801.3	796.3
	317GS	11/6/2014	810042	4981228.53	481993.01	X		11.0	21.0	10	841.71	839.2	828.2	818.2
	318GS	11/6/2014	810041	4981296.65	481536.24	X		9.0	19.0	10	837.59	835.0	826.0	816.0
	V	1984	U	4981344.35	481718.30	X		15.6	25.6	10	838.52	837.1	821.5	811.5
	W	1984	U	4981193.25	481736.69	X		7.1	17.1	10	830.77	828.8	821.7	811.7

Notes:

1 - Historic Well T installed 2/10/84 and abandoned 2/14/84 due to grout contamination of the screen. A new well (historically referred to as Well T-2) was installed adjacent to the original well on 2/15/84 and is generally referred to as Well T.

2 - Northing and easting coordinates are given in UTM Zone 15N, NAD83 (meters).

3 - Elevations are given in NGVD 29. Existing wells were reported in NGVD88 in previous reports and elevations may be slightly different (typically +/- 0.2 feet).

U - unknown
bgs - below ground surface
MSL - mean sea level

Table 3

Vapor Monitoring Port Details
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Vapor Monitoring Port[1]	Date Installed	Coordinates[2]		Ground Elevation (feet MSL)[3]	Depth to Bottom (feet bgs)	Screen Interval (feet bgs)	Sand Pack Interval (feet bgs)	Located on the Site?
		Northing	Easting					
SVP1	10/21/2014	4981986.41	482322.07	859.0	9	8 - 8.5	7.5 - 9	x
SVP2	10/23/2014	4981924.12	482310.25	858.3	9	8 - 8.5	7.5 - 9	x
SVP3	11/3/2014	4981833.32	482301.23	852.8	9	8 - 8.5	7.5 - 9	
SVP4	11/3/2014	4981831.99	482207.69	851.5	9	8 - 8.5	7.5 - 9	
SVP5	11/3/2014	4981790.19	482212.11	859.8	9	8 - 8.5	7.5 - 9	
SVP6	11/3/2014	4981729.64	482211.15	850.3	9	8 - 8.5	7.5 - 9	
SVP7	10/31/2014	4981674.74	482167.06	848.4	9	8 - 8.5	7.5 - 9	
SVP8	10/31/2014	4981643.74	482102.89	848.0	9	8 - 8.5	7.5 - 9	
SVP9	12/1/2014	4981563.87	482056.17	846.9	9	8 - 8.5	7.5 - 9	
SVP10	12/1/2014	4981556.29	482035.78	845.8	9	8 - 8.5	7.5 - 9	
SVP11	10/31/2014	4981491.58	481989.58	845.5	9	8 - 8.5	7.5 - 9	
SVP12	12/1/2014	4981443.50	481906.29	843.2	9	8 - 8.5	7.5 - 9	
SVP13	12/1/2014	4981379.83	481910.25	841.1	9	8 - 8.5	7.5 - 9	
SVP14	10/31/2014	4981342.16	481991.13	850.7	9	8 - 8.5	7.5 - 9	
SVP15	11/12/2014	4981337.43	482116.41	840.8	9	8 - 8.5	7.5 - 9	
SVP16	12/12/2014	4981361.44	482164.80	845.5	9	8 - 8.5	7.5 - 9	
SVP17	11/3/2014	4981372.72	482221.24	854.1	9	8 - 8.5	7.5 - 9	
SVP18	12/15/2014	4981372.45	482271.90	845.1	9	8 - 8.5	7.5 - 9	
SVP19	11/14/2014	4981459.45	482330.47	847.3	9	8 - 8.5	7.5 - 9	
SVP20	10/30/2014	4981530.74	482331.15	848.0	9	8 - 8.5	7.5 - 9	
SVP21	10/31/2014	4981572.66	482331.81	848.4	9	8 - 8.5	7.5 - 9	
SVP22	12/15/2014	4981609.91	482331.46	849.4	9	8 - 8.5	7.5 - 9	
SVP23	10/30/2014	4981649.60	482439.90	850.3	9	8 - 8.5	7.5 - 9	
SVP24	10/30/2014	4981682.05	482440.32	850.7	9	8 - 8.5	7.5 - 9	
SVP25	10/30/2014	4981725.05	482440.85	854.1	10	9 - 9.5	8.5 - 10	
SVP26	11/3/2014	4981725.44	482540.22	848.0	9	8 - 8.5	7.5 - 9	
SVP27	11/6/2014	4981803.60	482540.80	848.0	9	8 - 8.5	7.5 - 9	
SVP28	11/5/2014	4981931.83	482542.49	845.5	9	8 - 8.5	7.5 - 9	
SVP29	10/30/2014	4981941.79	482442.95	859.8	9	8 - 8.5	7.5 - 9	
SVP30	10/22/2014	4981972.46	482410.78	861.5	9	8 - 8.5	7.5 - 9	x

Notes:

1 - All vapor monitoring ports are included in the sentinel monitoring network and were sampled in December 2014 and March 2015. These vapor monitoring ports will be sampled during the second and third quarter of 2015.
2 - Northing and Easting coordinates are given in UTM Zone 15N, NAD83 (meters).
3 - Elevations are given in NGVD 29.

bgs - below ground surface
MSL - mean sea level

Table 4

Soil Sampling Summary
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Study Area	Sample Location	Sample Interval (feet bgs)	Date Sampled	Sampled in		Headspace (ppm)
				Vadose Zone	Groundwater	
Site	DP-061	6.5	10/14/2014	X		8.7
	DP-064	3.5	10/13/2014	X		8.9
	DP-064	16	10/13/2014	X		7.5
	DP-066	44	10/17/2014		X	6.9
	DP-066	52.5	10/17/2014		X	21.0
	DP-067	3	10/20/2014	X		3.1
	DP-067	19	10/20/2014	X		3.1
	DP-068	12	10/20/2014	X		19.4
	DP-069	11	10/21/2014	X		2.3
	DP-070	10	10/21/2014	X		75.1
	DP-071	9.5	10/22/2014	X		7.2
	311 Pilot	17.5	10/23/2014	X		1,733
Northeast Area	DP-073	11	10/27/2014	X		6.1
	DP-073	40.5	10/27/2014		X	24.4
	DP-074	4.5	10/28/2014	X		4.6
	301	35	12/2/2014		X	38.4
	301	42	12/2/2014		X	48.9
Central Area	313	39	10/31/2014		X	23.0
	314	39	12/11/2014		X	2.8
	315	45.5	11/11/2014		X	6.9
	SMW3	40.5	11/04/2014		X	3.5
	SMW6	41	11/04/2014		X	15.3
	SVP26	8	11/03/2014	X		0.2
Southwest Area	*No Soil Samples Collected*					

Notes:

bgs - feet below ground surface

ppm - parts per million

Table 5

Soil Sampling Analytical Results
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area	Site															Northeast Area					Central Area		
Location	DP-061	DP-064	DP-064	DP-066		DP-066	DP-067	DP-067	DP-068	DP-069	DP-070	DP-071		311 Pilot		DP-073	DP-073	DP-074	301	301	313	314	
Date	10/14/2014	10/13/2014	10/13/2014	10/17/2014		10/17/2014	10/20/2014	10/20/2014	10/20/2014	10/21/2014	10/21/2014	10/22/2014		10/23/2014		10/27/2014	10/27/2014	10/28/2014	12/02/2014	12/02/2014	10/31/2014	12/11/2014	
Depth	6.5 ft	3.5 ft	16 ft	44 ft	44 ft	52.5 ft	3 ft	19 ft	12 ft	11 ft	10 ft	9.5 ft	9.5 ft	17.5 ft	17.5 ft	11 ft	40.5 ft	4.5 ft	35 ft	42 ft	39 ft	39 ft	39 ft
Sample Type	N	N	N	N	FD	N	N	N	N	N	N	N	FD	N	FD	N	N	N	N	N	N	N	FD
Parameter																							
VOCs																							
Trichloroethylene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	**1290 ug/kg**	**1100 ug/kg**	**2080 ug/kg**	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	**449 ug/kg**	< 55.2 ug/kg	**243 ug/kg**	**2600 ug/kg**	**1760 ug/kg**	**2450 * ug/kg**	**797 * ug/kg**
1,1,1,2-Tetrachloroethane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,1,1-Trichloroethane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,1,2,2-Tetrachloroethane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 321 ug/kg	< 709 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,1,2-Trichloroethane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,1-Dichloro-1-propene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,1-Dichloroethane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,1-Dichloroethylene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,2,3-Trichlorobenzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,2,3-Trichloropropane	< 224 ug/kg	< 219 ug/kg	< 208 ug/kg	< 222 ug/kg	< 217 ug/kg	< 234 ug/kg	< 266 ug/kg	< 207 ug/kg	< 406 ug/kg	< 321 ug/kg	< 709 ug/kg	< 333 ug/kg	< 354 ug/kg	< 213 ug/kg	< 202 ug/kg	< 204 ug/kg	< 224 ug/kg	< 221 ug/kg	< 222 ug/kg	< 219 ug/kg	< 227 ug/kg	< 228 ug/kg	< 214 ug/kg
1,2,4-Trichlorobenzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,2,4-Trimethylbenzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	**41800 * ug/kg**	**27500 * ug/kg**	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,2-Dibromo-3-chloropropane	< 561 ug/kg	< 547 ug/kg	< 519 ug/kg	< 554 ug/kg	< 543 ug/kg	< 586 ug/kg	< 665 ug/kg	< 517 ug/kg	< 1020 ug/kg	< 803 ug/kg	< 1770 ug/kg	< 832 ug/kg	< 886 ug/kg	< 534 ug/kg	< 506 ug/kg	< 510 ug/kg	< 561 ug/kg	< 552 ug/kg	< 555 ug/kg	< 549 ug/kg	< 568 ug/kg	< 569 ug/kg	< 534 ug/kg
1,2-Dibromoethane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,2-Dichlorobenzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,2-Dichloroethane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,2-Dichloroethylene, cis	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	**134 ug/kg**	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	**74.4 ug/kg**	**110 ug/kg**	**142 ug/kg**	**60.1 ug/kg**
1,2-Dichloroethylene, trans	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	**119 ug/kg**	**62.5 ug/kg**
1,2-Dichloropropane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,3,5-Trimethylbenzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	**5420 ug/kg**	**6480 ug/kg**	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,3-Dichloro-1-propene, cis	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,3-Dichloro-1-propene, trans	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,3-Dichlorobenzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,3-Dichloropropane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
1,4-Dichlorobenzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
2,2-Dichloropropane	< 224 ug/kg	< 219 ug/kg	< 208 ug/kg	< 222 ug/kg	< 217 ug/kg	< 234 ug/kg	< 266 ug/kg	< 207 ug/kg	< 406 ug/kg	< 321 ug/kg	< 709 ug/kg	< 333 ug/kg	< 354 ug/kg	< 213 ug/kg	< 202 ug/kg	< 204 ug/kg	< 224 ug/kg	< 221 ug/kg	< 222 ug/kg	< 219 ug/kg	< 227 ug/kg	< 228 ug/kg	< 214 ug/kg
Acetone	< 1120 ug/kg	< 1090 ug/kg	< 1040 ug/kg	< 1110 ug/kg	< 1090 ug/kg	< 1170 ug/kg	< 1330 ug/kg	< 1030 ug/kg	< 2030 ug/kg	< 1610 ug/kg	< 3540 ug/kg	< 1660 ug/kg	< 1770 ug/kg	< 1070 ug/kg	< 1010 ug/kg	< 1020 ug/kg	< 1120 ug/kg	< 1100 ug/kg	< 1110 ug/kg	< 1100 ug/kg	< 1140 ug/kg	< 1140 ug/kg	< 1070 ug/kg
Allyl Chloride	< 224 ug/kg	< 219 ug/kg	< 208 ug/kg	< 222 ug/kg	< 217 ug/kg	< 234 ug/kg	< 266 ug/kg	< 207 ug/kg	< 406 ug/kg	< 321 ug/kg	< 709 ug/kg	< 333 ug/kg	< 354 ug/kg	< 213 ug/kg	< 202 ug/kg	< 204 ug/kg	< 224 ug/kg	< 221 ug/kg	< 222 ug/kg	< 219 ug/kg	< 227 ug/kg	< 228 ug/kg	< 214 ug/kg
Benzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 26.6 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 32.1 ug/kg	< 70.9 ug/kg	< 33.3 ug/kg	< 35.4 ug/kg	**114 ug/kg**	**136 ug/kg**	< 20.4 ug/kg	< 22.4 ug/kg	< 22.1 ug/kg	< 22.2 ug/kg	< 21.9 ug/kg	< 22.7 ug/kg	< 22.8 ug/kg	< 21.4 ug/kg
Bromobenzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Bromochloromethane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Bromodichloromethane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Bromoform	< 224 ug/kg	< 219 ug/kg	< 208 ug/kg	< 222 ug/kg	< 217 ug/kg	< 234 ug/kg	< 266 ug/kg	< 207 ug/kg	< 406 ug/kg	< 321 ug/kg	< 709 ug/kg	< 333 ug/kg	< 354 ug/kg	< 213 ug/kg	< 202 ug/kg	< 204 ug/kg	< 224 ug/kg	< 221 ug/kg	< 222 ug/kg	< 219 ug/kg	< 227 ug/kg	< 228 ug/kg	< 214 ug/kg
Bromomethane	< 561 ug/kg	< 547 ug/kg	< 519 ug/kg	< 554 ug/kg	< 543 ug/kg	< 586 ug/kg	< 665 ug/kg	< 517 ug/kg	< 1020 ug/kg	< 803 ug/kg	< 1770 ug/kg	< 832 ug/kg	< 886 ug/kg	< 534 ug/kg	< 506 ug/kg	< 510 ug/kg	< 561 ug/kg	< 552 ug/kg	< 555 ug/kg	< 549 ug/kg	< 568 ug/kg	< 569 ug/kg	< 534 ug/kg
Butyl benzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	**4560 ug/kg**	**5670 ug/kg**	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Butylbenzene, sec	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	**1900 ug/kg**	**2540 ug/kg**	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Butylbenzene, tert	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Carbon tetrachloride	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Chlorobenzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	**4420 * ug/kg**	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Chlorodibromomethane	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Chloroethane	< 561 ug/kg	< 547 ug/kg	< 519 ug/kg	< 554 ug/kg	< 543 ug/kg	< 586 ug/kg	< 665 ug/kg	< 517 ug/kg	< 1020 ug/kg	< 803 ug/kg	< 1770 ug/kg	< 832 ug/kg	< 886 ug/kg	< 534 ug/kg	< 506 ug/kg	< 510 ug/kg	< 561 ug/kg	< 552 ug/kg	< 555 ug/kg	< 549 ug/kg	< 568 ug/kg	< 569 ug/kg	< 534 ug/kg
Chloroform	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Chloromethane	< 224 ug/kg	< 219 ug/kg	< 208 ug/kg	< 222 ug/kg	< 217 ug/kg	< 234 ug/kg	< 266 ug/kg	< 207 ug/kg	< 406 ug/kg	< 321 ug/kg	< 709 ug/kg	< 333 ug/kg	< 354 ug/kg	< 213 ug/kg	< 202 ug/kg	< 204 ug/kg	< 224 ug/kg	< 221 ug/kg	< 222 ug/kg	< 219 ug/kg	< 227 ug/kg	< 228 ug/kg	< 214 ug/kg
Chlorotoluene, o	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Chlorotoluene, p	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Cumene (isopropyl benzene)	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	**2500 ug/kg**	**3130 ug/kg**	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Cymene p- (Toluene isopropyl p-)	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	**2260 ug/kg**	**2880 ug/kg**	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Dibromomethane (methylene bromide)	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Dichlorodifluoromethane (CFC-12)	< 224 ug/kg	< 219 ug/kg	< 208 ug/kg	< 222 ug/kg	< 217 ug/kg	< 234 ug/kg	< 266 ug/kg	< 207 ug/kg	< 406 ug/kg	< 321 ug/kg	< 709 ug/kg	< 333 ug/kg	< 354 ug/kg	< 213 ug/kg	< 202 ug/kg	< 204 ug/kg	< 224 ug/kg	< 221 ug/kg	< 222 ug/kg	< 219 ug/kg	< 227 ug/kg	< 228 ug/kg	< 214 ug/kg
Dichlorofluoromethane (CFC-21)	< 561 ug/kg	< 547 ug/kg	< 519 ug/kg	< 554 ug/kg	< 543 ug/kg	< 586 ug/kg	< 665 ug/kg	< 517 ug/kg	< 1020 ug/kg	< 803 ug/kg	< 1770 ug/kg	< 832 ug/kg	< 886 ug/kg	< 534 ug/kg	< 506 ug/kg	< 510 ug/kg	< 561 ug/kg	< 552 ug/kg	< 555 ug/kg	< 549 ug/kg	< 568 ug/kg	< 569 ug/kg	< 534 ug/kg
Ethyl benzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	**30400 ug/kg**	**38500 ug/kg**	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Ethyl ether	< 224 ug/kg	< 219 ug/kg	< 208 ug/kg	< 222 ug/kg	< 217 ug/kg	< 234 ug/kg	< 266 ug/kg	< 207 ug/kg	< 406 ug/kg	< 321 ug/kg	< 709 ug/kg	< 333 ug/kg	< 354 ug/kg	< 213 ug/kg	< 202 ug/kg	< 204 ug/kg	< 224 ug/kg	< 221 ug/kg	< 222 ug/kg	< 219 ug/kg	< 227 ug/kg	< 228 ug/kg	< 214 ug/kg
Hexachlorobutadiene	< 281 ug/kg	< 273 ug/kg	< 260 ug/kg	< 277 ug/kg	< 271 ug/kg	< 293 ug/kg	< 332 ug/kg	< 258 ug/kg	< 508 ug/kg	< 401 ug/kg	< 886 ug/kg	< 416 ug/kg	< 443 ug/kg	< 267 ug/kg	< 253 ug/kg	< 255 ug/kg	< 281 ug/kg	< 276 ug/kg	< 277 ug/kg	< 274 ug/kg	< 284 ug/kg	< 285 ug/kg	< 267 ug/kg
Methyl ethyl ketone	< 281 ug/kg	< 273 ug/kg	< 260 ug/kg	< 277 ug/kg	< 271 ug/kg	< 293 ug/kg	< 332 ug/kg	< 258 ug/kg	< 508 ug/kg	< 401 ug/kg	< 886 ug/kg	< 416 ug/kg	< 443 ug/kg	< 267 ug/kg	< 253 ug/kg	< 255 ug/kg	< 281 ug/kg	< 276 ug/kg	< 277 ug/kg	< 274 ug/kg	< 284 ug/kg	< 285 ug/kg	< 267 ug/kg
Methyl isobutyl ketone	< 1120 ug/kg	< 1090 ug/kg	< 1040 ug/kg	< 1110 ug/kg	< 1090 ug/kg	< 1170 ug/kg	< 332 ug/kg	< 1030 ug/kg	< 2030 ug/kg	< 401 ug/kg	< 886 ug/kg	< 416 ug/kg	< 443 ug/kg	< 267 ug/kg	< 253 ug/kg	< 255 ug/kg	< 281 ug/kg	< 276 ug/kg	< 277 ug/kg	< 274 ug/kg	< 284 ug/kg	< 285 ug/kg	< 267 ug/kg
Methyl tertiary butyl ether (MTBE)	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Methylene chloride	< 224 ug/kg	< 219 ug/kg	< 208 ug/kg	< 222 ug/kg	< 217 ug/kg	< 234 ug/kg	< 266 ug/kg	< 207 ug/kg	< 406 ug/kg	< 321 ug/kg	< 709 ug/kg	< 333 ug/kg	< 354 ug/kg	< 213 ug/kg	< 202 ug/kg	< 204 ug/kg	< 224 ug/kg	< 221 ug/kg	< 222 ug/kg	< 219 ug/kg	< 227 ug/kg	< 228 ug/kg	< 214 ug/kg
Naphthalene	< 224 ug/kg	< 219 ug/kg	< 208 ug/kg	< 222 ug/kg	< 217 ug/kg	< 234 ug/kg	< 266 ug/kg	< 207 ug/kg	< 406 ug/kg	< 321 ug/kg	< 709 ug/kg	< 333 ug/kg	< 354 ug/kg	**6670 ug/kg**	**6380 ug/kg**	< 204 ug/kg	< 224 ug/kg	< 221 ug/kg	< 222 ug/kg	< 219 ug/kg	< 227 ug/kg	< 228 ug/kg	< 214 ug/kg
Propylbenzene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	**4350 ug/kg**	**5500 ug/kg**	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Styrene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	< 50.6 ug/kg	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Tetrachloroethylene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	**67.4 ug/kg**	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	< 53.4 ug/kg	**80.3 ug/kg**	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Tetrahydrofuran	< 2240 ug/kg	< 2190 ug/kg	< 2080 ug/kg	< 2220 ug/kg	< 2170 ug/kg	< 2340 ug/kg	< 2660 ug/kg	< 2070 ug/kg	< 4060 ug/kg	< 3210 ug/kg	< 7090 ug/kg	< 3330 ug/kg	< 3540 ug/kg	< 2130 ug/kg	< 2020 ug/kg	< 2040 ug/kg	< 2240 ug/kg	< 2210 ug/kg	< 2220 ug/kg	< 2190 ug/kg	< 2270 ug/kg	< 2280 ug/kg	< 2140 ug/kg
Toluene	< 56.1 ug/kg	< 54.7 ug/kg	< 51.9 ug/kg	< 55.4 ug/kg	< 54.3 ug/kg	< 58.6 ug/kg	< 66.5 ug/kg	< 51.7 ug/kg	< 102 ug/kg	< 80.3 ug/kg	< 177 ug/kg	< 83.2 ug/kg	< 88.6 ug/kg	**5070 ug/kg**	**7500 ug/kg**	< 51.0 ug/kg	< 56.1 ug/kg	< 55.2 ug/kg	< 55.5 ug/kg	< 54.9 ug/kg	< 56.8 ug/kg	< 56.9 ug/kg	< 53.4 ug/kg
Trichlorofluoromethane	< 224 ug/kg	< 219 ug/kg	< 208 ug/kg	< 222 ug/kg	< 217 ug/kg	< 234 ug/kg	< 266 ug/kg	< 207 ug/kg	< 406 ug/kg	< 321 ug/kg	< 709 ug/kg	< 333 ug/kg	< 354 ug/kg	< 213 ug/kg	< 202 ug/kg	< 204 * ug/kg	< 224 ug/kg	< 221 ug/kg	< 222 ug/kg	< 219 ug/kg	< 227 ug/kg	< 228 ug/kg	< 214 ug/kg
Trichlorotrifluoroethane (Freon 113)	< 224 ug/kg	< 219 ug/kg	< 208 ug/kg	< 222 ug/kg	< 217 ug/kg	< 234 ug/kg	< 266 ug/kg	< 207 ug/kg	< 406 ug/kg	< 321 ug/kg	< 709 ug/kg	< 333 ug/kg	< 354 ug/kg	< 213 ug/kg	< 202 ug/kg	< 204 ug/kg	< 224 ug/kg	< 221 ug/kg	< 555 ug/kg	< 549 ug/kg	< 227 ug/kg	< 569 ug/kg	< 534 ug/kg
Vinyl chloride	< 22.4 ug/kg	< 21.9 ug/kg	< 20.8 ug/kg	< 22.2 ug/kg	< 21.7 ug/kg	< 23.4 ug/kg	< 26.6 ug/kg	< 20.7 ug/kg	< 40.6 ug/kg	< 32.1 ug/kg	< 70.9 ug/kg	< 33.3 ug/kg	< 35.4 ug/kg	< 21.3 ug/kg	< 20.2 ug/kg	< 20.4 ug/kg	< 22.4 ug/kg	< 22.1 ug/kg	< 22.2 ug/kg	< 21.9 ug/kg	< 22.7 ug/kg	< 22.8 ug/kg	< 21.4 ug/kg
Xylene, total	< 168 ug/kg	< 164 ug/kg	< 156 ug/kg	< 166 ug/kg	< 163 ug/kg	< 176 ug/kg	< 199 ug/kg	< 155 ug/kg	< 305 ug/kg	< 241 ug/kg	< 532 ug/kg	< 250 ug/kg	< 266 ug/kg	**200000 ug/kg**	**240000 ug/kg**	< 153 ug/kg	< 168 ug/kg	< 166 ug/kg	< 166 ug/kg	< 165 ug/kg	< 170 ug/kg	< 171 ug/kg	< 160 ug/kg

Note: Detected compound results shown in **bold**

Table 5

Soil Sampling Analytical Results
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area	Central Area			
Location	315	SMW3	SMW6	SVP26
Date	11/11/2014	11/04/2014	11/04/2014	11/03/2014
Depth	45.5 ft	40.5 ft	41 ft	8 ft
Sample Type	N	N	N	N
Parameter				
VOCs				
Trichloroethylene	**2420 ug/kg**	**812 ug/kg**	**4230 ug/kg**	< 52.4 ug/kg
1,1,1,2-Tetrachloroethane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,1,1-Trichloroethane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,1,2,2-Tetrachloroethane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,1,2-Trichloroethane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,1-Dichloro-1-propene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,1-Dichloroethane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,1-Dichloroethylene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,2,3-Trichlorobenzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,2,3-Trichloropropane	< 247 ug/kg	< 226 ug/kg	< 226 ug/kg	< 210 ug/kg
1,2,4-Trichlorobenzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,2,4-Trimethylbenzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,2-Dibromo-3-chloropropane	< 618 ug/kg	< 564 ug/kg	< 564 ug/kg	< 524 ug/kg
1,2-Dibromoethane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,2-Dichlorobenzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,2-Dichloroethane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,2-Dichloroethylene, cis	**76.3 ug/kg**	< 56.4 ug/kg	**112 ug/kg**	< 52.4 ug/kg
1,2-Dichloroethylene, trans	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,2-Dichloropropane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,3,5-Trimethylbenzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,3-Dichloro-1-propene, cis	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,3-Dichloro-1-propene, trans	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,3-Dichlorobenzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,3-Dichloropropane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
1,4-Dichlorobenzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
2,2-Dichloropropane	< 247 ug/kg	< 226 ug/kg	< 226 ug/kg	< 210 ug/kg
Acetone	< 1240 ug/kg	< 1130 ug/kg	< 1130 ug/kg	< 1050 ug/kg
Allyl Chloride	< 247 ug/kg	< 226 ug/kg	< 226 ug/kg	< 210 ug/kg
Benzene	< 24.7 ug/kg	< 22.6 ug/kg	< 22.6 ug/kg	< 21.0 ug/kg
Bromobenzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Bromochloromethane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Bromodichloromethane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Bromoform	< 247 ug/kg	< 226 ug/kg	< 226 ug/kg	< 210 ug/kg
Bromomethane	< 618 ug/kg	< 564 ug/kg	< 564 ug/kg	< 524 * ug/kg
Butyl benzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Butylbenzene, sec	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Butylbenzene, tert	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Carbon tetrachloride	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Chlorobenzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Chlorodibromomethane	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Chloroethane	< 618 ug/kg	< 564 * ug/kg	< 564 * ug/kg	< 524 ug/kg
Chloroform	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Chloromethane	< 247 ug/kg	< 226 ug/kg	< 226 ug/kg	< 210 ug/kg
Chlorotoluene, o	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Chlorotoluene, p	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Cumene (isopropyl benzene)	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Cymene p- (Toluene isopropyl p-)	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Dibromomethane (methylene bromide)	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Dichlorodifluoromethane (CFC-12)	< 247 ug/kg	< 226 ug/kg	< 226 ug/kg	< 210 ug/kg
Dichlorofluoromethane (CFC-21)	< 618 ug/kg	< 564 ug/kg	< 564 ug/kg	< 524 ug/kg
Ethyl benzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Ethyl ether	< 247 ug/kg	< 226 ug/kg	< 226 ug/kg	< 210 ug/kg
Hexachlorobutadiene	< 309 ug/kg	< 282 ug/kg	< 282 ug/kg	< 262 ug/kg
Methyl ethyl ketone	< 309 ug/kg	< 282 ug/kg	< 282 ug/kg	< 262 ug/kg
Methyl isobutyl ketone	< 309 ug/kg	< 282 ug/kg	< 282 ug/kg	< 262 ug/kg
Methyl tertiary butyl ether (MTBE)	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Methylene chloride	< 247 ug/kg	< 226 ug/kg	< 226 ug/kg	< 210 ug/kg
Naphthalene	< 247 ug/kg	< 226 ug/kg	< 226 ug/kg	< 210 ug/kg
Propylbenzene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Styrene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Tetrachloroethylene	< 61.8 ug/kg	< 56.4 ug/kg	**95.1 ug/kg**	< 52.4 ug/kg
Tetrahydrofuran	< 2470 ug/kg	< 2260 ug/kg	< 2260 ug/kg	< 2100 ug/kg
Toluene	< 61.8 ug/kg	< 56.4 ug/kg	< 56.4 ug/kg	< 52.4 ug/kg
Trichlorofluoromethane	< 247 ug/kg	< 226 * ug/kg	< 226 * ug/kg	< 210 ug/kg
Trichlorotrifluoroethane (Freon 113)	< 247 ug/kg	< 226 ug/kg	< 226 ug/kg	< 210 ug/kg
Vinyl chloride	< 24.7 ug/kg	< 22.6 ug/kg	< 22.6 ug/kg	< 21.0 ug/kg
Xylene, total	< 185 ug/kg	< 169 ug/kg	< 169 ug/kg	< 157 ug/kg

Note: Detected compound results shown in **bold**

Data Footnotes and Qualifiers

Footnote	
--	Not analyzed/not available.
<	Less than
N	Sample Type: Normal
FD	Sample Type: Field Duplicate

Qualifier	
e	Estimated value, exceeded the instrument calibration range.
h	EPA recommended sample preservation, extraction or analysis holding time was exceeded.
j	Estimated detected value. The reported value is less than the stated laboratory quantitation limit but greater the laboratory method detection limit.
*	Estimated value, QA/QC criteria not met.

Table 6

Groundwater Sampling Summary
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Study Area	Sample Location	Screen Interval (feet bgs)	Screened at		Sampled from		
			Water Table	Base of Glacial Drift	Temporary Well[1]	Glacial Drift Well[2]	Sentinel Well[3]
Site	DP-060	17.5-20.5	X		X		
	DP-060	51.25-53.25		X	X		
	DP-061	16.4-20.4	X		X		
	DP-061	52-54		X	X		
	DP-062	17-21	X		X		
	DP-062	55-57		X	X		
	DP-063	17-21	X		X		
	DP-063	47-49		X	X		
	DP-064	19-23	X		X		
	DP-064	26-28		X	X		
	DP-064	52.5-54.5		X	X		
	DP-065	20-24	X		X		
	DP-065	41-43		X	X		
	DP-065	48-50		X	X		
	DP-066	18-22	X		X		
	DP-066	36.5-38.5		X	X		
	DP-066	50-52		X	X		
	DP-067	17.6-21.6	X		X		
	DP-067	42-44		X	X		
	DP-067	51.7-53.7		X	X		
	DP-068	17.6-21.6	X		X		
	DP-068	36-38		X	X		
	DP-069	17.3-21.3	X		X		
	DP-069	33-35		X	X		
	DP-070	17-21	X		X		
	DP-070	29-31		X	X		
	DP-070	35-37		X	X		
	DP-071	16.8-20.8	X		X		
	DP-071	33-35		X	X		
	308GS	14.5-24.5	X			X	
	308GD	51-56		X		X	
	311GS	14-24	X			X	
	311GD	36.5-41.5		X		X	
	SMW1	14-24	X				X
	109	18-42	X			X	
	B	16.6-26.6	X			X	
Northeast Area	DP-072	14.3-18.3	X		X		
	DP-072	36-38		X	X		
	DP-073	13-17	X		X		
	DP-073	25-27		X	X		
	DP-073	38.3-40.3		X	X		
	DP-074	13.5-17.5	X		X		
	DP-074	44.5-46.5		X	X		
	DP-075	14-18	X		X		
	DP-075	35-37		X	X		
	DP-075	44-46		X	X		

Table 6

Groundwater Sampling Summary
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Study Area	Sample Location	Screen Interval (feet bgs)	Screened at		Sampled from		
			Water Table	Base of Glacial Drift	Temporary Well[1]	Glacial Drift Well[2]	Sentinel Well[3]
Northeast Area	DP-076	13.8-17.8	X		X		
	DP-076	42-44		X	X		
	301	17.5-21.5	X		X		
	301	48-50		X	X		
	301GS	14.5 -24.5	X			X	
	301GD	45-50		X		X	
	302GS	12.5-22.5	X			X	
	303	15.5-19.5	X		X		
	303	32-34		X	X		
	303GS	12.5-22.5	X			X	
	304	13.5-17.5	X		X		
	304	49-51		X	X		
	304GS	10.5-20.5	X			X	
	305	15.5-19.5	X		X		
	305	52-54		X	X		
	305GS	12.5-22.5	X			X	
	305GD	49.5-54.5		X		X	
	306GS	11-21	X			X	
	306GD	31-36		X		X	
	307GS	11-21	X			X	
	307GD	47.1-52.1		X		X	
	310GS	9.5-19.5	X			X	
Central Area	309GS	12.5-22.5	X			X	X
	309GD	42-47		X		X	
	312GS	13-23	X			X	X
	312GD	36.5-41.5		X		X	
	313GS	13-23	X			X	
	313GD	27.5-32.5		X		X	
	314GS	13-23	X			X	
	314GD	32.5-37.5		X		X	
	315GS	15-25	X			X	
	315GD	31.5-36.5		X		X	
	SMW3	11.8-21.8	X				X
	SMW6	13.2-23.2	X				X
	SMW10	15-25	X				X
	SMW16	16-26	X				X
	SMW19	12-22	X				X
	SMW22	12.5-22.5	X				X
	SMW25	13-23	X				X
	2	16-26	X			X	
	110	17-37	X			X	
	111	20-40	X			X	X
	112	16-36	X			X	X
	113	20-40	X			X	X
	Q	13.9-23.9	X			X	
	S	14.5-24.5	X			X	
	T	12-22	X			X	
	X	9-19	X			X	

Table 6

Groundwater Sampling Summary
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Study Area	Sample Location	Screen Interval (feet bgs)	Screened at		Sampled from		
			Water Table	Base of Glacial Drift	Temporary Well[1]	Glacial Drift Well[2]	Sentinel Well[3]
Southwest Area	DP-077	13-17	X		X		
	DP-077	34-36		X	X		
	316GS	5.5-15.5	X			X	
	316GD	34-39		X		X	
	317GS	11-21	X			X	
	318GS	9-19	X			X	
	V	15.6-25.6	X			X	
	W	7.1-17.1	X			X	

Notes:

1 - Groundwater sample collected from temporary well installed in soil boring during the investigation.

2 - Groundwater samples were collected from glacial drift monitoring wells in December 2014 and March 2015.

3 - Groundwater samples were collected from sentinel monitoring wells in December 2014 and March 2015. Additional groundwater samples will be collected during the second and third quarters of 2015.

bgs - below ground surface

Table 7

Groundwater Sampling Analytical Results - Temporary Wells
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area	Site																					
Location	DP-060 GW	DP-060 GW	DP-061 GW	DP-061 GW	DP-062 GW		DP-062 GW	DP-063 GW	DP-063 GW	DP-064 GW	DP-064 GW	DP-064 GW	DP-065 GW	DP-065 GW	DP-065 GW	DP-066 GW	DP-066 GW		DP-066 GW	DP-067 GW	DP-067 GW	DP-067 GW
Date	10/14/2014	10/14/2014	10/14/2014	10/15/2014	10/15/2014		10/15/2014	10/16/2014	10/16/2014	10/13/2014	10/13/2014	10/13/2014	10/16/2014	10/16/2014	10/16/2014	10/17/2014	10/17/2014		10/17/2014	10/20/2014	10/20/2014	10/20/2014
Depth	17.5 - 20.5 ft	51.25 - 53.25 ft	16.4 - 20.4 ft	52 - 54 ft	17 - 21 ft	17 - 21 ft	55 - 57 ft	17 - 21 ft	47 - 49 ft	19 - 23 ft	26 - 28 ft	52.5 - 54.5 ft	20 - 24 ft	41 - 43 ft	48 - 50 ft	18 - 22 ft	36.5 - 38.5 ft	36.5 - 38.5 ft	50 - 52 ft	17.6 - 21.6 ft	42 - 44 ft	51.7 - 53.7 ft
Sample Type	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N
VOCs																						
Trichloroethylene	**9.6 ug/l**	**5.1 ug/l**	**16.4 ug/l**	**5.4 ug/l**	**24.1 ug/l**	**22.2 ug/l**	**6.9 ug/l**	**117 ug/l**	**58.3 ug/l**	**149 ug/l**	**246 ug/l**	**629 ug/l**	**48.1 ug/l**	**191 ug/l**	**331 ug/l**	**52.7 ug/l**	**139 ug/l**	**135 ug/l**	**73.2 ug/l**	**26.5 ug/l**	**407 ug/l**	**509 ug/l**
1,1,1,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,1,1-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,1,2,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,1,2-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,1-Dichloro-1-propene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,1-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.2 ug/l**	< 1.0 ug/l	**1.3 ug/l**	**1.7 ug/l**	**3.5 ug/l**	< 1.0 ug/l	**1.2 ug/l**	**2.3 ug/l**	< 1.0 ug/l	**1.1 ug/l**	**1.2 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,1-Dichloroethylene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.0 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,2,3-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,2,3-Trichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
1,2,4-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,2,4-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,2-Dibromo-3-chloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
1,2-Dibromoethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,2-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,2-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,2-Dichloroethylene, cis	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**24.0 ug/l**	**5.7 ug/l**	**24.8 ug/l**	**47.4 ug/l**	**222 ug/l**	**6.5 ug/l**	**20.5 ug/l**	**99.3 ug/l**	**2.7 ug/l**	**13.1 ug/l**	**12.6 ug/l**	**13.5 ug/l**	**1.2 ug/l**	**138 ug/l**	**155 ug/l**
1,2-Dichloroethylene, trans	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.1 ug/l**	< 1.0 ug/l	**1.1 ug/l**	**2.5 ug/l**	**6.0 ug/l**	< 1.0 ug/l	**1.4 ug/l**	**2.9 ug/l**	< 1.0 ug/l	< 1.0 ug/l	**1.0 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
1,3,5-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,3-Dichloro-1-propene, cis	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
1,3-Dichloro-1-propene, trans	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
1,3-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,3-Dichloropropane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
1,4-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
2,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Acetone	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 100 ug/l	< 100 ug/l
Allyl Chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Bromobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Bromochloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Bromodichloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Bromoform	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Bromomethane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Butyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Butylbenzene, sec	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Butylbenzene, tert	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Carbon tetrachloride	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Chlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Chlorodibromomethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Chloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Chloroform	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Chloromethane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Chlorotoluene, o	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Chlorotoluene, p	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Cumene (isopropyl benzene)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Cymene p- (Toluene isopropyl p-)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Dibromomethane (methylene bromide)	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Dichlorodifluoromethane (CFC-12)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Dichlorofluoromethane (CFC-21)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Ethyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Ethyl ether	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Hexachlorobutadiene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl ethyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 25.0 ug/l
Methyl isobutyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 25.0 ug/l
Methyl tertiary butyl ether (MTBE)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methylene chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Naphthalene	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Propylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Styrene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Tetrachloroethylene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.9 ug/l**	**1.5 ug/l**	**2.5 ug/l**	**4.6 ug/l**	**12.1 ug/l**	< 1.0 ug/l	**2.9 ug/l**	**4.7 ug/l**	**1.6 ug/l**	**2.1 ug/l**	**2.1 ug/l**	< 1.0 ug/l	< 1.0 ug/l	**5.3 ug/l**	**7.0 ug/l**
Tetrahydrofuran	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 50.0 ug/l	< 50.0 ug/l
Toluene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Trichlorofluoromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Trichlorotrifluoroethane (Freon 113)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Vinyl chloride	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	**0.52 ug/l**	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 2.0 ug/l	< 2.0 ug/l
Xylene, total	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 15.0 ug/l	< 15.0 ug/l

Note: Detected compound results shown in **bold**

Table 7

Groundwater Sampling Analytical Results - Temporary Wells
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area	Site										Northeast Area												
Location	DP-068 GW	DP-068 GW	DP-069 GW	DP-069 GW	DP-070 GW	DP-070 GW	DP-070 GW	DP-071 GW		DP-071 GW	DP-072 GW	DP-072 GW	DP-073 GW	DP-073 GW	DP-073 GW	DP-074 GW	DP-074 GW	DP-075 GW	DP-075 GW	DP-075 GW		DP-076 GW	DP-076 GW
Date	10/20/2014	10/21/2014	10/21/2014	10/21/2014	10/21/2014	10/22/2014	10/22/2014	10/22/2014		10/22/2014	10/24/2014	10/27/2014	10/27/2014	10/28/2014	10/28/2014	10/28/2014	10/28/2014	10/28/2014	10/29/2014	10/29/2014		10/29/2014	10/29/2014
Depth	17.6 - 21.6 ft	36 - 38 ft	17.3 - 21.3 ft	33 - 35 ft	17 - 21 ft	29 - 31 ft	35 - 37 ft	16.8 - 20.8 ft	16.8 - 20.8 ft	33 - 35 ft	14.3 - 18.3 ft	36 - 38 ft	13 - 17 ft	25 - 27 ft	38.3 - 40.3 ft	13.5 - 17.5 ft	44.5 - 46.5 ft	14 - 18 ft	35 - 37 ft	44 - 46 ft	44 - 46 ft	13.8 - 17.8 ft	42 - 44 ft
Sample Type	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	FD	N	N
VOCs																							
Trichloroethylene	**0.42 ug/l**	**4.6 ug/l**	< 0.40 ug/l	**0.41 ug/l**	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	**181 ug/l**	**937 ug/l**	**4.5 ug/l**	**559 ug/l**	**1030 ug/l**	**6.1 ug/l**	**1210 ug/l**	**2.8 ug/l**	**728 ug/l**	**945 ug/l**	**925 ug/l**	< 0.40 ug/l	**761 ug/l**
1,1,1,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,1-Trichloroethane	**1.5 ug/l**	< 1.0 ug/l	**2.6 ug/l**	**4.4 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,2,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,2-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**6.9 ug/l**	**1.5 ug/l**	**2.5 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloro-1-propene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.9 ug/l**	< 1.0 ug/l	< 1.0 ug/l	**4.7 ug/l**	< 1.0 ug/l	**4.0 ug/l**	< 1.0 ug/l	< 5.0 ug/l	**4.1 ug/l**	< 1.0 ug/l	**2.3 ug/l**	< 1.0 ug/l	**1.7 ug/l**	**1.8 ug/l**	**2.0 ug/l**	< 1.0 ug/l	**1.6 ug/l**
1,1-Dichloroethylene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.3 ug/l**	< 1.0 ug/l	< 5.0 ug/l	**1.7 ug/l**	< 1.0 ug/l	**2.4 ug/l**	< 1.0 ug/l	**1.5 ug/l**	**2.1 ug/l**	**2.3 ug/l**	< 1.0 ug/l	**1.9 ug/l**
1,2,3-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,3-Trichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2,4-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,4-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**5.7 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dibromo-3-chloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2-Dibromoethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethylene, cis	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**46.9 ug/l**	**256 ug/l**	< 1.0 ug/l	**156 ug/l**	**349 ug/l**	**1.3 ug/l**	**509 ug/l**	< 1.0 ug/l	**269 ug/l**	**401 ug/l**	**392 ug/l**	< 1.0 ug/l	**257 ug/l**
1,2-Dichloroethylene, trans	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.1 ug/l**	**8.6 ug/l**	< 1.0 ug/l	< 5.0 ug/l	**10.8 ug/l**	< 1.0 ug/l	**12.7 ug/l**	< 1.0 ug/l	**8.2 ug/l**	**11.1 ug/l**	**11.9 ug/l**	< 1.0 ug/l	**8.1 ug/l**
1,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3,5-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloro-1-propene, cis	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichloro-1-propene, trans	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloropropane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,4-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
2,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Acetone	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 100 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Allyl Chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromochloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromodichloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromoform	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Bromomethane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 * ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Butyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, sec	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**2.5 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, tert	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**3.7 ug/l**	< 1.0 ug/l	< 1.0 ug/l	**1.2 ug/l**	**1.2 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Carbon tetrachloride	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorodibromomethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroform	**2.2 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	**3.7 ug/l**	< 1.0 ug/l	**2.8 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloromethane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Chlorotoluene, o	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorotoluene, p	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cumene (isopropyl benzene)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cymene p- (Toluene isopropyl p-)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	**2.0 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Dibromomethane (methylene bromide)	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Dichlorodifluoromethane (CFC-12)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Dichlorofluoromethane (CFC-21)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l
Ethyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Ethyl ether	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Hexachlorobutadiene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methyl ethyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 25.0 * ug/l	< 5.0 * ug/l	< 5.0 ug/l	< 5.0 * ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl isobutyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	**7.5 ug/l**	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl tertiary butyl ether (MTBE)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methylene chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Naphthalene	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Propylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Styrene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Tetrachloroethylene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**2.1 ug/l**	**10.8 ug/l**	< 1.0 ug/l	**11.2 ug/l**	**25.1 ug/l**	< 1.0 ug/l	**36.8 ug/l**	< 1.0 ug/l	**32.9 ug/l**	**38.0 ug/l**	**42.0 ug/l**	< 1.0 ug/l	**28.5 ug/l**
Tetrahydrofuran	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 50.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l
Toluene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Trichlorofluoromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Trichlorotrifluoroethane (Freon 113)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Vinyl chloride	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 2.0 ug/l	**7.0 ug/l**	< 0.40 ug/l	**4.0 ug/l**	< 0.40 ug/l	**2.0 ug/l**	**2.9 ug/l**	**3.1 ug/l**	< 0.40 ug/l	**2.5 ug/l**
Xylene, total	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 15.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l

Note: Detected compound results shown in **bold**

Table 7

Groundwater Sampling Analytical Results - Temporary Wells
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area	Northeast Area								Southwest Area		
Location	301	301	303	303	304	304	305	305	DP-077 GW	DP-077 GW	
Date	12/02/2014	12/03/2014	12/04/2014	12/04/2014	12/05/2014	12/08/2014	12/08/2014	12/08/2014	11/05/2014	11/05/2014	
Depth	17.5 - 21.5 ft	48 - 50 ft	15.5 - 19.5 ft	32 - 34 ft	13.5 - 17.5 ft	49 - 51 ft	15.5 - 19.5 ft	52 - 54 ft	13 - 17 ft	34 - 36 ft	34 - 36 ft
Sample Type	N	N	N	N	N	N	N	N	N	N	FD
VOCs											
Trichloroethylene	**1040 ug/l**	**1940 ug/l**	**255 ug/l**	**1020 ug/l**	**51.2 ug/l**	**1.6 ug/l**	**73.8 ug/l**	**0.86 ug/l**	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l
1,1,1,2-Tetrachloroethane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,1-Trichloroethane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**2.5 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,2,2-Tetrachloroethane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,2-Trichloroethane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloro-1-propene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloroethane	< 10.0 ug/l	< 20.0 ug/l	**1.2 ug/l**	**4.9 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloroethylene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	**1.5 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,3-Trichlorobenzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,3-Trichloropropane	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2,4-Trichlorobenzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,4-Trimethylbenzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dibromo-3-chloropropane	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2-Dibromoethane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichlorobenzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethylene, cis	**615 ug/l**	**424 ug/l**	**106 ug/l**	**308 ug/l**	**7.0 ug/l**	**1.1 ug/l**	**10.7 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethylene, trans	**12.8 ug/l**	< 20.0 ug/l	**2.4 ug/l**	**10.1 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloropropane	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3,5-Trimethylbenzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloro-1-propene, cis	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichloro-1-propene, trans	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichlorobenzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloropropane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,4-Dichlorobenzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
2,2-Dichloropropane	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Acetone	< 200 ug/l	< 400 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	**22.5 ug/l**	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Allyl Chloride	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Benzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromobenzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromochloromethane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromodichloromethane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromoform	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Bromomethane	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Butyl benzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, sec	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, tert	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Carbon tetrachloride	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorobenzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorodibromomethane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroethane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroform	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.8 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloromethane	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Chlorotoluene, o	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorotoluene, p	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cumene (isopropyl benzene)	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cymene p- (Toluene isopropyl p-)	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Dibromomethane (methylene bromide)	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Dichlorodifluoromethane (CFC-12)	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Dichlorofluoromethane (CFC-21)	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Ethyl benzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Ethyl ether	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Hexachlorobutadiene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methyl ethyl ketone	< 50.0 ug/l	< 100 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	**6.4 ug/l**	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl isobutyl ketone	< 50.0 ug/l	< 100 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl tertiary butyl ether (MTBE)	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methylene chloride	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Naphthalene	< 40.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Propylbenzene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Styrene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Tetrachloroethylene	**33.5 ug/l**	< 20.0 ug/l	**4.0 ug/l**	**13.3 ug/l**	**16.0 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Tetrahydrofuran	< 100 ug/l	< 200 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l
Toluene	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Trichlorofluoromethane	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Trichlorotrifluoroethane (Freon 113)	< 10.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Vinyl chloride	< 4.0 ug/l	< 8.0 ug/l	**2.1 ug/l**	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l
Xylene, total	< 30.0 ug/l	< 60.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l

Note: Detected compound results shown in **bold**

Data Footnotes and Qualifiers

Footnote	
--	Not analyzed/not available.
<	Less than
N	Sample Type: Normal
FD	Sample Type: Field Duplicate

Qualifier	
e	Estimated value, exceeded the instrument calibration range.
h	EPA recommended sample preservation, extraction or analysis holding time was exceeded.
j	Estimated detected value. The reported value is less than the stated laboratory quantitation limit but greater the laboratory method detection limit.
*	Estimated value, QA/QC criteria not met.

Table 8

Groundwater Sampling Analytical Results - Monitoring Wells
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area	Site																		Northeast Area							
Location	308GS	308GS	308GD	308GD	311GS		311GS	311GD	311GD		SMW1	SMW1	109		109		B	B	301GS	301GS	301GD	301GD	302GS	302GS	303GS	303GS
Date	12/16/2014	3/10/2015	12/16/2014	3/10/2015	12/17/2014		3/10/2015	12/17/2014	3/10/2015		12/12/2014	3/10/2015	12/11/2014		3/06/2015		12/11/2014	3/10/2015	12/18/2014	3/12/2015	12/18/2014	3/12/2015	12/22/2014	3/12/2015	12/19/2014	3/12/2015
Sample Type	N	N	N	N	N	FD	N	N	N	FD	N	N	N	FD	N	FD	N	N	N	N	N	N	N	N	N	N
VOCs																										
Trichloroethylene	**37.9 ug/l**	**35.8 ug/l**	**6.2 ug/l**	**5.6 ug/l**	**33.1 ug/l**	**35.0 ug/l**	**76.3 ug/l**	**165 ug/l**	**172 ug/l**	**171 ug/l**	< 0.40 ug/l	< 0.40 ug/l	**112 ug/l**	**112 ug/l**	**145 ug/l**	**145 ug/l**	**82.0 ug/l**	**55.5 ug/l**	**1080 h ug/l**	**1370 ug/l**	**3290 h ug/l**	**4270 ug/l**	< 0.40 ug/l	**0.98 ug/l**	**718 h ug/l**	**693 ug/l**
1,1,1,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,1,1-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**5.1 ug/l**	**5.3 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,1,2,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,1,2-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 10.0 ug/l	< 5.0 ug/l	< 20.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,1-Dichloro-1-propene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,1-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	**1.4 ug/l**	**1.4 ug/l**	**1.5 ug/l**	**1.1 ug/l**	< 1.0 ug/l	**1.3 ug/l**	**1.2 ug/l**	**1.3 ug/l**	**1.2 ug/l**	**1.0 ug/l**	< 1.0 ug/l	**1.5 ug/l**	< 10.0 ug/l	**6.7 ug/l**	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,1-Dichloroethylene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**3.2 ug/l**	< 10.0 ug/l	**20.8 ug/l**	**23.2 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,2,3-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,2,3-Trichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
1,2,4-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,2,4-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**81.8 ug/l**	**79.4 ug/l**	**50.5 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,2-Dibromo-3-chloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
1,2-Dibromoethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,2-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	**1.1 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,2-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,2-Dichloroethylene, cis	**2.4 ug/l**	**2.0 ug/l**	< 1.0 ug/l	< 1.0 ug/l	**5.3 ug/l**	**5.1 ug/l**	**16.3 ug/l**	**43.7 ug/l**	**42.6 ug/l**	**44.5 ug/l**	< 1.0 ug/l	< 1.0 ug/l	**24.9 ug/l**	**25.0 ug/l**	**32.3 ug/l**	**32.1 ug/l**	**7.7 ug/l**	**4.7 ug/l**	**712 h ug/l**	**732 ug/l**	**639 h ug/l**	**909 ug/l**	< 1.0 ug/l	< 1.0 ug/l	**339 h ug/l**	**308 ug/l**
1,2-Dichloroethylene, trans	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	**1.3 ug/l**	**1.8 ug/l**	**2.0 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.3 ug/l**	**1.7 ug/l**	< 1.0 ug/l	< 1.0 ug/l	**17.3 ug/l**	**20.9 ug/l**	**9.7 ug/l**	< 20.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	**6.9 ug/l**
1,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
1,3,5-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**21.3 ug/l**	**20.5 ug/l**	**13.3 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,3-Dichloro-1-propene, cis	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
1,3-Dichloro-1-propene, trans	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
1,3-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,3-Dichloropropane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
1,4-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
2,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
Acetone	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 100 ug/l	< 100 ug/l	**20.0 ug/l**	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 200 ug/l	< 20.0 ug/l	< 400 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 200 h ug/l	< 100 ug/l
Allyl Chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
Benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**5.5 ug/l**	**5.3 ug/l**	**2.9 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	**1.6 ug/l**	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Bromobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Bromochloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Bromodichloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Bromoform	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
Bromomethane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 50.0 ug/l	< 50.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
Butyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	**3.3 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Butylbenzene, sec	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	**3.5 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Butylbenzene, tert	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Carbon tetrachloride	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Chlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Chlorodibromomethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Chloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Chloroform	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Chloromethane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
Chlorotoluene, o	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Chlorotoluene, p	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Cumene (isopropyl benzene)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**10.8 ug/l**	**10.7 ug/l**	**9.7 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Cymene p- (Toluene isopropyl p-)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**5.1 ug/l**	**5.3 ug/l**	**5.4 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Dibromomethane (methylene bromide)	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
Dichlorodifluoromethane (CFC-12)	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Dichlorofluoromethane (CFC-21)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Ethyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**253 ug/l**	**257 ug/l**	**41.1 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Ethyl ether	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
Hexachlorobutadiene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Methyl ethyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 50.0 ug/l	< 5.0 ug/l	< 100 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 50.0 h ug/l	< 25.0 ug/l
Methyl isobutyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 50.0 ug/l	< 5.0 ug/l	< 100 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 50.0 h ug/l	< 25.0 ug/l
Methyl tertiary butyl ether (MTBE)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Methylene chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
Naphthalene	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	**30.8 ug/l**	**31.6 ug/l**	**22.6 ug/l**	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 ug/l	< 4.0 ug/l	< 80.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 40.0 h ug/l	< 20.0 ug/l
Propylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**10.3 ug/l**	**10.1 ug/l**	**9.4 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Styrene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Tetrachloroethylene	**1.5 ug/l**	**1.4 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	**1.7 ug/l**	**2.9 ug/l**	**3.4 ug/l**	**3.4 ug/l**	< 1.0 ug/l	< 1.0 ug/l	**2.6 ug/l**	**2.6 ug/l**	**3.5 ug/l**	**3.2 ug/l**	**2.3 ug/l**	**1.7 ug/l**	**48.9 ug/l**	**52.8 ug/l**	**1.7 ug/l**	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	**9.1 ug/l**
Tetrahydrofuran	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 50.0 ug/l	< 50.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 100 ug/l	< 10.0 ug/l	< 200 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 100 h ug/l	< 50.0 ug/l
Toluene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Trichlorofluoromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Trichlorotrifluoroethane (Freon 113)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 ug/l	< 1.0 ug/l	< 20.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 10.0 h ug/l	< 5.0 ug/l
Vinyl chloride	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	**3.3 ug/l**	< 4.0 ug/l	**12.8 ug/l**	**8.1 ug/l**	< 0.40 ug/l	< 0.40 ug/l	< 4.0 h ug/l	< 2.0 ug/l
Xylene, total	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	**1290 ug/l**	**1270 ug/l**	**80.1 ug/l**	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 30.0 ug/l	< 3.0 ug/l	< 60.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 30.0 h ug/l	< 15.0 ug/l

Note: Detected compound results shown in **bold**

Table 8

Groundwater Sampling Analytical Results - Monitoring Wells
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area	Northeast Area																
Location	304GS	304GS	305GS	305GS		305GD	305GD	306GS	306GS	306GD	306GD	307GS	307GS	307GD	307GD	310GS	310GS
Date	12/19/2014	3/12/2015	12/22/2014	3/12/2015		12/22/2014	3/12/2015	12/18/2014	3/11/2015	12/18/2014	3/11/2015	12/17/2014	3/11/2015	12/17/2014	3/11/2015	12/17/2014	3/09/2015
Sample Type	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	N
VOCs																	
Trichloroethylene	**63.5 h ug/l**	**111 ug/l**	**302 h ug/l**	**231 ug/l**	**247 ug/l**	**0.51 h ug/l**	< 0.40 ug/l	**373 h ug/l**	**470 ug/l**	**573 h ug/l**	**387 ug/l**	< 0.40 ug/l	**0.65 ug/l**	**0.83 ug/l**	**0.51 ug/l**	**10.3 ug/l**	**7.4 ug/l**
1,1,1,2-Tetrachloroethane	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,1-Trichloroethane	< 1.0 h ug/l	< 1.0 ug/l	**1.1 h ug/l**	< 2.0 ug/l	< 2.0 ug/l	**2.2 h ug/l**	**2.2 ug/l**	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	**1.5 ug/l**	**2.3 ug/l**	**1.9 ug/l**	**2.4 ug/l**	< 1.0 ug/l	< 1.0 ug/l
1,1,2,2-Tetrachloroethane	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,2-Trichloroethane	< 1.0 h ug/l	< 1.0 ug/l	< 5.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 5.0 h ug/l	< 1.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloro-1-propene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloroethane	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	**2.0 ug/l**	< 5.0 ug/l	**3.2 ug/l**	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloroethylene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,3-Trichlorobenzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,3-Trichloropropane	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2,4-Trichlorobenzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,4-Trimethylbenzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dibromo-3-chloropropane	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2-Dibromoethane	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichlorobenzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethane	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethylene, cis	**11.2 h ug/l**	**18.3 ug/l**	**65.9 h ug/l**	**44.2 ug/l**	**45.9 ug/l**	< 1.0 h ug/l	< 1.0 ug/l	**166 ug/l**	**188 ug/l**	**213 ug/l**	**149 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**4.1 ug/l**	**2.2 ug/l**
1,2-Dichloroethylene, trans	< 1.0 h ug/l	< 1.0 ug/l	< 4.0 h ug/l	< 2.0 ug/l	**2.2 ug/l**	< 4.0 h ug/l	< 1.0 ug/l	< 4.0 ug/l	**5.1 ug/l**	**5.1 ug/l**	**5.4 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloropropane	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3,5-Trimethylbenzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloro-1-propene, cis	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichloro-1-propene, trans	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichlorobenzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloropropane	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,4-Dichlorobenzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
2,2-Dichloropropane	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Acetone	< 20.0 h ug/l	< 20.0 ug/l	< 20.0 h ug/l	< 40.0 ug/l	< 40.0 ug/l	< 20.0 h ug/l	< 20.0 ug/l	< 20.0 ug/l	< 100 ug/l	< 20.0 ug/l	< 100 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Allyl Chloride	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Benzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromobenzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromochloromethane	< 1.0 h ug/l	< 1.0 ug/l	< 4.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 4.0 h ug/l	< 1.0 ug/l	< 4.0 ug/l	< 5.0 ug/l	< 4.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromodichloromethane	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromoform	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Bromomethane	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 * ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l
Butyl benzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, sec	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, tert	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Carbon tetrachloride	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorobenzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorodibromomethane	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroethane	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroform	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloromethane	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Chlorotoluene, o	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorotoluene, p	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cumene (isopropyl benzene)	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cymene p- (Toluene isopropyl p-)	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Dibromomethane (methylene bromide)	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Dichlorodifluoromethane (CFC-12)	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l
Dichlorofluoromethane (CFC-21)	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Ethyl benzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Ethyl ether	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Hexachlorobutadiene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methyl ethyl ketone	< 5.0 h ug/l	< 5.0 ug/l	< 5.0 h ug/l	< 10.0 ug/l	< 10.0 ug/l	< 5.0 h ug/l	< 5.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl isobutyl ketone	< 5.0 h ug/l	< 5.0 ug/l	< 5.0 h ug/l	< 10.0 ug/l	< 10.0 ug/l	< 5.0 h ug/l	< 5.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl tertiary butyl ether (MTBE)	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methylene chloride	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Naphthalene	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 h ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 h ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Propylbenzene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Styrene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Tetrachloroethylene	**20.5 h ug/l**	**30.0 ug/l**	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	**7.7 ug/l**	**8.0 ug/l**	**7.5 ug/l**	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**9.4 ug/l**	**8.5 ug/l**
Tetrahydrofuran	< 10.0 h ug/l	< 10.0 ug/l	< 10.0 h ug/l	< 20.0 ug/l	< 20.0 ug/l	< 10.0 h ug/l	< 10.0 ug/l	< 10.0 ug/l	< 50.0 ug/l	< 10.0 ug/l	< 50.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l
Toluene	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Trichlorofluoromethane	< 1.0 h ug/l	< 1.0 ug/l	< 4.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 4.0 h ug/l	< 1.0 ug/l	< 4.0 ug/l	< 5.0 ug/l	< 4.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Trichlorotrifluoroethane (Freon 113)	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 h ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 h ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Vinyl chloride	< 0.40 h ug/l	< 0.40 ug/l	< 0.40 h ug/l	< 0.80 ug/l	< 0.80 ug/l	< 0.40 h ug/l	< 0.40 ug/l	**0.97 ug/l**	< 2.0 ug/l	< 0.40 ug/l	< 2.0 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l
Xylene, total	< 3.0 h ug/l	< 3.0 ug/l	< 3.0 h ug/l	< 6.0 ug/l	< 6.0 ug/l	< 3.0 h ug/l	< 3.0 ug/l	< 3.0 ug/l	< 15.0 ug/l	< 3.0 ug/l	< 15.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l

Area	Central Area											
Location	309GS	309GS	309GD	309GD	312GS	312GS	312GD	312GD	313GS	313GS	313GD	313GD
Date	12/12/2014	3/11/2015	12/12/2014	3/11/2015	12/10/2014	3/09/2015	12/10/2014	3/09/2015	12/09/2014	3/06/2015	12/09/2014	3/06/2015
Sample Type	N	N	N	N	N	N	N	N	N	N	N	N
VOCs												
Trichloroethylene	**84.3 ug/l**	**74.7 ug/l**	**250 ug/l**	**140 ug/l**	**53.9 ug/l**	**48.3 ug/l**	**11.0 ug/l**	**9.7 ug/l**	**327 ug/l**	**320 ug/l**	**370 ug/l**	**347 ug/l**
1,1,1,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,1,1-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,1,2,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,1,2-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,1-Dichloro-1-propene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,1-Dichloroethane	**1.2 ug/l**	< 1.0 ug/l	**1.9 ug/l**	**1.1 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,1-Dichloroethylene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,2,3-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,2,3-Trichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
1,2,4-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,2,4-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,2-Dibromo-3-chloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
1,2-Dibromoethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,2-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,2-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,2-Dichloroethylene, cis	**9.7 ug/l**	**7.9 ug/l**	**81.6 ug/l**	**25.4 ug/l**	**12.3 ug/l**	**19.4 ug/l**	**2.1 ug/l**	**1.9 ug/l**	**112 ug/l**	**117 ug/l**	**128 ug/l**	**121 ug/l**
1,2-Dichloroethylene, trans	< 1.0 ug/l	**1.2 ug/l**	**2.3 ug/l**	**1.7 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**2.5 ug/l**	**3.4 ug/l**	**3.2 ug/l**	**3.4 ug/l**
1,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
1,3,5-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,3-Dichloro-1-propene, cis	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
1,3-Dichloro-1-propene, trans	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
1,3-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,3-Dichloropropane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
1,4-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
2,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
Acetone	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 40.0 ug/l	< 40.0 ug/l	< 40.0 ug/l	< 40.0 ug/l
Allyl Chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
Benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Bromobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Bromochloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Bromodichloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Bromoform	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
Bromomethane	< 10.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 8.0 ug/l	< 20.0 ug/l	< 8.0 ug/l
Butyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Butylbenzene, sec	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Butylbenzene, tert	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Carbon tetrachloride	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Chlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Chlorodibromomethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Chloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Chloroform	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Chloromethane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
Chlorotoluene, o	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Chlorotoluene, p	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Cumene (isopropyl benzene)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Cymene p- (Toluene isopropyl p-)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Dibromomethane (methylene bromide)	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
Dichlorodifluoromethane (CFC-12)	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 8.0 ug/l	< 2.0 ug/l	< 8.0 ug/l	< 2.0 ug/l
Dichlorofluoromethane (CFC-21)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Ethyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Ethyl ether	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
Hexachlorobutadiene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Methyl ethyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l
Methyl isobutyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l
Methyl tertiary butyl ether (MTBE)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Methylene chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
Naphthalene	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 8.0 ug/l
Propylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Styrene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Tetrachloroethylene	**2.2 ug/l**	**2.1 ug/l**	**4.8 ug/l**	**3.1 ug/l**	**1.8 ug/l**	**1.6 ug/l**	**1.9 ug/l**	**1.2 ug/l**	**9.9 ug/l**	**10.5 ug/l**	**10.3 ug/l**	**11.1 ug/l**
Tetrahydrofuran	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Toluene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Trichlorofluoromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Trichlorotrifluoroethane (Freon 113)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 2.0 ug/l
Vinyl chloride	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.80 ug/l	< 0.80 ug/l	< 0.80 ug/l	< 0.80 ug/l
Xylene, total	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 6.0 ug/l	< 6.0 ug/l	< 6.0 ug/l	< 6.0 ug/l

Note: Detected compound results shown in **bold**

Table 8

Groundwater Sampling Analytical Results - Monitoring Wells
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area	Central Area																						
Location	314GS		314GS	314GD	314GD	315GS	315GS	315GD	315GD	SMW3	SMW3	SMW6	SMW6	SMW10		SMW10	SMW16	SMW16	SMW19	SMW19		SMW22	SMW22
Date	12/23/2014		3/05/2015	12/23/2014	3/05/2015	12/09/2014	3/05/2015	12/09/2014	3/05/2015	12/12/2014	3/06/2015	12/12/2014	3/06/2015	12/16/2014		3/04/2015	12/23/2014	3/04/2015	12/08/2014	3/05/2015		12/22/2014	3/05/2015
Sample Type	N	FD	N	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N	N	FD	N	N
VOCs																							
Trichloroethylene	**498 h ug/l**	**514 h ug/l**	**421 ug/l**	**341 h ug/l**	**420 ug/l**	**164 ug/l**	**247 ug/l**	**349 ug/l**	**438 ug/l**	**5.4 ug/l**	**3.8 ug/l**	**2.4 ug/l**	**2.8 ug/l**	**1.7 ug/l**	**1.5 ug/l**	**1.6 ug/l**	**0.44 ug/l**	**0.58 ug/l**	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	**74.8 ug/l**	**82.9 ug/l**
1,1,1,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,1-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	**1.6 ug/l**	**2.2 ug/l**	**1.0 ug/l**	< 1.0 ug/l	**2.0 ug/l**	**2.0 ug/l**	**2.4 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,2,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,2-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l
1,1-Dichloro-1-propene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloroethane	**1.7 ug/l**	**1.6 ug/l**	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.3 ug/l**	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloroethylene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,3-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,3-Trichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2,4-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,4-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dibromo-3-chloropropane	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2-Dibromoethane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethylene, cis	**160 ug/l**	**159 ug/l**	**134 ug/l**	**108 ug/l**	**164 ug/l**	**38.9 ug/l**	**94.1 ug/l**	**149 ug/l**	**159 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**26.7 ug/l**	**28.8 ug/l**
1,2-Dichloroethylene, trans	**4.2 ug/l**	**4.3 ug/l**	**5.9 ug/l**	**2.6 ug/l**	< 5.0 ug/l	< 1.0 ug/l	**2.5 ug/l**	**3.5 ug/l**	**5.8 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	**1.1 ug/l**
1,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3,5-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloro-1-propene, cis	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichloro-1-propene, trans	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloropropane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,4-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
2,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Acetone	< 20.0 ug/l	< 20.0 ug/l	< 100 ug/l	< 20.0 ug/l	< 100 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 100 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Allyl Chloride	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Benzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromobenzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromochloromethane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l
Bromodichloromethane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.1 ug/l**	**1.0 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromoform	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Bromomethane	< 4.0 * ug/l	< 4.0 * ug/l	< 20.0 ug/l	< 4.0 * ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 20.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Butyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, sec	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, tert	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Carbon tetrachloride	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorodibromomethane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroethane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroform	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	**2.8 ug/l**	< 5.0 ug/l	**7.9 ug/l**	**9.3 ug/l**	**1.3 ug/l**	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**13.1 ug/l**	**9.9 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**5.7 ug/l**	**8.2 ug/l**
Chloromethane	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Chlorotoluene, o	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorotoluene, p	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cumene (isopropyl benzene)	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cymene p- (Toluene isopropyl p-)	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Dibromomethane (methylene bromide)	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Dichlorodifluoromethane (CFC-12)	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 5.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Dichlorofluoromethane (CFC-21)	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Ethyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Ethyl ether	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Hexachlorobutadiene	< 4.0 ug/l	< 4.0 ug/l	< 5.0 ug/l	< 4.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methyl ethyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl isobutyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 25.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl tertiary butyl ether (MTBE)	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methylene chloride	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Naphthalene	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 20.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Propylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Styrene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Tetrachloroethylene	**13.0 ug/l**	**12.5 ug/l**	**12.0 ug/l**	**10.5 ug/l**	**11.4 ug/l**	**6.6 ug/l**	**7.8 ug/l**	**10.9 ug/l**	**10.9 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**2.9 ug/l**	**3.3 ug/l**
Tetrahydrofuran	< 10.0 ug/l	< 10.0 ug/l	< 50.0 ug/l	< 10.0 ug/l	< 50.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 50.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l
Toluene	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Trichlorofluoromethane	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l
Trichlorotrifluoroethane (Freon 113)	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 5.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Vinyl chloride	< 0.40 ug/l	< 0.40 ug/l	< 2.0 ug/l	< 0.40 ug/l	< 2.0 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 2.0 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l
Xylene, total	< 3.0 ug/l	< 3.0 ug/l	< 15.0 ug/l	< 3.0 ug/l	< 15.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 15.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l

Note: Detected compound results shown in **bold**

Table 8

Groundwater Sampling Analytical Results - Monitoring Wells
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area	Central Area																						Southwest Area					
Location	SMW25	SMW25	2	2	110	110		111	111	112	112		113	113	Q	Q	S	S	T	T	X	X	316GS		316GS	316GD	316GD	317GS
Date	12/12/2014	3/06/2015	12/11/2014	3/09/2015	12/10/2014	3/05/2015		12/08/2014	3/03/2015	12/08/2014	3/03/2015		12/08/2014	3/04/2015	12/10/2014	3/03/2015	12/10/2014	3/04/2015	12/16/2014	3/05/2015	12/09/2014	3/04/2015	12/09/2014		3/04/2015	12/09/2014	3/04/2015	12/08/2014
Sample Type	N	N	N	N	N	N	FD	N	N	N	N	FD	N	N	N	N	N	N	N	N	N	N	N	FD	N	N	N	N
VOCs																												
Trichloroethylene	**243 ug/l**	**219 ug/l**	**82.2 ug/l**	**65.3 ug/l**	**214 ug/l**	**275 ug/l**	**272 ug/l**	**5.3 ug/l**	**4.8 ug/l**	**4.0 ug/l**	**4.8 ug/l**	**4.5 ug/l**	**0.98 ug/l**	**1.8 ug/l**	**0.78 ug/l**	< 0.40 ug/l	**63.7 ug/l**	**66.5 ug/l**	< 0.40 ug/l	< 0.40 ug/l	**0.61 * ug/l**	**0.70 ug/l**	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l
1,1,1,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,1-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	**2.2 ug/l**	**3.1 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.8 ug/l**	**1.8 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,2,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,2-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloro-1-propene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	**1.1 ug/l**	< 1.0 ug/l	**1.1 ug/l**	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloroethylene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,3-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,3-Trichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2,4-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,4-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dibromo-3-chloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2-Dibromoethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethylene, cis	**78.2 ug/l**	**61.3 ug/l**	**15.8 ug/l**	**12.1 ug/l**	**55.4 ug/l**	**103 ug/l**	**101 ug/l**	**1.2 ug/l**	**1.2 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethylene, trans	**2.0 ug/l**	**2.0 ug/l**	< 1.0 ug/l	**1.0 ug/l**	**1.4 ug/l**	**3.0 ug/l**	**2.9 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3,5-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloro-1-propene, cis	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichloro-1-propene, trans	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloropropane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,4-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
2,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Acetone	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 40.0 ug/l	< 40.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Allyl Chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromochloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromodichloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromoform	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Bromomethane	< 10.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 ug/l	< 10.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 10.0 ug/l	< 4.0 * ug/l	< 10.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l
Butyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, sec	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, tert	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Carbon tetrachloride	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorodibromomethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroform	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloromethane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Chlorotoluene, o	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorotoluene, p	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cumene (isopropyl benzene)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cymene p- (Toluene isopropyl p-)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Dibromomethane (methylene bromide)	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Dichlorodifluoromethane (CFC-12)	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 4.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Dichlorofluoromethane (CFC-21)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Ethyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Ethyl ether	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Hexachlorobutadiene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methyl ethyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl isobutyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl tertiary butyl ether (MTBE)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methylene chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Naphthalene	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 8.0 ug/l	< 8.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Propylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Styrene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Tetrachloroethylene	**8.3 ug/l**	**8.0 ug/l**	**1.6 ug/l**	**1.6 ug/l**	**6.9 ug/l**	**6.2 ug/l**	**5.8 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.6 ug/l**	**1.3 ug/l**	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Tetrahydrofuran	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 * ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l
Toluene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 * ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Trichlorofluoromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Trichlorotrifluoroethane (Freon 113)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 2.0 ug/l	< 2.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Vinyl chloride	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.80 ug/l	< 0.80 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l
Xylene, total	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 6.0 ug/l	< 6.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 * ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l

Note: Detected compound results shown in **bold**

Table 8

Groundwater Sampling Analytical Results - Monitoring Wells
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area	Southwest Area							
Location	317GS	318GS	318GS	V	V	W		W
Date	3/03/2015	12/08/2014	3/03/2015	12/09/2014	3/03/2015	12/09/2014		3/03/2015
Sample Type	N	N	N	N	N	N	FD	N
VOCs								
Trichloroethylene	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	**21.3 ug/l**	**29.2 ug/l**	**6.7 ug/l**	**6.7 ug/l**	**8.4 ug/l**
1,1,1,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,1-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,2,2-Tetrachloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1,2-Trichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloro-1-propene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,1-Dichloroethylene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,3-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,3-Trichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2,4-Trichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2,4-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dibromo-3-chloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,2-Dibromoethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,2-Dichloroethylene, cis	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**1.9 ug/l**	**47.1 ug/l**	**48.3 ug/l**	**80.4 ug/l**
1,2-Dichloroethylene, trans	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	**2.7 ug/l**	**2.5 ug/l**	**3.8 ug/l**
1,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3,5-Trimethylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloro-1-propene, cis	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichloro-1-propene, trans	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
1,3-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,3-Dichloropropane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
1,4-Dichlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
2,2-Dichloropropane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Acetone	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l	< 20.0 ug/l
Allyl Chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromochloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromodichloromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Bromoform	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Bromomethane	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 * ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 * ug/l
Butyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, sec	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Butylbenzene, tert	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Carbon tetrachloride	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorobenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorodibromomethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloroform	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chloromethane	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Chlorotoluene, o	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Chlorotoluene, p	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cumene (isopropyl benzene)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Cymene p- (Toluene isopropyl p-)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Dibromomethane (methylene bromide)	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Dichlorodifluoromethane (CFC-12)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Dichlorofluoromethane (CFC-21)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Ethyl benzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Ethyl ether	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Hexachlorobutadiene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methyl ethyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl isobutyl ketone	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l	< 5.0 ug/l
Methyl tertiary butyl ether (MTBE)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Methylene chloride	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Naphthalene	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l	< 4.0 ug/l
Propylbenzene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Styrene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Tetrachloroethylene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Tetrahydrofuran	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l	< 10.0 ug/l
Toluene	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Trichlorofluoromethane	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Trichlorotrifluoroethane (Freon 113)	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l	< 1.0 ug/l
Vinyl chloride	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	< 0.40 ug/l	**0.58 ug/l**
Xylene, total	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l	< 3.0 ug/l

Note: Detected compound results shown in **bold**

Data Footnotes and Qualifiers

Footnote	
--	Not analyzed/not available.
<	Less than
N	Sample Type: Normal
FD	Sample Type: Field Duplicate

Qualifier	
e	Estimated value, exceeded the instrument calibration range.
h	EPA recommended sample preservation, extraction or analysis holding time was exceeded.
j	Estimated detected value. The reported value is less than the stated laboratory quantitation limit but greater the laboratory method detection limit.
*	Estimated value, QA/QC criteria not met.

Table 9

Groundwater Elevations
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Study Area	Well ID	Monitoring Well Network		Measurement Date	Top of Casing Elevation (feet MSL)[1]	Depth to Water (feet)	Water Level Elevation (feet MSL)[1]
		Glacial Drift	Sentinel				
Site	308GS	X		12/16/2014	864.23	20.63	843.60
				2/27/2015	864.23	20.81	843.42
	308GD	X		12/16/2014	864.68	21.18	843.50
				2/27/2015	864.68	21.27	843.41
	311GS	X		12/17/2014	860.18	22.49	837.69
				2/27/2015	860.18	22.91	837.27
	311GD	X		12/17/2014	860.34	22.63	837.71
				2/27/2015	860.34	22.76	837.58
	SMW1		X	12/12/2014	861.74	20.35	841.39
				2/27/2015	861.74	20.53	841.21
	109	X		12/11/2014	859.74	22.21	837.53
				2/27/2015	859.74	22.29	837.45
	B	X		12/11/2014	864.12	20.44	843.68
				2/27/2015	864.12	20.55	843.57
Northeast Area	301GS	X		12/18/2014	867.81	21.10	846.71
				2/27/2015	867.81	21.44	846.37
	301GD	X		12/18/2014	868.27	21.59	846.68
				2/27/2015	868.27	21.95	846.32
	302GS	X		12/22/2014	864.04	18.66	845.38
				2/27/2015	864.04	18.89	845.15
	303GS	X		12/19/2014	865.80	19.35	846.45
				2/27/2015	865.80	19.58	846.22
	304GS	X		12/19/2014	863.47	17.11	846.36
				2/27/2015	863.47	17.48	845.99
	305GS	X		12/22/2014	864.29	19.42	844.87
				2/27/2015	864.29	19.55	844.74
	305GD	X		12/22/2014	864.25	19.58	844.67
				2/27/2015	864.25	19.65	844.60
	306GS	X		12/18/2014	862.45	17.54	844.91
				2/27/2015	862.45	17.72	844.73
	306GD	X		12/18/2014	862.77	17.88	844.89
				2/27/2015	862.77	18.09	844.68
	307GS	X		12/17/2014	863.27	19.22	844.05
				2/27/2015	863.27	19.40	843.87
	307GD	X		12/17/2014	863.28	19.23	844.05
				2/27/2015	863.28	19.41	843.87
	310GS	X		12/17/2014	861.44	15.87	845.57
				2/27/2015	861.44	16.18	845.26
Central Area	309GS	X	X	12/12/2014	863.47	19.12	844.35
				2/27/2015	863.47	19.24	844.23
	309GD	X		12/12/2014	863.55	19.18	844.37
				2/27/2015	863.55	19.28	844.27
	312GS	X	X	12/10/2014	858.28	20.62	837.66
				2/27/2015	858.28	20.63	837.65
	312GD	X		12/10/2014	858.32	20.67	837.65
				2/27/2015	858.32	20.68	837.64
	313GS	X		12/10/2014	853.14	19.36	833.78
				2/27/2015	853.14	19.40	833.74
	313GD	X		12/9/2014	853.12	19.37	833.75
				2/27/2015	853.12	19.41	833.71
	314GS	X		12/23/2014	849.67	19.84	829.83
				2/27/2015	849.67	19.89	829.78
	314GD	X		12/23/2014	850.04	20.25	829.79
				2/27/2015	850.04	20.30	829.74
	315GS	X		12/9/2014	847.94	22.01	825.93
				2/27/2015	847.94	22.08	825.86
	315GD	X		12/9/2014	848.20	22.30	825.90
				2/27/2015	848.20	22.37	825.83
	SMW3		X	12/12/2014	855.44	18.52	836.92
				2/27/2015	855.44	18.59	836.85

Table 9

Groundwater Elevations
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Study Area	Well ID	Monitoring Well Network		Measurement Date	Top of Casing Elevation (feet MSL)[1]	Depth to Water (feet)	Water Level Elevation (feet MSL)[1]
		Glacial Drift	Sentinel				
Central Area	SMW6		X	12/12/2014	852.22	19.35	832.87
				2/27/2015	852.22	19.50	832.72
	SMW10		X	12/16/2014	848.97	21.80	827.17
				2/27/2015	848.97	21.87	827.10
	SMW16		X	12/23/2014	847.78	22.42	825.36
				2/27/2015	847.78	22.66	825.12
	SMW19		X	12/8/2014	849.52	17.86	831.66
				2/27/2015	849.52	17.80	831.72
	SMW22		X	12/22/2014	852.37	19.35	833.02
				2/27/2015	852.37	19.38	832.99
	SMW25		X	12/12/2014	856.52	19.61	836.91
				2/27/2015	856.52	19.61	836.91
	2	X		12/11/2014	857.07	20.12	836.95
				2/27/2015	857.07	20.18	836.89
	110	X		12/10/2014	852.19	16.10	836.09
				2/27/2015	852.19	18.14	834.05
	111	X	X	12/8/2014	846.81	21.32	825.49
				2/27/2015	846.81	21.40	825.41
	112	X	X	12/8/2014	841.19	16.03	825.16
				2/27/2015	841.19	16.20	824.99
	113	X	X	12/8/2014	841.09	15.98	825.11
				2/27/2015	841.09	16.17	824.92
	Q	X		12/10/2014	850.22	20.88	829.34
				2/27/2015	850.22	20.82	829.40
	S	X		12/10/2014	848.00	17.56	830.44
				2/27/2015	848.00	17.64	830.36
	T	X		12/16/2014	849.26	16.38	832.88
				2/27/2015	849.26	16.62	832.64
	X	X		12/9/2014	842.68	17.53	825.15
				2/27/2015	842.68	17.74	824.94
Southwest Area	316GS	X		12/9/2014	837.65	15.03	822.62
				2/27/2015	837.65	15.69	821.96
	316GD	X		12/9/2014	837.88	19.46	818.42
				2/27/2015	837.88	20.47	817.41
	317GS	X		12/8/2014	841.71	18.63	823.08
				2/27/2015	841.71	19.50	822.21
	318GS	X		12/8/2014	837.59	18.55	819.04
				2/27/2015	837.59	19.25	818.34
	V	X		12/9/2014	838.42	20.27	818.15
				2/27/2015	838.42	21.28	817.14
	W	X		12/9/2014	830.63	12.74	817.89
				2/27/2015	830.63	13.61	817.02

Notes:

1 - Elevations are given in NGVD 29.

MSL - mean sea level

Table 10

Soil Gas Sampling Analytical Results
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area			Site								Central Area										
Location			DP-070 SG	DP-071 SG	SVP1	SVP1	SVP2	SVP2	SVP30	SVP30	313	314	315	SVP3	SVP3	SVP4	SVP4	SVP5	SVP5	SVP6	SVP6
Date			10/23/2014	10/31/2014	12/12/2014	3/10/2015	12/11/2014	3/10/2015	12/11/2014	3/10/2015	11/03/2014	12/11/2014	11/12/2014	12/12/2014	3/06/2015	12/11/2014	3/06/2015	12/11/2014	3/06/2015	12/12/2014	3/06/2015
Depth			7.5 ft	8 ft																	
Sample Type			N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter	MPCA Industrial 10X ISVs for Vapor Intrusion Risk Evaluation	MPCA Residential 10X ISVs for Vapor Intrusion Risk Evaluation																			
Effective Date	02/17/2015	02/17/2015																			
Exceedance Key	**Bold**	Underline																			
VOCs																					
Trichloroethylene	**60 (3) ug/m3**	20 (3) ug/m3	< 6.2 ug/m3	< 0.96 ug/m3	< 0.92 ug/m3	1.1 ug/m3	< 0.96 ug/m3	< 1.0 ug/m3	3.3 ug/m3	1.5 ug/m3	**975 ug/m3**	**371 ug/m3**	**116 ug/m3**	4.8 ug/m3	1.9 ug/m3	< 0.92 ug/m3	< 0.95 ug/m3	2.6 ug/m3	0.97 ug/m3	1.4 ug/m3	< 0.92 ug/m3
1,1,1-Trichloroethane	100000 ug/m3	50000 ug/m3	< 4.8 ug/m3	< 1.9 ug/m3	7.7 ug/m3	3.6 ug/m3	< 1.9 ug/m3	< 1.3 ug/m3	33.3 ug/m3	16.2 ug/m3	2.4 ug/m3	4.8 ug/m3	< 1.9 ug/m3	11.0 ug/m3	7.3 ug/m3	26.3 ug/m3	10.3 ug/m3	12.6 ug/m3	8.0 ug/m3	< 1.9 ug/m3	< 1.2 ug/m3
1,1,2,2-Tetrachloroethane	10 ug/m3	2 ug/m3	< 8.1 ug/m3	< 1.2 ug/m3	< 2.3 ug/m3	< 1.4 ug/m3	< 2.4 ug/m3	< 1.3 ug/m3	< 2.4 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 2.4 ug/m3	< 6.1 ug/m3	< 2.4 ug/m3	< 1.3 ug/m3	< 2.3 ug/m3	< 1.2 ug/m3	< 2.4 ug/m3	< 1.2 ug/m3	< 2.3 ug/m3	< 1.2 ug/m3
1,1,2-Trichloroethane	20 ug/m3	6 ug/m3	< 8.5 ug/m3	< 0.96 ug/m3	< 0.92 ug/m3	< 1.1 ug/m3	< 0.96 ug/m3	< 1.0 ug/m3	< 0.96 ug/m3	< 1.0 ug/m3	< 0.99 ug/m3	< 0.96 ug/m3	< 1.9 ug/m3	< 0.96 ug/m3	< 1.0 ug/m3	< 0.92 ug/m3	< 0.97 ug/m3	< 0.96 ug/m3	< 0.93 ug/m3	< 0.92 ug/m3	< 0.93 ug/m3
1,1-Dichloroethane	10000 ug/m3	5000 ug/m3	< 4.9 ug/m3	7.3 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
1,1-Dichloroethylene	6000 ug/m3	2000 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
1,2,4-Trichlorobenzene	100 ug/m3	40 ug/m3	< 12.7 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 2.9 ug/m3	< 2.6 ug/m3	< 2.8 ug/m3	< 2.6 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 6.6 ug/m3	< 2.6 ug/m3	< 2.7 ug/m3	< 2.5 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3
1,2,4-Trimethylbenzene	**200 ug/m3**	70 ug/m3	< 4.2 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.9 ug/m3	< 1.7 ug/m3	< 1.9 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	21.4 ug/m3	5.7 ug/m3	10.4 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	19.9 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	1.9 ug/m3	< 1.7 ug/m3
1,2-Dibromoethane	0.6 ug/m3	0.2 ug/m3	< 8.1 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 3.0 ug/m3	< 2.7 ug/m3	< 2.9 ug/m3	< 2.7 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.8 ug/m3	< 2.6 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3
1,2-Dichlorobenzene	6000 ug/m3	2000 ug/m3	< 4.9 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.4 ug/m3	< 2.1 ug/m3	< 2.3 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 5.3 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3
1,2-Dichloroethane	**10 ug/m3**	4 ug/m3	**21.5 ug/m3**	**17.4 ug/m3**	< 0.69 ug/m3	< 0.80 ug/m3	< 0.71 ug/m3	< 0.77 ug/m3	< 0.71 ug/m3	< 0.74 ug/m3	< 0.74 ug/m3	< 0.71 ug/m3	< 1.4 ug/m3	< 0.71 ug/m3	< 0.74 ug/m3	< 0.69 ug/m3	< 0.72 ug/m3	< 0.71 ug/m3	< 0.69 ug/m3	< 0.69 ug/m3	< 0.69 ug/m3
1,2-Dichloroethylene, cis	2000 (3) ug/m3	600 (3) ug/m3	106 ug/m3	7.4 ug/m3	< 1.4 ug/m3	< 3.9 ug/m3	< 1.4 ug/m3	< 3.8 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	25.4 ug/m3	20.0 ug/m3	2.5 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3	< 1.4 ug/m3	< 3.4 ug/m3	< 1.4 ug/m3	< 3.4 ug/m3
1,2-Dichloroethylene, trans	2000 ug/m3	600 ug/m3	< 5.7 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 3.9 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	2.0 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
1,2-Dichloropropane	100 ug/m3	40 ug/m3	< 5.3 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3
1,2-Dichlorotetrafluoroethane	NA	NA	< 8.7 ug/m3	< 2.5 ug/m3	< 2.4 ug/m3	< 2.8 ug/m3	< 2.5 ug/m3	< 2.7 ug/m3	< 2.5 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.6 ug/m3	< 2.4 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3
1,3,5-Trimethylbenzene	200 ug/m3	60 ug/m3	< 7.2 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.9 ug/m3	< 1.7 ug/m3	< 1.9 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	5.8 ug/m3	1.9 ug/m3	5.0 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	5.4 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3
1,3-Butadiene	20 (3) ug/m3	2 (3) ug/m3	< 3.0 ug/m3	< 0.78 ug/m3	< 0.76 ug/m3	< 0.87 ug/m3	< 0.78 ug/m3	< 0.84 ug/m3	< 0.78 ug/m3	< 0.81 ug/m3	< 0.81 ug/m3	< 0.78 ug/m3	< 2.0 ug/m3	< 0.78 ug/m3	< 0.81 ug/m3	< 0.76 ug/m3	< 0.78 ug/m3	< 0.78 ug/m3	< 0.76 ug/m3	< 0.76 ug/m3	< 0.76 ug/m3
1,3-Dichloro-1-propene, cis	600 (1) ug/m3	200 (1) ug/m3	< 4.7 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 4.0 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3
1,3-Dichloro-1-propene, trans	600 (1) ug/m3	200 (1) ug/m3	< 5.3 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 4.0 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3
1,3-Dichlorobenzene	NA	NA	< 8.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.4 ug/m3	< 2.1 ug/m3	< 2.3 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 5.3 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3
1,4-Dichlorobenzene	2000 ug/m3	600 ug/m3	< 6.9 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.4 ug/m3	< 2.1 ug/m3	< 2.3 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 5.3 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3
2-Hexanone	NA	NA	< 7.4 ug/m3	< 1.4 ug/m3	2.2 ug/m3	< 5.8 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	1.9 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	3.4 ug/m3	3.6 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
4-Ethyltoluene	NA	NA	< 6.1 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.9 ug/m3	< 1.7 ug/m3	< 1.9 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	15.0 ug/m3	2.2 ug/m3	6.3 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	6.4 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3
Acetone	870000 ug/m3	310000 ug/m3	255 ug/m3	358 ug/m3	57.6 ug/m3	102 ug/m3	50.7 ug/m3	92.1 ug/m3	58.3 ug/m3	89.8 ug/m3	168 ug/m3	120 ug/m3	68.4 ug/m3	107 ug/m3	82.4 ug/m3	52.4 ug/m3	58.6 ug/m3	114 ug/m3	63.5 ug/m3	73.9 ug/m3	40.1 ug/m3
Benzene	130 ug/m3	45 ug/m3	71.2 ug/m3	6.0 ug/m3	< 0.55 ug/m3	< 0.63 ug/m3	2.9 ug/m3	0.63 ug/m3	0.85 ug/m3	0.78 ug/m3	21.2 ug/m3	7.2 ug/m3	35.3 ug/m3	< 0.57 ug/m3	< 0.58 ug/m3	0.66 ug/m3	< 0.57 ug/m3	< 0.57 ug/m3	< 0.55 ug/m3	0.57 ug/m3	0.78 ug/m3
Benzyl chloride	30 ug/m3	10 ug/m3	< 18.3 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 2.0 ug/m3	< 1.8 ug/m3	< 2.0 ug/m3	< 1.8 ug/m3	< 1.9 ug/m3	< 1.9 ug/m3	< 1.8 ug/m3	< 4.6 ug/m3	< 1.8 ug/m3	< 9.5 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3
Bromodichloromethane	NA	NA	< 6.3 ug/m3	< 2.4 ug/m3	< 2.3 ug/m3	< 2.6 ug/m3	< 2.4 ug/m3	< 2.5 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	3.0 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	9.8 ug/m3	< 2.4 ug/m3	< 2.3 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.3 ug/m3	< 2.3 ug/m3	< 2.3 ug/m3
Bromoform	300 ug/m3	90 ug/m3	< 11.2 ug/m3	< 3.7 ug/m3	< 3.5 ug/m3	< 4.1 ug/m3	< 3.7 ug/m3	< 3.9 ug/m3	< 3.7 ug/m3	< 3.8 ug/m3	< 3.8 ug/m3	< 3.7 ug/m3	< 9.1 ug/m3	< 3.7 ug/m3	< 3.8 ug/m3	< 3.5 ug/m3	< 3.7 ug/m3	< 3.7 ug/m3	< 3.5 ug/m3	< 3.5 ug/m3	< 3.5 ug/m3
Bromomethane	100 ug/m3	50 ug/m3	< 9.4 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 3.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3
Carbon disulfide	20000 ug/m3	7000 ug/m3	21.3 j ug/m3	9.6 ug/m3	1.8 ug/m3	< 1.2 ug/m3	4.7 ug/m3	4.3 ug/m3	6.5 ug/m3	2.1 ug/m3	15.7 ug/m3	9.2 ug/m3	7.9 ug/m3	5.2 ug/m3	1.8 ug/m3	2.4 ug/m3	< 1.1 ug/m3	1.2 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	1.5 ug/m3
Carbon tetrachloride	**20 ug/m3**	7 ug/m3	< 11.1 ug/m3	< 2.2 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 2.3 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	**31.3 ug/m3**	1.6 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3
Chlorobenzene	1000 ug/m3	500 ug/m3	< 3.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3	1.8 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3
Chlorodibromomethane	NA	NA	< 30.1 ug/m3	< 3.0 ug/m3	< 2.9 ug/m3	< 3.4 ug/m3	< 3.0 ug/m3	< 3.2 ug/m3	< 3.0 ug/m3	< 3.1 ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 3.1 ug/m3	< 2.9 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 2.9 ug/m3	< 2.9 ug/m3	< 2.9 ug/m3
Chloroethane	300000 ug/m3	100000 ug/m3	< 5.6 ug/m3	< 0.94 ug/m3	< 0.91 ug/m3	< 1.0 ug/m3	< 0.94 ug/m3	< 1.0 ug/m3	< 0.94 ug/m3	< 0.97 ug/m3	< 0.97 ug/m3	< 0.94 ug/m3	< 2.3 ug/m3	< 0.94 ug/m3	< 0.97 ug/m3	< 0.91 ug/m3	< 0.94 ug/m3	< 0.94 ug/m3	< 0.91 ug/m3	< 0.91 ug/m3	< 0.91 ug/m3
Chloroform	3000 ug/m3	1000 ug/m3	< 6.2 ug/m3	< 0.86 ug/m3	< 0.83 ug/m3	< 0.96 ug/m3	< 0.86 ug/m3	< 0.93 ug/m3	< 0.86 ug/m3	< 0.89 ug/m3	25.4 ug/m3	5.8 ug/m3	4.4 ug/m3	638 ug/m3	32.7 ug/m3	4.3 ug/m3	1.7 ug/m3	5.5 ug/m3	3.2 ug/m3	29.9 ug/m3	11.2 ug/m3
Chloromethane	3000 ug/m3	900 ug/m3	< 6.7 ug/m3	< 0.73 ug/m3	< 0.71 ug/m3	< 0.81 ug/m3	< 0.73 ug/m3	< 0.79 ug/m3	< 0.73 ug/m3	< 0.76 ug/m3	< 0.76 ug/m3	< 0.73 ug/m3	< 0.73 ug/m3	< 0.73 ug/m3	< 0.76 ug/m3	< 0.71 ug/m3	< 0.73 ug/m3	< 0.73 ug/m3	< 0.71 ug/m3	< 0.71 ug/m3	< 0.71 ug/m3
Cyclohexane	200000 ug/m3	60000 ug/m3	20000 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3	30.9 ug/m3	4.5 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	7.7 ug/m3	6.3 ug/m3	52.6 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3
Dichlorodifluoromethane (CFC-12)			< 3.8 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	< 2.0 ug/m3	< 1.8 ug/m3	< 1.9 ug/m3	10.6 ug/m3	8.3 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	2.0 ug/m3	5.3 ug/m3	2.9 ug/m3	1.9 ug/m3	2.9 ug/m3	7.6 ug/m3	6.7 ug/m3	3.0 ug/m3	1.9 ug/m3
Ethyl acetate	80000 ug/m3	30000 ug/m3	< 4.4 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 3.6 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3
Ethyl Alcohol	420000 ug/m3	150000 ug/m3	< 11.0 ug/m3	< 1.7 ug/m3	3.8 ug/m3	5.7 ug/m3	5.0 ug/m3	3.5 ug/m3	4.8 ug/m3	5.5 ug/m3	51.1 ug/m3	7.1 ug/m3	9.2 ug/m3	4.0 ug/m3	2.2 ug/m3	3.5 ug/m3	3.0 ug/m3	4.4 ug/m3	4.6 ug/m3	3.7 ug/m3	3.7 ug/m3
Ethyl benzene	30000 ug/m3	10000 ug/m3	< 6.2 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 8.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	10.7 ug/m3	10.9 ug/m3	53.5 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	6.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3
Heptane	NA	NA	377 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	9.3 ug/m3	52.2 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
Hexachlorobutadiene	10 ug/m3	5 ug/m3	< 14.3 ug/m3	< 3.8 ug/m3	< 9.1 ug/m3	< 4.3 ug/m3	< 9.4 ug/m3	< 4.1 ug/m3	< 9.4 ug/m3	< 4.0 ug/m3	< 4.0 ug/m3	< 9.4 ug/m3	< 9.4 ug/m3	< 9.4 ug/m3	< 4.0 ug/m3	< 9.1 ug/m3	< 3.8 ug/m3	< 9.4 ug/m3	< 3.7 ug/m3	< 9.1 ug/m3	< 3.7 ug/m3
Hexane (C6)	60000 ug/m3	20000 ug/m3	13400 ug/m3	354 ug/m3	2.7 ug/m3	< 1.4 ug/m3	4.5 ug/m3	< 1.3 ug/m3	1.8 ug/m3	< 1.3 ug/m3	13.4 ug/m3	12.6 ug/m3	58.0 ug/m3	2.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	1.4 ug/m3	1.6 ug/m3	1.5 ug/m3
Isopropyl alcohol	200000 ug/m3	70000 ug/m3	< 3.2 ug/m3	3.4 ug/m3	44.4 ug/m3	147 ug/m3	39.3 ug/m3	148 ug/m3	26.6 ug/m3	74.3 ug/m3	16.9 ug/m3	< 2.2 ug/m3	< 2.2 ug/m3	284 ug/m3	198 ug/m3	66.7 ug/m3	57.5 ug/m3	289 ug/m3	278 ug/m3	32.5 ug/m3	12.2 ug/m3
Methyl ethyl ketone	100000 ug/m3	50000 ug/m3	< 9.5 ug/m3	180 ug/m3	7.6 ug/m3	7.3 ug/m3	4.1 ug/m3	< 1.1 ug/m3	4.4 ug/m3	2.4 ug/m3	97.2 ug/m3	30.7 ug/m3	14.1 ug/m3	6.2 ug/m3	2.5 ug/m3	3.0 ug/m3	< 1.0 ug/m3	4.4 ug/m3	8.3 ug/m3	2.0 ug/m3	< 1.0 ug/m3
Methyl isobutyl ketone	80000 ug/m3	30000 ug/m3	< 6.0 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 4.0 ug/m3	< 1.4 ug/m3	< 3.9 ug/m3	< 1.4 ug/m3	< 3.7 ug/m3	< 1.5 ug/m3	1.6 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 3.7 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3
Methyl tertiary butyl ether (MTBE)	80000 ug/m3	30000 ug/m3	< 3.1 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3
Methylene chloride	600 ug/m3	200 ug/m3	< 8.0 ug/m3	< 6.1 ug/m3	< 5.9 ug/m3	< 6.8 ug/m3	< 6.1 ug/m3	< 6.6 ug/m3	< 6.1 ug/m3	< 6.4 ug/m3	< 6.4 ug/m3	< 6.1 ug/m3	< 6.1 ug/m3	75.7 ug/m3	< 6.4 ug/m3	< 5.9 ug/m3	< 6.1 ug/m3	< 6.1 ug/m3	8.8 ug/m3	< 5.9 ug/m3	7.7 ug/m3
Naphthalene	300 ug/m3	90 ug/m3	< 9.0 ug/m3	< 4.6 ug/m3	< 4.5 ug/m3	< 5.2 ug/m3	< 4.6 ug/m3	< 5.0 ug/m3	< 4.6 ug/m3	< 4.8 ug/m3	18.9 ug/m3	6.8 ug/m3	9.1 ug/m3	< 4.6 ug/m3	< 4.8 ug/m3	< 4.5 ug/m3	< 4.6 ug/m3	< 4.6 ug/m3	< 4.5 ug/m3	< 4.5 ug/m3	< 4.5 ug/m3
Propylene	80000 ug/m3	30000 ug/m3	< 3.8 ug/m3	< 0.61 ug/m3	< 0.59 ug/m3	< 1.7 ug/m3	< 0.61 ug/m3	< 1.6 ug/m3	< 0.61 ug/m3	< 1.6 ug/m3	93.2 ug/m3	56.0 ug/m3	57.2 ug/m3	< 0.61 ug/m3	< 0.63 ug/m3	< 0.59 ug/m3	< 0.61 ug/m3	< 0.61 ug/m3	< 0.59 ug/m3	< 0.59 ug/m3	< 1.5 ug/m3
Styrene	30000 ug/m3	10000 ug/m3	< 4.7 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.7 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 3.8 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3
Tetrachloroethylene	300 (3) ug/m3	20 (3) ug/m3	147 ug/m3	< 1.2 ug/m3	4.6 ug/m3	< 6.7 ug/m3	2.9 ug/m3	1.9 ug/m3	3.6 ug/m3	1.5 ug/m3	148 ug/m3	37.3 ug/m3	29.9 ug/m3	4.9 ug/m3	1.4 ug/m3	5.6 ug/m3	1.3 ug/m3	3.3 ug/m3	1.4 ug/m3	2.1 ug/m3	< 1.2 ug/m3
Tetrahydrofuran	NA	NA	< 4.8 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 5.8 ug/m3	< 1.0 ug/m3	< 1.1 ug/m3	< 1.0 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.1 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3
Toluene	100000 ug/m3	50000 ug/m3	222 ug/m3	67.9 ug/m3	< 1.3 ug/m3	1.9 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	42.4 ug/m3	14.5 ug/m3	29.3 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	15.1 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	2.2 ug/m3
Trichlorofluoromethane	20000 ug/m3	7000 ug/m3	< 4.8 ug/m3	< 2.0 ug/m3	< 1.9 ug/m3	< 2.2 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 1.9 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 1.9 ug/m3	< 1.9 ug/m3	< 1.9 ug/m3
Trichlorotrifluoroethane (Freon 113)	800000 ug/m3	300000 ug/m3	< 5.6 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 3.1 ug/m3	< 2.8 ug/m3	< 3.0 ug/m3	7.2 ug/m3	3.1 ug/m3	< 2.9 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.9 ug/m3	3.4 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3
Vinyl acetate	6000 ug/m3	2000 ug/m3	< 12.1 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 3.1 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3
Vinyl chloride	30 ug/m3	10 ug/m3	< 3.2 ug/m3	1.1 ug/m3	< 0.44 ug/m3	< 0.50 ug/m3	< 0.45 ug/m3	< 0.49 ug/m3	< 0.45 ug/m3	< 0.47 ug/m3	< 0.94 ug/m3	< 0.45 ug/m3	< 0.45 ug/m3	< 0.45 ug/m3	< 0.47 ug/m3	< 0.44 ug/m3	< 0.45 ug/m3	< 0.45 ug/m3	< 0.44 ug/m3	< 0.44 ug/m3	< 0.44 ug/m3
Xylene, m & p	3000 (2) ug/m3	1000 (2) ug/m3	< 4.9 ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	< 3.4 ug/m3	< 3.1 ug/m3	< 3.3 ug/m3	< 3.1 ug/m3	< 3.2 ug/m3	25.0 ug/m3	5.7 ug/m3	23.1 ug/m3	< 3.1 ug/m3	< 3.2 ug/m3	< 3.0 ug/m3	41.2 ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3
Xylene, o	3000 (2) ug/m3	1000 (2) ug/m3	< 15.3 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 8.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	13.9 ug/m3	3.3 ug/m3	5.8 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	20.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3

Note: Detected compound results shown in **bold**

Table 10

Soil Gas Sampling Analytical Results
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

		Area	Central Area																			
		Location	SVP7	SVP7	SVP8	SVP8	SVP9	SVP9	SVP10	SVP10	SVP11	SVP11	SVP12	SVP12	SVP13	SVP13	SVP14	SVP14	SVP15	SVP15	SVP16	SVP16
		Date	12/11/2014	3/06/2015	12/11/2014	3/03/2015	12/10/2014	3/04/2015	12/16/2014	3/04/2015	12/09/2014	3/03/2015	12/10/2014	3/04/2015	12/10/2014	3/04/2015	12/09/2014	3/03/2015	12/10/2014	3/04/2015	12/23/2014	3/04/2015
		Depth																				
		Sample Type	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter	MPCA Industrial 10X ISVs for Vapor Intrusion Risk Evaluation	MPCA Residential 10X ISVs for Vapor Intrusion Risk Evaluation																				
Effective Date	02/17/2015	02/17/2015																				
Exceedance Key	**Bold**	Underline																				
VOCs																						
Trichloroethylene	**60 (3) ug/m3**	20 (3) ug/m3	2.6 ug/m3	2.9 ug/m3	< 0.96 ug/m3	< 0.95 ug/m3	2.2 ug/m3	3.9 ug/m3	2.0 ug/m3	< 0.95 ug/m3	< 0.96 ug/m3	< 0.95 ug/m3	< 0.92 ug/m3	< 0.98 ug/m3	< 0.96 ug/m3	< 1.0 ug/m3	12.8 ug/m3	8.1 ug/m3	3.2 ug/m3	1.9 ug/m3	15.2 ug/m3	7.7 ug/m3
1,1,1-Trichloroethane	100000 ug/m3	50000 ug/m3	< 1.9 ug/m3	< 1.2 ug/m3	17.4 ug/m3	11.2 ug/m3	< 1.9 ug/m3	6.3 ug/m3	19.0 ug/m3	9.6 ug/m3	2.4 ug/m3	1.6 ug/m3	< 1.9 ug/m3	< 1.3 ug/m3	< 1.9 ug/m3	< 1.3 ug/m3	< 1.7 ug/m3	< 1.2 ug/m3	< 1.9 ug/m3	< 1.4 ug/m3	< 1.9 ug/m3	< 1.2 ug/m3
1,1,2,2-Tetrachloroethane	10 ug/m3	2 ug/m3	< 2.4 ug/m3	< 1.2 ug/m3	< 2.4 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3
1,1,2-Trichloroethane	20 ug/m3	6 ug/m3	< 0.96 ug/m3	< 0.93 ug/m3	< 0.96 ug/m3	< 0.97 ug/m3	< 0.92 ug/m3	< 1.0 ug/m3	< 0.96 ug/m3	< 0.97 ug/m3	< 0.96 ug/m3	< 0.97 ug/m3	< 0.92 ug/m3	< 1.0 ug/m3	< 0.96 ug/m3	< 1.0 ug/m3	< 0.86 ug/m3	< 0.97 ug/m3	< 0.92 ug/m3	< 1.1 ug/m3	< 0.92 ug/m3	< 0.97 ug/m3
1,1-Dichloroethane	10000 ug/m3	5000 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
1,1-Dichloroethylene	6000 ug/m3	2000 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
1,2,4-Trichlorobenzene	100 ug/m3	40 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 6.8 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 6.8 ug/m3	< 2.6 ug/m3	< 7.1 ug/m3	< 2.4 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 7.3 ug/m3	< 2.5 ug/m3	< 6.6 ug/m3
1,2,4-Trimethylbenzene	**200 ug/m3**	70 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	5.1 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	3.9 ug/m3	2.0 ug/m3	< 1.7 ug/m3	41.8 ug/m3	< 1.8 ug/m3	9.4 ug/m3	< 1.9 ug/m3	2.1 ug/m3	1.9 ug/m3	< 1.7 ug/m3	24.5 ug/m3	5.5 ug/m3	**274 ug/m3**
1,2-Dibromoethane	0.6 ug/m3	0.2 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 2.9 ug/m3	< 2.4 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 3.0 ug/m3	< 2.6 ug/m3	< 2.7 ug/m3
1,2-Dichlorobenzene	6000 ug/m3	2000 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 2.3 ug/m3	< 1.9 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.4 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3
1,2-Dichloroethane	**10 ug/m3**	4 ug/m3	< 0.71 ug/m3	< 0.69 ug/m3	< 0.71 ug/m3	< 0.72 ug/m3	< 0.69 ug/m3	< 0.74 ug/m3	< 0.71 ug/m3	< 0.72 ug/m3	< 0.71 ug/m3	< 0.72 ug/m3	< 0.69 ug/m3	< 0.74 ug/m3	< 0.71 ug/m3	< 0.77 ug/m3	< 0.64 ug/m3	< 0.72 ug/m3	< 0.69 ug/m3	< 0.80 ug/m3	< 0.69 ug/m3	< 0.72 ug/m3
1,2-Dichloroethylene, cis	2000 (3) ug/m3	600 (3) ug/m3	< 1.4 ug/m3	< 3.4 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.8 ug/m3	< 1.3 ug/m3	< 3.5 ug/m3	< 1.4 ug/m3	< 3.9 ug/m3	< 3.4 ug/m3	< 3.5 ug/m3
1,2-Dichloroethylene, trans	2000 ug/m3	600 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
1,2-Dichloropropane	100 ug/m3	40 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3
1,2-Dichlorotetrafluoroethane	NA	NA	< 2.5 ug/m3	< 2.4 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.4 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.4 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 2.7 ug/m3	< 2.2 ug/m3	< 2.5 ug/m3	< 2.4 ug/m3	< 2.8 ug/m3	< 2.4 ug/m3	< 2.5 ug/m3
1,3,5-Trimethylbenzene	200 ug/m3	60 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	2.3 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	7.6 ug/m3	< 1.8 ug/m3	2.8 ug/m3	< 1.9 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	5.9 ug/m3	< 1.7 ug/m3	134 ug/m3
1,3-Butadiene	20 (3) ug/m3	2 (3) ug/m3	< 0.78 ug/m3	< 0.76 ug/m3	< 0.78 ug/m3	< 0.78 ug/m3	< 0.76 ug/m3	< 0.81 ug/m3	< 0.78 ug/m3	< 0.78 ug/m3	< 0.78 ug/m3	< 0.78 ug/m3	< 0.76 ug/m3	< 0.81 ug/m3	< 0.78 ug/m3	< 0.84 ug/m3	< 0.71 ug/m3	< 0.78 ug/m3	< 0.76 ug/m3	< 0.87 ug/m3	< 0.76 ug/m3	< 0.78 ug/m3
1,3-Dichloro-1-propene, cis	600 (1) ug/m3	200 (1) ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.8 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3
1,3-Dichloro-1-propene, trans	600 (1) ug/m3	200 (1) ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 8.0 ug/m3	< 1.5 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 8.0 ug/m3	< 1.5 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.4 ug/m3	< 8.0 ug/m3	< 1.5 ug/m3	< 1.8 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3
1,3-Dichlorobenzene	NA	NA	< 2.1 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 2.3 ug/m3	< 1.9 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.4 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3
1,4-Dichlorobenzene	2000 ug/m3	600 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 2.3 ug/m3	< 1.9 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.4 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3
2-Hexanone	NA	NA	< 1.4 ug/m3	1.8 ug/m3	1.9 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	1.6 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	7.5 ug/m3	< 1.4 ug/m3
4-Ethyltoluene	NA	NA	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	2.8 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	13.3 ug/m3	< 1.8 ug/m3	3.0 ug/m3	< 1.9 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	6.9 ug/m3	2.0 ug/m3	87.2 ug/m3
Acetone	870000 ug/m3	310000 ug/m3	51.8 ug/m3	35.4 ug/m3	43.4 ug/m3	52.6 ug/m3	66.8 ug/m3	51.5 ug/m3	68.3 ug/m3	59.0 ug/m3	44.8 ug/m3	43.1 ug/m3	72.1 ug/m3	73.9 ug/m3	77.1 ug/m3	27.3 ug/m3	44.7 ug/m3	75.1 ug/m3	71.6 ug/m3	97.0 ug/m3	83.7 ug/m3	87.9 ug/m3
Benzene	130 ug/m3	45 ug/m3	< 0.57 ug/m3	< 0.55 ug/m3	< 0.57 ug/m3	< 0.57 ug/m3	3.2 ug/m3	< 0.58 ug/m3	< 0.57 ug/m3	< 0.57 ug/m3	< 0.57 ug/m3	< 0.57 ug/m3	1.8 ug/m3	< 0.58 ug/m3	< 0.57 ug/m3	< 0.61 ug/m3	< 0.51 ug/m3	< 0.57 ug/m3	< 0.55 ug/m3	< 0.63 ug/m3	5.4 ug/m3	< 0.57 ug/m3
Benzyl chloride	30 ug/m3	10 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.9 ug/m3	< 1.8 ug/m3	< 9.2 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.9 ug/m3	< 1.8 ug/m3	< 2.0 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 2.0 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3
Bromodichloromethane	NA	NA	< 2.4 ug/m3	< 2.3 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.3 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.3 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.5 ug/m3	< 2.1 ug/m3	< 2.4 ug/m3	< 2.3 ug/m3	< 2.6 ug/m3	< 2.3 ug/m3	< 2.4 ug/m3
Bromoform	300 ug/m3	90 ug/m3	< 3.7 ug/m3	< 3.5 ug/m3	< 3.7 ug/m3	< 9.1 ug/m3	< 3.5 ug/m3	< 3.8 ug/m3	< 3.7 ug/m3	< 3.7 ug/m3	< 3.7 ug/m3	< 9.1 ug/m3	< 3.5 ug/m3	< 3.8 ug/m3	< 3.7 ug/m3	< 3.9 ug/m3	< 3.3 ug/m3	< 9.1 ug/m3	< 3.5 ug/m3	< 4.1 ug/m3	< 3.5 ug/m3	< 3.7 ug/m3
Bromomethane	100 ug/m3	50 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.5 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3
Carbon disulfide	20000 ug/m3	7000 ug/m3	1.7 ug/m3	2.0 ug/m3	4.5 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	2.5 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	10.4 ug/m3	< 1.1 ug/m3	2.1 ug/m3	< 1.2 ug/m3	1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	1.4 ug/m3	< 1.1 ug/m3
Carbon tetrachloride	**20 ug/m3**	7 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 2.2 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 2.2 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.0 ug/m3	2.7 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3
Chlorobenzene	1000 ug/m3	500 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3
Chlorodibromomethane	NA	NA	< 3.0 ug/m3	< 2.9 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 2.9 ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 2.9 ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	< 3.2 ug/m3	< 2.7 ug/m3	< 3.0 ug/m3	< 2.9 ug/m3	< 3.4 ug/m3	< 2.9 ug/m3	< 3.0 ug/m3
Chloroethane	300000 ug/m3	100000 ug/m3	< 0.94 ug/m3	< 0.91 ug/m3	< 0.94 ug/m3	< 0.94 ug/m3	< 0.91 ug/m3	< 0.97 ug/m3	< 0.94 ug/m3	< 0.94 ug/m3	< 0.94 ug/m3	< 0.94 ug/m3	< 0.91 ug/m3	< 0.97 ug/m3	< 0.94 ug/m3	< 1.0 ug/m3	< 0.85 ug/m3	< 0.94 ug/m3	< 0.91 ug/m3	< 1.0 ug/m3	< 0.91 ug/m3	< 0.94 ug/m3
Chloroform	3000 ug/m3	1000 ug/m3	1.3 ug/m3	1.1 ug/m3	< 0.86 ug/m3	< 0.86 ug/m3	< 0.83 ug/m3	0.91 ug/m3	1.9 ug/m3	< 0.86 ug/m3	5.2 ug/m3	3.0 ug/m3	8.8 ug/m3	5.6 ug/m3	< 0.86 ug/m3	< 0.93 ug/m3	< 0.78 ug/m3	< 0.86 ug/m3	4.7 ug/m3	2.5 ug/m3	8.0 ug/m3	9.3 ug/m3
Chloromethane	3000 ug/m3	900 ug/m3	< 0.73 ug/m3	< 0.71 ug/m3	< 0.73 ug/m3	< 0.73 ug/m3	1.2 ug/m3	< 0.76 ug/m3	< 0.73 ug/m3	< 0.73 ug/m3	< 0.73 ug/m3	< 0.73 ug/m3	< 0.71 ug/m3	< 0.76 ug/m3	< 0.73 ug/m3	< 0.79 ug/m3	< 0.66 ug/m3	< 0.73 ug/m3	< 0.71 ug/m3	< 0.81 ug/m3	< 0.71 ug/m3	< 0.73 ug/m3
Cyclohexane	200000 ug/m3	60000 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	2.9 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3	15.4 ug/m3	< 1.2 ug/m3
Dichlorodifluoromethane (CFC-12)			< 1.8 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	1.8 ug/m3	< 4.2 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 4.4 ug/m3	< 1.8 ug/m3	< 4.2 ug/m3	< 1.8 ug/m3	< 4.4 ug/m3	< 1.9 ug/m3	11700 e ug/m3	8390 ug/m3	< 4.2 ug/m3	< 2.0 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3
Ethyl acetate	80000 ug/m3	30000 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	1.5 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.1 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3	< 3.1 ug/m3	< 1.3 ug/m3
Ethyl Alcohol	420000 ug/m3	150000 ug/m3	4.3 ug/m3	4.0 ug/m3	159 ug/m3	2.8 ug/m3	13.0 ug/m3	1.9 ug/m3	9.5 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	2.2 ug/m3	< 1.6 ug/m3	3.3 ug/m3	2.9 ug/m3	3.5 ug/m3	< 1.5 ug/m3	2.2 ug/m3	2.8 ug/m3	5.7 ug/m3	11.3 ug/m3	3.5 ug/m3
Ethyl benzene	30000 ug/m3	10000 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	8.0 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	3.8 ug/m3	12.3 ug/m3	8.3 ug/m3
Heptane	NA	NA	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3	13.1 ug/m3	< 1.4 ug/m3
Hexachlorobutadiene	10 ug/m3	5 ug/m3	< 9.4 ug/m3	< 3.7 ug/m3	< 9.4 ug/m3	< 3.8 ug/m3	< 3.7 ug/m3	< 9.8 ug/m3	< 3.8 ug/m3	< 3.8 ug/m3	< 3.8 ug/m3	< 3.8 ug/m3	< 3.7 ug/m3	< 9.8 ug/m3	< 3.8 ug/m3	< 10.1 ug/m3	< 3.5 ug/m3	< 3.8 ug/m3	< 3.7 ug/m3	< 10.5 ug/m3	< 3.7 ug/m3	< 9.4 ug/m3
Hexane (C6)	60000 ug/m3	20000 ug/m3	< 1.3 ug/m3	1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	131 ug/m3	< 3.2 ug/m3	1.8 ug/m3	< 1.3 ug/m3	1.5 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 3.2 ug/m3	1.4 ug/m3	< 3.3 ug/m3	< 1.1 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 3.5 ug/m3	11.0 ug/m3	< 3.1 ug/m3
Isopropyl alcohol	200000 ug/m3	70000 ug/m3	92.4 ug/m3	46.2 ug/m3	39.4 ug/m3	51.5 ug/m3	7.4 ug/m3	40.1 ug/m3	47.7 ug/m3	1900 ug/m3	33.0 ug/m3	75.7 ug/m3	9.5 ug/m3	9.0 ug/m3	15.5 ug/m3	7.0 ug/m3	39.8 ug/m3	86.2 ug/m3	21.3 ug/m3	9.5 ug/m3	69.9 ug/m3	15.6 ug/m3
Methyl ethyl ketone	100000 ug/m3	50000 ug/m3	4.8 ug/m3	4.5 ug/m3	10.2 ug/m3	2.3 ug/m3	< 1.0 ug/m3	1.8 ug/m3	4.0 ug/m3	1.3 ug/m3	1.7 ug/m3	2.4 ug/m3	2.5 ug/m3	4.1 ug/m3	4.8 ug/m3	3.4 ug/m3	< 0.94 ug/m3	1.7 ug/m3	2.4 ug/m3	3.4 ug/m3	29.2 ug/m3	15.5 ug/m3
Methyl isobutyl ketone	80000 ug/m3	30000 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.7 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.7 ug/m3	< 1.4 ug/m3	< 3.9 ug/m3	< 1.3 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 4.0 ug/m3	< 3.5 ug/m3	< 3.6 ug/m3
Methyl tertiary butyl ether (MTBE)	80000 ug/m3	30000 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.1 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3
Methylene chloride	600 ug/m3	200 ug/m3	11.1 ug/m3	< 5.9 ug/m3	< 6.1 ug/m3	< 6.1 ug/m3	107 ug/m3	< 6.4 ug/m3	7.5 ug/m3	< 6.1 ug/m3	< 6.1 ug/m3	< 6.1 ug/m3	< 5.9 ug/m3	8.4 ug/m3	< 6.1 ug/m3	< 6.6 ug/m3	< 5.5 ug/m3	< 6.1 ug/m3	< 5.9 ug/m3	< 6.8 ug/m3	< 5.9 ug/m3	11.5 ug/m3
Naphthalene	300 ug/m3	90 ug/m3	< 4.6 ug/m3	< 4.5 ug/m3	< 4.6 ug/m3	< 4.6 ug/m3	< 4.5 ug/m3	< 4.8 ug/m3	< 4.6 ug/m3	8.3 ug/m3	< 4.6 ug/m3	< 4.6 ug/m3	< 4.5 ug/m3	< 4.8 ug/m3	< 4.6 ug/m3	< 5.0 ug/m3	< 4.2 ug/m3	< 4.6 ug/m3	< 4.5 ug/m3	6.9 ug/m3	11.1 ug/m3	< 4.6 ug/m3
Propylene	80000 ug/m3	30000 ug/m3	< 0.61 ug/m3	< 0.59 ug/m3	< 0.61 ug/m3	< 0.61 ug/m3	6.5 ug/m3	< 0.63 ug/m3	< 0.61 ug/m3	< 0.61 ug/m3	< 0.61 ug/m3	< 0.61 ug/m3	< 0.59 ug/m3	< 0.63 ug/m3	< 0.61 ug/m3	0.68 ug/m3	< 0.55 ug/m3	< 0.61 ug/m3	< 0.59 ug/m3	< 0.68 ug/m3	< 0.59 ug/m3	< 0.61 ug/m3
Styrene	30000 ug/m3	10000 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 3.8 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 3.8 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 3.8 ug/m3	< 1.5 ug/m3	< 1.7 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3
Tetrachloroethylene	300 (3) ug/m3	20 (3) ug/m3	1.6 ug/m3	< 1.2 ug/m3	7.8 ug/m3	4.2 ug/m3	< 1.2 ug/m3	2.2 ug/m3	6.4 ug/m3	2.0 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	6.1 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	6.5 ug/m3	3.9 ug/m3	2.9 ug/m3	< 1.3 ug/m3	3.0 ug/m3	< 1.2 ug/m3
Tetrahydrofuran	NA	NA	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.1 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.1 ug/m3	< 1.0 ug/m3	< 1.1 ug/m3	< 0.94 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.2 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3
Toluene	100000 ug/m3	50000 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	4.2 ug/m3	7.5 ug/m3	< 1.4 ug/m3	3.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	4.3 ug/m3	2.0 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.5 ug/m3	12.8 ug/m3	1.5 ug/m3
Trichlorofluoromethane	20000 ug/m3	7000 ug/m3	< 2.0 ug/m3	< 1.9 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	2.0 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 1.9 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 1.8 ug/m3	< 2.0 ug/m3	< 1.9 ug/m3	< 2.2 ug/m3	< 1.9 ug/m3	< 2.0 ug/m3
Trichlorotrifluoroethane (Freon 113)	800000 ug/m3	300000 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 2.9 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 2.9 ug/m3	< 2.8 ug/m3	< 3.0 ug/m3	< 2.5 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 3.1 ug/m3	< 2.7 ug/m3	< 2.8 ug/m3
Vinyl acetate	6000 ug/m3	2000 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	1.7 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3
Vinyl chloride	30 ug/m3	10 ug/m3	< 0.45 ug/m3	< 0.44 ug/m3	< 0.45 ug/m3	< 0.45 ug/m3	< 0.44 ug/m3	< 0.47 ug/m3	< 0.45 ug/m3	< 0.45 ug/m3	< 0.45 ug/m3	< 0.45 ug/m3	< 0.44 ug/m3	< 0.47 ug/m3	< 0.45 ug/m3	< 0.49 ug/m3	< 0.41 ug/m3	< 0.45 ug/m3	< 0.44 ug/m3	< 0.50 ug/m3	< 0.44 ug/m3	< 0.45 ug/m3
Xylene, m & p	3000 (2) ug/m3	1000 (2) ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	< 3.1 ug/m3	9.1 ug/m3	< 3.0 ug/m3	< 3.2 ug/m3	< 3.1 ug/m3	< 3.1 ug/m3	< 3.1 ug/m3	< 3.1 ug/m3	30.8 ug/m3	< 3.2 ug/m3	4.9 ug/m3	< 3.3 ug/m3	< 2.8 ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	19.1 ug/m3	32.2 ug/m3	103 ug/m3
Xylene, o	3000 (2) ug/m3	1000 (2) ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	5.0 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	14.3 ug/m3	< 1.6 ug/m3	3.7 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	10.6 ug/m3	10.3 ug/m3	72.6 ug/m3

Note: Detected compound results shown in **bold**

Table 10

Soil Gas Sampling Analytical Results
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Area			Central Area																			
Location			SVP17	SVP17	SVP18	SVP18	SVP19	SVP19	SVP20	SVP20	SVP21	SVP21	SVP22	SVP22	SVP23	SVP23	SVP24	SVP24	SVP25	SVP25	SVP26	SVP26
Date			12/10/2014	3/05/2015	12/19/2014	3/05/2015	12/08/2014	3/05/2015	12/10/2014	3/05/2015	12/16/2014	3/05/2015	12/22/2014	3/05/2015	12/11/2014	3/06/2015	12/11/2014	3/06/2015	12/12/2014	3/06/2015	12/11/2014	3/09/2015
Depth																						
Sample Type			N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Parameter	MPCA Industrial 10X ISVs for Vapor Intrusion Risk Evaluation	MPCA Residential 10X ISVs for Vapor Intrusion Risk Evaluation																				
Effective Date	02/17/2015	02/17/2015																				
Exceedance Key	**Bold**	Underline																				
VOCs																						
Trichloroethylene	**60 (3) ug/m3**	20 (3) ug/m3	3.2 ug/m3	< 0.92 ug/m3	< 0.99 ug/m3	< 0.86 ug/m3	< 1.5 ug/m3	< 0.95 ug/m3	< 0.96 ug/m3	< 0.95 ug/m3	1.3 ug/m3	1.2 ug/m3	36.9 ug/m3	9.1 ug/m3	< 0.99 ug/m3	< 0.98 ug/m3	2.0 ug/m3	1.0 ug/m3	**828 ug/m3**	**667 ug/m3**	< 0.92 ug/m3	< 0.95 ug/m3
1,1,1-Trichloroethane	100000 ug/m3	50000 ug/m3	< 1.9 ug/m3	< 1.2 ug/m3	< 2.0 ug/m3	< 1.1 ug/m3	< 2.9 ug/m3	< 1.2 ug/m3	< 1.9 ug/m3	< 1.2 ug/m3	< 2.0 ug/m3	< 1.3 ug/m3	< 1.9 ug/m3	< 1.2 ug/m3	3.1 ug/m3	< 1.3 ug/m3	144 ug/m3	71.0 ug/m3	189 ug/m3	111 ug/m3	< 1.9 ug/m3	< 1.2 ug/m3
1,1,2,2-Tetrachloroethane	10 ug/m3	2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.1 ug/m3	< 1.8 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 2.5 ug/m3	< 1.3 ug/m3	< 2.4 ug/m3	< 1.2 ug/m3	< 2.3 ug/m3	< 1.2 ug/m3	< 2.3 ug/m3	< 1.2 ug/m3
1,1,2-Trichloroethane	20 ug/m3	6 ug/m3	< 0.92 ug/m3	< 0.93 ug/m3	< 0.99 ug/m3	< 0.87 ug/m3	< 1.5 ug/m3	< 0.97 ug/m3	< 0.96 ug/m3	< 0.97 ug/m3	< 0.99 ug/m3	< 1.0 ug/m3	< 0.96 ug/m3	< 0.97 ug/m3	< 0.99 ug/m3	< 1.0 ug/m3	< 0.96 ug/m3	< 0.97 ug/m3	< 0.92 ug/m3	< 0.97 ug/m3	< 0.92 ug/m3	< 0.97 ug/m3
1,1-Dichloroethane	10000 ug/m3	5000 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.3 ug/m3	< 2.2 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	1.7 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
1,1-Dichloroethylene	6000 ug/m3	2000 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.3 ug/m3	< 2.1 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
1,2,4-Trichlorobenzene	100 ug/m3	40 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.7 ug/m3	< 2.4 ug/m3	< 4.0 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 2.6 ug/m3
1,2,4-Trimethylbenzene	**200 ug/m3**	70 ug/m3	2.5 ug/m3	2.7 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 2.6 ug/m3	< 1.7 ug/m3	2.7 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	2.5 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	3.3 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	2.9 ug/m3	2.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3
1,2-Dibromoethane	0.6 ug/m3	0.2 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.8 ug/m3	< 2.4 ug/m3	< 4.1 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 2.7 ug/m3
1,2-Dichlorobenzene	6000 ug/m3	2000 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.2 ug/m3	< 1.9 ug/m3	40.2 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.2 ug/m3	9.9 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3
1,2-Dichloroethane	**10 ug/m3**	4 ug/m3	< 0.69 ug/m3	< 0.69 ug/m3	< 0.74 ug/m3	< 0.65 ug/m3	< 1.1 ug/m3	< 0.72 ug/m3	< 0.71 ug/m3	< 0.72 ug/m3	< 0.74 ug/m3	< 0.74 ug/m3	< 0.71 ug/m3	< 0.72 ug/m3	< 0.74 ug/m3	< 0.74 ug/m3	< 0.71 ug/m3	< 0.72 ug/m3	< 0.69 ug/m3	< 0.72 ug/m3	< 0.69 ug/m3	< 0.72 ug/m3
1,2-Dichloroethylene, cis	2000 (3) ug/m3	600 (3) ug/m3	< 1.4 ug/m3	< 3.4 ug/m3	< 1.5 ug/m3	< 3.2 ug/m3	< 2.1 ug/m3	< 3.5 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3	< 1.5 ug/m3	< 3.6 ug/m3	< 3.5 ug/m3	< 3.5 ug/m3	< 1.5 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3	51.2 ug/m3	36.1 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3
1,2-Dichloroethylene, trans	2000 ug/m3	600 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.3 ug/m3	< 2.1 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	4.4 ug/m3	2.6 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
1,2-Dichloropropane	100 ug/m3	40 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.5 ug/m3	< 2.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3
1,2-Dichlorotetrafluoroethane	NA	NA	< 2.4 ug/m3	< 2.4 ug/m3	< 2.6 ug/m3	< 2.2 ug/m3	< 3.7 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.6 ug/m3	< 2.6 ug/m3	< 2.5 ug/m3	< 2.5 ug/m3	< 2.4 ug/m3	< 2.5 ug/m3	< 2.4 ug/m3	< 2.5 ug/m3
1,3,5-Trimethylbenzene	200 ug/m3	60 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 2.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3
1,3-Butadiene	20 (3) ug/m3	2 (3) ug/m3	< 0.76 ug/m3	< 0.76 ug/m3	< 0.81 ug/m3	< 0.71 ug/m3	< 1.2 ug/m3	< 0.78 ug/m3	< 0.78 ug/m3	< 0.78 ug/m3	< 0.81 ug/m3	< 0.81 ug/m3	< 0.78 ug/m3	< 0.78 ug/m3	< 0.81 ug/m3	< 0.81 ug/m3	< 0.78 ug/m3	< 0.78 ug/m3	< 0.76 ug/m3	< 0.78 ug/m3	< 0.76 ug/m3	< 0.78 ug/m3
1,3-Dichloro-1-propene, cis	600 (1) ug/m3	200 (1) ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.7 ug/m3	< 1.4 ug/m3	< 2.4 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3
1,3-Dichloro-1-propene, trans	600 (1) ug/m3	200 (1) ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.7 ug/m3	< 1.4 ug/m3	< 2.4 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3
1,3-Dichlorobenzene	NA	NA	< 2.0 ug/m3	< 2.0 ug/m3	< 2.2 ug/m3	< 1.9 ug/m3	< 3.2 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3
1,4-Dichlorobenzene	2000 ug/m3	600 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.2 ug/m3	< 1.9 ug/m3	46.2 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.2 ug/m3	13.9 ug/m3	< 2.1 ug/m3	< 2.2 ug/m3	< 2.2 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3
2-Hexanone	NA	NA	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.3 ug/m3	< 2.2 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	2.3 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
4-Ethyltoluene	NA	NA	< 1.7 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 2.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3
Acetone	870000 ug/m3	310000 ug/m3	89.2 ug/m3	72.4 ug/m3	40.1 ug/m3	19.4 ug/m3	37.6 ug/m3	38.5 ug/m3	79.4 ug/m3	48.0 ug/m3	60.9 ug/m3	75.5 ug/m3	21.4 ug/m3	20.0 ug/m3	45.2 ug/m3	63.6 ug/m3	42.6 ug/m3	35.5 ug/m3	49.6 ug/m3	53.5 ug/m3	53.6 ug/m3	37.2 ug/m3
Benzene	130 ug/m3	45 ug/m3	< 0.55 ug/m3	< 0.55 ug/m3	0.86 ug/m3	< 0.51 ug/m3	< 0.86 ug/m3	< 0.57 ug/m3	< 0.57 ug/m3	< 0.57 ug/m3	< 0.58 ug/m3	< 0.58 ug/m3	0.90 ug/m3	< 0.57 ug/m3	< 0.58 ug/m3	< 0.58 ug/m3	< 0.57 ug/m3	< 0.57 ug/m3	1.0 ug/m3	1.8 ug/m3	< 0.55 ug/m3	< 0.57 ug/m3
Benzyl chloride	30 ug/m3	10 ug/m3	< 1.8 ug/m3	< 8.8 ug/m3	< 1.9 ug/m3	< 8.3 ug/m3	< 2.8 ug/m3	< 9.2 ug/m3	< 1.8 ug/m3	< 9.2 ug/m3	< 1.9 ug/m3	< 1.9 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.9 ug/m3	< 1.9 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3
Bromodichloromethane	NA	NA	< 2.3 ug/m3	< 2.3 ug/m3	< 2.4 ug/m3	< 2.1 ug/m3	< 3.6 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.4 ug/m3	< 2.3 ug/m3	< 2.4 ug/m3	< 2.3 ug/m3	< 2.4 ug/m3
Bromoform	300 ug/m3	90 ug/m3	< 3.5 ug/m3	< 3.5 ug/m3	< 3.8 ug/m3	< 3.3 ug/m3	< 5.5 ug/m3	< 3.7 ug/m3	< 3.7 ug/m3	< 3.7 ug/m3	< 3.8 ug/m3	< 3.8 ug/m3	< 3.7 ug/m3	< 3.7 ug/m3	< 3.8 ug/m3	< 3.8 ug/m3	< 3.7 ug/m3	< 3.7 ug/m3	< 3.5 ug/m3	< 3.7 ug/m3	< 3.5 ug/m3	< 3.7 ug/m3
Bromomethane	100 ug/m3	50 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.2 ug/m3	< 2.1 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3
Carbon disulfide	20000 ug/m3	7000 ug/m3	1.4 ug/m3	< 1.1 ug/m3	5.3 ug/m3	< 0.99 ug/m3	< 1.7 ug/m3	< 1.1 ug/m3	2.9 ug/m3	2.9 ug/m3	1.8 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	4.1 ug/m3	1.4 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3
Carbon tetrachloride	**20 ug/m3**	7 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.0 ug/m3	< 1.7 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3
Chlorobenzene	1000 ug/m3	500 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.5 ug/m3	10 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	13.0 ug/m3	< 1.6 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3
Chlorodibromomethane	NA	NA	< 2.9 ug/m3	< 2.9 ug/m3	< 3.1 ug/m3	< 2.7 ug/m3	< 4.6 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 3.1 ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 3.1 ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 2.9 ug/m3	< 3.0 ug/m3	< 2.9 ug/m3	< 3.0 ug/m3
Chloroethane	300000 ug/m3	100000 ug/m3	< 0.91 ug/m3	< 0.91 ug/m3	< 0.97 ug/m3	< 0.85 ug/m3	< 1.4 ug/m3	< 0.94 ug/m3	< 0.94 ug/m3	< 0.94 ug/m3	< 0.97 ug/m3	< 0.97 ug/m3	< 0.94 ug/m3	< 0.94 ug/m3	< 0.97 ug/m3	< 0.97 ug/m3	< 0.94 ug/m3	< 0.94 ug/m3	< 0.91 ug/m3	< 0.94 ug/m3	< 0.91 ug/m3	< 0.94 ug/m3
Chloroform	3000 ug/m3	1000 ug/m3	6.7 ug/m3	4.5 ug/m3	15.6 ug/m3	11.5 ug/m3	< 1.3 ug/m3	< 0.86 ug/m3	< 0.86 ug/m3	< 0.86 ug/m3	< 0.89 ug/m3	< 0.89 ug/m3	8.8 ug/m3	4.4 ug/m3	< 0.89 ug/m3	1.4 ug/m3	< 0.86 ug/m3	< 0.86 ug/m3	132 ug/m3	59.9 ug/m3	7.6 ug/m3	4.5 ug/m3
Chloromethane	3000 ug/m3	900 ug/m3	< 0.71 ug/m3	< 0.71 ug/m3	< 0.76 ug/m3	< 0.66 ug/m3	< 1.1 ug/m3	< 0.73 ug/m3	< 0.73 ug/m3	< 0.73 ug/m3	< 0.76 ug/m3	< 0.76 ug/m3	< 0.73 ug/m3	< 0.73 ug/m3	< 0.76 ug/m3	< 0.76 ug/m3	< 0.73 ug/m3	< 0.73 ug/m3	< 0.71 ug/m3	< 0.73 ug/m3	< 0.71 ug/m3	< 0.73 ug/m3
Cyclohexane	200000 ug/m3	60000 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.1 ug/m3	< 1.8 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	1.5 ug/m3
Dichlorodifluoromethane (CFC-12)			< 4.2 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 6.6 ug/m3	< 1.8 ug/m3	< 4.4 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	2.0 ug/m3	1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	2.2 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3
Ethyl acetate	80000 ug/m3	30000 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.9 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 3.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3
Ethyl Alcohol	420000 ug/m3	150000 ug/m3	4.6 ug/m3	2.0 ug/m3	204 ug/m3	2.3 ug/m3	3.4 ug/m3	1.8 ug/m3	2.8 ug/m3	2.0 ug/m3	3.4 ug/m3	3.0 ug/m3	3.0 ug/m3	2.3 ug/m3	3.7 ug/m3	3.4 ug/m3	3.0 ug/m3	3.1 ug/m3	5.3 ug/m3	2.3 ug/m3	2.4 ug/m3	8.4 ug/m3
Ethyl benzene	30000 ug/m3	10000 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 2.3 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	2.5 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3
Heptane	NA	NA	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.3 ug/m3	< 2.2 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3
Hexachlorobutadiene	10 ug/m3	5 ug/m3	< 3.7 ug/m3	< 3.7 ug/m3	< 4.0 ug/m3	< 3.5 ug/m3	< 5.8 ug/m3	< 3.8 ug/m3	< 3.8 ug/m3	< 3.8 ug/m3	< 4.0 ug/m3	< 4.0 ug/m3	< 3.8 ug/m3	< 3.8 ug/m3	< 9.8 ug/m3	< 4.0 ug/m3	< 9.4 ug/m3	< 3.8 ug/m3	< 9.1 ug/m3	< 3.8 ug/m3	< 9.1 ug/m3	< 3.8 ug/m3
Hexane (C6)	60000 ug/m3	20000 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	2.4 ug/m3	< 1.1 ug/m3	< 1.9 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	2.2 ug/m3	3.6 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	1.4 ug/m3	1.7 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	7.6 ug/m3
Isopropyl alcohol	200000 ug/m3	70000 ug/m3	39.7 ug/m3	15.7 ug/m3	11.6 ug/m3	4.9 ug/m3	15.9 ug/m3	6.7 ug/m3	91.2 ug/m3	32.8 ug/m3	112 ug/m3	139 ug/m3	27.6 ug/m3	25.5 ug/m3	34.8 ug/m3	42.7 ug/m3	41.3 ug/m3	78.6 ug/m3	23.4 ug/m3	20.7 ug/m3	47.4 ug/m3	49.3 ug/m3
Methyl ethyl ketone	100000 ug/m3	50000 ug/m3	1.9 ug/m3	1.8 ug/m3	< 3.3 ug/m3	3.4 ug/m3	2.8 ug/m3	2.7 ug/m3	3.2 ug/m3	< 1.0 ug/m3	3.2 ug/m3	2.0 ug/m3	2.7 ug/m3	3.6 ug/m3	3.0 ug/m3	2.4 ug/m3	6.9 ug/m3	< 1.0 ug/m3	2.8 ug/m3	4.7 ug/m3	1.4 ug/m3	1.7 ug/m3
Methyl isobutyl ketone	80000 ug/m3	30000 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3	< 1.5 ug/m3	< 3.3 ug/m3	< 2.2 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	< 1.5 ug/m3	< 3.7 ug/m3	< 3.6 ug/m3	< 3.6 ug/m3	< 1.5 ug/m3	< 3.7 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3
Methyl tertiary butyl ether (MTBE)	80000 ug/m3	30000 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.1 ug/m3	< 1.9 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3
Methylene chloride	600 ug/m3	200 ug/m3	< 5.9 ug/m3	< 5.9 ug/m3	< 6.4 ug/m3	< 5.5 ug/m3	< 9.3 ug/m3	< 6.1 ug/m3	< 6.1 ug/m3	< 6.1 ug/m3	< 6.4 ug/m3	18.0 ug/m3	< 6.1 ug/m3	< 6.1 ug/m3	< 6.4 ug/m3	< 6.4 ug/m3	< 6.1 ug/m3	< 6.1 ug/m3	< 5.9 ug/m3	< 6.1 ug/m3	< 5.9 ug/m3	84.7 ug/m3
Naphthalene	300 ug/m3	90 ug/m3	< 4.5 ug/m3	< 4.5 ug/m3	< 4.8 ug/m3	< 4.2 ug/m3	< 7.0 ug/m3	< 4.6 ug/m3	< 4.6 ug/m3	< 4.6 ug/m3	< 4.8 ug/m3	< 4.8 ug/m3	< 4.6 ug/m3	< 4.6 ug/m3	< 4.8 ug/m3	< 9.6 ug/m3	< 4.6 ug/m3	< 4.6 ug/m3	5.5 ug/m3	< 4.6 ug/m3	< 4.5 ug/m3	< 4.6 ug/m3
Propylene	80000 ug/m3	30000 ug/m3	< 0.59 ug/m3	< 0.59 ug/m3	< 0.63 ug/m3	< 0.55 ug/m3	< 0.92 ug/m3	< 0.61 ug/m3	< 0.61 ug/m3	< 0.61 ug/m3	< 0.63 ug/m3	< 0.63 ug/m3	< 0.61 ug/m3	< 0.61 ug/m3	< 0.63 ug/m3	< 0.63 ug/m3	< 0.61 ug/m3	< 0.61 ug/m3	< 0.59 ug/m3	< 0.61 ug/m3	< 0.59 ug/m3	< 1.5 ug/m3
Styrene	30000 ug/m3	10000 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 2.3 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3
Tetrachloroethylene	300 (3) ug/m3	20 (3) ug/m3	1.4 ug/m3	< 1.2 ug/m3	1.5 ug/m3	< 1.1 ug/m3	4.5 ug/m3	1.4 ug/m3	49.9 ug/m3	14.2 ug/m3	32.8 ug/m3	14.1 ug/m3	16.3 ug/m3	5.4 ug/m3	9.2 ug/m3	4.8 ug/m3	5.7 ug/m3	2.6 ug/m3	107 ug/m3	46.8 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3
Tetrahydrofuran	NA	NA	< 1.0 ug/m3	< 1.0 ug/m3	< 1.1 ug/m3	< 0.94 ug/m3	< 1.6 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3	5.9 ug/m3	< 1.0 ug/m3	< 1.0 ug/m3
Toluene	100000 ug/m3	50000 ug/m3	2.9 ug/m3	< 1.3 ug/m3	3.2 ug/m3	< 1.2 ug/m3	2.1 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	1.7 ug/m3	< 1.4 ug/m3	3.5 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	1.3 ug/m3	2.1 ug/m3	< 1.3 ug/m3	3.0 ug/m3
Trichlorofluoromethane	20000 ug/m3	7000 ug/m3	< 1.9 ug/m3	< 1.9 ug/m3	< 2.1 ug/m3	< 1.8 ug/m3	< 3.0 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.0 ug/m3	< 1.9 ug/m3	< 2.0 ug/m3	< 1.9 ug/m3	< 2.0 ug/m3
Trichlorotrifluoroethane (Freon 113)	800000 ug/m3	300000 ug/m3	< 2.7 ug/m3	< 2.7 ug/m3	< 2.9 ug/m3	< 2.5 ug/m3	< 4.2 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.9 ug/m3	< 2.9 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.9 ug/m3	< 2.9 ug/m3	< 2.8 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 2.8 ug/m3
Vinyl acetate	6000 ug/m3	2000 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.1 ug/m3	< 1.9 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3
Vinyl chloride	30 ug/m3	10 ug/m3	< 0.44 ug/m3	< 0.44 ug/m3	< 0.47 ug/m3	< 0.41 ug/m3	< 0.69 ug/m3	< 0.45 ug/m3	< 0.45 ug/m3	< 0.45 ug/m3	< 0.47 ug/m3	< 0.47 ug/m3	< 0.45 ug/m3	< 0.45 ug/m3	< 0.47 ug/m3	< 0.47 ug/m3	< 0.45 ug/m3	< 0.45 ug/m3	< 0.44 ug/m3	< 0.45 ug/m3	< 0.44 ug/m3	< 0.45 ug/m3
Xylene, m & p	3000 (2) ug/m3	1000 (2) ug/m3	< 3.0 ug/m3	< 3.0 ug/m3	< 3.2 ug/m3	< 2.8 ug/m3	< 4.6 ug/m3	< 3.1 ug/m3	< 3.1 ug/m3	< 3.1 ug/m3	< 3.2 ug/m3	< 3.2 ug/m3	13.4 ug/m3	< 3.1 ug/m3	< 3.2 ug/m3	< 3.2 ug/m3	< 3.1 ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	< 3.1 ug/m3
Xylene, o	3000 (2) ug/m3	1000 (2) ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.4 ug/m3	< 2.3 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	5.2 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	1.9 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3

Note: Detected compound results shown in **bold**

Table 10

Soil Gas Sampling Analytical Results
Vapor Intrusion Pathway Investigation Report
East Hennepin Avenue Site
Minneapolis, Minnesota

			Area	Central Area					
			Location	SVP27	SVP27	SVP28	SVP28	SVP29	SVP29
			Date	12/10/2014	3/09/2015	12/12/2014	3/11/2015	12/11/2014	3/10/2015
			Depth						
			Sample Type	N	N	N	N	N	N
Parameter	MPCA Industrial 10X ISVs for Vapor Intrusion Risk Evaluation	MPCA Residential 10X ISVs for Vapor Intrusion Risk Evaluation							
Effective Date	02/17/2015	02/17/2015							
Exceedance Key	**Bold**	Underline							
VOCs									
Trichloroethylene	**60 (3) ug/m3**	20 (3) ug/m3	5.4 ug/m3	1.8 ug/m3	17.3 ug/m3	6.2 ug/m3	**66.3 ug/m3**	38.2 ug/m3
1,1,1-Trichloroethane	100000 ug/m3	50000 ug/m3	< 1.9 ug/m3	< 1.3 ug/m3	< 1.9 ug/m3	< 1.2 ug/m3	< 1.9 ug/m3	< 1.3 ug/m3
1,1,2,2-Tetrachloroethane	10 ug/m3	2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 2.3 ug/m3	< 1.2 ug/m3	< 2.3 ug/m3	< 1.3 ug/m3
1,1,2-Trichloroethane	20 ug/m3	6 ug/m3	< 0.92 ug/m3	< 1.0 ug/m3	< 0.92 ug/m3	< 0.97 ug/m3	< 0.92 ug/m3	< 1.0 ug/m3
1,1-Dichloroethane	10000 ug/m3	5000 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3
1,1-Dichloroethylene	6000 ug/m3	2000 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3
1,2,4-Trichlorobenzene	100 ug/m3	40 ug/m3	< 2.5 ug/m3	< 2.8 ug/m3	< 2.5 ug/m3	4.2 ug/m3	< 2.5 ug/m3	3.1 ug/m3
1,2,4-Trimethylbenzene	**200 ug/m3**	70 ug/m3	< 1.7 ug/m3	8.4 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	3.1 ug/m3	2.9 ug/m3
1,2-Dibromoethane	0.6 ug/m3	0.2 ug/m3	< 2.6 ug/m3	< 2.9 ug/m3	< 2.6 ug/m3	< 2.7 ug/m3	< 2.6 ug/m3	< 2.9 ug/m3
1,2-Dichlorobenzene	6000 ug/m3	2000 ug/m3	< 2.0 ug/m3	< 2.3 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.3 ug/m3
1,2-Dichloroethane	**10 ug/m3**	4 ug/m3	< 0.69 ug/m3	< 0.77 ug/m3	< 0.69 ug/m3	< 0.72 ug/m3	< 0.69 ug/m3	< 0.77 ug/m3
1,2-Dichloroethylene, cis	2000 (3) ug/m3	600 (3) ug/m3	< 1.4 ug/m3	< 3.8 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3	< 1.4 ug/m3	< 3.8 ug/m3
1,2-Dichloroethylene, trans	2000 ug/m3	600 ug/m3	< 1.4 ug/m3	< 1.5 ug/m3	< 1.4 ug/m3	< 3.5 ug/m3	< 1.4 ug/m3	< 3.8 ug/m3
1,2-Dichloropropane	100 ug/m3	40 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3
1,2-Dichlorotetrafluoroethane	NA	NA	< 2.4 ug/m3	< 2.7 ug/m3	< 2.4 ug/m3	< 2.5 ug/m3	< 2.4 ug/m3	< 2.7 ug/m3
1,3,5-Trimethylbenzene	200 ug/m3	60 ug/m3	< 1.7 ug/m3	< 1.9 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.9 ug/m3
1,3-Butadiene	20 (3) ug/m3	2 (3) ug/m3	< 0.76 ug/m3	< 0.84 ug/m3	< 0.76 ug/m3	< 0.78 ug/m3	< 0.76 ug/m3	< 0.84 ug/m3
1,3-Dichloro-1-propene, cis	600 (1) ug/m3	200 (1) ug/m3	< 1.5 ug/m3	< 1.7 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.7 ug/m3
1,3-Dichloro-1-propene, trans	600 (1) ug/m3	200 (1) ug/m3	< 1.5 ug/m3	< 1.7 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.7 ug/m3
1,3-Dichlorobenzene	NA	NA	< 2.0 ug/m3	< 2.3 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.3 ug/m3
1,4-Dichlorobenzene	2000 ug/m3	600 ug/m3	< 2.0 ug/m3	< 2.3 ug/m3	< 2.0 ug/m3	< 2.1 ug/m3	< 2.0 ug/m3	< 2.3 ug/m3
2-Hexanone	NA	NA	< 1.4 ug/m3	< 1.6 ug/m3	1.9 ug/m3	< 5.2 ug/m3	< 1.4 ug/m3	< 5.6 ug/m3
4-Ethyltoluene	NA	NA	< 1.7 ug/m3	2.5 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.7 ug/m3	< 1.9 ug/m3
Acetone	870000 ug/m3	310000 ug/m3	31.6 ug/m3	11.9 ug/m3	53.6 ug/m3	< 4.2 ug/m3	19.7 ug/m3	< 4.5 ug/m3
Benzene	130 ug/m3	45 ug/m3	1.3 ug/m3	1.3 ug/m3	1.1 ug/m3	1.6 ug/m3	0.84 ug/m3	1.1 ug/m3
Benzyl chloride	30 ug/m3	10 ug/m3	< 1.8 ug/m3	< 2.0 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 1.8 ug/m3	< 2.0 ug/m3
Bromodichloromethane	NA	NA	< 2.3 ug/m3	< 2.5 ug/m3	< 2.3 ug/m3	< 2.4 ug/m3	< 2.3 ug/m3	< 2.5 ug/m3
Bromoform	300 ug/m3	90 ug/m3	< 3.5 ug/m3	< 3.9 ug/m3	< 3.5 ug/m3	< 3.7 ug/m3	< 3.5 ug/m3	< 3.9 ug/m3
Bromomethane	100 ug/m3	50 ug/m3	< 1.3 ug/m3	< 1.5 ug/m3	< 1.3 ug/m3	< 1.4 ug/m3	< 1.3 ug/m3	< 1.5 ug/m3
Carbon disulfide	20000 ug/m3	7000 ug/m3	1.6 ug/m3	1.2 ug/m3	< 1.1 ug/m3	1.9 ug/m3	2.5 ug/m3	< 1.2 ug/m3
Carbon tetrachloride	**20 ug/m3**	7 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.1 ug/m3	< 1.2 ug/m3
Chlorobenzene	1000 ug/m3	500 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.6 ug/m3	< 1.8 ug/m3
Chlorodibromomethane	NA	NA	< 2.9 ug/m3	< 3.2 ug/m3	< 2.9 ug/m3	< 3.0 ug/m3	< 2.9 ug/m3	< 3.2 ug/m3
Chloroethane	300000 ug/m3	100000 ug/m3	< 0.91 ug/m3	< 1.0 ug/m3	< 0.91 ug/m3	< 0.94 ug/m3	< 0.91 ug/m3	< 1.0 ug/m3
Chloroform	3000 ug/m3	1000 ug/m3	< 0.83 ug/m3	< 0.93 ug/m3	3.8 ug/m3	2.4 ug/m3	4.7 ug/m3	4.8 ug/m3
Chloromethane	3000 ug/m3	900 ug/m3	< 0.71 ug/m3	< 0.79 ug/m3	< 0.71 ug/m3	< 0.73 ug/m3	< 0.71 ug/m3	< 0.79 ug/m3
Cyclohexane	200000 ug/m3	60000 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3
Dichlorodifluoromethane (CFC-12)			< 4.2 ug/m3	< 1.9 ug/m3	< 1.7 ug/m3	< 1.8 ug/m3	< 1.7 ug/m3	< 1.9 ug/m3
Ethyl acetate	80000 ug/m3	30000 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3	1.6 ug/m3	< 3.2 ug/m3	< 1.2 ug/m3	< 3.4 ug/m3
Ethyl Alcohol	420000 ug/m3	150000 ug/m3	< 1.6 ug/m3	5.6 ug/m3	14.0 ug/m3	13.4 ug/m3	7.0 ug/m3	< 1.8 ug/m3
Ethyl benzene	30000 ug/m3	10000 ug/m3	< 1.5 ug/m3	1.7 ug/m3	< 1.5 ug/m3	< 7.7 ug/m3	< 1.5 ug/m3	< 8.3 ug/m3
Heptane	NA	NA	< 1.4 ug/m3	< 1.6 ug/m3	2.6 ug/m3	< 1.4 ug/m3	< 1.4 ug/m3	< 1.6 ug/m3
Hexachlorobutadiene	10 ug/m3	5 ug/m3	< 3.7 ug/m3	< 4.1 ug/m3	< 9.1 ug/m3	< 3.8 ug/m3	< 9.1 ug/m3	< 4.1 ug/m3
Hexane (C6)	60000 ug/m3	20000 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	3.9 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3
Isopropyl alcohol	200000 ug/m3	70000 ug/m3	114 ug/m3	65.0 ug/m3	113 ug/m3	178 ug/m3	73.8 ug/m3	66.1 ug/m3
Methyl ethyl ketone	100000 ug/m3	50000 ug/m3	2.6 ug/m3	2.0 ug/m3	8.3 ug/m3	8.0 ug/m3	2.6 ug/m3	< 6.8 ug/m3
Methyl isobutyl ketone	80000 ug/m3	30000 ug/m3	< 1.4 ug/m3	< 3.9 ug/m3	< 1.4 ug/m3	< 3.6 ug/m3	< 1.4 ug/m3	< 3.9 ug/m3
Methyl tertiary butyl ether (MTBE)	80000 ug/m3	30000 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.4 ug/m3
Methylene chloride	600 ug/m3	200 ug/m3	< 5.9 ug/m3	< 6.6 ug/m3	< 5.9 ug/m3	8.8 ug/m3	< 5.9 ug/m3	< 6.6 ug/m3
Naphthalene	300 ug/m3	90 ug/m3	< 4.5 ug/m3	6.5 ug/m3	< 4.5 ug/m3	5.8 ug/m3	< 4.5 ug/m3	< 5.0 ug/m3
Propylene	80000 ug/m3	30000 ug/m3	< 0.59 ug/m3	< 1.6 ug/m3	< 0.59 ug/m3	< 1.5 ug/m3	< 0.59 ug/m3	< 1.6 ug/m3
Styrene	30000 ug/m3	10000 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.5 ug/m3	< 1.6 ug/m3
Tetrachloroethylene	300 (3) ug/m3	20 (3) ug/m3	1.7 ug/m3	< 1.3 ug/m3	3.3 ug/m3	< 6.0 ug/m3	14.3 ug/m3	32.4 ug/m3
Tetrahydrofuran	NA	NA	< 1.0 ug/m3	< 1.1 ug/m3	< 1.0 ug/m3	< 5.2 ug/m3	< 1.0 ug/m3	< 5.6 ug/m3
Toluene	100000 ug/m3	50000 ug/m3	1.9 ug/m3	6.2 ug/m3	1.8 ug/m3	5.0 ug/m3	< 1.3 ug/m3	1.8 ug/m3
Trichlorofluoromethane	20000 ug/m3	7000 ug/m3	< 1.9 ug/m3	< 2.1 ug/m3	< 1.9 ug/m3	< 2.0 ug/m3	2.4 ug/m3	9.7 ug/m3
Trichlorotrifluoroethane (Freon 113)	800000 ug/m3	300000 ug/m3	< 2.7 ug/m3	< 3.0 ug/m3	< 2.7 ug/m3	< 2.8 ug/m3	< 2.7 ug/m3	< 3.0 ug/m3
Vinyl acetate	6000 ug/m3	2000 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.2 ug/m3	< 1.3 ug/m3
Vinyl chloride	30 ug/m3	10 ug/m3	< 0.44 ug/m3	< 0.49 ug/m3	< 0.44 ug/m3	< 0.45 ug/m3	< 0.44 ug/m3	< 0.49 ug/m3
Xylene, m & p	3000 (2) ug/m3	1000 (2) ug/m3	< 3.0 ug/m3	10.9 ug/m3	< 3.0 ug/m3	< 3.1 ug/m3	< 3.0 ug/m3	< 3.3 ug/m3
Xylene, o	3000 (2) ug/m3	1000 (2) ug/m3	< 1.5 ug/m3	3.5 ug/m3	< 1.5 ug/m3	< 7.7 ug/m3	< 1.5 ug/m3	< 8.3 ug/m3

Note: Detected compound results shown in **bold**

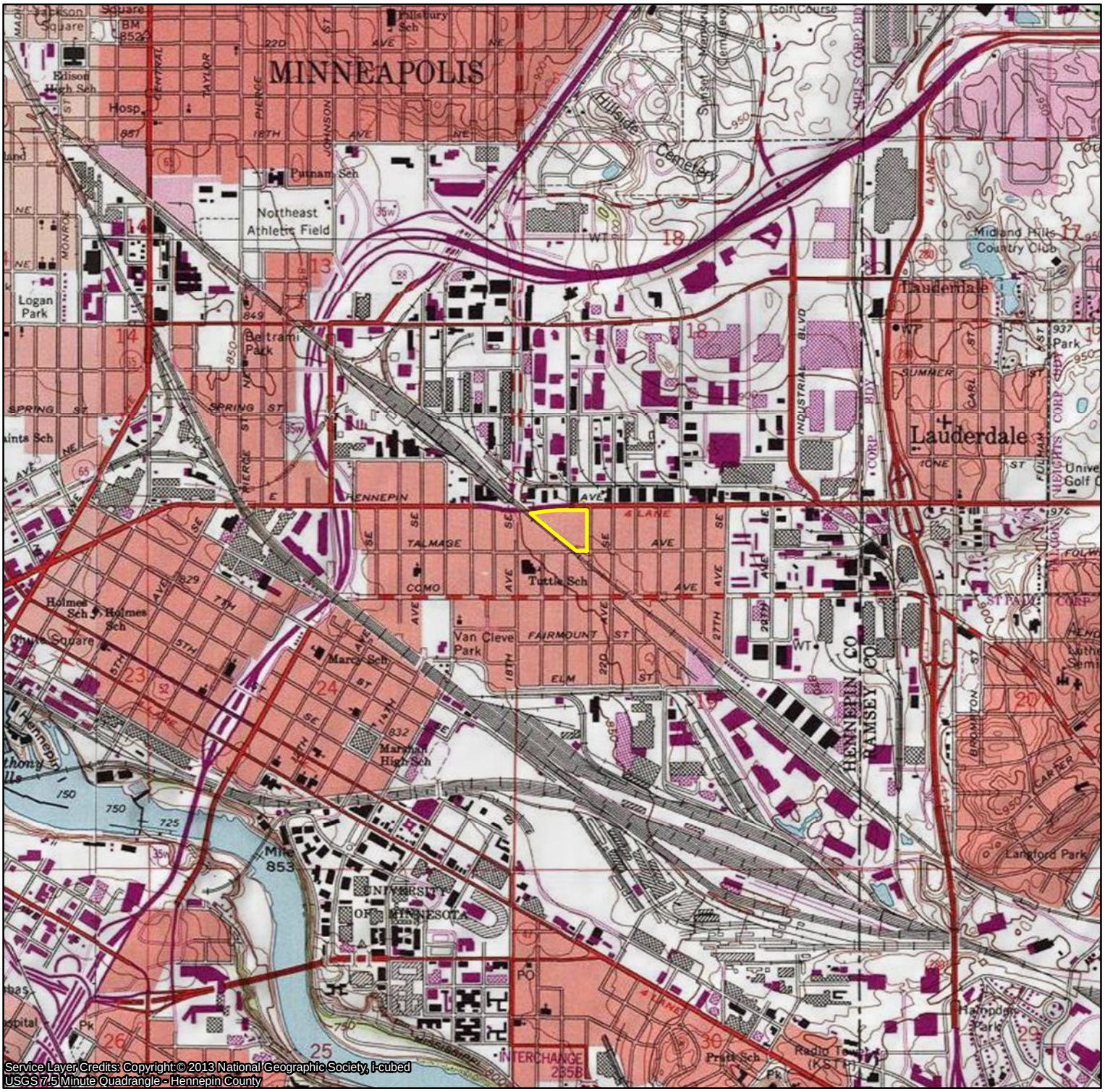
Data Footnotes and Qualifiers

Footnote	
--	Not analyzed/not available.
<	Less than
N	Sample Type: Normal
FD	Sample Type: Field Duplicate

Qualifier	
e	Estimated value, exceeded the instrument calibration range.
h	EPA recommended sample preservation, extraction or analysis holding time was exceeded.
j	Estimated detected value. The reported value is less than the stated laboratory quantitation limit but greater the laboratory method detection limit.
*	Estimated value, QA/QC criteria not met.

Barr, 2015. Vapor Intrusion Pathway Investigation Report. East Hennepin Avenue Site. Minneapolis,

Figures



2010 East Hennepin Ave

0 2,000 4,000

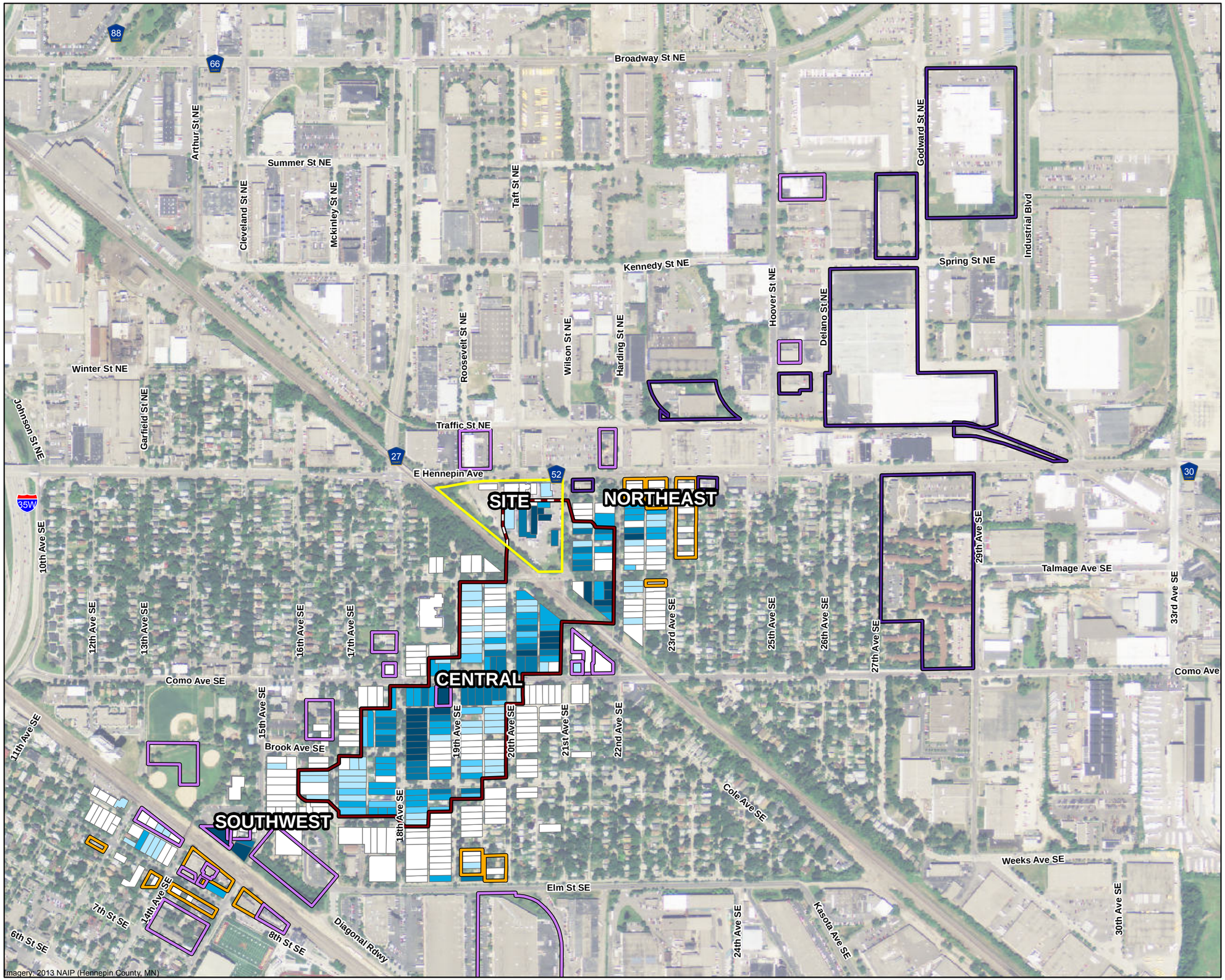
Feet

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

BARR

Figure 1

LOCATION MAP
East Hennepin Avenue Site
Minneapolis, Minnesota



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/m^3
- 20 - 60 ug/m^3
- 60 - 100 ug/m^3
- 100 - 500 ug/m^3
- 500 - 2000 ug/m^3
- > 2000 ug/m^3

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

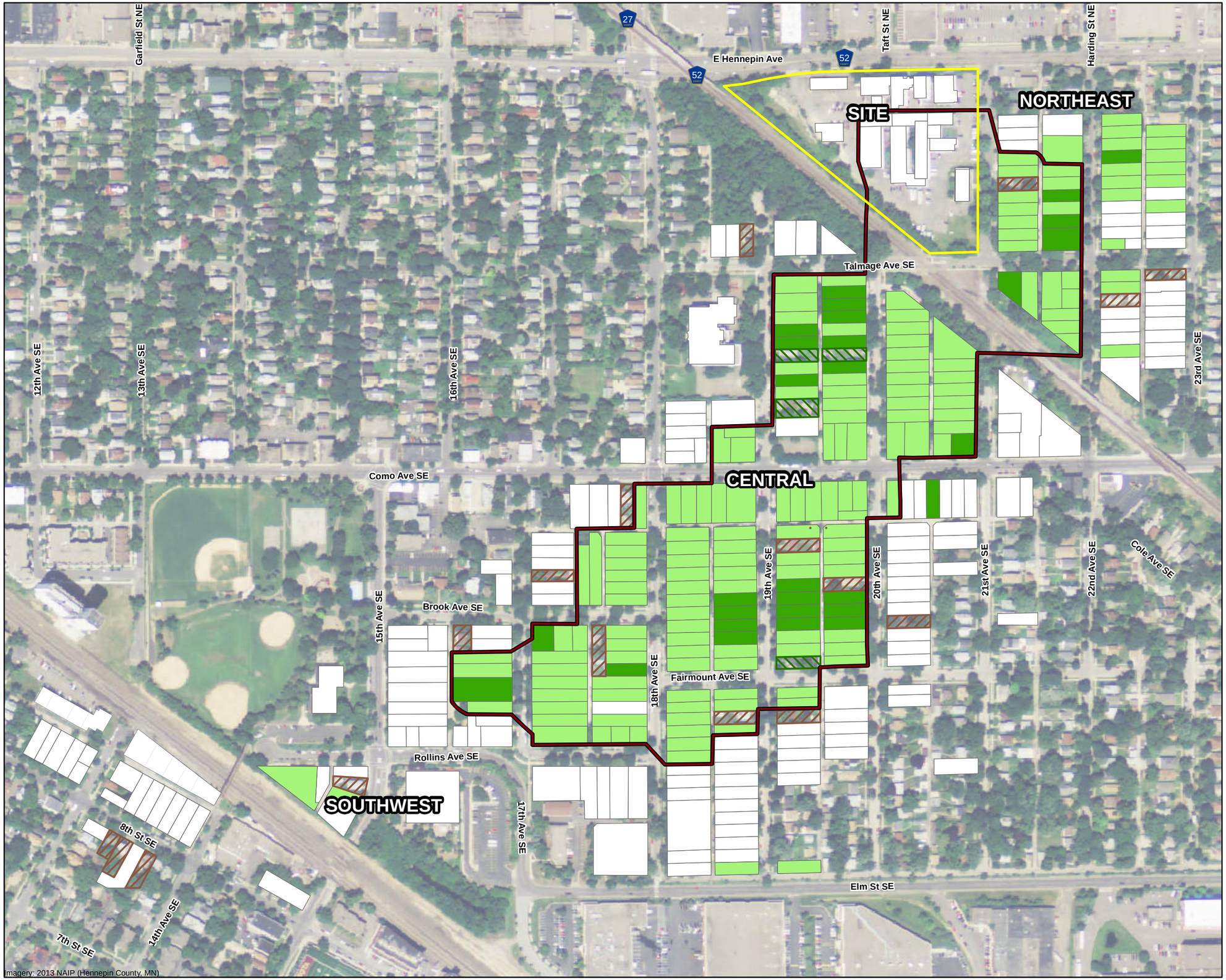
0 600 1,200

Feet

BARR

Figure 2

STUDY AREA
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 E Hennepin Ave

Soil Gas Monitoring Area

Building Mitigation System Installed - Property Mitigation Eligible

Building Mitigation System Installed - Property Offered Mitigation

Not Eligible for Mitigation

Mitigation Declined by Property Owner

Did Not Participate in Study

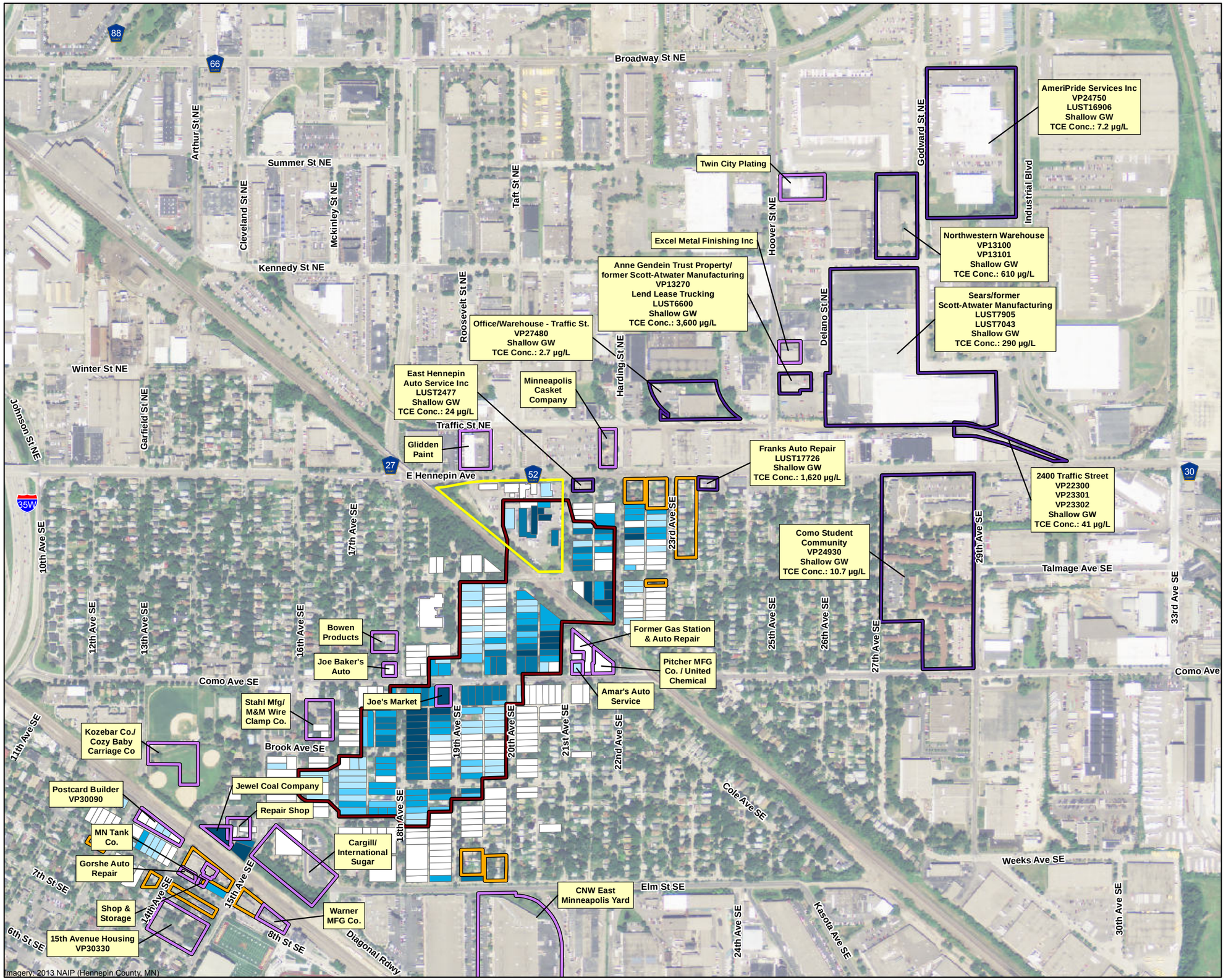
0 300 600

Feet

BARR

Figure 3

BUILDING MITIGATION STATUS
East Hennepin Avenue Site
Minneapolis, Minnesota



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 (MPCA data shown)

Soil Gas Monitoring Area

Sub-slab TCE Vapor Concentrations

- < 20 ug/m^3
- 20 - 60 ug/m^3
- 60 - 100 ug/m^3
- 100 - 500 ug/m^3
- 500 - 2000 ug/m^3
- > 2000 ug/m^3

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

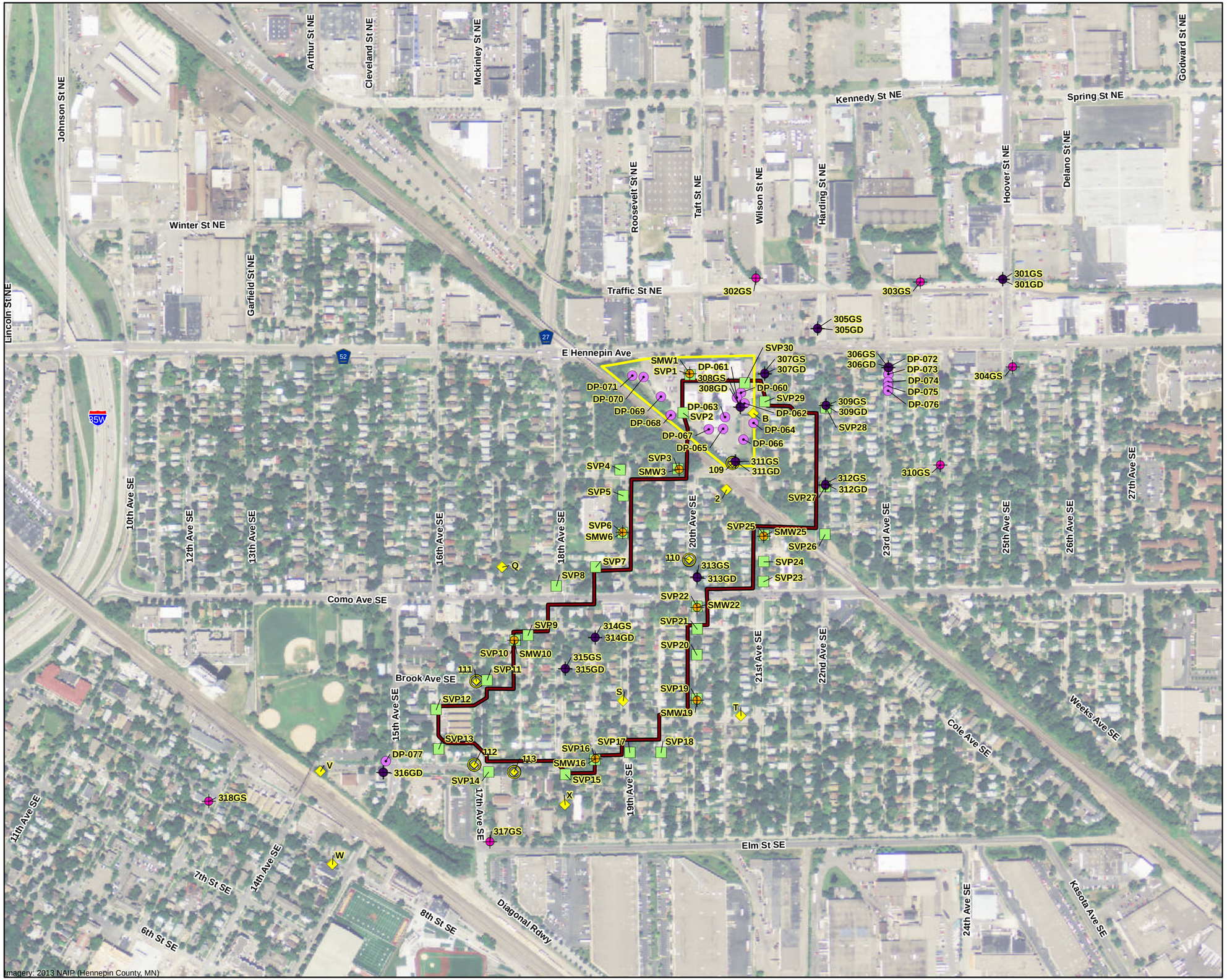
0 600 1,200

Feet

BARR

Figure 4

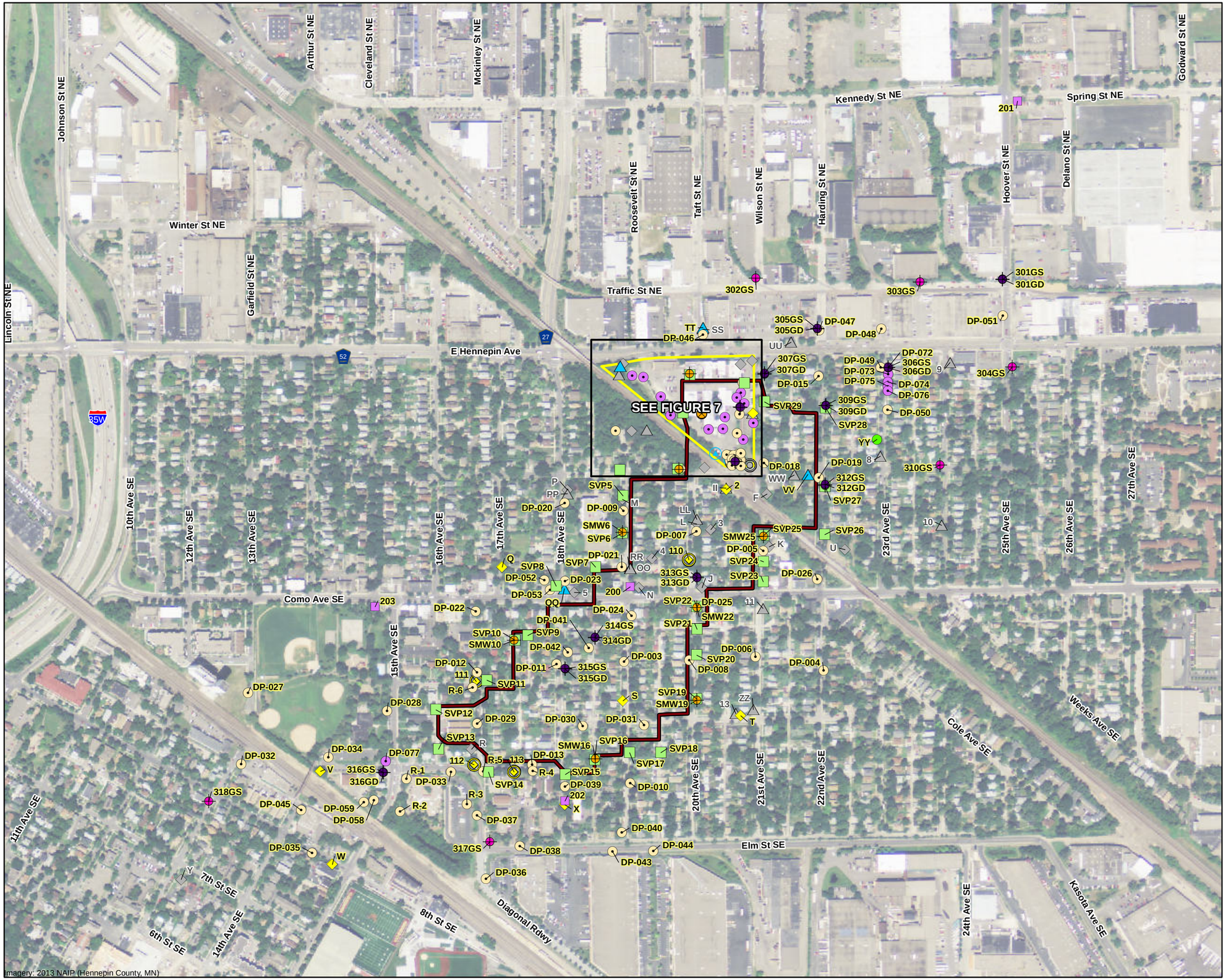
POTENTIAL STUDY AREA
TCE SOURCES
East Hennepin Avenue Site
Minneapolis, Minnesota



BARR

Figure 5

VI PATHWAY INVESTIGATION LOCATIONS
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

Soil Gas Monitoring Area

VI Pathway Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Nested Monitoring Well
- Sentinel Monitoring Well
- Boring
- Sentinel Vapor Monitoring Port

Previous Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Pump-Out Well
- Magnolia Member Monitoring Well
- Magnolia Member Pump-Out Well
- Carimona Monitoring Well
- St. Peter Sandstone Monitoring Well
- Prairie du Chien - Jordan Monitoring Well
- Pre-VI Pathway Investigation Boring

Abandoned / Former Wells

- Carimona, Magnolia, and/or Hidden Falls Monitoring Well
- Glacial Drift Monitoring Well
- Glacial Drift Pump-Out Well
- Carimona Pump-Out Well

N

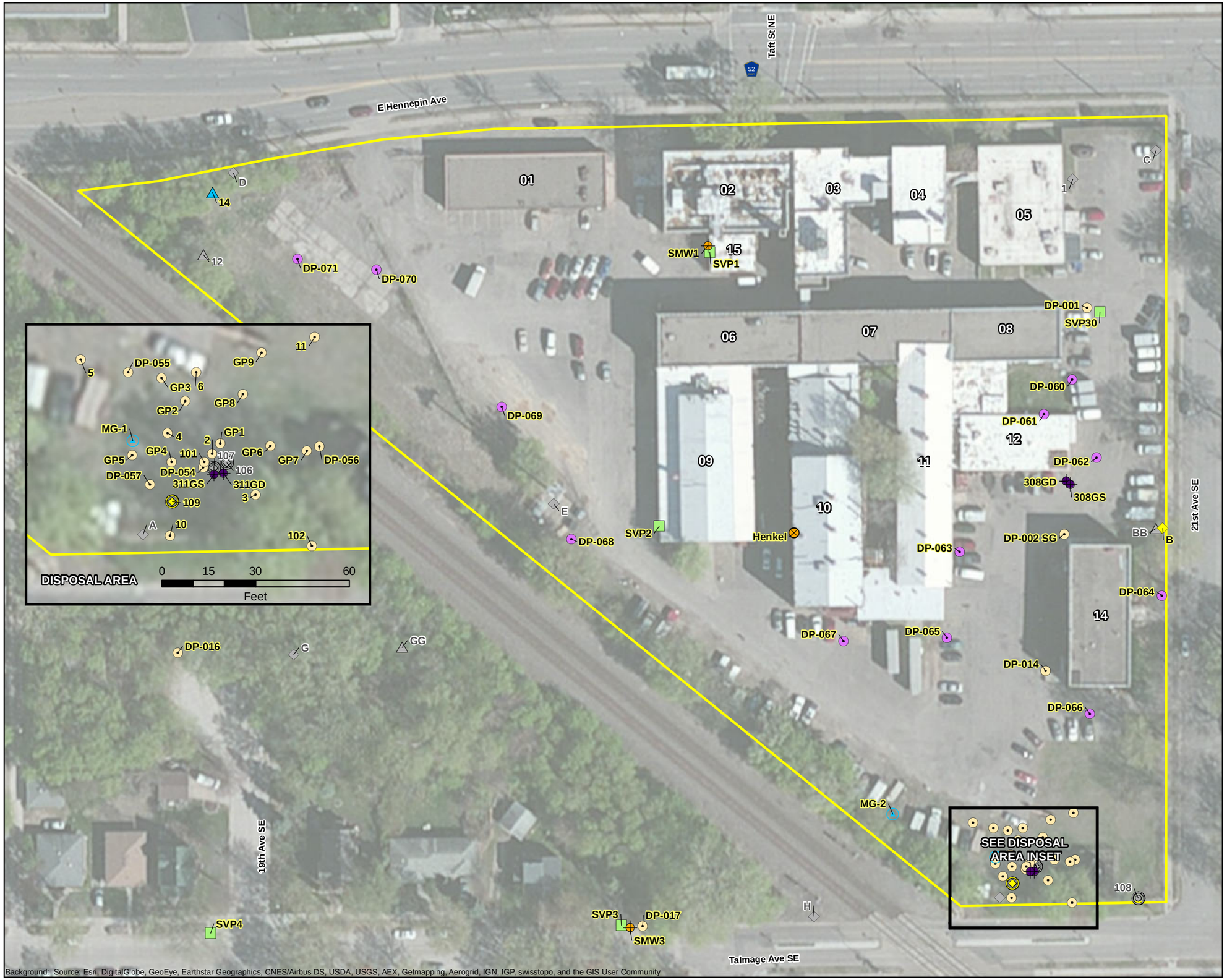
0 500 1,000

Feet

BARR

Figure 6

INVESTIGATION LOCATIONS - STUDY AREA
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

VI Pathway Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Nested Monitoring Well
- Sentinel Monitoring Well
- Boring
- Sentinel Vapor Monitoring Port

Previous Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Pump-Out Well
- Magnolia Member Monitoring Well
- Magnolia Member Pump-Out Well
- Carimona Monitoring Well
- St. Peter Sandstone Monitoring Well
- Prairie du Chien - Jordan Monitoring Well
- Pre-VI Pathway Investigation Boring

Abandoned / Former Wells

- Carimona, Magnolia, and/or Hidden Falls Monitoring Well
- Glacial Drift Monitoring Well
- Glacial Drift Pump-Out Well
- Carimona Pump-Out Well

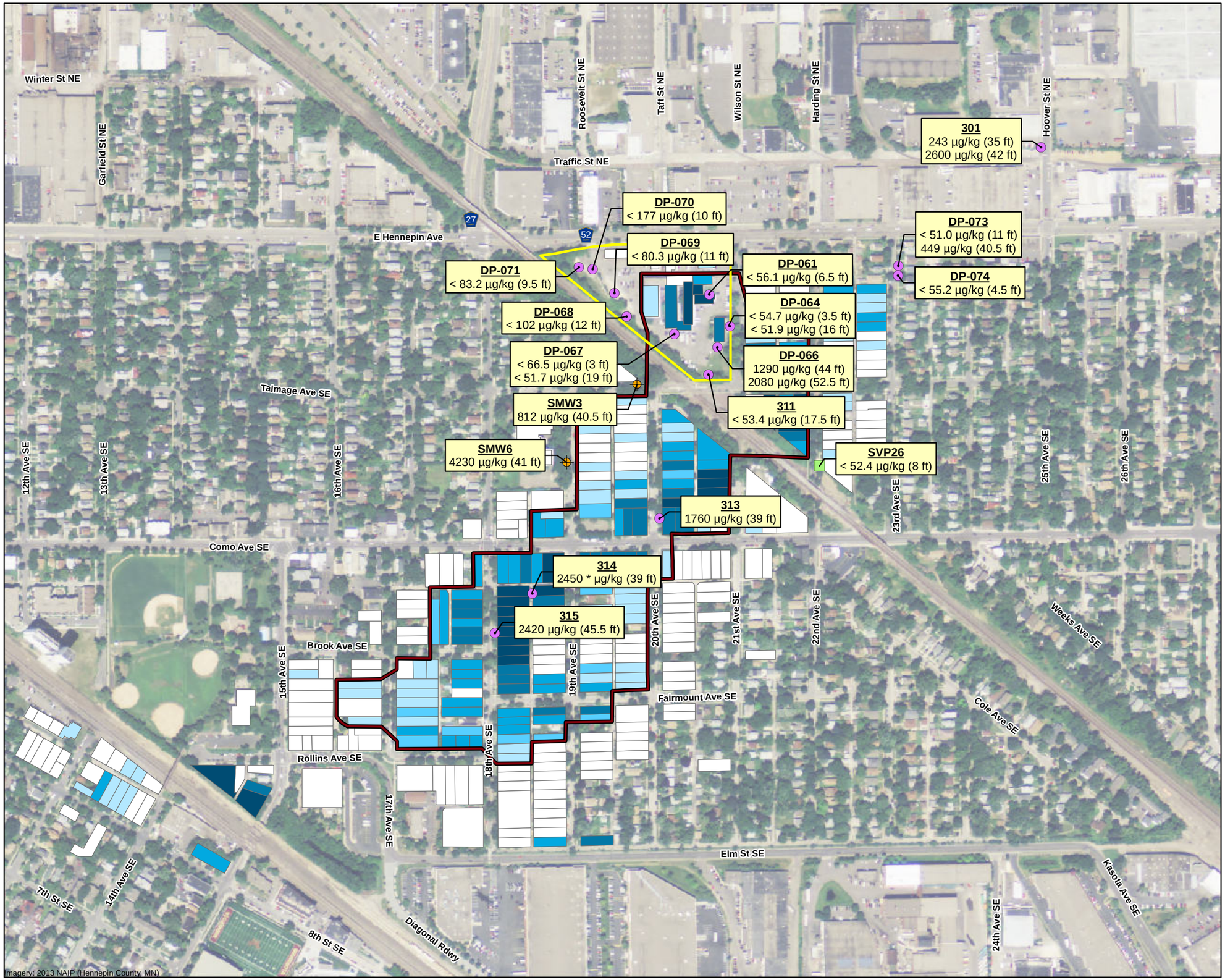
01 Building Number

0 70 140
Feet

BARR

Figure 7

INVESTIGATION LOCATIONS - SITE
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

Soil Gas Monitoring Area

VI Pathway Investigation Locations

- Sentinel Monitoring Well
- Boring
- Sentinel Vapor Monitoring Port

Sub-slab TCE Vapor Concentrations

- < 20 ug/m^3
- 20 - 60 ug/m^3
- 60 - 100 ug/m^3
- 100 - 500 ug/m^3
- 500 - 2000 ug/m^3
- > 2000 ug/m^3

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

Sample ID
TCE in Soil (Sample Depth)

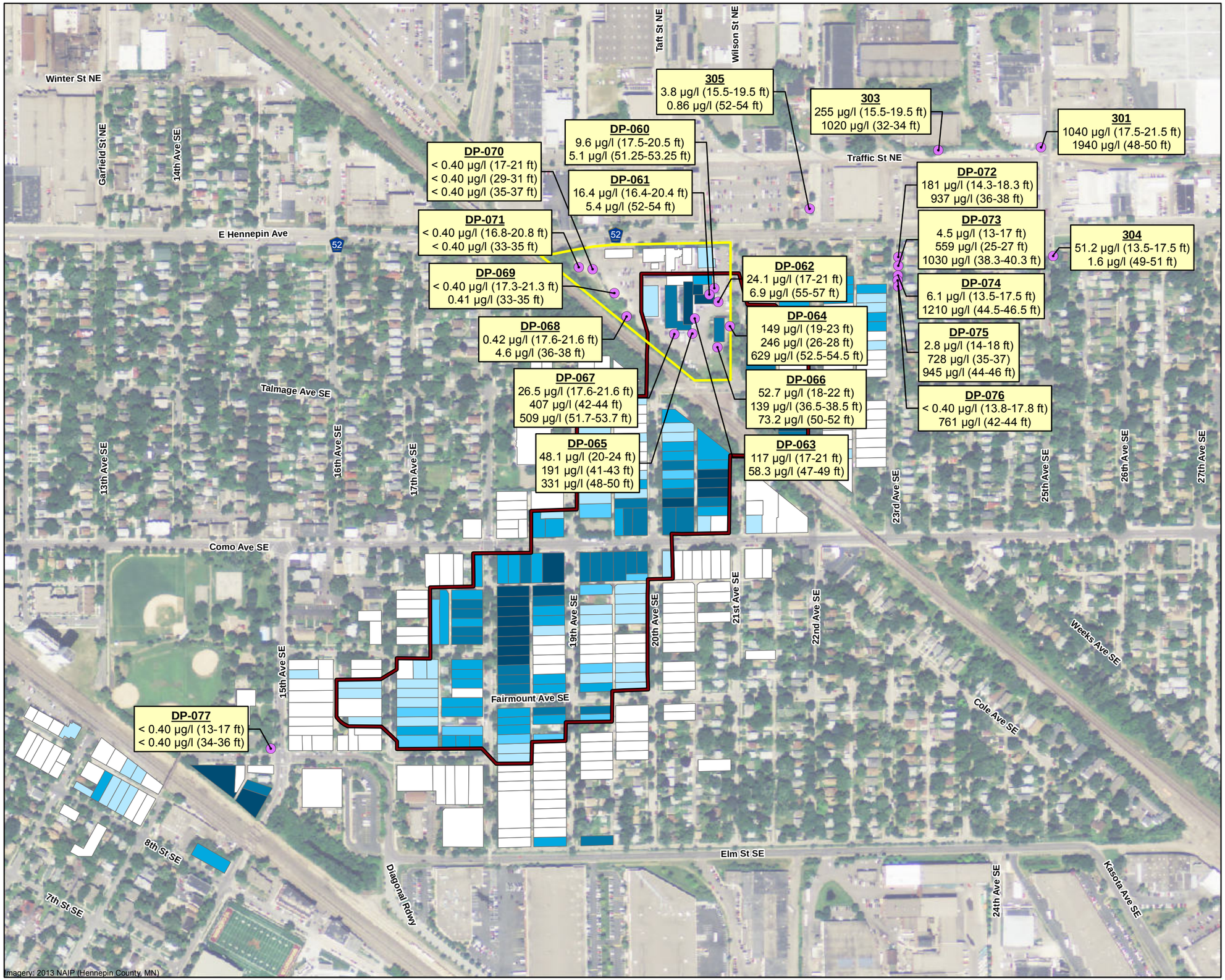
Footnotes:
* Estimated value, QA/QC criteria not met.

0 400 800
Feet

BARR

Figure 8

SOIL SAMPLING TCE RESULTS
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

Soil Gas Monitoring Area

VI Pathway Investigation Locations

Boring

Sub-slab TCE Vapor Concentrations

- < 20 ug/m^3
- 20 - 60 ug/m^3
- 60 - 100 ug/m^3
- 100 - 500 ug/m^3
- 500 - 2000 ug/m^3
- > 2000 ug/m^3

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

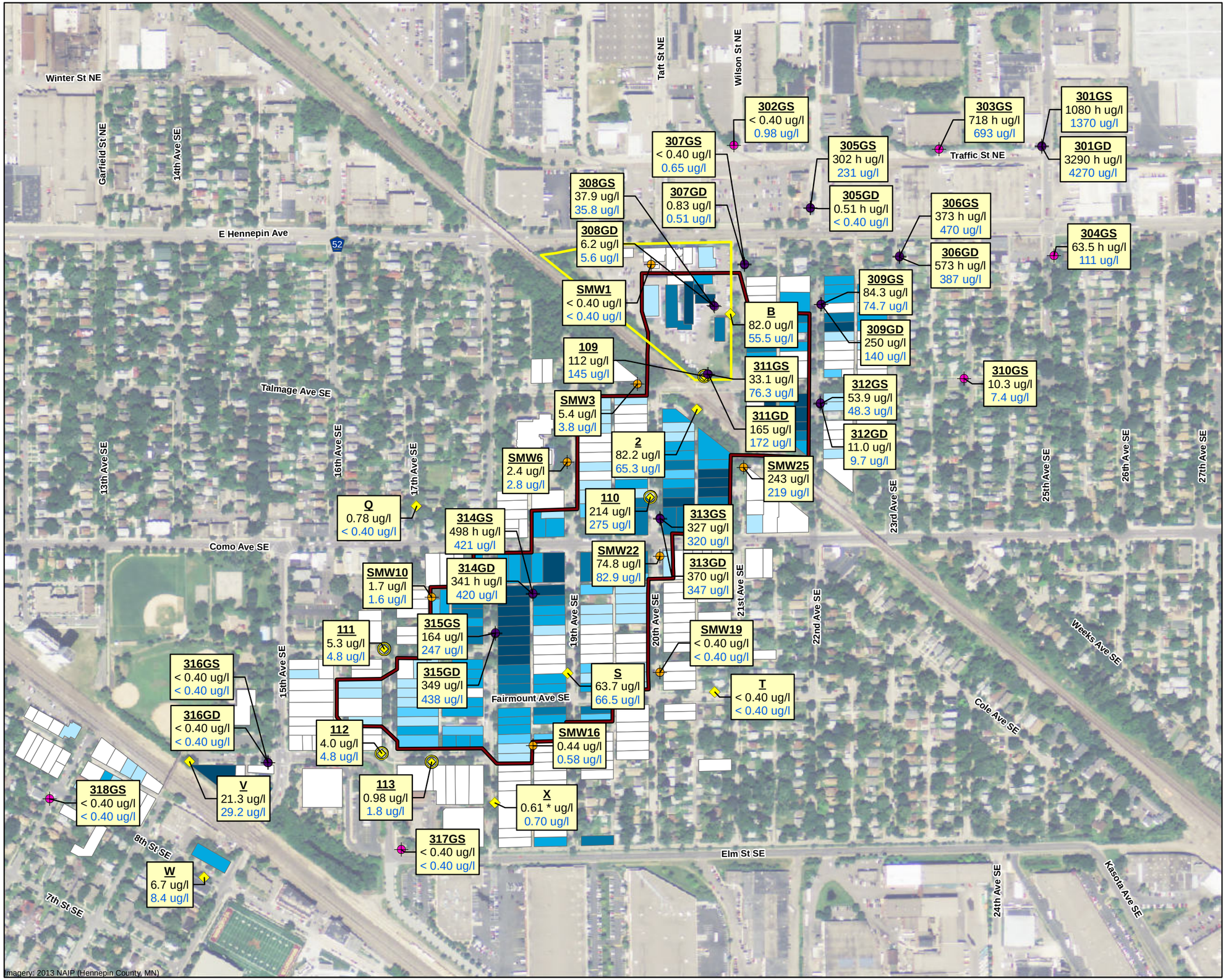
Sample ID
TCE in Groundwater (Temp Well Screen Depth)

0 400 800
Feet

BARR

Figure 9

GROUNDWATER SAMPLING TCE RESULTS - TEMPORARY WELLS
East Hennepin Avenue
Minneapolis, Minnesota



2010 East Hennepin Ave

Soil Gas Monitoring Area

VI Pathway Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Nested Monitoring Well
- Sentinel Monitoring Well

Previous Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Pump-Out Well

Sub-slab TCE Vapor Concentrations

- < 20 ug/m^3
- 20 - 60 ug/m^3
- 60 - 100 ug/m^3
- 100 - 500 ug/m^3
- 500 - 2000 ug/m^3
- > 2000 ug/m^3

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

Sample ID
TCE in groundwater, December 2014
TCE in groundwater, March 2015

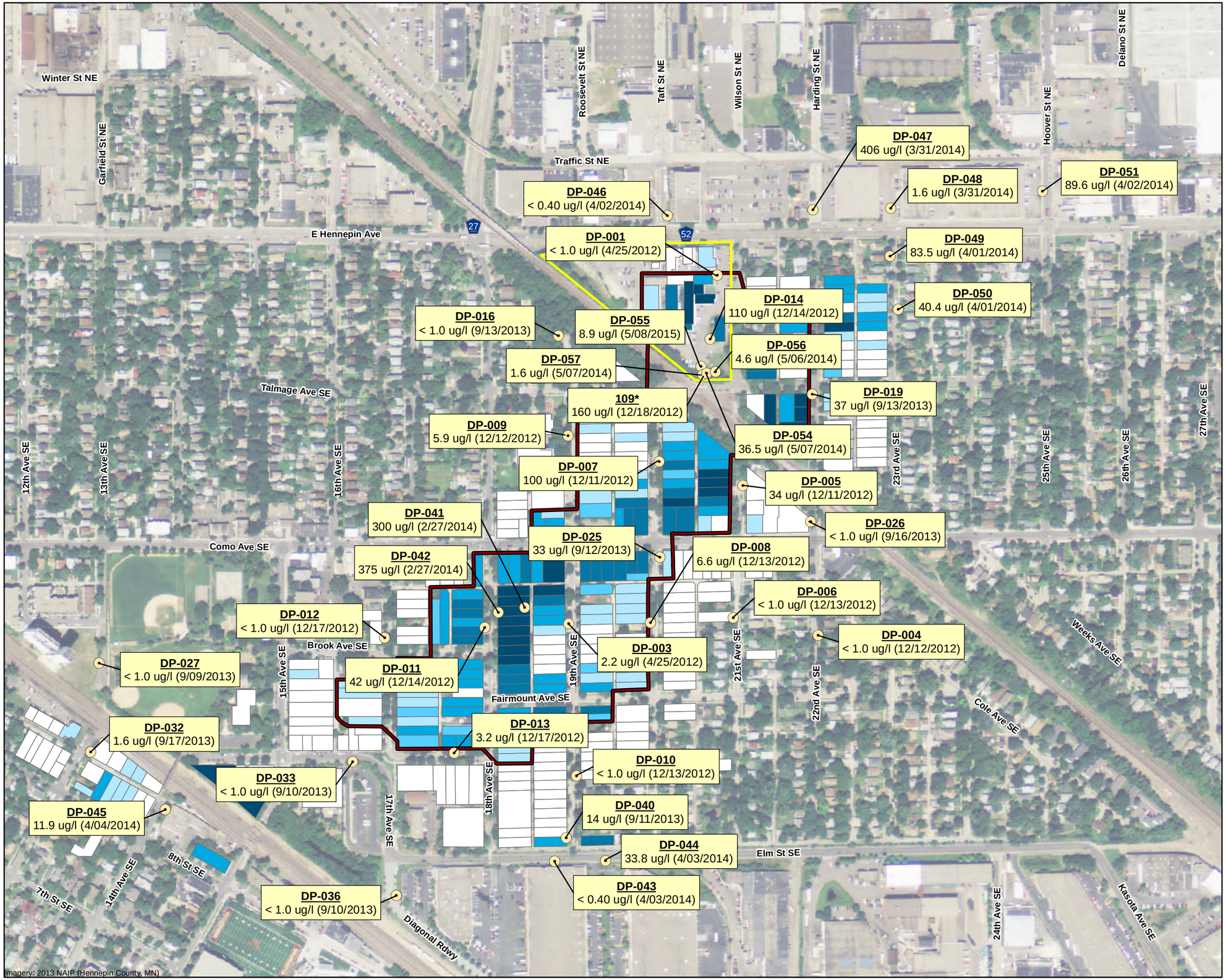
Footnotes:
* Estimated value, QA/QC criteria not met.
h EPA recommended sample preservation, extraction or analysis holding time was exceeded.

0 400 800
Feet

BARR

Figure 10

GROUNDWATER SAMPLING TCE RESULTS - PERMANENT WELLS
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 E Hennepin Ave

Soil Gas Monitoring Area

Previous Investigation Locations

Pre-VI Pathway Investigation Boring

Sub-slab TCE Vapor Concentrations

- < 20 ug/m^3
- 20 - 60 ug/m^3
- 60 - 100 ug/m^3
- 100 - 500 ug/m^3
- 500 - 2000 ug/m^3
- > 2000 ug/m^3

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

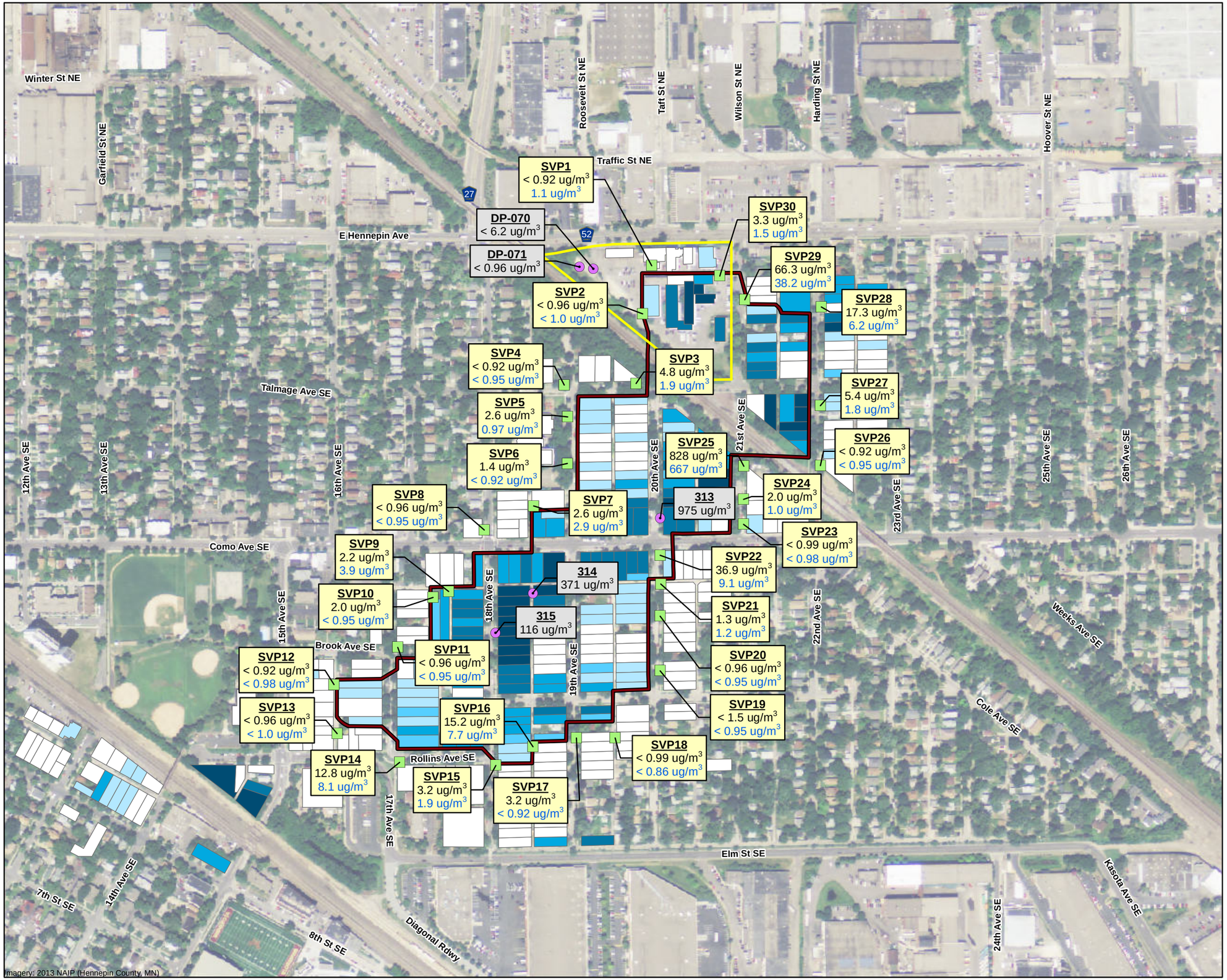
0 400 800

Feet

BARR

Figure 11

PREVIOUS GROUNDWATER SAMPLING TCE RESULTS - TEMPORARY WELLS
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

Soil Gas Monitoring Area

VI Pathway Investigation Locations

Boring

Sentinel Vapor Monitoring Port

Sub-slab TCE Vapor Concentrations

- < 20 ug/m^3
- 20 - 60 ug/m^3
- 60 - 100 ug/m^3
- 100 - 500 ug/m^3
- 500 - 2000 ug/m^3
- > 2000 ug/m^3

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

Permanent Vapor Point

Sample ID
TCE in soil gas, December 2014
TCE in soil gas, March 2015

Temporary Vapor Point

Sample ID
TCE in soil gas

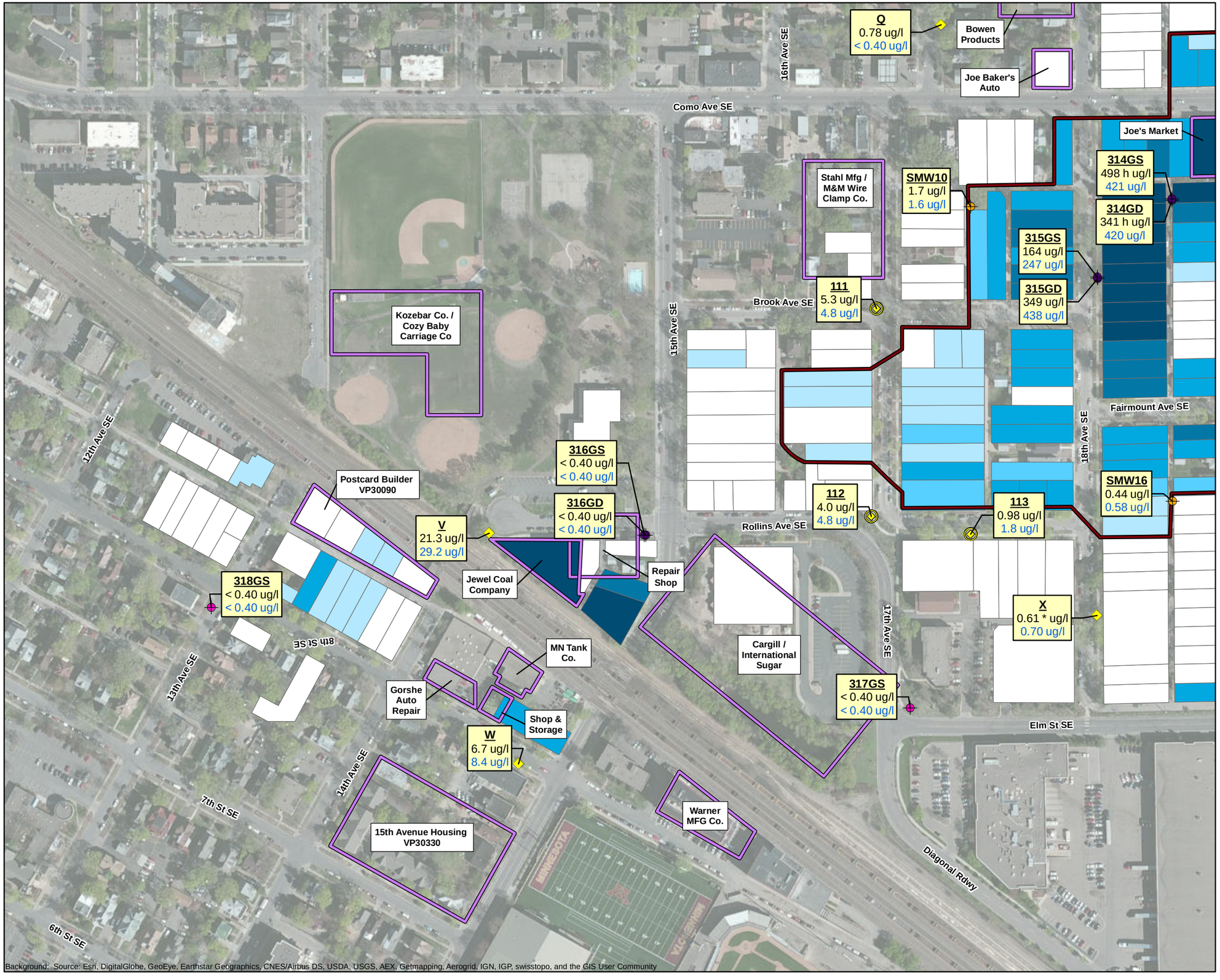
0 400 800

Feet

BARR

Figure 12

SOIL GAS SAMPLING TCE RESULTS
East Hennepin Avenue Site
Minneapolis, Minnesota



Property with Potential Solvent Use, Approximate Location of Current and/or Historic Business

Soil Gas Monitoring Area

VI Pathway Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Nested Monitoring Well
- Sentinel Monitoring Well

Previous Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Pump-Out Well

Sub-slab TCE Vapor Concentrations

- < 20 ug/m^3
- 20 - 60 ug/m^3
- 60 - 100 ug/m^3
- 100 - 500 ug/m^3
- 500 - 2000 ug/m^3
- > 2000 ug/m^3

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

Sample ID
TCE in groundwater, December 2014
TCE in groundwater, March 2015

Footnotes:
* Estimated value, QA/QC criteria not met.
h EPA recommended sample preservation, extraction or analysis holding time was exceeded.

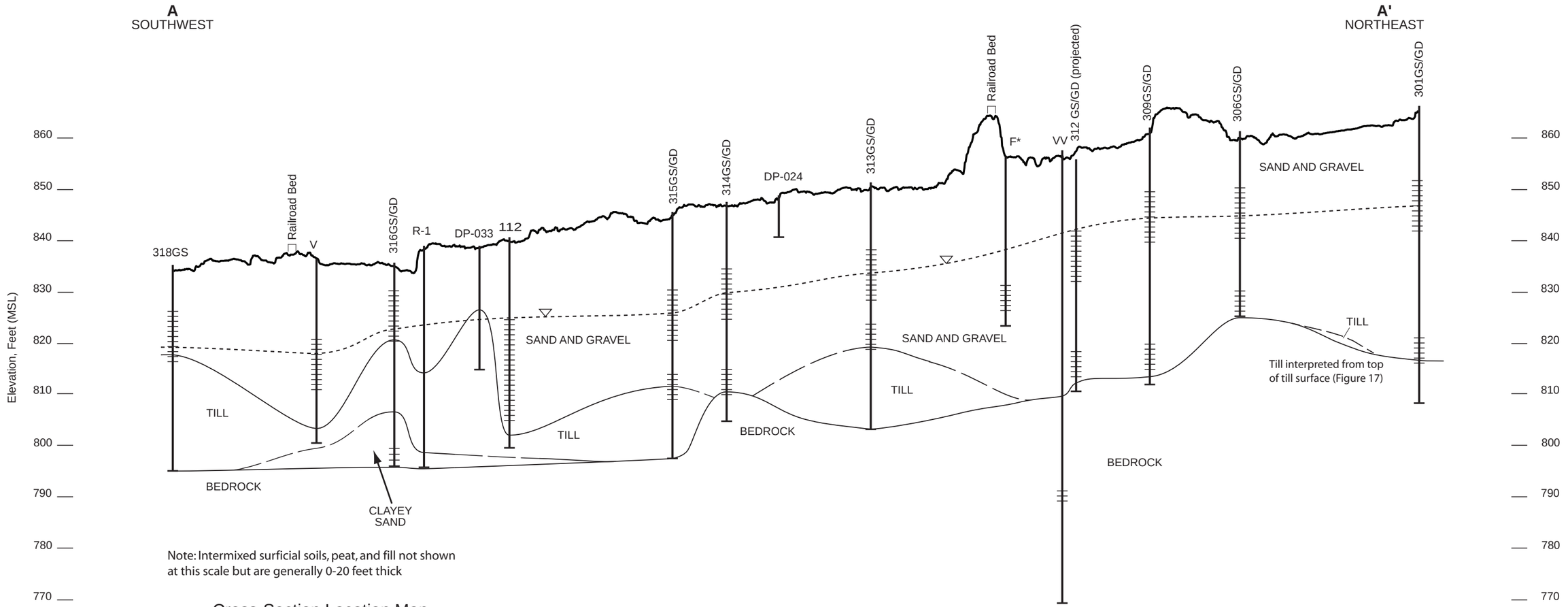
N

0 200 400
Feet

BARR

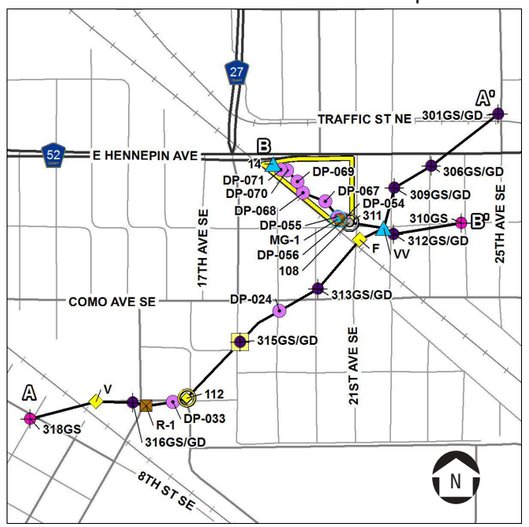
Figure 13

SOIL GAS AND GROUNDWATER SAMPLING TCE RESULTS - SOUTHWEST AREA
East Hennepin Avenue Site
Minneapolis, Minnesota



Note: Intermixed surficial soils, peat, and fill not shown at this scale but are generally 0-20 feet thick

Cross-Section Location Map



LEGEND

- Ground Surface
- Geologic Contact
- Inferred Geologic Contact
- Approximate Water table Dec. 2014
- Monitoring Well Screen
- Soil Boring
- * Well Abandoned

0 — 500

Approximate Horizontal Scale in Feet
~25X Vertical Exaggeration

BARR

Figure 14

GEOLOGIC CROSS SECTION A-A'
East Hennepin Avenue Site
Minneapolis, Minnesota

B WEST

B' EAST

Elevation, Feet (MSL)

860 850 840 830 820 810 800 790

14 DP-071 DP-070 DP-069 DP-068 DP-067 DP-055 MG-1 DP-054 311GS/GD DP-056 108* VV 312GS\GD 310GS

INTERMIXED FILL/PEAT/SAND/SILT

CLAY

SAND AND GRAVEL

PEAT

SILT

TILL

BEDROCK

SAND AND GRAVEL

TILL

BEDROCK

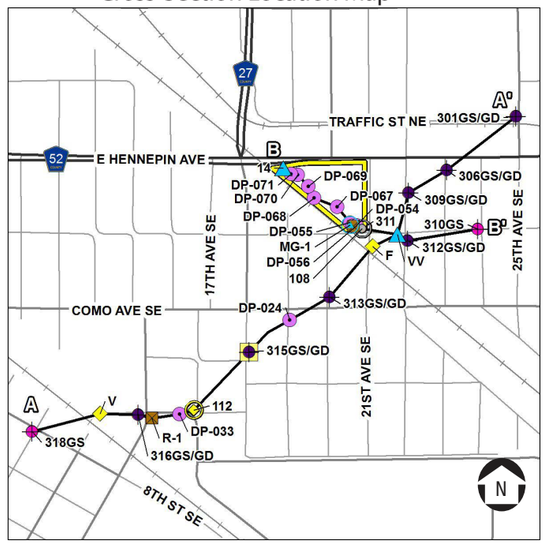
INTERMIXED FILL/PEAT/SAND/SILT

SAND AND GRAVEL

CLAY

BEDROCK

Cross-Section Location Map



LEGEND

- Ground Surface
- Geologic Contact
- Inferred Geologic Contact
- Approximate Water table Dec. 2014
- Monitoring Well Screen
- Soil Boring
- * Well Abandoned

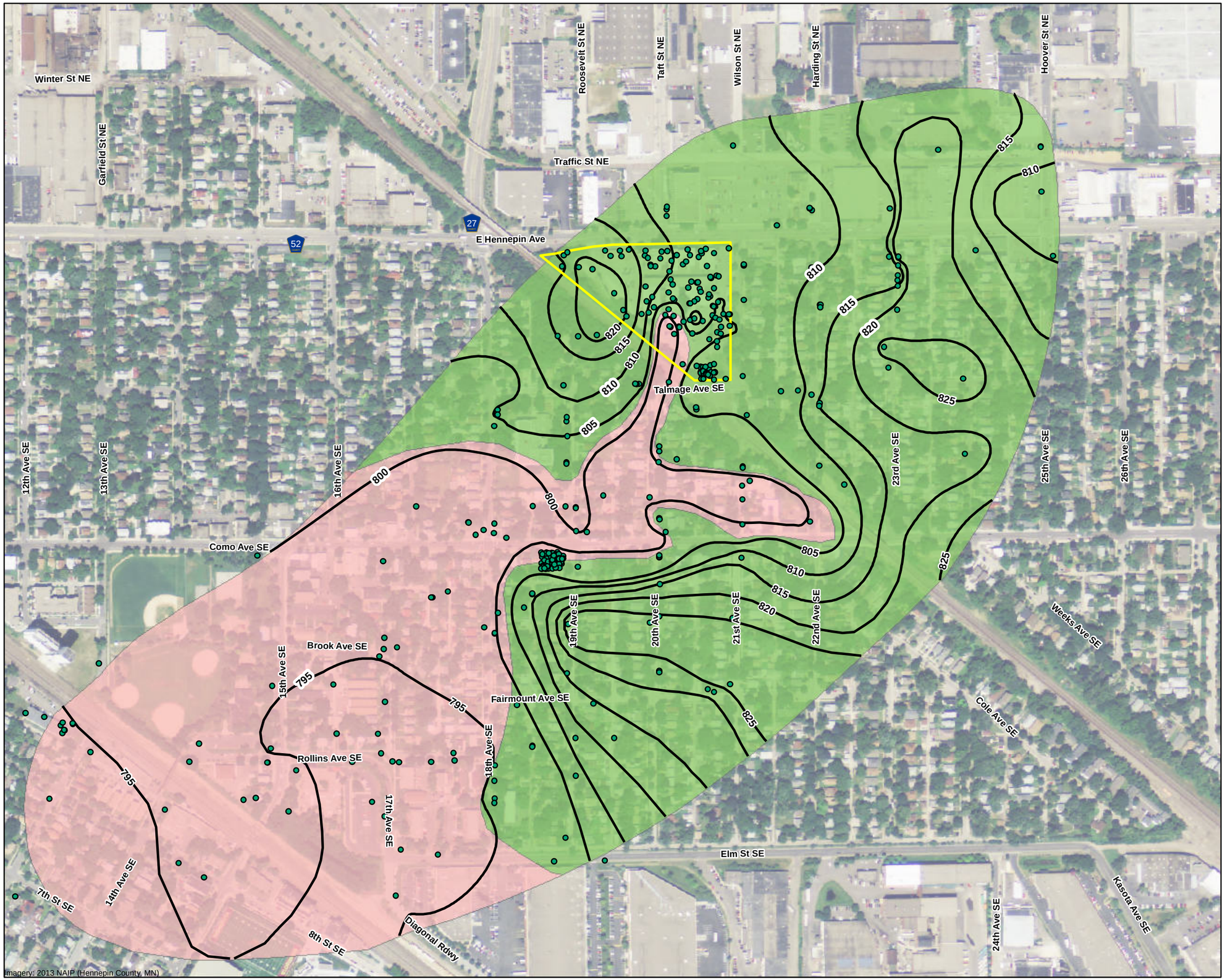
0 200

Approximate Horizontal Scale in Feet
~10X Vertical Exaggeration

BARR

Figure 15

GEOLOGIC CROSS SECTION B-B'
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

Boring Locations

Bedrock Topography, feet (MSL)

Bedrock Geology

Shale (Decorah Shale-Unnamed Member)

Carbonate (Decorah Shale-Carimona Member; Platteville Formation-Magnolia Member)

Bedrock geology and topography based on borings installed within the Study Area, mapping by the Minnesota Geological Survey, supplemental geologic data from City of Minneapolis, Minnesota County Well Index, Minnesota Department of Transportation, and MPCA files

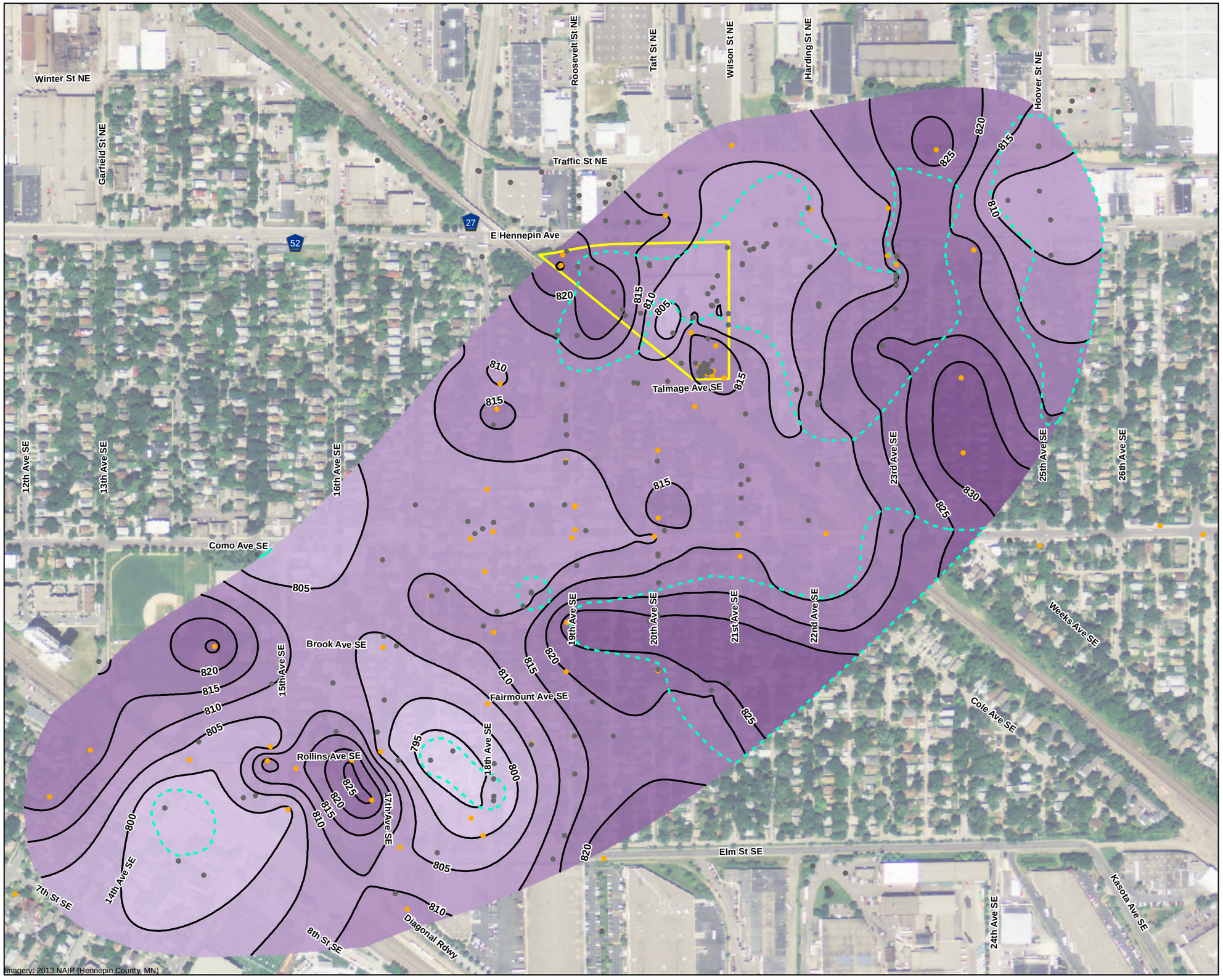
0 400 800

Feet

BARR

Figure 16

BEDROCK GEOLOGY AND TOPOGRAPHY
East Hennepin Avenue Site
Minneapolis, Minnesota



Imagery: 2013 NAIP (Hennepin County, MN)

2010 East Hennepin Ave

Boring Defining Top of Basal Clay/Till

Other Geologic Boring

Area Where Glacial Till Not Present

Base of Glacial Drift

Base of Glacial Drift

- 793 - 795
- 796 - 800
- 801 - 805
- 806 - 810
- 811 - 815
- 816 - 820
- 821 - 825
- 826 - 830
- 831 - 835
- 836 - 840
- 841 - 845
- 846 - 850

Base of glacial drift defined as either the top of the glacial till (where present) or top of bedrock. Clay lenses interpreted within the sand and gravel of the drift not included.

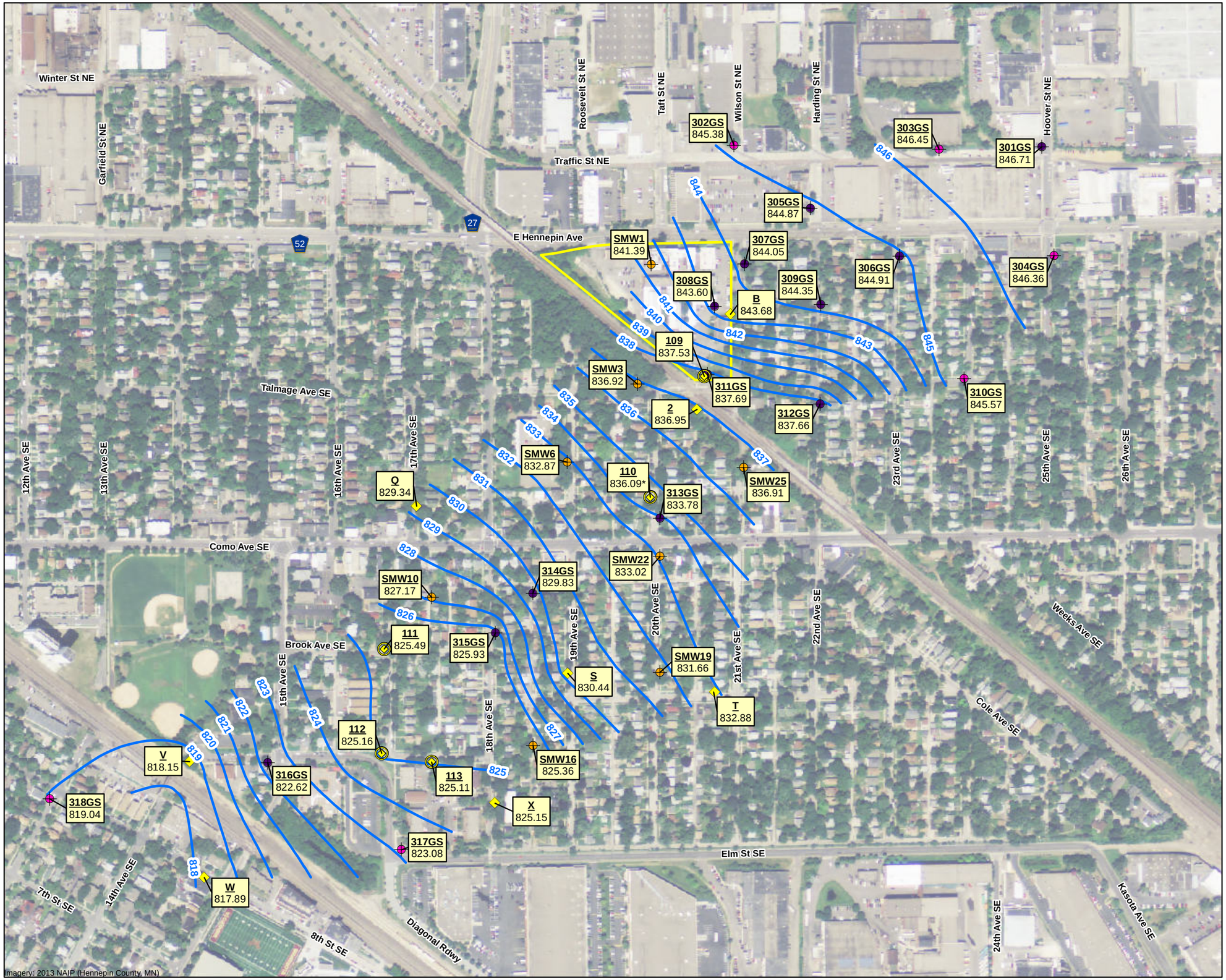
0 400 800

Feet

BARR

Figure 17

BASE OF GLACIAL DRIFT
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

VI Pathway Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Nested Monitoring Well
- Sentinel Monitoring Well

Previous Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Pump-Out Well
- Estimated Water Table Elevation Contour (ft MSL)

* Data inconsistent with historical and surrounding data. Value not used for contouring.

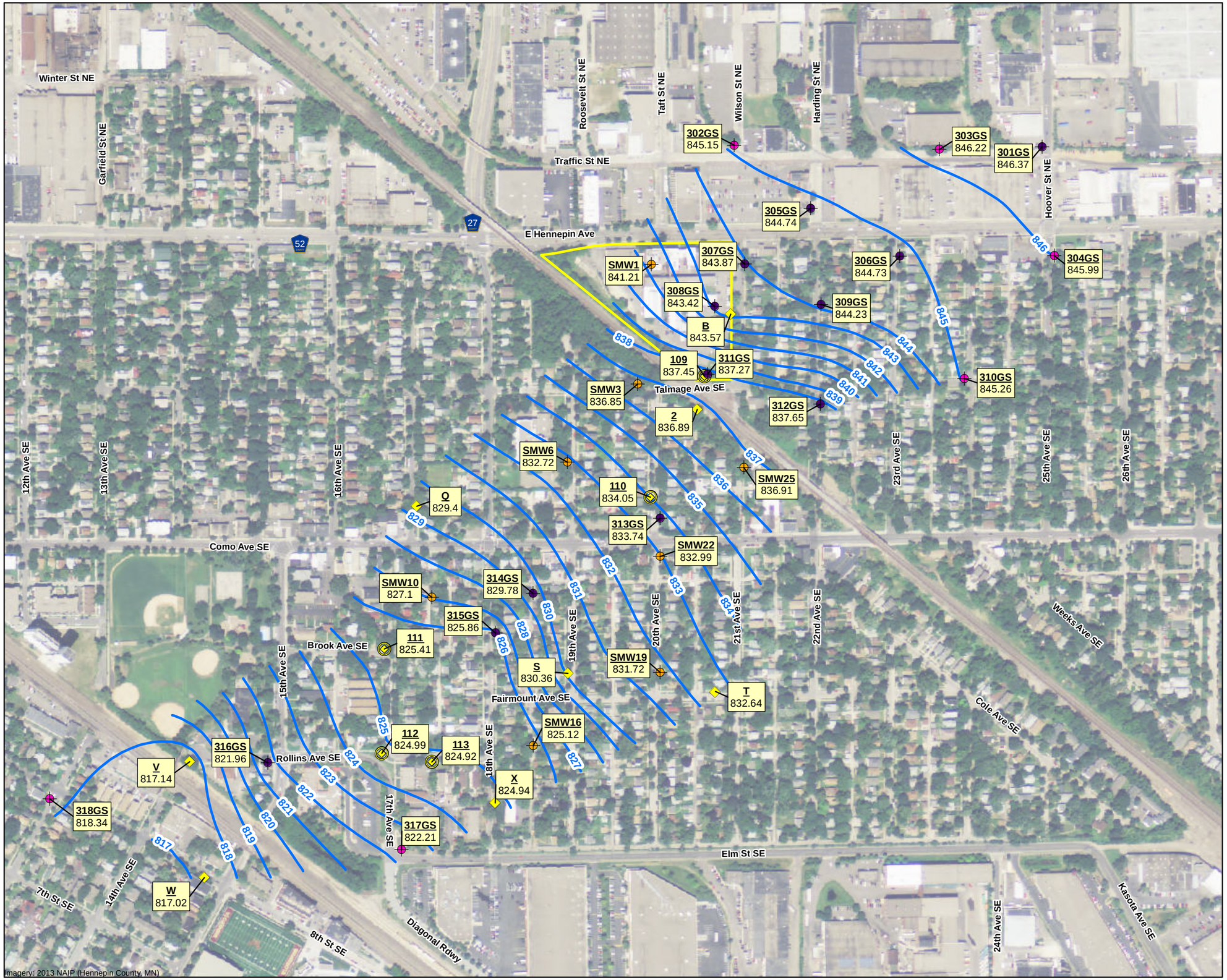
0 400 800

Feet

BARR

Figure 18

WATER TABLE CONTOURS - DECEMBER 2014
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

VI Pathway Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Nested Monitoring Well
- Sentinel Monitoring Well

Previous Investigation Locations

- Glacial Drift Monitoring Well
- Glacial Drift Pump-Out Well
- Estimated Water Table Elevation Contour (ft MSL)

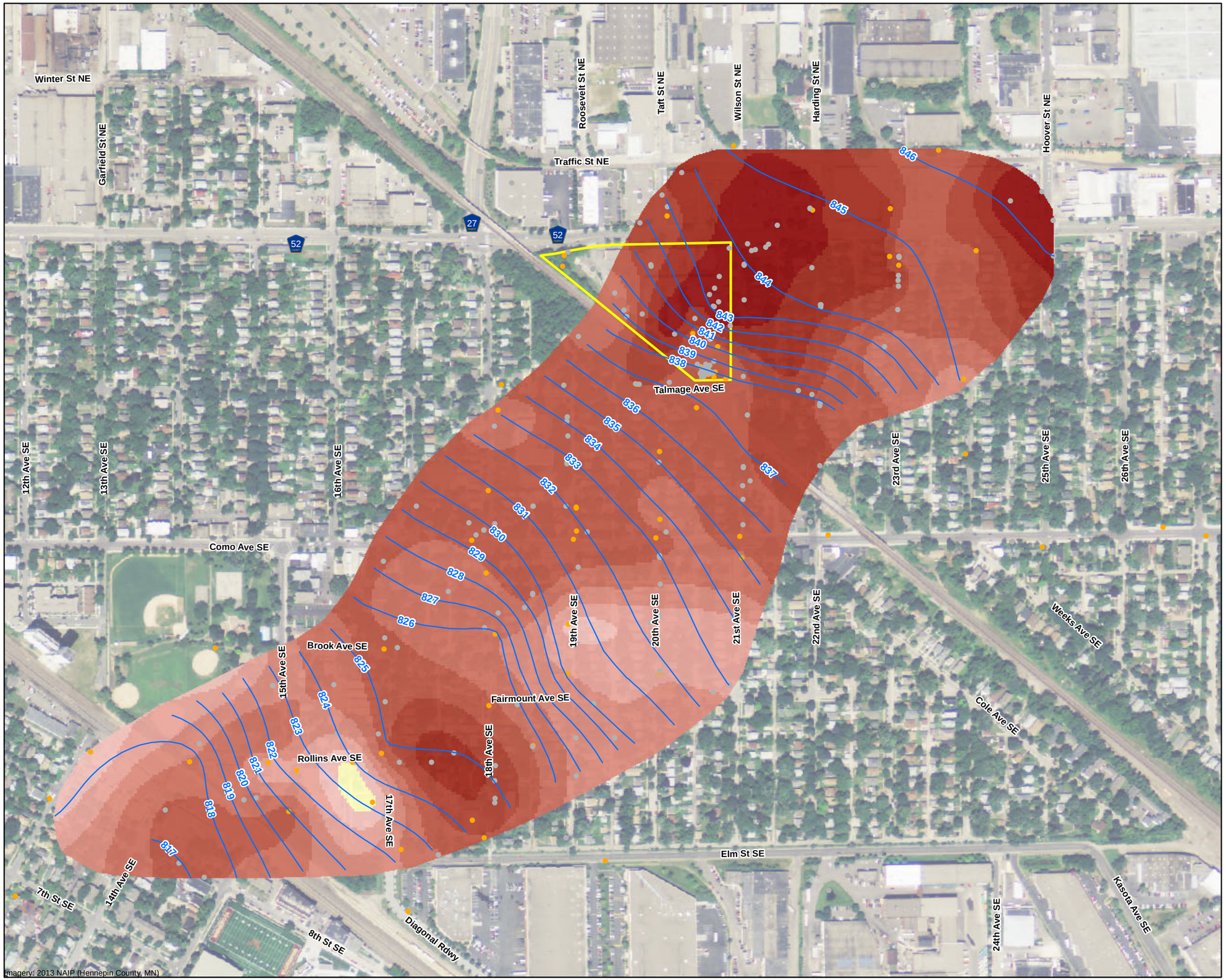
0 400 800

Feet

BARR

Figure 19

WATER TABLE CONTOURS - FEBRUARY 2015
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

Boring defining top of basal clay/till

Other geologic data boring

Water Table Contours (Feb. 2015)

Saturated Thickness (ft)

- <0
- 1 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- 21 - 25
- 26 - 30
- 31 - 35
- 36 - 40

0 400 800

Feet

BARR

Figure 20

SATURATED THICKNESS - GLACIAL DRIFT
East Hennepin Avenue Site
Minneapolis, Minnesota

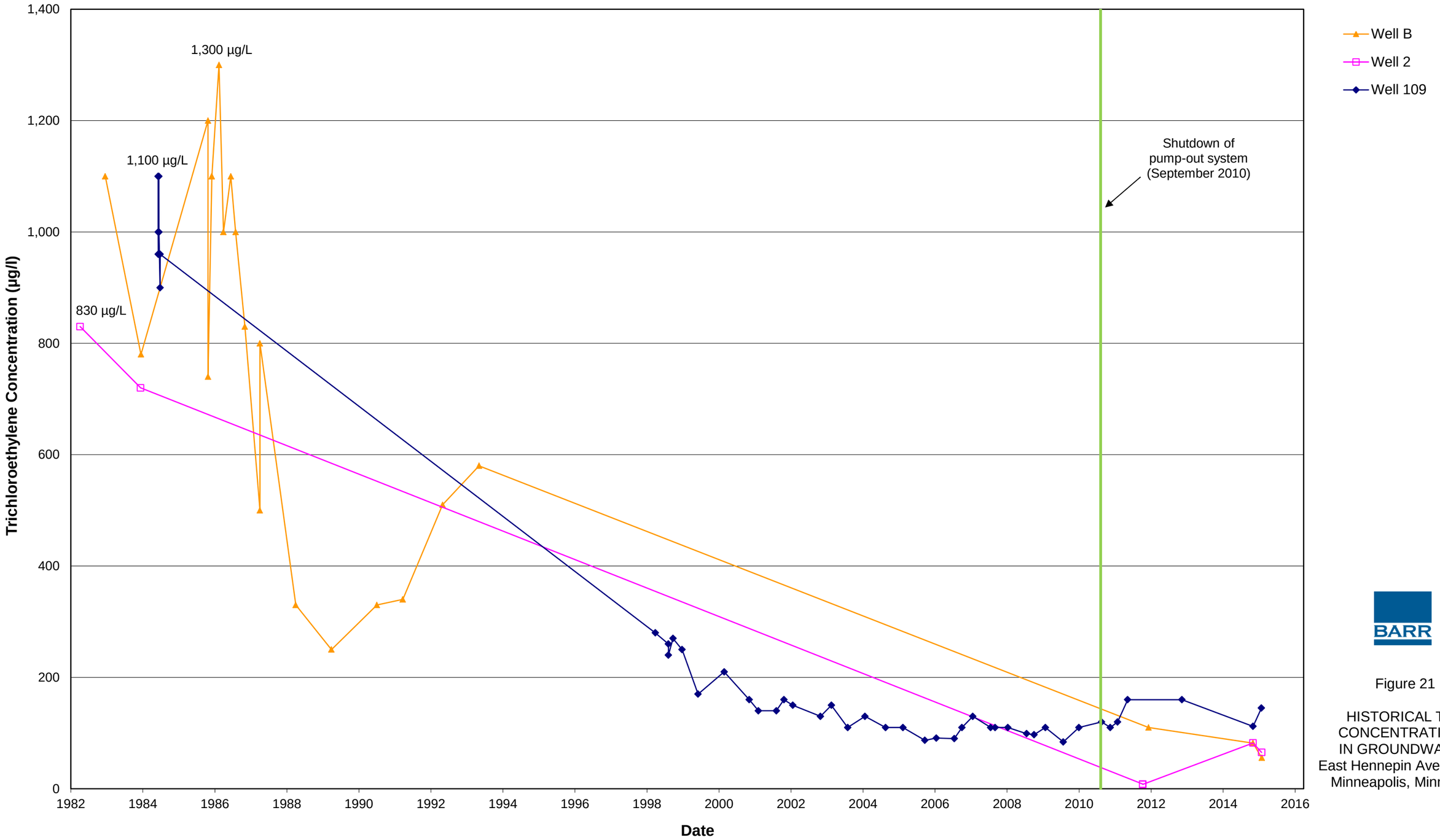


Figure 21

HISTORICAL TCE
CONCENTRATIONS
IN GROUNDWATER
East Hennepin Avenue Site
Minneapolis, Minnesota

Tables

Table 1

EXISTING AND HISTORIC WELLS
East Hennepin Avenue Site
Minneapolis, Minnesota

Name	Well Type	Unique Number	Status	Year Installed	Total Depth (feet bgs)	Depth of Top of Screen (feet bgs)	Depth of Bottom of Screen (feet bgs)	Top of Casing Elevation[1] (feet NAVD88)	Geologic Unit
2	Monitoring Well	196722	Active	1981	27	16	26	857.10	Glacial Drift
B	Monitoring Well		Active	1981	26.6	16.6	26.6	864.22	Glacial Drift
Q	Monitoring Well		Active	1984	36.5	13.9	23.9	850.21	Glacial Drift
S	Monitoring Well		Active	1984	31.2	14.5	24.5	848.08	Glacial Drift
T-2	Monitoring Well		Active	1984	26.6	12	22	849.34	Glacial Drift
V	Monitoring Well		Active	1984	35.7	15.6	25.6	838.52	Glacial Drift
W	Monitoring Well		Active	1984	20.5	7.1	17.1	830.78	Glacial Drift
X	Monitoring Well		Active	1984	27	9	19	842.72	Glacial Drift
109	Pump-Out Well	191913	Active	1984	42	18	42	859.83	Glacial Drift
110	Pump-Out Well	256171	Active	1983	37	17	37	852.19	Glacial Drift
111	Pump-Out Well		Active	1984	46	20	40	846.81	Glacial Drift
112	Pump-Out Well		Active	1984	41	16	36	841.19	Glacial Drift
113	Pump-Out Well		Active	1984	46.5	20	40	841.10	Glacial Drift
14	Monitoring Well	616615	Active	1998	66	60.5	65.5	858.75	Magnolia
QQ	Monitoring Well		Active	1982	59.3	57.3	59.3	859.08	Magnolia
TT	Monitoring Well		Active	1982	68.9	66.9	68.9	860.70	Magnolia
VV	Monitoring Well		Active	1982	68.3	66.3	68.3	859.70	Magnolia
MG-1	Pump-Out Well	463016	Active	1991	72	62	72	848.98	Magnolia
MG-2	Pump-Out Well	463017	Active	1991	72	60	72	861.95	Magnolia
200	Monitoring Well	403277	Active	1984	200	120	200	851.11	St. Peter Sandstone
201	Monitoring Well	191920	Active	1984	142	116.3	136.6	885.05	St. Peter Sandstone
202	Monitoring Well	191937	Active	1985	114	84	104	843.18	St. Peter Sandstone
203	Monitoring Well	409573	Active	1985	116	96	116	849.66	St. Peter Sandstone
Henkel	Former Industrial Supply	200815	Active	1947	404	215	404	unknown	Prairie du Chien/Jordan
1	Monitoring Well	196721	Abandoned	1981	28	18	28	--	Glacial Drift
3	Monitoring Well	180917	Abandoned	1982	23.5	13.5	23.5	--	Glacial Drift
4	Monitoring Well	180916	Abandoned	1982	23	13	23	--	Glacial Drift
5	Monitoring Well	180918	Abandoned	1982	24	14	24	--	Glacial Drift
106	Monitoring Well		Abandoned	1983	26	16	26	--	Glacial Drift
107	Monitoring Well	122237	Abandoned	1983	40	34	39	--	Glacial Drift
A	Monitoring Well	242970	Abandoned	1981	27	17	27	--	Glacial Drift
C	Monitoring Well	242971	Abandoned	1981	26.5	16.5	26.5	--	Glacial Drift
D	Monitoring Well		Abandoned	1981	21	11	21	--	Glacial Drift
E	Monitoring Well	242972	Abandoned	1981	26.5	16.5	26.5	--	Glacial Drift
F	Monitoring Well		Abandoned	1981	33	23	33	--	Glacial Drift
G	Monitoring Well		Abandoned	1981	24	13.5	23.5	--	Glacial Drift
H	Monitoring Well		Abandoned	1981	25	15	25	--	Glacial Drift
J	Monitoring Well	242973	Abandoned	1982	25.5	22.1	24.1	--	Glacial Drift
K	Monitoring Well	242974	Abandoned	1982	23.5	20	22	--	Glacial Drift
L	Monitoring Well	242975	Abandoned	1982	24.5	20.2	22.2	--	Glacial Drift
M	Monitoring Well	242976	Abandoned	1982	26	22.4	24.4	--	Glacial Drift
N	Monitoring Well		Lost	1982	26	22.2	24.2	--	Glacial Drift
P	Monitoring Well	242977	Abandoned	1982	25	21.5	23.5	--	Glacial Drift
R	Monitoring Well		Abandoned	1984	31	10	20	--	Glacial Drift
T	Monitoring Well		Abandoned	1984	30.1	7.2	17.2	--	Glacial Drift
U	Monitoring Well		Abandoned	1984	36	11.5	21.5	--	Glacial Drift
Y	Monitoring Well	242978	Abandoned	1984	31.5	12.3	22.3	--	Glacial Drift
Z	Monitoring Well	242979	Abandoned	1984	36.5	18.9	28.9	--	Glacial Drift
8	Monitoring Well	122236	Abandoned	1983	61.6	58	61.6	--	Carimona
9	Monitoring Well	122206	Abandoned	1983	61	57	61	--	Carimona
10	Monitoring Well	122202	Abandoned	1983	62	57	62	--	Carimona
11	Monitoring Well	122203	Abandoned	1983	52	48.2	52	--	Carimona
12	Monitoring Well	12204	Abandoned	1983	60	56.5	59.5	--	Carimona
13	Monitoring Well	191905	Abandoned	1984	50	47	50	--	Carimona
108	Monitoring Well	122205	Abandoned	1983	59.5	56.5	59.5	--	Carimona
RR	Monitoring Well		Abandoned	1982	53	50.4	52.4	--	Carimona
SS	Monitoring Well		Abandoned	1982	59.9	57.9	59.9	--	Carimona
UU	Monitoring Well		Abandoned	1982	61.8	59.8	61.8	--	Carimona
WW	Monitoring Well		Abandoned	1982	59.3	57.3	59.3	--	Carimona
YY	Monitoring Well	235547	Abandoned	1983	63	UNKN	UNKN	--	Carimona
II	Monitoring Well	242980	Abandoned	1981	64.2	54.2	64.2	--	Carimona/Magnolia
BB	Monitoring Well		Abandoned	1981	69.8	69.8	64.8	--	Magnolia
LL	Monitoring Well	242981	Abandoned	1982	56.3	54.3	56.3	--	Magnolia
OO	Monitoring Well		Abandoned	1982	60.5	58.5	60.5	--	Magnolia
PP	Monitoring Well	242982	Abandoned	1982	55	53	55	--	Magnolia
ZZ	Monitoring Well	191906	Abandoned	1984	56.5	52	56	--	Magnolia
GG	Monitoring Well		Abandoned	1981	69	59	69	--	Magnolia/Hidden Falls

bgs = below ground surface

NAVD88 = North American Vertical Datum of 1988

[1]Surveyed by Barr in 2012

Table 2

SOIL AND GROUNDWATER SAMPLING PLAN
East Hennepin Avenue Site
Minneapolis, Minnesota

Sampling Location	Estimated Total Depth	Targeted Sampling Interval	Soil Sampling		Groundwater Sampling					
			Quantity / Parameters		Estimated Temporary Well Screen Intervals (feet bgs)			Estimated Permanent Well Screen Interval		
ID	(feet bgs)		PID Field Screening (2 foot interval)	Attachment F VOCs*	Water Table	Mid-Aquifer	Bottom	(feet bgs)	Sampling Frequency	Parameters
Glacial Drift Monitoring Network										
301GS	25	water table	12	-	-	-	-	15-25	two events	Attachment F VOCs*
301GD	40	base of glacial drift aquifer	20	-	-	-	-	35-40	two events	Attachment F VOCs*
302GS	25	water table	12	-	-	-	-	15-25	two events	Attachment F VOCs*
302GD	40	base of glacial drift aquifer	20	-	-	-	-	35-40	two events	Attachment F VOCs*
303GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
303GD	40	base of glacial drift aquifer	20	-	-	-	-	35-40	two events	VOCs
304GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
304SD	40	base of glacial drift aquifer	20	-	-	-	-	35-40	two events	VOCs
305GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
305GD	40	base of glacial drift aquifer	20	-	-	-	-	35-40	two events	VOCs
306GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
307GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
307GD	40	base of glacial drift aquifer	20	-	-	-	-	35-40	two events	VOCs
308GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
308GD	40	base of glacial drift aquifer	20	-	-	-	-	35-40	two events	VOCs
309GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
309GD	40	base of glacial drift aquifer	20	-	-	-	-	35-40	two events	VOCs
310GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
310GD	40	base of glacial drift aquifer	20	-	-	-	-	35-40	two events	VOCs
311GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
311GD	40	base of glacial drift aquifer	20	-	-	-	-	35-40	two events	VOCs
312GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
313GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
314GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
315GS	25	water table	12	-	-	-	-	15-25	two events	VOCs
315GD	40	base of glacial drift aquifer	20	-	-	-	-	35-40	two events	VOCs
2	27	water table	-	-	-	-	-	16-26	two events	VOCs
109	42	glacial drift aquifer	-	-	-	-	-	18-42	two events	VOCs
110	37	glacial drift aquifer	-	-	-	-	-	17-37	two events	VOCs
111[†]	46	glacial drift aquifer	-	-	-	-	-	20-40	two events	VOCs
112[†]	41	glacial drift aquifer	-	-	-	-	-	16-36	two events	VOCs
113[†]	46.5	glacial drift aquifer	-	-	-	-	-	20-40	two events	VOCs
B	26.6	water table	-	-	-	-	-	16.6-26.6	two events	VOCs
Q	36.5	water table	-	-	-	-	-	13.9-23.9	two events	VOCs
S	31.2	water table	-	-	-	-	-	14.5-24.5	two events	VOCs
T-2	26.6	water table	-	-	-	-	-	12-22	two events	VOCs
V	35.7	water table	-	-	-	-	-	15.6-25.6	two events	VOCs
W	20.5	water table	-	-	-	-	-	7.1-17.1	two events	VOCs
X	27	water table	-	-	-	-	-	9-19	two events	VOCs

Table 2

SOIL AND GROUNDWATER SAMPLING PLAN
East Hennepin Avenue Site
Minneapolis, Minnesota

Sampling Location	Estimated Total Depth	Targeted Sampling Interval	Soil Sampling		Groundwater Sampling					
			Quantity / Parameters		Estimated Temporary Well Screen Intervals (feet bgs)			Estimated Permanent Well Screen Interval		
ID	(feet bgs)		PID Field Screening (2 foot interval)	Attachment F VOCs*	Water Table	Mid-Aquifer	Bottom	(feet bgs)	Sampling Frequency	Parameters
On-Site Investigation - Geoprobe Borings / Temporary Wells										
DP-058	40	vadose zone, glacial drift aquifer	continuous	0-2	20-23	30-32	38-40	-	one time	Attachment F VOCs*
DP-059	40	vadose zone, glacial drift aquifer	continuous	0-2	20-23	30-32	38-40	-	one time	Attachment F VOCs*
DP-060	40	vadose zone, glacial drift aquifer	continuous	0-2	20-23	30-32	38-40	-	one time	Attachment F VOCs*
DP-061	40	vadose zone, glacial drift aquifer	continuous	0-2	20-23	30-32	38-40	-	one time	Attachment F VOCs*
DP-062	40	vadose zone, glacial drift aquifer	continuous	0-2	20-23	30-32	38-40	-	one time	Attachment F VOCs*
DP-063	40	vadose zone, glacial drift aquifer	continuous	0-2	20-23	30-32	38-40	-	one time	Attachment F VOCs*
DP-064	40	vadose zone, glacial drift aquifer	continuous	0-2	20-23	30-32	38-40	-	one time	Attachment F VOCs*
DP-065	40	vadose zone, glacial drift aquifer	continuous	0-2	20-23	30-32	38-40	-	one time	Attachment F VOCs*
DP-066	40	vadose zone, glacial drift aquifer	continuous	0-2	20-23	30-32	38-40	-	one time	Attachment F VOCs*
DP-067	40	vadose zone, glacial drift aquifer	continuous	0-2	20-23	30-32	38-40	-	one time	Attachment F VOCs*

- None or not applicable

* Samples will be analyzed for specific VOC compounds listed in Attachment F in the original Response Order by Consent for this Site (MPCA, 1984) and using U.S. EPA Method 8260.

† These existing wells will be used for both the glacial drift monitoring and sentinel well monitoring. They will be sampled for TCE on the schedule described in the sentinel monitoring program.

Table 3

SENTINEL VAPOR PORT AND SENTINEL WELL SAMPLING PLAN
East Hennepin Avenue Site
Minneapolis, Minnesota

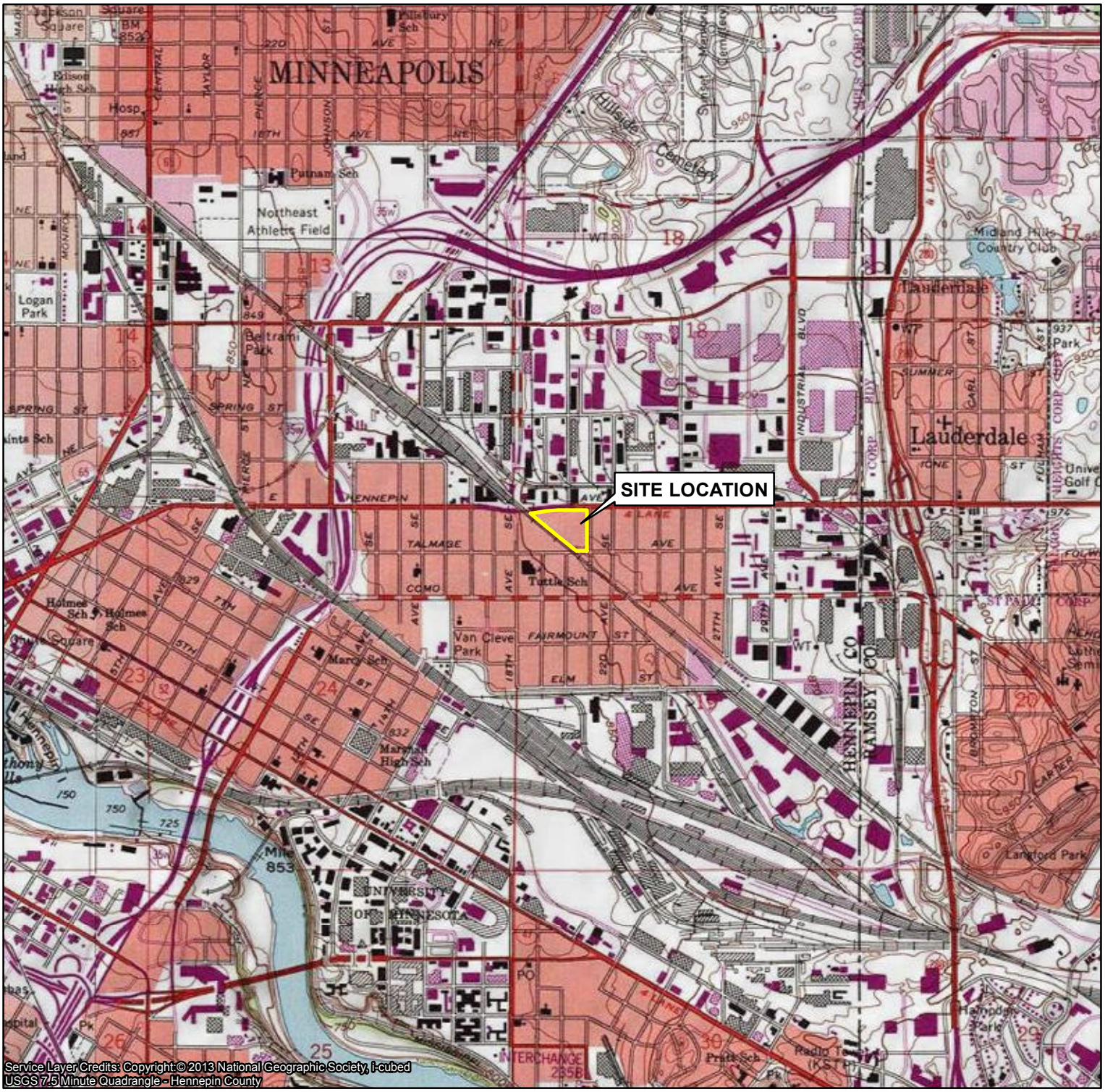
Sampling Location	Estimated Total Depth	Targeted Sampling Interval	Soil Sampling	Groundwater Sampling			Vapor Sampling		
ID	(feet bgs)		PID Field Screening (2 foot interval w/ HSA)	Estimated Well Screen Interval (feet bgs)	Sampling Frequency*	Parameter	Estimated Vapor Port Screen Interval (feet bgs)	Sampling Frequency*	Parameter
Sentinel Vapor Port Network									
SVP1	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP2	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP3	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP4	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP5	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP6	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP7	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP8	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP9	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP10	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP11	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP12	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP13	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP14	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP15	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP16	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP17	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP18	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP19	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP20	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP21	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP22	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP23	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
SVP24	9	vadose zone	continuous	-	-	-	8-9	quarterly	TCE
Sentinel Monitoring Well Network									
SMW1	25	water table	12	15-25	quarterly	TCE	-	-	-
SMW3	25	water table	12	15-25	quarterly	TCE	-	-	-
SMW6	25	water table	12	15-25	quarterly	TCE	-	-	-
SMW8	25	water table	12	15-25	quarterly	TCE	-	-	-
SMW11	25	water table	12	15-25	quarterly	TCE	-	-	-
SMW13	25	water table	12	15-25	quarterly	TCE	-	-	-
SMW16	25	water table	12	15-25	quarterly	TCE	-	-	-
SMW19	25	water table	12	15-25	quarterly	TCE	-	-	-
SMW22	25	water table	12	15-25	quarterly	TCE	-	-	-
SMW24	25	water table	12	15-25	quarterly	TCE	-	-	-
111†	46	fully penetrating	-	20-40	quarterly	TCE†	-	-	-
112†	41	fully penetrating	-	16-36	quarterly	TCE†	-	-	-
113†	46.5	fully penetrating	-	20-40	quarterly	TCE†	-	-	-

- None or not applicable

* Assumes one year of sampling starting in August 2014 following MPCA approval of work plan and installation of wells and vapor ports.

† These existing wells will be used for both the glacial drift monitoring and sentinel well monitoring.

Figures



2010 E Hennepin Avenue Site

0 2,000 4,000

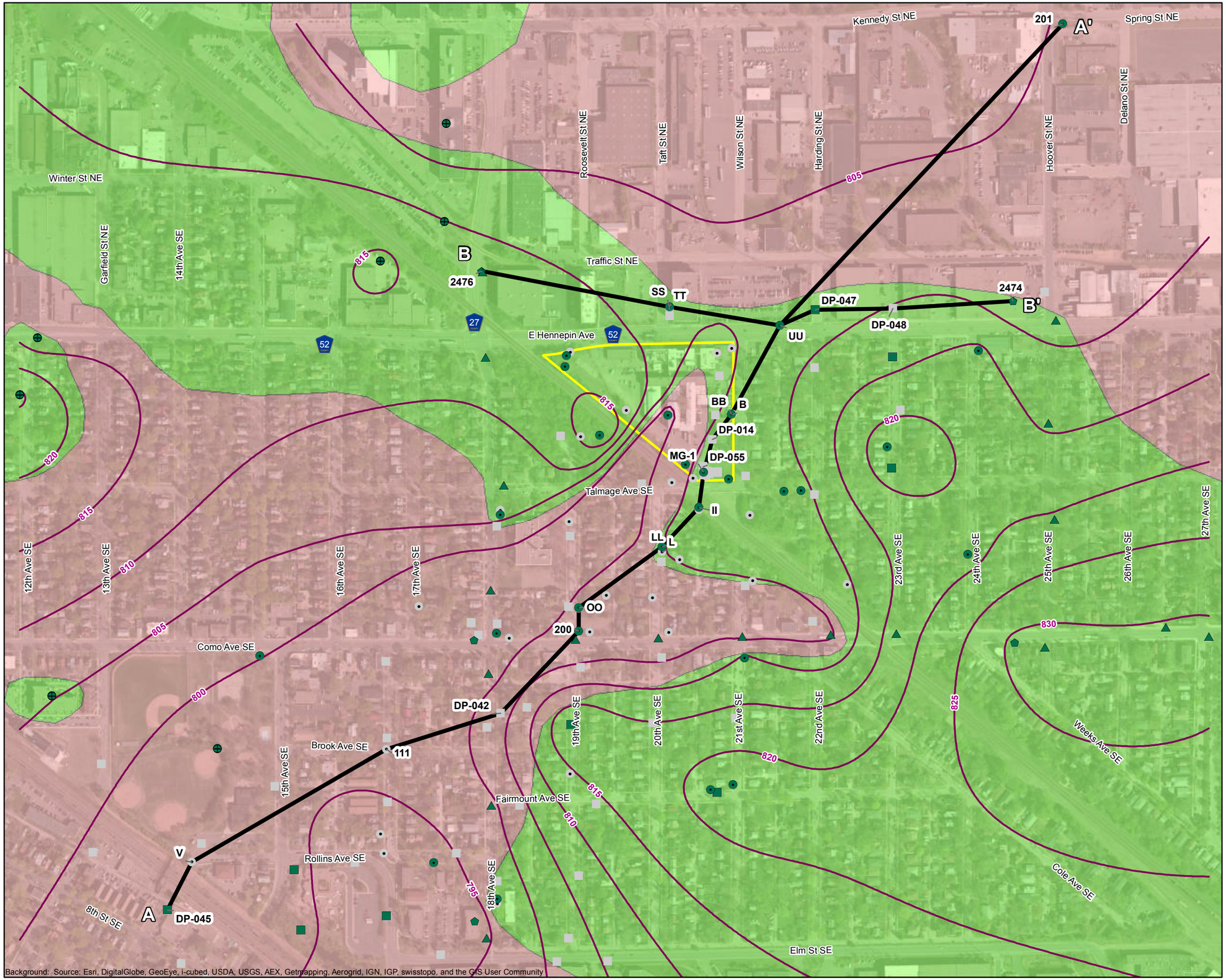
Feet

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

BARR

Figure 1

SITE LOCATION
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 E Hennepin Avenue

Data Points for Bedrock Elevation

- County Well Index Record
- MnDOT Boring
- Boring
- Well
- Storm Tunnel Manhole

Other Geology Data Points (not to bedrock)

- Direct Push Boring
- Monitoring and Pump-Out Wells

Cross Section Trace

Estimated Top of Bedrock Elevation (ft MSL)

Bedrock Type

- Shale (Decorah Shale, Unnamed Member)
- Carbonate (Decorah Shale, Carimona Member; Platteville Formation, Magnolia Member)

5-foot contour interval

Bedrock type modified from MGS Map M-194 (Mossler, 2013)

0 400 800

Feet

BARR

Figure 4

BEDROCK GEOLOGY AND TOPOGRAPHY
East Hennepin Avenue Site
Minneapolis, Minnesota

A
Southwest

A'
Northeast

Elevation, Feet (MSL)

880 — 870 — 860 — 850 — 840 — 830 — 820 — 810 — 800 — 790 — 780 — 770 — 760 — 750

15th Ave. SE — 18th Ave. SE — Como Ave. SE — Talmage Ave. SE — E. Hennepin Ave. — Hoover St. NE

DP-045 | V | 111 | DP-042 | 200 | OO* | L+/LL+ | II+ | MG-1 | DP-55 | DP-014 | BB/BB* | UU* | 201

FILL / TOPSOIL

FILL

MARL

PEAT

ORGANIC SILT AND TOPSOIL*

SAND AND GRAVEL

CLAY

DECORAH SHALE, UNNAMED MEMBER

DECORAH SHALE, CARIMONA MEMBER

PLATTEVILLE FORMATION, MAGNOLIA MEMBER

PLATTEVILLE FORMATION, HIDDEN FALLS MEMBER

PLATTEVILLE FORMATION, MIFFLIN MEMBER

PLATTEVILLE FORMATION, PECATONICA MEMBER

GLENWOOD FORMATION

ST. PETER SANDSTONE

728.1

648.1

(not to scale)

LEGEND

- Geologic Contact
- Inferred Geologic Contact
- Approximate Water table (dashed where inferred)
- Potentiometric Surface of St. Peter Sandstone (dashed where infereed)
- Monitoring Well Screen
- Soil Boring/Piezometer

0 — 500

Approximate Horizontal Scale in Feet
25X Vertical Exaggeration

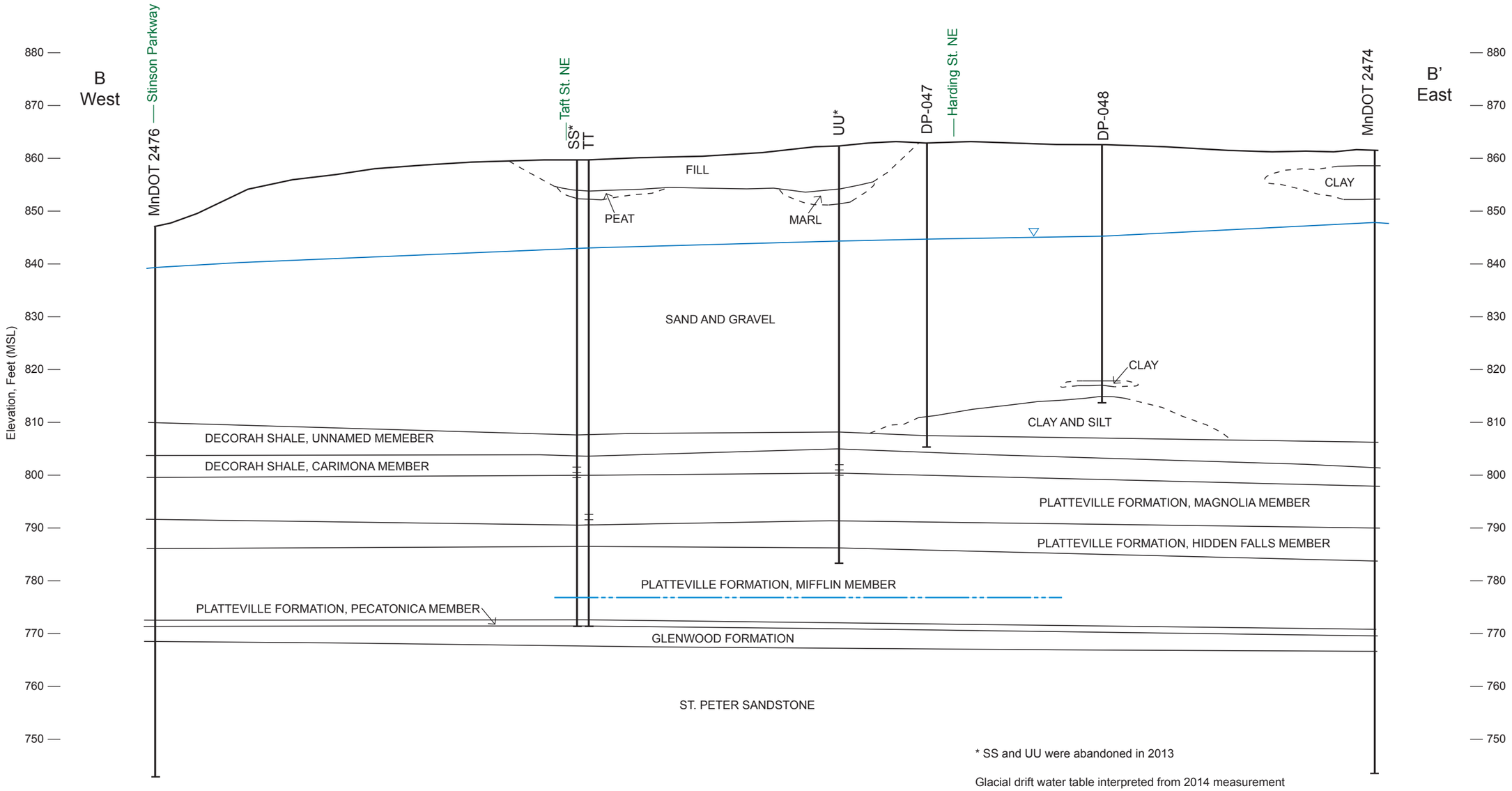
* BB, UU, OO were abandoned in 2013
+ L, LL, and II were abandoned in 1987

Glacial drift water table interpreted from 2014 measurements
St. Peter potentiometric surface interpreted from 2012 Annual Report Data

BARR

Figure 5

CROSS SECTION A-A'
East Hennepin Avenue Site
Minneapolis, Minnesota



* SS and UU were abandoned in 2013

Glacial drift water table interpreted from 2014 measurement

St. Peter potentiometric surface interpreted from 2012 Annual Report Data

LEGEND

- Geologic Contact
- Inferred Geologic Contact
- Approximate Water table (dashed where inferred)
- Potentiometric Surface of St. Peter Sandstone
- Monitoring Well Screen
- Soil Boring/Piezometer

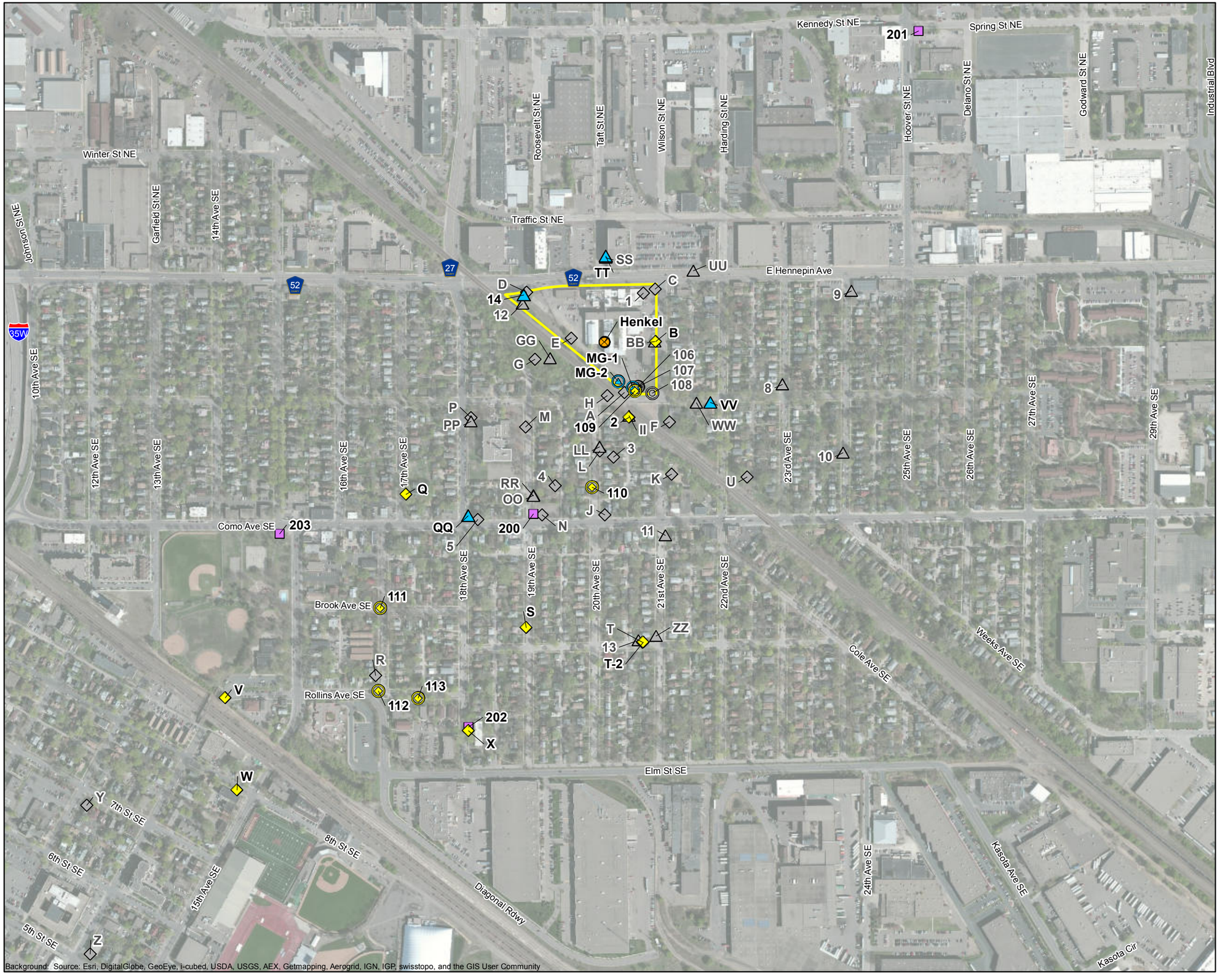
0 500

Approximate Horizontal Scale in Feet
25X Vertical Exaggeration

BARR

Figure 6

CROSS SECTION B-B'
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 E Hennepin Avenue

Existing Monitoring Well Location

- Glacial Drift Well
- Glacial Drift Pump-Out Well
- Magnolia Member Well
- Magnolia Member Pump-Out Well
- Prairie du Chien - Jordan Well
- St. Peter Sandstone Well

Abandoned / Former Wells

- Monitoring Well, Carimona, Magnolia, and/or Hidden Falls
- Glacial Drift Well
- Carimona Pump-Out Well
- Glacial Drift Pump-Out Well

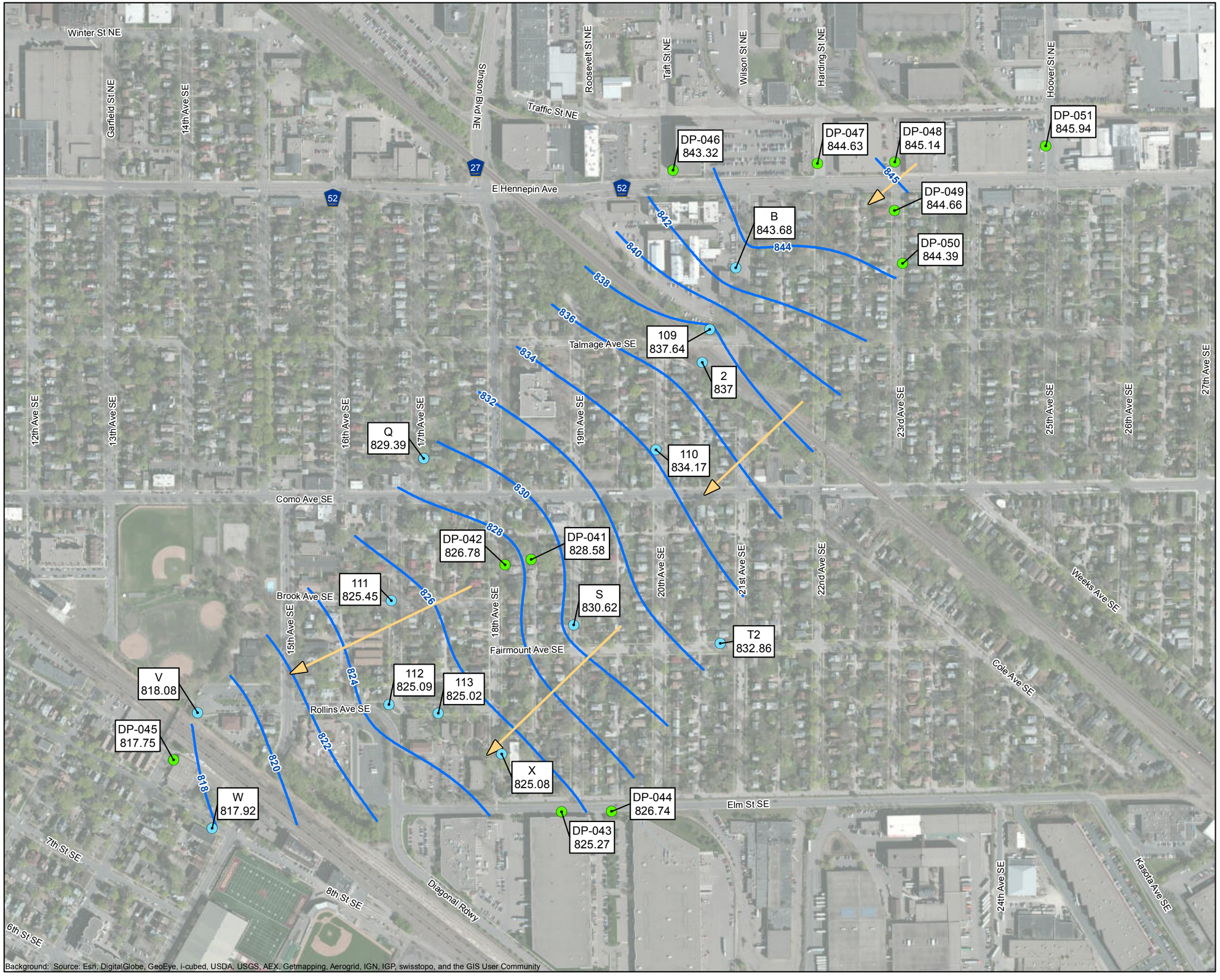
0 500 1,000

Feet

BARR

Figure 7

CURRENT AND FORMER WELLS
East Hennepin Avenue Site
Minneapolis, Minnesota



Geoprobe (Direct Push)

Groundwater Monitoring

Estimated Groundwater Flow Direction

Estimated Water Table Elevation Contour (ft MSL)

2-foot contour interval

Measuring point elevations DP-043 - DP-051 from survey; all other Geoprobe elevations taken from LiDAR (MN DNR, 2011)

All well measuring point elevations from survey

Geoprobe data collected 2/27/2014, 3/31/2014 - 4/4/2014
Well data collected 4/14/2014

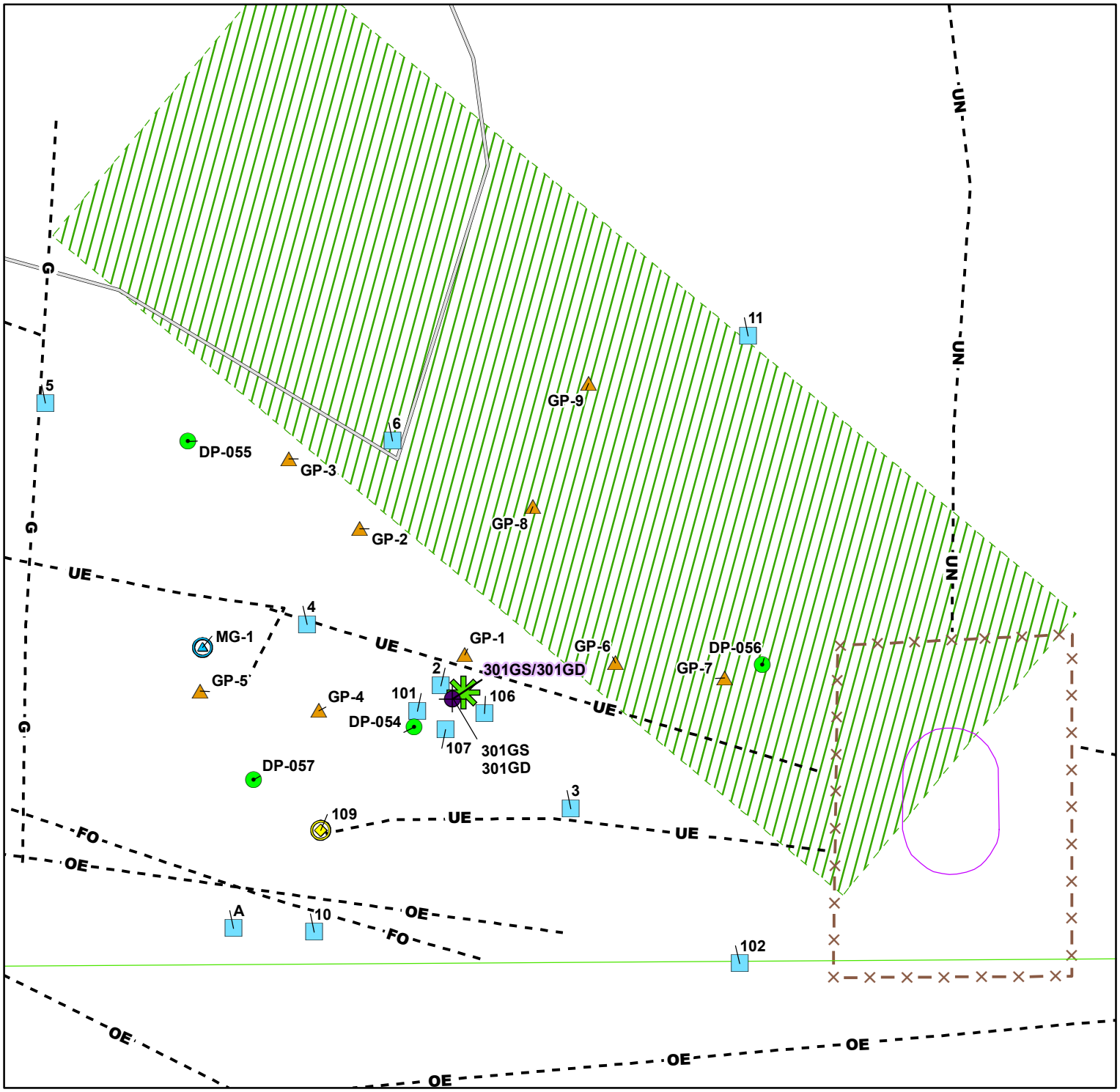
0 400 800

Feet

BARR

Figure 8

WATER TABLE CONTOURS
SPRING 2014
East Hennepin Avenue Site
Minneapolis, Minnesota



Former Disposal Area
Proposed Nested Well
Previous Boring Locations (2014)
Historic Borings / Wells

Current Wells
Glacial Drift Pump-Out Well
Magnolia Member Pump-Out Well
2001 Geoprobe Borings
Property Boundary From 2010 Survey

Utility Lines
FO Fiber Optic
G Gas Line
OE Overhead Electric
UE Underground Electric
UN Unknown Utility
Treatment Tower
Treatment Tower Fence
Former Tin Shed Location
Parking Lot Edge

Note:
Boring locations approximate based on historical data

0 15 30
Feet

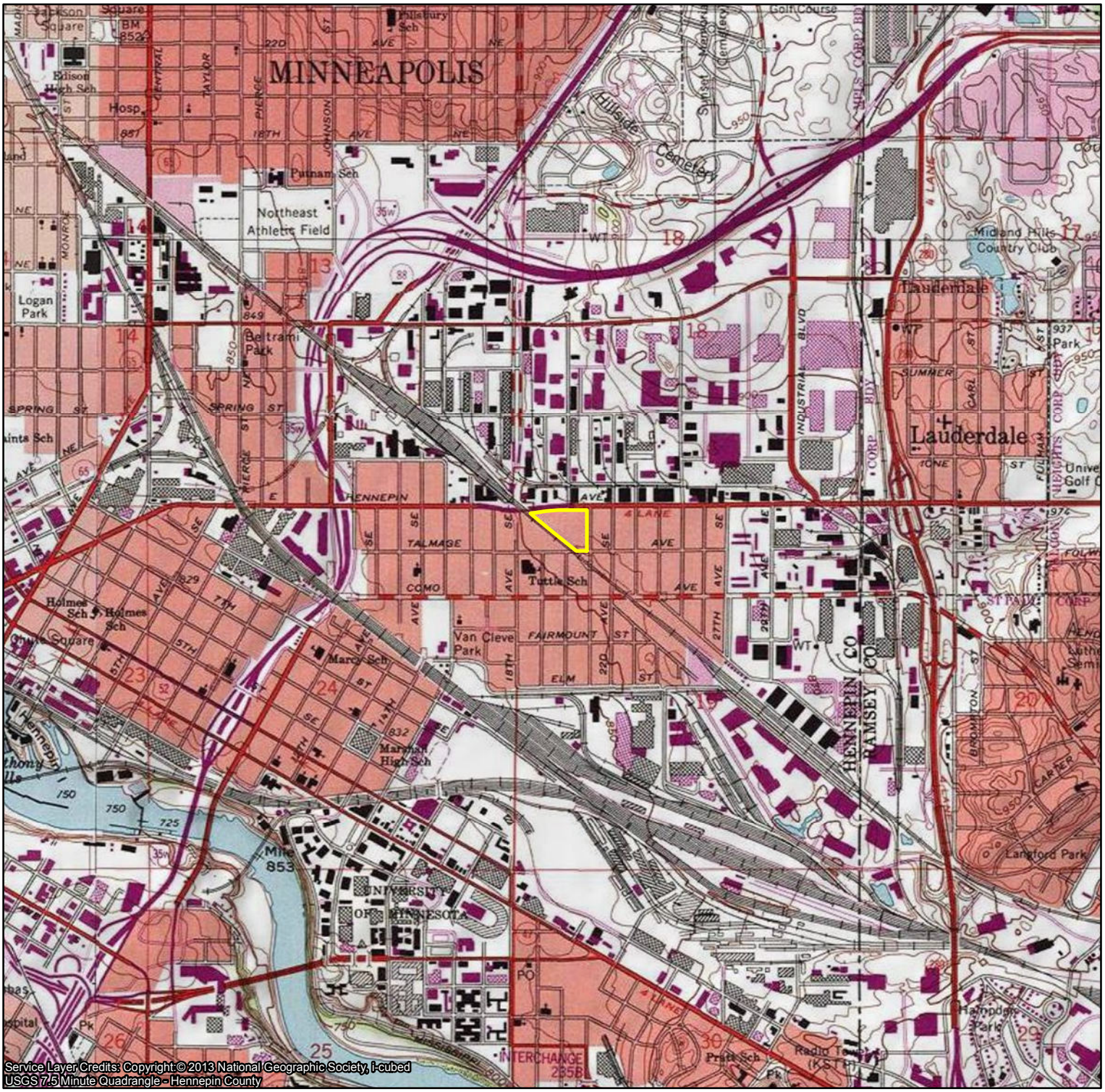
BARR

Figure 15

FORMER DISPOSAL AREA
INVESTIGATION LOCATIONS
East Hennepin Avenue Site
Minneapolis, Minnesota

Figures and Tables from the Barr, 2015 Sentinel Monitoring Network Report

Figures



2010 East Hennepin Ave

0 2,000 4,000

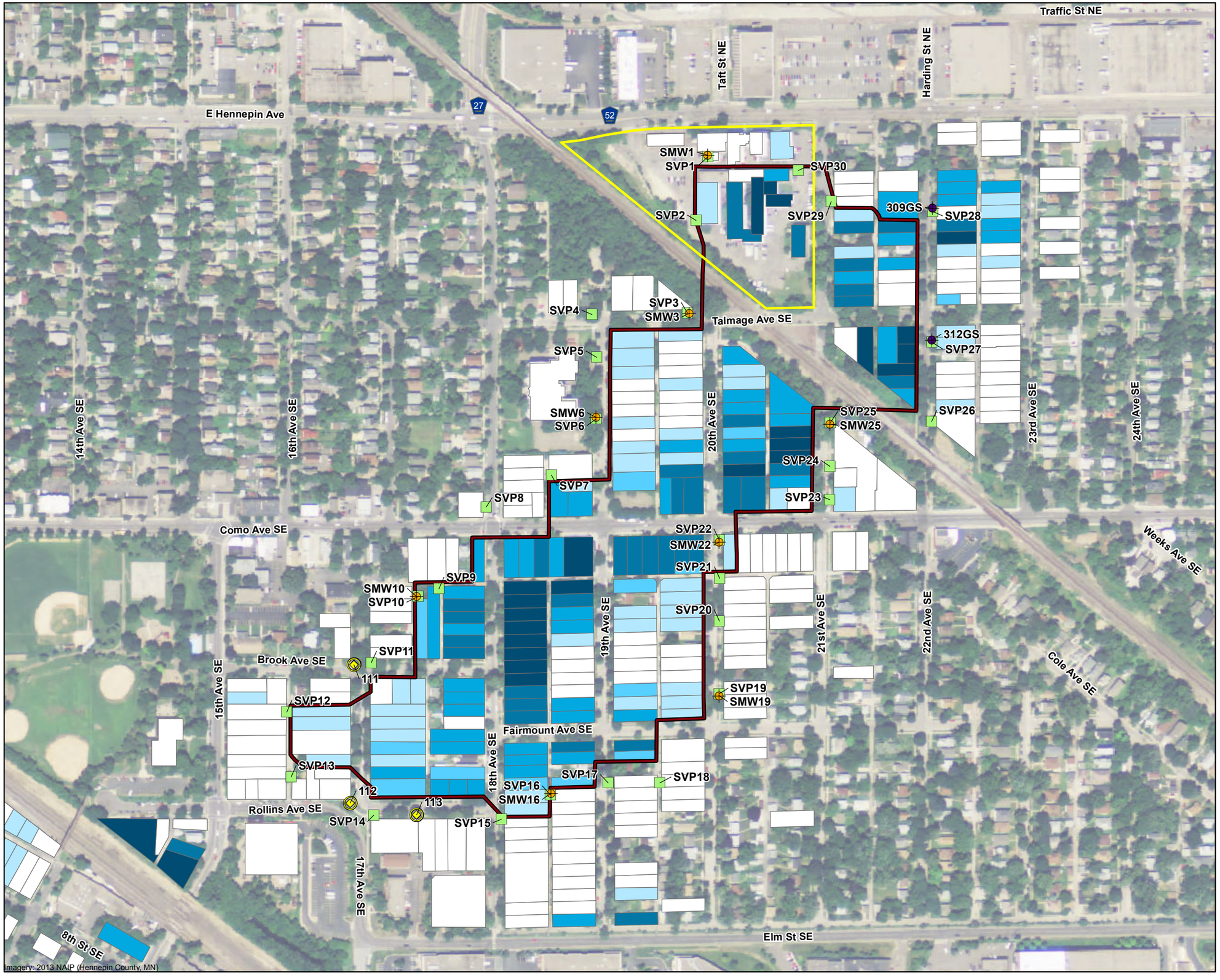
Feet

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

BARR

Figure 1

LOCATION MAP
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

Soil Gas Monitoring Area

Sentinel and Glacial Drift Nested Monitoring Well

Sentinel Monitoring Well

Sentinel Vapor Monitoring Port

Sentinel and Glacial Drift Pump-Out Well

Sub-slab TCE Vapor Concentrations

- < 20 ug/m^3
- 20 - 60 ug/m^3
- 60 - 100 ug/m^3
- 100 - 500 ug/m^3
- 500 - 2000 ug/m^3
- > 2000 ug/m^3

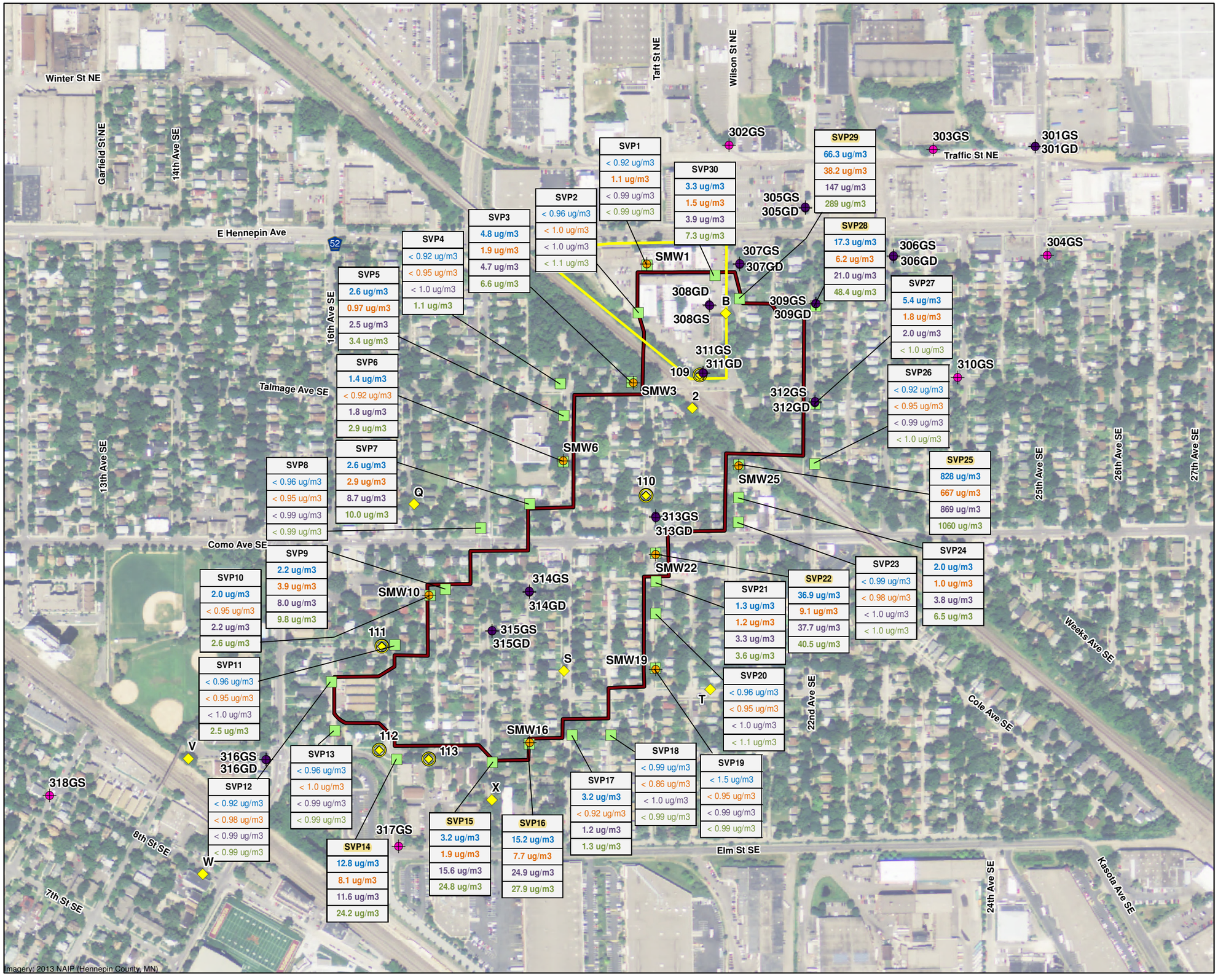
0 300 600

Feet

BARR

Figure 2

SENTINEL GROUNDWATER AND SOIL GAS MONITORING NETWORK
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

Soil Gas Monitoring Area

Glacial Drift Monitoring Well

Glacial Drift Nested Monitoring Well

Sentinel Monitoring Well

Sentinel Vapor Monitoring Port

Glacial Drift Monitoring Well

Glacial Drift Pump-Out Well

Sample ID
TCE in soil gas, December 2014
TCE in soil gas, March 2015
TCE in soil gas, June 2015
TCE in soil gas, September 2015

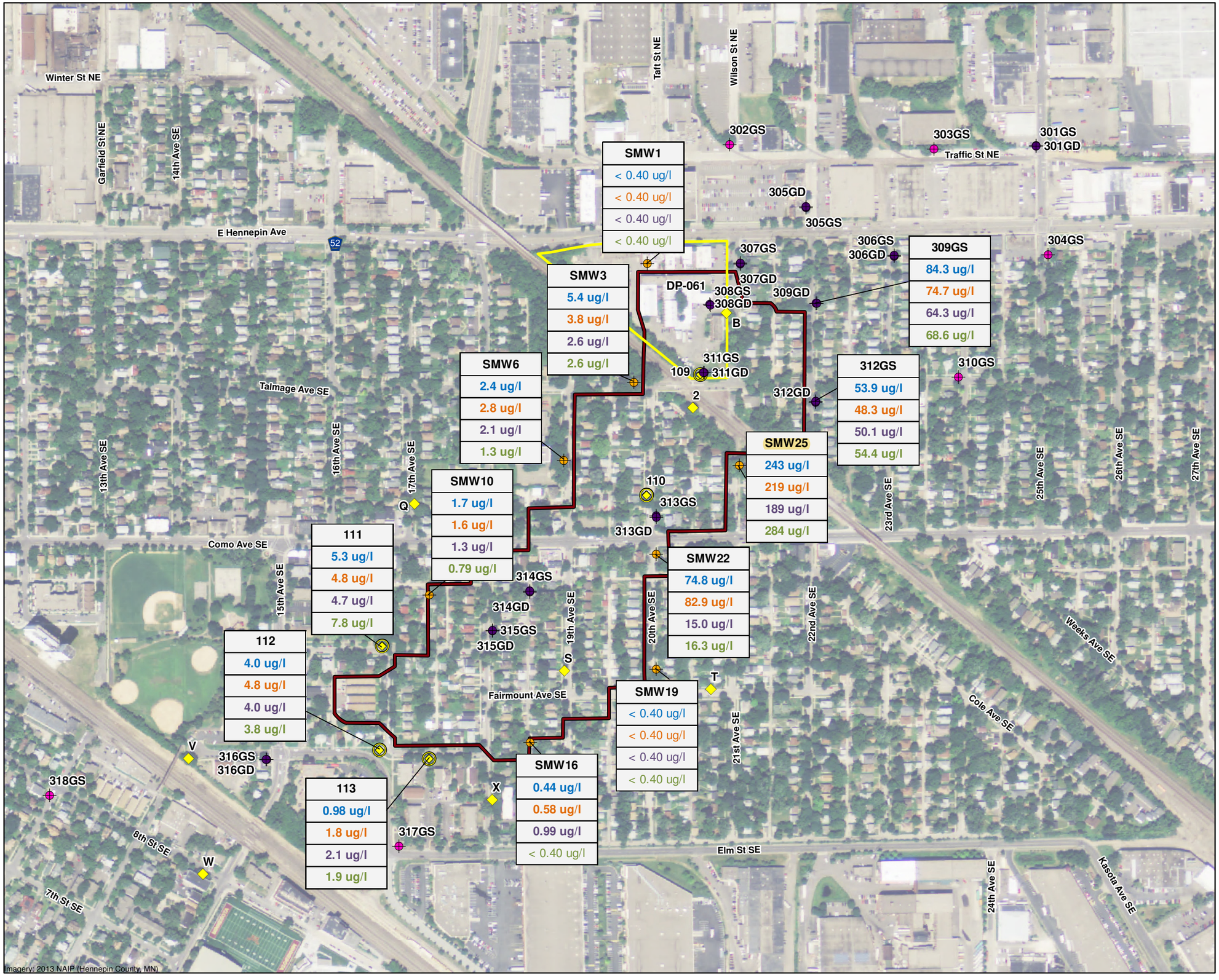
0 400 800

Feet

BARR

Figure 3

2015 SOIL GAS MONITORING RESULTS
East Hennepin Avenue Site
Minneapolis, Minnesota



2010 East Hennepin Ave

Soil Gas Monitoring Area

Glacial Drift Monitoring Well

Glacial Drift Nested Monitoring Well

Sentinel Monitoring Well

Glacial Drift Monitoring Well

Glacial Drift Pump-Out Well

Sample ID
TCE in groundwater, December 2014
TCE in groundwater, March 2015
TCE in groundwater, June 2015
TCE in groundwater, September 2015

0 400 800

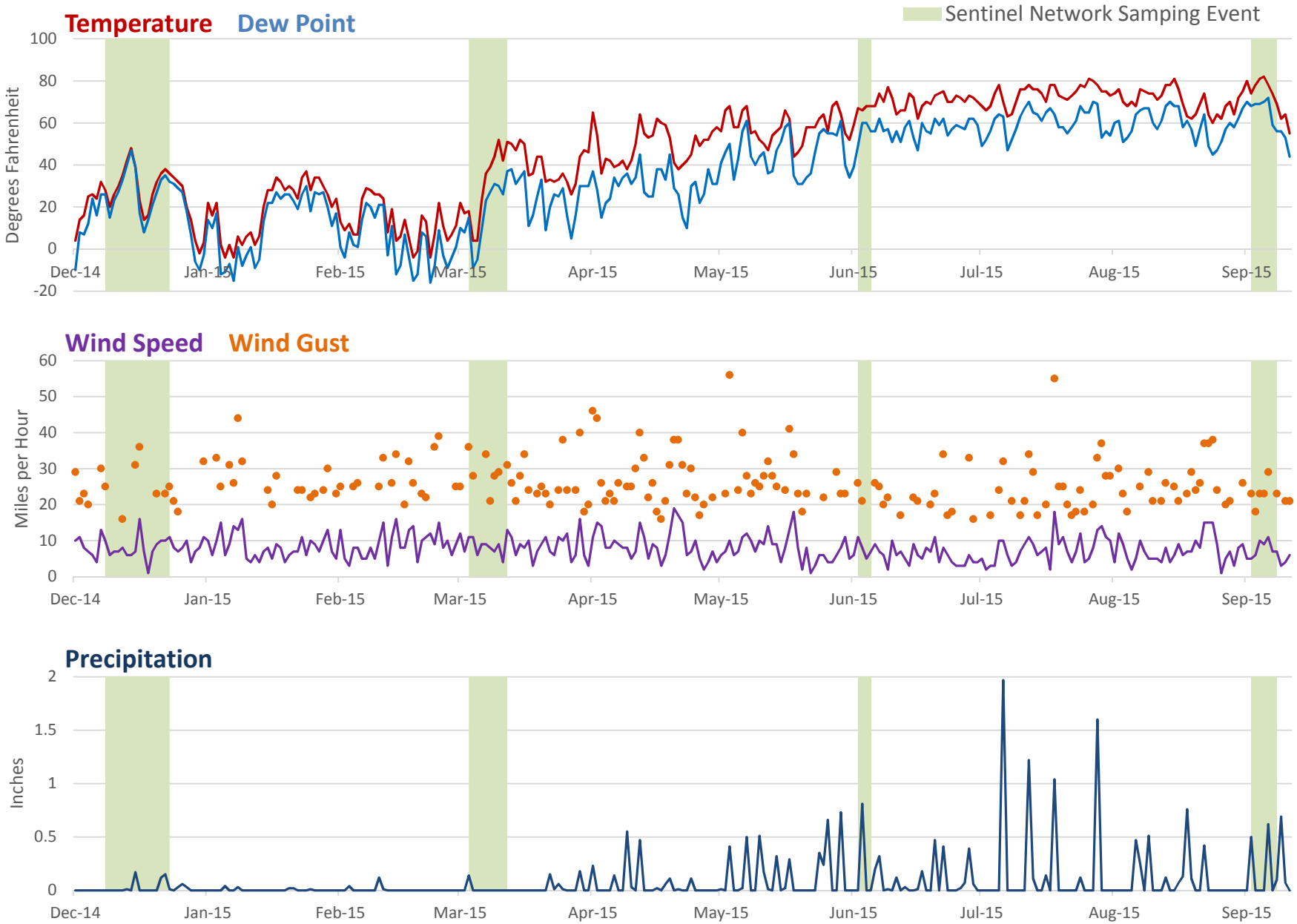
Feet

BARR

Figure 4

2015 MONITORING WELL RESULTS
East Hennepin Avenue Site
Minneapolis, Minnesota

Figure 5
Meteorological Data
East Hennepin Avenue Site
Minneapolis, Minnesota



Tables

Table 1

Vapor Monitoring Port Construction Details
2015 Sentinel Monitoring Network Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Vapor Monitoring Port	Date Installed	Coordinates[1]		Ground Elevation (feet MSL)[2]	Depth to Bottom (feet bgs)	Screen Interval (feet bgs)	Sand Pack Interval (feet bgs)
		Northing	Easting				
SVP1	10/21/2014	4981986.41	482322.07	859.0	9	8 - 8.5	7.5 - 9
SVP2	10/23/2014	4981924.12	482310.25	858.3	9	8 - 8.5	7.5 - 9
SVP3	11/3/2014	4981833.32	482301.23	852.8	9	8 - 8.5	7.5 - 9
SVP4	11/3/2014	4981831.99	482207.69	851.5	9	8 - 8.5	7.5 - 9
SVP5	11/3/2014	4981790.19	482212.11	859.8	9	8 - 8.5	7.5 - 9
SVP6	11/3/2014	4981729.64	482211.15	850.3	9	8 - 8.5	7.5 - 9
SVP7	10/31/2014	4981674.74	482167.06	848.4	9	8 - 8.5	7.5 - 9
SVP8	10/31/2014	4981643.74	482102.89	848.0	9	8 - 8.5	7.5 - 9
SVP9	12/1/2014	4981563.87	482056.17	846.9	9	8 - 8.5	7.5 - 9
SVP10	12/1/2014	4981556.29	482035.78	845.8	9	8 - 8.5	7.5 - 9
SVP11	10/31/2014	4981491.58	481989.58	845.5	9	8 - 8.5	7.5 - 9
SVP12	12/1/2014	4981443.50	481906.29	843.2	9	8 - 8.5	7.5 - 9
SVP13	12/1/2014	4981379.83	481910.25	841.1	9	8 - 8.5	7.5 - 9
SVP14	10/31/2014	4981342.16	481991.13	850.7	9	8 - 8.5	7.5 - 9
SVP15	11/12/2014	4981337.43	482116.41	840.8	9	8 - 8.5	7.5 - 9
SVP16	12/12/2014	4981361.44	482164.80	845.5	9	8 - 8.5	7.5 - 9
SVP17	11/3/2014	4981372.72	482221.24	854.1	9	8 - 8.5	7.5 - 9
SVP18	12/15/2014	4981372.45	482271.90	845.1	9	8 - 8.5	7.5 - 9
SVP19	11/14/2014	4981459.45	482330.47	847.3	9	8 - 8.5	7.5 - 9
SVP20	10/30/2014	4981530.74	482331.15	848.0	9	8 - 8.5	7.5 - 9
SVP21	10/31/2014	4981572.66	482331.81	848.4	9	8 - 8.5	7.5 - 9
SVP22	12/15/2014	4981609.91	482331.46	849.4	9	8 - 8.5	7.5 - 9
SVP23	10/30/2014	4981649.60	482439.90	850.3	9	8 - 8.5	7.5 - 9
SVP24	10/30/2014	4981682.05	482440.32	850.7	9	8 - 8.5	7.5 - 9
SVP25	10/30/2014	4981725.05	482440.85	854.1	10	9 - 9.5	8.5 - 10
SVP26	11/3/2014	4981725.44	482540.22	848.0	9	8 - 8.5	7.5 - 9
SVP27	11/6/2014	4981803.60	482540.80	848.0	9	8 - 8.5	7.5 - 9
SVP28	11/5/2014	4981931.83	482542.49	845.5	9	8 - 8.5	7.5 - 9
SVP29	10/30/2014	4981941.79	482442.95	859.8	9	8 - 8.5	7.5 - 9
SVP30	10/22/2014	4981972.46	482410.78	861.5	9	8 - 8.5	7.5 - 9

Notes:
1 - Northing and Easting coordinates are given in UTM Zone 15N, NAD83 (meters).
2 - Elevations are given in NGVD 29.

bgs - below ground surface
MSL - mean sea level

Table 2

Monitoring Well Construction Details
2015 Sentinel Monitoring Network Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Well ID	Date Installed	Unique Number	Coordinates[1]		Screen Details			Elevations (feet MSL)[2]				Colocated Soil Vapor Port
			Northing	Easting	Depth to Top of Screen (feet bgs)	Depth to Bottom of Screen (feet bgs)	Screen Length (feet)	Top of Casing	Ground Surface	Top of Screen	Bottom of Screen	
309GS	11/4/2014	810045	4981935.16	482542.08	12.5	22.5	10	863.47	861.0	848.5	838.5	SVP28
312GS	11/6/2014	810043	4981805.62	482540.82	13.0	23.0	10	858.28	855.5	842.5	832.5	SVP27
SMW1	10/20/2014	810026	4981987.95	482321.64	14.0	24.0	10	861.74	859.3	845.3	835.3	SVP1
SMW3	11/5/2014	810039	4981832.78	482303.22	11.8	21.8	10	855.44	852.8	841.0	831.0	SVP3
SMW6	11/4/2014	810040	4981731.30	482211.16	13.2	23.2	10	852.22	849.9	836.7	826.7	SVP6
SMW10	12/2/2014	810052	4981556.32	482034.22	15.0	25.0	10	848.97	846.2	831.2	821.2	SVP10
SMW16	12/12/2014	810062	4981362.97	482165.29	16.0	26.0	10	847.78	845.3	829.3	819.3	SVP16
SMW19	11/14/2014	810051	4981457.64	482330.66	12.0	22.0	10	849.52	847.0	835.0	825.0	SVP19
SMW22	12/11/2014	810063	4981608.13	482331.32	12.5	22.5	10	852.37	849.6	837.1	827.1	SVP22
SMW25	10/30/2014	810036	4981723.60	482440.67	13.0	23.0	10	856.52	853.6	840.6	830.6	SVP25
111	1984	U	4981489.81	481972.27	20.0	40.0	20	846.81	845.9	825.9	805.9	SVP11
112	1984	U	4981354.04	481968.22	16.0	36.0	20	841.19	840.1	824.1	804.1	SVP14
113	1984	U	4981342.14	482033.15	20.0	40.0	20	841.09	840.3	820.3	800.3	NA

Notes:

1 - Northing and easting coordinates are given in UTM Zone 15N, NAD83 (meters).

2 - Elevations are given in NGVD 29. Existing wells were reported in NGVD88 in previous reports and elevations may be slightly different (typically +/- 0.2 feet).

U - unknown
bgs - below ground surface
MSL - mean sea level
NA - not applicable
New monitoring wells constructed with 2-inch diameter stainless steel screens and black steel casing

Table 3

Groundwater Elevations
2015 Sentinel Monitoring Network Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Well ID	Measurement Date	Top of Casing Elevation (feet MSL)[1]	Depth to Water (feet)	Water Level Elevation (feet MSL)[1]
309GS	12/12/2014	863.47	19.12	844.35
	2/27/2015	863.47	19.24	844.23
	6/1/2015	863.47	19.08	844.39
	9/1/2015	863.47	19.04	844.43
312GS	12/10/2014	858.28	20.62	837.66
	2/27/2015	858.28	20.63	837.65
	6/1/2015	858.28	20.33	837.95
	9/1/2015	858.28	20.11	838.17
SMW1	12/12/2014	861.74	20.35	841.39
	2/27/2015	861.74	20.53	841.21
	6/1/2015	861.74	20.34	841.40
	9/1/2015	861.74	20.27	841.47
SMW3	12/12/2014	855.44	18.52	836.92
	2/27/2015	855.44	18.59	836.85
	6/1/2015	855.44	18.33	837.11
	9/1/2015	855.44	18.17	837.27
SMW6	12/12/2014	852.22	19.35	832.87
	2/27/2015	852.22	19.50	832.72
	6/1/2015	852.22	19.28	832.94
	9/1/2015	852.22	19.06	833.16
SMW10	12/16/2014	848.97	21.80	827.17
	2/27/2015	848.97	21.87	827.10
	6/1/2015	848.97	21.73	827.24
	9/1/2015	848.97	21.58	827.39
SMW16	12/23/2014	847.78	22.42	825.36
	2/27/2015	847.78	22.66	825.12
	6/1/2015	847.78	22.57	825.21
	9/1/2015	847.78	22.28	825.50
SMW19	12/8/2014	849.52	17.86	831.66
	2/27/2015	849.52	17.80	831.72
	6/1/2015	849.52	17.84	831.68
	9/1/2015	849.52	17.59	831.93
SMW22	12/22/2014	852.37	19.35	833.02
	2/27/2015	852.37	19.38	832.99
	6/1/2015	852.37	19.22	833.15
	9/1/2015	852.37	18.91	833.46
SMW25	12/12/2014	856.52	19.61	836.91
	2/27/2015	856.52	19.61	836.91
	6/1/2015	856.52	19.32	837.20
	9/1/2015	856.52	19.12	837.40
111	12/8/2014	846.81	21.32	825.49
	2/27/2015	846.81	21.40	825.41
	6/1/2015	846.81	21.31	825.50
	9/1/2015	846.81	21.20	825.61
112	12/8/2014	841.19	16.03	825.16
	2/27/2015	841.19	16.20	824.99
	6/1/2015	841.19	16.04	825.15
	9/1/2015	841.19	15.88	825.31
113	12/8/2014	841.09	15.98	825.11
	2/27/2015	841.09	16.17	824.92
	6/1/2015	841.09	16.03	825.06
	9/1/2015	841.09	15.83	825.26

Notes:

1 - Elevations are given in NGVD 29.

MSL - mean sea level

Table 4

2016 Sentinel Vapor Port and Sentinel Well Sampling Plan
2015 Sentinel Monitoring Network Report
East Hennepin Avenue Site
Minneapolis, Minnesota

Sampling Location	Sampling Frequency*	Parameter[1]
SVP1/SMW1	quarterly	VOCs
SVP2	quarterly	VOCs
SVP3/SMW3	quarterly	VOCs
SVP4	quarterly	VOCs
SVP5	quarterly	VOCs
SVP6/SMW6	quarterly	VOCs
SVP7	quarterly	VOCs
SVP8	quarterly	VOCs
SVP9	quarterly	VOCs
SVP10/SMW10	quarterly	VOCs
SVP11/111	quarterly	VOCs
SVP12	quarterly	VOCs
SVP13	quarterly	VOCs
SVP14/112	quarterly	VOCs
SVP15	quarterly	VOCs
SVP16/SMW16	quarterly	VOCs
SVP17	quarterly	VOCs
SVP18	quarterly	VOCs
SVP19/SMW19	quarterly	VOCs
SVP20	quarterly	VOCs
SVP21	quarterly	VOCs
SVP22/SMW22	quarterly	VOCs
SVP23	quarterly	VOCs
SVP24	quarterly	VOCs
SVP25/SMW25	quarterly	VOCs
SVP26	quarterly	VOCs
SVP27/312GS	quarterly	VOCs
SVP28/309GS	quarterly	VOCs
SVP29	quarterly	VOCs
SVP30	quarterly	VOCs
113	quarterly	VOCs

Notes:

* Assumes sampling begins in the first quarter of 2016.

[1] U.S. EPA Method 8260

Appendix E

Site Inspection Photos and Documentation

General Mills Well Inspections
6/26/2019
J190151

Well ID	Comments
W	PVC well casing, plug present and no bollards. *Two W well IDs, this one located on 22nd and Talamadge
B	~2" PVC well casing, plug/cap present, two bollards and surrounded by fence to the south
MG-2	8-10" steel outer casing, Two bollards one with electrical box attached, don't appear damaged.
MG-1	Hidden under vegitation and behind a tree. Two bollards present, one appears to have been backed into and is slightly bent.
109	In wooded area. Damaged electrical box attached to outside of well.
14	Two bollards. Behind locked fence, unable to access.
200	8-10" steel outer casing, two bollards on road side, pumping housing and electrical plug inside well.
S	~2" PVC well casing, plug/cap present, three bollards.
T	~2" PVC well casing, plug/cap present, three bollards.
QQ	~1 1/2" well casing, plug present, no bollards.
Q	2" PVC well casing, plug present, three bollards.
203	8-10" steel outer casing, Unable to remove lock.
111	8-10" steel outer casing, electrical box attached to outside of well. Cap bolted on, did not open. No bollards.
112	8-10" steel outer casing, electrical wires protected by PVC piping outside of well, cap bolted on, did not open. No bollards.
113	8-10" steel outer casing, electrical box attached to outside of well, appears slightly damaged. Cap bolted on , did not open, No bollards.
202	4" steel well casing, surrounded by vegitation, no plug/cap, no bollards.
X	Three bollards, unable to remove lock.
V	2" PVC well casing, no well plug, one bollard, appeards to have old/abandoned well or broken bollard behind it.
W	2" PVC well casing, plug present, three bollards. *Two W well IDs this one located on 8th St.
TT	Area under construction, unable to access.
201	4" steel well casing, plug present, no bollards. Area under construction at time of inspection.

Could not removed lock to look inside of well/ Inaccessable location

Bay West

Employee/Subcontractor/Visitor Register

Project Name	General Mills Five-Year Review	Date	6/3/2019
Project Number	J190151	Location	Minneapolis, MN

Your signature below indicates that you were present, coherent, and responsive during the meeting, that you're aware of site hazards, and that you agree to stop work when an uncontrolled hazard presents its

Inspection Date	Name (Printed)	Signature	Company
6/3/19	Shawn Lyman		Bay West
6/3/19	Dorothy Hamm		"
6-3-19	Wendy Menker		SECIA
6/3/19	Emily Hansen		MDH
6/3/19	Sara Ramsden		Barr
6/3/19	Alex Heller		First & First
6/3/19	Katie Larson		Bay West
6/3/19	Katherine Thomas		EPA
6/3/19	Allen Timm		MPCA
6/3/19	Tim Gropp		MPCA

Doc #2333421

Site Inspection Checklist

I. SITE INFORMATION	
Site name: General Mills/Henkel Corporation Site	**Date of inspection:** June 3, 2019
Location and Region: Minneapolis, Minnesota, Region 5	**EPA ID:** MND051441731
Agency, office, or company leading the five-year review: MPCA	**Weather/temperature: Sunny. 80 degrees.**

Remedy Includes: (Check all that apply)

- ☐ Landfill cover/containment
- ☐ Access controls
- ☒ Institutional controls
- ☐ Groundwater pump and treatment
- ☐ Surface water collection and treatment
- ☐ Monitored natural attenuation
- ☐ Groundwater containment
- ☐ Vertical barrier walls
- ☒ Other The groundwater pump and treatment remedy was discontinued in 2010 as the plume was stable/decreasing and concentrations were declining. In accordance with an MPCA approved plan, General Mills is performing periodic (every 5 years) groundwater monitoring to confirm stable/decreasing plume. Groundwater monitoring was completed in sentinel wells in 2015 and 2016. No groundwater monitoring has occurred since that time. Figure 1 outlines the General Mills site and presents locations of existing monitoring wells. The pump and treat system is not being used. Some wells have been damaged slightly.

Attachments: ☒ Inspection team roster attached ☒ Site map attached

II. INTERVIEWS (Check all that apply)

1. **O&M site manager**

Name Title Date

Interviewed ☐ at site ☐ at office ☐ by phone Phone no. 612.306.0949

Problems, suggestions; ☐ Report attached _____

Vapor System O&M:

Are there problems with the vapor intrusion remedy that could ultimately lead to the overall site remedy not being protective or question the protectiveness of the overall site remedy? Do residents regularly turn the exhaust fans off? Is the groundwater plume not contained? Are other actions (e.g., additional response actions, including ICs) necessary to ensure that there are no exposure pathways that could result in unacceptable risks?

2019 Observations: Visited one residential and one commercial system. The exhaust fans were running at both sites. The homeowner and building manager at both sites were aware of the system and aware of O&M requirements.

2. **O&M staff** _____ _____ _____ Name Title Date Interviewed ☐ at site ☐ at office ☐ by phone Phone no. _____ Problems, suggestions; ☐ Report attached _____
3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Please see attached interview documentation form and individual interview records.
4. **Other interviews** (optional) ☒ Report attached. Please see attached interview documentation form and individual interview records.

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1. **O&M Documents**
   - O&M manual ☐ Readily available ☐ Up to date ☒ N/A
   - As-built drawings ☐ Readily available ☐ Up to date ☒ N/A
   - Maintenance logs ☐ Readily available ☐ Up to date ☒ N/A

   Remarks_____

2. **Site-Specific Health and Safety Plan** ☐ Readily available ☐ Up to date ☒ N/A
   - Contingency plan/emergency response plan ☐ Readily available ☐ Up to date ☒ N/A

   Remarks_____

3. **O&M and OSHA Training Records** ☐ Readily available ☐ Up to date ☒ N/A

   Remarks_____

4. **Permits and Service Agreements**
   - Air discharge permit ☐ Readily available ☐ Up to date ☒ N/A
   - Effluent discharge ☐ Readily available ☐ Up to date ☒ N/A
   - Waste disposal, POTW ☐ Readily available ☐ Up to date ☒ N/A
   - Other permits_____ ☐ Readily available ☐ Up to date ☒ N/A

   Remarks_____

5. **Gas Generation Records** ☐ Readily available ☐ Up to date ☒ N/A

   Remarks_____

6. **Settlement Monument Records** ☐ Readily available ☐ Up to date ☒ N/A

   Remarks_____

7. **Groundwater Monitoring Records** ☐ Readily available ☐ Up to date ☒ N/A

   Remarks_____

8. **Leachate Extraction Records** ☐ Readily available ☐ Up to date ☒ N/A

   Remarks_____

9. **Discharge Compliance Records**
   - Air ☐ Readily available ☐ Up to date ☒ N/A
   - Water (effluent) ☐ Readily available ☐ Up to date ☒ N/A

   Remarks_____

10. **Daily Access/Security Logs** ☐ Readily available ☐ Up to date ☒ N/A

    Remarks_____

IV. O&M COSTS

1. **O&M Organization**

☐ State in-house ☐ Contractor for State
☐ PRP in-house ☒ Contractor for PRP
☒ Federal Facility in-house ☐ Contractor for Federal Facility
☒ Other No O&M Costs evaluated as work is being performed by the contractor for the PRP

V. ACCESS AND INSTITUTIONAL CONTROLS ☒ Applicable ☐ N/A

A. Fencing

1. **Fencing damaged** ☐ Location shown on site map ☐ Gates secured ☐ N/A

Remarks: 2014 Notes A fence surrounds the Site. There are gates at the two entrance points (one gate not serviceable), and one entrance is not gated. A fence surrounds the groundwater treatment with rows of barbed wire strung along the top of the fence.

2019 Notes: The fence was observed to be damaged with sagging barbed wire in several locations. The fence was not posted with no trespassing signs.

B. Other Access Restrictions

1. **Signs and other security measures** ☐ Location shown on site map ☐ N/A

Remarks: 2014 Notes: The building has a security system. According to Larry Deeney, General Mills, the treatment building security system remains functional. Larry agreed to provide details on what would trigger an alarm since the treatment system is currently shut down.

2019 notes: There is no active security on the treatment building at this time. None of the fences were posted with no trespassing signs.

C. Institutional Controls (ICs)

1. **Implementation and enforcement**

Site conditions imply ICs not properly implemented ☐ Yes ☒ No ☐ N/A

Site conditions imply ICs not being fully enforced ☐ Yes ☒ No ☐ N/A

Type of monitoring (*e.g.*, self-reporting, drive by) unknown

Frequency unknown

Responsible party/agency General Mills; MDH

Contact: Diane Curelli GMI

Emily Hansen, Minnesota Department of Health,

Name	Title	Date	Phone no.

Reporting is up-to-date ☐ Yes ☐ No ☐ N/A

Reports are verified by the lead agency ☐ Yes ☐ No ☐ N/A

Specific requirements in deed or decision documents have been met ☒ Yes ☐ No ☐ N/A

Violations have been reported ☐ Yes ☒ No ☐ N/A

Other problems or suggestions: ☐ Report attached

2014 Text: ICs are in place that restrict disturbance of soils below 4 ft in the vicinity of the former adsorption pit and installation of groundwater drinking water wells in the affected aquifers. There was no evidence that the soils were disturbed in the vicinity of the groundwater treatment system during the site inspection. MDH monitors well construction institutional controls and they have been requested to provide information on how they monitor compliance with the institutional controls/special well construction area for the General Mills site.

2019 Observations: No changes from 2014.

Note: Have the institutional controls (ICs) for the vapor intrusion portion of the remedy been implemented? If so, are they helping to minimize the potential for exposure to vapor intrusion over the long term by, for example, restricting or preventing potential impacts from vapor intrusion?3 Are ICs helping to protect the integrity of engineered controls? Do the ICs provide adequate notice to parties of the potential impacts from vapor intrusion?

SECIA representative commented on the Site Inspection that they are working on the community garden and they are wanting clarification on what the "vicinity" of the groundwater treatment system is with respect to ICs and soil disturbance.

2. **Adequacy** ☐ ICs are adequate ☐ ICs are inadequate ☐ N/A

Remarks_____

D. General

1. **Vandalism/trespassing** ☐ Location shown on site map ☒ No vandalism evident
Remarks 2014 Text: No vandalism is evident. However, access to the site is not restricted. There are holes in the fence and as shown in Figure 4 it appears that there is uncontrolled disposal and storage of miscellaneous materials on the south and west side of the property.

2019 Observations: No changes since 2014.

2. **Land use changes on site** ☒ N/A
Remarks 2014 Text: No land use changes since last five year review

2019 Observations: No land use changes since the last five year review.

3. **Land use changes off site** ☒ N/A
Remarks 2014 Text: A community garden has been placed across the street from the treatment building, along the green space between the street and the railroad tracks. The location is shown on Figure 4.

Notes: Have site conditions changed (e.g., new buildings or building modifications, changes in land use or zoning, or additional upgradient sources) that may present a potential vapor intrusion risk?

2019 Observations: The community garden was still present. No other land use changes were noted.

VI. GENERAL SITE CONDITIONS

A. Roads ☐ Applicable ☐ N/A

1. **Roads damaged** ☐ Location shown on site map ☐ Roads adequate ☒ N/A
Remarks 2014 Text: Roads, parking areas are generally asphalt and dirt in various stages of decay.

2019 Observations: No major changes to roads or parking areas.

VII. LANDFILL COVERS ☐ Applicable ☒ N/A

C. Treatment System ☐ Applicable ☒ N/A

1. **Treatment Train** (Check components that apply)

☐ Metals removal ☐ Oil/water separation ☐ Bioremediation
☐ Air stripping ☐ Carbon adsorbers
☐ Filters_____
☐ Additive (*e.g.*, chelation agent, flocculent)_____
☐ Others_____
☐ Good condition ☐ Needs Maintenance
☐ Sampling ports properly marked and functional
☐ Sampling/maintenance log displayed and up to date
☐ Equipment properly identified
☐ Quantity of groundwater treated annually_____
☐ Quantity of surface water treated annually_____

Remarks

2014 Text: The groundwater pump and treat system was shut down in 2010 but still remains in place. In the event that the treatment system is brought back online it will need a complete systems evaluation at that time. If it is determined that it is no longer necessary, abandonment of the extraction wells and removal of the treatment system is recommended. This should be evaluated again in the next five year event.

2019 Observations: No determination has been made with removal of the treatment system. As the treatment system ages, it will become more difficult to bring back online.

2. **Electrical Enclosures and Panels** (properly rated and functional)

☒ N/A ☐ Good condition ☐ Needs Maintenance
Remarks_____

3. **Tanks, Vaults, Storage Vessels**

☒ N/A ☐ Good condition ☐ Proper secondary containment ☐ Needs Maintenance
Remarks_____

4. **Discharge Structure and Appurtenances**

☒ N/A ☐ Good condition ☐ Needs Maintenance
Remarks_____

5. **Treatment Building(s)**

☐ N/A ☒ Good condition (esp. roof and doorways) ☐ Needs repair
☐ Chemicals and equipment properly stored
Remarks_____

6. **Monitoring Wells** (pump and treatment remedy)

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition

☐ All required wells located ☒ Needs Maintenance ☐ N/A

Remarks 2014 Text: All existing pump out and monitoring wells were located and photographed. Representative photographs are included in Figures 2 and 3. A well inventory sheet is attached. The well inventory sheet identifies the wells that require maintenance.

2019 Observations: Pump out and monitoring wells called out in the 2014 report were located. It appears that well repairs that were called out in 2014 were repaired. However new repairs were noted (missing/damaged bollards, well caps etc).

D. Monitoring Data

1. Monitoring Data

☒ Is routinely submitted on time ☒ Is of acceptable quality

2. Monitoring data suggests:

☒ Groundwater plume is effectively contained ☐ Contaminant concentrations are declining

D. Monitored Natural Attenuation

1. **Monitoring Wells** (natural attenuation remedy)

☐ Properly secured/locked ☐ Functioning ☐ Routinely sampled ☐ Good condition

☐ All required wells located ☒ Needs Maintenance ☐ N/A

Remarks See comments under treatment above.

X. OTHER REMEDIES

If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.

A. Vapor Mitigation

2014 Text: In order to address VI concerns the Consent Order was amended on March 11, 2014, "RAP Modification #1" to:

> " affirm the investigative and interim actions that have been performed to date and to further address the potential vapor intrusion risks associated with VOC contamination from the Site; to conduct additional sampling and monitoring of soil, soil gas, and groundwater to collect data necessary to identify and evaluate response action alternatives as may be necessary to mitigate the vapor intrusion pathway and reduce VOC concentrations in soil, soil gas, and groundwater."

VI investigations and mitigation activities are currently taking place. The next five year review will evaluate the VI activities.

2019 Observations: The Vapor Intrusion Pathway Report (Barr 2015) and the Sub Slab Sampling and Building Mitigation Implementation Report (Barr 2014) document soil, ground water and soil gas samples taken to evaluate the vapor intrusion pathway. To date, over 300 sub-slab samples have been taken from street right of ways and other undeveloped locations. An area was identified with sub-slab soil gas greater than 20 micrograms per cubic centimeters. 344 properties in the study area have undergone further sub-slab sampling. Mitigation systems have been installed at 188 of those properties. 14 properties remain that have sub slab soil gas greater than 20 micrograms per cubic centimeters.

XI. OVERALL OBSERVATIONS

A. Implementation of the Remedy

Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).
2014 Text: The groundwater remedy was designed to contain the contaminant plume. The pump and treat system was shut down in 2010. Periodic groundwater monitoring indicates the groundwater plume remains stable/receding and contaminant concentrations are declining. ICs are in place that restrict disturbance of soils below 4 ft in the vicinity of the former adsorption pit and installation of groundwater drinking water wells in the affected aquifers. Therefore, the groundwater remedy is effective and functioning as designed.

2019 Observations: Periodic groundwater monitoring is due in 2019. Additional monitoring of the sentinel well network was recommended by Barr and approved by the MPCA in 2016 and was never undertaken.

B.	Adequacy of O&M
	Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy. 2014 Text: The groundwater LTM program calls for sampling of existing monitoring well network every five years as approved by the MPCA. In light of the VI issues adequacy of the 5 year sampling frequency is being examined by General Mills and the MPCA. 2019 Observations: Groundwater monitoring frequency has not changed.

C.	Early Indicators of Potential Remedy Problems
	Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs that suggest that the protectiveness of the remedy may be compromised in the future. 2014 Text: As noted in the monitoring well inventory form, several wells require maintenance. These wells are only inspected during the groundwater monitoring event (currently every five years). Annual well inspection and repair, as necessary, is recommended. 2019 Observations: Wells called out in 2014 appear to have been repaired, however additional repairs to bollards, well caps etc were noted during the 2019 inspection.

D.	Opportunities for Optimization
	Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy. 2014 Text: Annual well inspection and repair, as necessary, is recommended. VI assessment should evaluate whether pump and treat system will enhance existing vapor mitigation activities. 2019 Observations: Annual well inspection and repair was recommended in 2014 and is still recommended.

SITE VISIT PHOTO LOG- June 2, 2019

GENERAL MILLS HENKEL SITE

SIXTH FIVE-YEAR REVIEW

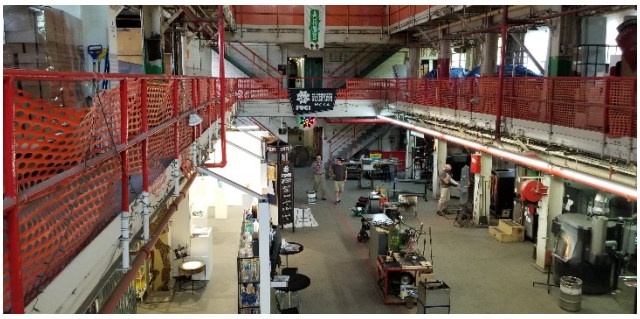


Photo 1 Glass blowing area in Building 10. Looked for vapor points. Inspected floor. No evidence of cracks.

Photo 2 Floor drain in basement of Building 10.

Photo 3 Basement of Building 10.

Photo 4. Tunnels of Building 10.

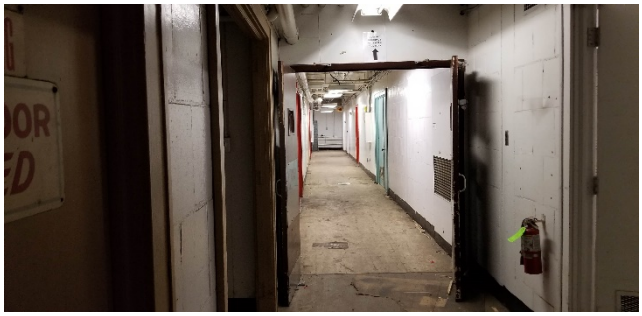


Photo 5 . Tunnels of Building 10.

Photo 6 Henkel well in Building 10.

SITE VISIT PHOTO LOG- June 2, 2019

GENERAL MILLS HENKEL SITE

SIXTH FIVE-YEAR REVIEW

Photo 7- . Henkel well in Building 10.

Photo 8 Sub slab vapor pin in Building 10.

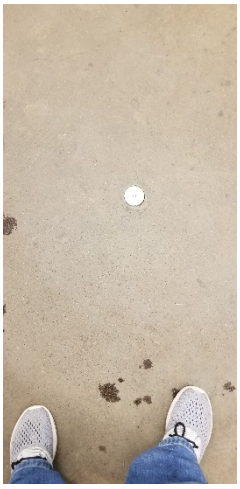


Photo 9. Sub slab vapor pin in Building 10

Photo 10 Trailer and topper noted in 2014 Site Walk.

Photo 11 Breach in fence near former water treatment system.

Photo 12- Well MG-2. No damage noted.

SITE VISIT PHOTO LOG- June 2, 2019

GENERAL MILLS HENKEL SITE

SIXTH FIVE-YEAR REVIEW

Photo 13- Well 311 GD and 311 GS. No damage noted.

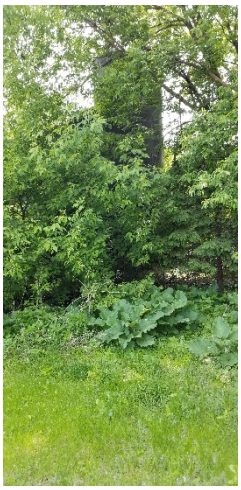


Photo 14 Bushes and trees growing into power lines.

Photo 15- Bushes and trees growing into power lines.

Photo 16- inactive water treatment building.

Photo 17

Photo 18

SITE VISIT PHOTO LOG- June 2, 2019

GENERAL MILLS HENKEL SITE

SIXTH FIVE-YEAR REVIEW

Photo 19

Photo 20

Photo 21 Community Garden.

Photo 22- Sagging barbed wire.

Photo 23

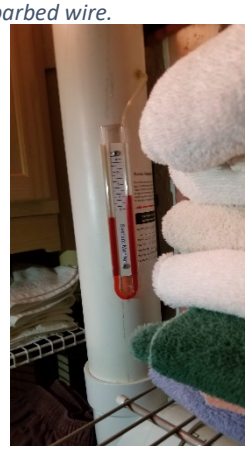


Photo 24- Residential system south of site. Manometer functioning. System on and working. Homeowner aware of system and O&M needed.

SITE VISIT PHOTO LOG- June 2, 2019

GENERAL MILLS HENKEL SITE

SIXTH FIVE-YEAR REVIEW

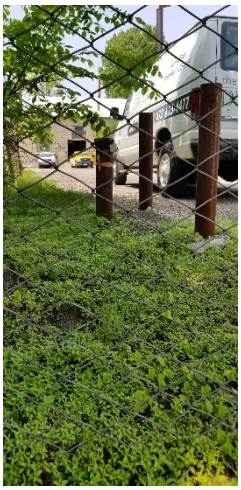


Photo 25

Photo 26- Varsity Apartment- commercial system.

Photo 27- Well outside Varsity apartments. Three bollards and well cap present.

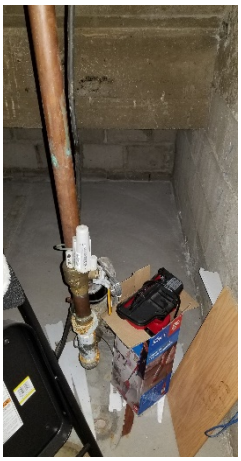


Photo 28 Varsity Apartment- commercial system.

Photo 29- Varsity Apartment- commercial system.

Photo 30- Varsity Apartment- commercial system.

SITE VISIT PHOTO LOG- June 2, 2019

GENERAL MILLS HENKEL SITE

SIXTH FIVE-YEAR REVIEW

Photo 31- Varsity Apartment- commercial system.

Photo 32- Cracks in floor at Varsity Apartments.

Photo 33- Blower at Varsity Apartments.

Photo 34- Blower at Varsity Apartments.

SITE VISIT PHOTO LOG- WELL INSPECTIONS

GENERAL MILLS HENKEL SITE

SIXTH FIVE-YEAR REVIEW

Photo 1 Well W located at 22nd and Talmadge. PVC well casing present. No bollards.

Photo 2 Well W located at 22nd and Talmadge. PVC well casing and plug present. No bollards.

Photo 3 Well MG-1. Hidden under vegetation and behind a tree. Two bollards present, one appears to have been backed into and is slightly bent.

Photo 4 Well QQ. 1 1/2" well casing, plug present, no bollards.

Photo 5 Well QQ. 1 1/2" well casing, plug present, no bollards.

Photo 6 Well 202. 4" steel well casing, surrounded by vegetation,

SITE VISIT PHOTO LOG- WELL INSPECTIONS

GENERAL MILLS HENKEL SITE

SIXTH FIVE-YEAR REVIEW

Photo 7 Well V. 2" PVC well casing, no well plug, one bollard, appears to have old/abandoned well or broken bollard behind it.

General Mills Well Inspection

06-26-19

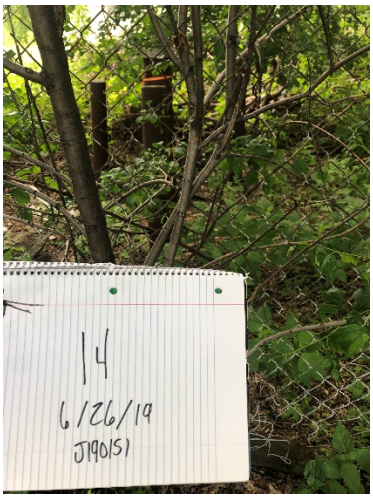


Photo 1 well 14 Two bollards. Behind locked fence, unable to access.

Photo 2- Well 109 In wooded area. Damaged electrical box attached to outside of well.

Photo 3 Well 110. No damage noted.

Photo 4. Well 111, 8-10" steel outer casing, electrical box attached to outside of well. Cap bolted on, did not open. No bollards.

Photo 5 Well 112. 8-10" steel outer casing, electrical wires protected by PVC piping outside of well, cap bolted on, did not open. No bollards.

Photo 6 Well 112. 8-10" steel outer casing, electrical wires protected by PVC piping outside of well, cap bolted on, did not open. No bollards

General Mills Well Inspection

06-26-19

Photo 7 8-10" steel outer casing, electrical box attached to outside of well, appears slightly damaged. Cap bolted on , did not open, No bollards.

Photo 8 Well 200. 8-10" steel outer casing, two bollards on road side, pumping housing and electrical plug inside well. No damage noted.

Photo 9. Well 200. 8-10" steel outer casing, two bollards on road side, pumping housing and electrical plug inside well. No damage noted.

Photo 10 Well 201. 4" steel well casing, plug present, no bollards. Area under construction at time of inspection. No damage noted.

Photo 11 Well 202. 4" steel well casing, surrounded by vegitation, no plug/cap, no bollards.

Photo 12 4" steel well casing, surrounded by vegitation, no plug/cap, no bollards.

General Mills Well Inspection

06-26-19

Photo 13 Well 203. 8-10" steel outer casing, Unable to remove lock.

Photo 14- Well B. - ~2" PVC well casing, plug/cap present, two bollards and surrounded by fence to the south

Photo 15- Well B. - ~2" PVC well casing, plug/cap present, two bollards and surrounded by fence to the south

Photo 16-Well MG-1. Hidden under vegetation and behind a tree. Two bollards present, one appears to have been backed into and is slightly bent.

Photo 17 Well MG-1. Hidden under vegetation and behind a tree. Two bollards present, one appears to have been backed into and is slightly bent.

Photo 18- Well MG-1. Hidden under vegetation and behind a tree. Two bollards present, one appears to have been backed into and is slightly bent.

General Mills Well Inspection

06-26-19

Photo 19 MG-2. 8-10" steel outer casing, Two bollards one with electrical box attached, don't appear damaged.

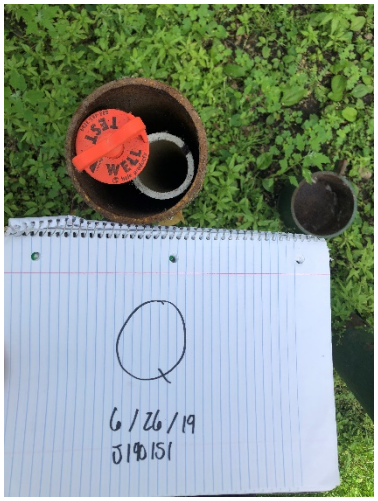


Photo 20- Well Q. 2" PVC well casing, plug present, three bollards. No apparent damage.

Photo 21- Well Q. 2" PVC well casing, plug present, three bollards. No apparent damage.

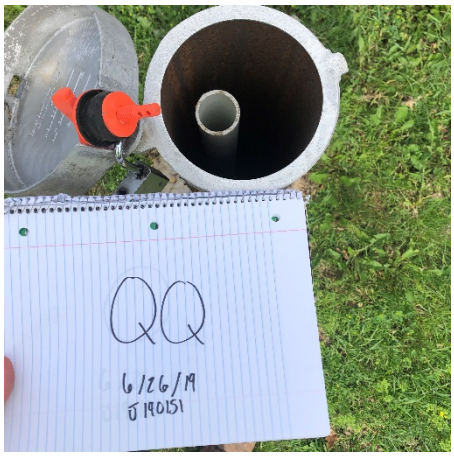


Photo 22- Well QQ. ~1 1/2" well casing, plug present, no bollards.

Photo 23- Well QQ. ~1 1/2" well casing, plug present, no bollards.

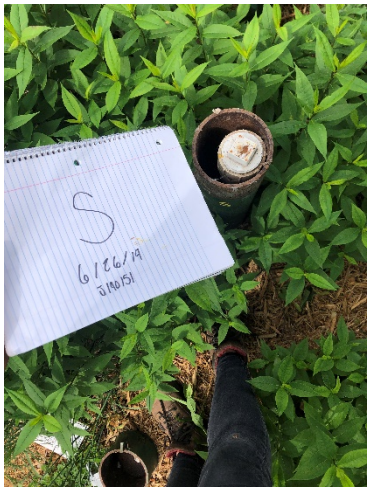


Photo 24- ~2" PVC well casing, plug/cap present, three bollards. No apparent damage.

General Mills Well Inspection

06-26-19

Photo 25- Photo 24- ~2" PVC well casing, plug/cap present, three bollards. No apparent damage.

Photo 26- Photo 24- ~2" PVC well casing, plug/cap present, three bollards. No apparent damage.

Photo 27- Well T. ~2" PVC well casing, plug/cap present, three bollards. No apparent damage.

Photo 28- Well T. ~2" PVC well casing, plug/cap present, three bollards. No apparent damage.

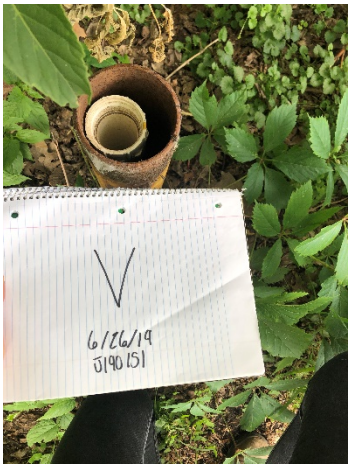


Photo 29- Well V. 2" PVC well casing, no well plug, one bollard, appears to have old/abandoned well or broken bollard behind it.

Photo 30- 2" PVC well casing, no well plug, one bollard, appears to have old/abandoned well or broken bollard behind it.

General Mills Well Inspection

06-26-19

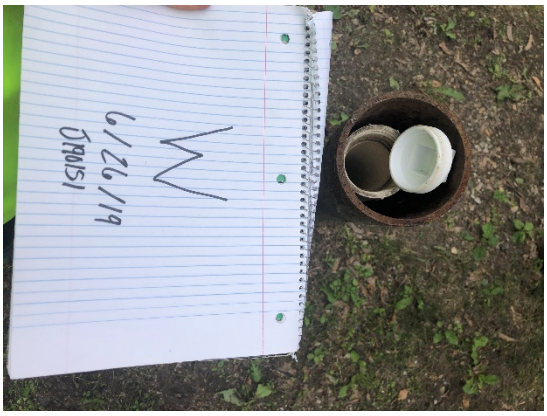


*Photo 31- Well W. 2" PVC well casing, plug present, three bollards. *Two W well IDs this one located on 8th St.*

*Photo 32- Well W. 2" PVC well casing, plug present, three bollards. *Two W well IDs this one located on 8th St.*

*Photo 33- Well W. 2" PVC well casing, plug present, three bollards. *Two W well IDs this one located on 8th St.*

*Photo 34- Well W. 2" PVC well casing, plug present, three bollards. *Two W well IDs this one located on 8th St.*

Photo 35- Three bollards, unable to remove lock.