Heartland Environmental Associates, Inc.

FURTHER SITE INVESTIGATION

USEPA Community-Wide Brownfields Petroleum Substances Assessment Grant for

Assessment of

Former Thomson Consumer Electronics / Former Radio Corporation of America / Former General Electric - Sherman Park Facility

"Sherman Park Parcel B"

Further Site Investigation Project

Grantee:

City of Indianapolis
Attn: Mr. Piers Kirby
200 East Washington Street
Suite 2042
Indianapolis, Indiana 46204

Prepared by

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October 11, 2017

HEA No. 5145-17-05

This report is prepared by:

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Prepared for:

The Consolidated City of Indianapolis
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Department of Metropolitan Development
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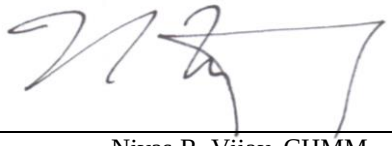
Suite 2042
Indianapolis, Indiana 46204-3328

For the Site:

Former Thomson Consumer Electronics / Former Radio Corporation of America /
Former General Electric – Sherman Park Facility
"Sherman Park Parcel B"
3324 East Michigan Street
Indianapolis, Indiana 46201

Report prepared by:



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1.0 INTRODUCTION

Within the scope of the United States Environmental Protection Agency (USEPA) Community-Wide Brownfields Assessment Grant for Petroleum Substances to the City of Indianapolis (City), this Further Site Investigation (FSI) is being provided to cover the assessment of the former Thomson Consumer Electronics / former Radio Corporation of America (RCA) / former General Electric (GE) - Sherman Park facility, located at 3324 East Michigan Street in Indianapolis, Indiana, herein referred to as 'site'. Specifically, this FSI was conducted on the western portion of the former manufacturing facility, historically identified as "Parcel B".

The City has leveraged its USEPA Community-Wide Brownfields Assessment Grant (Grant #00E01533-0) to facilitate FSI activities at this site. The purpose of the grant is to conduct site assessment to evaluate for the presence/absence of subsurface impacts to soil and/or groundwater related to historic usage of the site as a manufacturing facility. Heartland Environmental Associates, Inc. (Heartland) has prepared this report to document the following activities:

- Soil boring and temporary piezometer installation completed on August 10, 2017; and
- Groundwater Sampling Event completed on August 17, 2017.

Site activities have been completed under the USEPA Community-Wide Brownfields Assessment Grant for Petroleum Substances provided to the City. Site activities were completed in accordance to the pre-approved, site specific Quality Assurance Project Plan (QAPP) and the Sampling and Analysis Plan (SAP) submitted to the USEPA in June 2017 for this project.

The former RCA facility was historically utilized as a manufacturer of electronic components for radios and televisions. "Parcel B" is located in the western portion of the site and consists of vacant land containing graveled areas located on approximately 5.82-acres. This parcel (Parcel #1081431) historically contained two interconnected former industrial buildings encompassing 275,000-square feet of space. The site was originally developed in the mid-1940s and vacated in 2001. The facility operated as part of the larger RCA/Thomson Consumer Electronics facility which additionally owned and operated adjoining parcels to the north, east, west and south. The site was vacated by 2001, and site buildings were razed in 2017.

Prior to demolition activities, the site consisted of two interconnected former industrial buildings totaling approximately 275,000 square feet of space, along with two smaller detached garage buildings located east of the main site buildings, a chiller building located northeast of the main site buildings and a small guard shack building located in the northern portion of the site. Historically, the northernmost industrial building was identified as the "Warehouse Building", and the southernmost industrial building was identified as the "Southern Office Building". The site is currently owned by the City. A site location map is provided as Figure 1. A site location map depicting parcel boundaries is provided as Figure 2.

As part of due diligence environmental assessment activities conducted by the City in May 2015 and in October 2016, Heartland completed Phase I Environmental Site Assessments (ESA) at the site. Based on the results of the Phase I ESAs, the following Recognized Environmental Conditions (RECs) were identified:

- According to city directories, Sanborn Maps, aerial photographs and historic documents reviewed, the southern portion of the site historically operated as RCA Manufacturing Company, a manufacturer of electronic components for radios and televisions. The site was developed by RCA by at least the mid-1940s, and operated as RCA from at least the mid-1940s to 1987, when the site began operation as Thomson Consumer Electronics, an electronic and plastics manufacturer. The site operated as Thomson Consumer Electronics through 1995 when the site ceased operations as an electronics and plastics manufacturer and was utilized primarily for storage and warehousing of heavy machinery. The site was vacated by 2001, and remains vacant.

  Manufacturing operations conducted at the site included plating operations, paint booths and light and heavy machining operations. The site historically operated several aboveground storage tanks (ASTs) and an 8,000-gallon acid storage tank, located on the exterior of the site east of the main site buildings. These operations incorporated the usage of both hazardous and non-hazardous wastes which included, but were not limited to: flammable liquids and solids, chlorinated solvents, bulk and waste petroleum products, heavy metals and paints.

  Subsurface investigations at the site have indicated the presence of extensive impacts to both soil and groundwater due to historic industrial development. Impacts of volatile organic compounds (VOCs), specifically chlorinated volatile organic compounds (CVOCs) in the form of tetrachloroethene (PCE), trichloroethene (TCE), 1,2-dichloroethane (1,2-DCA) and 1,1,1-trichloroethane (1,1,1-TCA), along with impacts of total petroleum hydrocarbons (TPHs) and heavy metals in the form of arsenic, cadmium and lead have been encountered throughout the site.

- After the site was vacated, large quantities of abandoned chemical containers, including 250-gallon totes, 55-gallon drums, propane canisters and smaller containers were still present throughout the site buildings. These containers were previously observed to be in poor condition, with evidence of leakage observed. Areas of stained ground and chemical odors in the areas of the containers were identified within the site buildings and throughout the site grounds. Between September 18, 2015 and December 15, 2015, these containers were removed from the site as part of USEPA emergency response activities.

- As part of prior due diligence activities conducted at the site, the site was provided with a Comfort/Site Status Letter from the Indiana Brownfields Program.

  As part of this Comfort/Site Status Letter an Environmental Restrictive Covenant (ERC) was

placed on the southern portion of the site identified as "Parcel B" establishing restrictions in site usage due to known environmental impacts. Restrictions placed on "Parcel B" as part of the ERC included limiting future reuse of the property for commercial/industrial purposes, disallowing the installation of groundwater potable wells on the site and restricting the disturbing of subsurface soils at the site. The stipulations within the ERC further constitute a controlled REC for the site. This ERC was recorded for the site in 2012.

An asbestos building inspection and lead based paint (LBP) survey report was conducted by Heartland on June 22, 2016. The results of the inspection indicated ACMs in the form of thermal system insulation (TSI) in the form of pipe wrap and mudded joint insulation wrapping, transite paneling, resilient flooring materials and exterior window caulk were encountered throughout the office/manufacturing building and LBP was encountered in paint covering select surfaces in both the large office/manufacturing building and the warehouse building. These materials were properly abated prior to demolition of the site buildings.

Heartland conducted a Phase II ESA for the site in September 2016. Based on the results of the Phase II ESA, soil impacts exceeding the Indiana Department of Environmental Management (IDEM) Remediation Closure Guide (RCG) Residential Migration to Groundwater Screening Levels (MTGSLs) for select VOCs and polynuclear aromatic hydrocarbons (PAHs) constituents were encountered. Groundwater impacts exceeding IDEM RCG Residential Screening Levels (RSLs) for select VOCs, PAHs and lead were also encountered. A site map depicting historic soil boring locations is provided as Figure 3. A site map depicting historic groundwater flow direction is provided as Figure 4. Site maps depicting historic soil and groundwater analytical are provided in Figures 5 through 10.

In addition to these assessments, the site has been subject to environmental assessment related to the potential migration of chemical impacts onto the site from the neighboring facilities to the northeast and to the south.

Following the Phase II ESA conducted by Heartland, the site buildings were demolished in order to facilitate further large scale environmental assessment and potential remediation at the site. Based on the operational history of the site and surrounding areas as well as the previous Phase II ESA conducted by Heartland, areas of concern were identified in previously inaccessible areas within the building footprint where additional assessment was deemed warranted. Therefore, this FSI was specifically conducted to further characterize and delineate the site for the presence of petroleum and chemical impacts in the areas that were previously not investigated due to access restrictions.

2.0 FURTHER SITE INVESTIGATION

2.1 Soil Boring and Temporary Piezometer Installation

This FSI included the advancement of 23 soil borings and the sampling of soil and groundwater throughout the site to confirm the presence/absence of chemical impacts to soil and/or groundwater. Due to the limited nature of previously conducted subsurface assessments, this assessment was designed to provide a more comprehensive assessment of the entire site, particularly within the historic building footprint where access was previously limited.

From August 8 through August 10, 2017, Heartland personnel provided oversight for the advancement of 23 direct-push soil borings. The soil borings were advanced to a maximum depth of 36 feet below ground surface (bgs). Heartland contracted with Midway Services, Inc. of Knightstown, Indiana to advance the soil borings. Soil borings were advanced in pre-determined locations in the direct vicinity of the locations as identified in the SAP. A site map depicting soil boring locations is provided as Figure 11.

Soil sample intervals were continuously logged and the soil lithology was described on Heartland boring logs. The soil samples were inspected for indications of chemical impacts, such as staining and odors. The soil samples collected from the borings were continuously screened for soil vapors using a pre-calibrated photo-ionization detector (PID) organic vapor monitor. Soil borings logs are included in Appendix A.

Two (2) soil samples were collected from each of the 23 soil borings for laboratory analysis. Soil samples were collected at the initial encountered subsurface interval and at the interval exhibiting the highest field screening results or at the interval immediately above the first-encountered groundwater saturated zone.

Soil samples were submitted for laboratory analysis of VOCs using USEPA SW-846 Method 8260 and PAHs using USEPA SW-846 Method 8270. The initial encountered subsurface soil interval was additionally submitted for laboratory analysis of Resource, Conservation and Recovery Act (RCRA) 8 metals using USEPA SW-846 Method 6010B/7471. Soil samples submitted for VOC analysis were collected utilizing field sampling method 5035A.

All collected soil samples were placed into laboratory prepared sample containers and stored in a secured, iced cooler (at 4°C). Samples were transported to Pace Analytical Services, Inc. (Pace) in Indianapolis, Indiana and submitted for laboratory analysis under Heartland's chain of custody protocol. Quality assurance/quality control (QA/QC) samples were collected for this sampling event in accordance with the QAPP.

After completion of soil sampling, 22 of the 23 soil borings were subsequently completed with

temporary groundwater piezometers. These temporary groundwater piezometers were installed into the first encountered groundwater aquifer to a depth of approximately 16 feet to 24 feet bgs. After installation, the piezometers were allowed to stabilize for a period of 24 hours prior to sampling. One soil boring (SB-23) was convereted into a permanent groundwater monitoring well, for purposes of potential long-term groundwater monitoring, if determined necessary.

2.2 Water Level Measurements and Groundwater Flow

On August 14, 2017, Heartland personnel measured and recorded the static water levels of the temporary groundwater piezometers using a Solinst Instruments Oil/Water Interface Meter. The interface probe was decontaminated between each measurement to help prevent cross-contamination. In addition to the gauging of the temporary piezometers, Heartland personnel surveyed the temporary piezometers to evaluate groundwater flow direction.

Based on the collected static groundwater level measurements, groundwater flow at the site is to the west/northwest. A groundwater flow map is provided as Figure 12 and the water level gauging data is summarized in Table 1.

In addition to static water level gauging, each groundwater sampling location was gauged for the presence of light non-aqueous phase liquids (LNAPLs). Based on the results of the gauging, LNAPLs were not encountered in any of the temporary groundwater piezometers or the permanent groundwater monitoring well.

2.3 Groundwater Sampling

Temporary groundwater piezometers and the permanent groundwater monitoring well were sampled at the site utilizing IDEM accepted low-flow sampling methodology to minimize purged groundwater volumes. Groundwater was pumped at a low-flow rate through a flow cell equipped with a multi-parameter water quality meter to measure water quality parameters. After water quality parameters stabilized, water samples were collected. Groundwater sampling data sheets are provided in Appendix B.

Groundwater samples were submitted for laboratory analysis of VOCs using USEPA SW-846 Method 8260, PAHs using USEPA SW-846 Method 8270 and RCRA 8 metals (total and dissolved) using USEPA SW-846 Method 6010B/7471.

Groundwater samples were collected in laboratory prepared sample containers and placed in a secure, iced cooler (at 4°C). Groundwater samples were delivered to Pace in Indianapolis, Indiana, under Heartland chain-of-custody protocol. QA/QC samples were collected for this sampling event in accordance with the QAPP.

After completion of groundwater sampling, each of the 22 temporary groundwater piezometers were properly abandoned and completed to grade. It should be noted that a groundwater sample could not be collected from soil boring SB-15 due to insufficient generated groundwater. The piezometer was installed to a depth of 16 feet bgs. During groundwater sampling activities, the total depth of the piezometer was recorded at 11.79 feet bgs. It is likely that the slot screen collapsed during installation and allowed the infiltration of sand and silt in the piezometer.

2.4 Soil Analytical Results

2.4a Volatile Organic Compounds

Soil impacts slightly exceeding IDEM RCG MTGSLs for carbon tetrachloride was encountered in one (1) soil boring (SB-12) from a depth of 13 feet to 15 feet bgs. Additionally, impacts of PCE were encountered in two soil borings (SB-22 and SB-23) from a depth of 2 feet to 4 feet bgs exceeding IDEM RCG MTGSLs. Impacts of TCE were encountered in six soil borings (SB-18, SB-19, SB-24, SB-25, SB-27 and SB-29) at both shallow and deeper intervals immediately above the first encountered groundwater saturated zone exceeding IDEM RCG MTGSLs. Impacts of vinyl chloride were encountered in two soil borings (SB-21 and SB-25) slightly exceeding IDEM RCG MTGSLs from depths of 13 feet to 15 feet bgs and 16 feet to 18 feet bgs, respectively. Impacts of 1,1-dichloroethene were encountered in one soil boring (SB-25) from a depth of 16 feet to 18 feet bgs exceeding IDEM RCG MTGSLs.

In addition to these impacts, impacts of TCE were encountered in one soil boring (SB-25) from a depth of 16 feet to 18 feet bgs slightly exceeding IDEM RCG Residential Direct Contact Screening Levels (RDCSLs).

No other VOC impacts were encountered exceeding IDEM RCG MTGSLs or IDEM RCG RDCSLs. VOCs in soil analytical results are summarized in Table 2 and depicted on Figure 13. The laboratory certificate of analysis is included in Appendix C.

2.4b Polynuclear Aromatic Hydrocarbons

Soil impacts exceeding IDEM RCG MTGSLs for naphthalene were encountered in one (1) soil boring (SB-23) from a depth of 2 feet to 4 feet bgs. No other PAH constituent impacts exceeding IDEM RCG MTGSLs or IDEM RCG RDCSLs were encountered.

PAHs in soil analytical results are summarized in Table 3 and depicted on Figure 14. The laboratory certificate of analysis is included in Appendix C.

2.4c Metals in Soil

Soil impacts exceeding IDEM RCG MTGSLs for arsenic were encountered in 19 soil borings

(SB-12, SB-13, SB-15 through SB-20, SB-22, SB-24 through SB-27 and SB-29 through SB-34) from a depth of 2 feet to 4 feet bgs. Furthermore, soil impacts exceeding IDEM RCG MTGSLs for lead were encountered in one soil boring (SB-12) from a depth of 2 feet to 4 feet bgs.

In addition to these impacts, soil impacts exceeding IDEM RCG RDCSLs for arsenic were encountered in eight (8) soil borings (SB-13, SB-15, SB-17, SB-19, SB-20, SB-22, SB-24 and SB-33) from a depth of 2 feet to 4 feet bgs. Lead impacts in soil boring SB-12 were further encountered exceeding IDEM RCG RDCSLs and IDEM RCG Commercial Direct Contact Screening Levels.

No other metal constituent exhibited concentrations exceeding IDEM RCG MTGSLs, IDEM RCG RDCSLs or Commercial Direct Contact Screening Levels. Metals in soil analytical results are summarized in Table 4 and depicted on Figure 15. The laboratory certificate of analysis is included in Appendix C.

2.5 Groundwater Analytical Results

2.5a Volatile Organic Compounds

Groundwater impacts that exceeded IDEM RCG RSLs for carbon tetrachloride were encountered in one soil boring (SB-12). Additionally, groundwater impacts that exceeded IDEM RCG RSLs for 1,1-dichloroethene were encountered in one soil boring (SB-20).

Groundwater impacts for cis-1,2-dichloroethene were encountered in five soil borings (SB-20, SB-21, SB-25, SB-26 and SB-30) and groundwater impacts for TCE were encountered in 11 soil borings (SB-12, SB-16, SB-19 through SB-21, SB-24 through SB-27, SB-31 and SB-32) that exceeded IDEM RCG RSLs. Additionally, groundwater impacts that exceeded IDEM RCG RSLs for vinyl chloride were encountered in four soil borings (SB-18, SB-20, SB-21 and SB-30).

No other VOC impacts were encountered that exceeded IDEM RCG RSLs. VOCs in groundwater analytical results are summarized in Table 5 and depicted on Figure 16. The laboratory certificate of analysis is included in Appendix D.

2.5b Polynuclear Aromatic Hydrocarbons

Groundwater impacts exceeding IDEM RCG RSLs for PAHs were not encountered in any of the soil borings.

PAHs in groundwater analytical results are summarized in Table 6 and depicted on Figure 17. The laboratory certificate of analysis is included in Appendix D.

2.5c Metals in Groundwater

Groundwater impacts exceeding IDEM RCG RSLs for total arsenic were encountered in seven soil borings (SB-12, SB-17, SB-19, SB-20, SB-27, SB-31 and SB-33). Additionally, total barium and total mercury impacts exceeding IDEM RCG RSLs were encountered in soil boring SB-27. Groundwater impacts exceeding IDEM RCG RSLs for total cadmium and total chromium were encountered in two soil borings (SB-17 and SB-27). Groundwater impacts for total lead were encountered in four soil borings (SB-12, SB-17, SB-27 and SB-33) and groundwater impacts for total selenium were encountered in two soil borings (SB-12 and SB-27) that exceeded IDEM RCG RSLs.

Dissolved concentrations of arsenic were encountered three soil borings (SB-27, SB-31 and SB-33) that exceeded IDEM RCG RSLs. No other dissolved concentrations of metals were encountered exceeding laboratory detection limits.

It should be noted that groundwater samples collected were analyzed for both total and dissolved metals. Total metals analysis for water samples include the metals content both dissolved in the water and present in the particulates in the water. Typically, a dissolved metals analysis of a water sample is performed by removing the particulates with a filter and then analyzing the filtered water for metals. The groundwater impacts for total metals constituents that exceeded IDEM RCG RSLs are likely to be biased high due to elevated suspended solids resulting in high turbidity, with the exception of the three soil borings (SB-27, SB-31 and SB-33) with elevated dissolved concentrations of arsenic.

Metals in groundwater analytical results are summarized in Table 7 and depicted on Figure 18. The laboratory certificate of analysis is included in Appendix D.

2.6 Quality Assurance/Quality Control

As part of soil and groundwater sampling activities, Heartland collected QA/QC samples, as outlined in the QAPP. QA/QC samples included field duplicate samples, matrix spike/matrix spike duplicate samples, laboratory trip blanks and field equipment blanks. No data validation concerns were noted for this project.

2.7 Waste Disposal

Both soil cuttings and purged groundwater were containerized in 55-gallon, Department of Transportation approved steel drums. Drums were properly labeled and staged onsite pending disposal with Liquid Waste Removal, Inc. of Greenwood, Indiana.

3.0 CONCLUSIONS

Heartland has completed FSI activities that included the advancement of 23 soil borings, the installation of 22 temporary groundwater piezometers and one permanent groundwater monitoring well and the sampling and analysis of soil and groundwater at the site. The objective of this FSI was to further evaluate the site for the presence of petroleum and chemical impacts resulting from historic usage of the site as a manufacturing facility. Due to the limited nature of previously conducted subsurface assessments, this FSI was conducted to provide a more comprehensive evaluation of the entire site.

Based upon the results of this FSI, soil impacts exceeding IDEM RCG MTGSLs for select VOCs, including but not limited to PCE, TCE and vinyl chloride were encountered in 10 soil borings (SB-12, SB-18, SB-19, SB-21 through SB-25, SB-27 and SB-29) at both shallow and intermediate depths located above the first encountered groundwater saturated zone. Additionally, soil impacts exceeding IDEM RCG RDCSLs for TCE were encountered in one soil boring (SB-25) from a depth of 16 feet to 18 feet bgs.

Soil impacts exceeding IDEM RCG MTGSLs for PAHs in the form of naphthalene were encountered in one soil boring (SB-23) from a depth of 2 feet to 4 feet bgs. No other PAH constituents were encountered in soil exceeding IDEM RCG MTGSLs or IDEM RCG RDCSLs.

Soil impacts exceeding IDEM RCG MTGSLs for arsenic were encountered in 19 soil borings (SB-12, SB-13, SB-15 through SB-20, SB-22, SB-24 through SB-27 and SB-29 through SB-34) from a depth of 2 feet to 4 feet bgs. Soil impacts exceeding IDEM RCG RDCSLs for arsenic were further encountered in eight soil borings (SB-13, SB-15, SB-17, SB-19, SB-20, SB-22, SB-24 and SB-33) from a depth of 2 feet to 4 feet bgs.

Furthermore, soil impacts for lead exceeding IDEM RCG MTGSLs and IDEM RCG RDCSLs and Commercial Direct Contact Screening Levels were encountered in one soil boring (SB-12) from a depth of 2 feet to 4 feet bgs. No other metals constituents were encountered in soil exceeding IDEM RCG MTGSLs or IDEM RCG RDCSLs.

Groundwater impacts exceeding IDEM RCG RSLs for select VOCs, including carbon tetrachloride, TCE, 1,1-dichloroethene, cis-1,2-dichloroethene and vinyl chloride were encountered throughout the site. Groundwater impacts exceeding IDEM RCG RSLs for PAHs were not encountered in any of the soil borings.

Groundwater impacts exceeding IDEM RCG RSLs for dissolved arsenic were encountered in the filtered groundwater samples from three (3) soil borings (SB-27, SB-31 and SB-33). LNAPLs were not encountered in any of the temporary groundwater piezometers.

Based on the results of this investigation, it appears that CVOC impacts, likely associated with historic manufacturing operations, are present in both shallow and intermediate soils present above the first encountered groundwater saturated zone and in shallow groundwater at the site. The potential exists that groundwater impacts encountered are attributable to shallow and intermediate soil impacts. The presence of chlorinated solvent breakdown products (cis-1,2-dichloroethene, vinyl chloride) in groundwater is potentially attributable to the degradation of TCE, which was encountered in both soil and groundwater.

In addition to VOC impacts encountered, elevated arsenic was encountered in both soil and groundwater, with impacts of dissolved arsenic encountered in three soil borings (SB-27, SB-31 and SB-33) exceeding IDEM RCG RSLs. The presence of elevated dissolved concentrations in arsenic are potentially attributable to historic onsite manufacturing operations. Elevated total metals concentrations in groundwater, with the exception of arsenic in the three above stated soil borings, are likely attributable to laboratory bias due to elevated turbidity and not a result of direct impact based on historic site operations.

Elevated concentrations of arsenic were encountered in shallow soils at the site. However, a majority of these arsenic concentrations are comparable to the naturally elevated background arsenic concentrations found in City of Indianapolis and Marion County, Indiana soils. Arsenic concentrations were not encountered exceeding IDEM RCG Commercial Direct Contact Screening Levels.

Based on the results of this investigation, chemical impacts to both soil and groundwater are present at the site. Both soil and shallow groundwater impacts appear attributable to historic site usage. Furthermore, based on the calculated groundwater flow direction and a review of historic site investigation reports conducted for the immediately upgradient former RCA facility parcel to the east, the potential exists that, in addition to the shallow groundwater impacts encountered as part of this investigation, that intermediate and deep groundwater impacts are present at the site, migrating from the upgradient source to the east. A review of the *2016 Annual Progress Report* submitted by Tetra Tech, Inc. for the upgradient facility indicates that chlorinated solvent impacts are potentially migrating onto the intermediate and deep aquifers at the site along the northern and eastern boundaries of the site. Based on the groundwater flow direction from the *2016 Annual Progress Report,* the deep aquifer flow direction is toward the north/northwest.

The site is located in a mixed industrial and residential area in Indianapolis, Indiana. Heartland understands that the City of Indianapolis is evaluating the site for potential redevelopment, with the final nature of development yet to be determined. Based on the results of the investigation, additional site investigation is necessary to fully delineate the extent of soil and groundwater impacts. Based on the groundwater flow direction and the presence of chlorinated solvent impacts to shallow groundwater on the southern and western boundaries of the site, additional offsite investigation may be necessary to determine whether onsite impacts are migrating offsite.

It should be noted that the existing ERC implemented serves to mitigate exposure to existing impacts at the site. Direct contact with soil and groundwater and any potential ingestion and inhalation from any residual soil impacts and potential groundwater impact exposure pathways are eliminated through the ERC restriction prohibiting the installation and usage of onsite potable wells and limiting exposure to soils.

Heartland recommends further evaluation of redevelopment alternatives at the site and an evaluation of the potential exposure pathways present to determine whether additional action and potential mitigation is required with regard to these impacts prior to development. Heartland will consult with the City, the USEPA and the IBP to determine proper steps necessary to mitigate encountered impacts.

4.0 DISCLAIMER

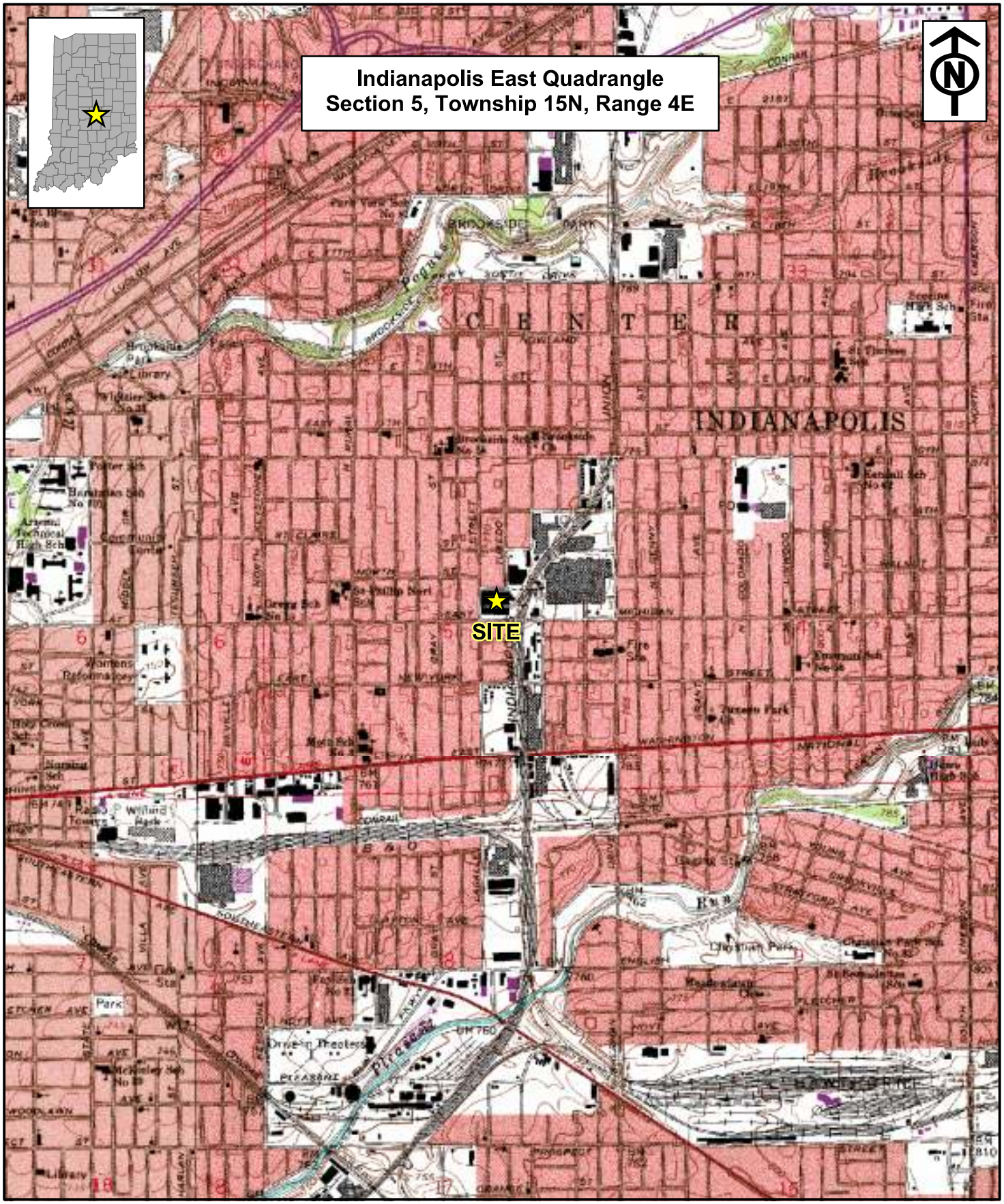
This FSI was prepared in accordance with generally accepted principles and practices in the environmental consulting field and in accordance to the pre-approved QAPP and SAP submitted to the USEPA in June 2017. Conclusions and recommendations expressed herein were developed from site evaluation and limited research, and we are not responsible for unrecorded data pertaining to this site. Heartland makes no warranties, expressed or implied, as to the fitness or merchantability of said property for any particular purpose, and we are not responsible for independent conclusions or opinions made by others based on this report.

This investigation was limited to the areas specified on the figures of this report. Heartland is not responsible for the identification of recognized environmental conditions that may be present outside this evaluated area, chemical parameters other than those analyzed for or at depths greater than that to which soil borings were advanced.

Any opinions and/or recommendations presented apply to site conditions existing at the time of performance of services. We are unable to report on or accurately predict events, which may impact the site, following performance of the described services, whether occurring naturally or caused by external forces. We assume no responsibility for conditions we are not authorized to investigate, or conditions not generally recognized as predictable at the time services are performed. Heartland makes no recommendations in regard to the sale, purchase, lease, construction, or other improvements on the subject property.

We are not responsible for changes in applicable regulatory standards, practices, or regulations following performance of services.

FIGURES



Base Map: USGS DRG

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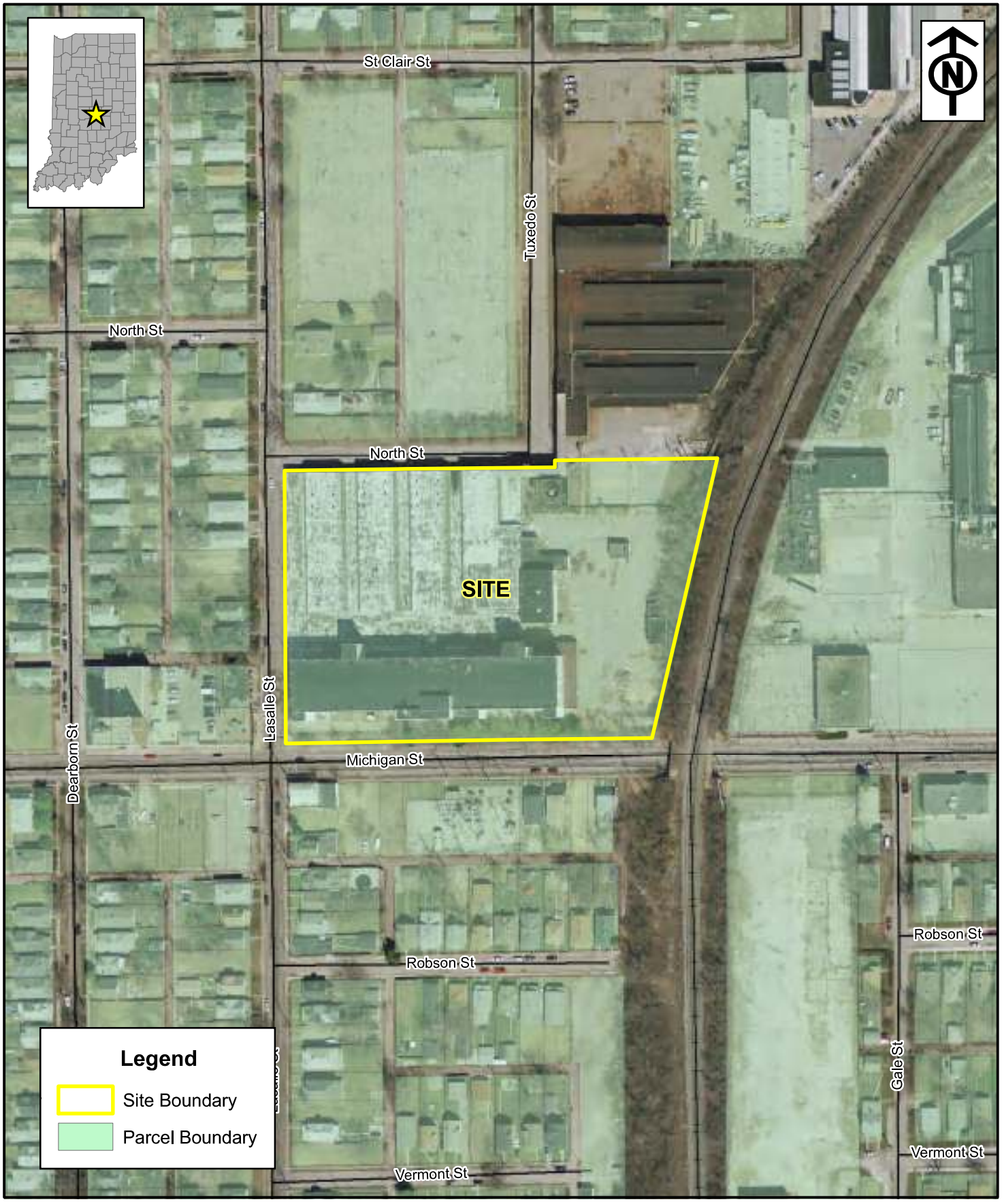
Figure 1
Site Location Map
Parcel B
Former Thomson Consumer Electronics / Former RCA / Former GE
Sherman Park Facility
3324 East Michigan Street
Indianapolis, Indiana 46201

Date: 10/4/17

1"=200'

Drawn By: RMO



Base Map: 2013 IndianaMap

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Figure 2
Site Location Map w/Parcel Boundary
Parcel B
Former Thomson Consumer Electronics / Former RCA / Former GE
Sherman Park Facility
3324 East Michigan Street
Indianapolis, Indiana 46201

Date: 10/4/17

1"=200'

Drawn By: RMO

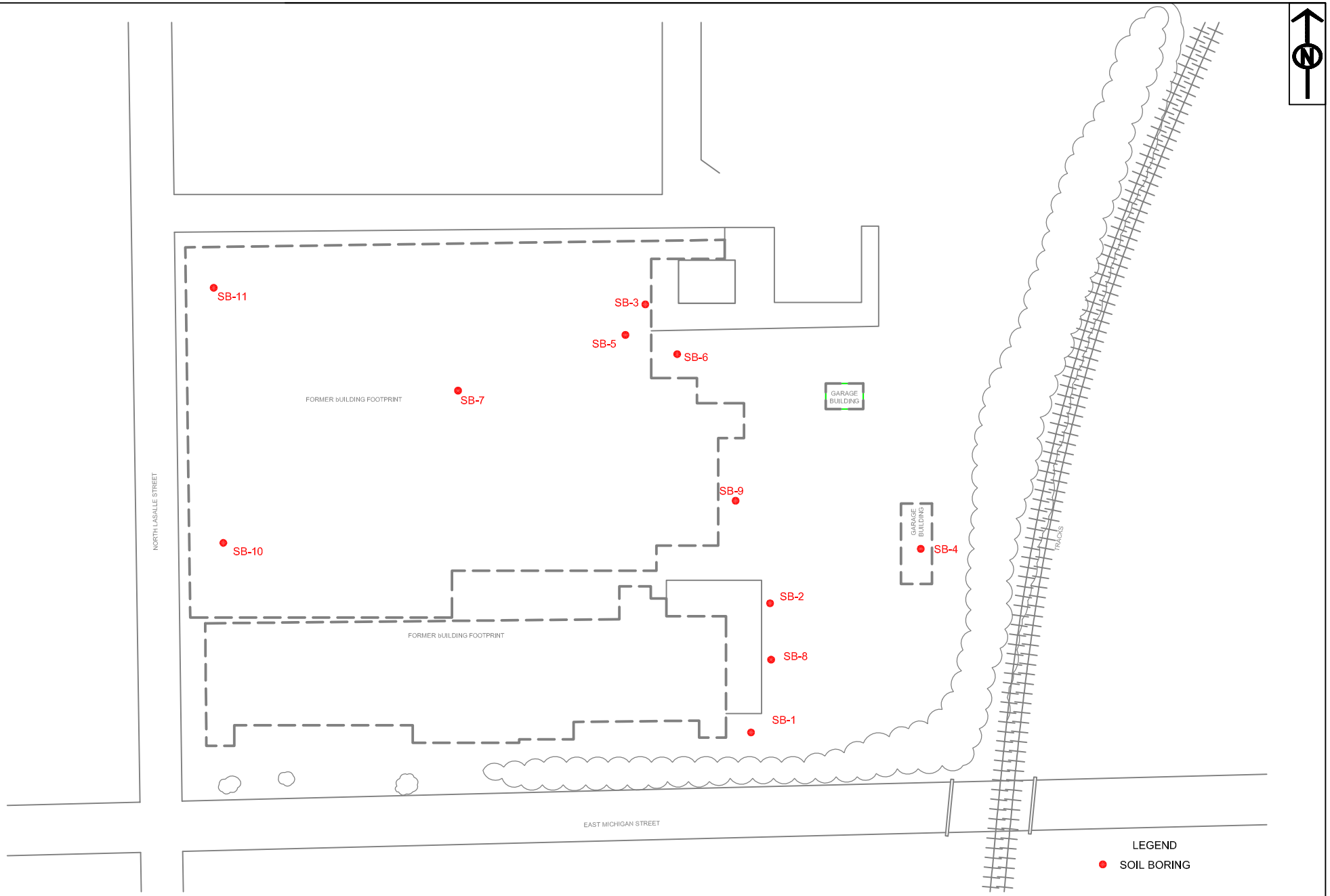

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FIGURE 3
HISTORIC SOIL BORING LOCATION MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV

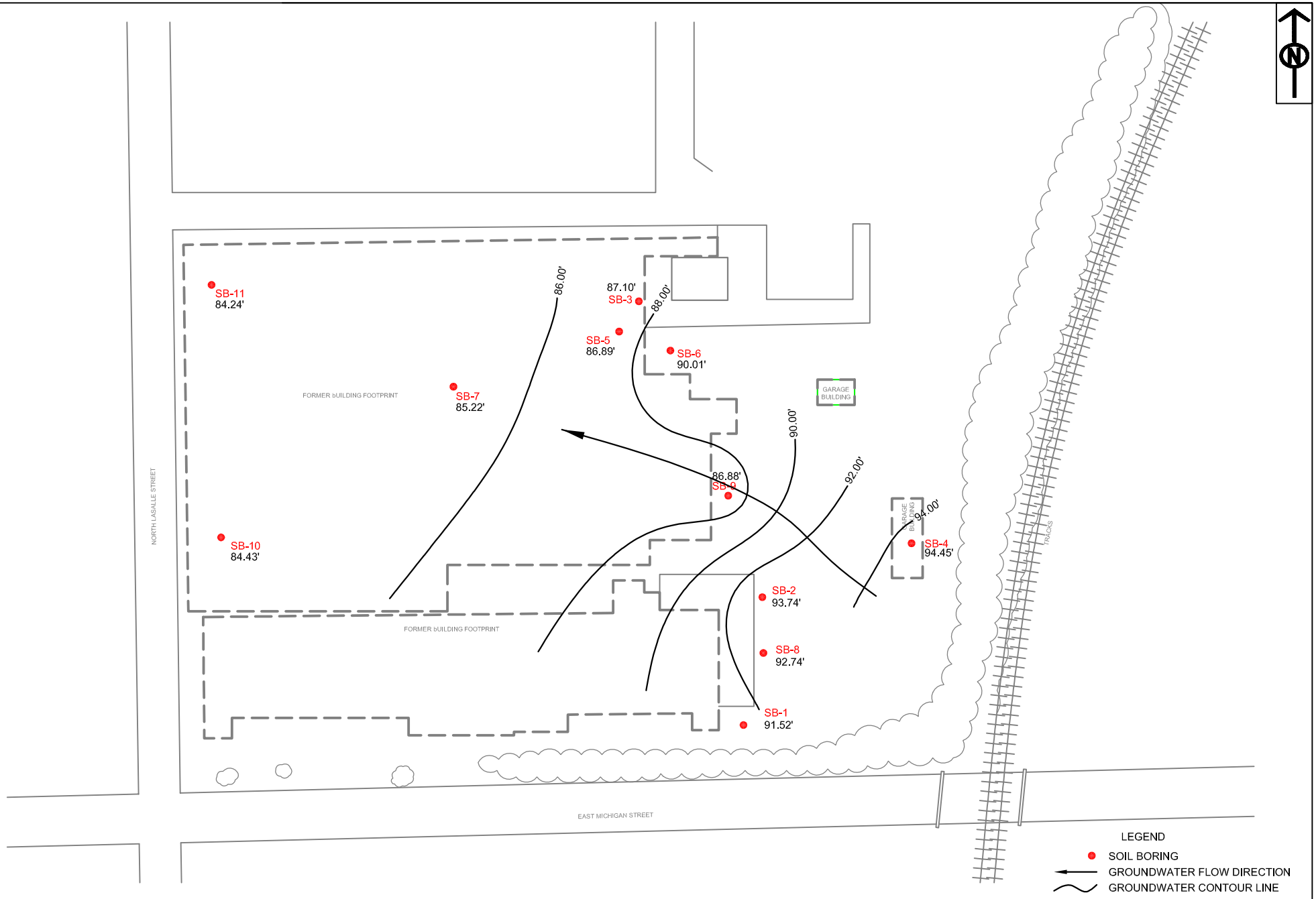

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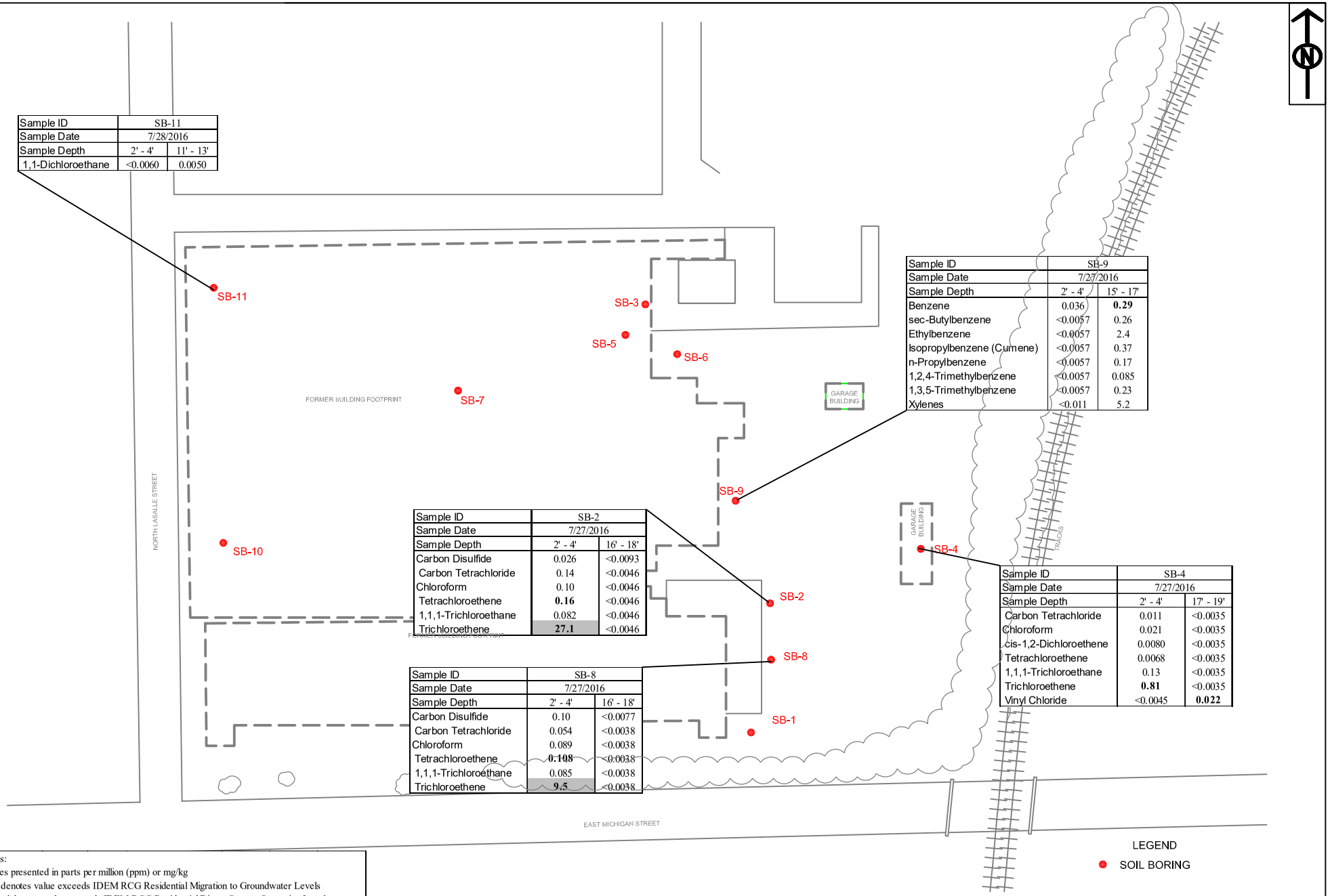
FIGURE 4
HISTORIC GROUNDWATER FLOW MAP
7/29/16
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17

Scale: 1"=100'

Drawn By: NV



Sample ID	SB-11	
Sample Date	7/28/2016	
Sample Depth	2' - 4'	11' - 13'
1,1-Dichloroethane	<0.0060	0.0050

Sample ID	SB-9	
Sample Date	7/27/2016	
Sample Depth	2' - 4'	15' - 17'
Benzene	0.036	**0.29**
sec-Butylbenzene	<0.0057	0.26
Ethylbenzene	<0.0057	2.4
Isopropylbenzene (Cumene)	<0.0057	0.37
n-Propylbenzene	<0.0057	0.17
1,2,4-Trimethylbenzene	<0.0057	0.085
1,3,5-Trimethylbenzene	<0.0057	0.23
Xylenes	<0.011	5.2

Sample ID	SB-2	
Sample Date	7/27/2016	
Sample Depth	2' - 4'	16' - 18'
Carbon Disulfide	0.026	<0.0093
Carbon Tetrachloride	0.14	<0.0046
Chloroform	0.10	<0.0046
Tetrachloroethene	**0.16**	<0.0046
1,1,1-Trichloroethane	0.082	<0.0046
Trichloroethene	**27.1**	<0.0046

Sample ID	SB-4	
Sample Date	7/27/2016	
Sample Depth	2' - 4'	17' - 19'
Carbon Tetrachloride	0.011	<0.0035
Chloroform	0.021	<0.0035
cis-1,2-Dichloroethene	0.0080	<0.0035
Tetrachloroethene	0.0068	<0.0035
1,1,1-Trichloroethane	0.13	<0.0035
Trichloroethene	**0.81**	<0.0035
Vinyl Chloride	<0.0045	**0.022**

Sample ID	SB-8	
Sample Date	7/27/2016	
Sample Depth	2' - 4'	16' - 18'
Carbon Disulfide	0.10	<0.0077
Carbon Tetrachloride	0.054	<0.0038
Chloroform	0.089	<0.0038
Tetrachloroethene	**0.108**	<0.0038
1,1,1-Trichloroethane	0.085	<0.0038
Trichloroethene	**9.5**	<0.0038

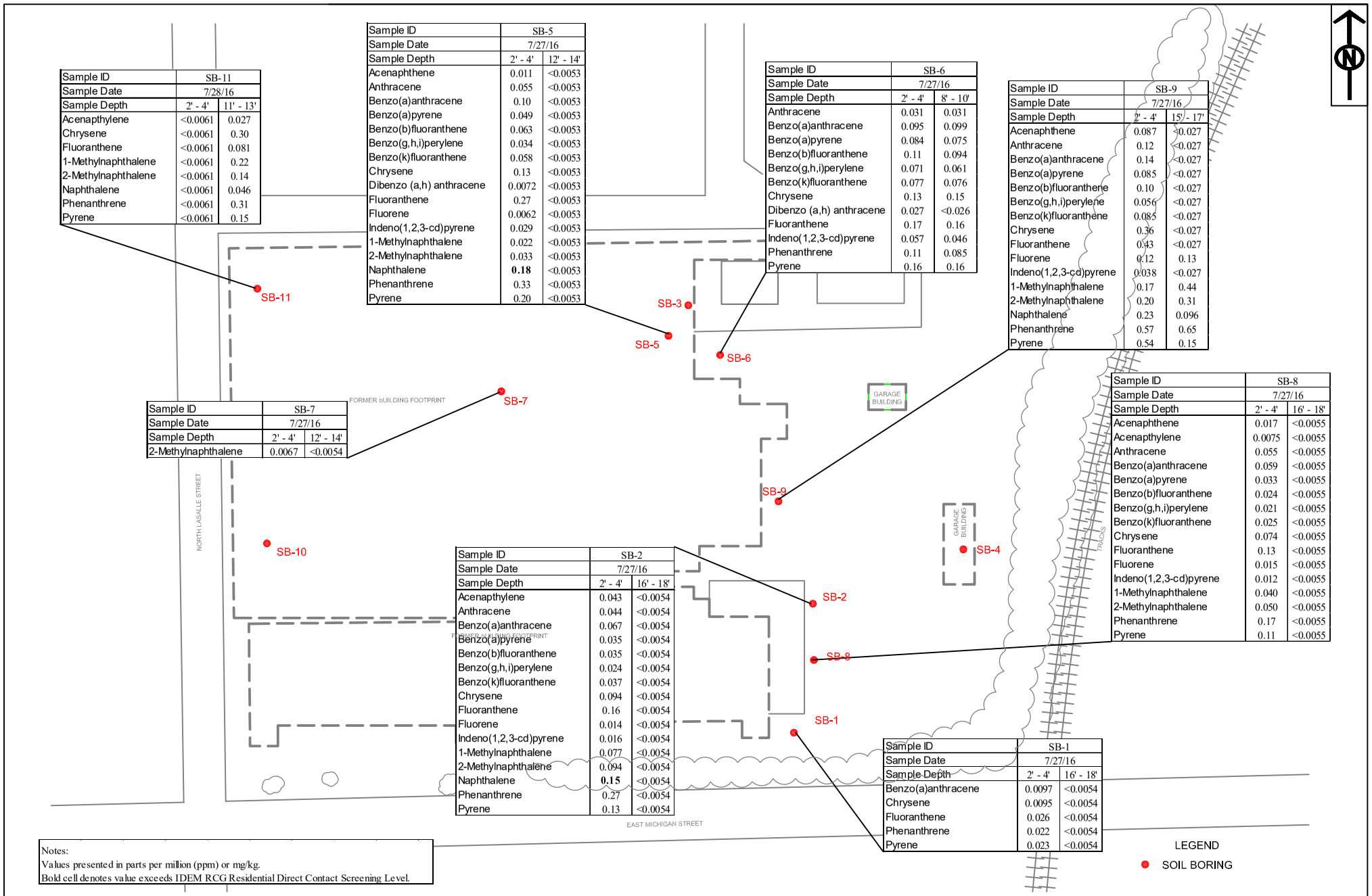
Notes:
Values presented in parts per million (ppm) or mg/kg
Bold denotes value exceeds IDEM RCG Residential Migration to Groundwater Levels
Shaded denotes value exceeds IDEM RCG Residential Direct Contact Screening Level

50' 0 100'

Heartland Environmental Associates, Inc.
3410 Mishawaka Avenue, South Bend, Indiana 46615

FIGURE 5
HISTORIC VOCS IN SOIL ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV



Sample ID	SB-11	
Sample Date	7/28/16	
Sample Depth	2' - 4'	11' - 13'
Acenapthylene	<0.0061	0.027
Chrysene	<0.0061	0.30
Fluoranthene	<0.0061	0.081
1-Methylnaphthalene	<0.0061	0.22
2-Methylnaphthalene	<0.0061	0.14
Naphthalene	<0.0061	0.046
Phenanthrene	<0.0061	0.31
Pyrene	<0.0061	0.15

Sample ID	SB-5	
Sample Date	7/27/16	
Sample Depth	2' - 4'	12' - 14'
Acenaphthene	0.011	<0.0053
Anthracene	0.055	<0.0053
Benzo(a)anthracene	0.10	<0.0053
Benzo(a)pyrene	0.049	<0.0053
Benzo(b)fluoranthene	0.063	<0.0053
Benzo(g,h,i)perylene	0.034	<0.0053
Benzo(k)fluoranthene	0.058	<0.0053
Chrysene	0.13	<0.0053
Dibenzo (a,h) anthracene	0.0072	<0.0053
Fluoranthene	0.27	<0.0053
Fluorene	0.0062	<0.0053
Indeno(1,2,3-cd)pyrene	0.029	<0.0053
1-Methylnaphthalene	0.022	<0.0053
2-Methylnaphthalene	0.033	<0.0053
Naphthalene	**0.18**	<0.0053
Phenanthrene	0.33	<0.0053
Pyrene	0.20	<0.0053

Sample ID	SB-6	
Sample Date	7/27/16	
Sample Depth	2' - 4'	8' - 10'
Anthracene	0.031	0.031
Benzo(a)anthracene	0.095	0.099
Benzo(a)pyrene	0.084	0.075
Benzo(b)fluoranthene	0.11	0.094
Benzo(g,h,i)perylene	0.071	0.061
Benzo(k)fluoranthene	0.077	0.076
Chrysene	0.13	0.15
Dibenzo (a,h) anthracene	0.027	<0.026
Fluoranthene	0.17	0.16
Indeno(1,2,3-cd)pyrene	0.057	0.046
Phenanthrene	0.11	0.085
Pyrene	0.16	0.16

Sample ID	SB-9	
Sample Date	7/27/16	
Sample Depth	2' - 4'	15' - 17'
Acenaphthene	0.087	<0.027
Anthracene	0.12	<0.027
Benzo(a)anthracene	0.14	<0.027
Benzo(a)pyrene	0.085	<0.027
Benzo(b)fluoranthene	0.10	<0.027
Benzo(g,h,i)perylene	0.056	<0.027
Benzo(k)fluoranthene	0.085	<0.027
Chrysene	0.36	<0.027
Fluoranthene	0.43	<0.027
Fluorene	0.12	0.13
Indeno(1,2,3-cd)pyrene	0.038	<0.027
1-Methylnaphthalene	0.17	0.44
2-Methylnaphthalene	0.20	0.31
Naphthalene	0.23	0.096
Phenanthrene	0.57	0.65
Pyrene	0.54	0.15

Sample ID	SB-7	
Sample Date	7/27/16	
Sample Depth	2' - 4'	12' - 14'
2-Methylnaphthalene	0.0067	<0.0054

Sample ID	SB-8	
Sample Date	7/27/16	
Sample Depth	2' - 4'	16' - 18'
Acenaphthene	0.017	<0.0055
Acenapthylene	0.0075	<0.0055
Anthracene	0.055	<0.0055
Benzo(a)anthracene	0.059	<0.0055
Benzo(a)pyrene	0.033	<0.0055
Benzo(b)fluoranthene	0.024	<0.0055
Benzo(g,h,i)perylene	0.021	<0.0055
Benzo(k)fluoranthene	0.025	<0.0055
Chrysene	0.074	<0.0055
Fluoranthene	0.13	<0.0055
Fluorene	0.015	<0.0055
Indeno(1,2,3-cd)pyrene	0.012	<0.0055
1-Methylnaphthalene	0.040	<0.0055
2-Methylnaphthalene	0.050	<0.0055
Phenanthrene	0.17	<0.0055
Pyrene	0.11	<0.0055

Sample ID	SB-2	
Sample Date	7/27/16	
Sample Depth	2' - 4'	16' - 18'
Acenapthylene	0.043	<0.0054
Anthracene	0.044	<0.0054
Benzo(a)anthracene	0.067	<0.0054
Benzo(a)pyrene	0.035	<0.0054
Benzo(b)fluoranthene	0.035	<0.0054
Benzo(g,h,i)perylene	0.024	<0.0054
Benzo(k)fluoranthene	0.037	<0.0054
Chrysene	0.094	<0.0054
Fluoranthene	0.16	<0.0054
Fluorene	0.014	<0.0054
Indeno(1,2,3-cd)pyrene	0.016	<0.0054
1-Methylnaphthalene	0.077	<0.0054
2-Methylnaphthalene	0.094	<0.0054
Naphthalene	**0.15**	<0.0054
Phenanthrene	0.27	<0.0054
Pyrene	0.13	<0.0054

Sample ID	SB-1	
Sample Date	7/27/16	
Sample Depth	2' - 4'	16' - 18'
Benzo(a)anthracene	0.0097	<0.0054
Chrysene	0.0095	<0.0054
Fluoranthene	0.026	<0.0054
Phenanthrene	0.022	<0.0054
Pyrene	0.023	<0.0054

Notes:
Values presented in parts per million (ppm) or mg/kg.
Bold cell denotes value exceeds IDEM RCG Residential Direct Contact Screening Level.

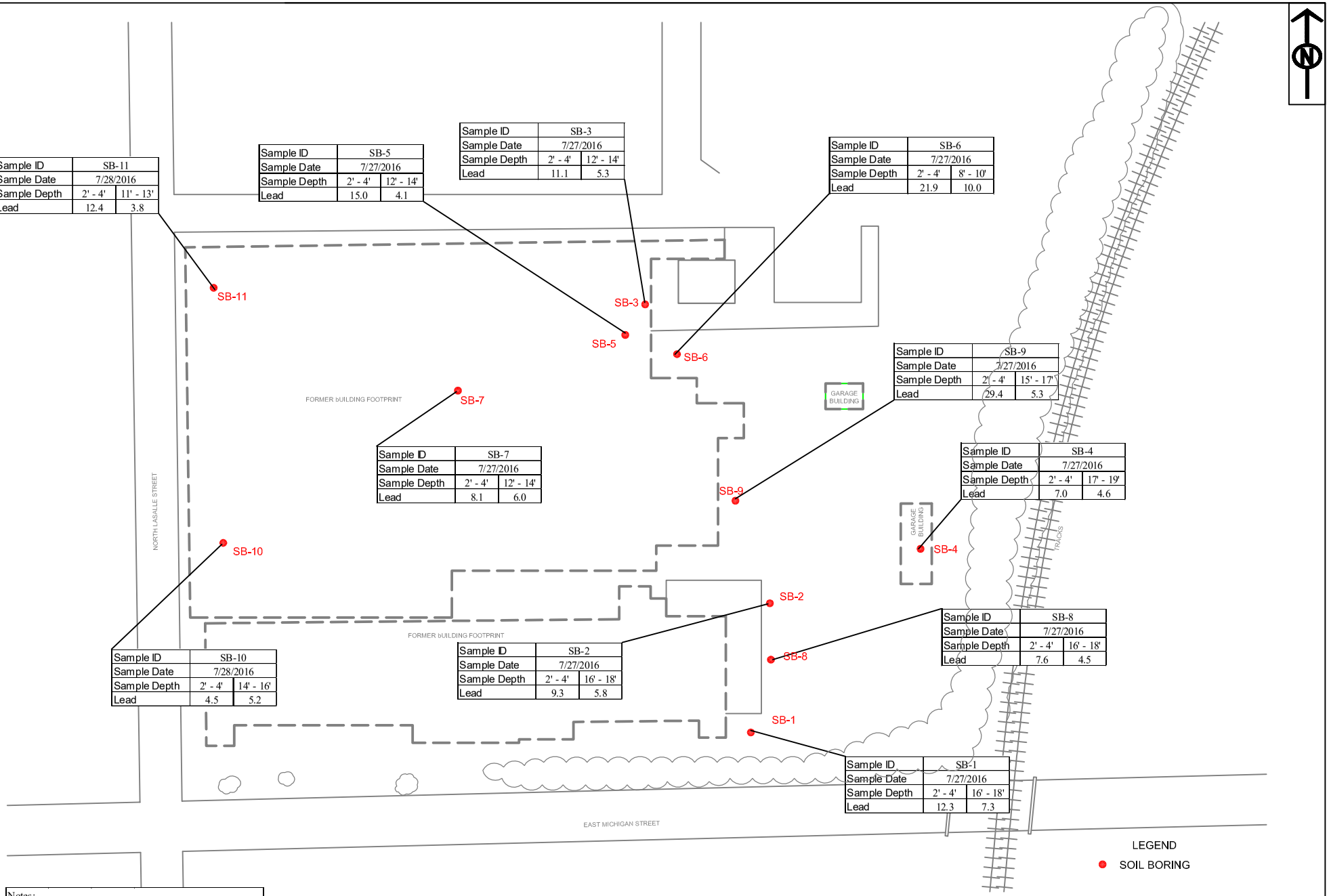
LEGEND
SOIL BORING

50' 0 100'

Heartland Environmental Associates, Inc.
3410 Mishawaka Avenue, South Bend, Indiana 46615

FIGURE 6
HISTORIC PAHS IN SOIL ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV



Notes:
Values presented in parts per million (ppm) or mg/kg.
Bold cell denotes value exceeds IDEM RCG Residential.

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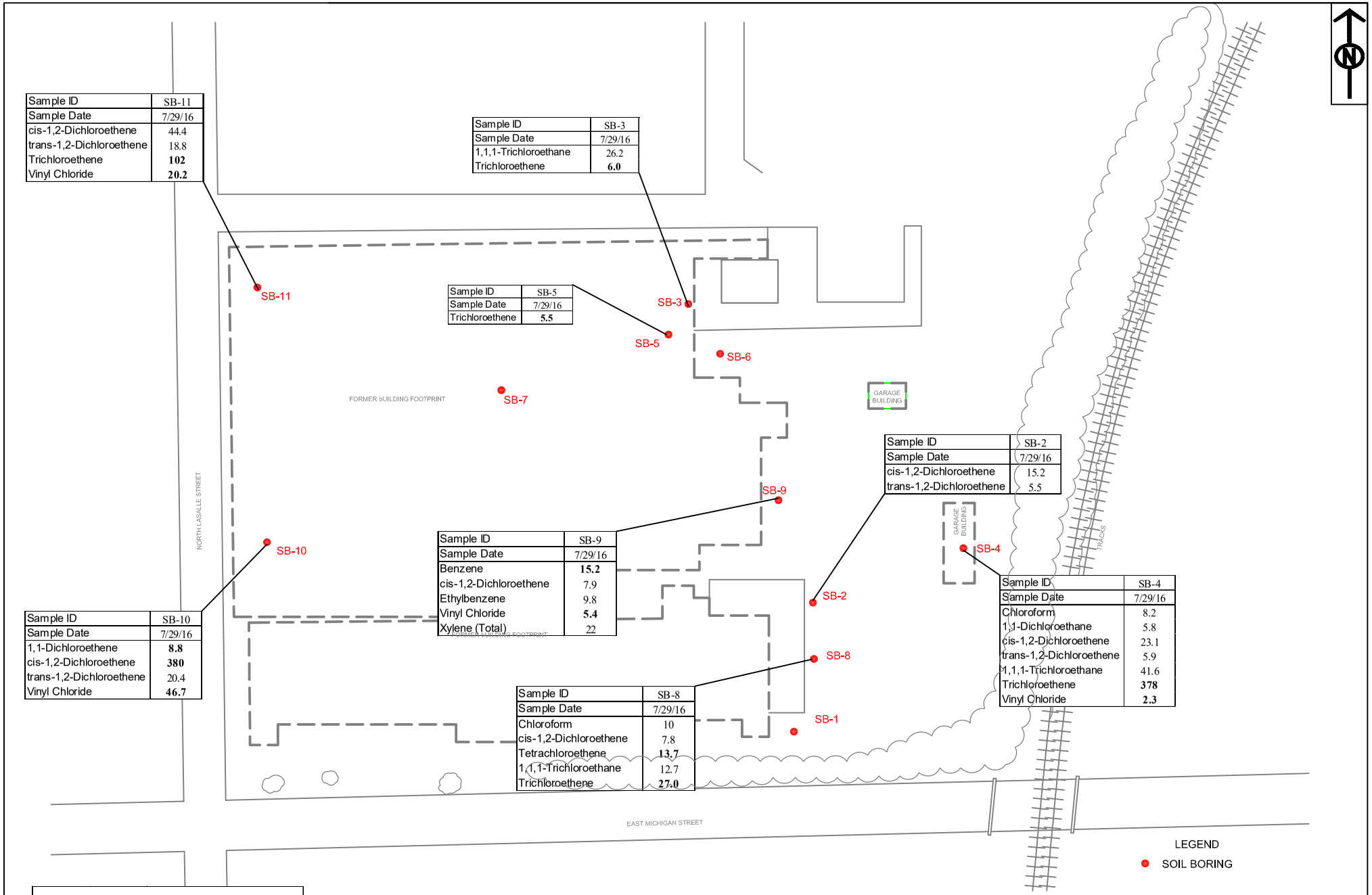
FIGURE 7
HISTORIC LEAD IN SOIL ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV



Notes:
Values presented in parts per billion (ppb) or ug/l.
Bold cell denotes value exceeds IDEM RCG RSLs.

50' 0 100'

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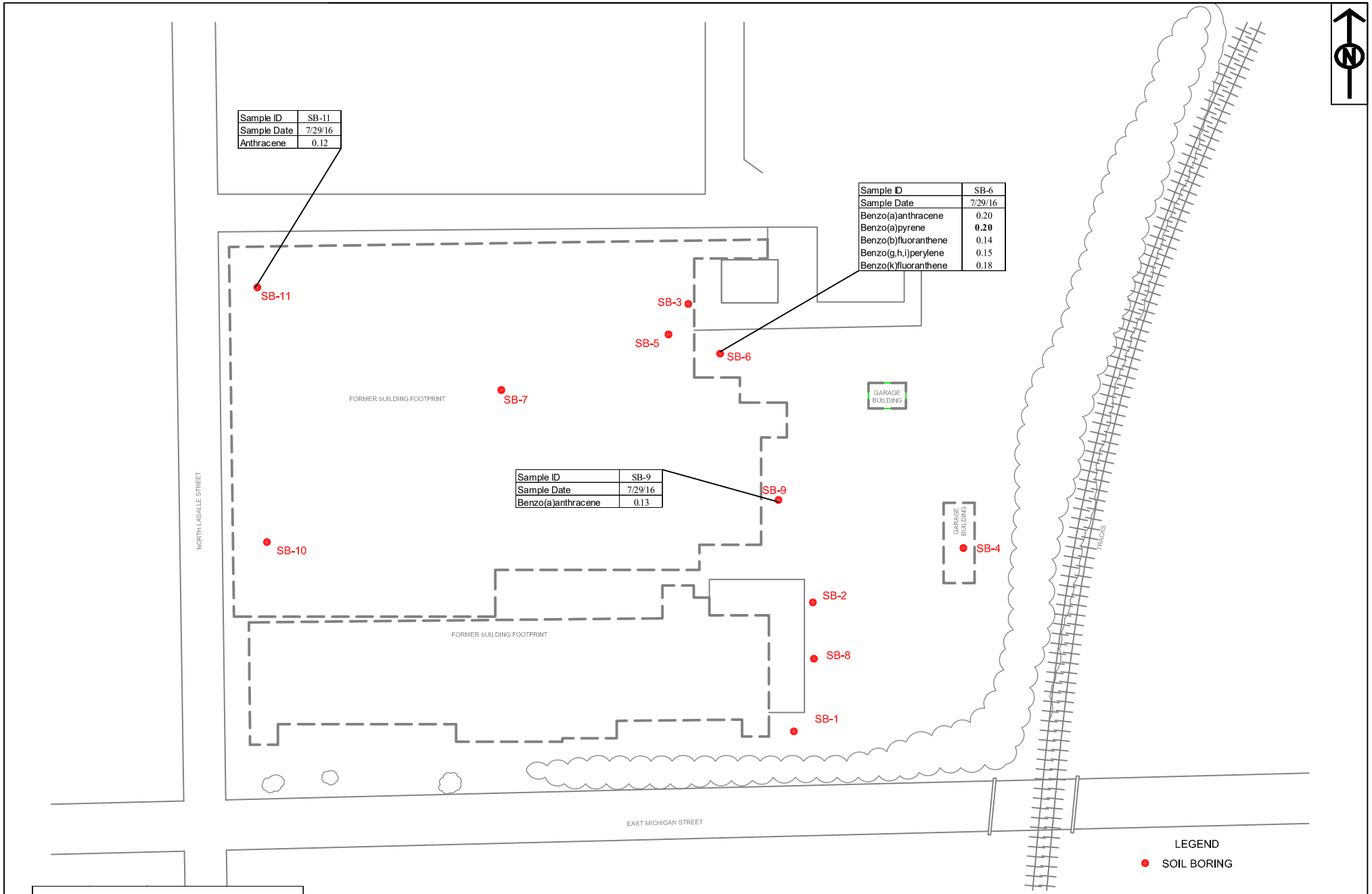
FIGURE 8
HISTORIC VOCS IN WATER ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV



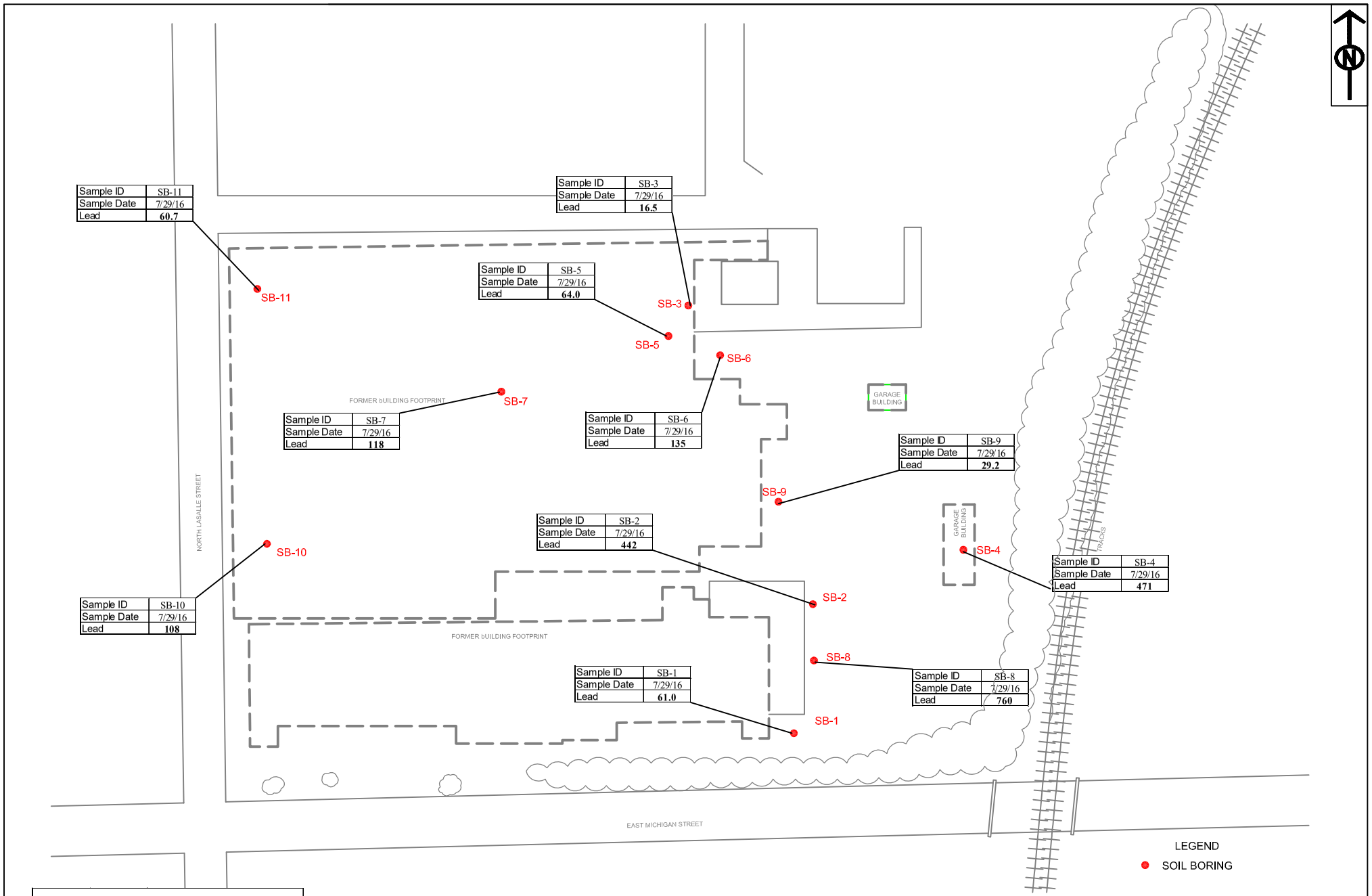
Notes:
Values presented in parts per billion (ppb) or ug/l.
Bold cell denotes value exceeds IDEM RCG RSLs.

50' 0 100'

Heartland Environmental Associates, Inc.
3410 Mishawaka Avenue, South Bend, Indiana 46615

FIGURE 9
HISTORIC PAHS IN GROUNDWATER ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV



Notes:
Values presented in parts per billion (ppb) or ug/l.
Bold cell denotes value exceeds IDEM RCG RSLs.

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FIGURE 10
HISTORIC LEAD IN WATER ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV

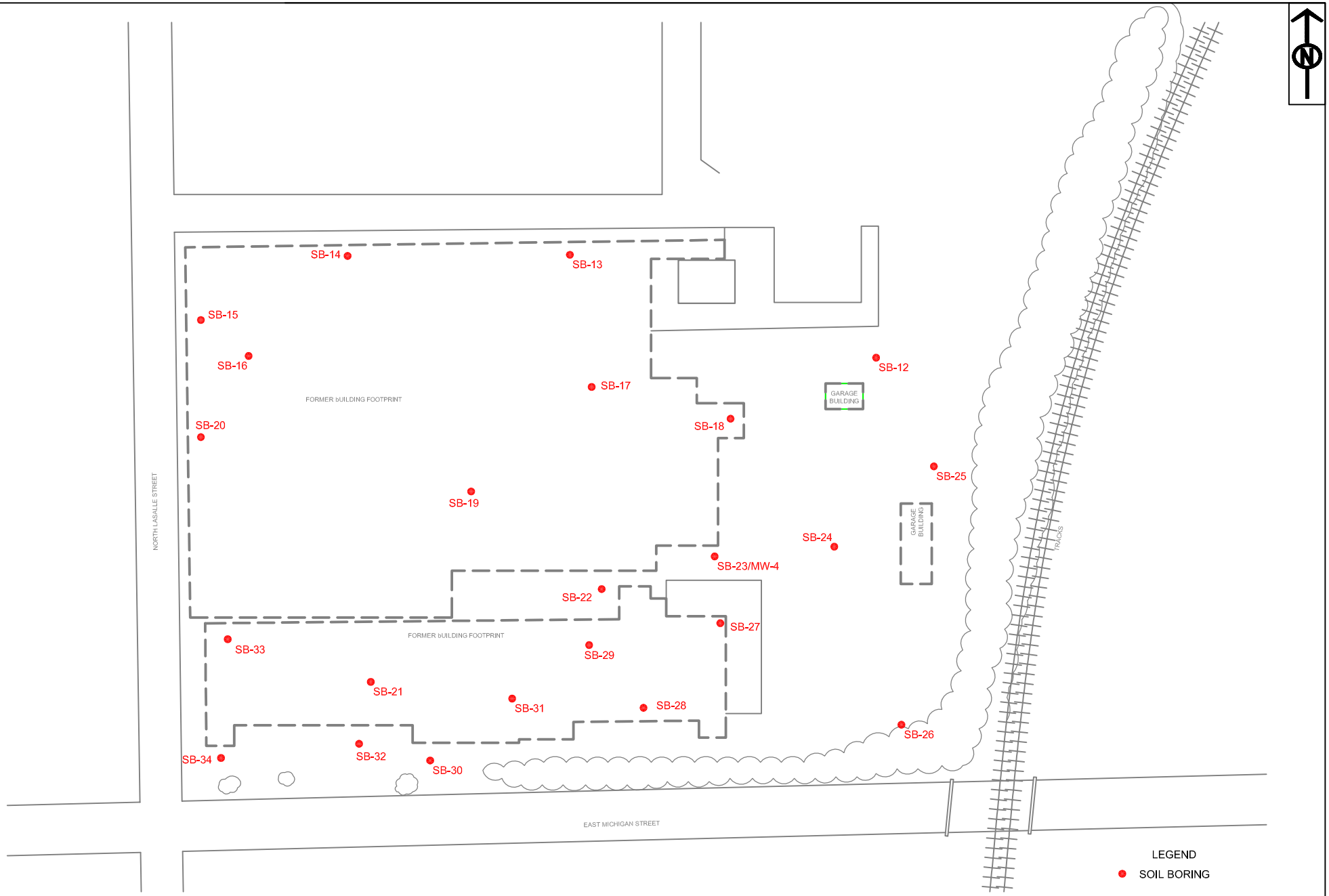

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FIGURE 11
SOIL BORING LOCATION MAP

PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17

Scale: 1"=100'

Drawn By: NV

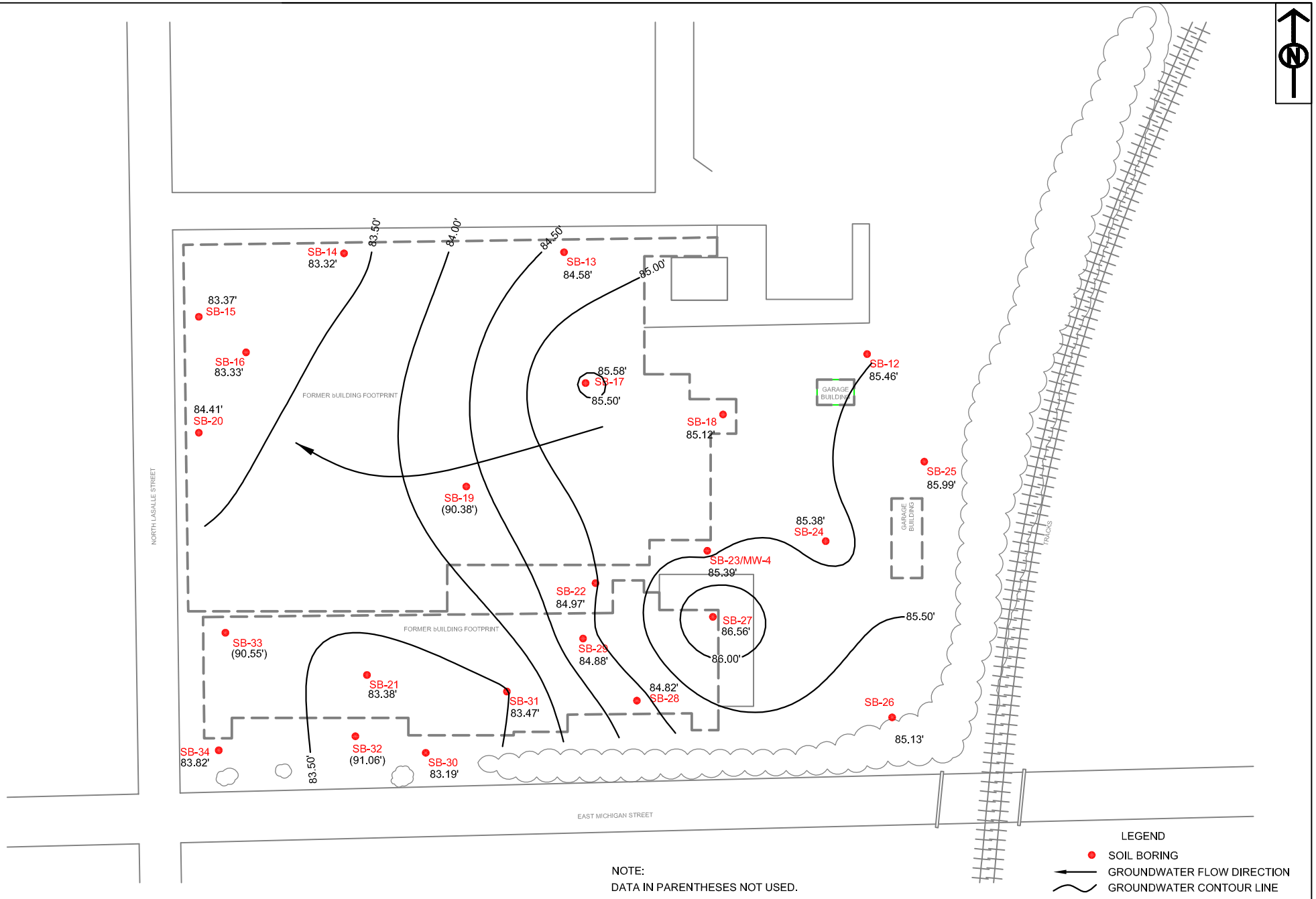

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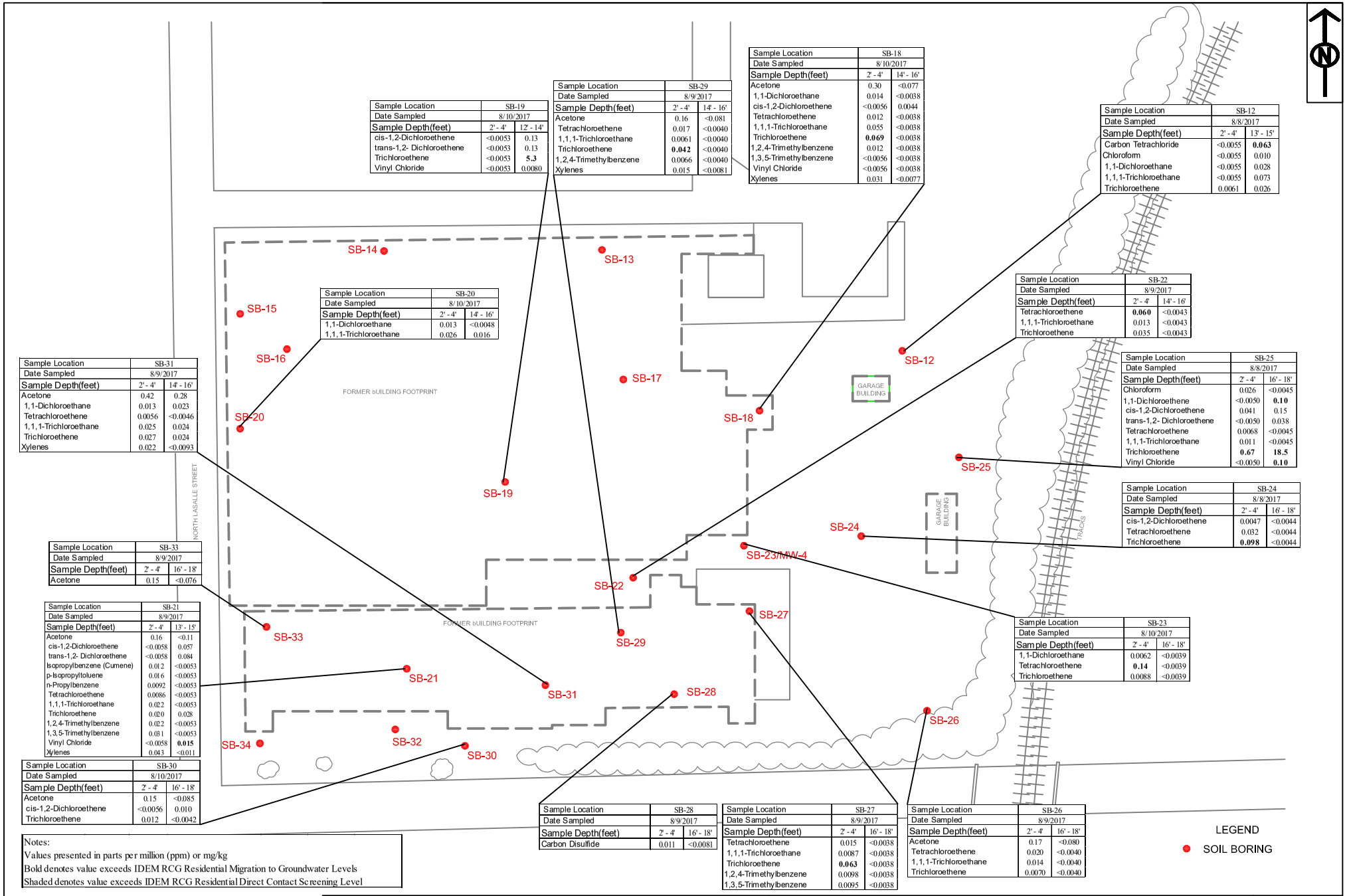
FIGURE 12
GROUNDWATER FLOW MAP
AUGUST, 2017

PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17

Scale: 1"=100'

Drawn By: NV



Sample Location	SB-19	
Date Sampled	8/10/2017	
Sample Depth(feet)	2' - 4'	12' - 14'
cis-1,2-Dichloroethene	<0.0053	0.13
trans-1,2- Dichloroethene	<0.0053	0.13
Trichloroethene	<0.0053	**5.3**
Vinyl Chloride	<0.0053	0.0080

Sample Location	SB-29	
Date Sampled	8/9/2017	
Sample Depth(feet)	2' - 4'	14' - 16'
Acetone	0.16	<0.081
Tetrachloroethene	0.017	<0.0040
1,1,1-Trichloroethane	0.0061	<0.0040
Trichloroethene	**0.042**	<0.0040
1,2,4-Trimethylbenzene	0.0066	<0.0040
Xylenes	0.015	<0.0081

Sample Location	SB-18	
Date Sampled	8/10/2017	
Sample Depth(feet)	2' - 4'	14' - 16'
Acetone	0.30	<0.077
1,1-Dichloroethane	0.014	<0.0038
cis-1,2-Dichloroethene	<0.0056	0.0044
Tetrachloroethene	0.012	<0.0038
1,1,1-Trichloroethane	0.055	<0.0038
Trichloroethene	**0.069**	<0.0038
1,2,4-Trimethylbenzene	0.012	<0.0038
1,3,5-Trimethylbenzene	<0.0056	<0.0038
Vinyl Chloride	<0.0056	<0.0038
Xylenes	0.031	<0.0077

Sample Location	SB-12	
Date Sampled	8/8/2017	
Sample Depth(feet)	2' - 4'	13' - 15'
Carbon Tetrachloride	<0.0055	**0.063**
Chloroform	<0.0055	0.010
1,1-Dichloroethane	<0.0055	0.028
1,1,1-Trichloroethane	<0.0055	0.073
Trichloroethene	0.0061	0.026

Sample Location	SB-20	
Date Sampled	8/10/2017	
Sample Depth(feet)	2' - 4'	14' - 16'
1,1-Dichloroethane	0.013	<0.0048
1,1,1-Trichloroethane	0.026	0.016

Sample Location	SB-22	
Date Sampled	8/9/2017	
Sample Depth(feet)	2' - 4'	14' - 16'
Tetrachloroethene	**0.060**	<0.0043
1,1,1-Trichloroethane	0.013	<0.0043
Trichloroethene	0.035	<0.0043

Sample Location	SB-31	
Date Sampled	8/9/2017	
Sample Depth(feet)	2' - 4'	14' - 16'
Acetone	0.42	0.28
1,1-Dichloroethane	0.013	0.023
Tetrachloroethene	0.0056	<0.0046
1,1,1-Trichloroethane	0.025	0.024
Trichloroethene	0.027	0.024
Xylenes	0.022	<0.0093

Sample Location	SB-25	
Date Sampled	8/8/2017	
Sample Depth(feet)	2' - 4'	16' - 18'
Chloroform	0.026	<0.0045
1,1-Dichloroethene	<0.0050	**0.10**
cis-1,2-Dichloroethene	0.041	0.15
trans-1,2- Dichloroethene	<0.0050	0.038
Tetrachloroethene	0.0068	<0.0045
1,1,1-Trichloroethane	0.011	<0.0045
Trichloroethene	**0.67**	**18.5**
Vinyl Chloride	<0.0050	**0.10**

Sample Location	SB-24	
Date Sampled	8/8/2017	
Sample Depth(feet)	2' - 4'	16' - 18'
cis-1,2-Dichloroethene	0.0047	<0.0044
Tetrachloroethene	0.032	<0.0044
Trichloroethene	**0.098**	<0.0044

Sample Location	SB-33	
Date Sampled	8/9/2017	
Sample Depth(feet)	2' - 4'	16' - 18'
Acetone	0.15	<0.076

Sample Location	SB-21	
Date Sampled	8/9/2017	
Sample Depth(feet)	2' - 4'	13' - 15'
Acetone	0.16	<0.11
cis-1,2-Dichloroethene	<0.0058	0.057
trans-1,2- Dichloroethene	<0.0058	0.084
Isopropylbenzene (Cumene)	0.012	<0.0053
p-Isopropyltoluene	0.016	<0.0053
n-Propylbenzene	0.0092	<0.0053
Tetrachloroethene	0.0086	<0.0053
1,1,1-Trichloroethane	0.022	<0.0053
Trichloroethene	0.020	0.028
1,2,4-Trimethylbenzene	0.022	<0.0053
1,3,5-Trimethylbenzene	0.031	<0.0053
Vinyl Chloride	<0.0058	**0.015**
Xylenes	0.043	<0.011

Sample Location	SB-30	
Date Sampled	8/10/2017	
Sample Depth(feet)	2' - 4'	16' - 18'
Acetone	0.15	<0.085
cis-1,2-Dichloroethene	<0.0056	0.010
Trichloroethene	0.012	<0.0042

Sample Location	SB-23	
Date Sampled	8/10/2017	
Sample Depth(feet)	2' - 4'	16' - 18'
1,1-Dichloroethane	0.0062	<0.0039
Tetrachloroethene	**0.14**	<0.0039
Trichloroethene	0.0088	<0.0039

Sample Location	SB-28	
Date Sampled	8/9/2017	
Sample Depth(feet)	2' - 4'	16' - 18'
Carbon Disulfide	0.011	<0.0081

Sample Location	SB-27	
Date Sampled	8/9/2017	
Sample Depth(feet)	2' - 4'	16' - 18'
Tetrachloroethene	0.015	<0.0038
1,1,1-Trichloroethane	0.0087	<0.0038
Trichloroethene	**0.063**	<0.0038
1,2,4-Trimethylbenzene	0.0098	<0.0038
1,3,5-Trimethylbenzene	0.0095	<0.0038

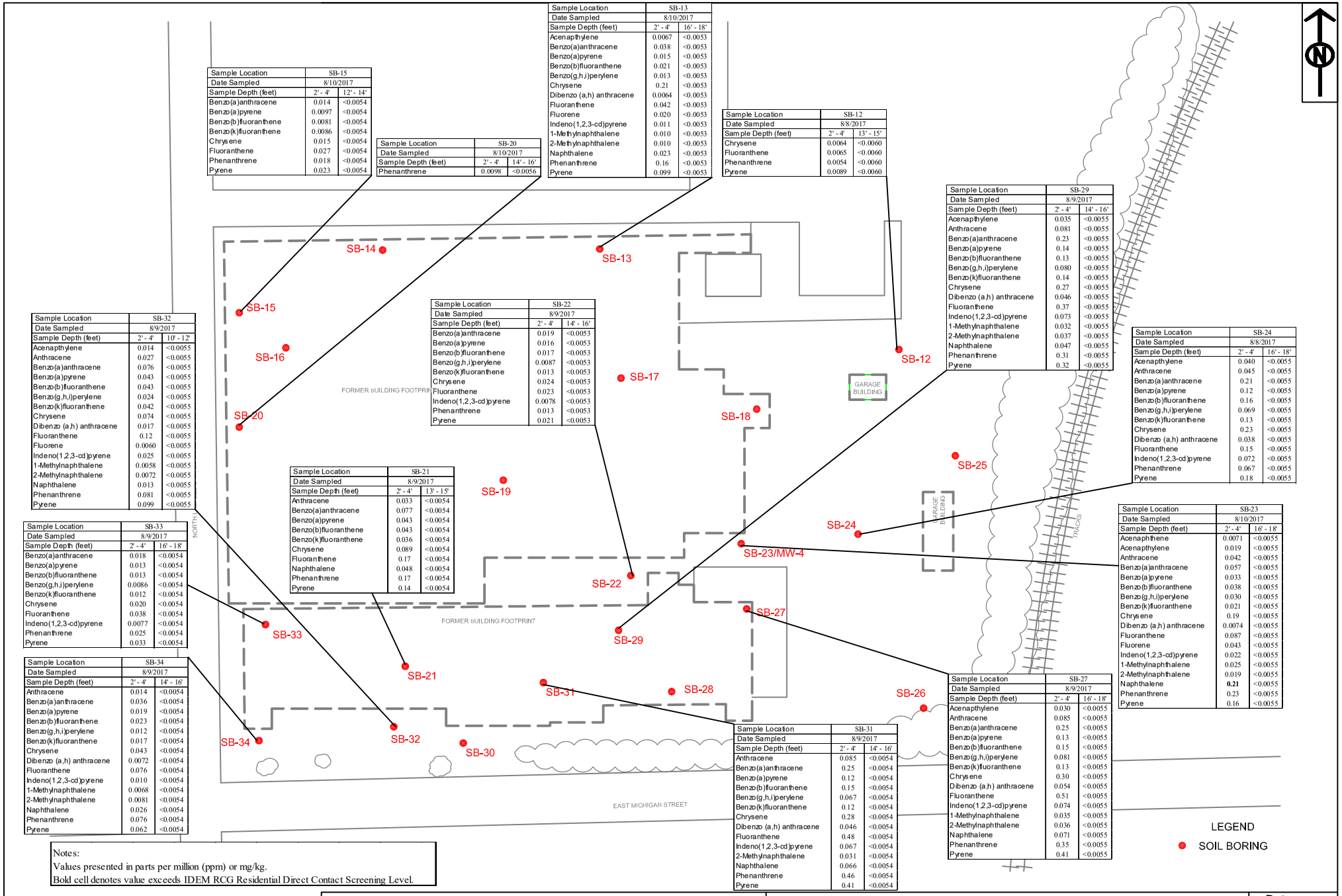
Sample Location	SB-26	
Date Sampled	8/9/2017	
Sample Depth(feet)	2' - 4'	16' - 18'
Acetone	0.17	<0.080
Tetrachloroethene	0.020	<0.0040
1,1,1-Trichloroethane	0.014	<0.0040
Trichloroethene	0.0070	<0.0040

Notes:
Values presented in parts per million (ppm) or mg/kg
Bold denotes value exceeds IDEM RCG Residential Migration to Groundwater Levels
Shaded denotes value exceeds IDEM RCG Residential Direct Contact Screening Level

Heartland Environmental Associates, Inc.
3410 Mishawaka Avenue, South Bend, Indiana 46615

FIGURE 13
VOCS IN SOIL ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV



Sample Location	SB-15	
Date Sampled	8/10/2017	
Sample Depth (feet)	2' - 4'	12' - 14'
Benzo(a)anthracene	0.014	<0.0054
Benzo(a)pyrene	0.0097	<0.0054
Benzo(b)fluoranthene	0.0081	<0.0054
Benzo(k)fluoranthene	0.0086	<0.0054
Chrysene	0.015	<0.0054
Fluoranthene	0.027	<0.0054
Phenanthrene	0.018	<0.0054
Pyrene	0.023	<0.0054

Sample Location	SB-20	
Date Sampled	8/10/2017	
Sample Depth (feet)	2' - 4'	14' - 16'
Phenanthrene	0.0098	<0.0056

Sample Location	SB-13	
Date Sampled	8/10/2017	
Sample Depth (feet)	2' - 4'	16' - 18'
Acenaphthylene	0.0067	<0.0053
Benzo(a)anthracene	0.038	<0.0053
Benzo(a)pyrene	0.015	<0.0053
Benzo(b)fluoranthene	0.021	<0.0053
Benzo(g,h,i)perylene	0.013	<0.0053
Chrysene	0.21	<0.0053
Dibenzo (a,h) anthracene	0.0064	<0.0053
Fluoranthene	0.042	<0.0053
Fluorene	0.020	<0.0053
Indeno(1,2,3-cd)pyrene	0.011	<0.0053
1-Methylnaphthalene	0.010	<0.0053
2-Methylnaphthalene	0.010	<0.0053
Naphthalene	0.023	<0.0053
Phenanthrene	0.16	<0.0053
Pyrene	0.099	<0.0053

Sample Location	SB-12	
Date Sampled	8/8/2017	
Sample Depth (feet)	2' - 4'	13' - 15'
Chrysene	0.0064	<0.0060
Fluoranthene	0.0065	<0.0060
Phenanthrene	0.0054	<0.0060
Pyrene	0.0089	<0.0060

Sample Location	SB-29	
Date Sampled	8/9/2017	
Sample Depth (feet)	2' - 4'	14' - 16'
Acenaphthylene	0.035	<0.0055
Anthracene	0.081	<0.0055
Benzo(a)anthracene	0.23	<0.0055
Benzo(a)pyrene	0.14	<0.0055
Benzo(b)fluoranthene	0.13	<0.0055
Benzo(g,h,i)perylene	0.080	<0.0055
Benzo(k)fluoranthene	0.14	<0.0055
Chrysene	0.27	<0.0055
Dibenzo (a,h) anthracene	0.046	<0.0055
Fluoranthene	0.37	<0.0055
Indeno(1,2,3-cd)pyrene	0.073	<0.0055
1-Methylnaphthalene	0.032	<0.0055
2-Methylnaphthalene	0.037	<0.0055
Naphthalene	0.047	<0.0055
Phenanthrene	0.31	<0.0055
Pyrene	0.32	<0.0055

Sample Location	SB-32	
Date Sampled	8/9/2017	
Sample Depth (feet)	2' - 4'	10' - 12'
Acenaphthylene	0.014	<0.0055
Anthracene	0.027	<0.0055
Benzo(a)anthracene	0.076	<0.0055
Benzo(a)pyrene	0.043	<0.0055
Benzo(b)fluoranthene	0.043	<0.0055
Benzo(g,h,i)perylene	0.024	<0.0055
Benzo(k)fluoranthene	0.042	<0.0055
Chrysene	0.074	<0.0055
Dibenzo (a,h) anthracene	0.017	<0.0055
Fluoranthene	0.12	<0.0055
Fluorene	0.0060	<0.0055
Indeno(1,2,3-cd)pyrene	0.025	<0.0055
1-Methylnaphthalene	0.0058	<0.0055
2-Methylnaphthalene	0.0072	<0.0055
Naphthalene	0.013	<0.0055
Phenanthrene	0.081	<0.0055
Pyrene	0.099	<0.0055

Sample Location	SB-22	
Date Sampled	8/9/2017	
Sample Depth (feet)	2' - 4'	14' - 16'
Benzo(a)anthracene	0.019	<0.0053
Benzo(a)pyrene	0.016	<0.0053
Benzo(b)fluoranthene	0.017	<0.0053
Benzo(g,h,i)perylene	0.0087	<0.0053
Benzo(k)fluoranthene	0.013	<0.0053
Chrysene	0.024	<0.0053
Fluoranthene	0.023	<0.0053
Indeno(1,2,3-cd)pyrene	0.0078	<0.0053
Phenanthrene	0.013	<0.0053
Pyrene	0.021	<0.0053

Sample Location	SB-24	
Date Sampled	8/8/2017	
Sample Depth (feet)	2' - 4'	16' - 18'
Acenaphthylene	0.040	<0.0055
Anthracene	0.045	<0.0055
Benzo(a)anthracene	0.21	<0.0055
Benzo(a)pyrene	0.12	<0.0055
Benzo(b)fluoranthene	0.16	<0.0055
Benzo(g,h,i)perylene	0.069	<0.0055
Benzo(k)fluoranthene	0.13	<0.0055
Chrysene	0.23	<0.0055
Dibenzo (a,h) anthracene	0.038	<0.0055
Fluoranthene	0.15	<0.0055
Indeno(1,2,3-cd)pyrene	0.072	<0.0055
Phenanthrene	0.067	<0.0055
Pyrene	0.18	<0.0055

Sample Location	SB-21	
Date Sampled	8/9/2017	
Sample Depth (feet)	2' - 4'	13' - 15'
Anthracene	0.033	<0.0054
Benzo(a)anthracene	0.077	<0.0054
Benzo(a)pyrene	0.043	<0.0054
Benzo(b)fluoranthene	0.043	<0.0054
Benzo(k)fluoranthene	0.036	<0.0054
Chrysene	0.089	<0.0054
Fluoranthene	0.17	<0.0054
Naphthalene	0.048	<0.0054
Phenanthrene	0.17	<0.0054
Pyrene	0.14	<0.0054

Sample Location	SB-23	
Date Sampled	8/10/2017	
Sample Depth (feet)	2' - 4'	16' - 18'
Acenaphthene	0.0071	<0.0055
Acenaphthylene	0.019	<0.0055
Anthracene	0.042	<0.0055
Benzo(a)anthracene	0.057	<0.0055
Benzo(a)pyrene	0.033	<0.0055
Benzo(b)fluoranthene	0.038	<0.0055
Benzo(g,h,i)perylene	0.030	<0.0055
Benzo(k)fluoranthene	0.021	<0.0055
Chrysene	0.19	<0.0055
Dibenzo (a,h) anthracene	0.0074	<0.0055
Fluoranthene	0.087	<0.0055
Fluorene	0.043	<0.0055
Indeno(1,2,3-cd)pyrene	0.022	<0.0055
1-Methylnaphthalene	0.025	<0.0055
2-Methylnaphthalene	0.019	<0.0055
Naphthalene	**0.21**	<0.0055
Phenanthrene	0.23	<0.0055
Pyrene	0.16	<0.0055

Sample Location	SB-33	
Date Sampled	8/9/2017	
Sample Depth (feet)	2' - 4'	16' - 18'
Benzo(a)anthracene	0.018	<0.0054
Benzo(a)pyrene	0.013	<0.0054
Benzo(b)fluoranthene	0.013	<0.0054
Benzo(g,h,i)perylene	0.0086	<0.0054
Benzo(k)fluoranthene	0.012	<0.0054
Chrysene	0.020	<0.0054
Fluoranthene	0.038	<0.0054
Indeno(1,2,3-cd)pyrene	0.0077	<0.0054
Phenanthrene	0.025	<0.0054
Pyrene	0.033	<0.0054

Sample Location	SB-31	
Date Sampled	8/9/2017	
Sample Depth (feet)	2' - 4'	14' - 16'
Anthracene	0.085	<0.0054
Benzo(a)anthracene	0.25	<0.0054
Benzo(a)pyrene	0.12	<0.0054
Benzo(b)fluoranthene	0.15	<0.0054
Benzo(g,h,i)perylene	0.067	<0.0054
Benzo(k)fluoranthene	0.12	<0.0054
Chrysene	0.28	<0.0054
Dibenzo (a,h) anthracene	0.046	<0.0054
Fluoranthene	0.48	<0.0054
Indeno(1,2,3-cd)pyrene	0.067	<0.0054
2-Methylnaphthalene	0.031	<0.0054
Naphthalene	0.066	<0.0054
Phenanthrene	0.46	<0.0054
Pyrene	0.41	<0.0054

Sample Location	SB-27	
Date Sampled	8/9/2017	
Sample Depth (feet)	2' - 4'	16' - 18'
Acenaphthylene	0.030	<0.0055
Anthracene	0.085	<0.0055
Benzo(a)anthracene	0.25	<0.0055
Benzo(a)pyrene	0.13	<0.0055
Benzo(b)fluoranthene	0.15	<0.0055
Benzo(g,h,i)perylene	0.081	<0.0055
Benzo(k)fluoranthene	0.13	<0.0055
Chrysene	0.30	<0.0055
Dibenzo (a,h) anthracene	0.054	<0.0055
Fluoranthene	0.51	<0.0055
Indeno(1,2,3-cd)pyrene	0.074	<0.0055
1-Methylnaphthalene	0.035	<0.0055
2-Methylnaphthalene	0.036	<0.0055
Naphthalene	0.071	<0.0055
Phenanthrene	0.35	<0.0055
Pyrene	0.41	<0.0055

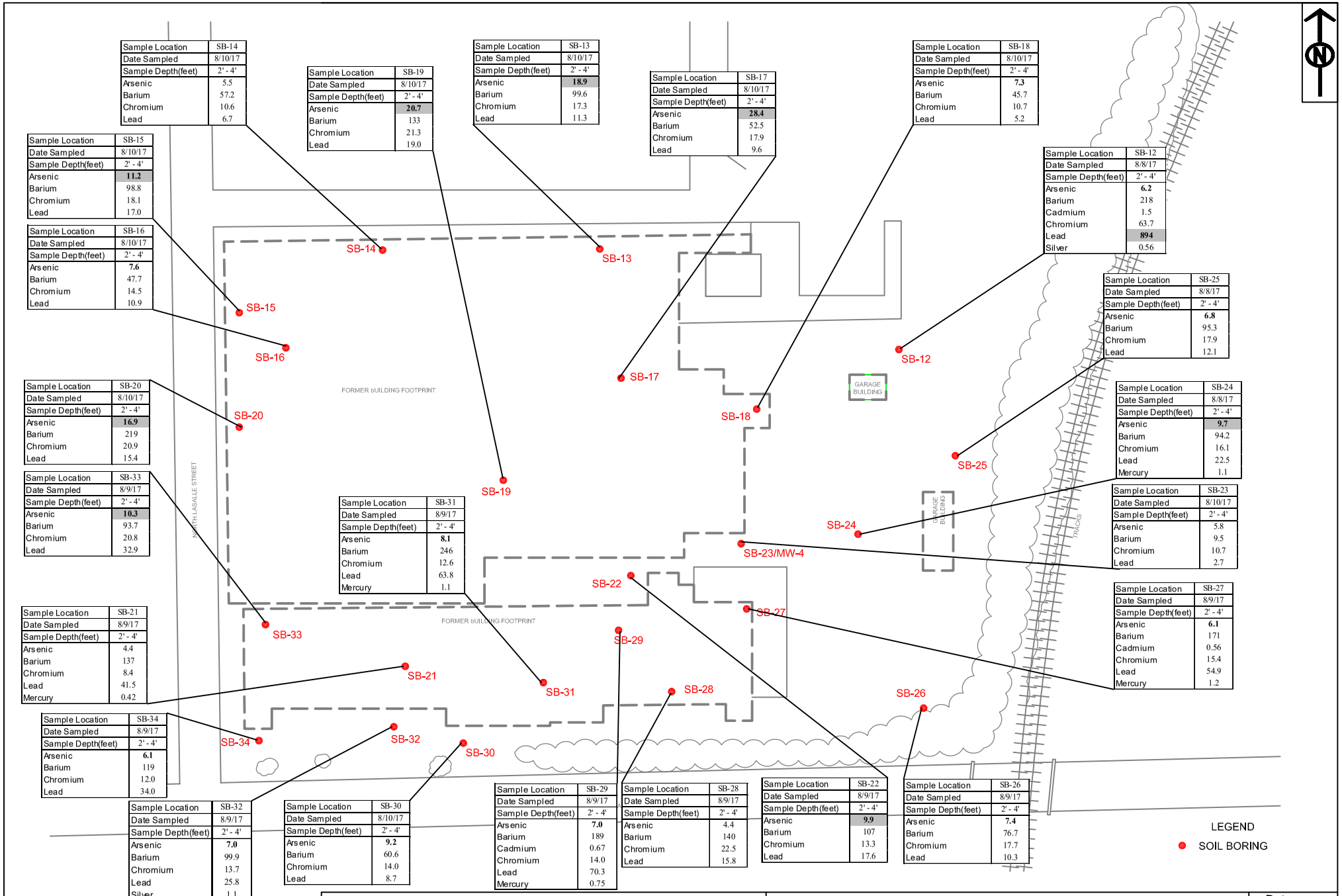
Sample Location	SB-34	
Date Sampled	8/9/2017	
Sample Depth (feet)	2' - 4'	14' - 16'
Anthracene	0.014	<0.0054
Benzo(a)anthracene	0.036	<0.0054
Benzo(a)pyrene	0.019	<0.0054
Benzo(b)fluoranthene	0.023	<0.0054
Benzo(g,h,i)perylene	0.012	<0.0054
Benzo(k)fluoranthene	0.017	<0.0054
Chrysene	0.043	<0.0054
Dibenzo (a,h) anthracene	0.0072	<0.0054
Fluoranthene	0.076	<0.0054
Indeno(1,2,3-cd)pyrene	0.010	<0.0054
1-Methylnaphthalene	0.0068	<0.0054
2-Methylnaphthalene	0.0081	<0.0054
Naphthalene	0.026	<0.0054
Phenanthrene	0.076	<0.0054
Pyrene	0.062	<0.0054

Notes:
Values presented in parts per million (ppm) or mg/kg.
Bold cell denotes value exceeds IDEM RCG Residential Direct Contact Screening Level.

Heartland Environmental Associates, Inc.
3410 Mishawaka Avenue, South Bend, Indiana 46615

FIGURE 14
PRESENT PAHS IN SOIL ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV



Sample Location	SB-14
Date Sampled	8/10/17
Sample Depth(feet)	2' - 4'
Arsenic	5.5
Barium	57.2
Chromium	10.6
Lead	6.7

Sample Location	SB-19
Date Sampled	8/10/17
Sample Depth(feet)	2' - 4'
Arsenic	**20.7**
Barium	133
Chromium	21.3
Lead	19.0

Sample Location	SB-13
Date Sampled	8/10/17
Sample Depth(feet)	2' - 4'
Arsenic	**18.9**
Barium	99.6
Chromium	17.3
Lead	11.3

Sample Location	SB-17
Date Sampled	8/10/17
Sample Depth(feet)	2' - 4'
Arsenic	**28.4**
Barium	52.5
Chromium	17.9
Lead	9.6

Sample Location	SB-18
Date Sampled	8/10/17
Sample Depth(feet)	2' - 4'
Arsenic	**7.3**
Barium	45.7
Chromium	10.7
Lead	5.2

Sample Location	SB-15
Date Sampled	8/10/17
Sample Depth(feet)	2' - 4'
Arsenic	**11.2**
Barium	98.8
Chromium	18.1
Lead	17.0

Sample Location	SB-16
Date Sampled	8/10/17
Sample Depth(feet)	2' - 4'
Arsenic	**7.6**
Barium	47.7
Chromium	14.5
Lead	10.9

Sample Location	SB-12
Date Sampled	8/8/17
Sample Depth(feet)	2' - 4'
Arsenic	**6.2**
Barium	218
Cadmium	1.5
Chromium	63.7
Lead	**894**
Silver	0.56

Sample Location	SB-25
Date Sampled	8/8/17
Sample Depth(feet)	2' - 4'
Arsenic	**6.8**
Barium	95.3
Chromium	17.9
Lead	12.1

Sample Location	SB-20
Date Sampled	8/10/17
Sample Depth(feet)	2' - 4'
Arsenic	**16.9**
Barium	219
Chromium	20.9
Lead	15.4

Sample Location	SB-24
Date Sampled	8/8/17
Sample Depth(feet)	2' - 4'
Arsenic	**9.7**
Barium	94.2
Chromium	16.1
Lead	22.5
Mercury	1.1

Sample Location	SB-33
Date Sampled	8/9/17
Sample Depth(feet)	2' - 4'
Arsenic	**10.3**
Barium	93.7
Chromium	20.8
Lead	32.9

Sample Location	SB-31
Date Sampled	8/9/17
Sample Depth(feet)	2' - 4'
Arsenic	**8.1**
Barium	246
Chromium	12.6
Lead	63.8
Mercury	1.1

Sample Location	SB-23
Date Sampled	8/10/17
Sample Depth(feet)	2' - 4'
Arsenic	5.8
Barium	9.5
Chromium	10.7
Lead	2.7

Sample Location	SB-27
Date Sampled	8/9/17
Sample Depth(feet)	2' - 4'
Arsenic	**6.1**
Barium	171
Cadmium	0.56
Chromium	15.4
Lead	54.9
Mercury	1.2

Sample Location	SB-21
Date Sampled	8/9/17
Sample Depth(feet)	2' - 4'
Arsenic	4.4
Barium	137
Chromium	8.4
Lead	41.5
Mercury	0.42

Sample Location	SB-34
Date Sampled	8/9/17
Sample Depth(feet)	2' - 4'
Arsenic	**6.1**
Barium	119
Chromium	12.0
Lead	34.0

Sample Location	SB-32
Date Sampled	8/9/17
Sample Depth(feet)	2' - 4'
Arsenic	**7.0**
Barium	99.9
Chromium	13.7
Lead	25.8
Silver	1.1

Sample Location	SB-30
Date Sampled	8/10/17
Sample Depth(feet)	2' - 4'
Arsenic	**9.2**
Barium	60.6
Chromium	14.0
Lead	8.7

Sample Location	SB-29
Date Sampled	8/9/17
Sample Depth(feet)	2' - 4'
Arsenic	**7.0**
Barium	189
Cadmium	0.67
Chromium	14.0
Lead	70.3
Mercury	0.75

Sample Location	SB-28
Date Sampled	8/9/17
Sample Depth(feet)	2' - 4'
Arsenic	4.4
Barium	140
Chromium	22.5
Lead	15.8

Sample Location	SB-22
Date Sampled	8/9/17
Sample Depth(feet)	2' - 4'
Arsenic	**9.9**
Barium	107
Chromium	13.3
Lead	17.6

Sample Location	SB-26
Date Sampled	8/9/17
Sample Depth(feet)	2' - 4'
Arsenic	**7.4**
Barium	76.7
Chromium	17.7
Lead	10.3

Notes:
Values presented in parts per million (ppm) or mg/kg
Bold cell denotes value exceeds IDEM RCG Residential Migration to Groundwater Levels
Shaded cell denotes value exceeds IDEM RCG Residential Direct Contact Levels

50' 0 100'

Heartland Environmental Associates, Inc.
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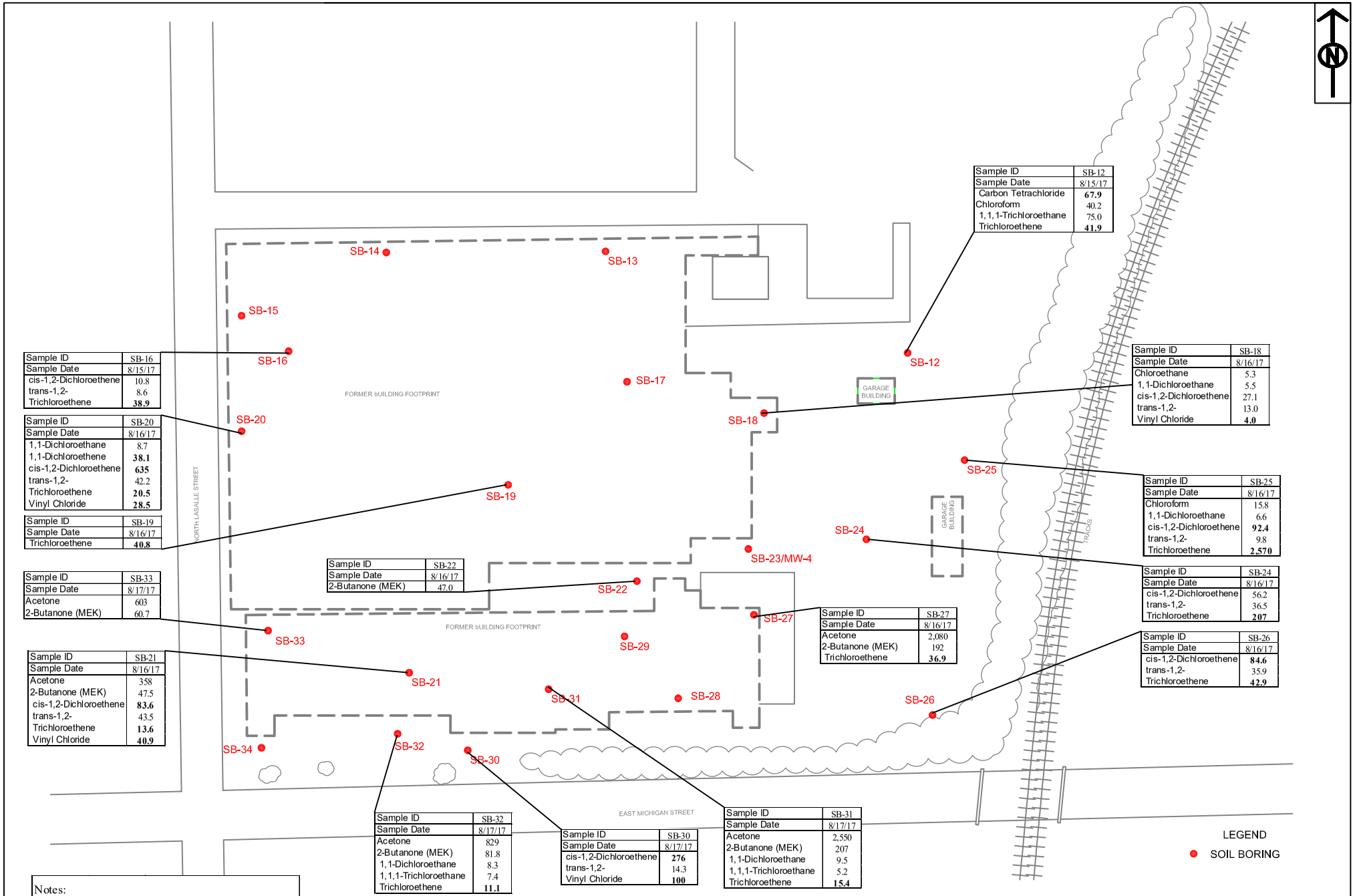
FIGURE 15
PRESENT METALS IN SOIL ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV



Sample ID	SB-16
Sample Date	8/15/17
cis-1,2-Dichloroethene	10.8
trans-1,2-	8.6
Trichloroethene	**38.9**

Sample ID	SB-20
Sample Date	8/16/17
1,1-Dichloroethane	8.7
1,1-Dichloroethene	**38.1**
cis-1,2-Dichloroethene	**635**
trans-1,2-	42.2
Trichloroethene	**20.5**
Vinyl Chloride	**28.5**

Sample ID	SB-19
Sample Date	8/16/17
Trichloroethene	**40.8**

Sample ID	SB-33
Sample Date	8/17/17
Acetone	603
2-Butanone (MEK)	60.7

Sample ID	SB-21
Sample Date	8/16/17
Acetone	358
2-Butanone (MEK)	47.5
cis-1,2-Dichloroethene	**83.6**
trans-1,2-	43.5
Trichloroethene	**13.6**
Vinyl Chloride	**40.9**

Sample ID	SB-22
Sample Date	8/16/17
2-Butanone (MEK)	47.0

Sample ID	SB-12
Sample Date	8/15/17
Carbon Tetrachloride	**67.9**
Chloroform	40.2
1,1,1-Trichloroethane	75.0
Trichloroethene	**41.9**

Sample ID	SB-18
Sample Date	8/16/17
Chloroethane	5.3
1,1-Dichloroethane	5.5
cis-1,2-Dichloroethene	27.1
trans-1,2-	13.0
Vinyl Chloride	**4.0**

Sample ID	SB-25
Sample Date	8/16/17
Chloroform	15.8
1,1-Dichloroethane	6.6
cis-1,2-Dichloroethene	**92.4**
trans-1,2-	9.8
Trichloroethene	**2,570**

Sample ID	SB-24
Sample Date	8/16/17
cis-1,2-Dichloroethene	56.2
trans-1,2-	36.5
Trichloroethene	**207**

Sample ID	SB-27
Sample Date	8/16/17
Acetone	2,080
2-Butanone (MEK)	192
Trichloroethene	**36.9**

Sample ID	SB-26
Sample Date	8/16/17
cis-1,2-Dichloroethene	**84.6**
trans-1,2-	35.9
Trichloroethene	**42.9**

Sample ID	SB-32
Sample Date	8/17/17
Acetone	829
2-Butanone (MEK)	81.8
1,1-Dichloroethane	8.3
1,1,1-Trichloroethane	7.4
Trichloroethene	**11.1**

Sample ID	SB-30
Sample Date	8/17/17
cis-1,2-Dichloroethene	**276**
trans-1,2-	14.3
Vinyl Chloride	**100**

Sample ID	SB-31
Sample Date	8/17/17
Acetone	2,550
2-Butanone (MEK)	207
1,1-Dichloroethane	9.5
1,1,1-Trichloroethane	5.2
Trichloroethene	**15.4**

Notes:
Values presented in parts per billion (ppb) or ug/l.
Bold cell denotes value exceeds IDEM RCG RSLs.

50' 0 100'

Heartland Environmental Associates, Inc.
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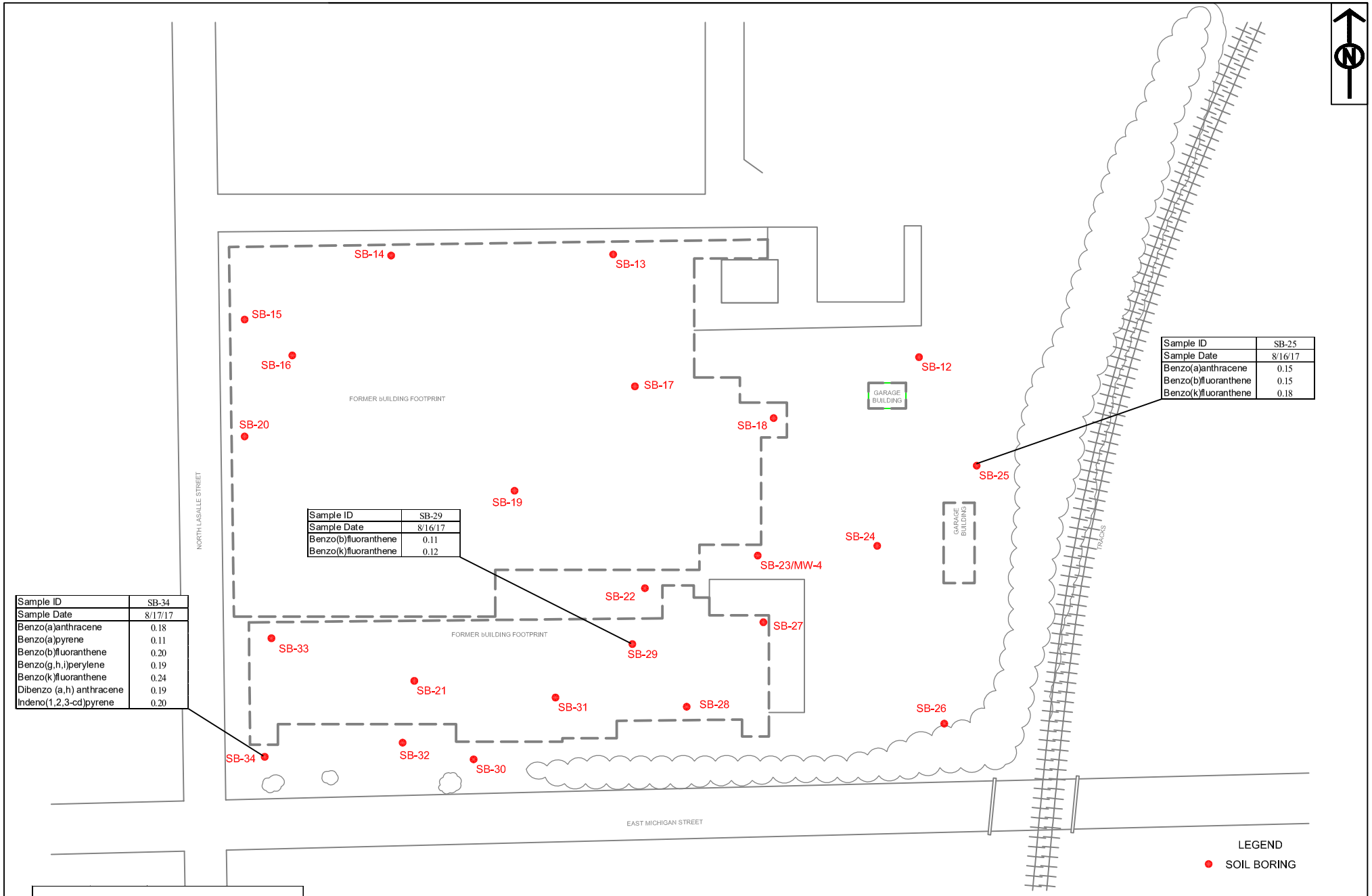
FIGURE 16
PRESENT VOCS IN WATER ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV



Notes:
Values presented in parts per billion (ppb) or ug/l.
Bold cell denotes value exceeds IDEM RCG RSLs.

50' 0 100'

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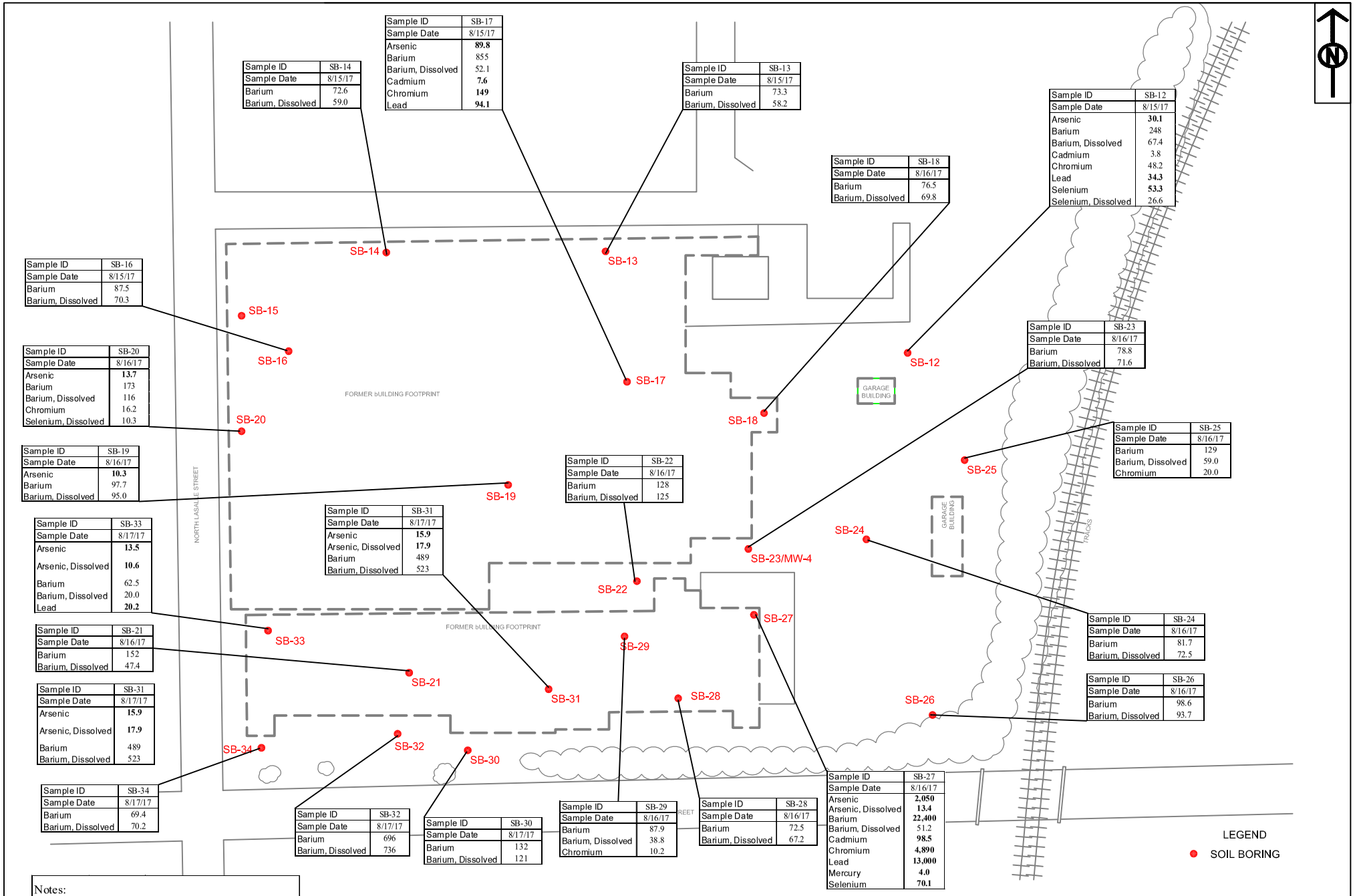
FIGURE 17
PRESENT PAHS IN GROUNDWATER ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV



Notes:
Values presented in parts per billion (ppb) or ug/l.
Bold cell denotes value exceeds IDEM RCG RSLs.

Heartland Environmental Associates, Inc.
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FIGURE 18
PRESENT METALS IN WATER ANALYTICAL MAP
PARCEL B
FORMER THOMSON CONSUMER ELECTRONICS / FORMER RCA / FORMER GE
SHERMAN PARK FACILITY
3324 EAST MICHIGAN STREET
INDIANAPOLIS, INDIANA 46201

Date: 10/4/17
Scale: 1"=100'
Drawn By: NV