above ground storage tank
air quality
asbestos/lead-based paint
baseline environmental assessment
brownfield redevelopment
building/infrastructure restoration
caisson/piles
coatings
concrete
construction materials services
corrosion
dewatering
drilling
due care analysis
earth retention system
environmental compliance
environmental site assessment
facility asset management
failure analyses
forensic engineering
foundation engineering
geodynamic/vibration
geophysical survey
geosynthetic
greyfield redevelopment
ground modification
hydrogeologic evaluation
industrial hygiene
indoor air quality/mold
instrumentation
masonry/stone
metals
nondestructive testing
pavement evaluation/design
property condition assessment
regulatory compliance
remediation
risk assessment
roof system management
sealants/waterproofing
settlement analysis
slope stability
storm water management
structural steel/welding
underground storage tank

BASELINE ENVIRONMENTAL ASSESSMENT REPORT

Conducted Pursuant to Section 20126(1)(c) of 1994 PA 451, Part 201, as amended, and the Rules promulgated thereunder

171 WEST MICHIGAN AVENUE
BATTLE CREEK, MICHIGAN

SME Project Number: KE62202C-11
February 10, 2011

Soil and Materials Engineers, Inc.

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February 10, 2011

Mr. Frank Ballo
District Supervisor
Michigan Department of Natural Resources and Environment
Remediation and Redevelopment Division, Kalamazoo District Office
7953 Adobe Road
Kalamazoo, Michigan 49009

RE: Baseline Environmental Assessment
171 West Michigan Avenue
Battle Creek, Michigan
SME Project KE62202C-11

Dear Mr. Ballo:

Please find attached one original, completed Baseline Environmental Assessment (BEA) report for the referenced facility. Soil and Materials Engineers, Inc. prepared this BEA report on behalf of the Calhoun County Land Bank (CCLB). The ownership of the Property was transferred to CCLB on December 28, 2010. The BEA Submittal Form is included with this BEA.

The enclosed BEA report is being submitted to the Michigan Department of Natural Resources and Environment (MDNRE) for disclosure in accordance with Section 20126(1)(c)(ii) of Part 201 of the Natural Resources and Environmental Protection Act, PA Act 451 of 1994, as amended.

If you have questions regarding the BEA report or enclosed form, please call.

Very truly yours,

SOIL AND MATERIALS ENGINEERS, INC.

Sara Bals

Sara I. Bals, EIT
Senior Environmental Engineer

Davin K. Ojala
Project Consultant

Enclosures: BEA Submittal Form
BEA Report (one original)

Distribution: Mr. Jon Bartlett, Calhoun County Land Bank (one original)
Ms. Tiffany Eichorst, Calhoun County Road Commission (one CD)
Mr. Craig Mankowski, U.S. EPA (one CD)

T/PROJ/62000/KE62202C-11/KE62202C-11-021011-BEA RPT.DOC

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MICHIGAN DEPARTMENT OF NATURAL RESOURCES AND ENVIRONMENT – REMEDIATION DIVISION
PO BOX 30426, LANSING, MICHIGAN 48909-7926, Phone 517-373-9837, Fax 517-373-2637

FOR DNRE USE ONLY
BEA Submittal #

Baseline Environmental Assessment Submittal Form

This form is for submittal of a Baseline Environmental Assessment (BEA), as defined by the Environmental Remediation, Part 201 of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, and the Part 201 Rules promulgated thereunder, for the purpose of establishing an exemption to liability pursuant to Section 20126(1)(c) for a new owner or operator of property that is a facility as defined by Section 20101(1)(r). The BEA report must be conducted either prior to or within 45 days after becoming the owner or operator, whichever is earliest. This form and the BEA report must be submitted within 6 months of becoming the owner or operator whichever is earliest. A separate BEA is required for each legal entity that is or will be a new owner or operator of the property. To maintain the exemption to liability, the owner and operator must also disclose the BEA to any subsequent purchaser or transferee before conveying interest in the property pursuant to Section 20126(1)(c) and Rule 919. An owner or operator of a facility also has due care obligations under Section 20107a with respect to any existing contamination to prevent unacceptable exposure; prevent exacerbation; take reasonable precautions; provide reasonable cooperation, assistance, and access to authorized persons taking response activities at the property; comply with land use restrictions associated with response activities; and not impede the effectiveness of response activities implemented at the property. Documentation of due care evaluations and response activities need to be available, but not submitted, to the DNRE within 8 months of becoming the owner or operator of a facility.

Submitter Information

Name of legal entity that will own or operate the property:
Calhoun County Land Bank
Address: 315 West Green Street
City: Marshall State: MI Zip: 49068
Contact person (Name & Title): Jon Bartlett, Executive Director
Telephone: (269) 781-0807 E-Mail: jbartlett@calhouncountymi.gov

Contact for BEA questions if different from submitter
Name & Title: Same as submitter
Company:
Address:
City: State: Zip:
Telephone: E-Mail:

Property Information

Street Address of Property: 171 West Michigan Avenue
City: Battle Creek State: MI Zip: 49017
Property Tax ID (include all applicable IDs):
0254-00-060-0
Address according to tax records, if different than above (include all applicable addresses):
City: State: Zip:

Status of submitter relative to the property (check all that apply):

	Former	Current	Prospective
Owner	☐	☒	☐
Operator	☐	☐	☐

County: Calhoun
City/Village/Township: City of Battle Creek
Town: 2S Range: 8W Section: 1
Quarter: SE Quarter-Quarter: NW
Decimal Degrees Latitude: 42° 19' 24.00" N
Decimal Degrees Longitude: 85° 11' 15.76" W
Reference point for latitude and longitude:
Center of site ☐ Main/front door ☐
Front gate/main entrance ☒ Other ☐
Collection method:
Survey ☐ GPS ☐ Interpolation ☒

Applicable Dates (provide date for all that are relevant): **MM/DD/YYYY**

Date All Appropriate Inquiry (AAI) Report or Phase I Environmental Assessment Report completed: 2/4/2011
Date Baseline Environmental Assessment Report conducted: 2/10/2011
Date submitter first became the owner: 12/28/2010
Date submitter first became the operator (if prior to ownership): N/A
Anticipated date of becoming the owner for prospective owners: N/A
Anticipated date of becoming the operator for prospective operators: N/A
If former owner or operator of this property, prior dates of being the owner or operator: N/A

Source of contamination at the property (check all that are known to apply):

Facility regulated under Part 201, other source, or source unknown Part 201 Site ID, if known:	☒
Leaking Underground Storage Tank regulated pursuant to Part 213 Part 211/213. Facility ID, if known:	☐
Oil or gas production and development regulated pursuant to Part 615 or 625	☐
Licensed landfill regulated pursuant to Part 115	☐
Licensed hazardous waste treatment, storage, or disposal facility regulated pursuant to Part 111	☐

Check the appropriate response to each of the following questions:	YES	NO
1. Is the property at which the BEA was conducted a "facility" as defined by Section 20101?	☒	☐
2. Is the All Appropriate Inquiry (AAI) compliant with 40 CFR 312, or is the Phase I Environmental Assessment compliant with ASTM E1527-05?	☒	☐
3. Was the BEA, including the AAI and sampling, conducted either prior to or within 45 days of the date of becoming the owner, operator, or of foreclosure, whichever is earliest, or within the alternate time-frames provided in Part 201 Rule 905(3) for submitters involved in oil and gas development under Part 615 or 625 property, or Rule 905(9) for property acquired through condemnation procedures?	☒	☐
4. Is this BEA being submitted to the department within 6 months of the submitter first becoming the owner or operator, or foreclosing?	☒	☐
5. If the BEA relies on studies or data prepared by others or conducted for other purposes, does the BEA provide sufficient rationale to demonstrate that the data are reliable and relevant to define conditions at the property at the time of purchase, occupancy, or foreclosure?	☒	☐
6. Does this BEA contain the legal description of the property addressed by the BEA?	☒	☐
7. Does this BEA contain the environmental analytical results, a scaled map showing the sample locations, and the basis for the determination that the property is a facility as defined by Section 20101(1)(f)?	☒	☐

Environmental Professional Signature:

I certify that to the best of my knowledge and belief, this BEA and all related materials are true, accurate, and complete and that I performed, or was responsible for the performance of, an All Appropriate Inquiry in conformance with the scope and limitations of the All Appropriate Inquiry Rule, 40 CFR 312 or a Phase I Environmental Site Assessment in conformance with the scope and limitations of the ASTM E1527-05 and have provided the sampling and analysis that confirm the property is a facility as defined by Section 20101(1)(r). Any exceptions to, or deletions from, the All Appropriate Inquiry Rule or ASTM E1527-05 are described in Section 1 of the BEA report. I understand that intentionally submitting false information in a BEA is a felony and may result in fines of up to $25,000 for each violation.

Signature: Date: 2/10/11

Printed Name: Davin K. Ojala

Company: Soil and Materials Engineers, Inc.

Mailing Address: 3301 Tech Circle Drive City: Kalamazoo State: MI Zip: 49008

Telephone: (269) 323-3555 E-Mail: ojala@sme-usa.com

Submitter Signature:

With my signature below, I certify that to the best of my knowledge and belief, this BEA and all related materials are true, accurate, and complete. I understand that intentionally submitting false information in a BEA is a felony and may result in fines of up to $25,000 for each violation.

Signature: Date: 2-10-11

Printed Name: Jon Bartlett

Title and Relationship of signatory to submitter: Executive Director, same as submitter

Address: 315 West Green Street City: Marshall State: MI Zip: 49068

Telephone: (269) 781-0807 E-Mail: jbartlett@calhouncountymi.gov

EQP 4025 (12/10)

Contents of BEA Report

Content	Section	Page Number
1. Introduction and Discussion:		
a. Owner/operator information (name, address, etc.).	1.0	pg. 1
b. Intended use of property (i.e., residential, institutional, industrial, gas station, commercial, etc.).	1.0 and 2.3	pg. 1 and 4
c. Executive summary of All Appropriate Inquiry (AAI) if available or a short summary of the findings and opinions of the AAI and the conditions indicative of releases or threatened releases of hazardous substances; or recognized environmental conditions identified in a Phase I Environmental Assessment.	2.2	pg. 2-3
d. Any exceptions to, or deletions from, the All Appropriate Inquiry Rule 40 CFR 312 or ASTM E1527-05.	2.2	pg. 3
e. Discussion of data gaps identified in the AAI or Phase I and how they affect this BEA.	2.2	pg. 3
f. Discussion of the sampling completed, including the purpose and methods. If the data was not collected by the submitter or environmental professional, the demonstration that the data are reliable and relevant to define the conditions at the property.	3.0 App D	pg. 5-6
g. The general location(s) of the known contamination on the property including the environmental media affected.	3.2 App D	pg. 6-7
h. The basis for the conclusion that the property is a facility.	3.3	pg. 8
2. Property Information		
a. Legal description of property.	App B	--
b. Survey map(s) (not aerial) showing property boundary, property tax ID, and, if applicable, parcel boundaries.	App B	--
c. Scaled site map(s) with site structures, sample locations and depths, and detected contaminant concentrations.	Fig. 4	--
d. Scaled area map showing property in relation to surrounding area (such as topographic or aerial maps).	Figs. 1 and 2	--
e. Property location: Street/City/State/Zip.	1.0 and 2.1	pg. 1 and 2
f. Spatial data required on form: County; City/Village/Township that is the governmental unit with jurisdiction; Town, Range, Section, Quarter and Quarter-Quarter Section; latitude and longitude coordinates including the information on how those were obtained.	Attached form	--
3. Facility Status		
a. Table listing the hazardous substances, CAS Number, their maximum concentration, sample location(s) and depths, and media affected, that are known to exceed residential criteria at the property.	Table 1 and 2	--
b. Laboratory analytical data sheets and chain-of-custody documents.	App D	--
4. Identification of the author of the BEA		
a. Name, qualifications as an environmental professional, company, contact information, etc.	4.0 App A	pg. 6
5. All Appropriate Inquiry Report or ASTM Phase I Environmental Site		
a. The report must consider hazardous substances as defined by Section 20101(1)(x).	App C	--
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Appendix B Legal Description and Survey Map
Appendix C: SME's Phase I Environmental Site Assessment Report, February 4, 2011
Appendix D: Previous Assessment Reports (CD-ROM)

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1.0 INTRODUCTION

This report presents the results of a Baseline Environmental Assessment of the property located at 171 West Michigan Avenue, in the City of Battle Creek, Calhoun County, Michigan (hereinafter referred to as, the Property). The Property location is depicted on Figure 1, and the Property features are shown on Figure 2. The Calhoun County Land Bank (CCLB) obtained ownership of the Property on December 28, 2010, and intends to hold the Property for future commercial redevelopment. A description of CCLB's proposed use of the Property is included in Section 2.3. CCLB's contact information is provided below:

Calhoun County Land Bank
Jon Bartlett, Executive Director
Calhoun County Land Bank
315 West Green Street
Marshall, Michigan 49068

Soil and Materials Engineers, Inc. (SME) prepared this BEA report, and will submit it to the Michigan Department of Natural Resources and Environment (MDNRE) on behalf of the CCLB. SME prepared this BEA report pursuant to Section 20126 of Part 201 of the Natural Resources and Environmental Protection Act (NREPA), Public Act 451 of 1994, as amended (Part 201). This BEA was prepared in general accordance with the MDNRE's "Baseline Environmental Assessment Submittal Form and Contents of BEA Report", effective December 14, 2010.

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2.0 PROPERTY INFORMATION AND PROPOSED FUTURE USE

2.1 Property Description

The Property is located at 171 West Michigan Avenue, south of West Michigan Avenue between South Washington Street and North Carlyle Street. The Property location is shown on Figure 1. The Property consists of approximately 6.9 acres of land developed with an approximately 44,600 square-foot vacant commercial building and associated paved parking and landscaped areas. The Battle Creek River crosses the eastern portion of the Property. The Property features at the time of this BEA are shown on Figure 2. A legal description of the Property, tax identification number 0254-00-060-0, is included in Appendix B. The western portion of the Property is currently zoned I1: Light Industrial, and the eastern portion of the Property is zoned C3, Intensive Business District. No change in zoning related to the proposed redevelopment is anticipated at this time.

2.2 All Appropriate Inquiry (AAI) Summary

SME completed a Phase I Environmental Site Assessment (ESA) report for the Property on February 4, 2011 (Appendix C). Based on SME's review of historical information, it appears the Property was developed with industrial, commercial, and residential buildings, and three railroad spurs by 1887. The railroad spurs were removed from the Property by 1992. Between 1887 and 1998, the industrial and commercial buildings on the Property were occupied by various manufacturing operations (nail and clamp; sash, door, and blinds; broom; sheet metal and machine works; radiators; pharmaceuticals), industrial operations (lumber and coal yard, planning mill, industrial and steam laundry, printers, vulcanizer, dye works), automotive repair operations, gasoline filling stations, commercial dry cleaners, and a mortuary (Hebbles Funeral Service). Between 1989 and 1992, two USTs associated with the former H.B. Sherman portion of the Property (eastern portion) and seven USTs associated with the former Hebbles Funeral Home portion of the Property (western portion) were removed. In 1998, the remaining buildings on the Property were razed and the current commercial building was constructed. The building was occupied by Kellogg's Cereal City USA interactive museum until 2007, when the museum was closed, and the building was vacated. The building was still vacant at the time of SME's 2010 Property reconnaissance.

Based on the results of the Phase I ESA, SME identified the reported presence of volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals in soil and groundwater at the Property at concentrations above Part 201 Generic Residential Cleanup Criteria as a recognized environmental condition (REC) in connection with the Property. This

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soil and groundwater impact was identified during numerous site investigations completed on the Property between 1991 and 2001. These investigations were completed to evaluate impact associated with the former USTs (H.B. Sherman (manufacturing) and Hebbles Funeral Home portions of the Property) as well as impact associated with the following sources, which were also identified as RECs in SME's Phase I ESA:

- Potential releases of hazardous substances and/or petroleum products associated with the historical use of the Property for various manufacturing and industrial operations, dry cleaning, gasoline filling station operations, and automotive repair operations.
- Potential releases of hazardous substances and/or petroleum products associated with the historical use of railroad spurs, gasoline underground storage tanks (USTs), and crude oil aboveground storage tanks (ASTs) on the Property
- Potential migration of contamination onto the Property from the north adjoining UST and small quantity hazardous waste generator sites and the west adjoining automotive brake repair site.
- Potential migration of contamination onto the Property associated with historical manufacturing and automotive operations on the north and east adjoining sites.

SME performed the Phase I ESA in conformance with the scope and limitations of ASTM Practice E 1527-05. The Practice's scope of services was implemented. SME identified one limitation in connection with this Phase I ESA. SME was unable to enter the former communications room on the first floor of the building on the Property. Because the room was used to contain communications equipment, it is unlikely that hazardous substances were stored in this area. Therefore, in SME's opinion, the inability to access the former communications room does not impair SME's ability to identify RECs in connection with the Property.

SME identified two data gaps in connection with the Property. First, SME was unable to identify use of the Property prior to 1887. Based on SME's knowledge of the area of the Property and the fact that it was developed by industrial operations and a railroad spur by 1887, it is likely that the Property was first developed for industrial use. Based on this information, it is SME's opinion that this data gap impairs our ability to evaluate the potential for environmental impact related to past uses of the Property. Second, SME identified the absence of a title records review as a data gap in connection with the Phase I ESA. SME reviewed the MDNRE's Perfected Lien List, and as of September 13, 2010, no state environmental liens were associated with the Property. Based on the results of this search and other inquiries reported herein, it is SME's opinion that this data gap did not impair our ability to evaluate the potential for environmental impact related to past uses of the Property.

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2.3 Proposed Future Property Use

The CCLB intends to hold the Property for future commercial redevelopment. CCLB does not anticipate generating waste materials or other hazardous substances.

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3.0 KNOWN CONTAMINATION

Soil and groundwater contamination identified through the completion of numerous site investigations on the Property between 1991 and 2001 is summarized in the following subsections.

3.1 Site Investigations

Various site investigations were completed between 1991 and 2001 to evaluate soil and groundwater conditions on the Property. The site investigations were completed to evaluate impact associated with the former USTs on the Property; the former presence of a railroad spur on the Property; the historical uses of the Property for various manufacturing, industrial, and commercial purposes; and the potential off-site sources. The site investigation boring locations are shown on Figure 3. The following reports document the sampling procedures, soil conditions, and results of the various site investigations completed at the Property. The reports are included in Appendix D.

1. Snell Environmental Group, **Soil Investigation, H. B Sherman Manufacturing Company,** December 1991.
2. Terra Environmental Corporation, **20-day Abatement Report, 103 East Michigan Avenue, Battle Creek, Michigan,** December 29, 1992.
3. Terra Environmental Corporation, **45-day Site Characterization Report, 103 East Michigan Avenue, Battle Creek, Michigan,** January 22, 1993.
4. Global Environmental Engineering and Terra Environmental Corporation, **Site Investigation Report, City of Battle Creek, H.B. Sherman Property,** May 28, 1993.
5. Global Environmental Engineering and Terra Environmental Corporation, **City of Battle Creek, Hebble Property, Site Investigation Report,** June 8, 1993.
6. Global Environmental Engineering and Terra Environmental Corporation, **Addendum to the May 28, 1993 Site Investigation Report, City of Battle Creek, H.B. Sherman Property,** August 30, 1993.
7. EarthTech, **A Risk Evaluation of Chemicals in Soils at the Hebble Site in Battle Creek, Michigan,** September 1994.
8. Horizon Environmental, **Investigative Results for the Former H.B. Sherman/Gallagher Laundry/Redbird Lounge Properties,** November 12, 1996.

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9. Prein and Newhoff, **Phase II Results/Former H.B. Sherman Site, Battle Creek, Michigan,** February 11, 2002.
10. Horizon Environmental, **Baseline Environmental Assessment, Former Cereal City USA Property, 171 West Michigan Avenue, Battle Creek, Michigan,** June 2, 2009.

It should be noted that the year the reports were issued do not necessarily reflect the year the samples were collected. It should also be noted that the 1994 EarthTech report does not contain new analytical results for the samples that EarthTech collected in 1994. SME reviewed MDNRE records and confirmed that the original report submitted by EarthTech to the MDNRE does not contain analytical data. In addition, SME was unable to locate a copy of the report documenting the analytical results for soil samples collected by Terra Environmental in August and September 1993. These results were included in the BEA submitted for the Property by Horizon Environmental in 2009. Because these data are generally consistent with other documented results and were included in the past BEA, they have been included in this BEA.

The majority of the reported chemical impact identified on the Property is PAHs and metals (see Section 3.2). These compounds are generally stable in the subsurface and are likely still present on the Property at or near the same concentrations as when the samples were collected. The reported VOC impact (benzene, ethylbenzene, and xylenes) is limited to four soil and/or groundwater samples and the concentrations are relative low. Therefore, the limited areas of VOC impact may have degraded to concentrations below Part 201 generic residential cleanup criteria. However, the majority of the historic data are reliable and relevant to define the conditions of the Property and identify the Property as a "facility" for the following reasons:

- The assessments were completed to evaluate historical uses of the Property prior to its use as an interactive museum and no RECs were identified in connection with this most recent use;
- The spatial distribution of the data include a large portion of the Property where historical RECs were identified;
- The data (which include 36 soil samples and 8 groundwater samples) were obtained by reputable environmental consulting firms using accredited laboratories who used United States Environmental Protection Agency (USEPA) analytical methods; and,

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- The concentrations of chemicals of concern that exceeded criteria were generally much higher than Part 201 generic residential cleanup criteria, indicating that potential sample quality assurance/quality control issues are unlikely to affect conclusions regarding the "facility" status of the Property.

3.2 Summary of Contamination

Results of chemical analyses performed on soil and groundwater samples collected by the various consulting firms between 1991 and 2001 are summarized in the following paragraphs. The sample locations, specific criteria exceedances, and maximum concentrations are summarized in Table 1 and Table 2. Exceedances are tabulated in Tables 3 and 4, and are depicted on Figure 4 and Figure 5. Laboratory analysis reports are included in site investigation reports included in Appendix D. Results of chemical analyses were compared to the Part 201 Generic Residential Cleanup Criteria (Part 201 criteria) to evaluate Part 201 "facility" status.

Ethylbenzene, xylenes, various PAHs (acenaphthene, acenanaphthylene, benzo(b)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, and phenanthrene), and various metals (arsenic, cadmium, chromium, copper, lead, mercury, and zinc) were measured at concentrations above Part 201 Generic Residential Cleanup Criteria in one or more soil samples. The distribution of these compounds in soil at concentrations exceeding Part 201 Generic Residential Cleanup Criteria is depicted on Figure 4. Soil impacted with VOCs and PAHs was identified on the southwestern portion of the Property and the eastern portion of the Property (along the Battle Creek River) in the areas where USTs were historically located. Soil impacted with metals was identified in the areas of the former USTs and in the area of the former railroad spur. The soil impact in the areas of the former USTs was identified at depths ranging from 1 foot to 20 feet below grade. Based on the depth at which groundwater was encountered in the area of the USTs (10 feet to 24 feet below grade), some of this impacted soil is likely located in the saturated zone. The soil impact in the area of the former railroad spur was identified at depths ranging from two feet to three feet below grade.

Benzene, various PAHs (acenaphthene, acenanaphthylene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluorene, naphthalene, phenanthrene, and pyrene), and lead were measured at concentrations above Part 201 Generic Residential Cleanup Criteria in one or more groundwater samples. The distribution of these compounds in groundwater at concentrations exceeding Part 201 Generic Residential Cleanup Criteria is depicted on Figure 5. Groundwater impacted with benzene, PAHs, and/or metals was identified in the area of the former USTs on the southwestern and eastern portions of the Property.

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The hazardous substances that were detected at concentrations greater than respective analysis method reporting limits (RLs) in soil and/or groundwater samples are listed in the following table. The bolded and shaded constituents were measured at concentrations exceeding Part 201 Generic Residential Cleanup Criteria. The sample locations, specific criteria exceedances, and maximum concentrations are summarized in Tables 1 and 2.

Constituent	CAS Number	Constituent	CAS Number
Acenaphthene	**83-32-9**	**Ethylbenzene**	**100-41-4**
Acenaphthylene	**208-96-8**	**Fluoranthene**	**206-44-0**
Anthracene	120-12-7	**Fluorene**	**86-73-7**
Arsenic	**7440-38-2**	**Indeno(1,2,3-cd)pyrene**	**193-39-5**
Barium	7440-39-3	**Lead**	**7439-92-1**
Benzene	**71-43-2**	**Mercury (total)**	**Varies**
Benzo(a)anthracene	56-55-3	2-Methylnaphthalene	91-57-6
Benzo(a)pyrene	**50-32-08**	**Naphthalene**	**91-20-3**
Benzo(b)fluoranthene	**205-99-2**	Nickel	7440-02-0
Benzo(g,h,i)perylene	191-24-2	**Phenanthrene**	**85-01-8**
Benzo(k)fluoranthene	207-08-9	**Pyrene**	**129-00-0**
Cadmium	**7440-43-9**	Tetrachoroethene	127-18-4
Chloroform	67-66-3	1,1,1-Trichloroethane	71-55-6
Chromium (total)	**Varies**	Toluene	108-88-3
Chrysene	**218-01-9**	1,2,4-Trimethylbenzene	95-63-6
Copper	**7440-50-8**	1,3,5-Trimethylbenzene	108-67-8
Dibenzo(a,h)anthracene	**53-70-3**	**Xylenes**	**1330-20-7**
Dibenzofuran	132-64-9	**Zinc**	**7440-66-6**
1,2-Dichloroethane	107-06-2		

3.3 Basis for BEA

Based on the historical use of the Property for various manufacturing and industrial operations, dry cleaning, gasoline filling station operations, and automotive repair operations, there is a potential that hazardous constituents and/or co-mingled petroleum products may have been released on the Property. Results of multiple site assessments completed on the Property between 1991 and 2001 indicate the following hazardous constituents were present in one or

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more soil and/or groundwater samples at concentrations exceeding Part 201 Generic Residential Cleanup Criteria: benzene, ethylebenzene, xylenes, acenaphthene, acenanaphthylene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene, arsenic, cadmium, chromium, copper, lead, mercury, and zinc. Therefore, the Property is a "facility" as defined by Section 20101(1)(o) of Part 201 of the Michigan Natural Resources and Environmental Protection Act, Public Act 451 of 1994, as amended (Part 201).

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4.0 IDENTIFICATION OF AUTHOR AND DATE BEA WAS CONDUCTED AND DATE BEA WAS COMPLETED

This Baseline Environmental Assessment (BEA) report was prepared by Ms. Sara I. Bals, EIT and reviewed by Mr. Davin K. Ojala and Mr. Keith Egan, Ohio Certified Professional #259. This BEA report was conducted on February 10, 2011. The Environmental Professional responsible for the conduct of the included Phase I Environmental Site Assessment (ESA) was Mr. Davin K. Ojala. Resumes of Ms. Bals, Mr. Ojala, and Mr. Egan are attached in Appendix A. The Environmental Professional responsible for the preparation of this BEA is Mr. Ojala whose contact information is provided below:

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5.0 CONCLUSIONS

The Property meets the definition of a "facility", as defined by Section 20101 of PA 451, Part 201, as amended, based on the presence of the following compounds ins soil and/or groundwater at greater than Part 201 Residential Generic Cleanup Criteria: benzene, ethylebenzene, xylenes, acenaphthene, acenanaphthylene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene, arsenic, cadmium, chromium, copper, lead, mercury, and zinc. This impact is generally associated with the two areas where USTs were formerly located on the Property (H.B. Sherman on the eastern portion of the Property and Hebbles Funeral Home on the western portion of the Property) and the area of the former railroad spur.

Hazardous substances were measured at concentrations above Part 201 Generic Residential Cleanup Criteria (Part 201 criteria) in soil and groundwater samples collected from the Property, but the extent of contamination from those substances was not fully delineated. These hazardous substances may be present at levels above Part 201 residential generic cleanup criteria at other locations on the Property. Various other target constituents were measured in soil and groundwater samples at concentrations above their respective laboratory RLs, but below Part 201 residential generic cleanup criteria. The potential exists that these constituents may be present at concentrations above Part 201 residential generic cleanup criteria elsewhere on the Property. SME cannot guarantee all potential contaminants have been identified. Undetected contamination resulting from historical activities or off-site sources may be present on the Property. The sampling locations were selected based on known historical uses of the Property and proximate sites. The chemical analyses programs were designed by other consultants to include those Part 201 hazardous substances that would be likely indicators of historic releases.

SME designed the BEA described herein based upon observed conditions, information discovered during the records search, projected future use of the subject property, and reported soil and groundwater conditions encountered during numerous subsurface activities completed by various other consultants. In the process of obtaining information in preparation of this BEA, procedures were followed that represent current reasonable and accepted engineering and hydrogeological practices and principles, in a manner consistent with the level of care and skill ordinarily exercised by members of these professions.

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6.0 REFERENCES

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2. **Part 201 of 1994 PA 451, as amended, the Natural Resources and Environmental Protection Act, and the Part 9 and Part 10 Rules,** December 21, 2002.

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4. U.S. Department of Health and Human Services - National Institute for Occupational Safety and Health, **NIOSH Pocket Guide to Chemical Hazards**, June 1994.

5. Snell Environmental Group, **Soil Investigation, H. B Sherman Manufacturing Company,** December 1991.

6. Terra Environmental Corporation, **20-day Abatement Report, 103 East Michigan Avenue, Battle Creek, Michigan,** December 29, 1992.

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10. Global Environmental Engineering and Terra Environmental Corporation, **Addendum to the May 28, 1993 Site Investigation Report, City of Battle Creek, H.B. Sherman Property,** August 30, 1993.

11. EarthTech, **A Risk Evaluation of Chemicals in Soils at the Hebble Site in Battle Creek, Michigan,** September 1994.

12. Horizon Environmental, **Investigative Results for the Former H.B. Sherman/Gallagher Laundry/Redbird Lounge Properties,** November 12, 1996.

13. Prein and Newhoff, **Phase II Results/Former H.B. Sherman Site, Battle Creek, Michigan,** February 11, 2002.

14. Horizon Environmental, **Baseline Environmental Assessment, Former Cereal City USA Property, 171 West Michigan Avenue, Battle Creek, Michigan,** June 2, 2009.

15. Soil and Materials Engineers, Inc., **Phase I Environmental Site Assessment, 171 West Michigan Avenue, Battle Creek, Michigan,** February 4, 2011.

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APPENDICES

Figures
Tables
Appendix A: Qualifications of Environmental Professionals
Appendix B: Legal Description and Survey Map
Appendix C: SME's Phase I Environmental Site Assessment Report, February 4, 2011
Appendix D: Previous Assessment Reports (CD-ROM)

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FIGURES

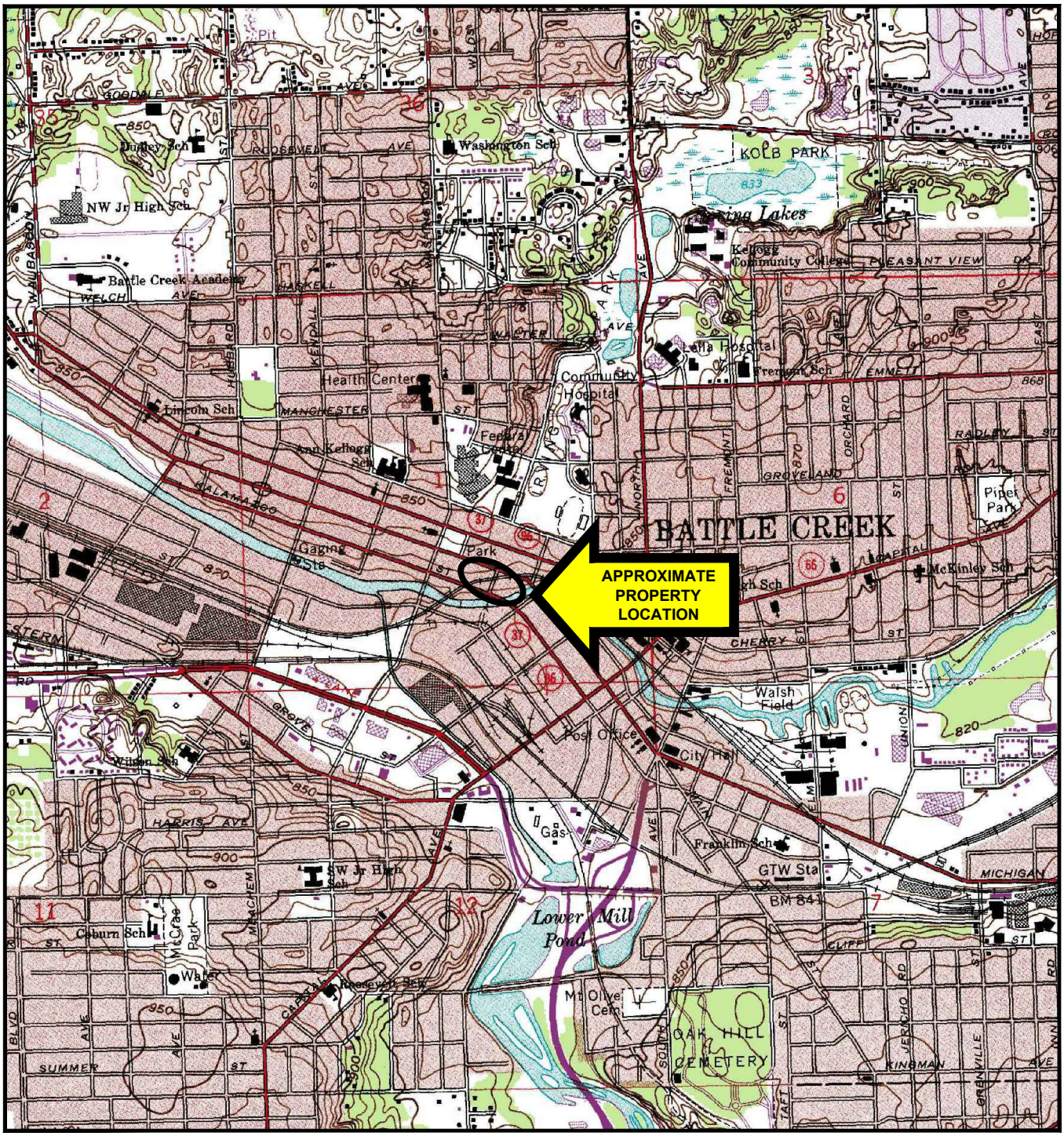
Figure 1: **Property Location Map**

Figure 2: **Property Features Diagram**

Figure 3: **Hand Auger, Soil Boring, and Monitoring Well Location Diagram**

Figure 4: **Distribution of VOCs, SVOCs, and Metals in Soil at Concentrations Exceeding Part 201 Generic Residential Cleanup Criteria**

Figure 5: **Distribution of VOCs, SVOCs, and Metals in Groundwater at Concentrations Exceeding Part 201 Generic Residential Cleanup Criteria**



Base map obtained from USGS.

USGS QUADRANGLE(s) REFERENCED

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SCALE: 1" = 2000'

NORTH

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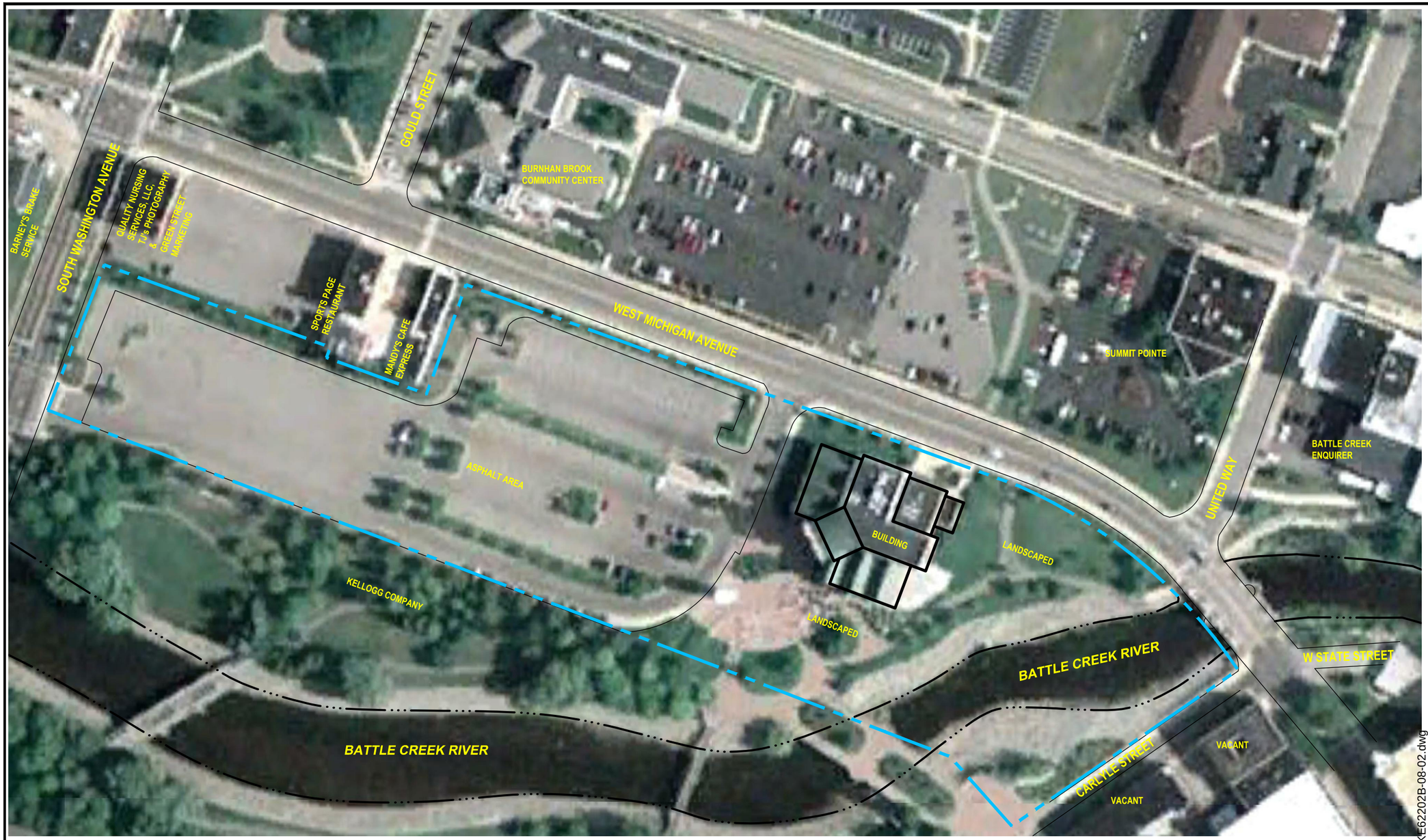
USGS 7.5 MINUTE TOPOGRAPHIC MAP

171 WEST MICHIGAN AVENUE

BATTLE CREEK, MICHIGAN

Figure No. 1



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APPROXIMATE PROPERTY BOUNDARY

0 120 240

GRAPHIC SCALE: 1" = 120'

NORTH

NOTE:
1. DRAWING INFORMATION TAKEN FROM BATTLE CREEK UNLIMITED'S ON-LINE GEOGRAPHIC INFORMATION SYSTEM AND PROPERTY RECONNAISSANCE.
2. PROPERTY FEATURES ARE TO APPROXIMATE SCALE.
3. THE AERIAL PHOTOGRAPH WAS OBTAINED FROM GOOGLE EARTH.

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PROPERTY FEATURES DIAGRAM
171 WEST MICHIGAN AVENUE
BATTLE CREEK, MICHIGAN

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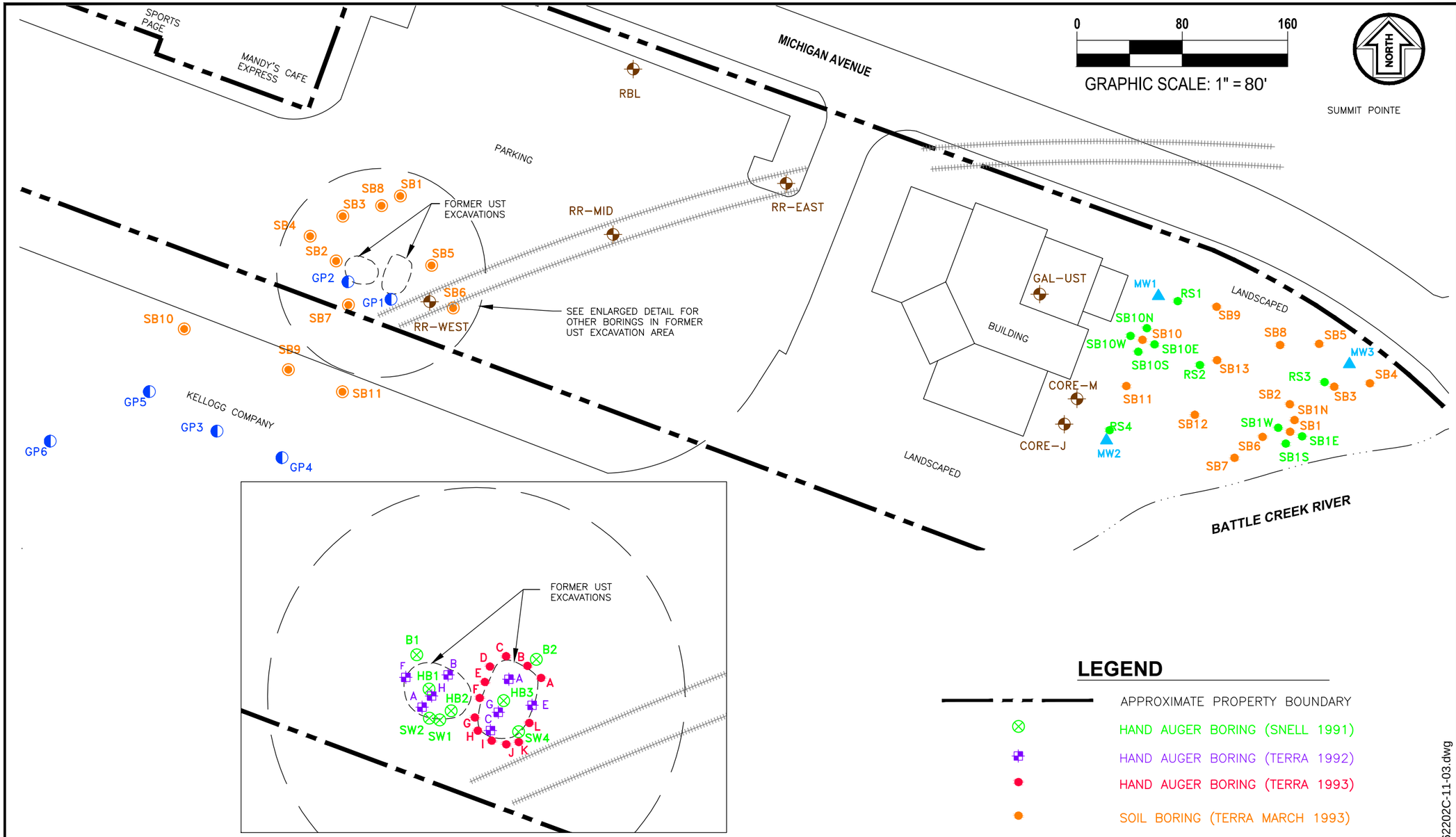
Figure No. 2



ENLARGED DETAIL

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GRAPHIC SCALE: 1" = 40'

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- HAND AUGER BORING (SNELL 1991)
- HAND AUGER BORING (TERRA 1992)
- HAND AUGER BORING (TERRA 1993)
- SOIL BORING (TERRA MARCH 1993)
- SOIL BORING (TERRA APRIL/JULY 1993)
- SOIL BORING (EARTH TECH 1994)
- MONITORING WELL (EARTH TECH 1994)
- SOIL BORING (HORIZON 1996)
- SOIL BORING (PREIN & NEWHOFF 2001)

NOTE:
1. DRAWING INFORMATION TAKEN FROM AVAILABLE ASSESSING INFORMATION. BORING LOCATIONS BASED ON REPORTS PROVIDED BY HORIZON ENVIRONMENTAL.
2. PROPERTY FEATURES ARE TO APPROXIMATE SCALE.

No.	Revision Date

HAND AUGER, SOIL BORING, AND MONITORING WELL LOCATION DIAGRAM
171 WEST MICHIGAN AVENUE
BATTLE CREEK, MICHIGAN

Date	02-08-11
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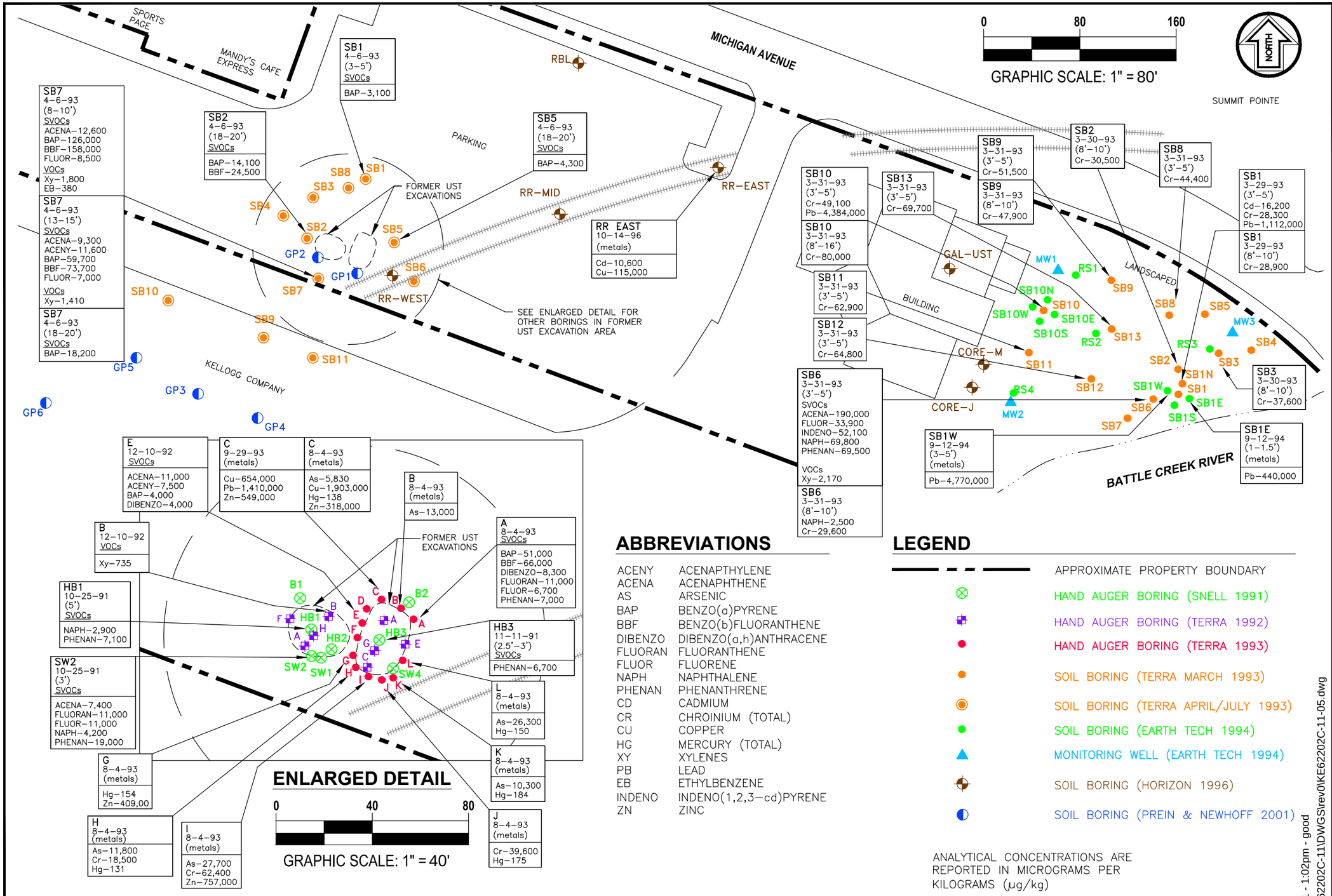

ABBREVIATIONS

ACENY	ACENAPTHYLENE
ACENA	ACENAPHTHENE
AS	ARSENIC
BAP	BENZO(a)PYRENE
BBF	BENZO(b)FLUORANTHENE
DIBENZO	DIBENZO(a,h)ANTHRACENE
FLUORAN	FLUORANTHENE
FLUOR	FLUORENE
NAPH	NAPHTHALENE
PHENAN	PHENANTHRENE
CD	CADMIUM
CR	CHROINIUM (TOTAL)
CU	COPPER
HG	MERCURY (TOTAL)
XY	XYLENES
PB	LEAD
EB	ETHYLBENZENE
INDENO	INDENO(1,2,3-cd)PYRENE
ZN	ZINC

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- HAND AUGER BORING (SNELL 1991)
- HAND AUGER BORING (TERRA 1992)
- HAND AUGER BORING (TERRA 1993)
- SOIL BORING (TERRA MARCH 1993)
- SOIL BORING (TERRA APRIL/JULY 1993)
- SOIL BORING (EARTH TECH 1994)
- MONITORING WELL (EARTH TECH 1994)
- SOIL BORING (HORIZON 1996)
- SOIL BORING (PREIN & NEWHOFF 2001)

ANALYTICAL CONCENTRATIONS ARE REPORTED IN MICROGRAMS PER KILOGRAMS (µg/kg)

NOTE:
1. DRAWING INFORMATION TAKEN FROM AVAILABLE ASSESSING INFORMATION. BORING LOCATIONS BASED ON REPORTS PROVIDED BY HORIZON ENVIRONMENTAL.
2. PROPERTY FEATURES ARE TO APPROXIMATE SCALE.

No.	Revision Date

DISTRIBUTION OF VOLATILE ORGANIC COMPOUNDS (VOCs) SEMI-VOLATILE ORGANIC COMPOUNDS (SVOCs) AND METALS IN SOILS AT CONCENTRATIONS EXCEEDING PART 201 GENERIC RESIDENTIAL CLEANUP CRITERIA

171 WEST MICHIGAN AVENUE
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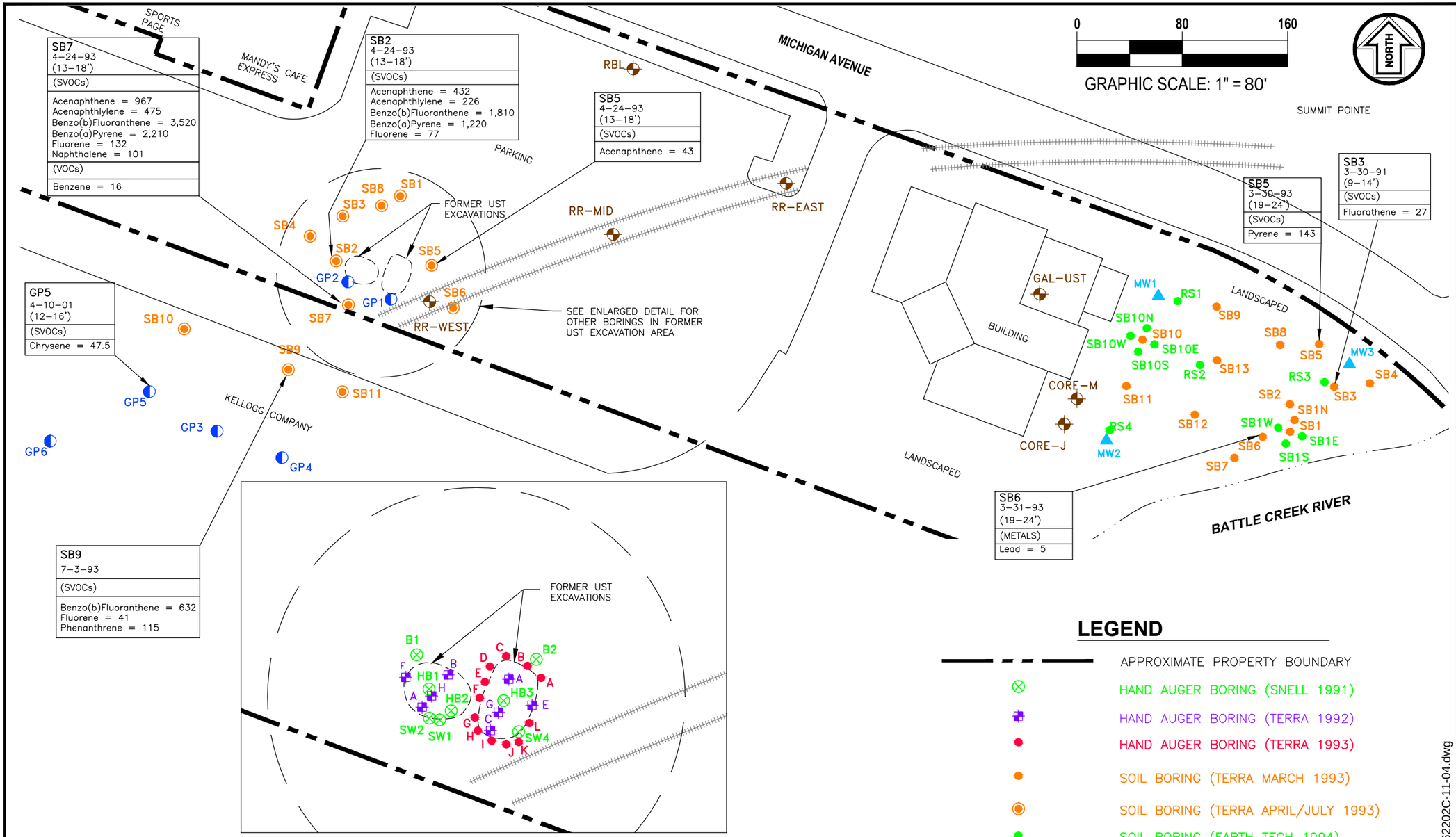
Figure No. 4



ENLARGED DETAIL

0 40 80

GRAPHIC SCALE: 1" = 40'

LEGEND

- APPROXIMATE PROPERTY BOUNDARY
- HAND AUGER BORING (SNELL 1991)
- HAND AUGER BORING (TERRA 1992)
- HAND AUGER BORING (TERRA 1993)
- SOIL BORING (TERRA MARCH 1993)
- SOIL BORING (TERRA APRIL/JULY 1993)
- SOIL BORING (EARTH TECH 1994)
- MONITORING WELL (EARTH TECH 1994)
- SOIL BORING (HORIZON 1996)
- SOIL BORING (PREIN & NEWHOFF 2001)

ANALYTICAL CONCENTRATIONS ARE REPORTED IN MICROGRAMS PER LITER (ug/L)

NOTE:
1. DRAWING INFORMATION TAKEN FROM AVAILABLE ASSESSING INFORMATION. BORING LOCATIONS BASED ON REPORTS PROVIDED BY HORIZON ENVIRONMENTAL.
2. PROPERTY FEATURES ARE TO APPROXIMATE SCALE.

No.	Revision Date

DISTRIBUTION OF VOLATILE ORGANIC COMPOUNDS (VOCs), SEMI-VOLATILE ORGANIC COPOUNDS (SVOCs) AND METALS IN GROUNDWATER AT CONCENTRATIONS EXCEEDING PART 201 GENERIC RESIDENTIAL CLENUP CRITERIA

171 WEST MICHIGAN AVENUE BATTLE CREEK, MICHIGAN

Date	02-08-11
Drawn By	GM
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Figure No. 5

TABLES

Table 1: **Summary of Soil Contamination**

Table 2: **Summary of Groundwater Contamination**

Table 3: **Soil Analytical Results – Part 201 Exceedances**

Table 4: **Groundwater Analytical Results – Part 201 Exceedances**

TABLE 1
SUMMARY OF SOIL CONTAMINATION
171 WEST MICHIGAN AVENUE, BATTLE CREEK, MICHIGAN

SME Project No. KE62202C-11

Constituent	Sample Location and Depth	Sampled By	Sample Date	Criteria Exceeded	Maximum Concentration (µg/kg)
Metals					
Arsenic	B	Terra	8/4/1993	DWPC, GSIPC, DCC	27,700
	C	Terra	8/4/1993		
	H	Terra	8/4/1993		
	I	Terra	8/4/1993		
	K	Terra	8/4/1993		
	L	Terra	8/4/1993		
Cadmium	RR-East (2-3)	Horizon	10/14/1996	DWPC, GSIPC	16,200
	SB1 (3-5)	Terra	3/29/1993		
Chromium	SB1 (3-5)	Terra	3/29/1993	DWPC, GSIPC	80,000
	SB2 (8-10)	Terra	3/30/1993		
	SB3 (8-10)	Terra	3/30/1993		
	SB6 (8-10)	Terra	3/31/1993		
	SB8 (3-5)	Terra	3/31/1993		
	SB9 (3-5)	Terra	3/31/1993		
	SB9 (8-10)	Terra	3/31/1993		
	SB10 (3-5)	Terra	3/31/1993		
	SB10 (8-10)	Terra	3/31/1993		
	SB11 (3-5)	Terra	3/31/1993		
	SB12 (3-5)	Terra	3/31/1993		
	SB13 (5-7)	Terra	3/31/1993		
	H	Terra	8/4/1993		
	I	Terra	8/4/1993		
	J	Terra	8/4/1993		
Copper	C	Terra	8/4/1993	GSIPC	1,903,000
	C	Terra	9/29/1993		
	RR-East (2-3)	Horizon	10/14/1996		
Lead	SB1 (3-5)	Terra	3/31/1993	DWPC, GSIPC, DCC	4,770,000
	SB-10 (3-5)	Terra	3/31/1993		
	C	Terra	9/29/1993		
	SB1-E (1-1.5)	Earth Tech	9/12/1994		
	SB1-W (3-5)	Earth Tech	9/12/1994		
Mercury	C	Terra	8/4/1993	GSIPC	184
	G	Terra	8/4/1993		
	H	Terra	8/4/1993		
	J	Terra	8/4/1993		
	K	Terra	8/4/1993		
	L	Terra	8/4/1993		
Zinc	C	Terra	8/4/1993	GSIPC	757,000
	G	Terra	8/4/1993		
	I	Terra	8/4/1993		
	C	Terra	9/29/1993		

TABLE 1
SUMMARY OF SOIL CONTAMINATION
171 WEST MICHIGAN AVENUE, BATTLE CREEK, MICHIGAN

SME Project No. KE62202C-11

Constituent	Sample Location and Depth	Sampled By	Sample Date	Criteria Exceeded	Maximum Concentration (µg/kg)
SVOCs					
Acenaphthene	E	Terra	12/10/1992	GSIPC	190,000
	SB-6 (3-5)	Terra	3/31/1993		
	SW-2 (3)	Snell	10/25/1991		
Acenaphthylene	E	Terra	12/10/1992	DWPC	12,600
	SB-7 (8-10)	Terra	4/6/1993		
	SB-7 (13-15)	Terra	4/6/1993		
Benzo(b)fluoranthene	SB-2 (18-20)	Terra	4/6/1993	DCC	158,000
	SB-7 (8-10)	Terra	4/6/1993		
	SB-7 (13-15)	Terra	4/6/1993		
	A	Terra	8/4/1993		
Benzo(a)pyrene	A	Terra	8/4/1993	DCC	126,000
	E	Terra	12/10/1992		
	SB-1 (3-5)	Terra	4/6/1993		
	SB-2 (18-20)	Terra	4/6/1993		
	SB-5 (18-20)	Terra	4/6/1993		
	SB-7 (8-10)	Terra	4/6/1993		
	SB-7 (13-15)	Terra	4/6/1993		
	SB-7 (18-20)	Terra	4/6/1993		
Dibenzo(a,h)anthracene	E	Terra	12/10/1992	DCC	8,300
	A	Terra	8/4/1993		
Fluoranthene	A	Terra	8/4/1993	GSIPC	11,000
	SW-2 (3)	Snell	10/25/1991		
Fluorene	A	Terra	8/4/1993	GSIPC	33,900
	SW-2 (3)	Snell	10/25/1991		
	SB-6 (3-5)	Terra	3/31/1993		
	SB-7 (8-10)	Terra	4/6/1993		
	SB-7 (13-15)	Terra	4/6/1993		
Indeno(1,2,3-cd)pyrene	SB-6 (3-5)	Terra	3/31/1993	DCC	52,100
Naphthalene	HB-1 (5)	Snell	10/25/1991	GSIPC	69,800
	SW-2 (3)	Snell	10/25/1991		
	SB-6 (3-5)	Terra	3/31/1993		
	SB-6 (8-10)	Terra	3/31/1993		
Phenanthrene	HB-1 (5)	Snell	10/25/1991	GSIPC	69,500
	HB-3 (2.5-3)	Snell	11/11/1991		
	SW-2 (3)	Snell	10/25/1991		
	SB-6 (3-5)	Terra	3/31/1993		
	A	Terra	8/4/1993		

TABLE 1
SUMMARY OF SOIL CONTAMINATION
171 WEST MICHIGAN AVENUE, BATTLE CREEK, MICHIGAN

SME Project No. KE62202C-11

Constituent	Sample Location and Depth	Sampled By	Sample Date	Criteria Exceeded	Maximum Concentration (µg/kg)
VOCs					
Ethylbenzene	SB-7 (8-10)	Terra	4/6/1993	GSIPC	380
Xylenes	B SB-6 (3-5) SB-7 (8-10) SB-7 (13-15)	Terra Terra Terra Terra	12/10/1992 3/31/1993 4/6/1993 4/6/1993	GSIPC	2,170

TABLE 2
SUMMARY OF GROUNDWATER CONTAMINATION
171 WEST MICHIGAN AVENUE, BATTLE CREEK, MICHIGAN

SME Project No. KE62202C-11

Constituent	Sample Location and Depth	Sampled By	Sample Date	Criteria Exceeded	Maximum Concentration (µg/L)
Metals					
Lead	SB-6 (19-24)	Terra	3/30/1993	DWC	5
PAHs					
Acenaphthene	SB-2 (13-18) SB-5 (13-18) SB-7 (13-18)	Terra Terra Terra	4/24/1993 4/24/1993 4/24/1993	DWC	967
Acenaphthylene	SB-2 (13-18) SB-7 (13-18)	Terra Terra	4/24/1993 4/24/1993	DCC	475
Benzo(a)pyrene	SB-2 (13-18) SB-7 (13-18)	Terra Terra	4/24/1993 4/24/1993	GSIC, DCC	2,210
Benzo(b)fluoranthene	SB-2 (13-18) SB-7 (13-18) SB-9	Terra Terra Terra	4/24/1993 4/24/1993 7/3/1993	GSIC, DCC	3,520
Chrysene	GP-5 (12-16)	Prein & Newhoff	4/10/2001	DCC	47.5
Fluoranthene	SB-3 (9-14)	Terra	3/30/1993	GSIC	27
Fluorene	SB-2 (13-18) SB-7 (13-18) SB-9 (15-20)	Terra Terra Terra	4/24/1993 4/24/1993 7/3/1993	DWC	132
Naphthalene	SB-7 (13-18)	Terra	4/24/1993	DWC	101
Phenanthrene	SB-9 (15-20)	Terra	7/3/1993	DWC, GSIC	115
Pyrene	SB-5 (19-24)	Terra	3/30/1993	DWC	143
VOCs					
Benzene	SB-7 (13-18)	Terra	4/24/1993	DCC	16

TABLE 3
SOIL ANALYTICAL RESULTS - PART 201 EXCEEDANCES
171 WEST MICHIGAN AVENUE, BATTLE CREEK, MICHIGAN

SME Project No. KE62202c-11

		Part 201 Generic Residential Cleanup Criteria				Sample ID / Depth Below Grade (ft) / Date Collected											
							Snell 1991		Terra 1992		Terra March 1993						
Constituent	CAS Number	Drinking Water Protection Criteria	Groundwater Surface Interface Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Direct Contact Criteria	SW2 3 10/25/1991	HB1 5 10/25/1991	HB3 2.5' - 3' 11/11/1991	B 12/10/1992	E 12/10/1992	SB1 3' - 5' 3/29/1993	SB1 8' - 10' 3/29/1993	SB2 8' - 10' 3/30/1993	SB3 8' - 10' 3/30/1993	SB6 3' - 5' 3/31/1993	SB6 8' - 10' 3/31/1993	SB8 3' - 5' 3/31/1993
VOCs (ug/kg)																	
Benzene	71-43-2	100	240***	1,600	180,000	**29**	**32**	<RL	<RL	<RL	**15**	<RL	<RL	<RL	**76**	<RL	<RL
Chloroform	67-66-3	1,600	3,400	7,200	1,200,000	NR	NR	NR	NR	NR	<RL	<RL	<RL	<RL	**37**	**18**	<RL
1,2-Dichloroethane	107-06-2	100	7,200	2,100	91,000	NR	NR	NR	NR	NR	<RL	<RL	<RL	<RL	**11**	<RL	<RL
Ethylbenzene	100-41-4	1,500	**360**	87,000	140,000	**110**	**49**	**28**	**248**	<RL	**75**	<RL	<RL	<RL	**300**	<RL	<RL
Methyl-tert-butyl-ether	1634-04-4	800	15,000	5,900,000	1,500,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	**NR**	NR	NR
Tetrachloroethylene	127-18-4	100	220***	11,000	88,000	NR	NR	NR	NR	NR	**74**	<RL	<RL	<RL	<RL	<RL	<RL
Toluene	108-88-3	16,000	2,800	250,000	250,000	<RL	<RL	<RL	<RL	<RL	**330**	**31**	<RL	**13**	**1,400**	**42**	**27**
1,1,1-Trichloroethane	71-55-6	4,000	4,000	250,000	460,000	NR	NR	NR	NR	NR	**21**	**10**	<RL	<RL	**44**	**12**	**49**
1,2,4-Trimethlybenzene	95-63-6	2,100	570	110,000	110,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	**NR**	NR	NR
1,3,5-Trimethylbenzene	108-67-8	1,800	1,100	94,000	94,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	**NR**	NR	NR
Xylenes (total)	1330-20-7	5,600	**700**	150,000	150,000	**153**	**40**	**132**	**735**	<RL	NR	NR	NR	NR	**2,170**	**32**	**83**
Other VOCs	CS	CS	CS	CS	CS	NR	NR	NR	NR	NR	<RL	<RL	<RL	<RL	<RL	<RL	<RL
SVOCs (ug/kg)																	
Acenaphthene	83-32-9	300,000	**4,400**	190,000,000	41,000,000	**7,400**	**4,100**	<RL	<RL	**11,000**	<RL	<RL	<RL	<RL	**190,000**	<RL	<RL
Acenaphthylene	208-96-8	**5,900**	ID	1,600,000	1,600,000	<RL	ND	<RL	<RL	**7,500**	<RL	<RL	<RL	<RL	<RL	**4,200**	<RL
Anthracene	120-12-7	41,000	ID	1,000,000,000	230,000,000	<RL	**8,200**	**7,800**	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Benzo(a)anthracene	56-55-3	NLL	NLL	NLV	20,000	<RL	<RL	**5,400**	<RL	**4,600**	<RL	<RL	<RL	<RL	NR	NR	NR
Benzo(a)anthracene & Chrysene +	CS	N/A	N/A	N/A	N/A	NR	NR	NR	NR	NR	NR	NR	NR	NR	**109,000**	**2,000**	<RL
Benzo(a)pyrene	50-32-8	NLL	NLL	NLV	**2,000**	**1,100**	<RL	<RL	<RL	**4,000**	<RL	<RL	<RL	<RL	NR	NR	NR
Benzo(a)pyrene & Dibenzo(a,h)anthracene +	CS	N/A	N/A	N/A	N/A	NR	NR	NR	NR	NR	NR	NR	NR	NR	**80,300**	**1,800**	<RL
Benzo(b)fluoranthene	205-99-2	NLL	NLL	ID	**20,000**	**2,200**	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR	NR	NR
Benzo(b)fluoranthene & Benzo(k)fluoranthene	CS	N/A	N/A	N/A	N/A	NR	NR	NR	NR	NR	NR	NR	NR	NR	<RL	**4,700**	<RL
Benzo(g,h,i)perylene	191-24-2	NLL	NLL	NLV	2,500,000	**490**	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Benzo(k)fluoranthene	207-08-9	NLL	NLL	NLV	200,000	NR	NR	NR	<RL	<RL	NR	NR	NR	NR	NR	NR	NR
Chrysene	218-01-9	NLL	NLL	ID	2,000,000	<RL	<RL	**5,900**	<RL	**4,600**	<RL	<RL	<RL	<RL	NR	NR	NR
Dibenzo(a,h)anthracene	53-70-3	NLL	NLL	NLV	**2,000**	<RL	<RL	<RL	<RL	**4,000**	<RL	<RL	<RL	<RL	NR	NR	NR
Fluoranthene	206-44-0	730,000	**5,500**	1,000,000,000	46,000,000	**11,000**	**3,100**	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Fluorene	86-73-7	390,000	**5,300**	580,000,000	27,000,000	**11,000**	**4,100**	<RL	<RL	**1,400**	<RL	<RL	<RL	<RL	**33,900**	<RL	<RL
Indeno(1,2,3-cd)pyrene	193-39-5	NLL	NLL	NLV	20,000	<RL	<RL	<RL	<RL	**3,300**	<RL	<RL	<RL	<RL	**52,100**	**380**	<RL
2-Methylnaphthalene	91-57-6	57,000	ID	ID	8,100,000	NR	NR	NR	NR	**NR**	NR	NR	NR	NR	NR	**NR**	NR
Naphthalene	91-20-3	35,000	**870**	250,000	16,000,000	**4,200**	**2,900**	<RL	<RL	<RL	<RL	<RL	<RL	<RL	**69,800**	**2,500**	<RL
Phenanthrene	85-01-8	56,000	**5,300**	2,800,000	1,600,000	**19,000**	**7,100**	**6,700**	<RL	**2,900**	<RL	<RL	<RL	<RL	**69,500**	<RL	<RL
Pyrene	129-00-0	480,000	ID	1,000,000,000	29,000,000	<RL	<RL	<RL	<RL	**6,200**	<RL	<RL	<RL	<RL	**164,000**	<RL	<RL
Metals (ug/kg)																	
Arsenic	7440-38-2	**5,800^**	23,000 ***	NLV	**7,600**	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barium	7440-39-3	1,300,000	440,000 **	NLV	37,000,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cadmium	7440-43-9	**6,000**	**3,000 ** **	NLV	550,000	NR	NR	NR	NR	NR	**16,200**	**395**	**57**	**135**	**2,140**	**1,710**	**134**
Chromium (total) ****	18540-29-9	**30,000**	**18,000^**	NLV	2,500,000	NR	NR	NR	NR	NR	**28,300**	**28,900**	**30,500**	**37,600**	**17,200**	**29,600**	**44,400**
Copper	7440-50-8	5,800,000	**73,000 ** **	NLV	20,000,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lead (total)	7439-92-1	**700,000**	**2,500,000 ** **	NLV	**400,000**	NR	NR	NR	NR	NR	**1,112,000**	**201,000**	**2,380**	**5,920**	**171,000**	**112,000**	**3,450**
Mercury	Varies	1,700	**130^**	48,000	160,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Selenium	7782-49-2	4,000	410^	NLV	2,600,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Silver	7440-22-4	4,500	1,000^	NLV	2,500,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Zinc	7440-66-6	2,400,000	**170,000 ** **	NLV	170,000,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

NOTES:
1. VOCs - Volatile Organic Compounds; SVOCs - Semi-volatile Organic Compounds
2. Concentrations reported in micrograms per kilogram (ug/kg).
3. Highlighted and bolded concentrations exceed applicable Part 201 residential cleanup criteria.
4. Criteria taken from MDNRE RRD Operational Memorandum #1, Table 2 Soil: Residential and Commercial I Part 201 Generic Cleanup Criteria and Screening levels, dated January 23, 2006.
5. Target analyte concentrations were also compared to ambient air volatile soil inhalation criteria (infinite source), which are not listed in above table because the concentrations were below the applicable criteria.
6. CS - Criterion is specific to individual constituent.
7. <RL - Analytical result was less than the respective reporting limit.
8. NR - Analysis not requested.
9. N/A - Criterion is not applicable because, per the RRD Operational Memorandum #2, the concentration of coelutes are not defined.
10. NLV - Hazardous substance is not likely to volatilize under most conditions.
11. ^- Statewide Default Background Level used as criterion because it was greater than the listed Drinking Water Protection Criterion or the Groundwater Surface Water Interface Protection Criterion.
12 ** - Groundwater Surface Water Interface Criterion depends on the water hardness of the receiving water. In accordance with MDEQ Operational Memo No. 5, a water hardness of 150 mg CaCO3/L was used for the waters of the southern lower peninsula of Michigan. The criteria are protective for surface water that is used as a drinking water source.
13. *** - Criterion is protective of surface water that is used as a drinking water source.
14. **** - Total chromium results are compared to hexavalent chromium criteria.
15. + - Consituent is a coelute. Criteria for coelutes are not defined under MDNRE RRD Operational Memorandum #1, Table 2 Soil: Residential and Commercial I Part 201 Generic Cleanup Criteria and Screening levels.
16. NLL - Hazardous substance is not likely to leach under most soil conditions.

TABLE 3
SOIL ANALYTICAL RESULTS - PART 201 EXCEEDANCES
171 WEST MICHIGAN AVENUE, BATTLE CREEK, MICHIGAN

SME Project No. KE62202C-11

		Part 201 Generic Residential Cleanup Criteria				Sample ID Depth Below Grade (ft) Date Collected											
						Terra March 1993							Terra April/July 1993				
Constituent	CAS Number	Drinking Water Protection Criteria	Groundwater Surface Interface Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Direct Contact Criteria	SB9 3' - 5' 3/31/1993	SB9 8' - 10' 3/31/1993	SB10 3' - 5' 3/31/1993	SB10 8' - 10' 3/31/1993	SB11 3' -5' 3/31/1993	SB12 3' - 5' 3/31/1993	SB13 5' - 7' 3/31/1993	SB1 3' - 5' 4/6/1993	SB2 18' - 20' 4/6/1993	SB5 18' - 20' 4/6/1993	SB7 8' - 10' 4/6/1993	SB7 13' - 15' 4/6/1993
VOCs (ug/kg)																	
Benzene	71-43-2	100	240***	1,600	180,000	NR	NR	NR	NR	NR	NR	NR	<RL	<RL	<RL	<RL	<RL
Chloroform	67-66-3	1,600	3,400	7,200	1,200,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dichloroethane	107-06-2	100	7,200	2,100	91,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	100-41-4	1,500	**360**	87,000	140,000	NR	NR	NR	NR	NR	NR	NR	<RL	<RL	<RL	**380**	**290**
Methyl-tert-butyl-ether	1634-04-4	800	15,000	5,900,000	1,500,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethylene	127-18-4	100	220***	11,000	88,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Toluene	108-88-3	16,000	2,800	250,000	250,000	NR	NR	NR	NR	NR	NR	NR	<RL	**112**	**55**	**1,500**	**1,300**
1,1,1-Trichloroethane	71-55-6	4,000	4,000	250,000	460,000	NN	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trimethlybenzene	95-63-6	2,100	570	110,000	110,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3,5-Trimethylbenzene	108-67-8	1,800	1,100	94,000	94,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Xylenes (total)	1330-20-7	5,600	**700**	150,000	150,000	NR	NR	NR	NR	NR	NR	NR	<RL	<RL	<RL	**1,800**	**1,410**
Other VOCs	CS	CS	CS	CS	CS	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
SVOCs (ug/kg)																	
Acenaphthene	83-32-9	300,000	**4,400**	190,000,000	41,000,000	NR	NR	NR	NR	NR	NR	NR	<RL	**4,200**	**980**	<RL	**9,300**
Acenaphthylene	208-96-8	**5,900**	ID	1,600,000	1,600,000	NR	NR	NR	NR	NR	NR	NR	<RL	**2,000**	<RL	**12,600**	**11,600**
Anthracene	120-12-7	41,000	ID	1,000,000,000	230,000,000	NR	NR	NR	NR	NR	NR	NR	**676**	<RL	<RL	<RL	<RL
Benzo(a)anthracene	56-55-3	NLL	NLL	NLV	20,000	NR	NR	NR	NR	NR	NR	NR	<RL	<RL	<RL	<RL	<RL
Benzo(a)anthracene & Chrysene +	CS	N/A	N/A	N/A	N/A	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzo(a)pyrene	50-32-8	NLL	NLL	NLV	**2,000**	NR	NR	NR	NR	NR	NR	NR	**1,610**	**14,100**	**4,300**	**126,000**	**59,700**
Benzo(a)pyrene & Dibenzo(a,h)anthracene +	CS	N/A	N/A	N/A	N/A	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzo(b)fluoranthene	205-99-2	NLL	NLL	ID	**20,000**	NR	NR	NR	NR	NR	NR	NR	**5,450**	**24,500**	**5,600**	**158,000**	**73,700**
Benzo(b)fluoranthene & Benzo(k)fluoranthene +	CS	N/A	N/A	N/A	N/A	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzo(g,h,i)perylene	191-24-2	NLL	NLL	NLV	2,500,000	NR	NR	NR	NR	NR	NR	NR	440	<RL	<RL	<RL	<RL
Benzo(k)fluoranthene	207-08-9	NLL	NLL	NLV	200,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chrysene	218-01-9	NLL	NLL	ID	2,000,000	NR	NR	NR	NR	NR	NR	NR	<RL	<RL	<RL	<RL	<RL
Dibenzo(a,h)anthracene	53-70-3	NLL	NLL	NLV	**2,000**	NR	NR	NR	NR	NR	NR	NR	<RL	<RL	<RL	<RL	<RL
Fluoranthene	206-44-0	730,000	**5,500**	1,000,000,000	46,000,000	NR	NR	NR	NR	NR	NR	NR	**806**	<RL	<RL	<RL	<RL
Fluorene	86-73-7	390,000	**5,300**	580,000,000	27,000,000	NR	NR	NR	NR	NR	NR	NR	<RL	**790**	**440**	**8,500**	**7,000**
Indeno(1,2,3-cd)pyrene	193-39-5	NLL	NLL	NLV	20,000	NR	NR	NR	NR	NR	NR	NR	**465**	<RL	<RL	**1,100**	<RL
2-Methylnaphthalene	91-57-6	57,000	ID	ID	8,100,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Naphthalene	91-20-3	35,000	**870**	250,000	16,000,000	NR	NR	NR	NR	NR	NR	NR	**359**	<RL	<RL	<RL	<RL
Phenanthrene	85-01-8	56,000	**5,300**	2,800,000	1,600,000	NR	NR	NR	NR	NR	NR	NR	**1,500**	<RL	<RL	<RL	<RL
Pyrene	129-00-0	480,000	ID	1,000,000,000	29,000,000	NR	NR	NR	NR	NR	NR	NR	**704**	<RL	<RL	<RL	<RL
Metals (ug/kg)																	
Arsenic	7440-38-2	**5,800^**	23,000 ***	NLV	**7,600**	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Barium	7440-39-3	1,300,000	440,000 **	NLV	37,000,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Cadmium	7440-43-9	**6,000**	**3,000 ** **	NLV	550,000	**2,320**	**120**	**654**	**297**	**310**	**416**	**377**	NR	NR	NR	NR	NR
Chromium (total) ****	18540-29-9	**30,000**	**18,000^**	NLV	2,500,000	**51,500**	**47,900**	**49,100**	**80,000**	**62,900**	**64,800**	**69,700**	NR	NR	NR	NR	NR
Copper	7440-50-8	5,800,000	**73,000 ** **	NLV	20,000,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Lead (total)	7439-92-1	**700,000**	**2,500,000 ** **	NLV	**400,000**	**191,000**	**5,460**	**4,384,000**	**2,390**	**5,350**	**8,360**	**69,900**	NR	NR	NR	NR	NR
Mercury	Varies	1,700	**130^**	48,000	160,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Selenium	7782-49-2	4,000	410^	NLV	2,600,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Silver	7440-22-4	4,500	1,000^	NLV	2,500,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Zinc	7440-66-6	2,400,000	**170,000 ** **	NLV	170,000,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

NOTES:

1. VOCs - Volatile Organic Compounds; SVOCs - Semi-volatile Organic Compounds
2. Concentrations reported in micrograms per kilogram (ug/kg).
3. Highlighted and bolded concentrations exceed applicable Part 201 residential cleanup criteria.
4. Criteria taken from MDNRE RRD Operational Memorandum #1, Table 2 Soil: Residential and Commercial I Part 201 Generic Cleanup Criteria and Screening levels, dated January 23, 2006.
5. Target analyte concentrations were also compared to ambient air volatile soil inhalation criteria (infinite source), which are not listed in above table because the concentrations were below the applicable criteria.
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8. NR - Analysis not requested.
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10. NLV - Hazardous substance is not likely to volatilize under most conditions.
11. ^- Statewide Default Background Level used as criterion because it was greater than the listed Drinking Water Protection Criterion or the Groundwater Surface Water Interface Protection Criterion.
12. ** - Groundwater Surface Water Interface Criterion depends on the water hardness of the receiving water. In accordance with MDEQ Operational Memo No. 5, a water hardness of 150 mg CaCO3/L was used for the waters of the southern lower peninsula of Michigan. The criteria are protective for surface water that is used as a drinking water source.
13. *** - Criterion is protective of surface water that is used as a drinking water source.
14. **** - Total chromium results are compared to hexavalent chromium criteria.
15. + - Consituent is a coelute. Criteria for coelutes are not defined under MDNRE RRD Operational Memorandum #1, Table 2 Soil: Residential and Commercial I Part 201 Generic Cleanup Criteria and Screening levels.
16. NLL - Hazardous substance is not likely to leach under most soil conditions.

TABLE 3
SOIL ANALYTICAL RESULTS - PART 201 EXCEEDANCES
171 WEST MICHIGAN AVENUE, BATTLE CREEK, MICHIGAN

SME Project No. KE62202C-11

Constituent	CAS Number	Part 201 Generic Residential Cleanup Criteria: Drinking Water Protection Criteria	Groundwater Surface Interface Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Direct Contact Criteria	Sample ID / Depth Below Grade (ft) / Date Collected: Terra April/July 1993 SB7 18' - 20' 4/6/1993	Terra August/September 1993 A 8/4/1993	B 8/4/1993	C 8/4/1993	G 8/4/1993	H 8/4/1993	I 8/4/1993	J 8/4/1993	K 8/4/1993	L 8/4/1993	C 9/29/1993
VOCs (ug/kg)																
Benzene	71-43-2	100	240***	1,600	180,000	<RL	NR	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Chloroform	67-66-3	1,600	3,400	7,200	1,200,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2-Dichloroethane	107-06-2	100	7,200	2,100	91,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Ethylbenzene	100-41-4	1,500	360	87,000	140,000	<RL	NR	<RL	<RL	<RL	<RL	<RL	<RL	<RL	31	NR
Methyl-tert-butyl-ether	1634-04-4	800	15,000	5,900,000	1,500,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Tetrachloroethene	127-18-4	100	220***	11,000	88,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Toluene	108-88-3	16,000	2,800	250,000	250,000	110	NR	<RL	<RL	<RL	<RL	<RL	<RL	<RL	26	NR
1,1,1-Trichloroethane	71-55-6	4,000	4,000	250,000	460,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,2,4-Trimethlybenzene	95-63-6	2,100	570	110,000	110,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1,3,5-Trimethylbenzene	108-67-8	1,800	1,100	94,000	94,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Xylenes (total)	1330-20-7	5,600	700	150,000	150,000	16	NR	<RL	<RL	<RL	<RL	<RL	<RL	<RL	65	NR
Other VOCs	CS	CS	CS	CS	CS	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
SVOCs (ug/kg)																
Acenaphthene	83-32-9	300,000	4,400	190,000,000	41,000,000	3,400	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Acenaphthylene	208-96-8	5,900	ID	1,600,000	1,600,000	1,400	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Anthracene	120-12-7	41,000	ID	1,000,000,000	230,000,000	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Benzo(a)anthracene	56-55-3	NLL	NLL	NLV	20,000	13,900	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Benzo(a)anthracene & Chrysene +	CS	N/A	N/A	N/A	N/A	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzo(a)pyrene	50-32-8	NLL	NLL	NLV	2,000	18,200	51,000	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Benzo(a)pyrene & Dibenzo(a,h)anthracene +	CS	N/A	N/A	N/A	N/A	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzo(b)fluoranthene	205-99-2	NLL	NLL	ID	20,000	19,600	66,000	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Benzo(b)fluoranthene & Benzo(k)fluoranthene	CS	N/A	N/A	N/A	N/A	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Benzo(g,h,i)perylene	191-24-2	NLL	NLL	NLV	2,500,000	<RL	52,000	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Benzo(k)fluoranthene	207-08-9	NLL	NLL	NLV	200,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Chrysene	218-01-9	NLL	NLL	ID	2,000,000	<RL	18,000	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Dibenzo(a,h)anthracene	53-70-3	NLL	NLL	NLV	2,000	<RL	8,300	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Fluoranthene	206-44-0	730,000	5,500	1,000,000,000	46,000,000	<RL	11,000	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Fluorene	86-73-7	390,000	5,300	580,000,000	27,000,000	850	6,700	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Indeno(1,2,3-cd)pyrene	193-39-5	NLL	NLL	NLV	20,000	<RL	15,000	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
2-Methylnaphthalene	91-57-6	57,000	ID	ID	8,100,000	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Naphthalene	91-20-3	35,000	870	250,000	16,000,000	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Phenanthrene	85-01-8	56,000	5,300	2,800,000	1,600,000	<RL	7,000	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Pyrene	129-00-0	480,000	ID	1,000,000,000	29,000,000	<RL	13,000	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Metals (ug/kg)																
Arsenic	7440-38-2	5,800^	23,000 ***	NLV	7,600	NR	5,780	13,000	5,830	3,430	11,800	27,700	5,200	10,300	26,300	NR
Barium	7440-39-3	1,300,000	440,000 **	NLV	37,000,000	NR	13,600	40,000	32,800	17,000	26,700	67,700	11,100	26,600	41,400	NR
Cadmium	7440-43-9	6,000	3,000 **	NLV	550,000	NR	53	55	1,160	1,620	30	1,110	<RL	125	<RL	NR
Chromium, Total ****	18540-29-9	30,000	18,000^	NLV	2,500,000	NR	3,020	4,490	3,360	3,410	18,500	62,400	39,600	8,840	14,200	NR
Copper	7440-50-8	5,800,000	73,000 **	NLV	20,000,000	NR	6,000	38,000	1,903,000	365,000	6,540	7,070	5,950	7,020	9,800	654,000
Lead (total)	7439-92-1	700,000	2,500,000 **	NLV	400,000	NR	2,430	18,600	36,000	36,900	5,460	10,600	400	5,250	5,310	1,410,000
Mercury	Varies	1,700	130^	48,000	160,000	NR	120	110	138	154	131	122	175	184	150	NR
Selenium	7782-49-2	4,000	410^	NLV	2,600,000	NR	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Silver	7440-22-4	4,500	1,000^	NLV	2,500,000	NR	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	<RL	NR
Zinc	7440-66-6	2,400,000	170,000 **	NLV	170,000,000	NR	11,200	41,800	318,000	409,000	38,900	757,000	49,700	24,900	75,300	549,000

NOTES:
1. VOCs - Volatile Organic Compounds; SVOCs - Semi-volatile Organic Compounds
2. Concentrations reported in micrograms per kilogram (ug/kg).
3. Highlighted and bolded concentrations exceed applicable Part 201 residential cleanup criteria.
4. Criteria taken from MDNRE RRD Operational Memorandum #1, Table 2 Soil: Residential and Commercial I Part 201 Generic Cleanup Criteria and Screening levels, dated January 23, 2006.
5. Target analyte concentrations were also compared to ambient air volatile soil inhalation criteria (infinite source), which are not listed in above table because the concentrations were below the applicable criteria.
6. CS - Criterion is specific to individual constituent.
7. <RL - Analytical result was less than the respective reporting limit.
8. NR - Analysis not requested.
9. N/A - Criterion is not applicable because, per the RRD Operational Memorandum #2, the concentration of coelutes are not defined.
10. NLV - Hazardous substance is not likely to volatilize under most conditions.
11. ^- Statewide Default Background Level used as criterion because it was greater than the listed Drinking Water Protection Criterion or the Groundwater Surface Water Interface Protection Criterion.
12 ** - Groundwater Surface Water Interface Criterion depends on the water hardness of the receiving water. In accordance with MDEQ Operational Memo No. 5, a water hardness of 150 mg CaCO3/L was used for the waters of the southern lower peninsula of Michigan. The criteria are protective for surface water that is used as a drinking water source.
13. *** - Criterion is protective of surface water that is used as a drinking water source.
14. **** - Total chromium results are compared to hexavalent chromium criteria.
15. + - Consituent is a coelute. Criteria for coelutes are not defined under MDNRE RRD Operational Memorandum #1, Table 2 Soil: Residential and Commercial I Part 201 Generic Cleanup Criteria and Screening levels.
16. NLL - Hazardous substance is not likely to leach under most soil conditions.

TABLE 3
SOIL ANALYTICAL RESULTS - PART 201 EXCEEDANCES
171 WEST MICHIGAN AVENUE, BATTLE CREEK, MICHIGAN

SME Project No. KE62202C-11

		Part 201 Generic Residential and Commercial I Cleanup Criteria				Sample ID Depth Below Grade (ft) Date Collected		
						Earth Tech 1994		Horizon 1996
Constituent	CAS Number	Drinking Water Protection Criteria	Groundwater Surface Interface Protection Criteria	Soil Volatilization to Indoor Air Inhalation Criteria	Direct Contact Criteria	SB1E 1' - 1.5' 9/12/1994	SB1W 3' - 5' 9/12/1994	RR-East 10/14/96
VOCs (ug/kg)								
Benzene	71-43-2	100	**240*****	1,600	180,000	NR	NR	<RL
Chloroform	67-66-3	1,600	3,400	7,200	1,200,000	NR	NR	NR
1,2-Dichloroethane	107-06-2	100	**7,200**	2,100	91,000	NR	NR	NR
Ethylbenzene	100-41-4	1,500	**360**	87,000	140,000	NR	NR	<RL
Methyl-tert-butyl-ether	1634-04-4	800	**15,000**	5,900,000	1,500,000	NR	NR	NR
Tetrachloroethene	127-18-4	100	**220*****	11,000	88,000	NR	NR	NR
Toluene	108-88-3	16,000	**2,800**	250,000	250,000	NR	NR	<RL
1,1,1-Trichloroethane	71-55-6	4,000	**4,000**	250,000	460,000	NR	NR	NR
1,2,4-Trimethlybenzene	95-63-6	2,100	**570**	110,000	110,000	NR	NR	NR
1,3,5-Trimethylbenzene	108-67-8	1,800	**1,100**	94,000	94,000	NR	NR	NR
Xylenes (total)	1330-20-7	5,600	**700**	150,000	150,000	NR	NR	<RL
Various VOCs	CS	CS	CS	CS	CS	NR	NR	NR
SVOCs (ug/kg)								
Acenaphthene	83-32-9	300,000	**4,400**	190,000,000	41,000,000	NR	NR	<RL
Acenaphthylene	208-96-8	**5,900**	ID	1,600,000	1,600,000	NR	NR	<RL
Anthracene	120-12-7	41,000	ID	1,000,000,000	230,000,000	NR	NR	**676**
Benzo(a)anthracene	56-55-3	NLL	NLL	NLV	20,000	NR	NR	<RL
Benzo(a)anthracene & Chrysene +	CS	N/A	N/A	N/A	N/A	NR	NR	NR
Benzo(a)pyrene	50-32-8	NLL	NLL	NLV	**2,000**	NR	NR	**1,610**
Benzo(a)pyrene & Dibenzo(a,h)anthracene +	CS	N/A	N/A	N/A	N/A	NR	NR	NR
Benzo(b)fluoranthene	205-99-2	NLL	NLL	ID	**20,000**	NR	NR	**5,450**
Benzo(b)fluoranthene & Benzo(k)fluoranthene +	CS	N/A	N/A	N/A	N/A	NR	NR	NR
Benzo(g,h,i)perylene	191-24-2	NLL	NLL	NLV	2,500,000	NR	NR	440
Benzo(k)fluoranthene	207-08-9	NLL	NLL	NLV	200,000	NR	NR	NR
Chrysene	218-01-9	NLL	NLL	ID	2,000,000	NR	NR	<RL
Dibenzo(a,h)anthracene	53-70-3	NLL	NLL	NLV	**2,000**	NR	NR	<RL
Fluoranthene	206-44-0	730,000	**5,500**	1,000,000,000	46,000,000	NR	NR	**806**
Fluorene	86-73-7	390,000	**5,300**	580,000,000	27,000,000	NR	NR	<RL
Indeno(1,2,3-cd)pyrene	193-39-5	NLL	NLL	NLV	20,000	NR	NR	**465**
2-Methylnaphthalene	91-57-6	57,000	ID	ID	8,100,000	NR	NR	NR
Naphthalene	91-20-3	35,000	**870**	250,000	16,000,000	NR	NR	**359**
Phenanthrene	85-01-8	56,000	**5,300**	2,800,000	1,600,000	NR	NR	**1,500**
Pyrene	129-00-0	480,000	ID	1,000,000,000	29,000,000	NR	NR	**704**
Metals (ug/kg)								
Arsenic	7440-38-2	**5,800^**	23,000 ***	NLV	**7,600**	NR	NR	<RL
Barium	7440-39-3	1,300,000	440,000 **	NLV	37,000,000	NR	NR	**27,800**
Cadmium	7440-43-9	**6,000**	**3,000 ****	NLV	550,000	NR	NR	**10,600**
Chromium, Total ****	18540-29-9	**30,000**	**18,000^**	NLV	2,500,000	NR	NR	**10,800**
Copper	7440-50-8	5,800,000	**73,000 ****	NLV	20,000,000	NR	NR	**115,000**
Lead (total)	7439-92-1	**700,000**	**2,500,000 ****	NLV	**400,000**	**440,000**	**4,770,000**	**47,500**
Mercury	Varies	1,700	**130^**	48,000	160,000	NR	NR	<RL
Selenium	7782-49-2	4,000	410^	NLV	2,600,000	NR	NR	<RL
Silver	7440-22-4	4,500	1,000^	NLV	2,500,000	NR	NR	<RL
Zinc	7440-66-6	2,400,000	**170,000 ****	NLV	170,000,000	NR	NR	**137,000**

NOTES:
1. VOCs - Volatile Organic Compounds; SVOCs - Semi-volatile Organic Compounds
2. Concentrations reported in micrograms per kilogram (ug/kg).
3. Highlighted and bolded concentrations exceed applicable Part 201 residential cleanup criteria.
4. Criteria taken from MDNRE RRD Operational Memorandum #1, Table 2 Soil: Residential and Commercial I Part 201 Generic Cleanup Criteria and Screening levels, dated January 23, 2006.
5. Target analyte concentrations were also compared to ambient air volatile soil inhalation criteria (infinite source), which are not listed in above table because the concentrations were below the applicable criteria.
6. CS - Criterion is specific to individual constituent.
7. <RL - Analytical result was less than the respective reporting limit.
8. NR - Analysis not requested.
9. N/A - Criterion is not applicable because, per the RRD Operational Memorandum #2, the concentration of coelutes are not defined.
10. NLV - Hazardous substance is not likely to volatilize under most conditions.
11. ^- Statewide Default Background Level used as criterion because it was greater than the listed Drinking Water Protection Criterion or the Groundwater Surface Water Interface Protection Criterion.
12 ** - Groundwater Surface Water Interface Criterion depends on the water hardness of the receiving water. In accordance with MDEQ Operational Memo No. 5, a water hardness of 150 mg CaCO3/L was used for the waters of the southern lower peninsula of Michigan. The criteria are protective for surface water that is used as a drinking water source.
13. *** - Criterion is protective of surface water that is used as a drinking water source.
14. **** - Total chromium results are compared to hexavalent chromium criteria.
15. + - Consituent is a coelute. Criteria for coelutes are not defined under MDNRE RRD Operational Memorandum #1, Table 2 Soil: Residential and Commercial I Part 201 Generic Cleanup Criteria and Screening levels.
16. NLL - Hazardous substance is not likely to leach under most soil conditions.

TABLE 4
GROUNDWATER ANALYTICAL RESULTS - PART 201 EXCEEDANCES
171 WEST MICHIGAN AVENUE, BATTLE CREEK, MICHIGAN

SME Project No. KE62202C-11

		Part 201 Generic Residential and Commercial I Cleanup Criteria				Sample ID Screen Depth Below Grade (ft) Date Collected							
						Terra March 1993			Terra April/July 1993				Prein and Newhoff 2001
Constituent	CAS Number	Drinking Water Criteria	Groundwater Surface Interface Criteria	Groundwater Volatilization to Indoor Air Inhalation Criteria	Groundwater Contact Criteria	SB3 9'-14' 3/30/1993	SB5 19' - 24' 3/30/1993	SB6 19'-24' 3/31/1993	SB2 13' -18' 4/24/1993	SB5 13' - 18' 4/24/1993	SB7 13' -18' 4/24/1993	SB9 7/3/1993	GP-5 12' - 16' 4/10/2001
VOCs (ug/L)													
Benzene	71-43-2	**5.0**	200	5,600	11,000	<RL	**1**	<RL	**5**	<RL	**16**	<RL	<RL
Ethylbenzene	100-41-4	74	18	110,000	169,000	NR	<RL	<RL	<RL	<RL	<RL	<RL	<RL
Toluene	108-88-3	790	140	530,000	526,000	**2**	**18**	**4**	**6**	**2**	**4**	<RL	<RL
Trichloroethene	79-01-6	5.0	29 **	15,000	22,000	NR	NR	NR	NR	NR	NR	NR	NR
Other VOCs	CS	CS	CS	CS	CS	NR	NR	NR	<RL	<RL	<RL	<RL	<RL
SVOCs (ug/L)													
Acenaphthene	83-32-9	1,300	3,800	**19**	4240^	NR	NR	NR	**432**	**43**	**967**	**7**	<RL
Acenaphthylene	208-96-8	**52**	ID	3900^	3900^	NR	NR	NR	**226**	**25**	**475**	<RL	<RL
Anthracene	39-41-8	43.4	43.4	43.4	43.4	**<RL**	**13**	<RL	<RL	<RL	<RL	<RL	<RL
Benzo(a)pyrene	50-32-8	**5.0**	ID	NLV	**0.6**	<RL	<RL	<RL	**1,220**	<RL	**2,210**	<RL	<RL
Benzo(a)anthracene & Chrysene +	CS	N/A	N/A	N/A	N/A	**<RL**	**106**	<RL	NR	NR	NR	NR	NR
Benzo(b)fluoranthene	205-99-2	**1.5^**	**1.5^**	**1.5^**	**1.5^**	NR	NR	NR	**1,810**	<RL	**3,520**	**632**	<RL
Chrysene	218-01-9	**1.6^**	**1.6^**	**1.6^**	**1.6^**	NR	NR	NR	<RL	<RL	<RL	<RL	**47.5**
Fluoranthene	206-44-0	**210^**	**1.6**	210^	210^	**27**	<RL	<RL					
Fluorene	86-73-7	880	**12**	2000^	2000^	NR	NR	NR	**77**	**9**	**132**	**41**	<RL
Naphthalene	91-20-3	520	13	31,000	31,000	NR	NR	NR	<RL	<RL	**101**	<RL	<RL
Phenanthrene	85-01-8	**52**	**2.4**	1000^	1000^	NR	NR	NR	<RL	<RL	<RL	**115**	<RL
Pyrene	129-00-0	**135^**	**135^**	**135^**	**135^**	**26**	**143**	<RL	<RL	<RL	<RL	<RL	**37.9**
Other SVOCs	CS	CS	CS	CS	CS	NR	NR	NR	<RL	<RL	<RL	<RL	<RL
Metals (ug/L)													
Arsenic	7440-38-2	10	50 **	NLV	4,300	NR	NR	NR	NR	NR	NR	NR	NR
Barium	7440-39-3	2,000	670	NLV	14,000,000	NR	NR	NR	NR	NR	NR	NR	NR
Cadmium	7440-43-9	5.0	2.5 *	NLV	190,000	NR	NR	<RL	NR	NR	NR	NR	NR
Chromium, Total ***	16065-83-1	100	100	NLV	290,000,000	NR	NR	1	NR	NR	NR	NR	NR
Chromium, Hexavalent	18540-29-9	100	11	NLV	460,000	NR	NR	NR	NR	NR	NR	NR	NR
Copper	7440-50-8	1,000	13 *	NLV	7,400,000	NR	NR	NR	NR	NR	NR	NR	NR
Lead	7439-92-1	**4**	14 *	NLV	ID	NR	NR	**5**	NR	NR	NR	NR	NR
Mercury	Varies	2.0	0.0013	56	56	NR	NR	NR	NR	NR	NR	NR	NR
Selenium	7782-49-2	50	5.0	NLV	970,000	NR	NR	NR	NR	NR	NR	NR	NR
Silver	7440-22-4	34	0.2	NLV	1,500,000	NR	NR	NR	NR	NR	NR	NR	NR
Zinc	7440-66-6	2,400	170 *	NLV	110,000,000	NR	NR	NR	NR	NR	NR	NR	NR

NOTES:
1. VOCs - Volatile Organic Compounds; PAHs - Polycyclic Aromatic Hydrocarbons.
2. Concentrations reported in micrograms per liter (ug/L).
3. Highlighted and bolded concentrations exceed applicable Part 201 residential cleanup criteria.
4. Criteria taken from MDNRE RRD Operational Memorandum #1, Table 1. Groundwater: Residential and Industrial-Commercial Part 201 Generic Cleanup Criteria and Screening levels, dated January 23, 2006.
5. Target analyte concentrations were compared to Part 201 Flammability and Explosivity Screening Levels and Acute Inhalation Screening Levels, which were not shown on this table because there were no exceedances.
6. CS - Criterion is specific to individual constituent.
7. <RL - Analytical result was less than the respective reporting limit.
8. NR - Analysis not requested.
9. ID - Insufficient data to develop criterion.
10. NLV - Hazardous substance is not likely to volatilize under most conditions.
11. * - Groundwater Surface Water Interface Criterion depends on the water hardness of the receiving water. In accordance with MDEQ Operational Memo No. 5, a water hardness of 150 mg CaCO3/L was used for the waters of the southern lower peninsula of Michigan. The criteria are protective for surface water that is used as a drinking water source.
12. ** - Criterion is protective of surface water that is used as a drinking water source.
13. *** - Total Chromium value is compared to the Trivalent Chromium Criterion.
14. ^ - Criterion defualts to the hazardous substance-specific water solubility limit.
15. N/A - Criterion is not applicable because the concentration of coelutes are not defined.
16. + - Consituent is a coelute. Criteria for coelutes are not defined under MDNRE RRD Operational Memorandum #1, Table 1 Groundwater: Residential and Commercial I Part 201 Generic Cleanup Criteria and Screening levels.

APPENDIX A

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONALS

RESUME — *KEITH B. EGAN, CP*

Senior Consultant

Mr. Egan provides senior technical consulting and project management expertise in the areas of brownfield redevelopment and financing, site investigation and remediation, environmental due diligence, RCRA Corrective Action, environmental regulatory compliance, and environmental chemistry.

- **Professional Qualifications:**
  - 33 years experience in environmental evaluations and consulting, including 13 years experience with the Ohio Voluntary Action Program (VAP).
  - Served as Certified Professional (CP) or principal author for 15 No Further Action (NFA) letters for redevelopment projects that received Covenant Not to Sue Status.
  - Obtained approximately $10 million in Clean Ohio Revitalization Fund (CORF) and Clean Ohio Assistance Fund (COAF) grants for redevelopment projects.
  - Successfully prepared a U.S. EPA Brownfield Pilot Project grant application.
  - Expert in liability management and due care planning for property transactions, brownfield redevelopment planning and environmental response actions, and identification and acquisition of financial incentives for brownfield redevelopments
  - Expert at environmental site investigations and development of remediation alternatives for industrial and commercial facilities, UST sites, and RCRA Corrective Action facilities.
- **Representative Project Experience:**
  - Successfully prepared the $2.9 million CORF grant application for Clean Ohio funds to remediate and redevelop a former shingle manufacturing facility in Lockland, Ohio. Funds were used to demolish buildings, remediate impacted soil and install underground utilities. Managed the site investigation, remediation, and redevelopment of the property as well as CORF budgeting and invoicing. Prepared the Phase I and II Property Assessments, Remedial Action Plan, and Remedial Implementation Report.
  - Served as the CP for a former asbestos-containing building material manufacturing facility. Prepared a work plan in response to deficiencies contained in a No Further Action Letter prepared by others. The plan addressed trace levels of asbestos in the soil. Recommended and monitored an air sampling plan approved by the State of Ohio. Prepared a revised Phase II Property Assessment, a Property-Specific Risk Assessment, new Executive Summary and Filing Document, and NFA letter for this COAF supported project.
  - Served as the CP for a former china manufacturing facility that was redeveloped for commercial and recreational use. The site was heavily impacted with lead requiring remediation of the soil and sediments. Remediation required interagency cooperation between VAP, the Division of Surface Water, Division of Hazardous Waste Management, and the Division of Solid and Infectious Waste. Prepared the Phase I and II Property Assessments, Property-Specific Risk Assessment, Remedial Implementation Report, and the Executive Summary and Filing Document. The project received Covenant Not to Sue status.
  - Project manager for the remedial investigation of five Superfund sites in Ohio, Kentucky and California.
  - Project manager for underground storage tank sites obtaining No Further Action status for over 50 Ohio sites using a risk-based approach.
  - Project manager for over 100 Phase I/II site assessments for due diligence related to property transfers and corporate acquisitions and divestitures in several states.
- **Career History:** SME since May, 2010 - Other firms from 1977
- **Education:** B.S., Environmental Science, University of Arkansas
  Graduate Studies in Geology, University of Oklahoma
- **Registrations:** Certified Professional – State of Ohio VAP Program
  40-Hour HAZWOPER Course

- Served as the CP for a former scrap metal recycling facility now developed for commercial use. This site was heavily impacted with metals and petroleum hydrocarbons requiring remediation of the soil. Prepared a Property-Specific Risk Assessment, Remedial Implementation Report, and the Executive Summary and Filing Document. The project received Covenant Not to Sue status.
- Project manager for all phases of the VAP project at a lead impacted property in Ohio. Developed a sampling strategy, provided oversight of field activities, and prepared Phase I and II Property Assessments and Remedial Implementation Reports. The project received Covenant Not to Sue status and is being transformed into a residential development.
- Managed all phases of the VAP projects at two aircraft parts machining facilities in Cincinnati, Ohio. Project included development of the sampling strategy, oversight of field activities, and preparation of the Phase II Property Assessment and Project-Specific Risk Assessment reports. A Covenant Not to Sue was issued for both properties.
- Managed the VAP assessment of a former linoleum manufacturing facility now developed for residential use. Project included development of the sampling strategy, oversight of field activities, and preparation of the Project-Specific Risk Assessment report. Remediation of this property was driven by residential direct contact and site-specific leaching standards. During the remediation, continually performed cumulative risk analysis and leaching modeling to assess if the current concentrations remaining at the property posed a risk to human receptors and groundwater. This approach prevented unnecessary soil remediation. A Covenant Not to Sue was issued for this property.
- Managed the VAP activities related to redevelopment of a former paper mill. Developed the sampling strategy, provided oversight of field activities, and prepared the Phase II Property Assessment and Project-Specific Risk Assessment reports. The key to the success of this project was development of a site-specific lead leaching standard based on bench scale leachability tests, the first to be approved by OEPA. A Covenant Not to Sue was issued for this site.

RESUME **DAVIN K. OJALA**

Project Consultant

Performs Phase I and Phase II Environmental Site Assessments (ESA), and prepares Baseline Environmental Assessments (BEA). Also responsible for performing asbestos building material assessments, supervision of drilling and monitoring well installation activities, field activities for underground storage tank (UST) removal, and assisting with the implementation of brownfield redevelopment plans.

❖ **Professional Qualifications:**

- Skilled in conducting ESAs for real estate transactions including report research, site reconnaissance and report preparation. Knowledgeable of ASTM E1527-00, E1528-00 and specific lending institution requirements.
- Skilled in environmental drilling, groundwater monitor well installation, and subsequent development and sampling.
- Skilled in field coordination of UST removals and associated sampling activities.
- Skilled in performing asbestos surveys and air quality sampling.

❖ **Representative Project Experience:**

- Performed over 125 Phase I and Phase II ESAs in Michigan and Indiana on commercial, industrial and agricultural properties.
- Completed Phase I and Phase II ESAs for a 400,000 square-foot industrial building in Elkhart, Indiana.
- Completed an asbestos building material assessment of a two-story, 40,000 square-foot building located in downtown Kalamazoo, Michigan.
- Completed a Category "S" BEA for an industrial site located in Kalamazoo, Michigan. To facilitate completion of the BEA, an isolation zone was established through Phase II ESA activities.
- Completed a Phase I ESA for a 770-acre site in Marshall, Michigan.
- Completed over 20 environmental projects within the Fort Custer Industrial Park in Battle Creek, Michigan.
- Performed groundwater sampling services for four former manufactured gas plants in Michigan.
- Assisted in asbestos building material and lead based paint assessments for a multi-story former hotel.
- Completed a hazardous materials assessment of a three-story hospital located in Jackson, Michigan. Work included an asbestos and lead-based paint assessment.
- Performed soil compaction testing for a landfill cap on a National Superfund Site located in Kalamazoo County.

❖ **Career History:** SME since 2000 - Other firms from 1998

❖ **Education:** B.S. Geography, Environmental Resource Management and Environmental Studies, Western Michigan University

❖ **Certifications:** 40-Hour HAZWOPER Course
8-Hour HAZWOPER Refresher Training - Health and Safety
Asbestos Building Inspector, Michigan
Certified Nuclear Density Meter Operator - Troxler

❖ **Affiliations:** Sigma Phi Epsilon - Geographic Honor Society
Risk Management Association

RESUME **SARA I. BALS, EIT**

Senior Environmental Engineer

Performs a broad range of tasks related to Phase I and Phase II Environmental Site Assessments (ESAs), Baseline Environmental Assessments (BEAs), Brownfield Redevelopment and Assessment Grants and Financing, Toxic Release Inventory (TRI) reporting, excavation monitoring, and other related environmental and/or subsurface assessment activities.

❖ **Professional Qualifications:**

- Skilled at conducting Phase I ESAs, including property history research, site walkover observation, and Phase I ESA report preparation.
- Experienced at conducting Phase II ESAs, BEAs and other subsurface investigations, including assessing site conditions and history for soil probe, test pits, and/or monitoring well placement, delineation of subsurface impact, and assessment of potential exposure pathways.
- Experienced in TRI reporting including data collection, conducting site visits, calculating releases, preparing reports, and analyzing data.

❖ **Representative Project Experience:**

- Completed U.S. EPA Assessment Grant applications for the cities of Buchanan, Battle Creek, Albion, and Calhoun County, Michigan, and DeKalb County, Indiana.
- Assisted with oversight and implementation of the Calhoun County, City of Buchanan, City of Albion, City of Battle Creek, and Cities of Allegan, Otsego, and Plainwell Assessment Grants, including development of a Quality Assurance Project Plans (QAPPs), Health and Safety Plans (HASPs), and Sampling and Analysis Plans (SAPs).
- Performed over 80 Phase I ESAs, Phase II ESAs, and BEAs in southwest Michigan for individuals, corporations, and lending institutions, in association with properties ranging from residential/commercial to industrial usages.
    - Conducted multiple Phase I and Phase II ESAs related to the Calhoun County Assessment Grant. ESAs were performed in Albion, Battle Creek, Marshall, and Springfield. Clients included Calhoun County Road Commission, Calhoun County Community Development, Allman Development, and Sioux Chief Manufacturing. Also assisted with the oversight and implementation of the assessment grant, including development of a QAPP.
    - Conducted multiple Phase I and Phase II ESA's in support of the W. K. Kellogg Institute for Food and Nutrition Research facility expansion in downtown Battle Creek, and in support of redevelopment of sites within the Fort Custer Industrial Park in Battle Creek. ESAs were performed for Battle Creek Unlimited.
    - Conducted multiple Phase I and Phase II ESAs in support of the City of Buchanan U.S. EPA Assessment Grant.
- Prepared TRI reports for a major automotive manufacturer assembly and stamping facilities.
- Analyzed data and prepared quarterly hydrogeologic monitoring reports for Central Sanitary Landfill in Michigan.

❖ **Career History:** SME since 2006

❖ **Education:** B.S., Civil and Environmental Engineering, Northern Arizona University
M.S., Environmental Engineering, University of Notre Dame

❖ **Certifications:** Engineer-in-Training (EIT) - Michigan
40-Hour HAZWOPER Training

❖ **Affiliations:** Air & Waste Management Association
Tau Beta Pi – Engineering Honor Society

APPENDIX B

LEGAL DESCRIPTION AND SURVEY MAP

General Property Information

[Back to Non-Printer Friendly Version] [Send To Printer]

Parcel: 0254-00-060-0

Property Address

[collapse]

171 W MICHIGAN AVE
BATTLE CREEK, MI 49017-3662

Owner Information

[collapse]

BATTLE CREEK UNLIMITED INC
N/A

Unit: 52

Taxpayer Information

[collapse]

CALHOUN COUNTY LAND BANK AUTHORITY
315 GREEM ST W
MARSHALL, MI 49068-1585

General Information for Tax Year 2010

[collapse]

Property Class:	201	**Assessed Value:**	$958,466
School District:	13020 - BATTLE CREEK SCHOOLS	**Taxable Value:**	$958,466
State Equalized Value:	$958,466	**Map #**	601SE
User Number Indx:		**Date of Last Name Chg:**	01/13/2011
		Date Filed:	
		Notes:	N/A

Principal Residence Exemption	May 1st	Final
2011	0.0000 %	-
2010	0.0000 %	0.0000 %

Previous Year Info	MBOR Assessed	Final S.E.V.	Final Taxable
2009	$958,466	$958,466	$958,466
2008	$958,466	$958,466	$958,466

Land Information

[collapse]

	Frontage		Depth
Lot 1:	0.00 Ft.		0.00 Ft.
Lot 2:	0.00 Ft.		0.00 Ft.
Lot 3:	0.00 Ft.		0.00 Ft.
Total Frontage:	0.00 Ft.	**Average Depth:**	0.00 Ft.

Acreage:	6.94		
Zoning Code:	REF		
Land Value:	$588,362	**Mortgage Code:**	N/A
Land Improvements:	$372,852	**Lot Dimensions/Comments:**	
Renaissance Zone:	NO		
Renaissance Zone Expiration			

Date:

ECF Neighborhood Code: 00511 - 511 OFFICE BLDGS NORTH

Legal Information for 0254-00-060-0

[collapse]

BC CITY RB4 PART OF LOTS 48, 49, 50, 59, 61 THRU 65, 70, 71 & 72, ALL OF LOTS 51 THRU 58, 66 THRU 69, 73 THRU 79, MORE PARTICULARY DESC AS FOLLOWS: COMM NW COR OF LOT 65 OF SD PLAT - S 74 DEG 30 MIN 00 SEC E ALG SLY LI OF MICHIGAN AVE 400.29 FT TO TRUE POB - CONTN S 74 DEG 30 MIN 00 SEC E ALG SD SLY LI 684.34 FT - SELY ALG SD ALG ARC TO RT & SLY LI OF RELOCATED MICHIGAN AVE 324.10 FT (RAD 539.96 FT; CHORD BRG S 57 DEG 18 MIN 17 SEC E 319.25 FT) - CONT ALG SLY LI OF RELOCATED MICHIGAN AVE 7.08 FT - S 49 DEG 44 MIN 42 SEC W ALG NWLY LI OF CARLYLE ST (49.5 FT WIDE) 265.03 FT - N 40 DEG 07 MIN 39 SEC W ALG NWLY EXT OF SLY LI OF 72 THRU 81 OF BC CITY RB3 DIST OF 95.85 FT - N 74 DEG 33 MIN 05 SEC W ALG SLY LI OF LOTS 66 TROUGH 77 OF BC CITY RB4 & ELY EXT THEREOF 1169.93 FT - N 16 DEG 05 MIN 29 SEC E ALG WLY LI OF LOTS 66 & 65 OF BC CITY RB4 DIST OF 141.90 FT - S 74 DEG 30 MIN 00 SEC E 278.76 FT - S 15 DEG 30 MIN 00 SEC W 12.50 FT - S 74 DEG 30 MIN 00 SEC E 122.79 FT - N 15 DEG 30 MIN 00 SEC E 135 FT TO POB ((ASSESSED WITH 0254-00-054-0, -055-0, -056-0, -058-0, -059-0, -060-0, -062-0, -063-0, -065-0, -084-0, -084-1, -084-2, 084-3, -086-0 IN 1998))

Sales Information

6 sale record(s) found.

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms Of Sale	Liber/Page
12/22/2010	$1.00	04	BATTLE CREEK UNLIMITED INC	CALHOUN COUNTY LAND BANK AUTHORITY	04 P T A	
05/19/2009	$0.00	12	CC REAL ESTATE HOLDINGS LLC	BATTLE CREEK UNLIMITED INC	16 GOVT UNIT	3504/0354
06/29/2007	$0.00	05	HERITAGE CENTER FOUNDATION	CC REAL ESTATE HOLDINGS LLC	25 WD/LC N.USED	3294/632
05/23/2003	$1.00	12	HERITAGE CENTER FOUNDATION	CITY OF BATTLE CREEK	12 QCD/OTHER	2646/0783
06/08/1998	$1.00	11	CITY OF BATTLE CREEK	HERITAGE CENTER FOUNDATION	11 MULTIPLE ASSMTS	2032/0009
01/27/1998	$725,000.00	11	CEREAL CITY DEVELOPMENT CORP	CITY OF BATTLE CREEK	11 MULTIPLE ASSMTS	2032/0006

Building Information

1 building(s) found.

	Description	Floor Area	Yr Built
[−]	Commercial/Industrial Building 1 - *Office Building*	44606 Sq. Ft.	1998

General Information

Floor Area:	44606 Sq. Ft.	**Estimated TCV:**	N/A
Occupancy:	Office Building	**Class:**	C
Stories Above Ground:	3	**Average Story Height:**	14
Basement Wall Height:	N/A		
Year Built:	1998	**Year Remodeled:**	0
Percent Complete:	100%	**Heat:**	Package Heating & Cooling
Physical Percent Good:	77%	**Functional Percent Good:**	50%
Economic Percent Good:	100%	**Effective Age:**	13 yrs.

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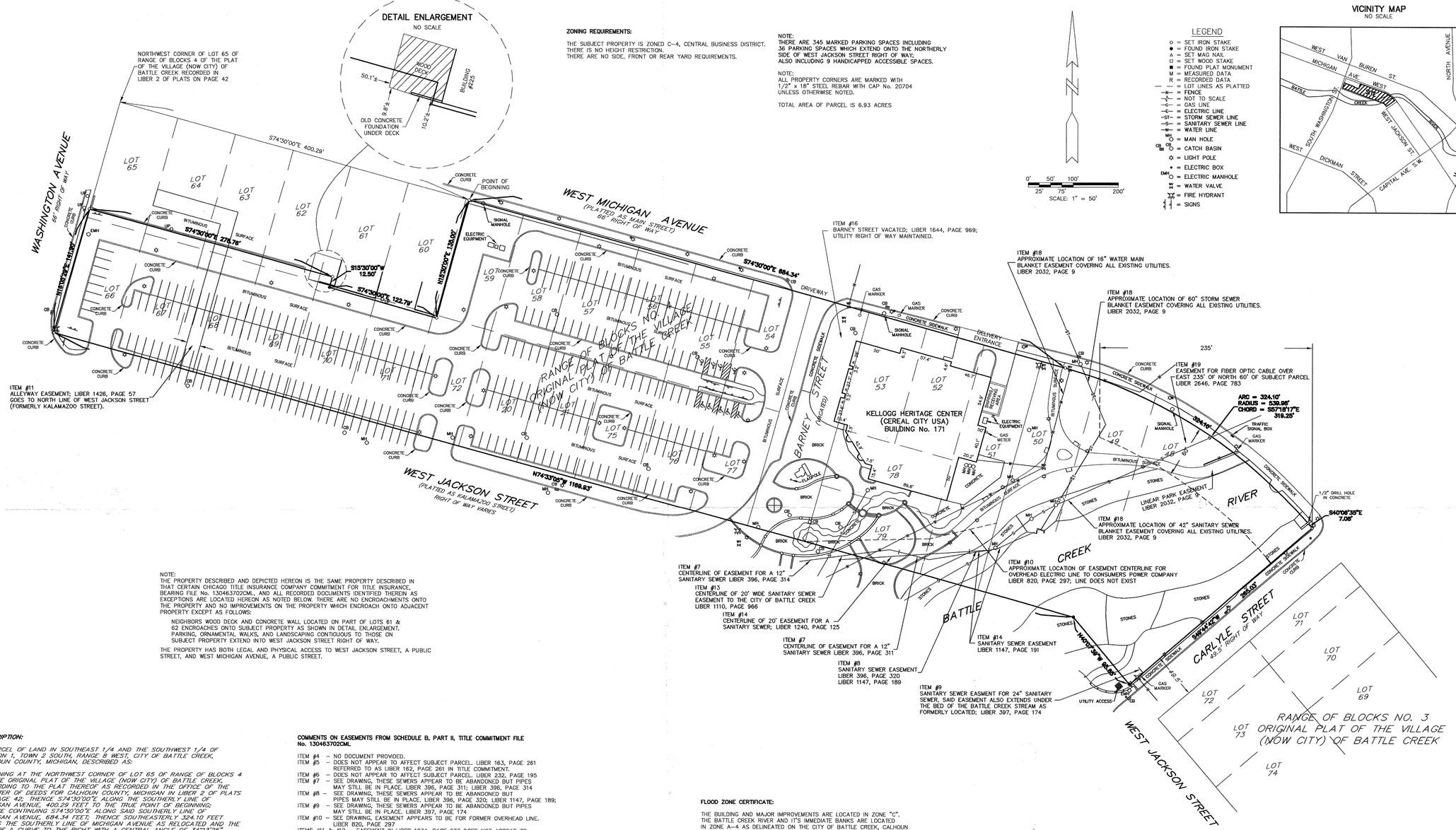

ZONING REQUIREMENTS:

THE SUBJECT PROPERTY IS ZONED C-4, CENTRAL BUSINESS DISTRICT.
THERE IS NO HEIGHT RESTRICTION.
THERE ARE NO SIDE, FRONT OR REAR YARD REQUIREMENTS.

NOTE:
THERE ARE 345 MARKED PARKING SPACES INCLUDING
36 PARKING SPACES WHICH EXTEND ONTO THE NORTHERLY
SIDE OF WEST JACKSON STREET RIGHT OF WAY;
ALSO INCLUDING 9 HANDICAPPED ACCESSIBLE SPACES.

NOTE:
ALL PROPERTY CORNERS ARE MARKED WITH
1/2" x 18" STEEL REBAR WITH CAP No. 20704
UNLESS OTHERWISE NOTED.

TOTAL AREA OF PARCEL IS 6.93 ACRES

NOTE:
THE PROPERTY DESCRIBED AND DEPICTED HEREON IS THE SAME PROPERTY DESCRIBED IN THAT CERTAIN CHICAGO TITLE INSURANCE COMPANY COMMITMENT FOR TITLE INSURANCE, BEARING FILE No. 130463702CML, AND ALL RECORDED DOCUMENTS IDENTIFIED THEREIN AS EXCEPTIONS ARE LOCATED HEREON AS NOTED BELOW. THERE ARE NO ENCROACHMENTS ONTO THE PROPERTY AND NO IMPROVEMENTS ON THE PROPERTY WHICH ENCROACH ONTO ADJACENT PROPERTY EXCEPT AS FOLLOWS:

NEIGHBORS WOOD DECK AND CONCRETE WALL LOCATED ON PART OF LOTS 61 & 62 ENCROACHES ONTO SUBJECT PROPERTY AS SHOWN IN DETAIL ENLARGEMENT. PARKING, ORNAMENTAL WALKS, AND LANDSCAPING CONTIGUOUS TO THOSE ON SUBJECT PROPERTY EXTEND INTO WEST JACKSON STREET RIGHT OF WAY.

THE PROPERTY HAS BOTH LEGAL AND PHYSICAL ACCESS TO WEST JACKSON STREET, A PUBLIC STREET, AND WEST MICHIGAN AVENUE, A PUBLIC STREET.

DESCRIPTION:

A PARCEL OF LAND IN SOUTHEAST 1/4 AND THE SOUTHWEST 1/4 OF SECTION 1, TOWN 2 SOUTH, RANGE 8 WEST, CITY OF BATTLE CREEK, CALHOUN COUNTY, MICHIGAN, DESCRIBED AS:

BEGINNING AT THE NORTHWEST CORNER OF LOT 65 OF RANGE OF BLOCKS 4 OF THE ORIGINAL PLAT OF THE VILLAGE (NOW CITY) OF BATTLE CREEK, ACCORDING TO THE PLAT THEREOF AS RECORDED IN THE OFFICE OF THE REGISTER OF DEEDS FOR CALHOUN COUNTY, MICHIGAN IN LIBER 2 OF PLATS ON PAGE 42; THENCE S74°30'00"E ALONG THE SOUTHERLY LINE OF MICHIGAN AVENUE, 400.29 FEET TO THE TRUE POINT OF BEGINNING; THENCE CONTINUING S74°30'00"E ALONG SAID SOUTHERLY LINE OF MICHIGAN AVENUE, 684.34 FEET; THENCE SOUTHEASTERLY 324.10 FEET ALONG THE SOUTHERLY LINE OF MICHIGAN AVENUE AS RELOCATED AND THE ARC OF A CURVE TO THE RIGHT WITH A CENTRAL ANGLE OF 34°23'25", A RADIUS OF 539.96 FEET AND A CHORD WHICH BEARS S57°18'17"E, 319.25 FEET; THENCE CONTINUING ALONG SAID SOUTHERLY LINE OF MICHIGAN AVENUE AS RELOCATED S40°06'35"E, 7.08 FEET TO THE NORTHWESTERLY LINE OF CARLYLE STREET (49.5 FEET WIDE); THENCE S46°44'42"W ALONG SAID NORTHWESTERLY LINE OF CARLYLE STREET, 263.03 FEET TO A POINT ON THE NORTHWESTERLY EXTENSION OF THE SOUTHWESTERLY LINE OF LOTS 72 THROUGH 81 OF RANGE OF BLOCKS 3 OF SAID "ORIGINAL PLAT OF THE VILLAGE (NOW CITY) OF BATTLE CREEK;" THENCE N40°07'39"W ALONG SAID NORTHWESTERLY EXTENSION, 95.85 FEET TO THE POINT OF INTERSECTION OF SAID NORTHWESTERLY EXTENSION WITH THE EASTERLY EXTENSION OF THE SOUTHERLY LINE OF LOTS 75 THROUGH 77 OF RANGE OF BLOCKS 4 OF SAID "ORIGINAL PLAT OF THE VILLAGE (NOW CITY) OF BATTLE CREEK;" THENCE N74°33'05"W ALONG SAID EASTERLY EXTENSION AND THE SOUTHERLY LINE OF LOTS 75 THROUGH 77, LOTS 20 AND 21, AND LOTS 66 THROUGH 72 OF RANGE OF BLOCKS 4 OF SAID "ORIGINAL PLAT OF THE VILLAGE (NOW CITY) OF BATTLE CREEK," 1169.93 FEET TO THE SOUTHWEST CORNER OF LOT 66 OF RANGE OF BLOCKS 4; THENCE N16°05'29"E ALONG THE WESTERLY LINE OF LOTS 66 AND 65 OF SAID RANGE OF BLOCKS 4, A DISTANCE OF 141.90 FEET; THENCE S74°30'00"E PARALLEL WITH SAID SOUTHERLY LINE OF MICHIGAN AVENUE, 278.76 FEET; THENCE S15°30'00"W AT RIGHT ANGLES TO SAID SOUTHERLY LINE OF MICHIGAN AVENUE, A DISTANCE OF 12.50 FEET; THENCE S74°30'00"E PARALLEL WITH SAID SOUTHERLY LINE OF MICHIGAN AVENUE, 122.79 FEET; THENCE N15°30'00"E AT RIGHT ANGLES TO SAID SOUTHERLY LINE OF MICHIGAN AVENUE, 135.00 FEET TO THE PLACE OF BEGINNING.

COMMENTS ON EASEMENTS FROM SCHEDULE B, PART II, TITLE COMMITMENT FILE No. 130463702CML.

ITEM #4 – NO DOCUMENT PROVIDED.
ITEM #5 – DOES NOT APPEAR TO AFFECT SUBJECT PARCEL. LIBER 163, PAGE 261 REFERRED TO AS LIBER 162, PAGE 261 IN TITLE COMMITMENT.
ITEM #6 – DOES NOT APPEAR TO AFFECT SUBJECT PARCEL. LIBER 232, PAGE 195
ITEM #7 – SEE DRAWING. THESE SEWERS APPEAR TO BE ABANDONED BUT PIPES MAY STILL BE IN PLACE. LIBER 396, PAGE 311; LIBER 398, PAGE 314
ITEM #8 – SEE DRAWING. THESE SEWERS APPEAR TO BE ABANDONED BUT PIPES MAY STILL BE IN PLACE. LIBER 396, PAGE 320; LIBER 1147, PAGE 189;
ITEM #9 – SEE DRAWING. THESE SEWERS APPEAR TO BE ABANDONED BUT PIPES MAY STILL BE IN PLACE. LIBER 397, PAGE 174
ITEM #10 – SEE DRAWING. EASEMENT APPEARS TO BE FOR FORMER OVERHEAD LINE. LIBER 820, PAGE 297
ITEMS #11 & #12 – EASEMENT IN LIBER 1034, PAGE 933 DOES NOT APPEAR TO AFFECT PARCEL; EASEMENT IN LIBER 1426, PAGE 57, SEE DRAWING. EASEMENT EXTENDS FROM LOT 63 SOUTHERLY TO WEST JACKSON STREET (FORMERLY KALAMAZOO STREET); LIBER 1558, PAGE 503 DOES NOT APPEAR TO AFFECT SUBJECT PARCEL.
ITEM #13 – SEE DRAWING, THESE SEWERS APPEAR TO BE ABANDONED BUT PIPES MAY STILL BE IN PLACE. LIBER 1110, PAGE 966
ITEM #14 – SEE DRAWING, THESE SEWERS APPEAR TO BE ABANDONED BUT PIPES MAY STILL BE IN PLACE. LIBER 1147, PAGE 191; LIBER 1240, PAGE 125;
ITEM #15 – DOES NOT APPEAR TO AFFECT SUBJECT PARCEL. LIBER 1639, PAGE 99.
ITEM #16 – SEE DRAWING. VACATION OF BARNEY STREET. LIBER 1644, PAGE 969.
ITEM #17 – RESTRICTIONS PLACED ON PARTS OF LOTS 55, 56, & 57 BY FORMER OWNERS; LIBER 1646, PAGE 95; MAY NO LONGER BE RELEVANT.
ITEM #18 – BLANKET EASEMENT RESERVED BY CITY OF BATTLE CREEK FOR EXISTING UTILITIES AND LINEAR PARK.
ITEM #19 – SEE DRAWING. EASEMENT FOR FIBER OPTIC CABLE; LIBER 2646, PAGE 783.

FLOOD ZONE CERTIFICATE:

THE BUILDING AND MAJOR IMPROVEMENTS ARE LOCATED IN ZONE "C". THE BATTLE CREEK RIVER AND IT'S IMMEDIATE BANKS ARE LOCATED IN ZONE A-4 AS DELINEATED ON THE CITY OF BATTLE CREEK, CALHOUN COUNTY, MICHIGAN, NATIONAL FLOOD INSURANCE PROGRAM FIRM FLOOD INSURANCE RATE MAP COMMUNITY – PANEL NUMBER 260051 0006 B, EFFECTIVE DATE OF APRIL 4, 1983 AND PUBLISHED BY U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, FEDERAL INSURANCE ADMINISTRATION.

ZONE "C" IS DEFINED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, FEDERAL INSURANCE ADMINISTRATION AS AREAS OF MINIMAL FLOODING.

ZONE "A–4" IS DEFINED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT, FEDERAL INSURANCE ADMINISTRATION AS AREAS OF 100 YEAR FLOOD; BASE FLOOD ELEVATIONS AND FLOOD HAZARD FACTORS DETERMINED.

SURVEYORS CERTIFICATE

TO: KELLOGG COMPANY, A DELAWARE CORPORATION; CC REAL ESTATE HOLDINGS, LLC, A MICHIGAN LIMITED LIABILITY COMPANY; CHICAGO TITLE OF MICHIGAN; AND CHICAGO TITLE INSURANCE COMPANY.

ALTA/ACSM LAND TITLE SURVEY: (A) MADE IN ACCORDANCE WITH MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA/ACSM LAND TITLE SURVEYS, AS JOINTLY PUBLISHED AND ADOPTED BY ALTA, ACSM AND NSPS IN 2005; (B) WITH ACCURACY STANDARDS, AS ADOPTED BY ALTA AND ACSM (2005); AND (C) INCLUDING OPTIONAL ITEM NOS. 1, 2, 3, 6, 7(A), 8, 9, 10 AND 11(A) OF THE TABLE "A" OPTIONAL SURVEY RESPONSIBILITIES AND SPECIFICATIONS.

CLIENT				
KELLOGG HERITAGE FOUNDATION				ROBERT R. CARR P.S. NO. 20704
JOB NO 07–7130	SCALE 1" = 50'	DRAWN BY RWM	DATE JUNE 22, 2007	CARR & ASSOCIATES, LLC LAND SURVEYING 306 West Columbia Battle Creek, Michigan 49015 (269) 963–7778
ALTA/ACSM LAND TITLE SURVEY				

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APPENDIX C

SME'S PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT, FEBRUARY 4, 2011

above ground storage tank
air quality
asbestos/lead-based paint
baseline environmental assessment
brownfield redevelopment
building/infrastructure restoration
caisson/piles
coatings
concrete
construction materials services
corrosion
dewatering
drilling
due care analysis
earth retention system
environmental compliance
environmental site assessment
facility asset management
failure analyses
forensic engineering
foundation engineering
geodynamic/vibration
geophysical survey
geosynthetic
greyfield redevelopment
ground modification
hydrogeologic evaluation
industrial hygiene
indoor air quality/mold
instrumentation
masonry/stone
metals
nondestructive testing
pavement evaluation/design
property condition assessment
regulatory compliance
remediation
risk assessment
roof system management
sealants/waterproofing
settlement analysis
slope stability
storm water management
structural steel/welding
underground storage tank

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

171 WEST MICHIGAN AVENUE BATTLE CREEK, MICHIGAN

Prepared for:

Mr. Jon Bartlett
Calhoun County Land Bank
315 West Green Street
Marshall, MI 49068

SME Project Number: KE62202B-08

February 4, 2011

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Soil and Materials Engineers, Inc.

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Thomas H. Skotzke
Michael J. Thelen, PE
John C. Zarzecki, CET, CDT, NDE

February 4, 2011

Mr. Jon Bartlett
Calhoun County Land Bank
315 West Green Street
Marshall, MI 49068

RE: Phase I Environmental Site Assessment Report
171 West Michigan Avenue
Battle Creek, MI
SME Project Number: KE62202B-08

Dear Mr. Bartlett:

Soil and Materials Engineers, Inc. (SME) has completed a Phase I Environmental Site Assessment (ESA) of the above referenced property, hereinafter referred to as the Property. The enclosed Phase I ESA report presents SME's interpretation of site conditions at the time the Phase I ESA was completed, based on field observations, a review of readily available historical and regulatory records, and interviews.

The Phase I ESA was requested to identify recorded and readily observable recognized environmental conditions associated with the Property. SME understands the Calhoun County Land Bank and the Calhoun County Road Commission will rely upon the professional opinions and representations contained in the report in accordance with the terms and conditions agreed upon for the project. This reliance is not to be construed as a warranty or guarantee on the part of SME.

Thank you for the opportunity to provide these services. If you have any questions concerning this report, or if additional services are required, please call.

Very truly yours,

SOIL AND MATERIALS ENGINEERS, INC.

Nathan B. Bolles
Staff Geologist

Davin K. Ojala
Project Consultant

Enclosure: One original

cc: Ms. Tiffany Eichorst, Calhoun County Road Commission (one CD)
Mr. Craig Mankowski, U.S. EPA (one CD)

T:\PROJ\62000\KE62202B-08\KE62202B-08-020411-RPT.DOC

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SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

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Appendix D: Interview Documentation
User Questionnaire
Owner/Occupant Questionnaire
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Appendix F: Qualifications of Environmental Professional(s)

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1.0 SUMMARY

SME performed a Phase I Environmental Site Assessment (ESA) of the property located at 171 West Michigan Avenue, in the City of Battle Creek, Calhoun County, Michigan, hereinafter referred to as "the Property," in conformance with the scope and limitations of ASTM Practice E 1527-05. Any exceptions to, or deletions from, this practice are described in Section 2.4 of this report. A Property Location Map (Figure 1) is included in Appendix A.

The purpose of this Phase I ESA is to satisfy relevant All Appropriate Inquiry (AAI) requirements to qualify the Calhoun County Land Bank (the User) for applicable landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act, as amended (CERCLA). One of the primary objectives is to identify recognized environmental conditions (RECs) in connection with the Property and assess the relative significance of the identified REC(s).

This Phase I ESA report is comprised of the following elements in support of AAI: 1) property description, 2) User-provided information, 3) records review, 4) site reconnaissance, 5) interviews, 6) findings, opinions, and conclusions.

Based on SME's review of historical information, it appeared that the Property was developed by 1887 with industrial, commercial, residential buildings, and three railroad spurs. Historical occupants of the Property included one or more of the following: H.B. Sherman Manufacturing Company (nail and clamp manufacturer), W.S. Nelson Lumber and Coal Yard, a planing mill, sash, door, & blind factory, Gates Half Sole Service Station, Imperial Dye Works, Wolverine Auto Cycle Company, Shouldice Brothers Sheet Metal Works, Johnson Machine Works, Rivers Motor Company, Hebble Mortuary, Dugans Auto Top Shop, United Motor Company, Oral Olmstead Auto Sales, Bertwistle's Cleaners, Mack's Garage, Detroit Waste Works, Auto Radiator Company, Super Kleen Dry Cleaners, Northern Rebuilt Motor Exchange, Meeks Auto Service, Pancost Press Printers, Hartung Buick Body Shop, Gallagher's Industrial Laundry, medicine manufacturing, Traux Music Company, a vulcanizer, steam laundry, gasoline filling stations, broom factory, numerous other miscellaneous commercial businesses, and residences. The railroad spurs remained on the Property until sometime between 1981 and 1992. The Property continued to be occupied by a mixture of industrial, commercial, and residential buildings until 1998 when the Property was developed with Kellogg's Cereal City USA, an interactive museum, along with asphalt parking areas and landscaped areas. The Property use remained constant until 2007 when Cereal City USA closed and the Property became unoccupied. The Property was vacant until the time of SME's 2010 Property reconnaissance.

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This assessment has revealed no evidence of recognized environmental conditions in connection with the Property except for the following:

- The reported presence of volatile organic compounds, polycyclic aromatic hydrocarbons, and metals contaminants in soil and/or groundwater on the Property (Sections 5.1 and 7.1).
- The potential for unreported and/or undetected releases of hazardous substances and/ or petroleum products associated with the historical manufacturing, dry cleaning, gasoline filling station, and automotive service center operations, the former presence of railroad spurs, and the historical presence of gasoline USTs and crude oil ASTs on the Property (Sections 5.4.2 and 7.1).
- The potential for migration of contamination onto the Property from the north adjoining Registered UST and RCRAGN sites (Section 5.1).
- The potential for migration of contamination onto the Property from current and former sites located west, north, and east of the Property (Sections 5.4.3 and 6.5).

Based on the cumulative results of environmental assessments performed by various consulting companies from 1991 through 2001, soil is contaminated with various volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and/or metals. These contaminants were detected exceeding the following Part 201 Commercial health-based criteria: Drinking Water Protection Criteria, Direct Contact Criteria, and/or Particulate Soil Inhalation Criteria. Various VOCs, PAHs, and/or metals were also detected in groundwater exceeding Part 201 Commercial Drinking Water Criteria.

The User acquiring the Property is the sole party responsible for complying with AAI requirements for Landowner Liability Protection (LLP) under CERCLA as an Innocent Purchaser, Bona Fide Prospective Purchaser, or Contiguous Property Owner, as applicable. The completion of a Phase I ESA, with statement by an Environmental Professional (EP) that it is compliant with AAI and/or the ASTM E 1527-05 Practice, may not be sufficient to provide CERCLA LLP.

SME's Project Team was as follows:

Preparer:	Nathan B. Bolles
Environmental Professional (EP):	Davin K. Ojala
Senior Technical Reviewer:	Keith Egan, Ohio CP#259

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2.0 INTRODUCTION

SME performed a Phase I Environmental Site Assessment (ESA) of the property located at 171 West Michigan Avenue in the City of Battle Creek, Calhoun County, Michigan, hereinafter referred to as the Property. The Phase I ESA was conducted according to the ASTM International (ASTM) Practice E 1527-05 (Practice), which is accepted in the U.S. Environmental Protection Agency regulations as satisfying one component of the requirements of All Appropriate Inquiries (AAI) under the Comprehensive Environmental Response, Compensation and Liability Act, as amended (CERCLA).

Satisfying AAI is one component of the requirements for a Prospective Purchaser to qualify for the Bona Fide Prospective Purchaser (BFPP), Contiguous Property Owner, or Innocent Landowner defense to CERCLA liability. For properties known to be contaminated with hazardous substances, or petroleum, the Prospective Purchaser also must comply with the continuing obligations defined in CERCLA to maintain the landowner liability protection (LLP) to CERCLA.

Ms. Tiffany Eichorst, on behalf of the Calhoun County Road Commission, authorized the conduct of this Phase I ESA to identify and evaluate potential environmental concerns associated with the Property prior to transfer of ownership of the Property to the Calhoun County Land Bank, the User. SME was retained to conduct this Phase I ESA based on our approved task/work authorization, dated February 1, 2011. The Phase I ESA was funded by the Calhoun County Road Commission's U.S. Environmental Protection Agency (U.S. EPA) Brownfields Assessment Grant for hazardous substances.

2.1 Purpose

The purpose of this Phase I ESA was to satisfy relevant AAI requirements for qualifying the User of this report for applicable landowner liability protections under CERCLA (42 U.S.C. 9601). One of the primary objectives was to identify recognized environmental conditions (RECs) in connection with the Property and assess the relative significance of the identified REC(s). The Practice defines a REC as:

> *...the presence or likely presence of any hazardous substances* or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include de minimis conditions that generally do not present a threat to human health or the environment and*

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that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be de minimis are not recognized environmental conditions.

**For the purposes of this Phase I ESA, a hazardous substance is a substance as defined in the ASTM Practice E 1527-05.*

2.2 Detailed Scope of Services

This Phase I ESA was conducted in conformance with the ASTM Standard Practice on Environmental Site Assessments for Commercial Real Estate designation E 1527-05, "Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process." This Phase I ESA does not address the non-scope considerations as defined by Section 13 of the Practice.

2.3 Significant Assumptions

Pursuant to the Practice, SME assumes that the information provided by all sources and parties, including the User, is accurate and complete, except where obvious inconsistencies or inaccuracies were identified.

2.4 Limitations and Exceptions

SME was unable to enter the former communications room on the first floor of the building on the Property. This limitation is discussed in Section 8.0. The Practice's scope of services was implemented.

2.5 Special Terms and Conditions

No special terms and conditions were imposed on SME as part of this Phase I ESA.

2.6 Reliance

SME has prepared this report to be used and relied upon solely and exclusively by the Calhoun County Land Bank (the User), and the Calhoun County Road Commission in accordance with terms and conditions agreed upon for the project. No other party may rely upon SME's opinions, conclusions, or reports unless SME has agreed to such reliance in writing.

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3.0 PROPERTY DESCRIPTION

The following are descriptions of the Property, uses and conditions of the Property, and uses of the adjoining sites at the time of this Phase I ESA. Photographs of the Property and surrounding areas are included in Appendix B.

3.1 Property Location and Legal Description

The Property is located at 171 West Michigan Avenue, Battle Creek, Calhoun County, Michigan. The legal description of the Property, tax identification number 0254-00-060-0, is attached in Appendix C.

3.2 Property and Vicinity Characteristics

The Property consists of approximately 6.94 acres of land developed with an approximately 44,600 square-foot unoccupied, commercial building and asphalt paved parking areas. The remainder of the Property was landscaped areas and grass-covered land. The Property was located south of West Michigan Avenue and east of North Washington Avenue in a commercial area.

A current Property Features Diagram was developed from the observations, field notes, photographs, and/or historical information collected during conduct of this Phase I ESA. It is included as Figure 2 in Appendix A.

3.3 Current Use of the Property

At the time of SME's reconnaissance, the building on the Property was unoccupied. The following primary utilities were connected to the building on the Property: electricity, natural gas, and municipal water, sewer, and storm sewer.

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3.4 Current Uses of the Adjoining Sites

Known current uses of adjoining sites are summarized in the following table:

Direction	Name Address	Activity
North	Burnham Brook Community Center 200 West Michigan Avenue	Recreation
	Summit Point 140 West Michigan Avenue	Mental Health Services
	Linear Park	City Park
	GreenStreet Marketing 245 West Michigan Avenue	Marketing Services
	TJ's Photography 247 West Michigan Avenue	Photography Studio
	Quality Nursing Services, LLC 249 West Michigan Avenue	Nursing Care
	Sports Page 225 West Michigan Avenue	Restaurant
	Mandy's Café Express 215 West Michigan Avenue	Restaurant
East	Unoccupied 119 West Michigan Avenue	Unoccupied
	Unoccupied 15 Carlyle Street	Unoccupied
South	Kellogg Company 1 Kellogg Square	Offices
West	Barney's Brake Service 267 West Michigan Avenue	Automotive Service

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4.0 USER PROVIDED INFORMATION

As part of AAI the User has the statutory responsibility, above and beyond the Phase I ESA conducted under supervision of an EP, to provide information about the following issues in support of all appropriate inquiry into environmental conditions on the Property:

- Reason for this Phase I ESA;
- Environmental cleanup liens and activity/use limitations (AULs) recorded for the Property;
- Specialized knowledge and experience of the User indicative of potential RECs associated with the Property;
- Relationship of purchase price to market value;
- Commonly known or reasonably ascertainable information about environmental conditions on the Property; and
- Legal/administrative proceedings related to hazardous substances, petroleum products, or environmental compliance issues in, on or emanating from the Property.

The User information was provided through completion of the **User Questionnaire** attached in Appendix D. Information provided by Mr. Jon Bartlett, Executive Director for the Calhoun County Land Bank, is summarized in the following subsections.

4.1 Reason for the Phase I ESA

Mr. Bartlett reported that the reason for this Phase I ESA of the Property was to support the User's all appropriate inquiry into environmental conditions of the Property, a component of the User's effort to qualify for one of the landowner liability protections to CERCLA applicable to ownership of the Property.

4.2 Recorded Environmental Cleanup Liens and AULs

Mr. Bartlett reported that a review of recorded land title records for the Property was not conducted. This represents a data gap with respect to AAI and is discussed in Section 8.

4.3 Specialized Knowledge and Experience

Mr. Bartlett reported having no specialized knowledge or experience that would indicate, or create suspicion of, the presence of environmental contamination on the Property.

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4.4 Relationship of Purchase Price to Value

Mr. Bartlett reported that the purchase price of the Property was significantly below fair market value. SME understands the property is being transferred from BCU to the Calhoun County Land Bank for tax purposes and a monetary transaction for the purchase of the Property will not occur.

4.5 Commonly Known or Reasonably Ascertainable Information

Mr. Bartlett reported that he has not become aware, through conversations, rumor, etc., of any commonly known or reasonably ascertainable information within the local community that would indicate the Property could be contaminated or that any past event could have resulted in environmental impact of the Property or adjoining properties.

4.6 Proceedings Involving the Property

Mr. Bartlett, based on personal knowledge and experience related to the Property, reported no known pending, threatened, or past litigation, administrative proceedings, or violations of environmental laws and regulations related to hazardous substances or petroleum products in, on, or arising from the Property.

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5.0 RECORDS REVIEW

5.1 Environmental Record Sources

SME retained FirstSearch Technology Corporation (FirstSearch) to query the state, federal, and tribal regulatory agency databases described in the Practice to identify regulated and/or environmentally impacted sites within the specified approximate minimum search distances. FirstSearch also queried other readily available regulatory agency databases beyond those required by the Practice. The queried databases and associated search radii are listed in the FirstSearch report (Appendix E). The FirstSearch report includes site maps indicating the location of these listed sites relative to the Property, and dates the lists were updated.

A summary of listed sites of concern determined by SME to be suspect RECs is presented in the table included in this subsection. Non-geocoded sites, as identified by FirstSearch, are sites, which for various reasons cannot be mapped through the FirstSearch query system. Where possible, SME attempted to locate the reported non-geocoded sites. Non-geocoded sites determined by SME to be within the applicable approximate minimum search distance(s) and to be suspect RECs are also included in the table. Acronyms used in the table are defined in the FirstSearch report.

Based on the assumed groundwater flow direction to the south, the hydraulic barrier formed by the Kalamazoo River and Battle Creek River, and the distance to the Property, the remaining sites do not appear to represent suspect RECs in connection with the Property. In SME's opinion, it was not necessary to review records for these sites.

LISTED SITES OF CONCERN (SUSPECT RECS)

Site Name and Address	Approximate Distance and Direction from Property[1]	Name of List[2]
Battle Creek Hebbles 123 West Michigan Avenue	Property	RCRAGN, Registered UST (closed), State Open LUST Site
H.B. Sherman 169 West Michigan Avenue	Property	BEA
H.B. Sherman 171 West Michigan Avenue	Property	BEA

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Site Name and Address	Approximate Distance and Direction from Property[1]	Name of List[2]
City of Battle Creek H.B. Sherman 207 West Michigan Avenue	Property	State Open LUST Site
Robert D & Carol B Wolfe 172 West Michigan Avenue	North adjoining	Registered UST (closed)
MAACO Auto Painting and Wolfe and Associates 194 West Michigan Avenue	North adjoining	RCRAGN
Burnham Brook Community Center 200 West Michigan Avenue	North adjoining	Registered UST (closed)
Burnam Brook Center 245 West Michigan Avenue	North adjoining	RCRAGN

[1] *FirstSearch sites are mapped by address. Distances and/or site directions listed above may be adjusted from those reported by FirstSearch to better represent field conditions and potential site boundaries.*
[2] *Definitions of acronyms and lists are presented in the FirstSearch report.*

The north adjoining Robert D & Carol B Wolfe site was listed as a State Registered UST site. Based on SME's review of the FirstSearch report, two 4,000-gallon heating oil USTs and one 3,000-gallon heating oil UST were installed on the Property in 1953 and removed in 1989. The Burnham Brook Community Center also adjoined the Property to the north and was listed as a State Registered UST site. Based on SME's review of the FirstSearch report, one 1,000-gallon UST listed as containing gasoline and/or diesel was removed in 2008. No date of installation was provided in the FirstSearch report. The potential for environmental impact from migration of hazardous substances and/or petroleum products from the north adjoining Registered UST sites represents a suspect REC in connection with the Property.

The north adjoining MAACO Auto Painting/Wolf and Associates and Burnham Brook Center sites were listed as RCRAGN sites. Based on information provided in the FirstSearch report, two violations were reported for the MAACO Auto Painting site in 1988. The report indicated both violations were resolved in 1991. SME identified the potential for migration of unreported and/or undetected releases of hazardous substances and/or petroleum products from the north adjoining RCRAGN sites onto the Property as a suspect REC in connection with the Property.

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SME reviewed available MDNRE file information for the Battle Creek Hebbles, H.B. Sherman, and City of Battle Creek sites at the MDNRE-Remediation and Redevelopment Division (RRD), Kalamazoo District office. Below is a summary of information regarding the sites:

> **The Battle Creek Hebbles, H.B. Sherman, and City of Battle Creek** (Property) are listed as a State Open LUST, BEA, RCRAGN, and/or State Registered UST site. Based on SME's review of a BEA completed by Horizon Environmental for the Property on June 3, 2009, two USTs associated with the former H.B. Sherman portion of the Property and seven USTs associated with the former Hebbles Funeral Home portion of the Property were removed in 1991 and 1989/1992, respectively. Numerous site investigations were completed between 1990 and 2002 to evaluate impact associated with the former USTs as well as impact associated with the following historical uses of the Property: gasoline station; lumber and coal yard; nickel and brass foundry; planing mill; sash, door, and blind factory; laundry; print shop; machine shop; pattern shop; paper and paint store; cement manufacturer, auto repair; auto body and paint shop; and sewage pump station. Cumulative results of environmental assessments conducted at the Property indicate the presence of benzene, ethylbenzene, xylenes, acenaphthene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthrance, fluoranthene, fluorene, naphthalene, phenanthrene, arsenic, cadmium, chromium, lead, and mercury in soil and/or groundwater at concentrations that exceed Part 201 generic residential cleanup criteria. SME identified the reported presence of volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals in soil and/or groundwater at the Property as a suspect REC in connection with the Property.

5.2 Additional Environmental Record Sources

5.2.1 County Environmental Health Department

On December 30, 2010, SME contacted the Calhoun County Environmental Health Department via facsimile and requested all available information pertaining to environmental concerns associated with the Property and surrounding area, including information on septic systems and water wells, if any, located on the Property.

Ms. Cindy Southwick, Administrative Assistant for the Calhoun County Environmental Health Department, indicated no records were available for the Property.

5.2.2 Fire Department

On December 30, 2010, SME contacted the City of Battle Creek Fire Department via facsimile and requested all available records associated with the Property and surrounding properties.

Mr. Ralph Britton, Fire Inspector, indicated the Property has been vacant since Kellogg's Cereal City USA closed. The Kellogg Company began renovations on the building in the spring of 2007 and halted renovation work in the fall of 2007.

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5.2.3 MDNRE Geological Survey Division

SME queried the MDNRE-Geological Survey Division's (GSD) Oil and Gas Information System – Online Data Query for oil and gas permits/wells for the Property's township, range, and section number.

According to the December 30, 2010 query results, no known oil and/or gas well permits were recorded for the Property section number.

5.2.4 Other Record Sources

As discussed in Section 5.1, SME reviewed a BEA prepared for the Property by Horizon Environmental on June 3, 2009. The BEA summarizes results of chemical analyses performed on soil and groundwater samples collected by the various consulting firms between 1991 and 2001. The environmental assessment reports referenced in the BEA are cited in Section 11. The cumulative results of environmental assessments indicated ethylebenzene, xylenes, various PAHs (acenaphthene, acenanaphthylene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, fluoranthene, fluorene, naphthalene, and phenanthrene), and various metals (arsenic, cadmium, chromium, lead, and mercury) were measured at concentrations above Part 201 Residential Drinking Water Protection Criteria, Groundwater Surface Water Interface Protection Criteria, and/or Direct Contact Criteria in one or more soil samples. Benzene, various PAHs (acenaphthene, acenanaphthylene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluorene, naphthalene, and phenanthrene), cadmium, and lead were measured at concentrations above Part 201 Residential Drinking Water Criteria and/or Groundwater Surface Water Interface Criteria in one or more groundwater samples. SME identified the presence of volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and metals in soil and/or groundwater at the Property as a suspect REC in connection with the Property.

5.3 Physical Setting Source(s)

5.3.1 USGS – Current 7.5 Minute Topographic Map

SME reviewed a United States Geological Survey (USGS) topographic map to evaluate the physical setting of the Property. According to the USGS 7.5 minute series Topographic Map Battle Creek Quadrangle, Michigan, compiled in 1961 and photorevised in 1985, the Property is relatively flat at an elevation of approximately 820 feet to 840 feet above mean sea level (MSL). The Property is depicted as an urban area. A Conrail railroad track is shown in the central and eastern portions of the Property. The I-94 business loop is shown approximately one-half mile southeast of the Property. The Battle Creek River is located approximately 100 feet south of the

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western and central portions of the Property and bisects the eastern portion of the Property. The Kalamazoo River intersects the Battle Creek River approximately 500 feet southwest of the Property. Four unnamed ponds and marsh areas were depicted approximately three-quarter mile northeast of the Property. No other bodies of water were depicted within a one-mile radius of the Property.

5.3.2 Other Non-Practice Physical Setting Sources

SME completed a Geotechnical Engineering Report for the Property on February 20, 1997. Based on information contained in the report, the general soil profile consists of sand fill extending to a depth of 2.5 feet to 7.5 feet below ground surface. Except near the vicinity of the Battle Creek River, natural sand with varying amounts of silt and clay was encountered below the sand fill and extended to depths ranging from 12.5 feet to 21 feet below ground surface. Organic clayey silt and/or organic silty clay is present below the sand fill near the Battle Creek River. Silty clay was encountered below sand fill and/or natural sands near the western portion of the Property. Weathered sandstone was encountered below the natural sand at depths between 5 feet and 21.5 feet below ground surface. Groundwater was generally encountered within the natural sand at a depth ranging from 6 feet to 18 feet below ground surface.

5.4 Historical Use Information for the Property

The objective of consulting historical record sources is to develop a history of the Property's previous uses to help identify the likelihood of past uses having led to RECs in connection with the Property. The information reviewed was from reasonably ascertainable standard sources, defined in the Practice as publicly available, obtainable from its source within reasonable time and cost constraints, and practicably reviewable.

Data failures encountered, as defined by the Practice, are described under each appropriate Practice historical source. The Practice requires review of only as many of the standard historical sources as are reasonably ascertainable and likely to be useful.

5.4.1 Standard Historical Sources

The sources reviewed to determine the historical uses of the Property and related environmental issues are summarized below. Copies of source documents are included in Appendix C. A summary of findings from these reviews is presented in section 5.4.2.

- **Aerial Photographs:** SME reviewed aerial photographs, previously obtained from Environmental Data Resources, Inc. (EDR), dated 1938, 1950, 1955, 1961, 1967, 1974, 1981, 1992, and 2005.

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- **Fire Insurance Maps:** SME reviewed Sanborn® Fire Insurance Maps of the Property area, previously obtained from EDR, dated 1887, 1892, 1899, 1902, 1907, 1913, 1919, 1950, and 1972.
- **Property Tax Files:** SME visited the City of Battle Creek Assessing Department and requested all available records pertaining to the Property. SME reviewed the provided records, which were comprised of three industrial assessment cards. SME also reviewed the City of Battle Creek online assessing information.
- **Recorded Land Title Records:** SME did not review land title records because information regarding the history of the Property was obtained from other historical sources identified herein. In addition, land title records typically provide information regarding ownership, but not use, of a property.
- **USGS Topographic Maps:** SME reviewed the USGS 7.5 minute series Topographic Map Battle Creek Quadrangle, Michigan, compiled in 1961 and photorevised in 1985.
- **Local Street Directories:** SME reviewed local street directories for the years 1918, 1922, 1927, 1935, 1940, 1946, 1951, 1955, 1960, 1965, 1970, 1975, 1979, 1983, 1987/1988, 1992/1993, 1997/1998, 2001/2002, and 2006/2007 at the Charles Willard Public Library in Battle Creek.
- **Building Department Records:** SME visited the City of Battle Creek Inspections Department and requested all available records pertaining to the Property. SME reviewed the provided records, which were comprised of several building permits for the construction of the Kellogg's Cereal City USA building and the construction of an unspecified shop in 1923.
- **Zoning/Land Use Records:** SME reviewed the City of Battle Creek's online geographic information system (GIS) for zoning information. According to the GIS, the Property was zoned I1: Light Industrial and C3: Intensive Business District.
- **Other Historical Sources:** SME reviewed a *Phase I Environmental Site Assessment Update* completed by Horizon Environmental in June 2009.

5.4.2 Historical Usage Summary

A summary of historical usage of the Property, back to 1887, the date of earliest readily available records as described above, is presented in the following table:

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HISTORICAL USAGE SUMMARY

Year / Period	Identified / Inferred Use	Source (Date)
1887	The Property was depicted as developed with W.S. Nelson Lumber and Coal Yard, Halbert & Knight Planing Mill, Sash, Door, & Blind Factory, a steam laundry, a bakery, a gunsmith, a carpenter, and sixteen residences. An oil house was depicted on the southwest corner of the Property. Two railroad spurs were located on the southern and central portions of the Property.	Sanborn Map (1887)
1892	The Property was depicted as developed with Knights & Company Planing Mill & Sash & Doors, a steam laundry, a doorbell shop, a bakery, a book store, a printing shop, a hardware store, a coal and wood yard, a broom factory, a carpenter, and seventeen residences. Three crude oil storage tanks, an oil pump, and an oil house were depicted on the southwest corner of the Property. Three railroad spurs were located on the southern and central portions of the Property.	Sanborn Map (1892)
1899	The Property was depicted as developed with Knights & Fess Planing Mill & Sash & Doors, Battle Creek Bakery, a pattern shop, three grocery stores, a bakery, a coal and wood yard, a peanut roaster, and sixteen residences. Three crude oil storage tanks, an oil pump, and an oil house were depicted on the southwest corner of the Property. Two railroad spurs were located on the southern and central portions of the Property.	Sanborn Map (1899)
1902	The Property was depicted as developed with H.B. Sherman Manufacturing Company, Griffin & Son Coal and Wood Yard, Knights & Fess Planing Mill, Traux Music Company, Johnson Machine Works, Battle Creek Bakery Company, a bicycle repair shop, a pattern shop, a butcher shop, two grocery stores, a tailor, a photo shop, and twelve residences. Three crude oil storage tanks, an oil pump, and an oil house were depicted on the southwest corner of the Property. Three railroad spurs were located on the southern and central portions of the Property.	Sanborn Map (1902)
1907	The Property was depicted as developed as H.B. Sherman Manufacturing Company, Knight & Son Planing Mill, Traux Music Company, Battle Creek Bakery Company, a saloon, a grocery store, a medicine factory, a printing shop, a steam laundry, a jewelry store, a tailor, a variety shop, a bakery, a barber, a broom factory, and sixteen residences. Three crude oil storage tanks were depicted on the southwest corner of the Property. Five railroad spurs were located on the southern and central portions of the Property.	Sanborn Map (1907)

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Year / Period	Identified / Inferred Use	Source (Date)
1913	The Property was depicted as developed with H.B. Sherman Manufacturing Company, two dry cleaners, a printing shop, a sheet metal works, a produce store, a millinery, a bicycle repair shop, an electrical office, a music store, a wallpaper and paint store, bottling works, a photograph shop, a confectionary, a pool, four unspecified stores, and thirteen residences. Four gasoline USTs were depicted on the eastern portion of the Property. Four railroad spurs were located on the southern and central portions of the Property.	Sanborn Map (1913)
1918	The Property was listed as occupied by HB Sherman Manufacturing Company, Rivers Motor Company, Shouldice Brothers, Wolverine Auto Cycle Company, Gates Half Sole Service Station, Gildersleeve Block, Imperial Dye Works, Candy-Crabb Stores Company, Battle Creek Monument Park Cemetery Association, Kleckner Music House, Kleckner Florist, a bicycle shop, a barber, a produce store, a cigar shop, a restaurant, a shoemaker, a motorcycle shop, a jewelry store, an undertaker, a confectionary, a goods store, a boarding house, a printing shop, a machine shop, and fifteen residences.	City Directory (1918)
1919	The Property was depicted as developed with H.B. Sherman Manufacturing Company, City Brass and Aluminum Company, Shouldice Brothers Sheet Metal Works, a vulcanizer, a dry cleaner, three auotomotive repair shops, an autocycle repair shop, a bicycle repair shop, a shoe repair shop, thirteen unspecified stores, a restaurant, an undertaker, and ten residences. One 120-gallon gasoline UST and four 180-gallon gasoline USTs were depicted on the eastern portion of the Property. Four railroad spurs were located on the southern and central portions of the Property.	Sanborn Map (1919)
1922	The Property was listed as occupied by HB Sherman Manufacturing Company, John B Hummel auto sales, Barclay & Claypool, Carter & Voyce, Riverside Trimming Company, Rivers Motor Company, Pollock & Clifford, Farlin Tent & Awning, Hebble Mortuary, Imperial Dye Works, a restaurant, Candy-Crabb Stores Company, Smith & VanSickle, Kleckner Music House, Kleckner Florist, a barber, a produce shop, a confectioner, a bakery, a cigar shop, a shoemaker, a motorcycle shop, a hair dresser, a jewelry store, a grocery store, a laundry, a mechanical engineer, and fifteen residences.	City Directory (1922)

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Year / Period	Identified / Inferred Use	Source (Date)
1927	The Property was listed as occupied by HB Sherman Manufacturing Company, Furniture Market, Dugans Auto Top Shop, DeNooyer Brothers, FM Electric Company, Wolverine Advertising Company, Crabb Bros, Sellers CW & Son, Owl Drug Company, Crabb Bros, United Motor Company, Wagner Book Shop, Kellers Mens Wear Shop, Oral Olmstead auto sales, Hebble Mortuary, Battle Creek Memorial Park Cemetery Association, FB Stevens, Office Equipment Company, Kleckner's Music House, Kleckner's Flower Shop, Reliable Tire Company, Imperial Dye Works, Guarantee Roofing Company, Gross Washer Company, Golden Pheasant Café', a real estate office, a chiropractor, a real estate office, a shoe repair shop, a tailor, a grocery store, a barber, a tire store, a barber, a shoe maker, a jeweler, a laundry, and six residences.	City Directory (1927)
1935	The Property was listed as occupied by HB Sherman Manufacturing Company, Bertwistle's Cleaners, Norton's Second Hand, Mack's Garage, Detroit Waste Works, Carter's Flower Shoppe, BC Florists Exchange, Hebble Mortuary, Mitchell's Ice Cream Shop, Central Photo Studio, Imperial Dye Works, Typewriting Services, DeLuxe Barber Shop, Sunshine Café, US Tire Service, Auto Radiator Company, Battle Creek Sandwich Shop, West Michigan Tavern, Buckner & Starnes, a grocery store, a printing shop, a physician, a shoe repair store, a laundry, a machine shop, and three residences.	City Directory (1935)
1938	The Property appeared to be developed with at least nine buildings. A railroad crossed through the central portion of the Property.	Aerial Photograph (1938)
1940	The Property was listed as occupied by HB Sherman Manufacturing Company, Bertine's Beauty Shop, Norton's Second Hand, M&M Construction Company, Miller's Café', Super Kleen Dry Cleaners, The Little Gift Shop, Williams Tailors, Hebble Funeral Service, Battle Creek Memorial Park Cemetery Association, Battle Creek Air Conditioning & Refrigeration, Sherman Athletic Association, Wedemeyer Electronics Supply, Imperial Dye Works, Northern Reubilt Motor Exchange, Erard Florists, DeLuxe Barber Shop, Robert H Holmes used car sales, Auto Radiator Company, Battle Creek Sandwich Shop, BC Florists Exchange, Detroit Waste Works, Robert H Holmes used car sales, a magazine shop, Hickey's Tavern, a used furniture store, a laundry, a shoe repair shop, a gasoline filling station, a barber, a printing shop, and three residences.	City Directory (1940)

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Year / Period	Identified / Inferred Use	Source (Date)
1946	The Property was listed as occupied by HB Sherman Manufacturing Company, Skateland Roller Club, Bertine's Beauty Shop, Norton's Second Hand, Chuck's Radio Service, Acme Health Laboratories, a printing shop, Detroit Waste Works, Robert H Holmes used car sales, Hickey's Tavern, Re-Nu Sweeper Shop, Super Kleen Cleaners, Wolverine Tavern, Rial's Key Shop, Battle Creek Sandwich Shop, Williams Tailors, Hebble Funeral Service, Battle Creek Memorial Park Cemetery Association, Battle Creek Air Conditioning & Refrigeration, Huber's Embroideries, Merle's Auto Electric Service, Wedemeyer Electronics Supply Company, Bertwistle's Dry Cleaners, DeLuxe Barber Shop, Robert H Holmes used car sales, a goods store, a real estate office, a shoe repair store, a bakery, a laundry, an antique shop, and four residences.	City Directory (1946)
1950	The Property was depicted as developed with H.B. Sherman Manufacturing Company, a dry cleaner, two gasoline filling stations, an auto body shop, a box factory, a laundry, twenty-one unspecified stores, a drug store, a printing shop, an undertaker, and three residences. Two gasoline USTs were depicted in the central portion of the Property and one gasoline UST was depicted on the eastern portion of the Property. Four railroad spurs were located on the southern and central portions of the Property.	Sanborn Map (1950)
	The Property appeared to be developed with at least nine buildings. A railroad crossed through the central portion of the Property.	Aerial Photograph (1950)
1951	The Property was listed as occupied by HB Sherman Manufacturing Company, UAW, Bertine's Beauty Shop, Re-Nu Sweeper Shop, Super Kleen Cleaners, Triple X Café', Hickey's Tavern, West Side Clothiers, Moore's Apple, Rial's Key Shop, Battle Creek Sandwich Shop, Electronics Sup Corporation, Detroit Waste Works, DeLuxe Barber Shop, Hebble Funeral Service, Battle Creek Memorial Park Cemetery Association, Purtnam Radio & Television, Meeks Auto Service, Bertwistle's Dry Cleaners, Clothing Exchange, a shoe repair store, an antique shop, a bakery, a printing shop, a tailor, a barber, a laundry, an automotive service garage, a real estate office, a restaurant, and four residences.	City Directory (1951)

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Year / Period	Identified / Inferred Use	Source (Date)
1955	The Property was listed as occupied by HB Sherman Manufacturing Company, Super Kleen Cleaners, Nicolai Music Studio, The Handy Store, Hebble Funeral Service, Battle Creek Memorial Park Cemetery Association, Meek's Auto Service, Triple X Bar, Bertwistle's Dry Cleaners, Rummage Sales Room, Moss Shoe Service, DeLuxe Barber Shop, Swank's Barber Shop, Howald's Motor Sales, Necchi-elna Sewing Circle, Rial's Key Shop, Battle Creek Sandwich Shop, Hickey's Tavern, Southern Grill, Frosty's Ice Cream, Detroit Waste Works, Robert H Holmes used car sales, a tailor, an antique shop, a printing shop, and a residence.	City Directory (1955)
	The Property appeared to be developed with at least ten buildings. A railroad crossed through the central portion of the Property.	Aerial Photograph (1955)
1960	The Property was listed as occupied by HB Sherman Manufacturing Company, Holland Furnace Company, Super Kleen Cleaners, Perry's Music Studio, Handy's Men's Store, Hebble Funeral Service, Battle Creek Memorial Park Cemetery Association, Triple X Bar, Bertwistle's Dry Cleaners, Rummage Sales Room, Moss Shoe Service, Grant's Barber Shop, Swank's Barber Shop, Robert H Holmes used car dealer, Necchi-elna Sewing Circle, Rial's Key Shop, Battle Creek Sandwich Shop, Town Tavern, Top Value Enterprises, Detroit Waste Works, a tailor, a printing shop, and a residence.	City Directory (1960)
1961	The Property appeared to be developed with at least ten buildings. A railroad crossed through the central portion of the Property.	Aerial Photograph (1961)
1965	The Property was listed as occupied by HB Sherman Manufacturing Company, City Parking, Pancost Press Printers, Hebble Funeral Service, Michael's Lounge Tavern, Ratti & Son, Rummage Sales Room, Ralph's Barber Shop, Swank's Barber Shop, Robert H Holmes used car sales, Necchi-elna Sewing Circle, Rial's Key Shop, Battle Creek Sandwich Shop, Town Tavern, Detroit Waste Works, The Monogram Shop, a shoe repair store, a jeweler, and a tailor.	City Directory (1965)
1967	The Property appeared to be developed with at least ten buildings. A railroad crossed through the central portion of the Property.	Aerial Photograph (1967)

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Year / Period	Identified / Inferred Use	Source (Date)
1970	The Property was listed as occupied by HB Sherman Manufacturing, Hartung Buick Body Shop, The Monogram Shop, Hebble Funeral Home, Staley's Lounge, storage, Rummage Sales Room, Ralph's Barber Shop, Burr's Bar, Gallagher Industrial Laundry, and a jewelry shop.	City Directory (1970)
1972	The Property was depicted as developed with H.B. Sherman Manufacturing Company, a dry cleaner, an automotive sales business, an undertaker, a sewage pump, an auto body and paint shop, an overall laundry, two restaurants, nine unspecified stores, and three residences. One railroad spur was located on the southern portion of the Property and three additional railroad spurs intersected the spur on the eastern portion of the Property.	Sanborn Map (1972)
1974	The Property appeared to be developed with at least eight buildings. A railroad crossed through the central portion of the Property.	Aerial Photograph (1974)
1975	The Property was listed as occupied by Sherman Manufacturing, The Rummage Store, A-Z Key Shop, Hosh's Sandwich Shop, Kiddie Kare Sitter, Love Home Care Service, Jerry's Place, Gallagher's Industrial Laundry, Staley's Lounge, and The Monogram Shop.	City Directory (1975)
1979	The Property was listed as occupied by Sherman Manufacturing Company, Robert L Brown, Thiede Barber Shop, Niecko's Rustproofing, A-Z Key Shop, Hosh's Sandwich Shop, Jerry's Place, Gallagher Industrial Laundry, Staley's Lounge, and The Monogram Shop.	City Directory (1979)
1981	The Property appeared to be developed with at least nine buildings. A railroad traversed the central portion of the Property.	Aerial Photograph (1981)
1983	The Property was listed as occupied by Kelley Spring & Alignment, Sherman Manufacturing Company, Lifeline American, Thiede Barber Shop, A-Z Key Shop, Robert Brown Studio, Hosh's Sandwich Shop, Jerry's Place, Gallagher Industrial Laundry, Red Bird Lounge, and The Monogram Shop	City Directory (1983)
1987	The Property was listed as occupied by Sherman Manufacturing, Joe's Place, Hosh's Sandwich Shop, Robert Brown Studio, A-Z Key Shop, Triple D Auto Body, Gallagher Industrial Laundry, Red Bird Lounge, and The Monogram Shop.	City Directory (1987)

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Year / Period	Identified / Inferred Use	Source (Date)
1992	The Property was listed as occupied by Gallagher Industrial Laundry, Red Bird Lounge, and The Monogram Shop. The Property appeared to be developed with three buildings on the central and eastern portion of the Property. The remainder of the Property consisted of grass-covered land.	City Directory (1992) Aerial Photograph (1992)
1997	The Property was listed as occupied by Calhoun County Distributing.	City Directory (1997)
1998	The current building on the Property was constructed.	Assessing Information Building Permits
2001	The Property was listed as occupied by Kellogg's Cereal City USA.	City Directory (2001)
2005	The Property appeared to be developed with one building near the eastern Property boundary. The remainder of the Property was developed with a parking lot and landscaped areas.	Aerial Photograph (2005)
2006	The Property was listed as occupied by Kellogg's Cereal City USA, Heritage Battle Creek, Historical Society of Battle Creek, and Sojourner Truth Institute.	City Directory (2006)
2007	The building on the Property became vacant.	Horizon's Phase I ESA
2009	The Property was developed with a vacant building, asphalt parking lot, and landscaped areas.	Horizon's Phase I ESA

SME identified the potential for unreported and/or undetected releases of hazardous substances and/or petroleum products associated with the historical use of the Property as a variety of manufacturing operations, a coal and wood yard, dry cleaning, printers, undertakers, automotive service and sales, a dye works, and gasoline filling stations as suspect RECs in connection with the Property.

SME identified the potential for unreported and/or undetected releases of hazardous substances and/or petroleum products associated with the historical presence of gasoline USTs on the central and eastern portions of the Property as a suspect REC in connection with the Property.

SME identified the potential for the unreported and/or undetected release of hazardous substances and/or petroleum products associated with the historical use of railroad spurs on the central and eastern portions of the Property as a suspect REC in connection with the Property.

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SME obtained no information to indicate the past or current presence of a fuel oil UST/AST(s) on the Property. In SME's opinion, it is equally likely that coal or some other heating source was used to heat the former buildings as it is that fuel oil was used to heat the buildings.

The use of the Property prior to 1887 was not identified. This represents a data gap that is discussed in Section 8.0.

The historical research reported above was sufficient to develop a history of the previous uses of the Property in order to help identify the likelihood of past uses having resulted in the creation of RECs in connection with the Property.

5.4.3 Historical Use Information About Proximate Sites

An attempt was made to assess the historical uses of proximate sites by reviewing records referenced in Section 5.4. A summary of proximate sites of concern (suspect RECs), as identified only to the extent that this information was revealed in the course of researching the Property itself, is presented in the following table:

Year / Period	Identified / Inferred Use (Relationship to Property)	Source (Date)
1919 - 1993	A gas station with USTs were shown 300 feet northwest of the Property.	Sanborn Map (1919)
	Two automotive sales and service centers adjoined the Property to the north.	Sanborn Map (1950, 1972)
	To the north (128 W. Michigan Ave.) was listed as Boyds Dry Cleaning.	City Directory (1927)
	To the north (158 W. Michigan Ave.) was listed as Hartung Buick.	City Directory (1970)
	The property to the north (170 W. Michigan Ave.) was listed as various auto sales or service companies.	City Directories (1940 - 1992/1993)
	The property to the north (176 W. Michigan Ave.) was listed as auto/motorcycle sales/service, and Signs Unlimited.	City Directories (1927 - 1992/1993)
	The property to the north at 190 W. Michigan Ave. was used for auto sales.	City Directories (1960 - 1970)

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Year / Period	Identified / Inferred Use (Relationship to Property)	Source (Date)
1919 - 1993	The north adjoining property (194 W. Michigan Ave.) was listed as auto sales and service companies.	City Directories (1951 - 1992/1993)
	The north adjoining property (200 W. Michigan Ave.) was listed as Roberts Manufacturing Company.	City Directory (1922)
	The north adjoining property (206 W. Michigan Ave.) was listed as Elmo Nobles (autos).	City Directory (1927)
	To the north (208 W. Michigan Avenue) was used for printing, auto sales or repair, and as a cab company.	City Directories (1922 - 1992/1993)
1913 - 1965	W.H. Eldred Harness Factory adjoined the Property to the east, across Carlyle Street. Two 120-gallon gasoline USTs were depicted approximately 400 feet east of the Property.	Sanborn Map (1913)
	The east adjoining properties (15-23 Carlyle Street) were listed as Alsteel Inc. (metal stamping).	City Directories (1918 - 1951)
	The Property located approximately 300 feet southeast of the Property (58 Carlyle Street) was listed as Lyman Oil Company.	City Directory (1965)
1913 - 1972	Johnson Automatic Sealer Company, J.S. Van Duesen & Son Carpet Cleaning, and an oil house adjoined the Property to the south, across Kalamazoo Avenue.	Sanborn Map (1913)
	J.S. Van Deusen & Son Carpet Cleaning was depicted adjoining the Property to the south. The Michigan Glove Company was depicted approximately 150 feet south of the Property, across the Battle Creek River.	Sanborn Map (1919)
	A coal yard adjoined the Property to the south.	Sanborn Map (1972)
	The south adjoining site was listed as VanDeusen Carpet Cleaners.	City Directories (1918 - 1951)

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SME identified the potential for migration of contamination from the former north adjoining automotive sales and service, dry cleaning, and manufacturing sites, and the former gasoline filling station and USTs located approximately 300 feet northwest of the Property as suspect RECs in connection with the Property.

SME identified the potential for migration of contamination from the former east adjoining W.H. Eldred Harness Factory, Alsteel Inc. site, and former USTs, and the former Lyman Oil Company gasoline filling station located approximately 300 feet southeast of the Property, as suspect RECs in connection with the Property.

SME identified the potential for migration of contamination from the former south adjoining Johnson Automatic Sealer Company, J.S. Van Duesen & Son Carpet Cleaning, coal yard, and former oil house, and the former Michigan Glove Company located approximately 150 feet south of the Property, as suspect RECs in connection with the Property.

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6.0 SITE RECONNAISSANCE

The site reconnaissance was conducted to identify evidence of the presence of suspect RECs in connection with the Property. Descriptions of the current Property use and conditions, including the use, storage, and/or treatment of hazardous substances and/or petroleum products and the generation, storage/accumulation, and/or disposal of chemical, petroleum or other contaminated wastes are presented in the following sections.

6.1 Methodology and Limitations

On December 29, 2010, Mr. Davin K. Ojala, Ms. Sara I. Bals, and Mr. Thomas R. Howe of SME conducted a reconnaissance of the Property to observe Property conditions and features in an effort to identify RECs in connection with the Property. SME was unaccompanied during the reconnaissance. SME observed the Property exterior and boundaries and the exterior and interior of the building on the Property. Photographs taken during the reconnaissance, which illustrate observed Property conditions and surrounding areas, are contained in Appendix B. SME was unable to enter the former communications room on the first floor of the building on the Property. This limitation is discussed in Section 8.0.

6.2 General Property Setting

The Property is located south of West Michigan Avenue, east of South Washington Street, and west of North Carlyle Street. The Battle Creek River crossed through the eastern portion of the Property. Commercial businesses and parking lots adjoined the Property in all directions.

6.3 Exterior Observations

A three-story, vacant building is located on the eastern portion of the Property. Paved parking areas extend from the building to the western Property boundary. Landscaped areas extended from the building to the southern and northern Property boundaries and the Battle Creek River. During the Property reconnaissance, SME observed no evidence of stained soils or pavements, or areas of stressed vegetation. In addition, SME observed no evidence of septic systems or water supply wells on the Property.

6.3.1 Chemical Use and Storage

SME observed no exterior use and/or storage of chemicals.

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6.3.2 USTs/ASTs

SME observed no exterior evidence of USTs or ASTs.

6.3.3 PCB Containing Equipment

SME observed three pad-mounted transformers located near the northern Property boundary. SME did not observe labels indicating the PCB content of the transformers. No staining was observed on the concrete pad or ground surface near the transformer.

6.3.4 Pits, Ponds, and Lagoons

SME observed no visual evidence of pits, ponds, or lagoons.

6.3.5 Waste Generation, Treatment, Storage, and Disposal

SME observed no exterior visual evidence of the generation, treatment, storage, or disposal of liquid or solid wastes.

6.3.6 Other Exterior Features

SME observed no other exterior features indicative of suspect RECs.

6.4 Interior Observations

The three-story building is constructed of concrete block and brick walls on a concrete floor slab. The first floor includes an entryway, former museum viewing rooms, storage rooms, mechanical room, communications room, and an elevator maintenance room. The second floor included former museum viewing rooms, storage rooms, and an electrical room. The third floor includes museum viewing rooms, storage rooms, restrooms, and a mechanical room. The majority of the interior of the building (interior walls, drywall, flooring, light fixtures, and restrooms) on the first and second floors have been removed. The interior demolition of the third floor appears to be limited to flooring, drywall, and fixtures.

6.4.1 Chemical Use and Storage

SME observed an approximately two-gallon container of lubricating oil stored in the elevator maintenance room on the first floor of the building. SME observed staining on the concrete floor in the area of the lubricating oil container. The staining was *de minimus* and did not appear to represent a suspect REC in connection with the Property.

6.4.2 USTs/ASTs

SME observed no evidence of USTs or ASTs in the building.

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6.4.3 PCB Containing Equipment

SME observed one dry-type transformer in the electrical room on the second floor and three dry-type transformers in the mechanical room on the third floor. Dry-type transformers do not contain dielectric fluid and do not represent a suspect REC in connection with the Property.

6.4.4 Drains and Sumps

SME observed floor drains in the mechanical rooms. The floor drains were connected to the sanitary sewer and did not appear to represent suspect RECs in connection with the Property.

6.4.5 Waste Generation, Treatment, Storage, and Disposal

SME observed no evidence of the generation, treatment, storage, or disposal of liquid or solid wastes in the building.

6.4.6 Heating/Cooling

The building formerly utilized natural gas fired boilers and central air conditioning.

6.4.7 Other Interior Features

SME observed no additional features that appeared to represent suspect RECs in connection with the Property.

6.5 Adjoining Sites Observations

SME observed adjoining sites from the Property boundaries and public right-of-ways for evidence of RECs. The reconnaissance did not include physically accessing the adjoining sites; therefore, SME was unable to view all portions of adjoining sites.

Burnham Brook Community Center and Summit Pointe adjoined the Property to the north, across West Michigan Avenue. Mandy's Café Express, Sports Page, Quality Nursing Services, LLC, GreenStreet Marketing, and TJ's Photography also adjoined the Property to the north, near the western portion of the Property. Two vacant buildings adjoined the Property to the east, across Carlyle Street. The Kellogg Company office building adjoined the Property to the south and across the Battle Creek River. Barney's Brake Service adjoined the Property to the west, across South Washington Avenue. SME identified the potential for migration of hazardous substances and/or petroleum products onto the Property from the west adjoining site as a suspect REC in connection with the Property.

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7.0 INTERVIEWS

As part of the conduct of this Phase I ESA, SME interviewed the following pertinent individuals other than the User of this report:

- Current Property owner (or representative) – Ms. Cheryl Beard, Technical Marketing Director, Battle Creek Unlimited.
- State and/or local government officials – Ms. Cindy Southwick, Calhoun County Health Department.

7.1 Interviews with Owner/Site Manager/Occupant

A copy of SME's Property Owner/Occupant Questionnaire completed by Ms. Cheryl Beard, Property owner representative, is included in Appendix D. The Owner/Occupant Questionnaire was the primary source of interview information for this Phase I ESA. SME identified the historical industrial use of the Property and the BEA completed for the Property as suspect RECs based on review of the Owner/Occupant Questionnaire.

SME interviewed Ms. Beard by Owner/Occupant Questionnaire, seeking the following information:

- Whether the owner's representative knew of existence of environmental reports and permits; UST, AST, and underground injection system registrations; material safety data sheets; community right-to-know plans; safety and spill prevention plans; hydrogeologic reports; notices of past or current violations of environmental laws; hazardous waste generator notices or reports; geotechnical studies; risk assessments; and, recorded activity and use limitations.
- If the owner's representative had knowledge regarding historical use, occupants, and operations.
- Whether the owner's representative knew of any pending, threatened, or past litigation and/or administrative proceedings; or governmental notices regarding any possible violation of environmental laws or possible liability related to hazardous substances or petroleum products in, on, or from the Property.

Ms. Beard indicated the Property was a former industrial site. Ms. Beard also indicated that a Baseline Environmental Assessment (BEA) was previously completed for Battle Creek Unlimited. Ms. Beard provided SME with a copy of the Baseline Environmental Assessment, completed by Horizon Environmental on June 3, 2009.

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7.2 Interviews with Local Government Officials

SME interviewed Ms. Cindy Southwick and asked whether she had any environmental concerns associated with the Property and surrounding area. Ms. Southwick indicated she was not aware of environmentally related incidents having occurred on the Property.

7.3 Interviews with Others

No other interviews were performed as part of this Phase I ESA.

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8.0 FINDINGS, OPINIONS, AND CONCLUSIONS

SME has completed a Phase I ESA of the Property located at 171 West Michigan Avenue in the City of Battle Creek, Calhoun County, Michigan. At the time of SME's reconnaissance, the building on the Property was vacant. Data failures, data gaps, and limitations identified during this Phase I ESA are discussed below.

Based on SME's review of historical information, it appeared that the Property was developed by 1887 with industrial, commercial, residential buildings, and three railroad spurs. Historical occupants of the Property included, but not limited to, one or more of the following: H.B. Sherman Manufacturing Company (nail and clamp manufacturer), W.S. Nelson Lumber and Coal Yard, a planing mill, sash, door, & blind factory, Gates Half Sole Service Station, Imperial Dye Works, Wolverine Auto Cycle Company, Shouldice Brothers Sheet Metal Works, Johnson Machine Works, Rivers Motor Company, Hebble Mortuary, Dugans Auto Top Shop, United Motor Company, Oral Olmstead Auto Sales, Bertwistle's Cleaners, Mack's Garage, Detroit Waste Works, Auto Radiator Company, Super Kleen Dry Cleaners, Northern Rebuilt Motor Exchange, Meeks Auto Service, Pancost Press Printers, Hartung Buick Body Shop, Gallagher's Industrial Laundry, medicine manufacturing, Traux Music Company, a vulcanizer, steam laundry, gasoline filling stations, broom factory, numerous other miscellaneous commercial businesses, and residences. The railroad spurs remained on the Property until sometime between 1981 and 1992. The Property continued to be used by a mixture of industrial, commercial, and residential buildings until 1998 when the Property was developed with Kellogg's Cereal City USA, an interactive museum, along with asphalt parking areas and landscaped areas. The Property use remained constant until 2007 when Cereal City USA closed and the Property became unoccupied. The Property was vacant until the time of SME's 2010 Property reconnaissance.

Based on the cumulative results of environmental assessments performed by various consulting companies from 1991 through 2001, soil is contaminated with various volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and/or metals. These contaminants were detected exceeding the following Part 201 Commercial health-based criteria: Drinking Water Protection Criteria, Direct Contact Criteria, and/or Particulate Soil Inhalation Criteria. Various VOCs, PAHs, and/or metals were also detected in groundwater exceeding Part 201 Commercial Drinking Water Criteria.

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Based on the results of the Phase I ESA, in SME's opinion, the following suspect RECs were identified in connection with the Property:

- The reported presence of VOCs, PAHs, and metals contaminants in soil and/or groundwater on the Property (Sections 5.1 and 7.1) - The presence of these compounds in the soil and/or groundwater on the Property represents a REC in connection with the Property.
- The potential for unreported and/or undetected releases of hazardous substances and/or petroleum products associated with the historical manufacturing, dry cleaning, gasoline filling station, and automotive service center operations, the former railroad spurs, and the historical presence of gasoline USTs and crude oil ASTs on the Property (Sections 5.4.2 and 7.1) - Based on the number of manufacturing, dry cleaning, gasoline filling stations, and automotive service centers, railroad spurs, and USTs and ASTs that operated on the Property, the length of time they were present, and SME's specialized knowledge of chemical usage and waste disposal practices associated with these operations, potential exists for a past unreported and/or undetected release of hazardous substances and/or petroleum products at the Property. In SME's opinion, this represents a REC in connection with the Property.
- The potential for migration of environmental impact associated with the north adjoining Registered UST and RCRAGN sites (Section 5.1) –Based on SME's review of information contained in the FirstSearch report, several of the USTs were installed for several years. In addition, numerous violations were reported for the MAACO Auto Painting RCRAGN site. Groundwater flow direction is assumed to be to the south, toward the Battle Creek River. Based on this information, these sites represent a REC in connection with the Property.
- The potential for migration of undetected and/or unreported releases of hazardous substances and/or petroleum products associated with the west adjoining site and the former north and east adjoining sites (Sections 5.4.3 and 6.5) - Based on the assumed direction of groundwater flow and the proximity to the Property, these sites represent a REC in connection with the Property.

In SME's opinion, the following suspect RECs are not RECs in connection with the Property for the stated reasons.

- The potential for migration of contamination onto the Property from the former south adjoining sites and former Michigan Glove Company located approximately 150 feet south of the Property (Section 5.4.3). Based on the proximity of the Battle Creek River to the sites (approximately 100 feet south) and the assumed direction of groundwater flow away from the Property towards the Battle Creek River, potentially impacted groundwater on the site is not likely to have migrated onto the Property. Therefore, any potential release(s) from historical operations on the sites located south of the Property are not likely to have migrated onto the Property.

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SME identified the unidentified use of the Property prior to 1887 and the absence of a title records review for environmental liens and AULs as data gaps in connection with this Phase I ESA. Based on SME's knowledge of the area of the Property and the fact that it was developed by industrial operations and a railroad spur by 1887, it is likely that the Property was first developed for industrial use. Based on this information, it is SME's opinion that this data gap impairs our ability to evaluate the potential for environmental impact related to past uses of the Property. SME reviewed the MDNRE's Perfected Lien List, and as of September 13, 2010, no state environmental liens were associated with the Property. Based on the results of this search and other inquiries reported herein, it is SME's opinion that this data gap does not impair our ability to evaluate the potential for environmental impact related to past uses of the Property.

SME identified one limitation in connection with this Phase I ESA. SME was unable to enter the former communications room on the first floor of the building on the Property. Since the room was used to contain communications equipment, it is unlikely that hazardous substances were stored in this area. Therefore, in SME's opinion, the inability to access the former communications room does not impair SME's ability to identify RECs in connection with the Property.

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9.0 DEVIATIONS

No deviations occurred as part of this Phase I ESA.

10.0 ADDITIONAL SERVICES

No additional services were provided in conjunction with this Phase I ESA.

11.0 REFERENCES

1. ASTM International, **Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process**, November 1, 2005.
2. Horizon Environmental, **Phase I Environmental Site Assessment Update, 171 West Michigan Avenue, Battle Creek, Michigan**, June 2009.
3. Snell Environmental Group, **Soil Investigation, H. B Sherman Manufacturing Company,** December 1991.
4. Terra Environmental Corporation, **20-day Abatement Report, 103 East Michigan Avenue, Battle Creek, Michigan,** December 29, 1992.
5. Terra Environmental Corporation, **45-day Site Characterization Report, 103 East Michigan Avenue, Battle Creek, Michigan,** January 22, 1993.
6. Global Environmental Engineering and Terra Environmental Corporation, **Site Investigation Report, City of Battle Creek, H.B. Sherman Property,** May 28, 1993.
7. Global Environmental Engineering and Terra Environmental Corporation, **City of Battle Creek, Hebble Property, Site Investigation Report,** June 8, 1993
8. Global Environmental Engineering and Terra Environmental Corporation, **Addendum to the May 28, 1993 Site Investigation Report, City of Battle Creek, H.B. Sherman Property,** August 30, 1993.
9. EarthTech, **A Risk Evaluation of Chemicals in Soils at the Hebble Site in Battle Creek, Michigan,** September 1994.
10. Horizon Environmental, **Investigative Results for the Former H.B. Sherman/Gallagher Laundry/Redbird Lounge Properties,** November 12, 1996.

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11. Prein and Newhoff, **Phase II Results/Former H.B. Sherman Site, Battle Creek, Michigan,** February 11, 2002.

12. Horizon Environmental, **Baseline Environmental Assessment, Former Cereal City USA Property, 171 West Michigan Avenue, Battle Creek, Michigan,** June 2, 2009.

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12.0 GENERAL COMMENTS

SME conducted this Phase I ESA to identify RECs in connection with the Property and to assess the relative significance of the identified RECs. The findings, opinions, conclusions, and recommendations presented in this report are based upon observations noted during the site visit, and information obtained during the performance of the scope of services on the dates indicated. In the process of obtaining the field and historical information in preparation of this report, procedures were followed that represent reasonable and accepted environmental practices and principles, in a manner consistent with that level of care and skill ordinarily exercised by members of these professions currently practicing under similar conditions. Records reviewed at various locations as identified within the text of this report, include only those records that were provided to SME by the referenced department on the date indicated. As such, the records provided to SME may not represent all records available at a given source. Appropriate inquiry was made into the past uses of the Property consistent with good commercial or customary practice. As is typical with Phase I ESAs, SME conducted no testing or subsurface evaluation for this assessment.

Due to unknown or latent conditions on the Property, or on adjacent or nearby properties, which may become evident in the future, SME does not represent the Property is free of contamination or hazardous waste material. It should also be noted the Property conditions may change over time. Should additional surface, subsurface, chemical, or other data become available after the date of issue of this report, the findings, conclusions, and recommendations contained in this report may have to be modified. SME should be retained to review the new information and adjust our opinion and recommendations accordingly.

All reports, field data, field notes, laboratory test data, calculations, estimates, and other documents prepared by SME as instruments of service are the property of SME. No parties other than those specifically identified in this report may rely upon SME's opinions, conclusions, or reports unless SME has agreed to such reliance in writing. In any event, any reliance will be subject to the terms and conditions set forth in SME's General Conditions (01/09).

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SIGNATURE(S) OF ENVIRONMENTAL PROFESSIONAL(S)

The Environmental Professional responsible for the conduct of this Phase I ESA was Mr. Davin K. Ojala. The site reconnaissance and interviews were performed by Mr. Nathan B. Bolles. Senior review of the report was performed by Mr. Keith Egan. Resumes of Messrs. Ojala, Bolles, and Egan are attached in Appendix F.

I declare that, to the best of my professional knowledge and belief, I meet the definition of *Environmental Professional* as defined in §312.10 of 40 CFR 312. I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the Practices and practices set forth in 40 CFR Part 312.

Davin K. Ojala, Project Consultant
Environmental Professional

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APPENDIX A

FIGURES

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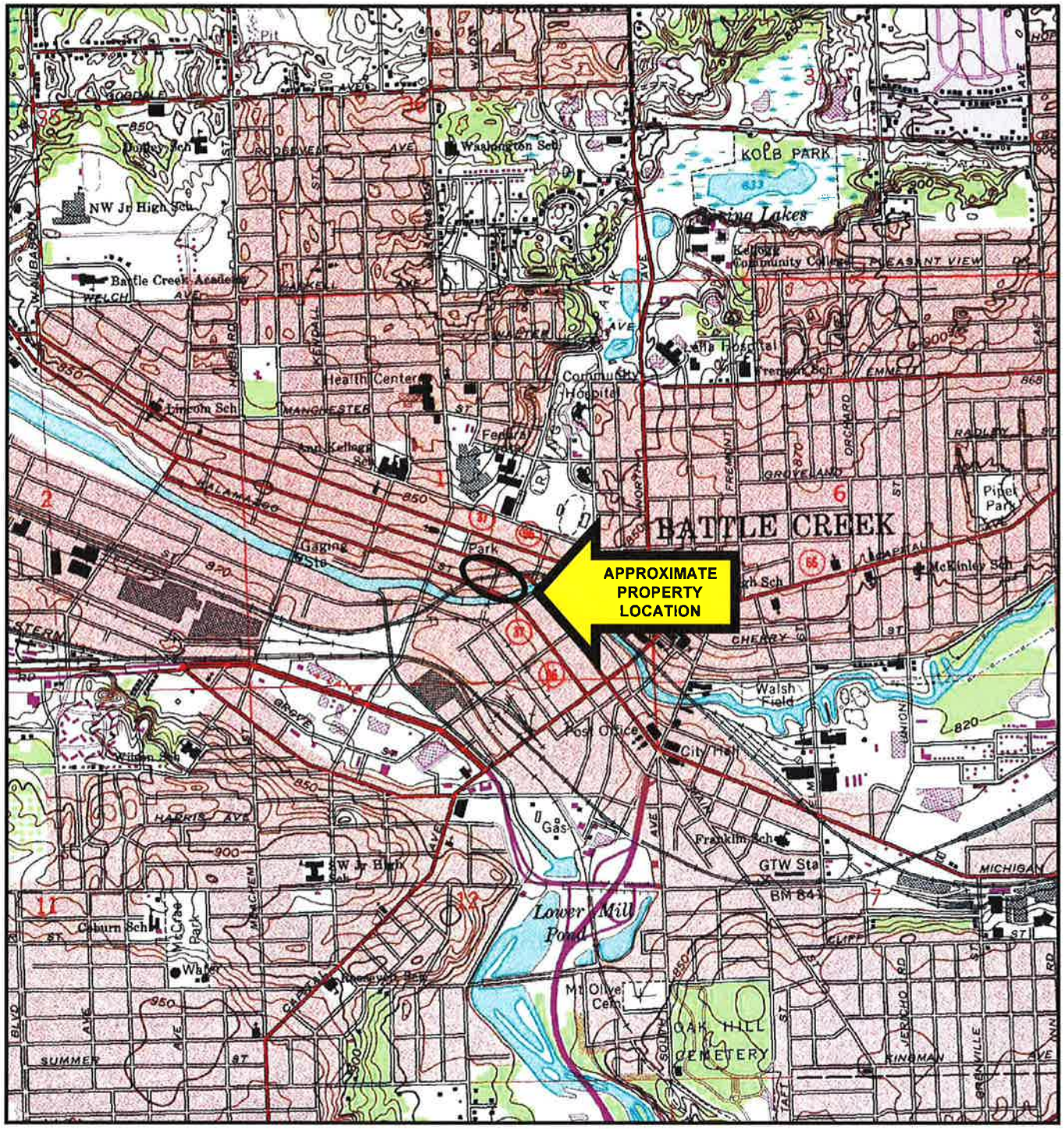

Base map obtained from USGS.

USGS QUADRANGLE(s) REFERENCED

BATTLE CREEK, MICHIGAN, 1985

0' 2000'

SCALE: 1" = 2000'

NORTH

Feb 04, 2011 - 10:06am - good

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sme

www.sme-usa.com

Indiana
Michigan
Ohio

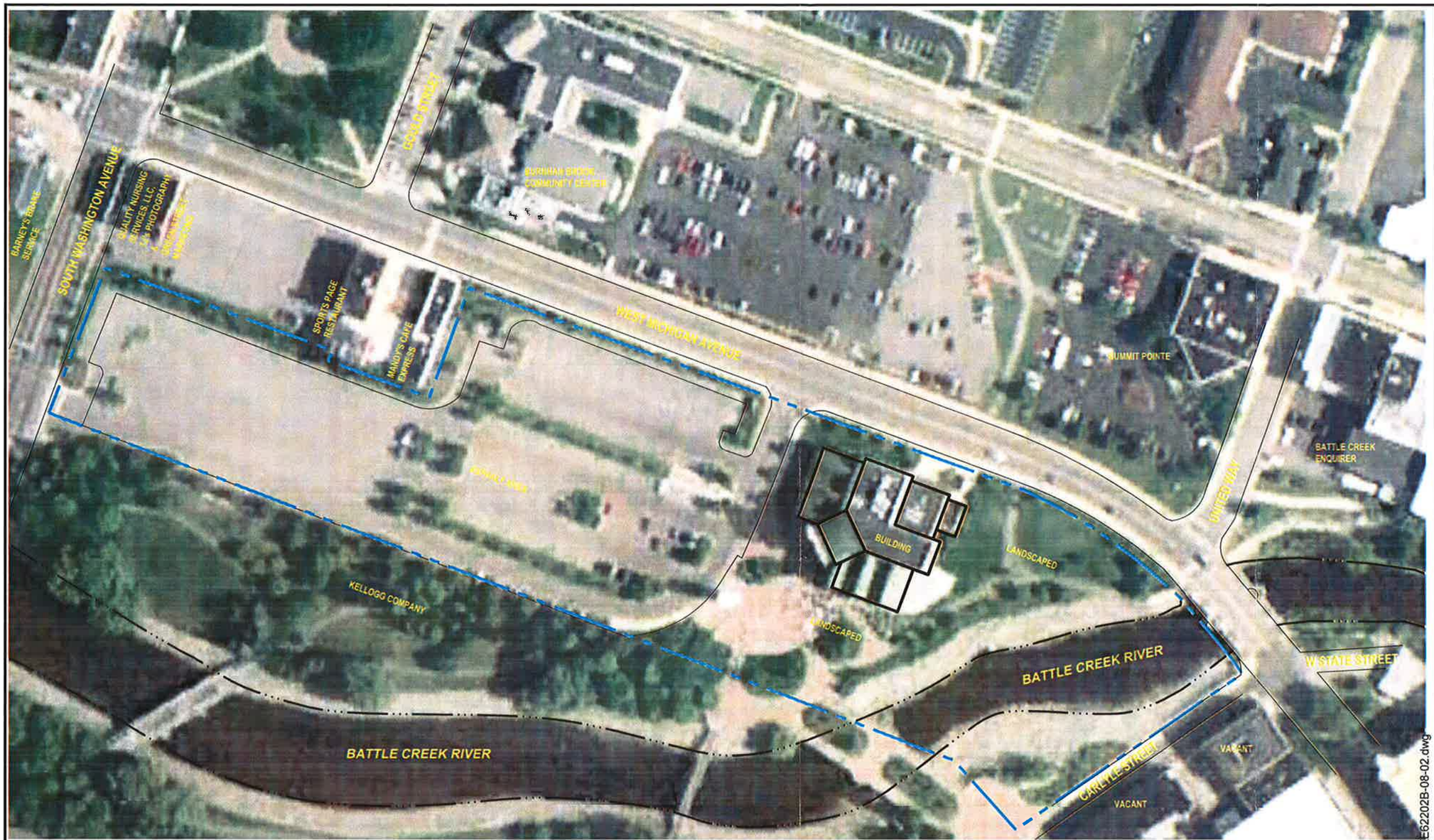
Date	02-04-11
Drawn By	GM,SRG
Scale	1" = 2000'
Project	KE62202B-08

USGS 7.5 MINUTE TOPOGRAPHIC MAP

171 WEST MICHIGAN AVENUE

BATTLE CREEK, MICHIGAN

Figure No. 1



LEGEND

APPROXIMATE PROPERTY BOUNDARY

0 120 240

GRAPHIC SCALE: 1" = 120'

NORTH

NOTE:
1. DRAWING INFORMATION TAKEN FROM BATTLE CREEK UNLIMITED'S ON-LINE GEOGRAPHIC INFORMATION SYSTEM AND PROPERTY RECONNAISSANCE.
2. PROPERTY FEATURES ARE TO APPROXIMATE SCALE.
3. THE AERIAL PHOTOGRAPH WAS OBTAINED FROM GOOGLE EARTH.

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No.	Revision Date

PROPERTY FEATURES DIAGRAM
171 WEST MICHIGAN AVENUE
BATTLE CREEK, MICHIGAN

Date	02-04-11
Drawn By	GM,SRG
Designed By	NBB
Scale	1" = 120'
Project	KE62202B-08

Indiana
Michigan
Ohio

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Figure No. 2

APPENDIX B

PHOTOGRAPHS

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PHOTO NO. 1: View of the building on the Property, taken from the parking lot looking northeast.

PHOTO NO. 2: View of the Property, taken from Michigan Avenue looking southwest.

SME Project Number:	**KE62202B-08**
Photograph by:	**Thomas R. Howe**
Date:	**12/29/10**
Project:	**171 West Michigan Avenue**
Location:	**Battle Creek, Michigan**

PHOTO NO. 3: View of the Property, taken from the Battle Creek River looking northeast.

PHOTO NO. 4: View of the second floor of the building on the Property, taken from the approximate north side looking west.

SME Project Number:	**KE62202B-08**
Photograph by:	**Thomas R. Howe**
Date:	**12/29/10**
Project:	**171 West Michigan Avenue**
Location:	**Battle Creek, Michigan**

PHOTO NO. 5: View of the mechanical room, taken from the first floor on the east side of the building.

PHOTO NO. 6: View of the north adjoining Burnham Brook Community Center. Photograph was taken from the northern Property boundary looking northwest, across West Michigan Avenue.

SME Project Number:	**KE62202B-08**
Photograph by:	**Thomas R. Howe**
Date:	**12/29/10**
Project:	**171 West Michigan Avenue**
Location:	**Battle Creek, Michigan**

PHOTO NO. 7: View of the north adjoining Summit Pointe Mental Healthcare. Photograph was taken from the north side of West Michigan Avenue, looking north.

PHOTO NO. 8: View of the northeast adjoining Battle Creek Enquirer. Photograph was taken from the northeast corner of the Property, looking northeast across West Michigan Avenue and the Battle Creek River.

SME Project Number:	**KE62202B-08**
Photograph by:	**Thomas R. Howe**
Date:	**12/29/10**
Project:	**171 West Michigan Avenue**
Location:	**Battle Creek, Michigan**

PHOTO NO. 9: View of the east adjoining unoccupied buildings. Photograph was taken from the eastern Property boundary looking east, across Carlyle Street.

PHOTO NO. 10: View of the south adjoining Kellogg Company. Photograph was taken from near the main entrance to the building on the Property looking southeast, across the Battle Creek River.

SME Project Number:	**KE62202B-08**
Photograph by:	**Thomas R. Howe**
Date:	**12/29/10**
Project:	**171 West Michigan Avenue**
Location:	**Battle Creek, Michigan**

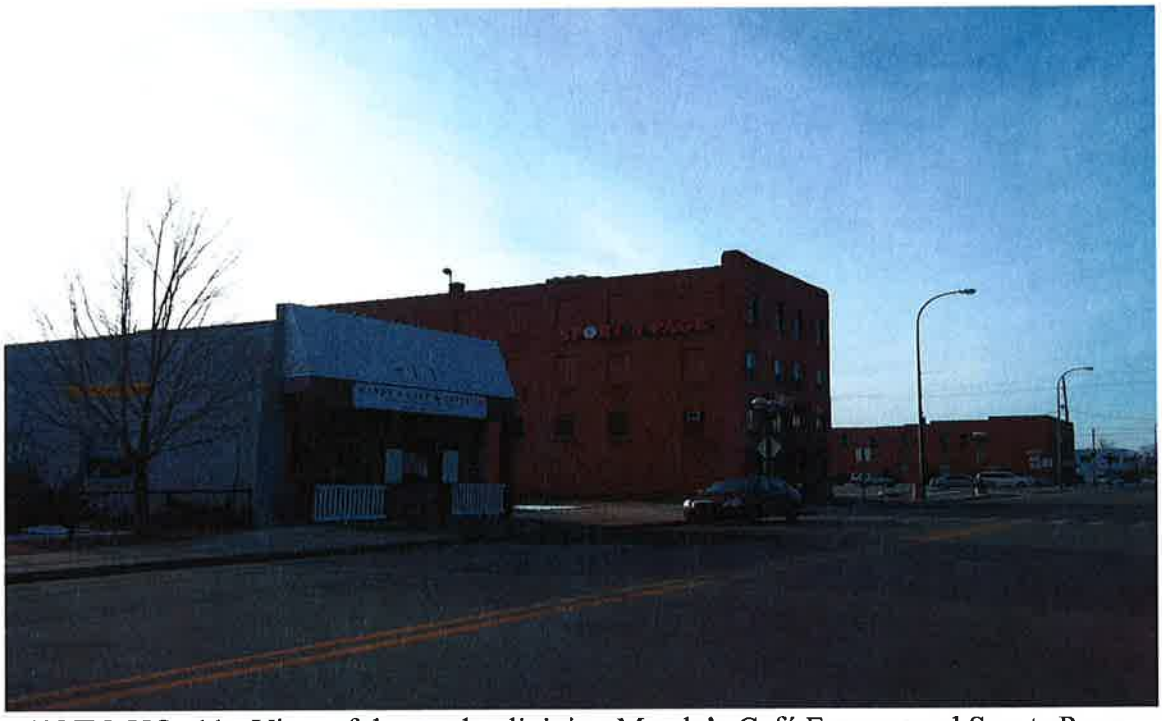


PHOTO NO. 11: View of the north adjoining Mandy's Café Express and Sports Page Restaurant. Photograph was taken from the north side of West Michigan Avenue looking southwest.

PHOTO NO. 12: View of the north adjoining Green Street Marketing, TJ's Photography, and Quality Nursing Services, LLC. Photograph was taken from the intersection of West Michigan Avenue and Washington Avenue, looking south.

SME Project Number:	**KE62202B-08**
Photograph by:	**Thomas R. Howe**
Date:	**12/29/10**
Project:	**171 West Michigan Avenue**
Location:	**Battle Creek, Michigan**

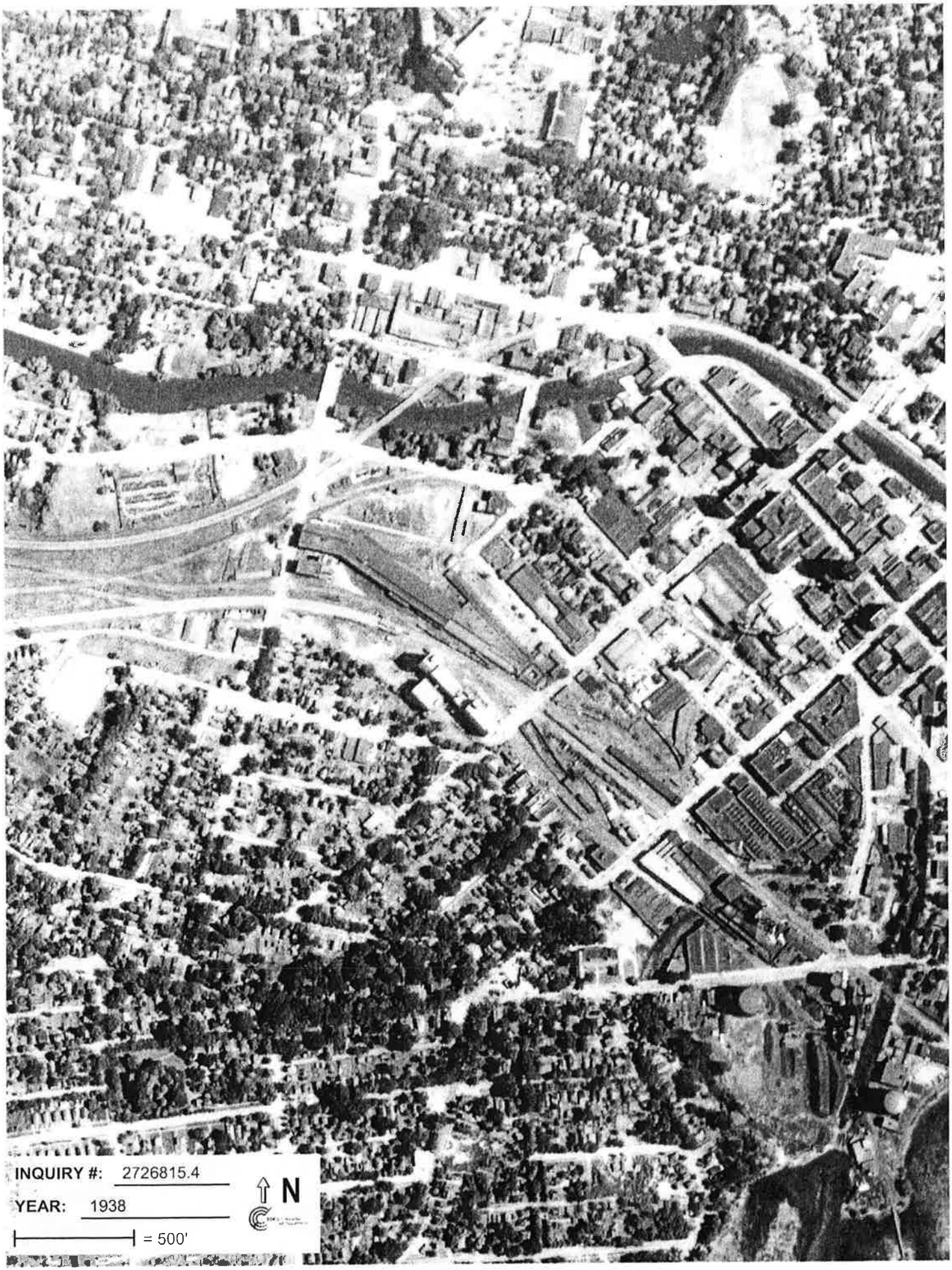
PHOTO NO. 13: View of the west adjoining Barney's Brake Service. Photograph was taken from the intersection of West Michigan Avenue and Washington Avenue looking southwest.

SME Project Number:	**KE62202B-08**
Photograph by:	**Thomas R. Howe**
Date:	**12/29/10**
Project:	**171 West Michigan Avenue**
Location:	**Battle Creek, Michigan**

APPENDIX C

HISTORICAL RESEARCH DOCUMENTATION

© 2011 soil and materials engineers, inc.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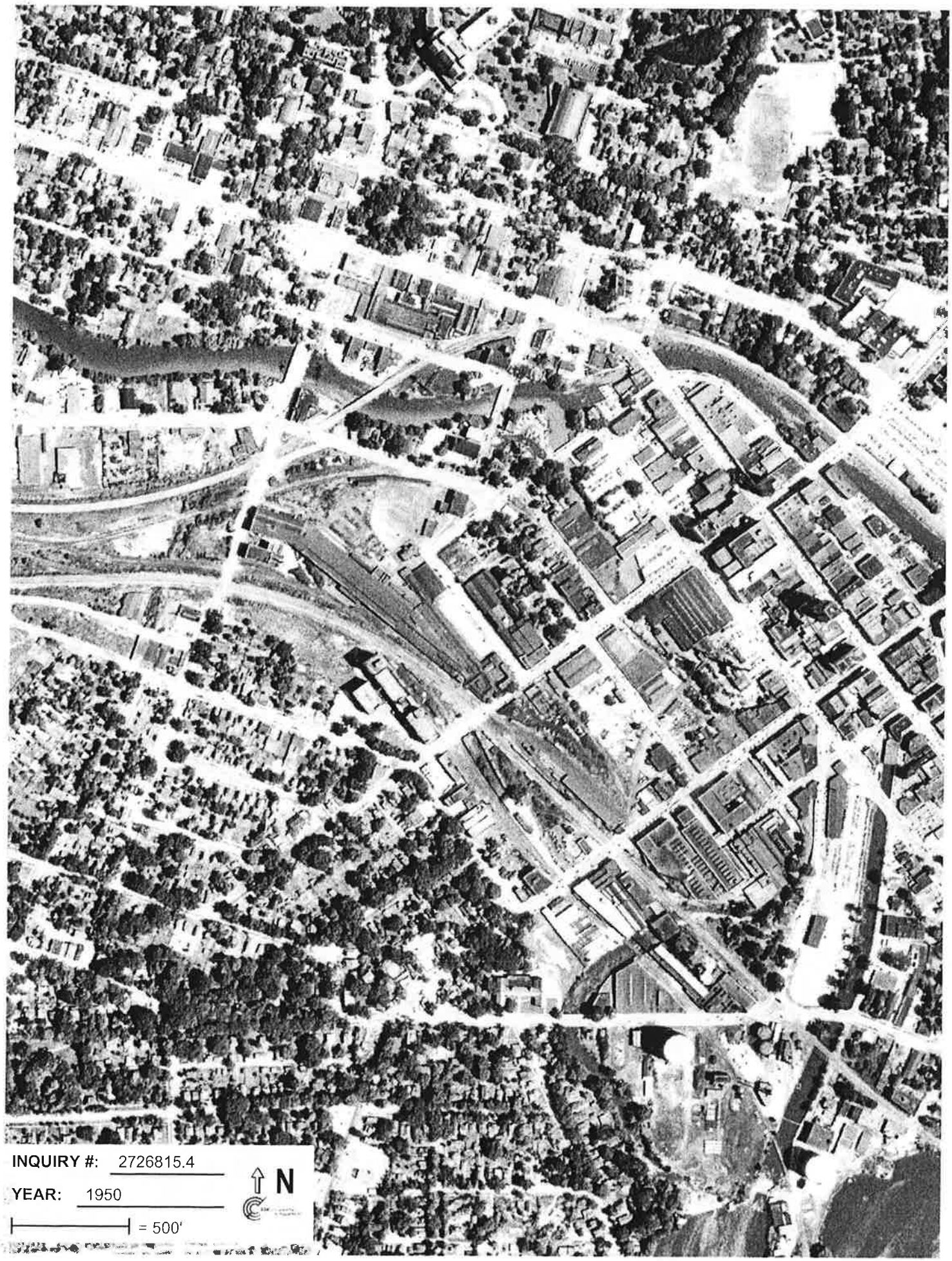
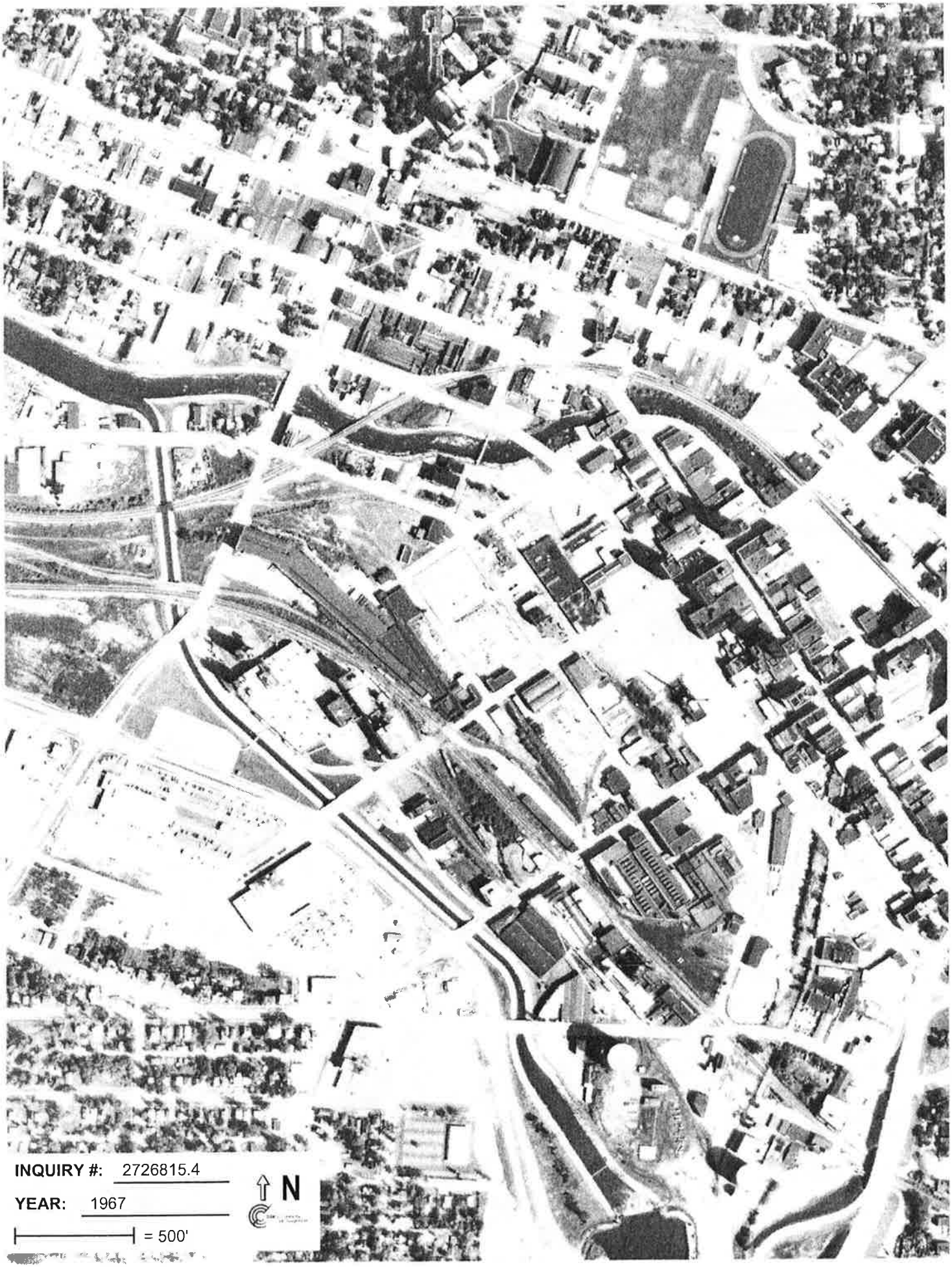
YEAR: 1938
= 500'
N


INQUIRY #: 2726815.4
YEAR: 1950
= 500'
N

INQUIRY #: 2726815.4
YEAR: 1955
= 500'
N

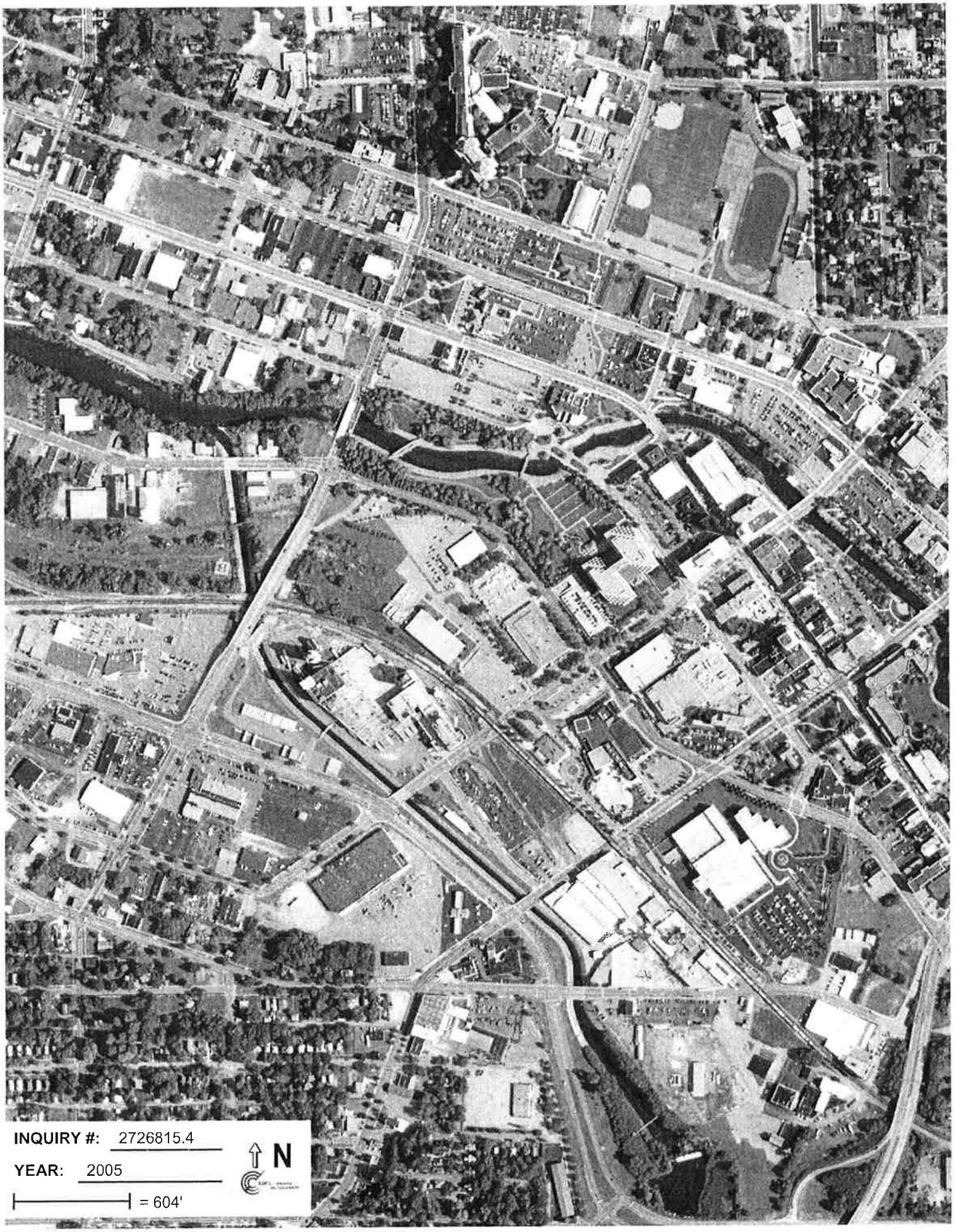
INQUIRY #: 2726815.4
YEAR: 1961
= 500'
N

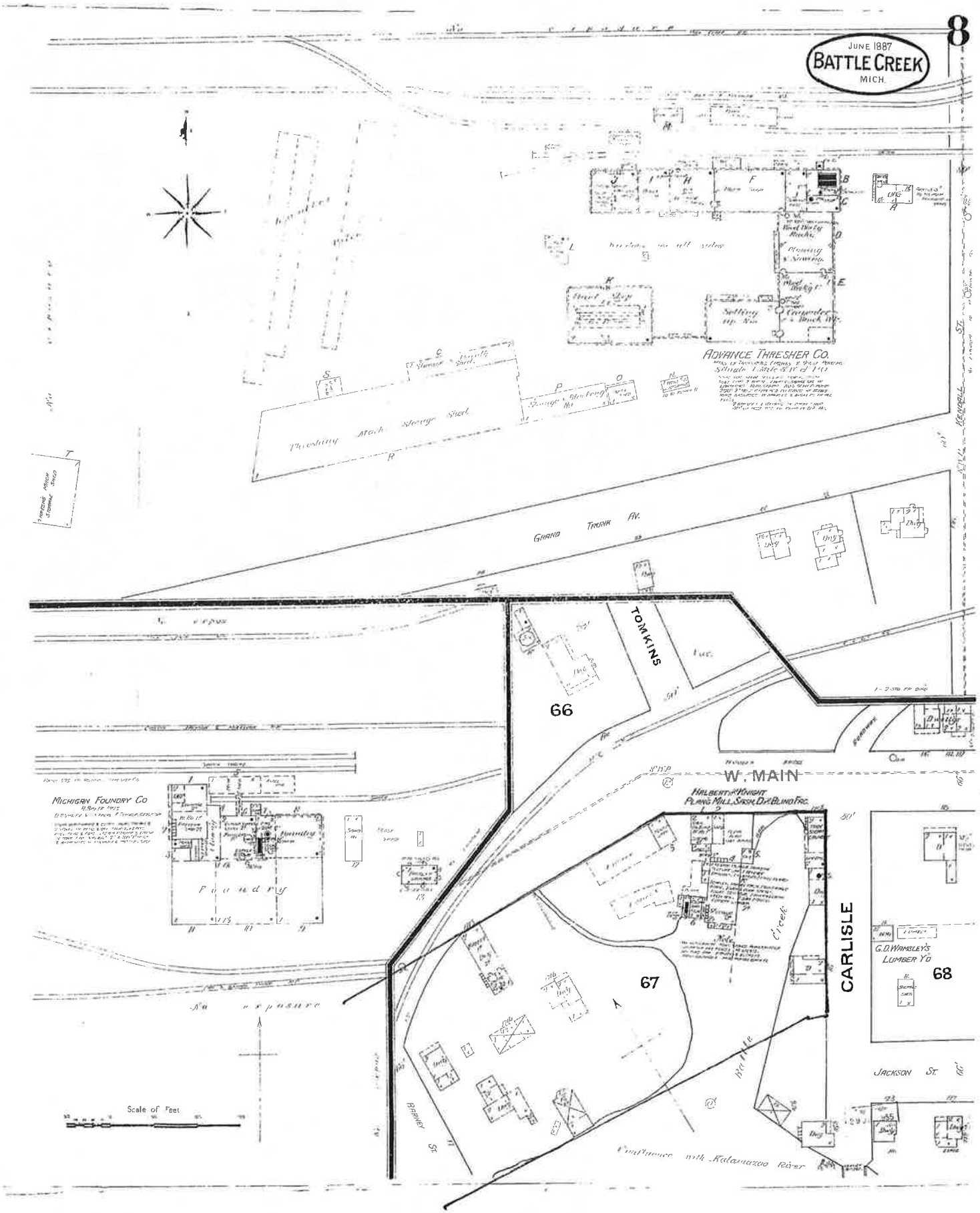

INQUIRY #: 2726815.4
YEAR: 1967
= 500'
N

INQUIRY #: 2726815.4
YEAR: 1974
= 600'
N

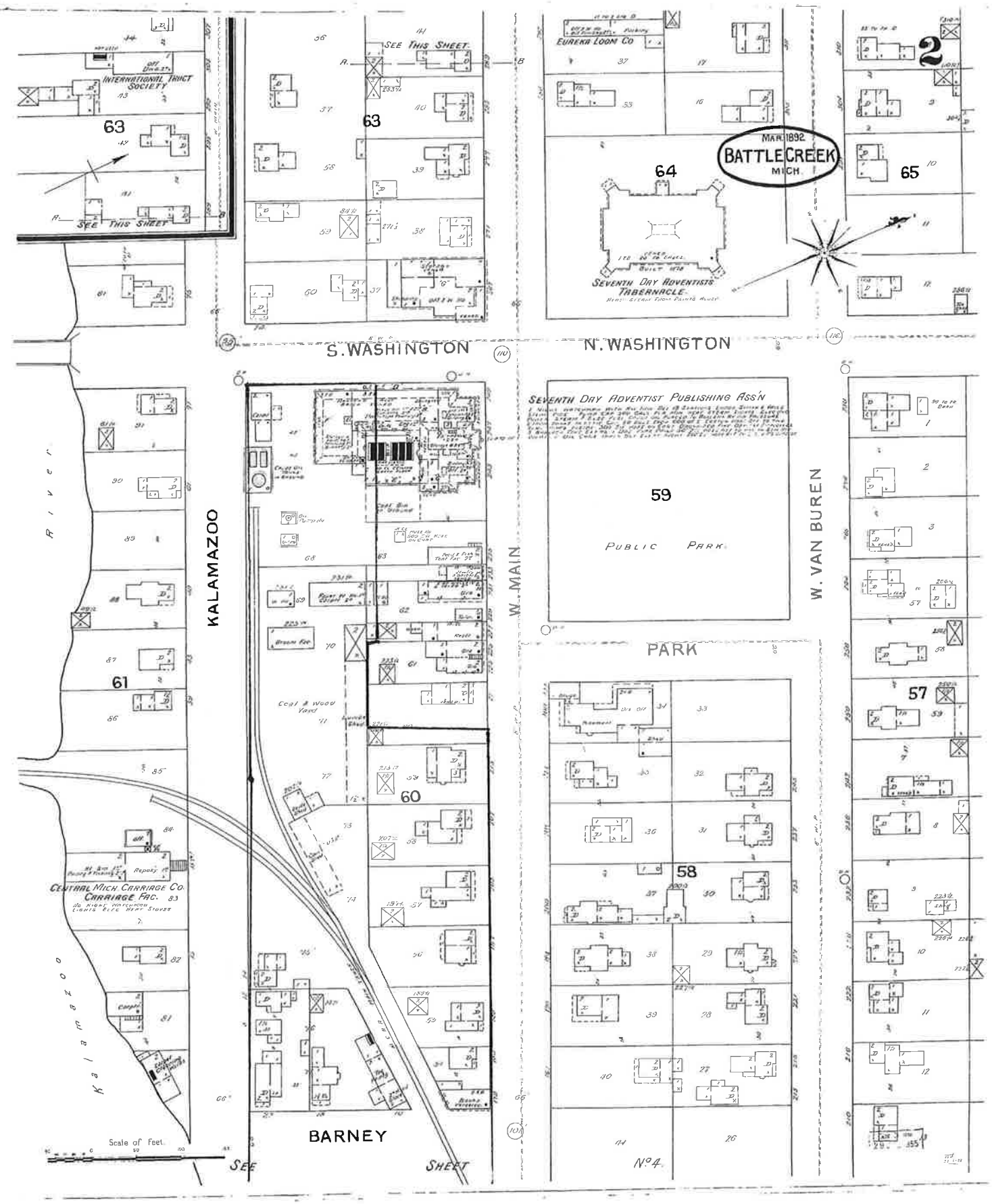
INQUIRY #: 2726815.4
YEAR: 1981
= 600'
N

INQUIRY #: 2726815.4
YEAR: 1992
= unknown
N

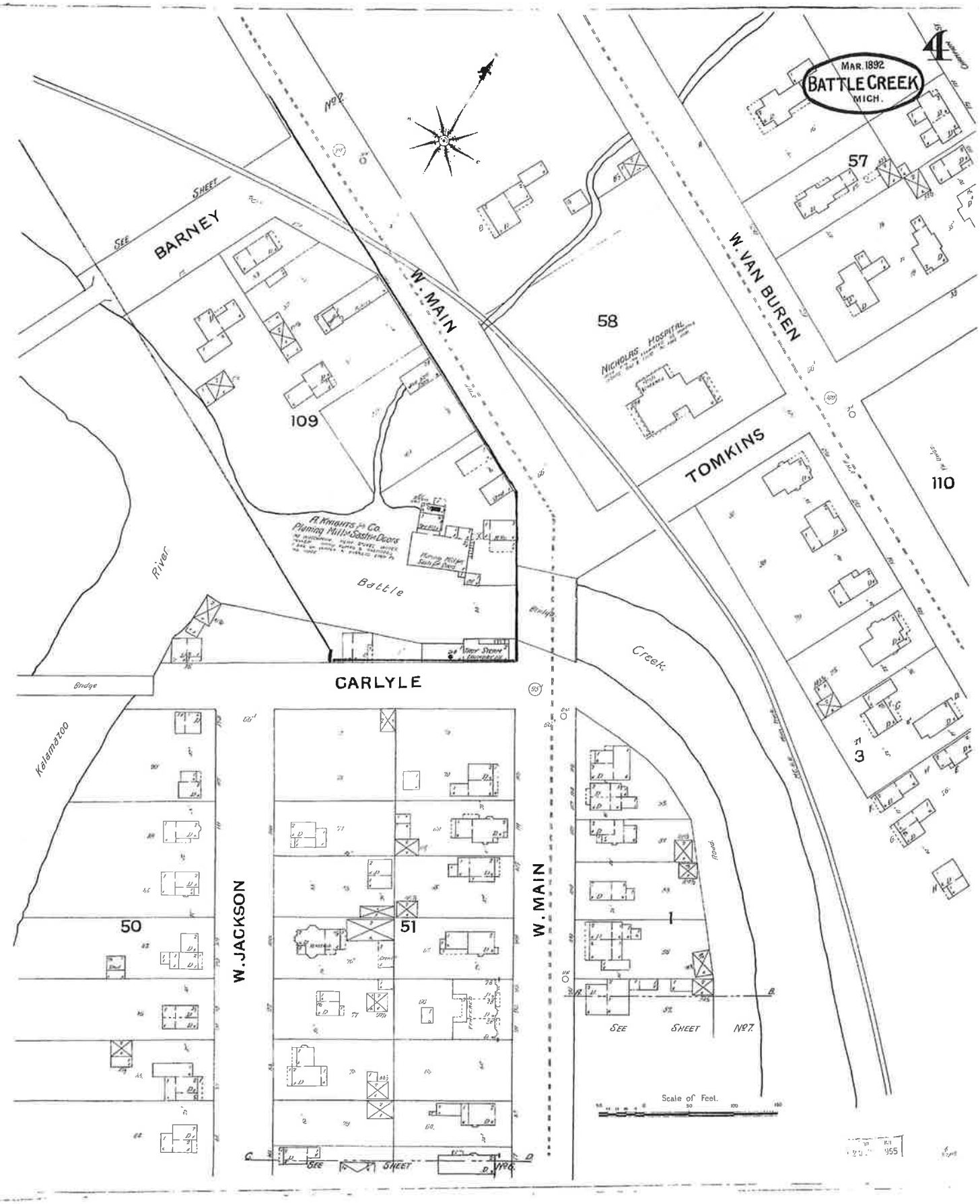

INQUIRY #: 2726815.4
YEAR: 2005
= 604'
N


8
JUNE 1887
BATTLE CREEK
MICH.
ADVANCE THRESHER CO.
GRAND TRUNK AV.
TOMKINS
66
W. MAIN
MICHIGAN FOUNDRY CO
Foundry
HALBERT & KNIGHT
PLANING MILL, SASH, DR. & BLIND FAC.
CARLISLE
67
G.D. WAMSLEY'S LUMBER YD
68
JACKSON ST.
BARNEY ST.
Kalamazoo River
Scale of Feet

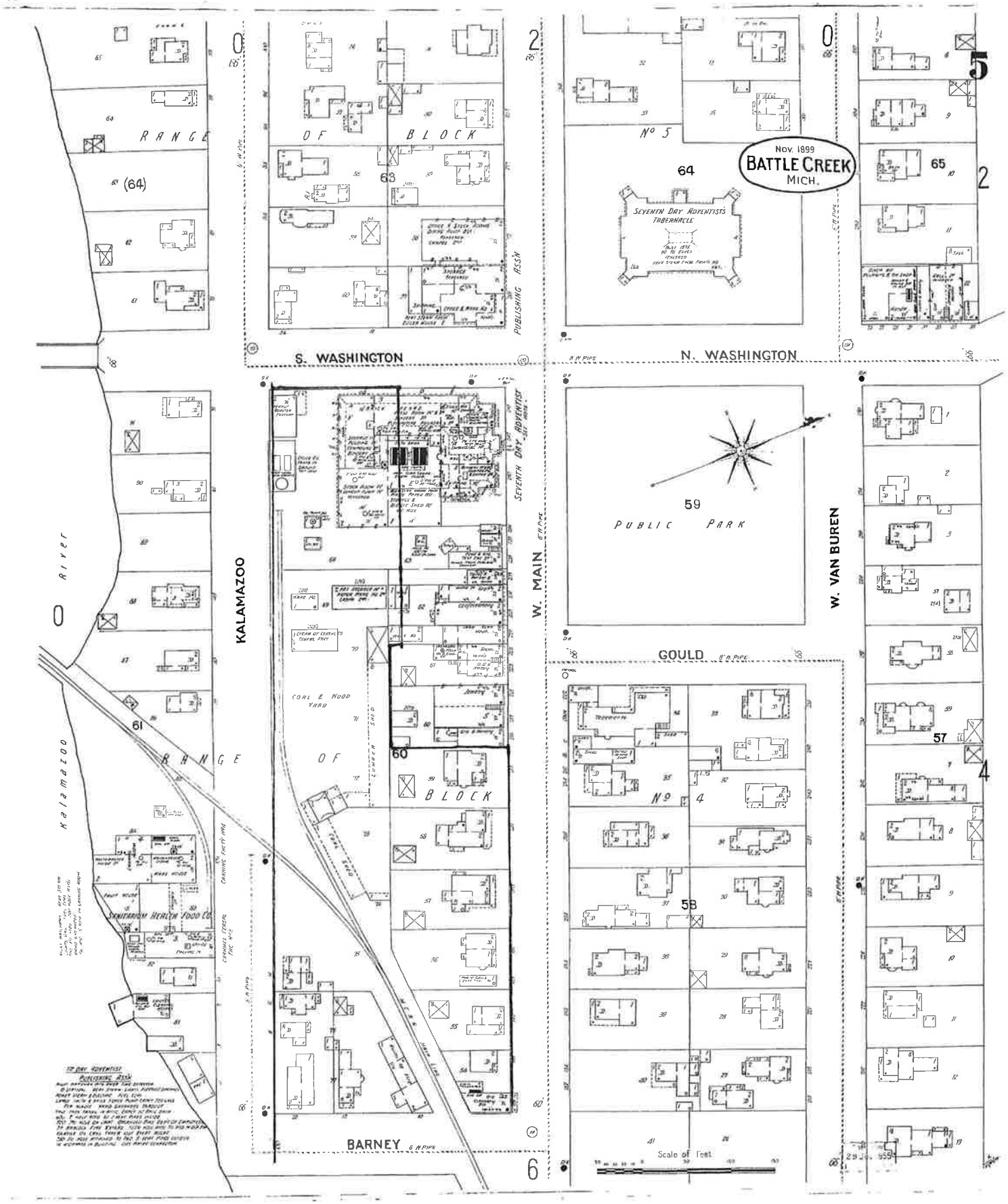
1887


MAR. 1892
BATTLE CREEK
MICH.
INTERNATIONAL TRACT SOCIETY
SEE THIS SHEET
EUREKA LOOM CO
SEVENTH DAY ADVENTISTS TABERNACLE
S. WASHINGTON
N. WASHINGTON
SEVENTH DAY ADVENTIST PUBLISHING ASS'N
PUBLIC PARK
PARK
KALAMAZOO
W. MAIN
W. VAN BUREN
RIVER
Coal & Wood Yard
CENTRAL MICH. CARRIAGE CO.
CARRIAGE FAC.
BARNEY
No. 4
Scale of Feet
SEE SHEET

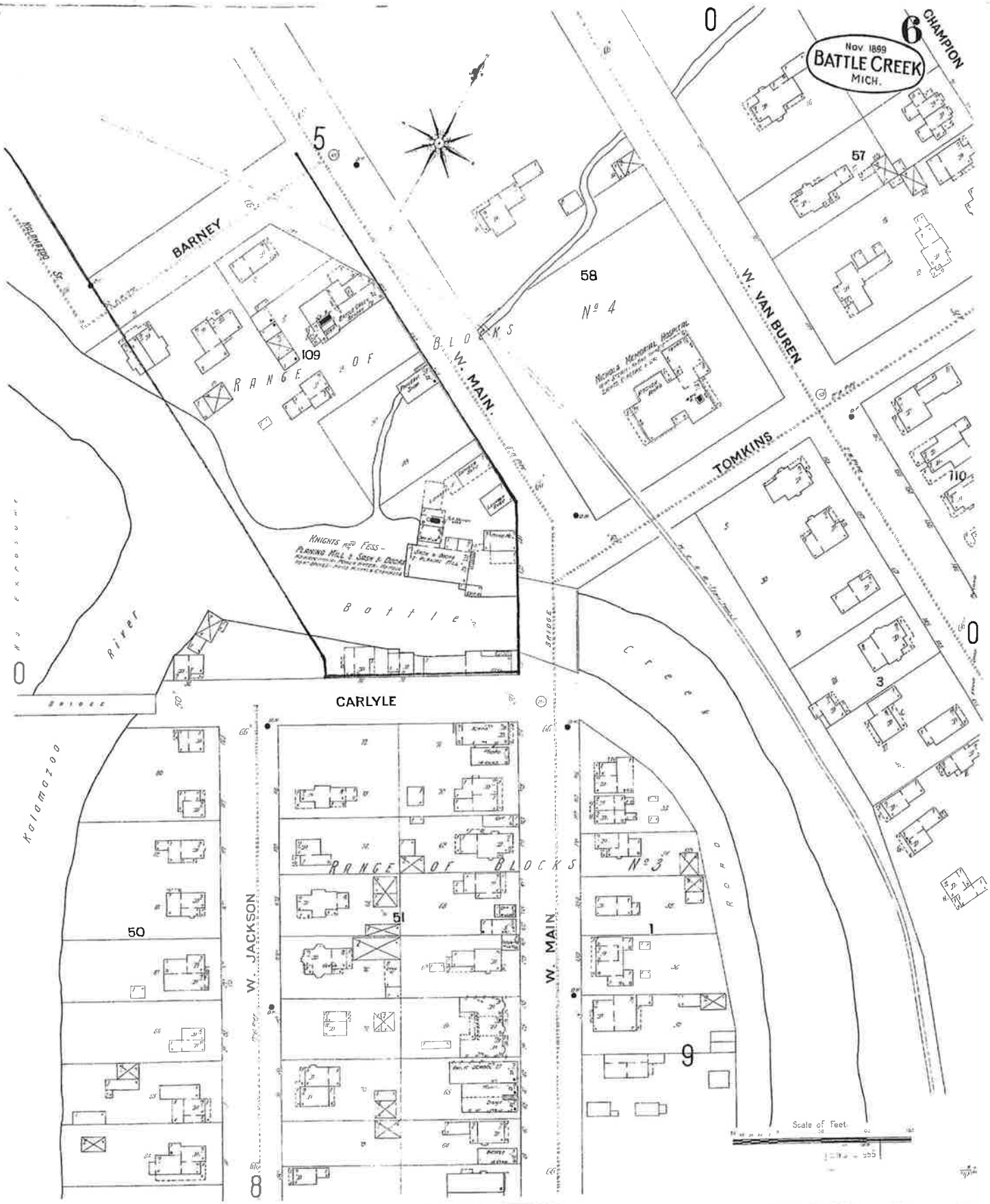
1892


MAR. 1892
BATTLE CREEK
MICH.
4
BARNEY
SEE SHEET
W. MAIN
W. VAN BUREN
TOMKINS
CARLYLE
W. JACKSON
W. MAIN
NICHOLAS HOSPITAL
A. KNIGHTS & CO.
Planing Mill & Sash & Doors
Battle
Creek
River
Kalamazoo
Bridge
Road
109
58
57
110
3
50
51
1
SEE SHEET No 7
SEE SHEET No 6
Scale of Feet.

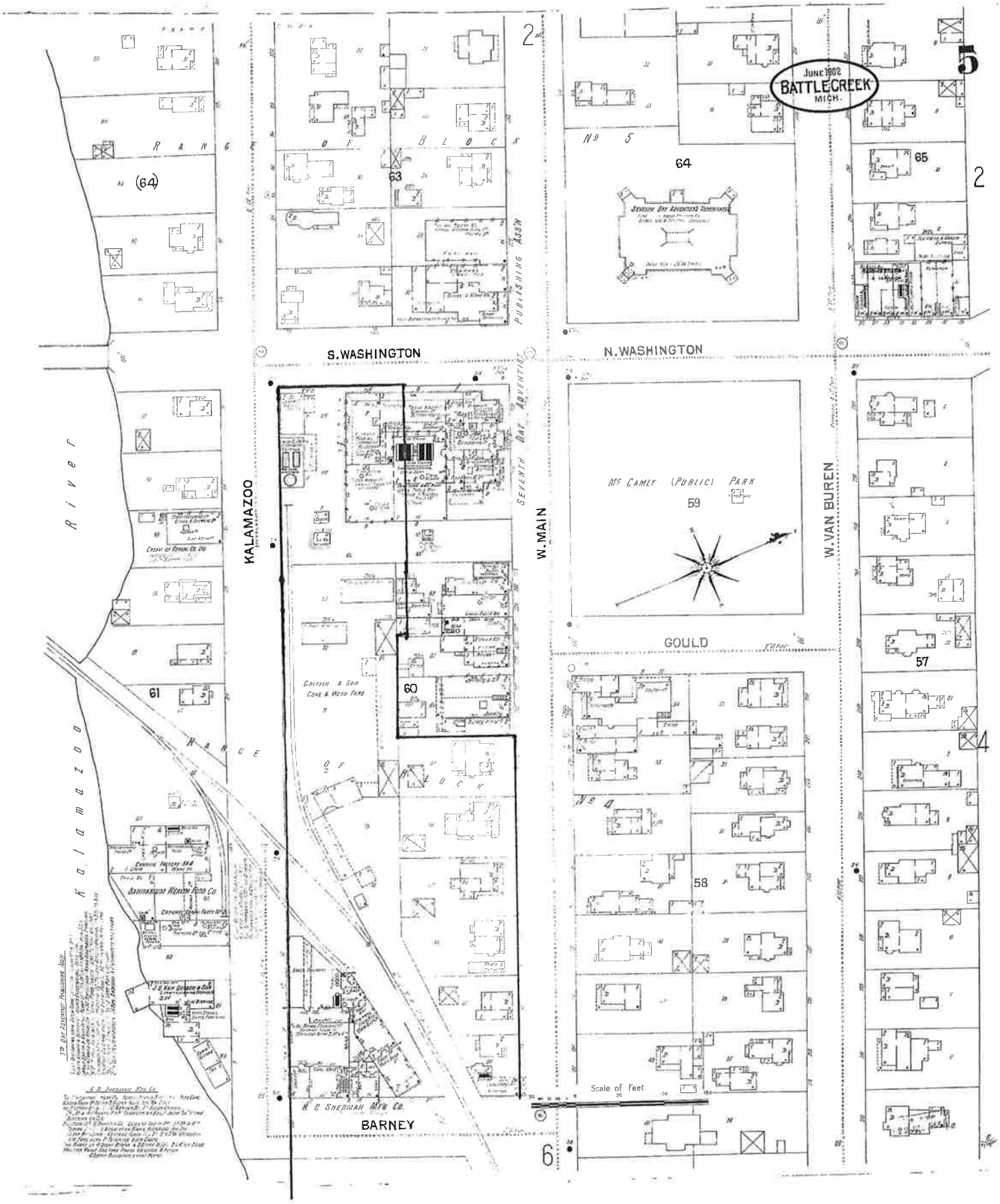
1892


Nov. 1899
BATTLE CREEK
MICH.
S. WASHINGTON
N. WASHINGTON
W. MAIN
W. VAN BUREN
KALAMAZOO
GOULD
BARNEY
PUBLISHING ASSN
SEVENTH DAY ADVENTISTS
SEVENTH DAY ADVENTISTS TABERNACLE
PUBLIC PARK
COAL & WOOD YARD
SANITARIUM HEALTH FOOD CO.
Kalamazoo River
RANGE OF BLOCK
No 5
No 4
Scale of Feet

1899

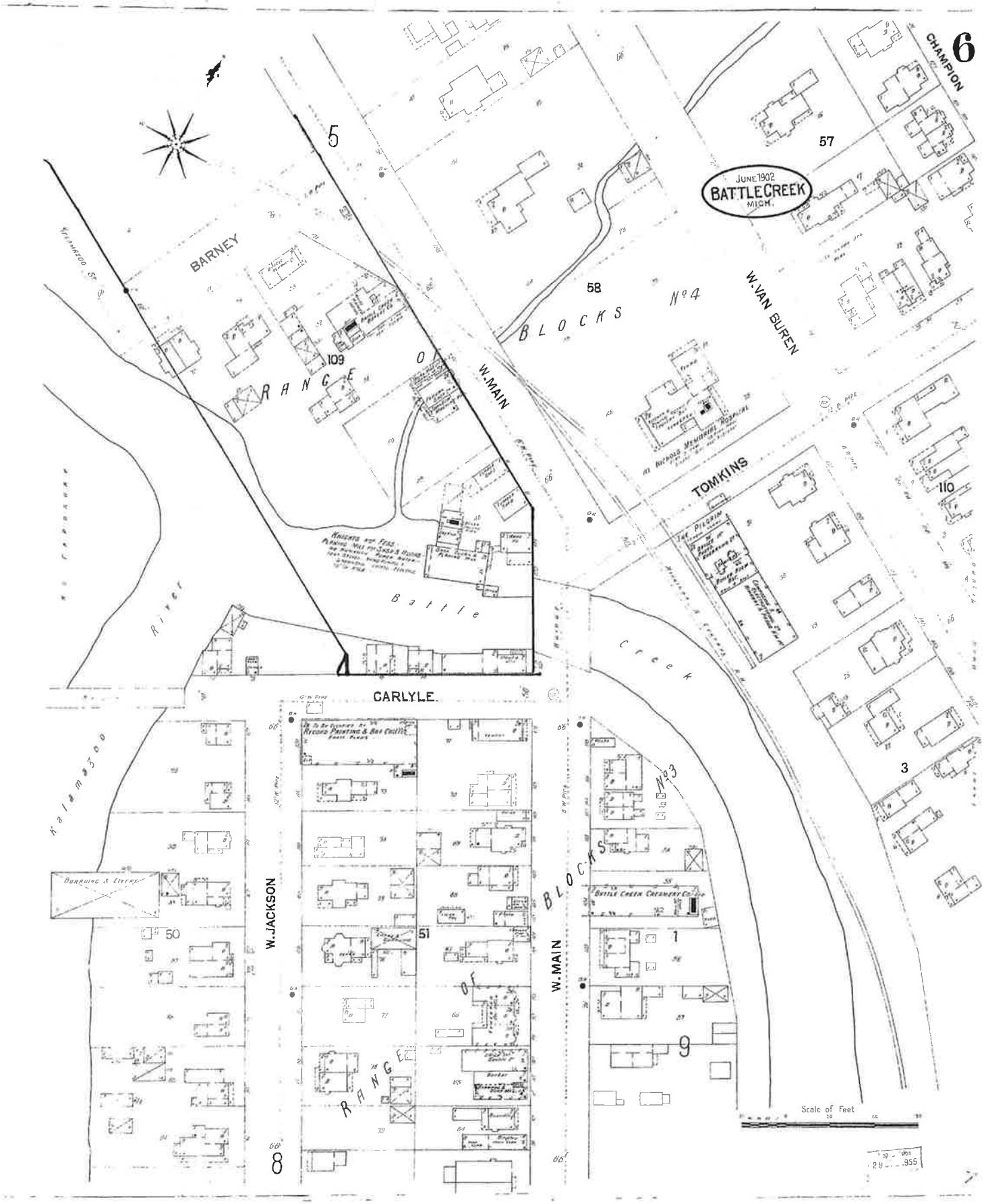

Nov 1899
BATTLE CREEK
MICH.
6
CHAMPION
0
5
57
58
Nº 4
W. VAN BUREN
BARNEY
109
RANGE OF BLOCKS
W. MAIN
TOMKINS
110
3
0
River
Battle
Creek
CARLYLE
Kalamazoo
RANGE OF BLOCKS Nº 3
W. JACKSON
W. MAIN
50
51
1
9
8
Scale of Feet

1899

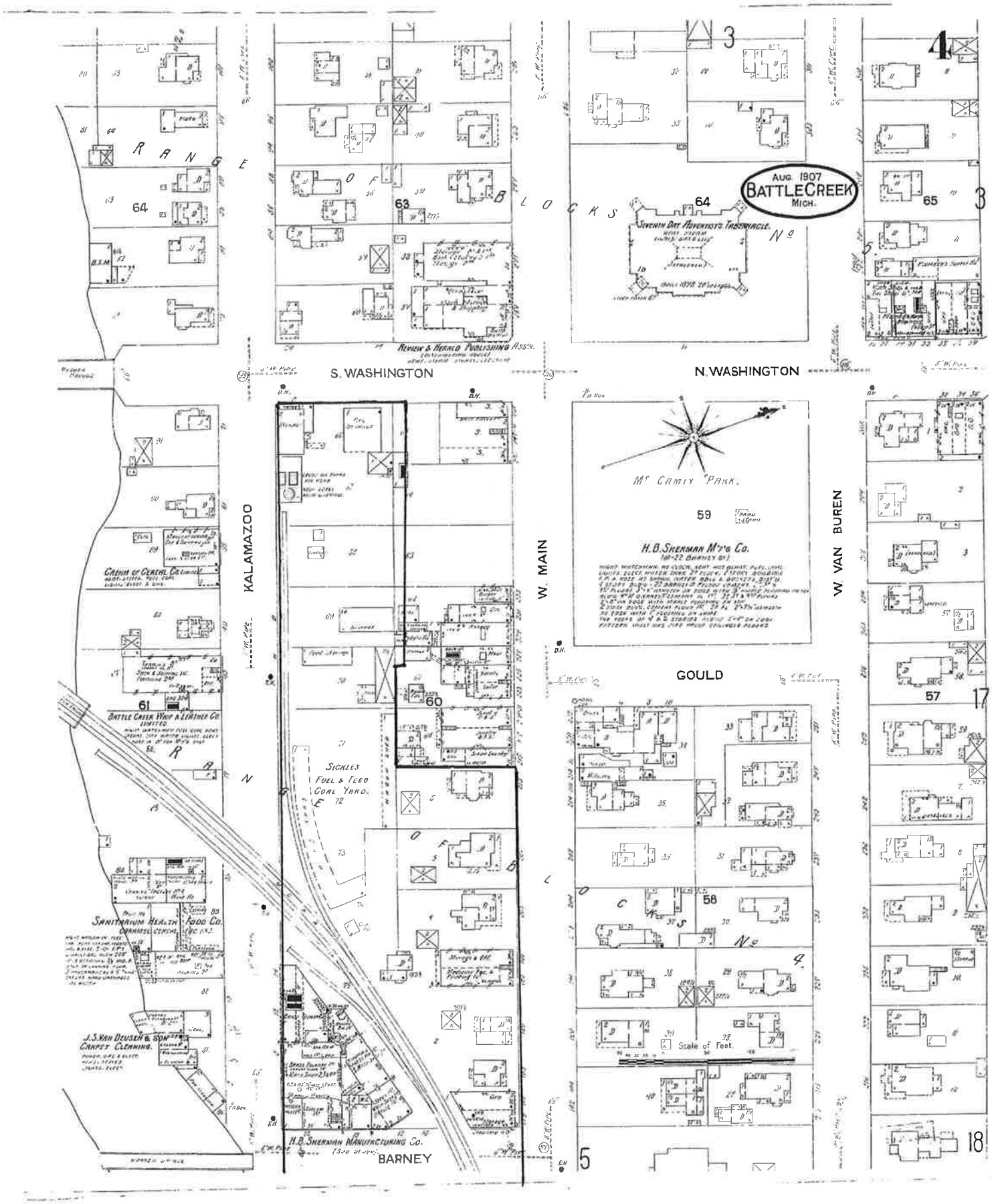


JUNE 1902
BATTLE CREEK
MICH.
5
2
4
6
RANGE OF BLOCK
(64)
63
64
65
57
58
59
60
61
S. WASHINGTON
N. WASHINGTON
KALAMAZOO
W. MAIN
W. VAN BUREN
GOULD
BARNEY
SEVENTH DAY ADVENTIST PUBLISHING ASS'N
Mc CAMLY (PUBLIC) PARK
GRIFFIN & SON COAL & WOOD YARD
SANITARIUM HEALTH FOOD CO.
H. B. SHERMAN MFG. CO.
Kalamazoo River
Scale of Feet

1902

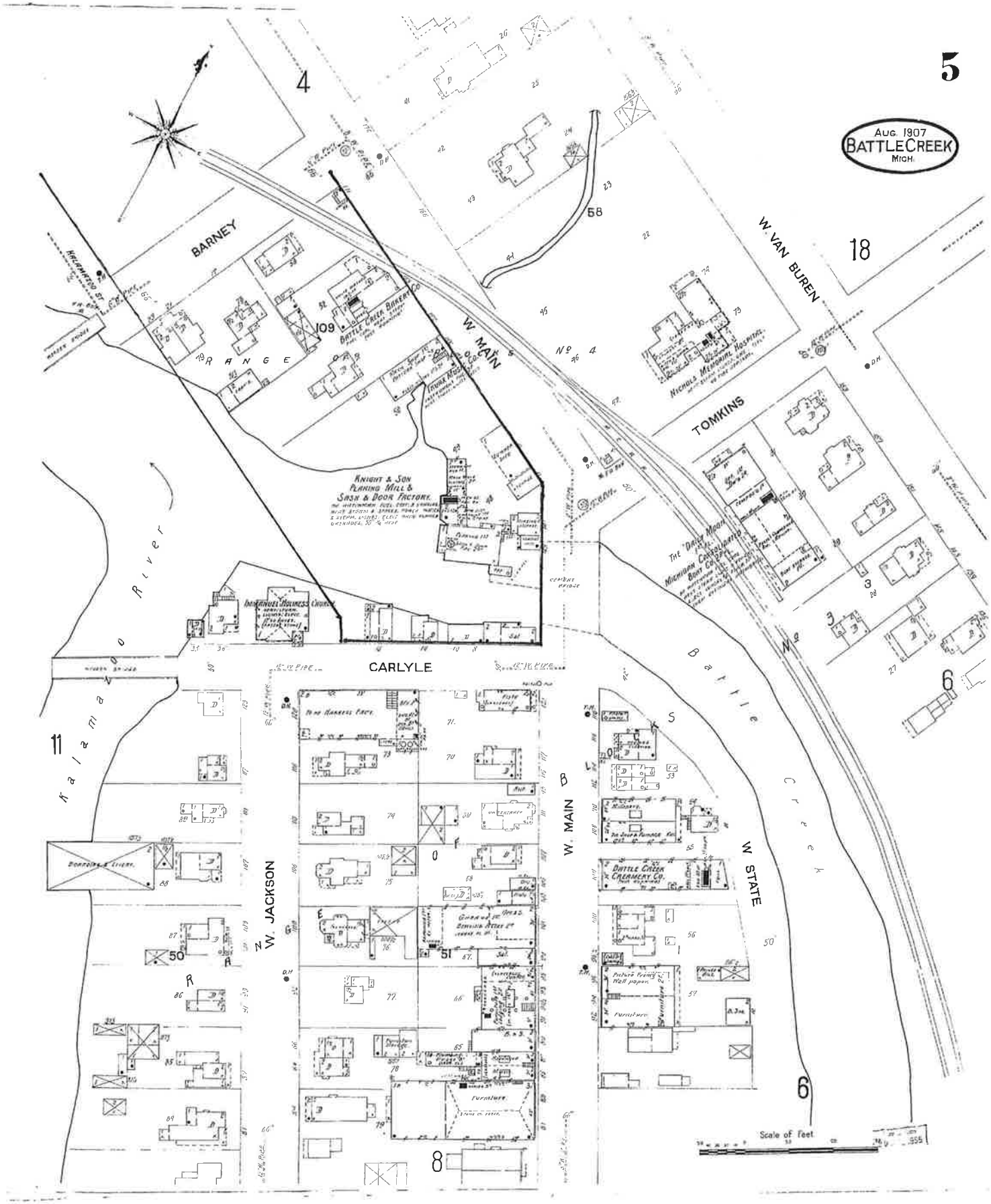

6
CHAMPION
5
57
JUNE 1902
BATTLE CREEK
MICH.
BARNEY
58
BLOCKS No 4
W. VAN BUREN
109
RANGE OF
W. MAIN
TOMKINS
110
Battle
Creek
River
CARLYLE
Kalamazoo
3
BLOCKS No 3
W. JACKSON
50
51
1
W. MAIN
RANGE OF
9
8
Scale of Feet

1902

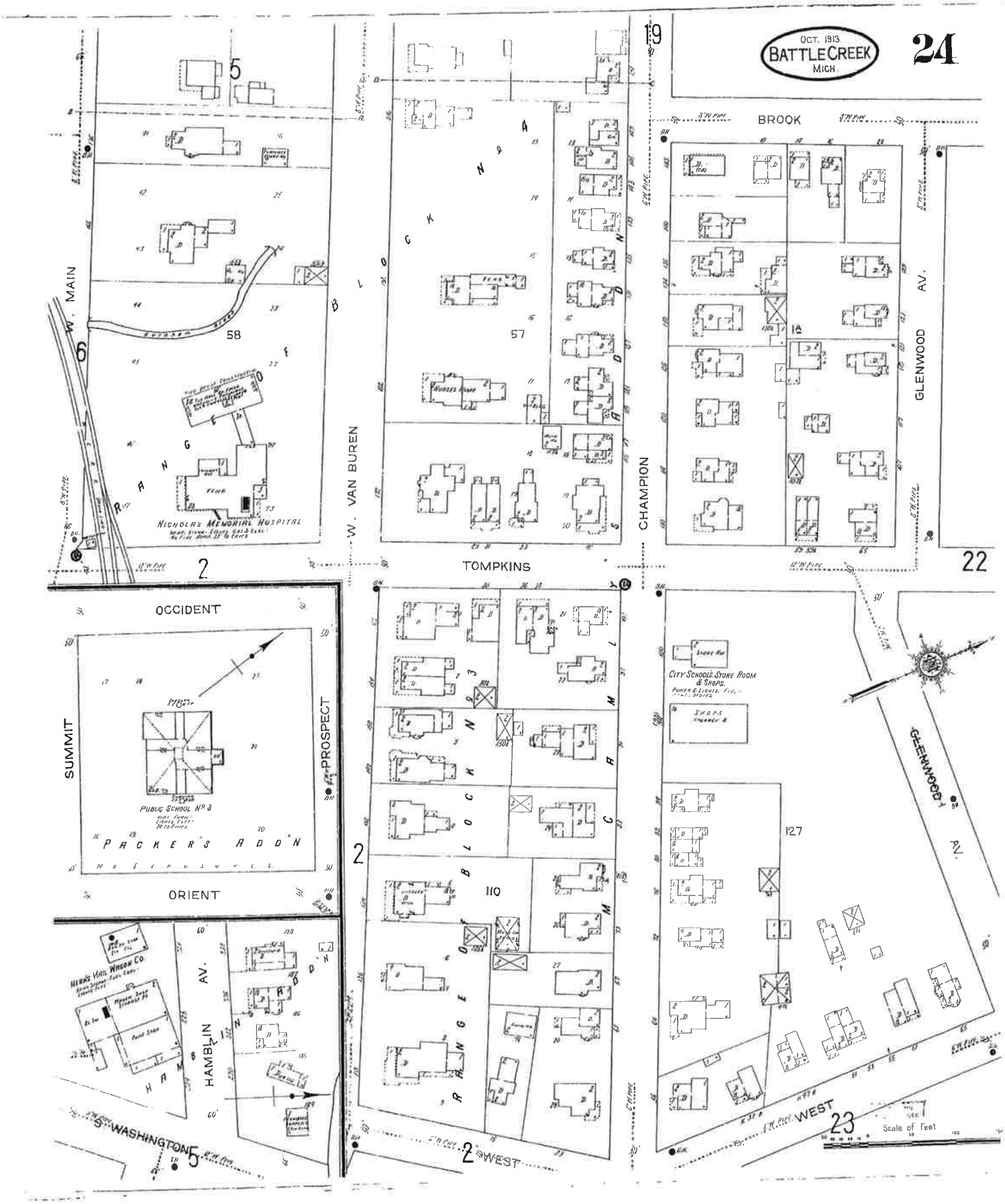


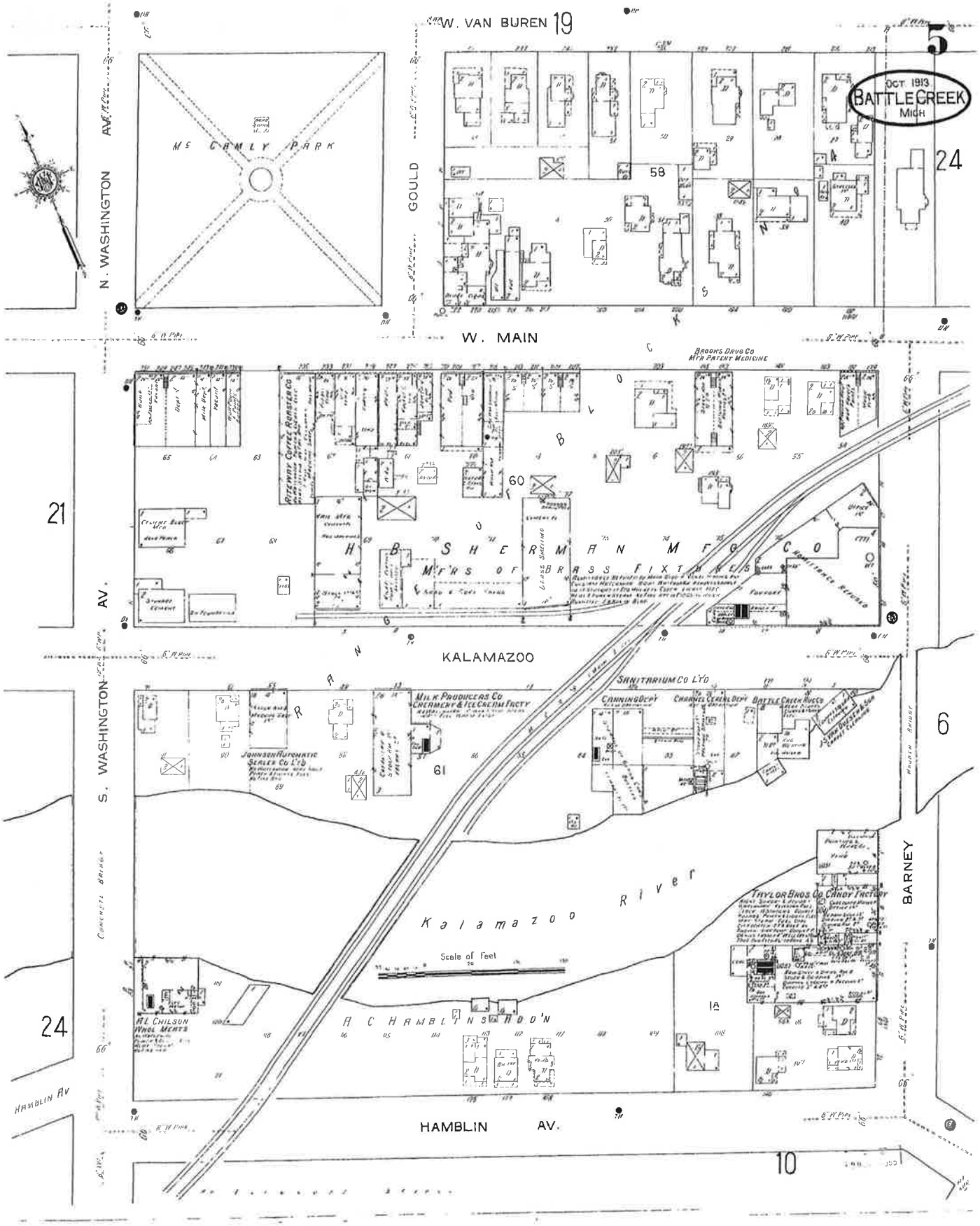
AUG. 1907
BATTLE CREEK
MICH.
RANGE OF BLOCKS No 3
RANGE OF BLOCKS No 4
S. WASHINGTON
N. WASHINGTON
KALAMAZOO
W. MAIN
W. VAN BUREN
GOULD
BARNEY
Mc CAMIY PARK
H.B. SHERMAN M'F'G CO.
SEVENTH DAY ADVENTIST'S TABERNACLE
REVIEW & HERALD PUBLISHING ASS'N.
CREAM OF CEREAL CO.
BATTLE CREEK WHIP & LEATHER CO. LIMITED
SANITARIUM HEALTH FOOD CO.
J.S. VAN DEUSEN & SON CARPET CLEANING
SICKLES FUEL & FEED COAL YARD
H.B. SHERMAN MANUFACTURING CO.
Scale of Feet

1907


5
Aug. 1907
BATTLE CREEK
MICH.
BARNEY
RANGE
W. MAIN
W. VAN BUREN
TOMKINS
CARLYLE
W. JACKSON
W. STATE
Kalamazoo River
Battle Creek
Knight & Son Planing Mill & Sash & Door Factory
Battle Creek Bakery
Nichols Memorial Hospital
Battle Creek Creamery Co.
Scale of Feet

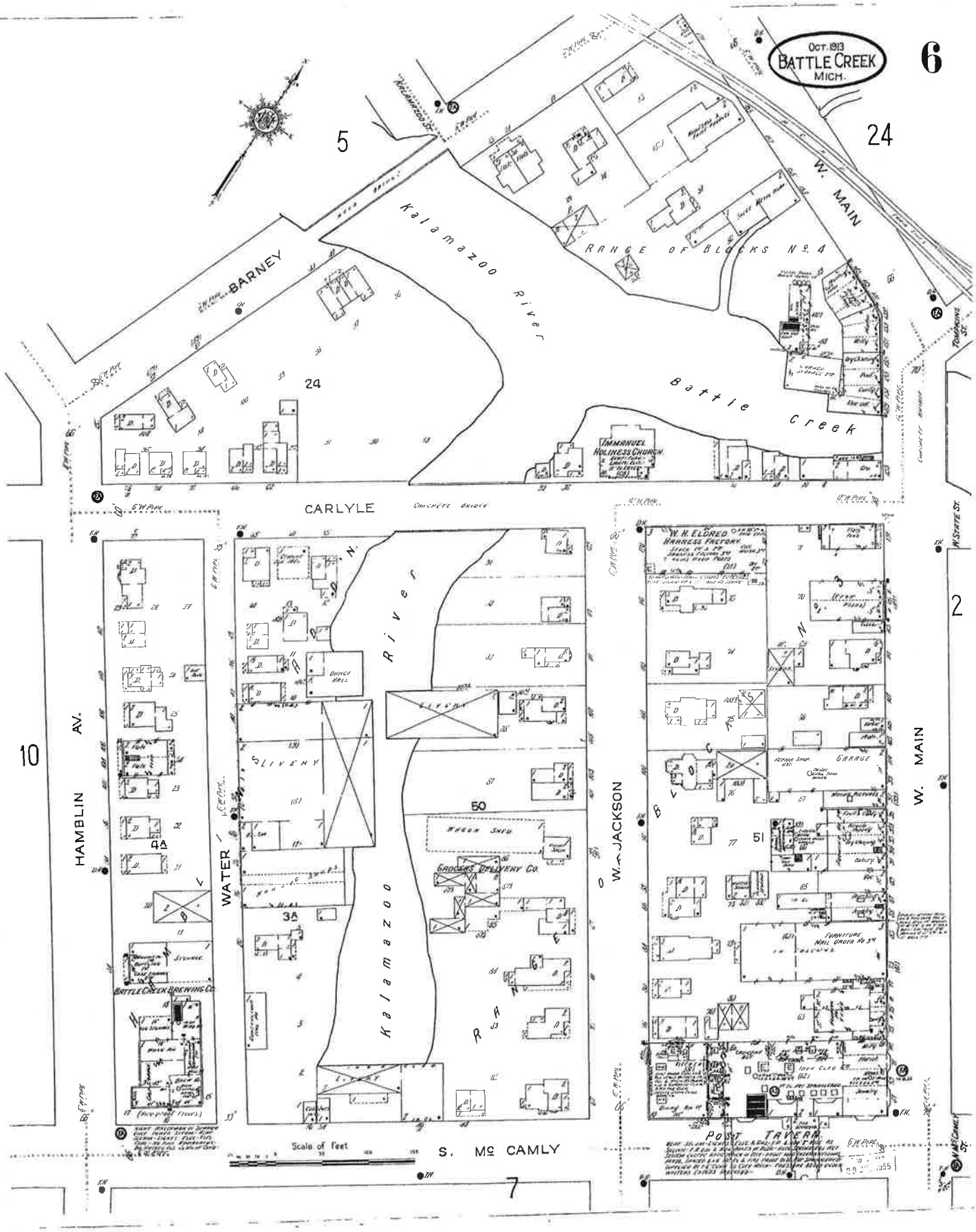
1907


OCT. 1913
BATTLE CREEK
MICH.
24
BROOK
W. MAIN
W. VAN BUREN
CHAMPION
GLENWOOD AV.
TOMPKINS
OCCIDENT
ORIENT
SUMMIT
PROSPECT
PACKER'S ADD'N
PUBLIC SCHOOL No 3
NICHOLAS MEMORIAL HOSPITAL
CITY SCHOOLS STORE ROOM & SHOPS
HAMBLIN AV.
WASHINGTON
WEST
Scale of Feet



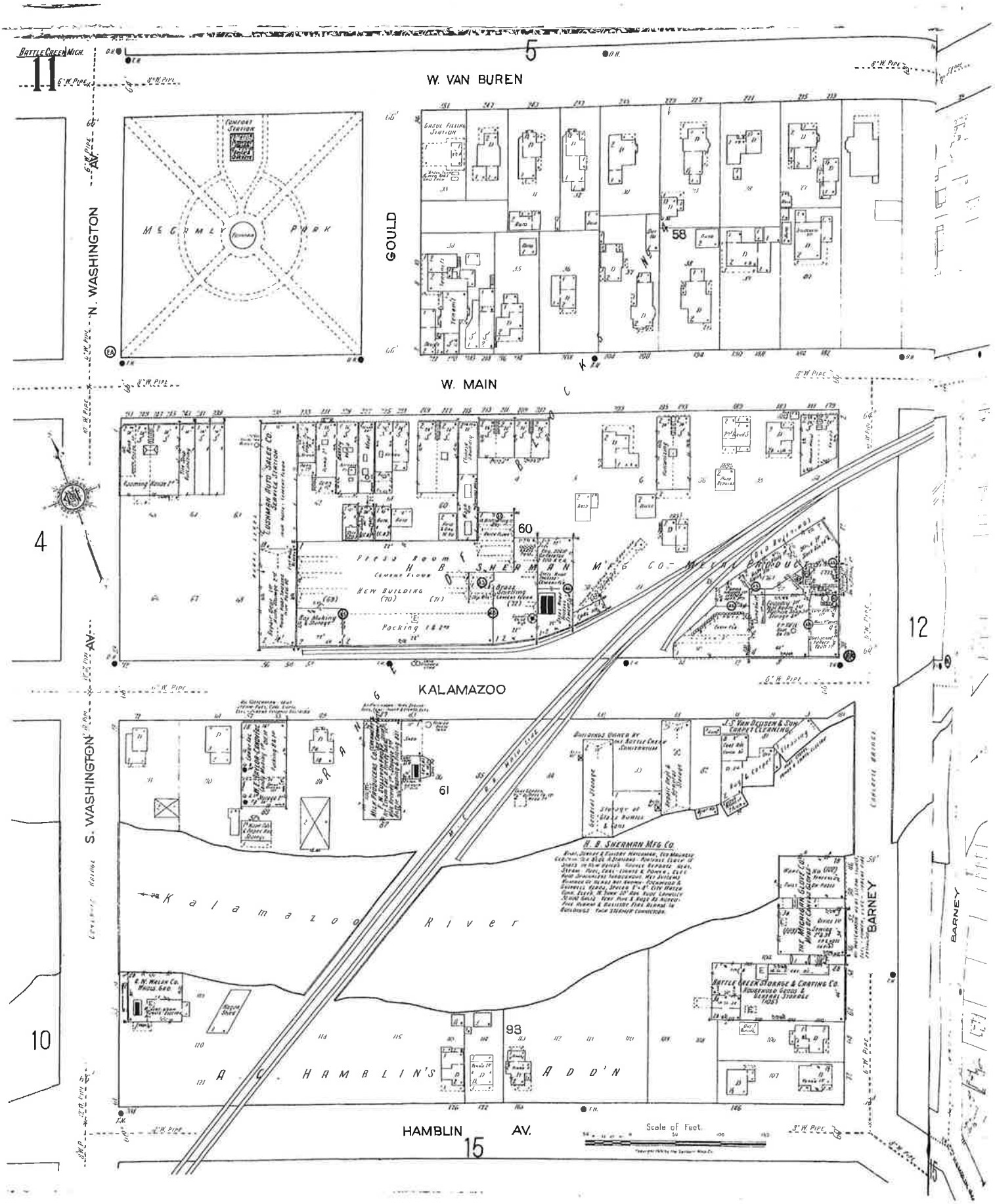
W. VAN BUREN
19
5
OCT. 1913
BATTLE CREEK
MICH
24
N. WASHINGTON AV.
McCAMLY PARK
GOULD
58
W. MAIN
BROOKS DRUG CO
MFR PATENT MEDICINE
RITEWAY COFFEE ROASTER CO
60
21
H B SHERMAN MFG CO
MFRS OF BRASS FIXTURES
KALAMAZOO
S. WASHINGTON AV.
MILK PRODUCERS CO
CREAMERY & ICE CREAM FACTY
SANITARIUM CO LTD
CANNING DEPT
CHANNEL CEREAL DEPT
BATTLE CREEK RUG CO
JOHNSON AUTOMATIC SERLER CO LTD
61
6
BARNEY
TAYLOR BROS CO CANDY FACTORY
Kalamazoo River
Scale of Feet
A C HAMBLIN'S ADD'N
1A
24
HAMBLIN AV
HAMBLIN AV.
10

1913



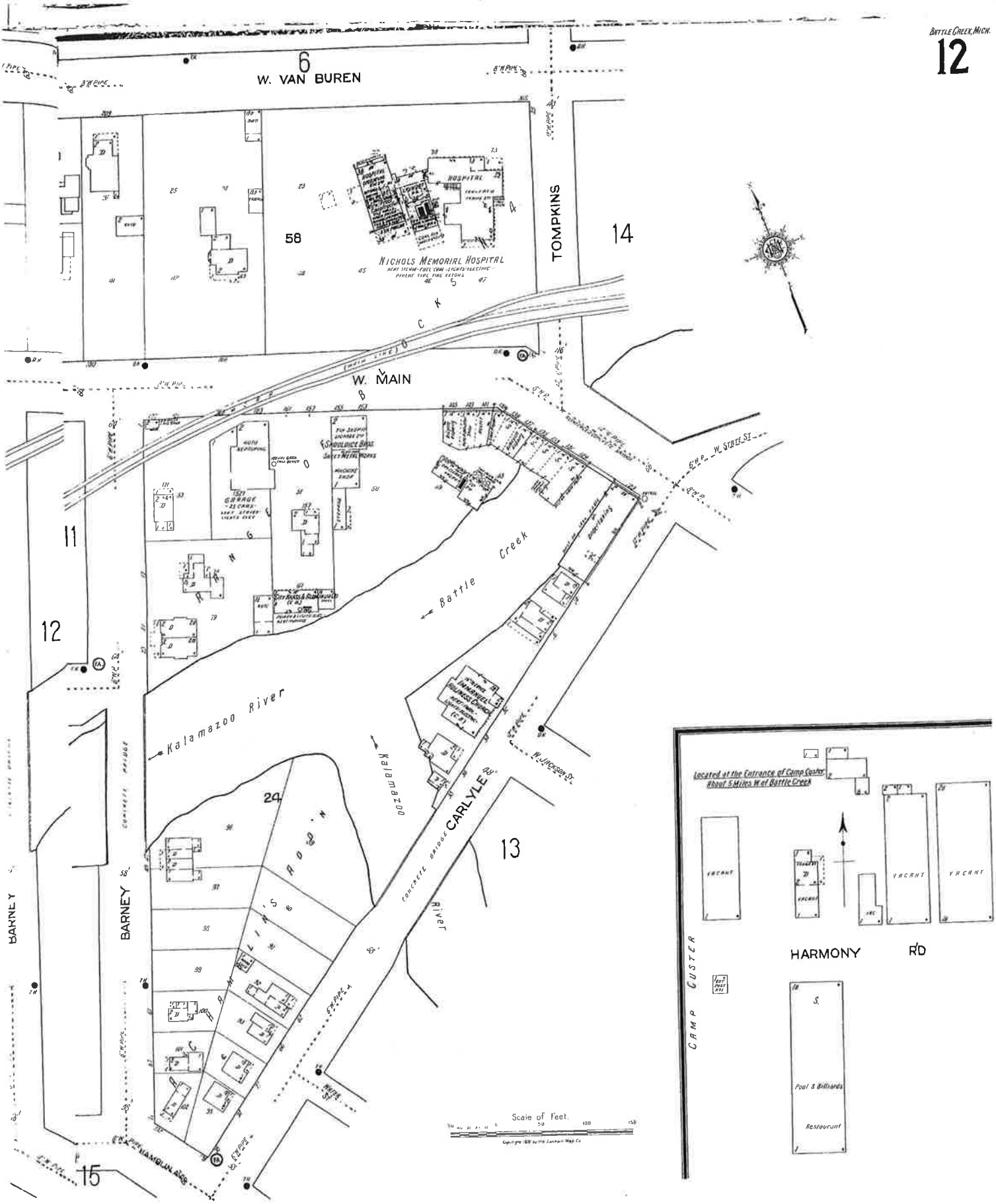
Oct. 1913
BATTLE CREEK
MICH.
6
5
24
W. MAIN
BARNEY
Kalamazoo River
RANGE OF BLOCKS No. 4
Battle Creek
IMMANUEL HOLINESS CHURCH
CARLYLE
CONCRETE BRIDGE
W. H. ELDRED HARNESS FACTORY
2
10
HAMBLIN AV.
WATER
W. JACKSON
W. MAIN
DANCE HALL
LIVERY
GROCERS DELIVERY CO.
BATTLE CREEK BREWING CO.
GARAGE
FURNITURE MAIL ORDER No 3
POST TAVERN
Scale of Feet
S. Mc CAMLY
7

1913



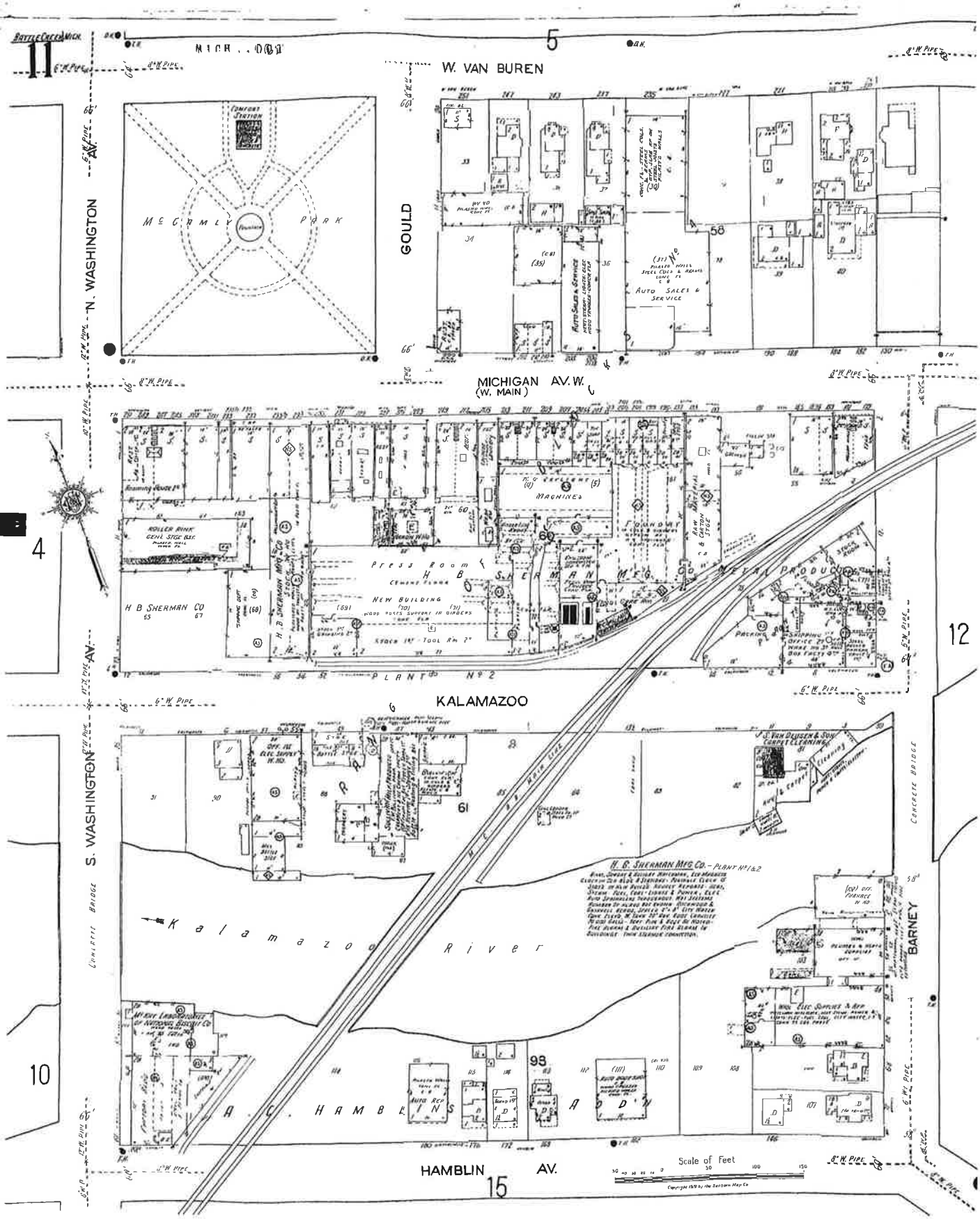
BATTLE CREEK MICH.
11
5
W. VAN BUREN
N. WASHINGTON AV.
GOULD
McCAMLY PARK
58
W. MAIN
4
60
H. B. SHERMAN MFG CO. METAL PRODUCTS
KALAMAZOO
12
S. WASHINGTON AV.
61
H. B. SHERMAN MFG CO.
Kalamazoo River
BARNEY
10
93
A. C. HAMBLIN'S ADD'N
HAMBLIN AV.
15
Scale of Feet

1919

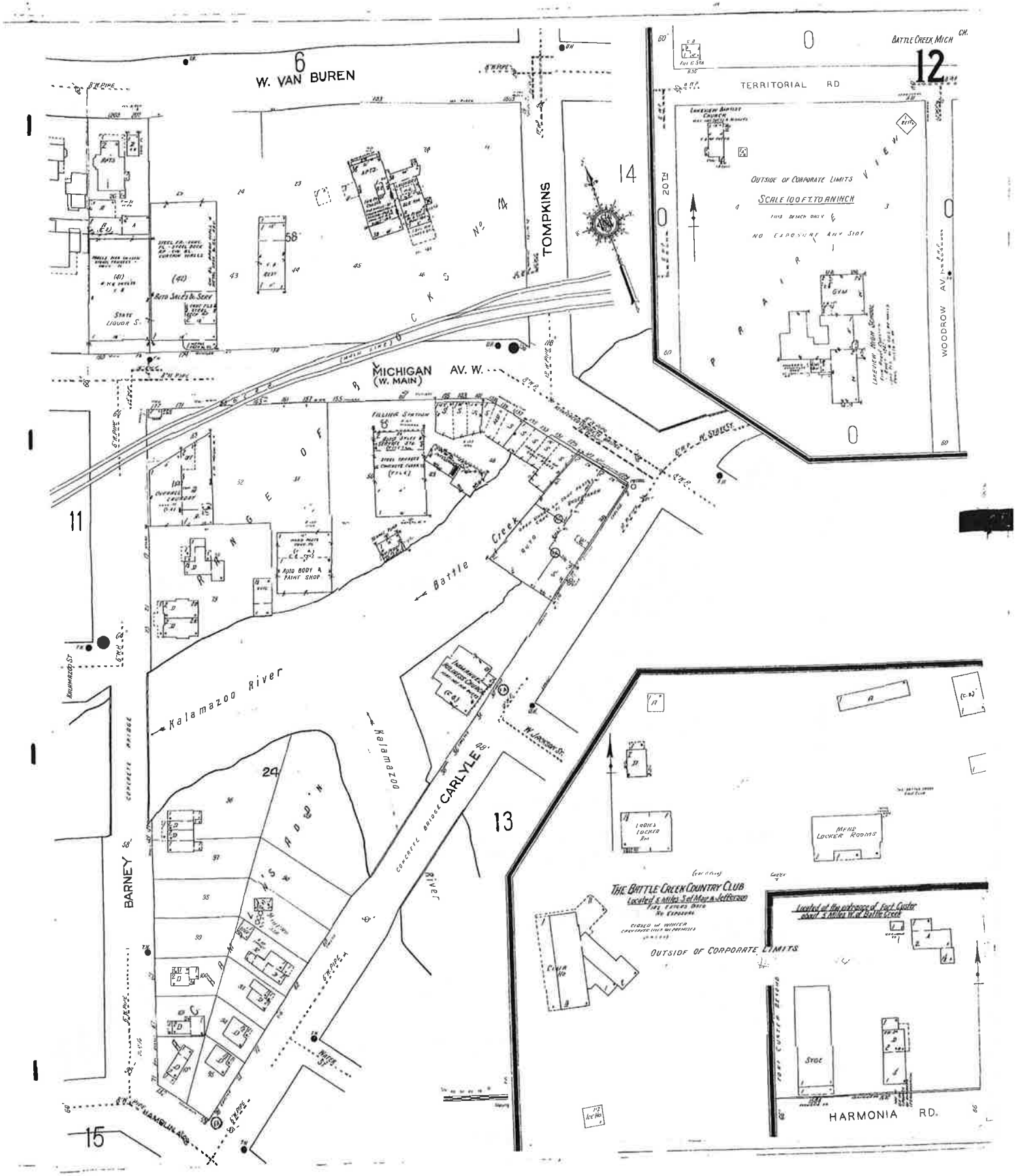


BATTLE CREEK, MICH.
12
6
W. VAN BUREN
TOMPKINS
14
58
NICHOLS MEMORIAL HOSPITAL
HOSPITAL
W. MAIN
11
12
Battle Creek
Kalamazoo River
Kalamazoo
CARLYLE
13
24
BARNEY
15
W. STATE ST.
W. JACKSON ST.
CONCRETE BRIDGE
Located at the Entrance of Camp Custer About 5 Miles W. of Battle Creek
VACANT
HARMONY
RD
CAMP CUSTER
Pool & Billiards
Restaurant
Scale of Feet.

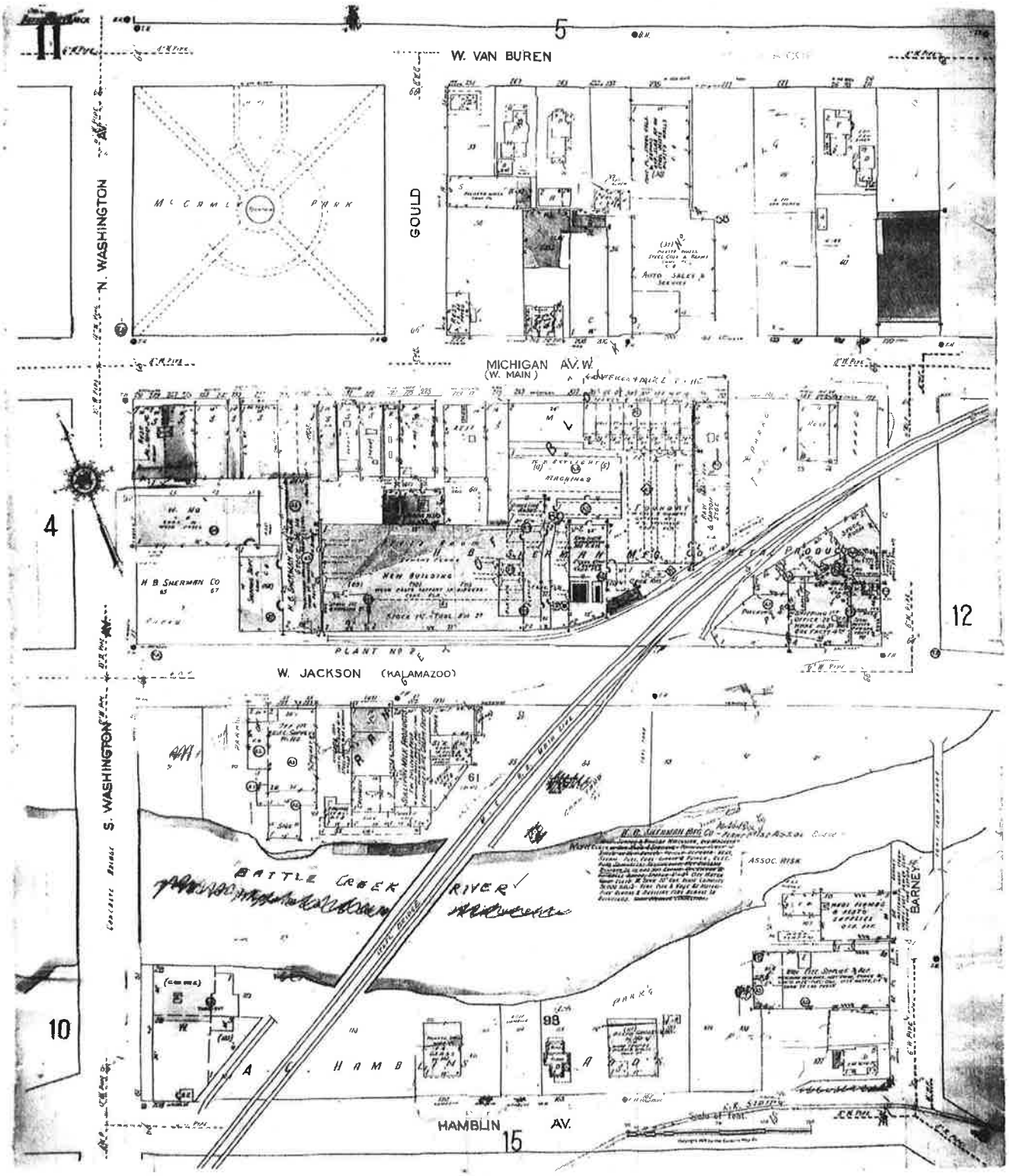
1919


W. VAN BUREN
GOULD
N. WASHINGTON AV.
McCAMLY PARK
COMFORT STATION
MICHIGAN AV. W.
(W. MAIN)
AUTO SALES & SERVICE
H B SHERMAN CO
Press Room
NEW BUILDING
MACHINES
FOUNDRY
PLANT No 2
KALAMAZOO
S. WASHINGTON AV.
Kalamazoo River
A. C. HAMBLINS ADDN
BARNEY
CONCRETE BRIDGE
HAMBLIN AV.
Scale of Feet
11
5
4
12
10
15

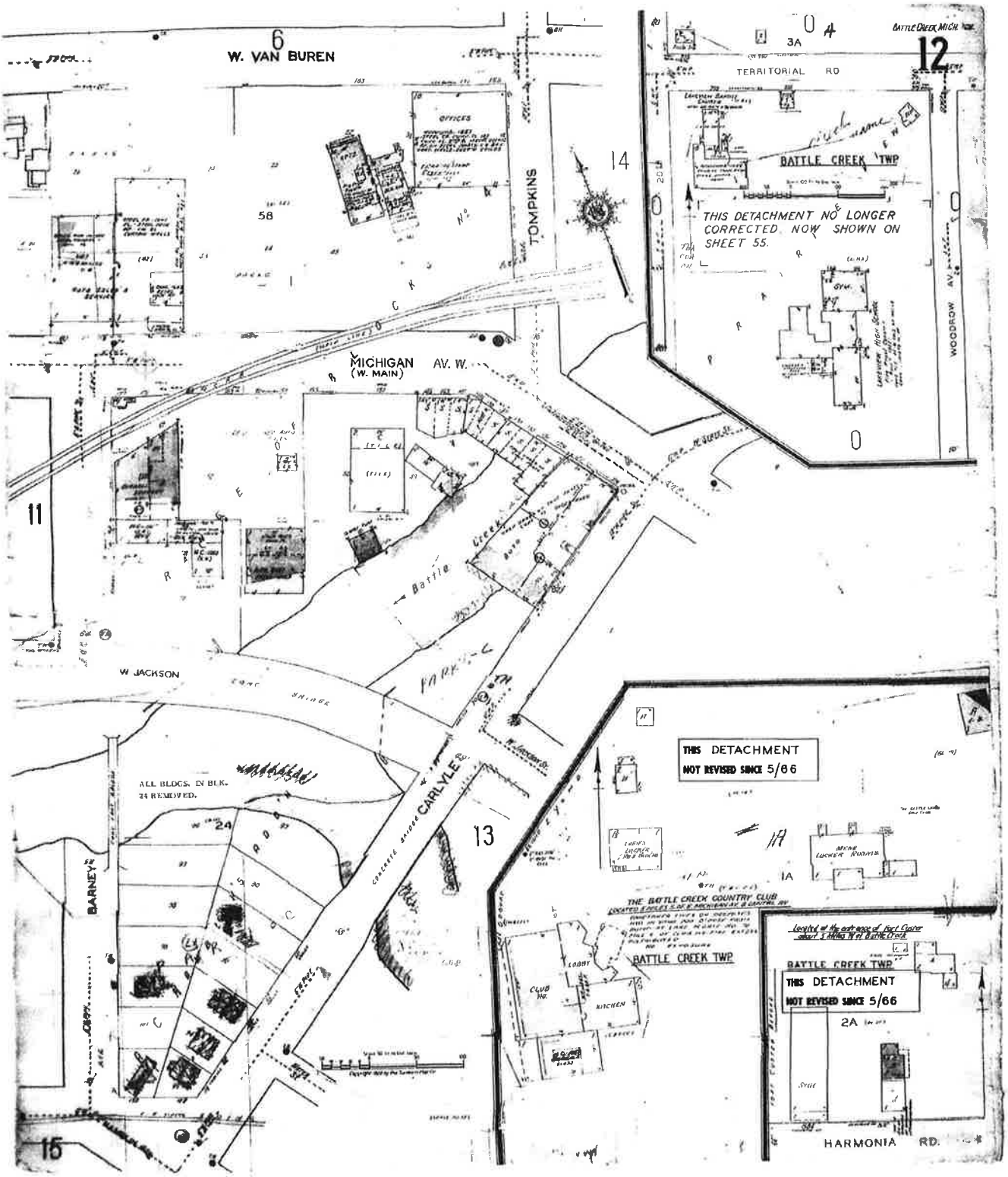
1950


W. VAN BUREN
TOMPKINS
MICHIGAN AV. W.
(W. MAIN)
TERRITORIAL RD
BATTLE CREEK MICH
OUTSIDE OF CORPORATE LIMITS
SCALE 100 FT. TO AN INCH
WOODROW AV.
Battle Creek
Kalamazoo River
CARLYLE
BARNEY
HAMBLIN AVE
THE BATTLE CREEK COUNTRY CLUB
OUTSIDE OF CORPORATE LIMITS
HARMONIA RD.
12
13
14
15
11
6

1950


5
W. VAN BUREN
N. WASHINGTON
GOULD
MICHIGAN AV. W.
(W. MAIN)
4
12
H B SHERMAN CO
NEW BUILDING
PLANT NO 7
W. JACKSON (KALAMAZOO)
S. WASHINGTON
BATTLE CREEK RIVER
ASSOC. MISK
BARNEY
10
HAMBLIN AV.
15

1972


6
W. VAN BUREN
OFFICES
58
TOMPKINS
14
MICHIGAN
(W. MAIN)
AV. W.
11
W JACKSON
Battle
Creek
PARK
ALL BLDGS. IN BLK.
24 REMOVED.
24
CARLYLE
13
BARNEY
15
BATTLE CREEK, MICH.
12
3A
TERRITORIAL RD
BATTLE CREEK TWP
THIS DETACHMENT NO LONGER
CORRECTED. NOW SHOWN ON
SHEET 55.
WOODROW AV.
THIS DETACHMENT
NOT REVISED SINCE 5/66
1A
THE BATTLE CREEK COUNTRY CLUB
BATTLE CREEK TWP
LOBBY
KITCHEN
Located at the entrance of Fort Custer
about 1 Mile W of Battle Creek
BATTLE CREEK TWP
THIS DETACHMENT
NOT REVISED SINCE 5/66
2A
HARMONIA RD.

1972

General Property Information

[Back to Non-Printer Friendly Version] [Send To Printer]

Parcel: 0254-00-060-0

Property Address [collapse]

171 W MICHIGAN AVE
BATTLE CREEK, MI 49017-3662

Owner Information [collapse]

BATTLE CREEK UNLIMITED INC
N/A

Unit: 52

Taxpayer Information [collapse]

CALHOUN COUNTY LAND BANK AUTHORITY
315 GREEM ST W
MARSHALL, MI 49068-1585

General Information for Tax Year 2010 [collapse]

Property Class:	201	**Assessed Value:**	$958,466
School District:	13020 - BATTLE CREEK SCHOOLS	**Taxable Value:**	$958,466
State Equalized Value:	$958,466	**Map #**	601SE
User Number Indx:		**Date of Last Name Chg:**	01/13/2011
		Date Filed:	
		Notes:	N/A

Principal Residence Exemption	May 1st	Final
2011	0.0000 %	-
2010	0.0000 %	0.0000 %

Previous Year Info	MBOR Assessed	Final S.E.V.	Final Taxable
2009	$958,466	$958,466	$958,466
2008	$958,466	$958,466	$958,466

Land Information [collapse]

	Frontage		Depth
Lot 1:	0.00 Ft.		0.00 Ft.
Lot 2:	0.00 Ft.		0.00 Ft.
Lot 3:	0.00 Ft.		0.00 Ft.
Total Frontage:	0.00 Ft.	**Average Depth:**	0.00 Ft.

Acreage:	6.94		
Zoning Code:	REF		
Land Value:	$588,362	**Mortgage Code:**	N/A
Land Improvements:	$372,852	**Lot Dimensions/Comments:**	
Renaissance Zone:	NO		
Renaissance Zone Expiration			

Date:

ECF Neighborhood Code: 00511 - 511 OFFICE BLDGS NORTH

Legal Information for 0254-00-060-0

[collapse]

BC CITY RB4 PART OF LOTS 48, 49, 50, 59, 61 THRU 65, 70, 71 & 72, ALL OF LOTS 51 THRU 58, 66 THRU 69, 73 THRU 79, MORE PARTICULARY DESC AS FOLLOWS: COMM NW COR OF LOT 65 OF SD PLAT - S 74 DEG 30 MIN 00 SEC E ALG SLY LI OF MICHIGAN AVE 400.29 FT TO TRUE POB - CONTN S 74 DEG 30 MIN 00 SEC E ALG SD SLY LI 684.34 FT - SELY ALG SD ALG ARC TO RT & SLY LI OF RELOCATED MICHIGAN AVE 324.10 FT (RAD 539.96 FT; CHORD BRG S 57 DEG 18 MIN 17 SEC E 319.25 FT) - CONT ALG SLY LI OF RELOCATED MICHIGAN AVE 7.08 FT - S 49 DEG 44 MIN 42 SEC W ALG NWLY LI OF CARLYLE ST (49.5 FT WIDE) 265.03 FT - N 40 DEG 07 MIN 39 SEC W ALG NWLY EXT OF SLY LI OF 72 THRU 81 OF BC CITY RB3 DIST OF 95.85 FT - N 74 DEG 33 MIN 05 SEC W ALG SLY LI OF LOTS 66 TROUGH 77 OF BC CITY RB4 & ELY EXT THEREOF 1169.93 FT - N 16 DEG 05 MIN 29 SEC E ALG WLY LI OF LOTS 66 & 65 OF BC CITY RB4 DIST OF 141.90 FT - S 74 DEG 30 MIN 00 SEC E 278.76 FT - S 15 DEG 30 MIN 00 SEC W 12.50 FT - S 74 DEG 30 MIN 00 SEC E 122.79 FT - N 15 DEG 30 MIN 00 SEC E 135 FT TO POB ((ASSESSED WITH 0254-00-054-0, -055-0, -056-0, -058-0, -059-0, -060-0, -062-0, -063-0, -065-0, -084-0, -084-1, -084-2, 084-3, -086-0 IN 1998))

Sales Information

6 sale record(s) found.

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms Of Sale	Liber/Page
12/22/2010	$1.00	04	BATTLE CREEK UNLIMITED INC	CALHOUN COUNTY LAND BANK AUTHORITY	04 P T A	
05/19/2009	$0.00	12	CC REAL ESTATE HOLDINGS LLC	BATTLE CREEK UNLIMITED INC	16 GOVT UNIT	3504/0354
06/29/2007	$0.00	05	HERITAGE CENTER FOUNDATION	CC REAL ESTATE HOLDINGS LLC	25 WD/LC N.USED	3294/632
05/23/2003	$1.00	12	HERITAGE CENTER FOUNDATION	CITY OF BATTLE CREEK	12 QCD/OTHER	2646/0783
06/08/1998	$1.00	11	CITY OF BATTLE CREEK	HERITAGE CENTER FOUNDATION	11 MULTIPLE ASSMTS	2032/0009
01/27/1998	$725,000.00	11	CEREAL CITY DEVELOPMENT CORP	CITY OF BATTLE CREEK	11 MULTIPLE ASSMTS	2032/0006

Building Information

1 building(s) found.

	Description	Floor Area	Yr Built
-	Commercial/Industrial Building 1 - *Office Building*	44606 Sq. Ft.	1998

General Information

Floor Area:	44606 Sq. Ft.	**Estimated TCV:**	N/A
Occupancy:	Office Building	**Class:**	C
Stories Above Ground:	3	**Average Story Height:**	14
Basement Wall Height:	N/A		
Year Built:	1998	**Year Remodeled:**	0
Percent Complete:	100%	**Heat:**	Package Heating & Cooling
Physical Percent Good:	77%	**Functional Percent Good:**	50%
Economic Percent Good:	100%	**Effective Age:**	13 yrs.

****Disclaimer:** BS&A Software provides this Web Site as a way for municipalities to display information online and is not responsible for the content or accuracy of the data herein. This data is provided for reference only and WITHOUT WARRANTY of any kind, expressed or inferred. Please contact your local municipality if you believe there are errors in the data.
Privacy Policy

CITY OF BATTLE CREEK-ASSESSOR'S
INDUSTRIAL ASSESSMENT RECORD

0254-00-060-0

MAP NO. R-18 ASSESSMENT NO. DDA0-57

~~RB04-00-060~~ DDA0-00-575 I
DETROIT WASTE WORKS
169 MICHIGAN AVE W

BC CITY RB 4 LOT 53 EXC RR ALSO LOT 78 ALS N 16' OF LOT 79 & W 120' OF S 60' OF N 76' OF LOT 79 EXC EASEMENT OF RECORD

DATE TRAN.	RECORD OF OWNERSHIP	LIB.-PAGE	SALE
2-28-77	Purchased From City (LAND)	1110-966	10,000
	GALLAGHER IND. LAUNDRY	L/C ?	

PAVED	
CURB	
SIDEWALK	
WATER	
SEWER	
ELECTRIC	
GAS	
LAND	
LEVEL	
ROLLING	
LOW	
HIGH	
LANDSCAPED	
SWAMP	
ZONING	C-3

BUILDING or ALTERATION PERMIT	DATE	AMOUNT
15x50 add. load. dock PLANS #390	9-75	$5,000
4900 SF pave/plans 267	7/78	2,900
new office space 396	9/78	40,000
attach & include whse area to laundry/sketch #439	10/78	5,000
18'x25' add 395	10/79	4,000

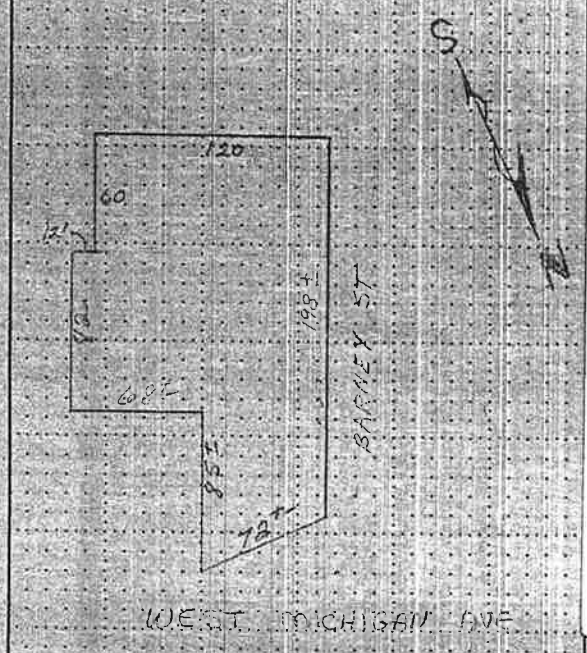
LAND VALUE PLUS IMPROVEMENTS COMPUTATION

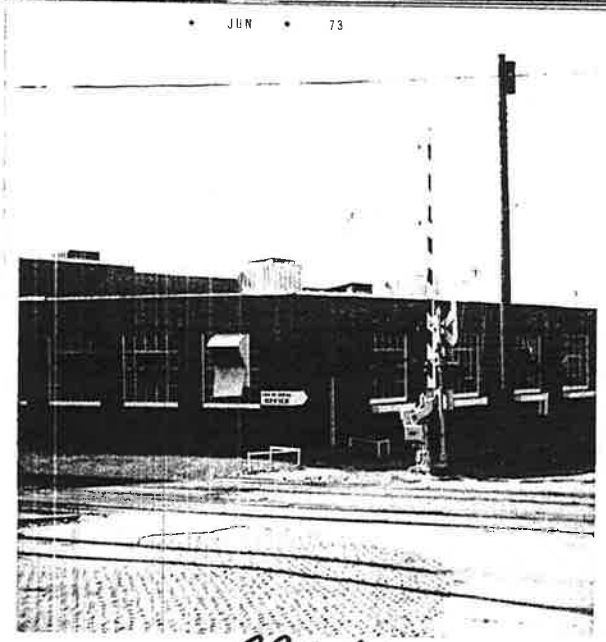
LOT SIZE	DEPTH FACTOR	EQUIVALENT FRONTAGE	RATE	TRUE CASH VALUE
19178 ø			$	$
+7200				
26378	@	804		21,102

LAND IMPROVEMENT	VALUE NEW	% COND.
WELL & SEPTIC TANK		
PAVED DRIVE		
FENCE & LANDSCAPING		

TOTAL LAND PLUS IMPROVEMENTS	$ 21,100
TOTAL BUILDINGS	$ 77,740
TOTAL TRUE CASH VALUE	$ 98,840

SKETCH





RB4-60

INTERVIEWED	BY	DATE	ESTIMATED BY
OFFS MGR	AYAW	2/74	
RON GALLAGHER	DCZ	8-7-78	
MIKE GALLAGHER	DCZ	11-2-78	

YEAR	ASSESSED VALUATION	BOARD OF REVIEW	TAX COMMISSION
74	$ 40450	$	$
76	42640		
78	45520		
79	45950		255 New
80	48710		See 255N-78-00
81	49,420		

ORDER BY FORM NO. M294-F1-K REVISED 5/70 – INDUSTRIAL ASSESSMENT RECORD
FROM: DOUBLEDAY BROS. & CO., KALAMAZOO, MICH. #528656

FORM APPROVED BY STATE TAX COMMISSION

SIZES	STY.	HGT.	AREA	CUBE	CUBE COST	QUALITY 2	USE: LAUNDRY & OFFICE
WAREHOUSE, LAUNDRY,						CLASS CONST. C	
STORAGE & LOADING		14	2020			MAN. SEC. 44	
LAUNDRY		14	9415		SQ. FT. COST	SEC. DATE 9-80	
OFFICE		12	1066				
						BUILDING DATE	COSTS

EXCAV.						12501# @	.09	1,125
FDN.	✓	CONCRETE		CONC. BLK.	WAREHOUSE 3' ELEVATION	2,020#	1.10	2,242
		COL. FTGS.			LAUNDRY BEARING WALLS	9,415#	1.00	9,415
					OFFICE #2	1,066# @	1.00	1,066
FRAME	✓				OFFICE	0		
FLOOR STRUCT.	✓	CONCRETE			CONC. OFFICE	1066# @	1.61	1,716
	✓	STL. JOISTS						
		WD. JOIST			WAREHOUSE & LAUNDRY	11435# @	1.61	18,410
FLOOR COVER	✓	NONE		ASP. TILE	WAREHOUSE	2020	—	
		HARDWOOD		TILE	LAUNDRY	9415	—	
	✓	CARPET						
					OFFICE	1066 @	1.90	2,025
CLNGS.	✓	NONE		DRI-WALL	OFFICE	1066 @	3.00	3,198
		PLASTER	✓	ACOUSTICAL				
PARTNS.	✓	FRAME		MASONRY	FRAME OFFICE	1066 @	1.74	1,854
					LAUNDRY (FACTORY RATE)	11435	.80	9,148
PLUMBING	2	TOILET 2	2	LAVATORY	OFFICE (4)			
		TUB		SHOWER	OFFICE	4 X 1,300		5,200
		URINAL		SINK	STEAM WATER COOLER	1 @ 3,000		3,000
	✓	AWH		DISPOSAL	LAUND. & WAREHSE.	5 X 1,300		6,500
HEATING AND COOLING		NONE			ROOF UNIT OFFICE 14-12=2 X .03 = .06 1.06 X 2.61 = 2.77	1066 @	2.77	2,952
	✓	UNIT		GAS				
					2 GAS FIRED BOILERS 14'	11,435 @	2.08	23,784
ELEC. & LTG.	✓				OFFICE	1066 @	2.33	2,483
	✓					11,435 @	1.83	20,926
EXT. WALLS	✓	CONC. BLK.		BRICK	OFFICE 53.3+53.3+20=126.6 X 12 =	1519# @	7.83	11,893
		BRICK VEN.		WD. FR.	LAUNDRY 520 LF X 14' Hi =	7280# @	7.83	57,002
					WAREHOUSE 164 L.F. X 14' Hi =	2296# @	7.83	17,977
BSM'T. WALLS	✓	NONE		CONC. BLK.	NONE			
		CONCRETE						
ROOF STRUCT.	✓	STL. JOISTS			WOOD PRE FAB. TRUSSES OFFICE	1,066 @	3.52	3,752
		WD. JOISTS			LAUNDRY	9,415	2.85	26,832
		CONCRETE						
	✓	TRUSSES			WAREHOUSE FLAT	2020	2.28	4,605
ROOF COVER	✓	COMP. B.U.			COMP. BU	1066	.77	820
	✓				1" insul on 1½" steel deck 3 ply build-up comp	11,435	.77	8,804
MISC.						Paving		2,880

Items Ck'd in Blue
Ass'd PA255 - Unit 12/31/90 } $39,839 X .98% X Local 1.04% = $40,603 X 50% = $20,300.

CONDITION	EXCEL.	GOOD	AVG.	FAIR	POOR	COST TOTALS FORM IN BUILDING FILE	249,609

COSTS x ARCHITECT'S FEE AND SUPERVISION x CURRENT COST MULT. x LOCAL MULT. = BUILDING REPLACEMENT VALUE

209,770 x .98 x 1.04 = $ 215,935

Act 255 39,839 x .98 x 1.04 $ 40,603 (255)

BUILDING REPLACEMENT VALUE x COST MULT. = REPLACEMENT VALUE x DEPRECIATION FACTOR = APPRAISED VALUE

$ 215,935 - 60% Phys - 10% Func = $77,736

1979 Loading Deck $ 40,603 - = 40,600

YARD IMPROVEMENTS: CHANGES FOR 1979
ASPH PAVING OF PARKING LOT.
[illegible] @ 60¢ = 2880
OFFICE [illegible] 20 x 53 = 38,540
Assessed Under PA255 in 1981 = $40,600

NOTES: GALLAGHER
11-9-78 MIKE GALLAGER SAID TO NOT COMBINE WITH RB4-58 — REPEATED 4/29/79

SEE 255P-00-002 for calculations of Exempt part of BUILDING.

[redacted]

CITY OF BATTLE CREEK - ASSESSOR'S OFFICE

INDUSTRIAL ASSESSMENT RECORD

MAP NO. [redacted] ASSESSMENT NO.

0254-00-060-0 I BC 16
DETROIT WASTE WORKS
169 MICHIGAN AVE W

BC CITY RB 4 LOT 53 EXC RR ALSO LOT 78 ALSO
N 16 FT OF LOT 79 & W 120 FT OF S 60 FT OF N
76 FT OF LOT 79 EXC EASEMENT OF RECORD

2010 - Common Address Now 171 W. Michigan

DATE TRAN.	RECORD OF OWNERSHIP	LIB.-PAGE	SALE
10-3-84	CON Rail ROW To City	1321/164	QCD
1-9-91	City of Battle Creek	1556/666	804 310.00
	(see also 0254-00-058-0)		

IMPROVEMENTS
GRAVEL
PAVED
CURB
SIDEWALK
WATER
SEWER
ELECTRIC
GAS

LAND
LEVEL
ROLLING
LOW
HIGH
LANDSCAPED
SWAMP

ZONING

BUILDING or ALTERATION PERMIT	DATE	AMOUNT
Fence #325	5/87	$ 1871
Laundry Storage BLDG #799	10/87	12,138

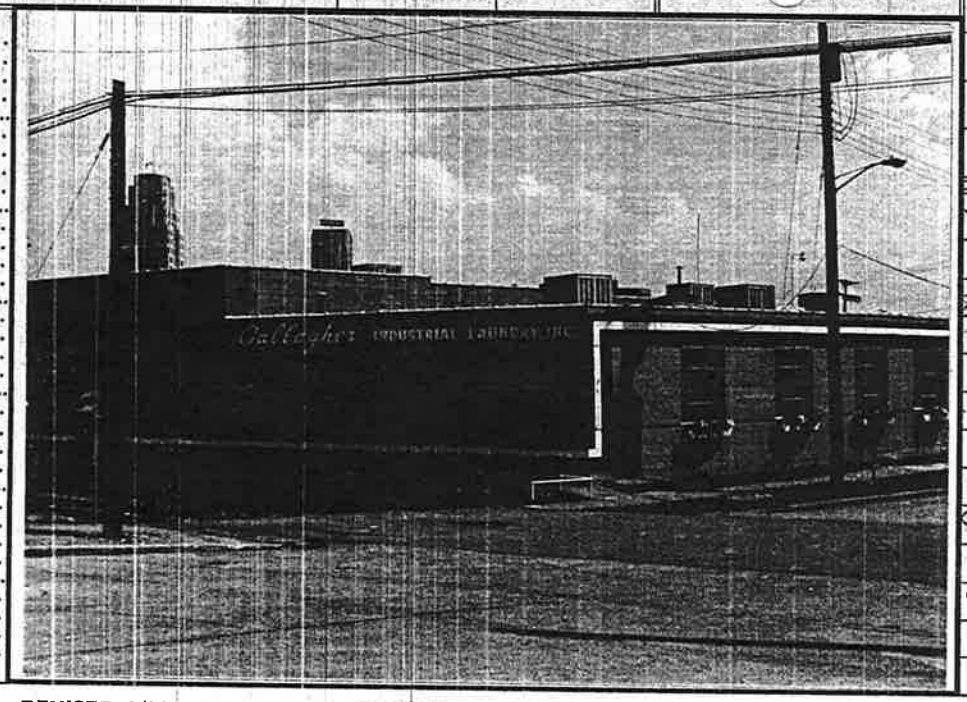
LAND VALUE PLUS IMPROVEMENTS COMPUTATION

LOT SIZE	DEPTH FACTOR	EQUIVALENT FRONTAGE	RATE	TRUE CASH VALUE
22152#			$1.20	$26582

LAND IMPROVEMENT	VALUE NEW	% COND.	
WELL & SEPTIC TANK			
PAVED DRIVE ASPH	6162#	@ 1.00	6162
FENCE & LANDSCAPING			

TOTAL LAND PLUS IMPROVEMENTS	$ 32,744
TOTAL BUILDINGS	$
TOTAL TRUE CASH VALUE	$

LAND SKETCH



YEAR	ASSESSED VALUATION	BOARD OF REVIEW	TAX COMMISSION
84	$49,420	$	$
85	49,420	CFT New	LAND AND
		ORIGINAL	STRUCTURE
		NEW IMPROVEMENTS	ON
		255 N ROLL	
		SEE:	84-23
88	55,420	49,420	Dec. 80
91	55100 All		
92		0	
93	55,100		

ORDER BY FORM NO. M294-FI-K REVISED 3/83 — INDUSTRIAL ASSESSMENT RECORD

SIZES	STY.	HGT.	AREA	CUBE	COST	QUALITY	USE:
						CLASS CONST.	
						MAN. SEC.	
					SQ. FT. COST	SEC. DATE	
						BUILDING DATE	COSTS

EXCAV.				
FDN.	CONCRETE	CONC. BLK.		
	COL. FTGS.			
FRAME				
FLOOR STRUCT.	CONCRETE			
	STL. JOISTS			
	WD. JOIST			
FLOOR COVER	NONE	ASP. TILE		
	HARDWOOD	TILE		
CLNGS.	NONE	DRI-WALL		
	PLASTER	ACOUSTICAL		
PARTNS.	FRAME	MASONRY		
PLUMB'NG	TOILET	LAVATORY		
	TUB	SHOWER		
	URINAL	SINK		
	AWH	DISPOSAL		
HEATING AND COOLING	NONE			
ELEC. & LTG.				
EXT. WALLS	CONC. BLK.	BRICK		
	BRICK VEN.	WD. FR.		
BSM'T. WALLS	NONE	CONC. BLK.		
	CONCRETE			
ROOF STRUCT.	STL.JOISTS			
	WD. JOISTS			
	CONCRETE			
	TRUSSES			
ROOF COVER	COMP. B.U.			
MISC.				
CONDITION	EXCEL.	GOOD	AVG.	FAIR [redacted] T TOTALS

3
2
1
B

COSTS X ARCHITECT'S FEE AND SUPERVISION X CURRENT COST MULT. X LOCAL MULT. = BUILDING REPLACEMENT VALUE

BUILDING REPLACEMENT VALUE X COST MULT. = REPLACEMENT VALUE X DEPRECIATION FACTOR = APPRAISED VALUE

YARD IMPROVEMENTS:

NOTES: RB 4-66
TDAO 5-75

[redacted]

CITY OF BATTLE CREEK - ASSESSOR'S OFFICE

INDUSTRIAL ASSESSMENT RECORD

MAP NO. [redacted] 255 (New)

255N-78-002- CN BC O
GALLAGHER INDUSTRIAL LAUNDRY
169 MICHIGAN AVE W

BC CITY RB4 LOTS 51 & 52 EXC BEG AT INTER-
SECTION OF NLY LI OF BC RIVER WITH ELY LI
LOT 79 RB4 -NLY ON ELY LI SAID LOT 79 TO

IMPROVEMENTS	
	GRAVEL
	PAVED
	CURB
	SIDEWALK
	WATER
	SEWER
	ELECTRIC
	GAS

LAND	
	LEVEL
	ROLLING
	LOW
	HIGH
	LANDSCAPED
	SWAMP
ZONING	

DATE TRAN.	RECORD OF OWNERSHIP	LIB.-PAGE	SALE
	AD-VALOREM - 0254 - 00-060-0		
	(original Business on 2 AD-VALOREM Pcls)		

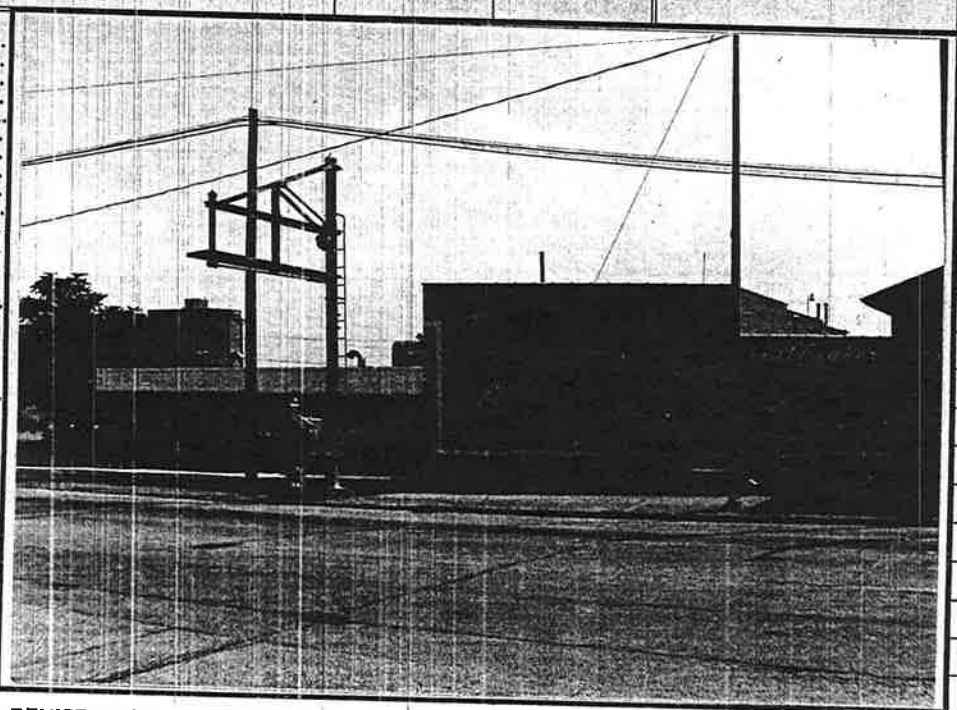
BUILDING or ALTERATION PERMIT	DATE	AMOUNT
		$

LAND VALUE PLUS IMPROVEMENTS COMPUTATION

LOT SIZE	DEPTH FACTOR	EQUIVALENT FRONTAGE	RATE	TRUE CASH VALUE
			$	$

LAND IMPROVEMENT	VALUE NEW	% COND.	
WELL & SEPTIC TANK			
PAVED DRIVE			
FENCE & LANDSCAPING			
TOTAL LAND PLUS IMPROVEMENTS			$
TOTAL BUILDINGS			$ 45,000
TOTAL TRUE CASH VALUE			$ 45,000

LAND SKETCH



YEAR	ASSESSED VALUATION	BOARD OF REVIEW	TAX COMMISSION
79	$ 21,705	$	$
82	22,500		
91	0	Expired	12/31/90
	Transferred	to 0254-00-058-0	

ORDER BY FORM NO. M294-FI-K REVISED 3/83 — INDUSTRIAL ASSESSMENT RECORD

CITY OF BATTL[redacted]SSESSOR'S OFFICE

MAP NO. [redacted]FT New

COMMERCIAL ASSESSMENT RECORD

GALLAGER INDUSTRIAL LAUNDRY
84-023

IMPROVEMENTS	
	GRAVEL
	PAVED
	CURB
	SIDEWALK
	WATER
	SEWER
	ELECTRIC
	GAS

LAND	
	LEVEL
	ROLLING
	LOW
	HIGH
	LANDSCAPED
	SWAMP
ZONING	

BUILDING or ALTERATION PERMIT	DATE	AMOUNT
		$

DATE TRAN.	RECORD OF OWNERSHIP	LIB.-PAGE	SALE
	AD-VALOREM - 0254-00-060-0		

LAND VALUE PLUS IMPROVEMENTS COMPUTATION

LOT SIZE	DEPTH FACTOR	EQUIVALENT FRONTAGE	RATE	TRUE CASH VALUE
			$	$

LAND IMPROVEMENT	VALUE NEW	% COND.	
WELL & SEPTIC TANK			
PAVED DRIVE			
FENCE & LANDSCAPING			
TOTAL LAND PLUS IMPROVEMENTS			$
TOTAL BUILDINGS			$
TOTAL TRUE CASH VALUE			$ 92,000

LAND SKETCH

PHOTO AREA

1984
CFT CERTIFICATE
ON $95,000 BLDG
ADDITION

$75,000 WAS VERY CLOSE TO
ACTUAL CONSTRUCTION COST:
(RE: JOHN GALLAGHER)

Bldg Complete except
Heat ~~installation~~ for 85
add heat cost in
for 1986

YEAR	ASSESSED VALUATION	BOARD OF REVIEW	TAX COMMISSION
85	$ 46,000	$ Partial	$
86	SAME		
91	46,000		
92		—	

REQUEST FOR PUBLIC RECORD

City of Battle Creek

Office Use Only

FOIA # 11-04

Department Ken + Ralph

Request: Written: ✓

Electronic: _____

Name SME

Address 3301 Tech Circle Dr.
Kalamazoo, Mi 49008

Phone _____

Date Filed 1/3/11

I request to have the public record(s) supplied to me in the following form: Inspection _____ Copies _____

Brief description identifying public record desired: Parcel 0254-00-060-0
171 W. Michigan
environmental, underground
+ building

PAYMENT MUST BE RECEIVED PRIOR TO DELIVERY OF PUBLIC RECORDS

I understand a public body must respond to my request within five (5) business days after it is received. The public body must grant or deny all or a portion of my request, or issue a notice extending for ten (10) business days, the period in which the public body must respond to my request. In place of these deadlines, I agree to allow the public body a reasonable time to process my request.

_____
Signature

1/25/11

Office Use Only

Requests exceeding $50.00

Estimate _____
(-) 50% _____

Deposit Due $ _____

FOIA Charges

	Dept.	Clerk
Mailing (actual)		
Labor		4.61
25 copies @ $ .10		2.50
Other		
Other		
Sub Total		
(-) Deposit		
Total Amount Due		$ 7.11

Date Available: _____

White - Requestor Yellow - City Clerk

Rev. 1/07

Soil and Materials Engineers, Inc.
3301 Tech Circle Drive
Kalamazoo, MI 49009-5611

tel (269) 323-3555
fax (269) 323-3553
www.sme-usa.com

Kenneth W. Kramer, PE
Founder

Mark K. Kramer, PE
Timothy H. Bedenis, PE
Gerald M. Belian, PE
Chuck A. Gemayel, PE
James M. Harless, PhD, CHMM
Larry P. Jedele, PE
Cheryl A. Kehres-Dietrich, CGWP
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Timothy J. Mitchell, PE
Robert C. Rabeler, PE
Daniel O. Roeser, PG

Daniel R. Cassidy, CPG
Andrew J. Emmert, CPA
Sheryl K. Fountain, SPHR
Michael E. Gase, CWI, ASNT III
Davie J. Hurlburt, PE
Laurel M. Johnson, PE
Jeffery M. Krusinga, PE, GE
Michael S. Meddock, PE
Mark L. Michener, LEED GA, CDT
Louis J. Northouse, PE
Joel W. Rinkel, PE
Jason A. Schwartzenberger, PE
Larry W. Shook, PE
Thomas H. Skotzke
Michael J. Thelen, PE
John C. Zarzecki, CET, CDT, NDE

December 30, 2010

City of Battle Creek - City Clerk
10 N. Division Street, Suite 111
Battle Creek, MI 49014

Via Facsimile (269) 966-3555

RE: Freedom of Information Act Request
171 West Michigan Ave.
Battle Creek, MI 49017

To Whom It May Concern:

SME would like to obtain information (if available) for the property referenced above. The property is the former Cereal City USA Museum. The legal description of the property is **Parcel:** 0254-00-060-0. I am interested in information pertaining to environmentally related incidents (e.g. chemical spills) and underground and aboveground storage tanks (USTs and ASTs) located on or adjacent to the property.

Please call me at (269) 323-3555 or fax me at (269) 323-3553 with any information for the site. Thank you for your help.

Sincerely,

Soil and Materials Engineers, Inc.

Thomas R. Howe III
Staff Geologist

Soil and Materials Engineers, Inc.
3301 Tech Circle Drive
Kalamazoo, MI 49008-5611

tel (269) 323-3555
fax (269) 323-3553
www.sme-usa.com

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December 30, 2010

City of Battle Creek - City Clerk
10 N. Division Street, Suite 111
Battle Creek, MI 49014

Via Facsimile (269) 966-3555

RE: Freedom of Information Act Request – Inspections Department
171 W. Michigan Ave.
Battle Creek, MI

To Whom It May Concern:

SME would like to obtain information (if available) for the above referenced property. The legal description of the property is Parcel: 0254-00-060-0. The property is the former Cereal City USA Museum.

I am interested in recent and historical building permits associated with the property.

Please call me at (269) 323-3555 or fax me at (269) 323-3553 with any information for the site. Thank you for your help.

Sincerely,

Soil and Materials Engineers, Inc.

Thomas R. Howe III
Staff Geologist

CITY OF

BATTLE CREEK

FIRE PREVENTION DIVISION

January 3, 2011

To Whom It May Concern:

This letter is in reference to your FOIA request for Site Information on the property located at 171 W. Michigan Avenue in Battle Creek, Michigan.

I have searched our records and found no record of any Hazardous Material spills or Incidents at this location. There are no records of any in ground or above ground storage tanks at this location.

This facility has been vacant since Kellogg Cereal City USA closed.
The Kellogg Co. started to renovate the structure for office space in the spring of 2007 and then stopped work on the project in the fall of 2007.

If my office can be of any further assistance please contact me at (269)-966-3521.

Respectfully,

Ralph Britton

Fire Inspector Ralph Britton
Battle Creek Fire Department

Re: FOIA Requests
Ken Kohs to: Sarah E McGinnis 01/04/2011 07:42 AM

No information on any of these.

Ken Kohs
Utilities Director
City of Battle Creek
150 S. Kendall St.
Battle Creek MI 49037
269-966-3480

Sarah E McGinnis Please see the attached two FOIA requests regarding 50 W Michigan and 171... 01/03/2011 11:06:12 AM

Sarah E McGinnis/BattleCreek
01/03/2011 11:06 AM

To Ken Kohs/BattleCreek@BattleCreek
cc
Subject FOIA Requests

Please see the attached two FOIA requests regarding 50 W Michigan and 171 W Michigan...

[attachment "20110103102939300.pdf" deleted by Ken Kohs/BattleCreek]

[attachment "20110103102931415.pdf" deleted by Ken Kohs/BattleCreek]

Did I send you 17 W Michigan last week???

[attachment "20101230151232245.pdf" deleted by Ken Kohs/BattleCreek]

Thank you!

Sarah McGinnis
Customer Service
City Clerk's Office
10 N. Division
Battle Creek, MI 49016
269-966-3348 Ext. 1211

SEMcGinnis@ci.Battle-Creek.mi.us

Building Permit | PB00-00573

Property Information

0254-00-060-0	171 W MICHIGAN AVE	Subdivision:	
	BATTLE CREEK MI, 49017-3662	Lot:	Block:

Name Information

Owner:	HERITAGE CENTER FOUNDATION	Phone:	
Occupant:		Phone:	
Applicant:	HERITAGE CENTER FOUNDATION	Phone:	
Contractor:		Phone:	
Licensee:		Phone:	
License Issued:			
License Expires:			

Permit Information

Date Issued: 06/29/2000 Date Expires: 12/26/2000 Status: FINALED

Work Description:

ERECT 6' HIGH TEMP FENCE TO SURROUND KIDDIE MINI RACE CAR TRACK

Stipulations:

Comment:

Fee Information

Standard Item	Admin Fee 20	1.00
Miscellaneous	Fence	1.00
ADMINISTRATION	ZONING APPROVAL FEE	1.00

Building Permit | PB01-00158

Property Information

0254-00-060-0	171 W MICHIGAN AVE	Subdivision:	
	BATTLE CREEK MI, 49017-3662	Lot:	Block:

Name Information

Owner:	HERITAGE CENTER FOUNDATION	Phone:	
Occupant:		Phone:	
Applicant:	HERITAGE CENTER FOUNDATION	Phone:	
Contractor:		Phone:	
Licensee:		Phone:	
License Issued:			
License Expires:			

Permit Information

Date Issued: 04/02/2001 Date Expires: 09/29/2001 Status: FINALED

Work Description:
ERECT FENCE AROUND KIDDIE CAR TRACK

Stipulations:

Comment:

Fee Information

Standard Item	Admin Fee 20	1.00
Miscellaneous	Fence	1.00
ADMINISTRATION	ZONING APPROVAL FEE	1.00

Building Permit | PB97-00009

Property Information

0254-00-060-0	171 W MICHIGAN AVE	Subdivision:	
	BATTLE CREEK MI, 49017-3662	Lot:	Block:

Name Information

Owner:	CITY OF BATTLE CREEK	Phone:	
Occupant:		Phone:	
Applicant:		Phone:	
Contractor:		Phone:	
Licensee:		Phone:	
License Issued:			
License Expires:			

Permit Information

Date Issued: 01/09/1997 Date Expires: 07/08/1997 Status: FINALED

Work Description:
demolition

Stipulations:

Comment:

Fee Information

Demolition	DEMOLITION WITHOUT BASEMENT	1.00
Demolition	SEWER CAP FEE	1.00
Demolition	SEWER CAP FEE	1.00
Standard Item	Admin Fee 20	1.00

Building Permit | PB9700155

Property Information

0254-00-060-0	171 W MICHIGAN AVE	Subdivision:	
	BATTLE CREEK MI, 49017-3662	Lot:	Block:

Name Information

Owner:	CITY OF BATTLE CREEK	Phone:	
Occupant:		Phone:	
Applicant:	A. J. Etkin Construction Co	Phone:	(616) 342 5400
Contractor:	A J ETKIN CONSTRUCTION CO	Phone:	(616) 342 5400
Licensee:	A. J. Etkin Construction Co	Phone:	(616) 342 5400
License Issued:			
License Expires:			

Permit Information

Date Issued: 04/14/1997 Date Expires: 10/11/1997 Status: FINALED

Work Description:
new museum

Stipulations:

Comment:

Fee Information

ADMINISTRATION	ZONING APPRVL, COMMERCIAL	1.00
New Const.	USE A-2 & A-3	45,000.00
Plan Review	COMMERCIAL PLAN REVIEW	45,000.00
Plan Review	Site Plan Review	1.00
Standard Item	Admin Fee 20	1.00

Footing Inspection | Frank Ballard

Status: Completed Result: Partially Approved

Scheduled: 04/14/1997 12:00 AM Completed: 04/14/1997 12:00 AM

Comments:

footing 4/14/97 50%

FINAL Inspection | Frank Ballard

Status: Completed Result: Approved

Scheduled: 05/26/1998 12:00 AM Completed: 05/26/1998 12:00 AM

Comments:

3/30/98 Met with fire marshall and Kellogg reps to discuss exit signage within new building. (exit signs & egress lighting).

APPLICATION FOR BUILDING PERMIT

a. New Building
b. Repair Old Building
c. Building on SameLot with a Dwelling
d. Addition
e. Remodeling

1. Residence
2. Store and Residence
3. Garage
4. Warehouse
5. Manufacturing Building
6. Stable

W Michigan No. 4044

At No. 171 W Main Street

Battle Creek, Mich. 5-7 1923

The undersigned hereby makes application for a permit to ~~remodel~~ construct a 2 story Shop on the 3 side of W Main Street, between Barney Street and Carly C Street

This Shop is to be 30 feet wide 84 feet long.

This building is to be used for

Remarks 8" concrete walls Pitasters to be run solid

Kind of Roof Tar & Gravel roof

STATE OF MICHIGAN
County of Calhoun } ss.

C W Sellers being duly sworn deposes and says that the foregoing statement is true in all particulars to the best of his/her knowledge and belief, and that the Shop will be constructed to plans attached hereto.

Subscribed and sworn to before me this 7 day of May 1923

M L Ferris
Notary Public, Calhoun County, Mich.

My commission expires 12 12 1923

☞ This permit conveys no right to occupy any Street, Alley or Sidewalk, or any part thereof, either temporarily or permanently.

Telephone 1220

BUILDING PERMIT

Permit No. 4044

DEPARTMENT OF BUILDINGS, CITY HALL

Battle Creek, Mich., 5-7 **1923**

The Department of Buildings hereby grants permission to C W Sellers **of** City **to** erect/remodel **a** 2 **story** Shop **as described in application above.**

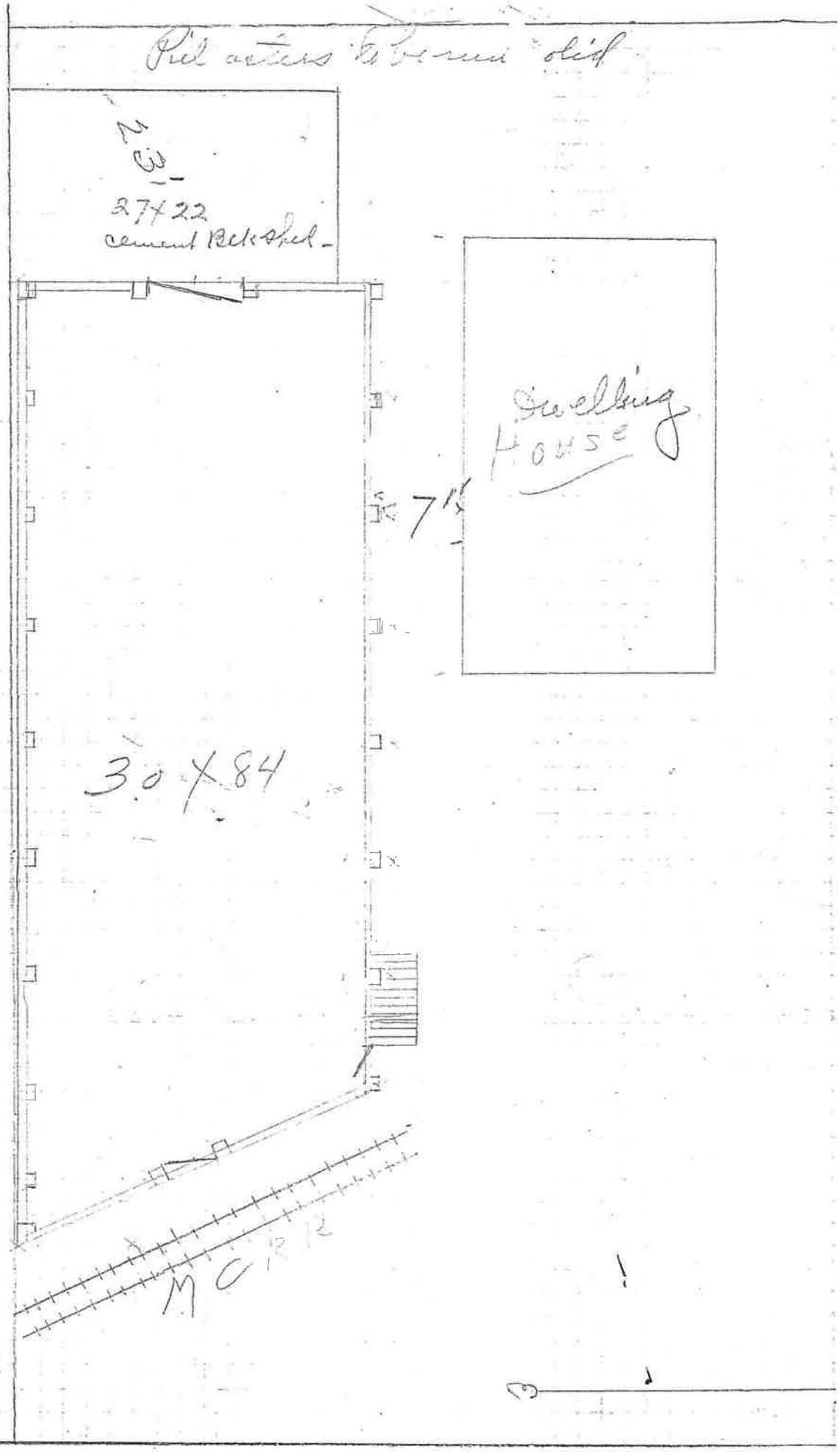
This permit is granted on the express condition that the said construction shall in all respects conform to the State Housing Code, Act 167, regulating the construction of buildings, and may be revoked at any time upon the violation of any of the provisions of said code.

Fee, $ **Estimated Cost, $** 4000.00

OWNER C W Sellers & Sons **DEPARTMENT OF BUILDING**

ADDRESS 236 W Van Buren M L Ferris
Permit Clerk

LOT VAC.


Pile acters to be run solid
27x22
cement Bekshed
Dwelling
House
7'
30 X 84
MCRR

171 W Main

CITY OF BATTLE CREEK, MICHIGAN

REVENUE SERVICES GROUP

Judith A. Mudge
Assessor/Revenue Services Group Manager

January 15, 1997

Willie P. Calloway
Executive Director
Kellogg Heritage Center
35 Jackson St. W. Suite 210
Battle Creek, MI 49017-3559

ADDRESS OF KELLOGG CEREAL CITY U. S. A.

Enclosed you will find a map showing the approximate location of the proposed structure referenced above. The address of this facility will be 171 Michigan Avenue West.

Because the Assessor's Office is responsible for assigning addresses within the City of Battle Creek, please disregard any other address you may have been given for this structure. For your convenience, the offices and agencies listed below have been notified of this new address.

If you have any question regarding this matter, please don't hesitate to contact me.

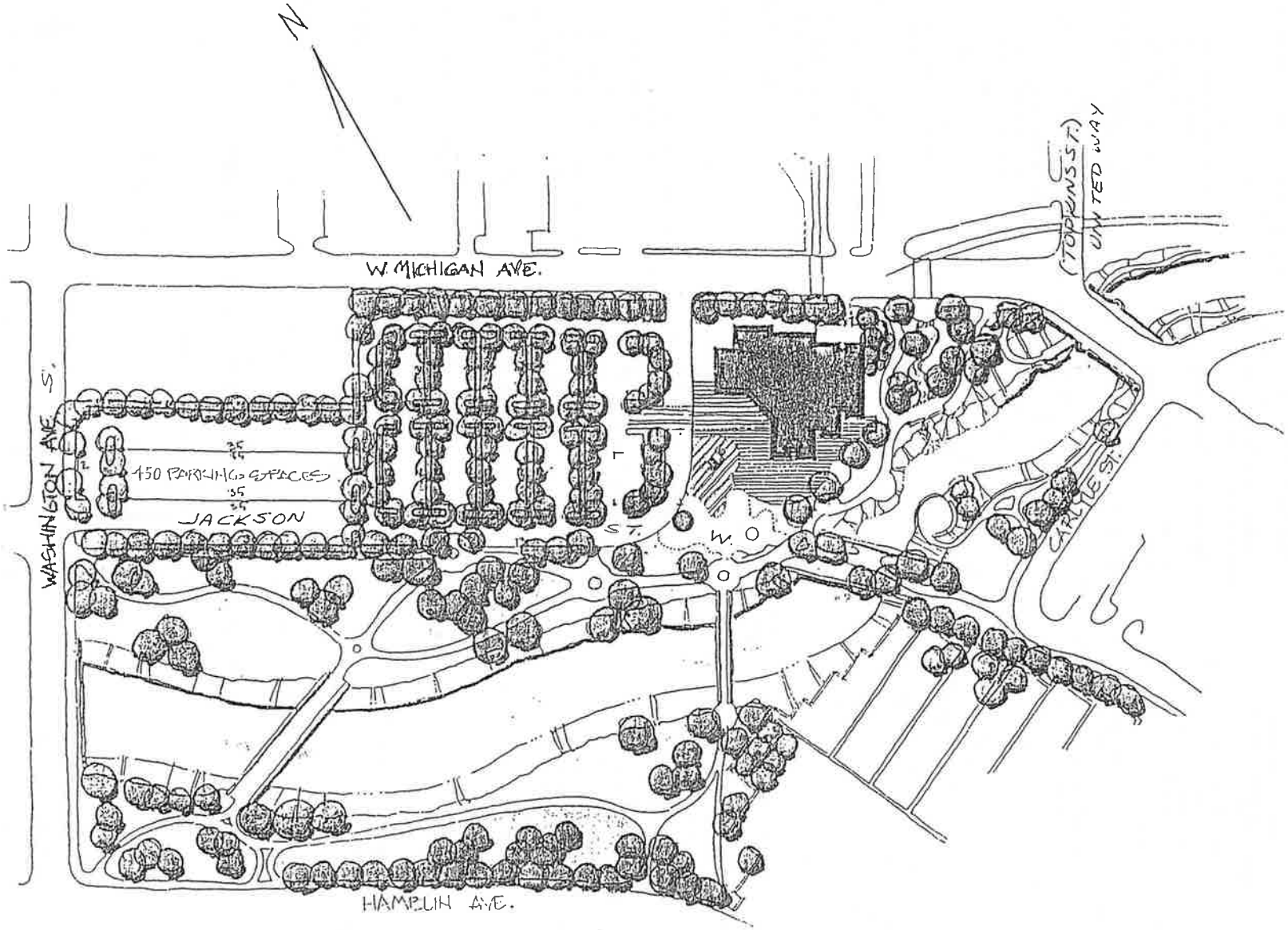
Sincerely,

James A. Eldridge

James A. Eldridge
Assessing Cartographer

enclosure

c Police & Fire Dispatch - Jill Fish
City Clerk's Office
Inspection Dept.
Battle Creek Gas Co. - Dick Hastings
Consumers Power - Engineering Dept.



CEREAL CITY USA

CONCEPTUAL SITE PLAN

OCTOBER 21, 1996

Rouse-Wyatt ASSOCIATES

Leroy Township
8156 Four Mile Road
E. Leroy, Mich. 49051
616-979-4921

Area Metropolitan Services Agency

Please make your check payable to and send it to, the appropriate jurisdiction noted.

Newton Township
7988 G Drive South
Battle Creek, Mich. 49
616-979-3212

Charter Township of Bedford
115 S. Uldriks Drive
Battle Creek, Mich. 49017
616-965-9096

City of Springfield
601 Avenue A
Springfield, Mich. 49015
616-965-2354

City of Battle Creek
PO Box 1717
Battle Creek, Mich. 49016
616-966-3382

Charter Township of Emmett
620 Cliff Street
Battle Creek, Mich. 49017
616-968-0335

Charter Township of Pennfi
20260 Capital Avenue NE
Battle Creek, Mich. 49017
616-968-8549

JB T/ZB U/A-3

#19118 4-14-97 97-155

0254-00-060-0

APPLICATION FOR PLAN EXAMINATION AND BUILDING PERMIT

I. LOCATION OF BUILDING

AT (LOCATION) 171 W. Michigan AVENUE (NO.) (STREET) ZONING DISTRICT

BETWEEN WASHINGTON AVENUE (CROSS STREET) AND Carlyle Street (CROSS STREET)

SUBDIVISION LOT BLOCK LOT SIZE

II. TYPE AND COST OF BUILDING - All applicants complete Parts A - D

A. TYPE OF IMPROVEMENT

1 ☒ New building
2 ☐ Addition *(If residential, enter number of new housing units added, if any, in Part D, 13)*
3 ☐ Alteration *(See 2 above)*
4 ☐ Repair, replacement
5 ☐ Wrecking *(If multifamily residential, enter number of units in building in Part D, 13)*
6 ☐ Moving *(relocation)*
7 ☐ Foundation only

B. OWNERSHIP

8 ☒ Private *(individual, corporation, nonprofit institution, etc.)*
9 ☐ Public *(Federal, State, or local government)*

D. PROPOSED USE - For "Wrecking" most recent use

Residential
12 ☐ One family
13 ☐ Two or more family - F... numb...
1. PERMIT Fee: 18,050.00
15 PLAN REVIEW Fee: 325.00
16
17
$18,375.00
100.00
18425.00

Nonresidential
18 ☒ Amusement, recreational
19 ☐ Church, other religious
20 ☐ Industrial
21 ☐ Parking garage
22 ☐ Service station, repair garage
23 ☐ Hospital, institutional
24 ☐ Office, bank, professional
25 ☐ Public utility
26 ☐ School, library, other educational
27 ☐ Stores, mercantile
28 ☐ Tanks, towers
29 ☐ Other - *Specify*

C. COST estimates

	(Omit cents)
10. Cost of improvement	$ 7,700,000
To be installed but not included in the above cost	
a. Electrical	700,000
b. Plumbing	500,000
c. Heating, air conditioning	500,000
d. Other (elevator, etc.)	incl
11. TOTAL COST OF IMPROVEMENT	$ 9,400,000

No... pro... scho... depa... If use...

John York will pick up when READY - Please call 963-5021

...se of buildings, e.g., food ...g at hospital, elementary ...ol, parking garage for, ...lding at industrial plant. ...proposed use.

III. SELECTED CHARACTERISTICS OF BUILDING - *For new ... additions, complete Parts E - L; for wrec...g, complete only Part J, for all others skip to IV.*

E. PRINCIPAL TYPE OF FRAME

30 ☐ Masonry (wall bearing)
31 ☐ Wood frame
32 ☒ Structural steel
33 ☐ Reinforced concrete
34 ☐ Other - *Specify*

F. PRINCIPAL TYPE OF HEATING FUEL

35 ☒ Gas
36 ☐ Oil
37 ☐ Electricity
38 ☐ Coal
39 ☐ Other - *Specify*

G. TYPE OF SEWAGE DISPOSAL

40 ☒ Public or private company
41 ☐ Private (septic tank, etc.)

H. TYPE OF WATER SUPPLY

42 ☒ Public or private company
43 ☐ Private (well, cistern)

I. TYPE OF MECHANICAL

Will there be central air conditioning?
44 ☒ YES 45 ☐ NO
Will there be an elevator?
46 ☒ YES 47 ☐ NO

J. DIMENSIONS

48. Number of stories	3
49. Total square feet of floor area, all floors, based on exterior dimensions	45,000
50. Total land area, sq. ft.	500,00

K. NUMBER OF OFF-STREET PARKING SPACES

51. Enclosed	0
52. Outdoors	400

L. RESIDENTIAL BUILDINGS ONLY

53. Number of bedrooms	N/A
54. Number of bathrooms — Full	

"Section 23a of the state construction codes act of 1972, Act No. 230 of Public Acts of 1972, being section 125.1523a of the Michigan Complied Laws, prohibits a person from conspiring to circumvent the licensing requirements of this state relating to persons who perform work on residential building or a residential structure. Violators of section 23a are subject to civil fines."

License No. 2102021169 Exp. Date

Worker's Disability Compensation Insurance

Carrier

IRS Employer No. 38-2092024 MESC Employer No. 063141

Owner(s)
Lessee Kellogg Heritage Center
Address 35 W. Jackson City Battle Creek Tel. No.
Applicant A.J. Etkin Construction Co. City Kalamazoo Tel. No. 616 342 5400
Plans Engineer
Architect Beta Design Group City Grand Rapids Tel. No. 616 235 6220
General Contractor A.J. Etkin Construction City Lic. No.
Electrical Contractor to be determined City Lic. No.
Plumbing Contractor to be determined City Lic. No.
Mechanical Contractor to be determined City Lic. No.

It is specifically understood that if a Building Permit is granted for the construction herein proposed, and is issued for this building and/or land, it will be on the express condition that said construction, shall conform in all respects to the requirements of local Building, Housing, Zoning Ordinances and the Housing Laws of Michigan, and all laws and ordinances applicable thereto, and that said Permit or Certificate may be revoked at any time in case of any failure or neglect to comply with any of the provisions of said ordinances or of said laws, or in case any false statement or misrepresentation is made in this application, or in any plans, specifications or statements submitted or filed for said Permit or Certificate.

State of Michigan
County of Calhoun ss.

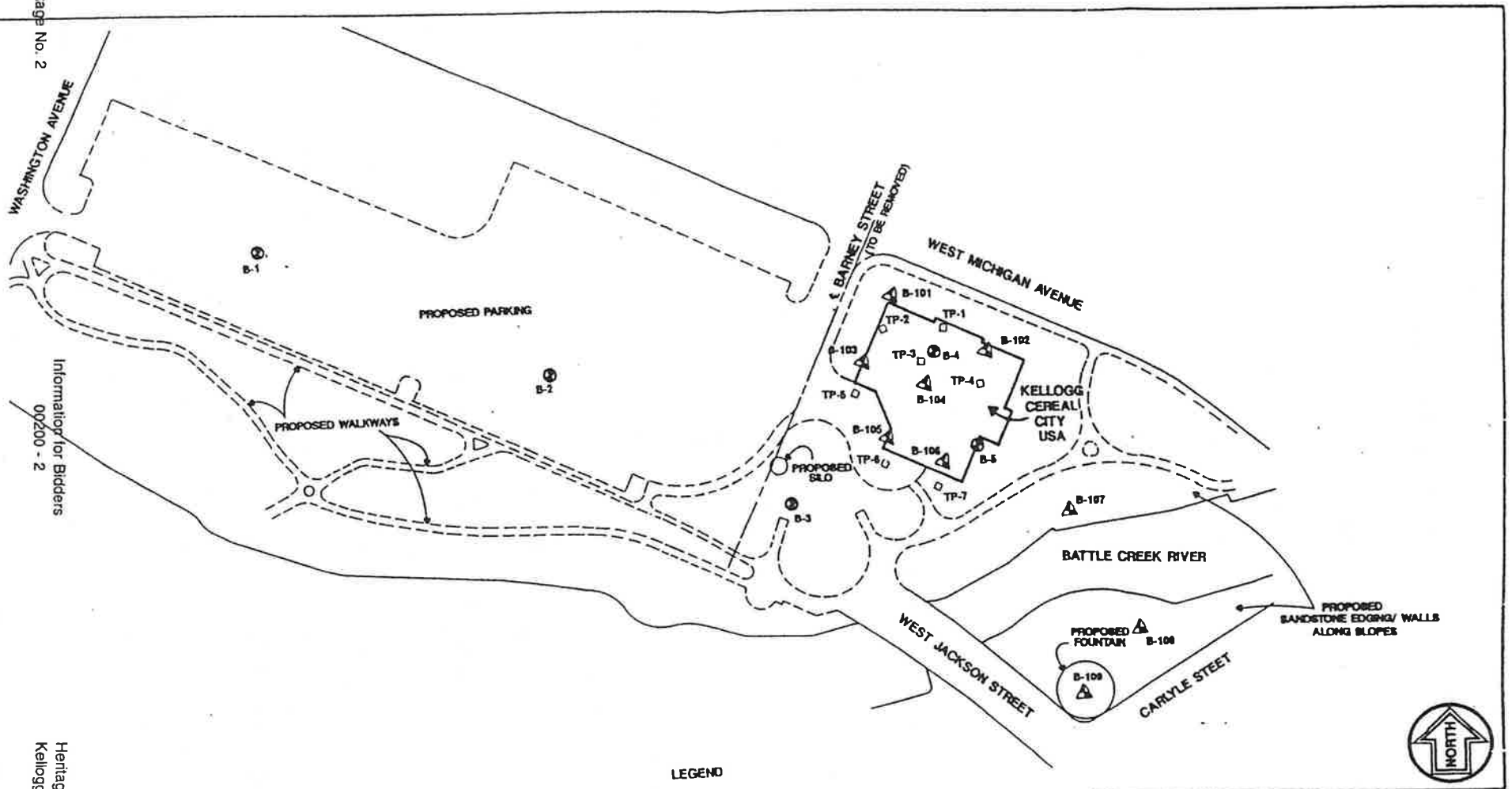
Robert D Andrews (he) being duly sworn deposes and says that (she) has read and examined the statements, plans and specifications which are contained in the foregoing application, or which are attached thereto and made a part thereof, and that said statements, plans and specifications are true and correct in all particulars to the best of (his) (her) knowledge and belief, and that if said application is approved, the proposed construction will conform to such approved plans and specifications and all laws and ordinances applicable thereto.

Witnessed by

Signed Robert D Andrews III
3-25-97

PROJECT DESCRIPTION: Construction of a Museum and associated improvements to river frontage. Sitework, Landscaping and 400+ parking space parking lot.

NOTES:



LEGEND

- SOIL BORINGS PERFORMED BY SME IN 1996
- SOIL BORINGS PERFORMED BY SME IN FEBRUARY 1997
- TEST PIT EXCAVATION PERFORMED BY HOFFMAN BROTHERS AND OBSERVED BY SME IN FEBRUARY 1997

LOCATION DIAGRAM
KELLOGG CEREAL CITY USA
BATTLE CREEK, MICHIGAN

BAY CITY
KALAMAZOO
LANSING
PLYMOUTH

Date 2-18-97
Drawn By AJW
Scale 1" = 100'

$100.00

City of Battle Creek
SITE PLAN REVIEW APPLICATION

GENERAL INFORMATION

APPLICANT'S NAME	A. J. Etkin Construction Co. Rob Andrews	TELEPHONE NUMBER	616 342 5400
ADDRESS	1516 Trimble Avenue, Kalamazoo, MI, 49001		
PROPERTY OWNER'S NAME	Kellogg Heritage Society	TELEPHONE NUMBER	616 962 6230
LOCATION OF PROJECT	171 W. Michigan Avenue	PROPERTY NUMBER'S	
EXISTING ZONING			
EXISTING LAND USE			

PROJECT INFORMATION

TOTAL SITE ACREAGE	9+	ACRES TO BE DEVELOPED	9+
BUILDING COVERAGE	18,868 ± (sq. ft.)	If residential, number of units and net density	
LANDSCAPE COVERAGE	175,000 ±	USABLE OPEN SPACE	5,000 ±
VEHICULAR AREA (including parking)	162,955 ±	NUMBER OF PARKING SPACES PROVIDED	400

PROJECT DESCRIPTION

FULL DESCRIPTION OF PROPOSED PROJECT A three story museum with interactive exhibits, displays, theatre, galleries, shops, cafe, classrooms and administration. Also included is the construction of a parking lot (400 spaces) and site improvements.

OWNER CERTIFICATION

I certify that I am presently the legal owner of the above described property. Further I acknowledge the filing of this application and certify that all of the information is true and accurate. (Agent of owner must attach a letter of authorization from the legal owner).

DATE	3/24/97	SIGNATURE	William Calloway
		PRINT NAME	Willie Calloway

White - INSPECTION *Yellow* - ENGINEERING *Pink* - PLANNING

BOARD OF CALHOUN COUNTY ROAD COMMISSIONERS
PUBLIC WORKS and PARK TRUSTEES

13300 Fifteen Mile Road Marshall, Michigan 49068

COMMISSIONERS

Albert C. Bobrofsky
Chester E. Travis
David D. Veramay

Dennis A. Randolph
Managing Director

PHONE NUMBERS

616-781-9841
800-781-5512
Fax 616-781-6101

COUNTY OF CALHOUN
STATE OF MICHIGAN

PERMIT FOR AN EARTH CHANGE

Under Part 91, Soil Erosion and Sedimentation Control, of the Natural Resource and Environmental Protection Act, Act 451 of the Public Acts of 1994, being Sections 324.9101 to 324.9123 of the Michigan Compiled Laws Annotated.

PERMIT NUMBER: 918

PERMIT STARTING DATE: 4/1/97

EXPIRATION DATE: 12/1/97

Under the provisions of Part 91 of Act 451 of 1994, authority is hereby granted for an earth change to:

Ed Davids, Hoffman Bros. Excavating, ~~8574 Verona Rd.~~, Battle Creek, Mi. 49014 for construction of the Kellogg Heritage Society Bldg. At 171 W. Michigan Ave.

In Calhoun County, City of Battle Creek or Township of XXXXXXX

Section 1 Town 2 S Range 8 W. Work to be done under authority of this permit is subject

to the following special restrictions, limitations, and instructions: See transmittal letter dated April 21, 1997.

BOND REQUIREMENT - A performance bond is required as per Section 5 of the Resolution for

Soil Erosion and Sediment Control.

AMOUNT OF BOND - The amount of the bond for this earth change project is $ 0.00 .

This Soil Erosion and Sedimentation Control Permit does not obviate the need for other state and federal permits such as those that are required when the work will effect flood plains or wetlands.

The issuance of this permit will allow the enforcing agent or his representative to enter or inspect the property for the application review process as well as the construction process, as necessary.

CITY OF BATTLE CREEK, MICHIGAN

INSPECTION DIVISION

Kim A. Tuck
Inspection Superintendent/Chief Building Official

March 26, 1997

George M. Lewis
Beta Design Group
50 Monroe Pl., Suite 300
Grand Rapids, MI 49503

Dear Sir:

PLAN REVIEW: Kellogg's Cereal City U.S.A., 171 W. Michigan Avenue, Battle Creek, Michigan

Planning documents for the above referenced project have been reviewed for compliance with the City of Battle Creek Ordinances and the State of Michigan Construction Code. The following list of items must be corrected prior to the approval of the plans.

STRUCTURAL:

Letter of compliance with the Michigan Energy Code signed and sealed by a registered Architect or Engineer.

Please provide detail for exit signs and egress lighting, Michigan Construction Code, Section 1023.0 and 1024.0.

Building must meet all draft stop requirements, Michigan Construction Code, Section 720.0.

Signed and sealed plans showing electrical and Mechanical review process. Michigan Construction Code, Section 1274.04.

Parking lot area must conform to all barrier free requirements, Michigan Part 4, Section 1105.0.

Interior finishes must meet and comply with flame spread and flame resistance tests. Michigan Construction Code, Section 803.0, 804.0 and 805.0.

Install and maintain portable fire extinguishers as per NFPA 10.

Be sure the general contractor or sub-contractors call our office (966-3382) and set up all required inspections per that particular trade. Failure to comply with this requirement could result in additional fees and also, termination of work and/or permits.

The address of the building must be located at (or near) the front, (main) entrance, clearly visible from the street, parking lot, service drive, etc.

Historical requirement: The exterior portion of the building must comply with the requirements set forth by the Historic District Commission. Application may be made through the Planning Office. Please fill out forms and submit for review.

This project will be field inspected for compliance with the approved plans and all applicable codes and ordinances.

Any deviation from code requirements will be corrected prior to occupancy.

Plans acceptable with above notes.

Respectfully,

Frank R. Ballard
Building Inspector

/jg

c: file

PLAN REVIEW

JOB Kellogg's Cereal City U.S.A.

ADDRESS: 171 W. Michigan

COPY TO: George M. Lewis - Peter Design Group - 50 Monroe Pl. Suite 300 Grand Rapids, Mich. 49503

PLAN PAGE #	ITEMS	CODE SECTION #
	Use Group - A3	
	Type of Construction - 2B	
	51	
	52	
	53	
	56	
	57	
	59	
	510	
	512	
	515	
	516	
	517	
	518	
	519(B)	

17118

Received Payment

INSPECTION DIVISION

City of Battle Creek, Michigan

To: A.J. Etkin

Date 4/8/97

For: Bldg permit for 171 W. Michigan Ave

Amount $18,475

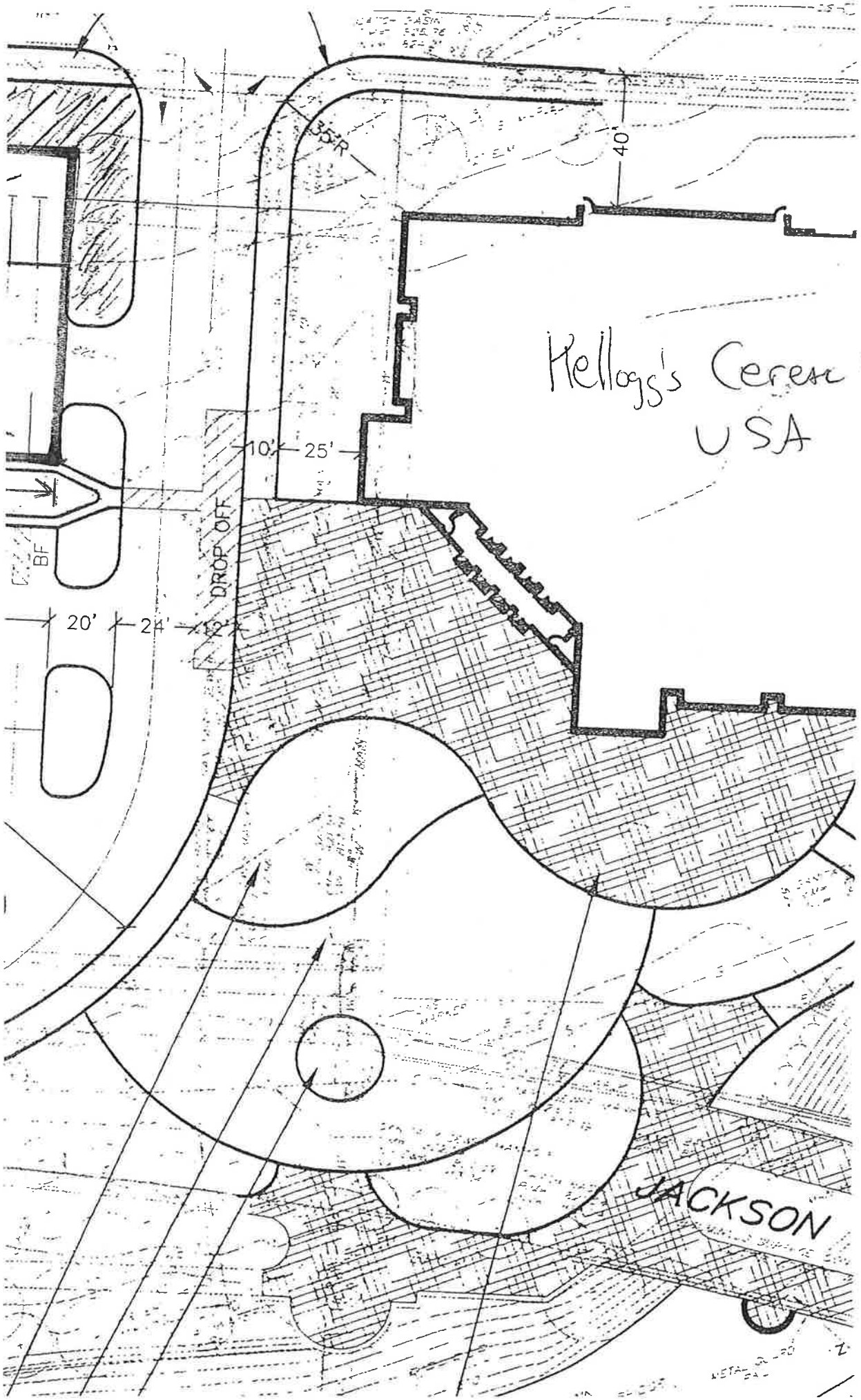
PAID 1997 CITY TREASURER BATTLE CREEK

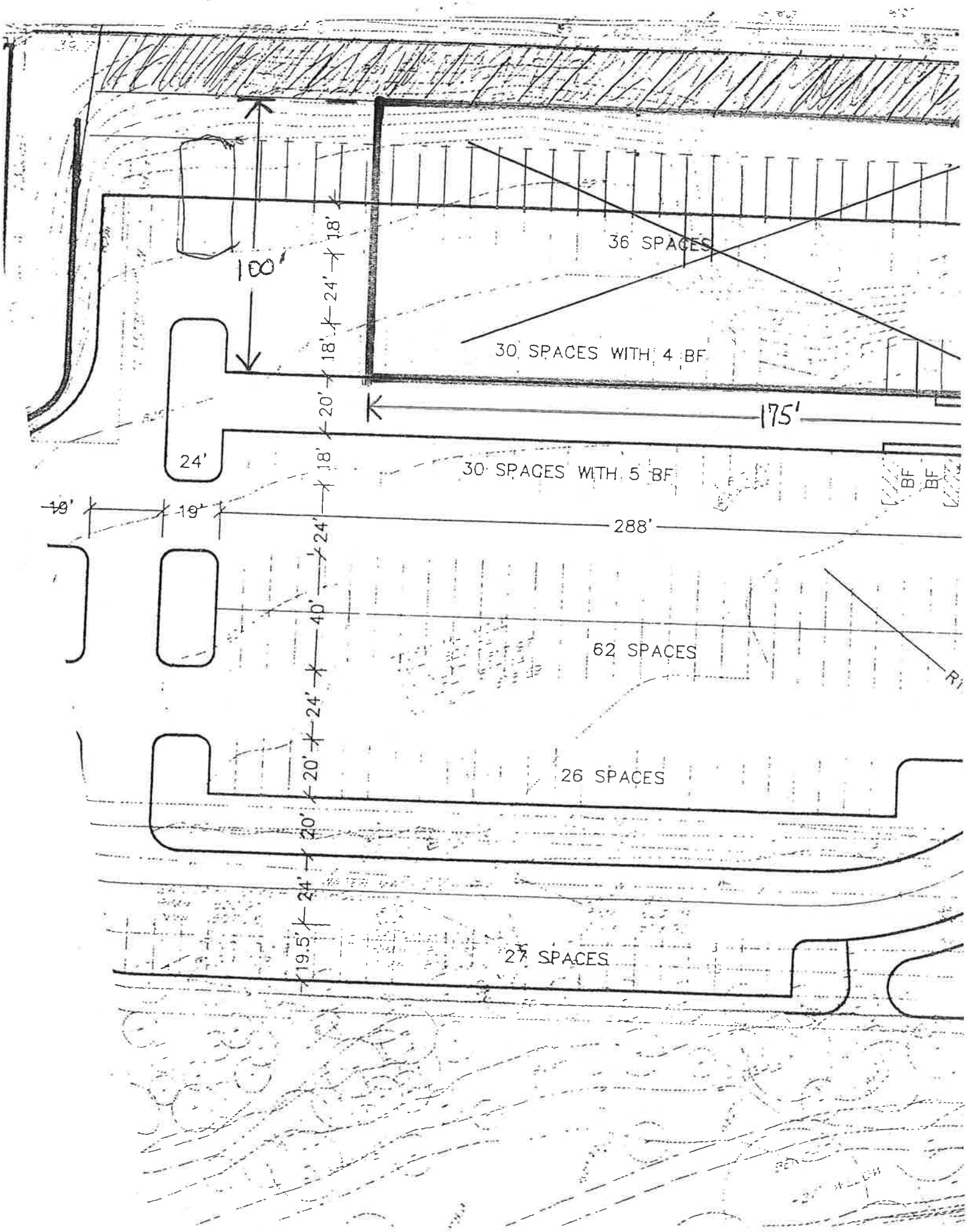
Total Paid $18,475

For Deposit To Acct # — 101 387 5001

This form becomes a RECEIPT when processed by City Treasurer

IN-1009


35'R
40
Kellogg's Cereal City
USA
10'
25'
DROP OFF
BF
20'
24'
JACKSON


36 SPACES
100'
18'
24'
18'
30 SPACES WITH 4 BF
20'
175'
24'
18'
30 SPACES WITH 5 BF
BF
BF
19'
19'
288'
24'
40'
62 SPACES
24'
20'
26 SPACES
20'
24'
19.5'
27 SPACES

Leroy Township
8156 Four Mile Road
East Leroy, MI 49051
616-979-9421

Area Metropolitan Services Agency

Please make your check payable to and send it to, the appropriate jurisdiction noted.

Newton Township
7988 G Drive South
Ceresco, MI 49033
616-979-3212

Charter Township of Bedford
115 S. Uldriks Drive
Battle Creek, MI 49017
616-965-9096

City of Springfield
601 Avenue A
Springfield, MI 49015
616-965-2354

City of Battle Creek
P.O. Box 1717
Battle Creek, MI 49016
616-966-3382

Charter Township of Emmett
620 Cliff Street
Battle Creek, MI49017
616-968-0335

Charter Township of Pennfield
20260 Capital Avenue NE
Battle Creek, MI49017
616-968-8549

PLEASE TYPE OR PRINT

Date Application Received: _____
Property ID Number: _____

APPLICATION FOR PLAN EXAMINATION AND BUILDING PERMIT

I. LOCATION OF BUILDING

AT (LOCATION) X Kellogg's Cereal City USA (NO.) (STREET) ZONING DISTRICT _____

BETWEEN 171 West Michigan (CROSS STREET) AND Washington (CROSS STREET)

SUBDIVISION _____ LOT _____ BLOCK _____ LOT SIZE _____

NO. _____ STREET _____

II. TYPE AND COST OF BUILDING - All applicants complete Parts A - D

A. TYPE OF IMPROVEMENT
1 ☒ New building
2 ☐ Addition *(If residential, enter number of new housing units added, if any, in Part D. 13)*
3 ☐ Alteration *(See 2 above)*
4 ☐ Repair, replacement
5 ☐ Wrecking *(If multifamily residential, enter number of units in building in Part D. 13)*
6 ☐ Moving *(Relocation)*
7 ☐ Foundation only

B. OWNERSHIP
8 ☐ Private *(Individual, corporation, nonprofit institution, etc.)*
9 ☐ Public *(Federal, State, or local government)*

D. PROPOSED USE - For "Wrecking" most recent use

Residential
12 ☐ One family
13 ☐ Two or more family - *Enter number of units* ____
14 ☐ Transient hotel, motel, or dormitory - *Enter number of units* ____
15 ☐ Garage
16 ☐ Carport
17 ☒ Other - *Specify* Fence (For Temporary operation)

Nonresidential
18 ☐ Amusement, recreational
19 ☐ Church, other religious
20 ☐ Industrial
21 ☐ Parking garage
22 ☐ Service station, repair garage
23 ☐ Hospital, institutional
24 ☐ Office, bank, professional
25 ☐ Public utility
26 ☐ School, library, other educational
27 ☐ Stores, mercantile
28 ☐ Tanks, towers
29 ☐ Other - *Specify* _____

C. COST
10 Cost of improvement ..... $ 5000
To be installed but not included in the above cost
a. Electrical ..... _____
b. Plumbing ..... _____
c. Heating, air conditioning ..... _____
d. Other (elevator, etc.) ..... _____
11 TOTAL COST OF IMPROVEMENT ..... $

Nonresidential - Describe in detail proposed use of buildings, e.g. food processing plant, machine shop, laundry building at hospital, elementary school, secondary school, college, parochial school, parking garage for department store, rental office building, office building at industrial plant. If use of existing building is being changed, enter proposed use.

III. SELECTED CHARACTERISTICS OF BUILDING - *For new buildings and additions, complete Parts E - L; for wrecking, complete only Part J, for all others skip to IV.*

E. PRINCIPAL TYPE OF FRAME
30 ☐ Masonry (wall bearing)
31 ☐ Wood frame
32 ☐ Structural steel
33 ☐ Reinforced concrete
34 ☐ Other - *Specify* _____

F. PRINCIPAL TYPE OF HEATING FUEL
35 ☐ Gas
36 ☐ Oil
37 ☐ Electricity
38 ☐ Coal
39 ☐ Other - *Specify* _____

G. TYPE OF SEWAGE DISPOSAL
40 ☐ Public or private company
41 ☐ Private (septic tank, etc.)

H. TYPE OF WATER SUPPLY
42 ☐ Public or private company
43 ☐ Private (well, cistern)

I. TYPE OF MECHANICAL
Will there be central air conditioning?
44 ☐ YES 45 ☐ NO
Will there be an elevator?
46 ☐ YES 47 ☐ NO

J. DIMENSIONS
48 Number of Stories ..... _____
49 Total square feet of floor area, all floors, based on exterior dimensions ..... _____
50 Total land area, sq. ft. ..... _____

K. NUMBER OF OFF-STREET PARKING SPACES
51 Enclosed ..... _____
52 Outdoors ..... _____

L. RESIDENTIAL BUILDINGS ONLY
53 Number of bedrooms ..... _____
54 Number of bathrooms Full ..... _____ Partial ..... _____

48 hours before you dig, call toll free Miss Dig at 1-800-482-7171

PROJECT DESCRIPTION: X Temporary INSTALLATION of 6' Fence (Cyclone) to surround KIDDIE MINI RACE CAR OPERATION. OPERATOR WILL PLACE Steel TRACK BARRIERS within Fence confines. OPERATION TO RUN FROM 6/30/00 - 9/4/00 only

HAVE THE FOLLOWING PERMITS OR APPROVALS BEEN SUBMITTED WITH THIS APPLICATION?

	YES	NO	NOT APPLICABLE
Soil Erosion Permit			
Driveway Permit			
Well/Septic Permit			
Municipal Water/Sewer Permit			
Wetlands Approval			
Floodplain Permit			

IF THE APPLICATION FOR CONSTRUCTION IS WITHIN WETLANDS OR A FLOODPLAIN PLEASE NOTE THE DATE OF APPROVAL OR PERMIT NUMBER.

Approval Date: _____ Permit Number: _____

SITE PLAN EXAMINATION

Zoning District _____ Use _____

Front Yard Setback _____ Rear Yard Setback _____

Side Yard Setback _____ Side Yard Setback _____

APPROVED:	YES	NO	DATE
Building Inspector			
Zoning Administrator			
Building Official			
Fire Marshal (if applicable)			
Others			

NOTES:

_____

_____

_____

BUILDING PERMIT NUMBER _____ AMSA PERMIT FEE SECTION(S)

ISSUE DATE _____ _____

PLAN REVIEW FEE $_____

PERMIT FEE $_____

MISCELLANEOUS FEE $_____

TOTAL $_____

OWNER OR LESSEE INFORMATION

Address 171 W. MICHIGAN City Battle Creek Tel. No. 962-6230

Applicant Kellogg's Cereal City USA City Battle Creek Tel. No. 962-6230

Plans Engineer Architect _____ City _____ Tel. No. _____

General Contractor _____ City _____ Lic. No. _____

Electrical Contractor _____ City _____ Lic. No. _____

Plumbing Contractor _____ City _____ Lic. No. _____

Mechanical Contractor _____ City _____ Lic. No. _____

It is specifically understood that if a Building Permit is granted for the construction herein proposed, and is issued for this building and/or land, it will be on the express condition that said construction, shall conform in all respects to the requirements of local Building, Housing, Zoning Ordinances and the Housing Laws of Michigan, and all laws and ordinances applicable thereto, and that said Permit or Certificate may be revoked at any time in case of any failure or neglect to comply with any of the provisions of said ordinances or of said laws, or in case any false statement or misrepresentation is made in this application, or in any plans, specifications or statements submitted or filed for said Permit or Certificate.

"Section 23a of the state construction codes act of 1972, Act No. 230 of Public Acts of 1972, being section 125.1523a of the Michigan Complied Laws, prohibits a person from conspiring to circumvent the licensing requirements of this relating to persons who perform work on residential building or a residential structure. Violators of section 23a are subject to civil fines."

State of Michigan
County of Calhoun ss.

_____ being duly sworn deposes and says that he/she has read and examined the statements, plans and specifications which are contained in the foregoing application, or which are attached thereto and made a part thereof, and that said statements, plans and specifications are true and correct in all particulars to the best of his/her knowledge and belief, and that if said application is approved, the proposed construction will conform to such approved plans and specifications and all laws and ordinances applicable thereto.

_____ Signed Willie Calloway

Witnessed by Code Official or authorized designee

Notice of Inspection &/or Correction

X Building ____ Electrical ____ Mechanical ____ Plumbing

Job Location			Permit # / E.R. #
171 W. MICHIGAN			
Contractor/Owner: KELLOGG Co./CEREAL MUSEUM			Phone
Date inspection requested: 3-30-98	Time in	Time out	Date performed: 3-30-98

X New construction ____ Remodel ____ Other

Footings/underground: % completed ____ ___approved ___not approved

Rough-in: % completed ____ ___approved ___not approved

Final: EXIT SIGNS & EGRESS LIGHTING % completed ____ ___approved ___not approved

Violations - Upon inspection, the following code violations were found:

- MET WITH FIRE MARSHAL AND KELLOGG REPS TO DISCUSS EXIT SIGNAGE WITHIN NEW BLDG.

Do you know there are no bldg Roughs.

All corrections must be made on or before ____.

Please notify the Inspections Division upon correction at ____.

Inspector F. Pollard

Notice of Inspection &/or Correction

X Building ____ Electrical ____ Mechanical ____ Plumbing

Job Location			Permit # / E.R. #
171 W. MICHIGAN			
Contractor/Owner: CEREAL CITY MUSEUM			Phone
Date inspection requested: 5-26-98	Time in	Time out	Date performed: 5-26-98

X New construction ____ Remodel ____ Other

Footings/underground: % completed ____ ___approved ___not approved

Rough-in: % completed ____ ___approved ___not approved

Final: % completed 100% X approved ___not approved

Violations - Upon inspection, the following code violations were found:

All corrections must be made on or before ____.

Please notify the Inspections Division upon correction at ____.

Inspector F. Pollard

Notice of Inspection &/or Correction

X Building ____ Electrical ____ Mechanical ____ Plumbing

Job Location			Permit # / E.R. #
171 W. Michigan			
Contractor/Owner: Kellogg Co./Cereal Museum			Phone
Date inspection requested: 3-30-98	Time in	Time out	Date performed: 3-30-98

X New construction ____ Remodel ____ Other

Footings/underground: % completed ____ ___approved ___not approved

Rough-in: % completed ____ ___approved ___not approved

Final: EXIT SIGNS & EGRESS LIGHTING % completed ____ ___approved ___not approved

Violations - Upon inspection, the following code violations were found:

- MET WITH FIRE MARSHAL AND KELLOGG REPS TO DISCUSS EXIT SIGNAGE WITHIN NEW BLDG.

All corrections must be made on or before ____.

Please notify the Inspections Division upon correction at ____.

Inspector F. Pelland.

Notice of Inspection &/or Correction

X Building ____ Electrical ____ Mechanical ____ Plumbing

Job Location			Permit # / E.R. #
171 W. Michigan			
Contractor/Owner: Kellogg Cereal Museum			Phone
Date inspection requested: 5-15-98	Time in	Time out	Date performed

X New construction ____ Remodel ____ Other

Footings/underground: % completed ____ ___approved ___not approved

Rough-in: % completed ____ ___approved ___not approved

Final: % completed 90% X approved ___not approved

Violations - Upon inspection, the following code violations were found:

All corrections must be made on or before ____.

Please notify the Inspections Division upon correction at ____.

Inspector F. Pelland.

APPENDIX D

INTERVIEW DOCUMENTATION
USER QUESTIONNAIRE
OWNER/OCCUPANT QUESTIONNAIRE

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SME Project No. _____

PHASE I ENVIRONMENTAL ASSESSMENT – ALL APPROPRIATE INQUIRY USER QUESTIONNAIRE

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the Brownfields Amendments to CERCLA), the User of a Phase I Environmental Site Assessment (ESA) must consider the issues discussed below as part of the User's All Appropriate Inquiry (AAI) to identify Recognized Environmental Conditions (RECs) associated with the Property. This information should be provided to the Environmental Professional conducting the Phase I ESA so that a complete report can be issued.

The User may decide not to provide this information to the Environmental Professional; however, the absence of the information will be noted in the Phase I ESA report and may affect assessment conclusions. Under these circumstances, it will be the User's responsibility to determine if the Phase I ESA results, combined with results from the tasks described below, is sufficient to satisfy the requirements of All Appropriate Inquiry as defined by federal statute and regulation.

Instructions:

1. Fill in all blanks.
2. Indicate "NA" (not applicable), if appropriate.
3. Attach additional pages with your signature if additional space is required.

Property Name: _____

Property Location: 171 W. Michigan, Battle Creek

County: Calhoun State: MI

Questionnaire Completed By/Title: Jon Bartlett, Executive Director

Company/ Phone Number: 269-781-0807

On Behalf Of (if applicable): Calhoun County Land Bank Authority

Planned Date of Purchase/Lease (circle one): 12/22/2010

Time Period of Site Knowledge: Since 12/22/2010

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1. Reason for Phase I ESA

The User of the requested Phase I ESA must make the reason for the Phase I ESA known to the Environmental Professional. Otherwise, it must be assumed that the reason is to qualify for an LLP to CERCLA liability. Please indicate the reason for this Phase I ESA of the Property.

- [X] Due diligence/liability protection for purchase of the Property
- [ ] Due diligence/liability protection for lease of the Property
- [ ] Mortgage loan or refinance
- [ ] Foreclosure
- [ ] Other; explain _____

2. Recorded Environmental Cleanup Liens and Activity/Use Limitations

The User is responsible to ascertain, through personal knowledge and/or a review of reasonably ascertainable recorded land and judicial records, if any environmental liens have been filed on the Property and if any activity or use limitations (AULs) have been placed on the Property because of environmental impact. You may engage a title company or other capable professional to undertake the review of reasonably ascertainable records on your behalf.

Have you conducted, or arranged to have conducted, a review of land title records in which recorded liens and activity/use restrictions would be revealed?

[ ] Yes [X] No

If yes, please specify who conducted the review:_____

_____

If yes, please specify the types and locations of records reviewed:_____

_____

Based on your personal knowledge and reviews of title records, are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state, or local law?

[ ] Yes [X] No

If yes, explain briefly:_____

_____

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Based on your personal knowledge and reviews of title records, are you aware of any activity and/or use limitations, such as engineering controls, land use restrictions, or institutional controls, that are in place at the property and/or have been filed or recorded in a registry under federal, tribal, state, or local law?

☐ Yes ☒ No

If yes, identify the land use limitations/restrictions:_____

3. Specialized Knowledge and Experience

Any specialized knowledge or experience of the User that could indicate, or create suspicion of, the presence environmental contamination on the Property must be considered as part of the AAI process. Specialized knowledge or experience includes familiarity with historic activities on the Property that could result in environmental impact, personal knowledge or experience that would indicate a risk of environmental impact associated with past Property uses, knowledge of the environmental history of the Property, and any other information that could indicate environmental impact or threat of environmental impact on the Property.

As the User of this environmental site assessment, do you have any specialized knowledge or experience related to the Property or adjoining properties?

☐ Yes ☒ No

If yes, explain briefly:_____

4. Relationship of Purchase Price to Value

Historically, environmentally contaminated properties often have been sold at prices below market value to entice buyers to acquire the property, contamination, and resultant liabilities; therefore, if a property's sale price is significantly below market value without any obvious impairments or reasons for the reduced price, the potential for environmental impact as a cause of the reduced price must be evaluated.

Does the purchase price being paid for this Property reasonably reflect the fair market value of the property?

☐ Yes ☒ No

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If there is a significant negative difference, can you identify the reason for the reduced price versus value? If "No" the Property may be assumed to be contaminated.

☒ Yes ☐ No

If yes, explain briefly: See attached.

5. Commonly Known or Reasonably Ascertainable Information

Have you become aware, through conversations, rumor, etc., of any commonly known or reasonably ascertainable information within the local community that would indicate the Property could be contaminated (e.g. types of past uses, presence of storage tanks, use of chemicals, environmental cleanups, etc.) or that any past event (e.g. fire, chemical spill, accident, etc.) could have resulted in environmental impact of the Property or adjoining properties.

☐ Yes ☒ No

If yes, explain briefly:

6. Proceedings Involving the Property

Do you, the User of this environmental site assessment, based on your knowledge and experience related to the property, have any knowledge of any of the following:

- Pending, threatened, or past litigation related to hazardous substances or petroleum products in, on or arising from the Property?

  ☐ Yes ☒ No

  If yes, explain briefly:

- Pending, threatened, or past administrative proceedings related to hazardous substances or petroleum products in, on or arising from the Property?

  ☐ Yes ☒ No

  If yes, explain briefly:

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- Notices from any governmental entity regarding any possible violation of environmental laws or regulations or possible liability relating to hazardous substances or petroleum products in, on or arising from the Property?

  ☐ Yes ☒ No

  If yes, explain briefly:_____

Jon Bartlett
Printed Name

Signature

1-13-2011
Date

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SME Project No. _____

PHASE I ENVIRONMENTAL ASSESSMENT (ESA)
PROPERTY OWNER/OCCUPANT QUESTIONNAIRE

This questionnaire concerns the current and historical uses and conditions of the referenced property and will be included within the Phase I ESA report. Questionnaire answers should be based upon the owner/occupant's reasonable knowledge of current and historical use and activities at the property.

Instructions:

1. Fill in all blanks.
2. Indicate "NA" (not applicable), if appropriate.
3. Attach additional pages with your signature if additional space is required.

Property Name: 171 W. Michigan

Property Location: 171 W. Michigan

County: Calhoun State: MI

Questionnaire Completed By/Title: Cheryl Beard, Tech. mktg Dir

Company/ Phone Number: Battle Creek Unlimited 269.441.1664

On Behalf Of (if applicable): _____

Year of ~~Purchase/Lease~~ (circle one): donation 2009

Time Period of Site Knowledge: 5 years

Names/Phone Numbers of Former Owners/Occupants:

Owners: Kellogg Company

Occupants: 0 occupy

Names/Phone Numbers of other persons who have knowledge of property history: _____

Property Description and Use

1. Provide a general description of the property:

☐ Undeveloped ☒ Vacant ☐ Wooded ☐ Buildings ☐ Other

2. Describe the structures present on the property (number, size, and construction date):

3 story former museum

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SME Project No. _____

3. Identify utilities available to the property (check box and indicate provider):
   - ☒ Electric: Consumers
   - ☒ Gas: Semco
   - ☒ Sanitary Sewer: City of Battle Creek
   - ☒ Storm Sewer: "
   - ☒ Municipal Water: "

4. Are there any easements at the property?:

   ☐ Yes ☒ No

   If yes, where are the easements located?:_____

5. To the best of your knowledge, identify if the following were formerly (F) or are currently (C) present on the property. Select NA if not applicable to the property.

F	C	NA	On-site water supply wells
F	C	NA	Septic fields, drain fields, or dry wells
F	C	NA	Abandoned wells
F	C	NA	Lagoons, settling ponds
F	C	NA	Monitoring wells
F	C	NA	Underground sumps, lines, basins, or tanks
F	C	NA	Aboveground storage tanks (ASTs)
F	C	NA	Transformers or capacitors
F	C	NA	Other PCB containing equipment
F	C	NA	Mines or pits
F	C	NA	Hidden chemical materials or wastes
F	C	NA	Dumps or landfills
F	C	NA	Oil or gas wells or test holes
F	C	NA	Unusual fill areas, such as foundry sand, etc.
F	C	NA	Barrel or drum storage areas

6. What is the general use of property:

   ☐ Industrial ☒ Commercial ☐ Residential ☐ Other

7. What products/services are produced/provided at the property?: vacant

8. What type of on-site processes are used at the property?: Vacant

9. What types of equipment are used at the property?: Vacant

10. What raw materials are used at the property?: Vacant

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SME Project No. _____

11. Are there any environmental permits (e.g. solid waste disposal, hazardous waste disposal, wastewater, NPDES, etc.) associated with the property?:

☐ Yes ☒ No

If yes, list the applicable permit(s):_____

Property and Adjoining Properties - Current and Historical Use

12. Are there any liquid or solid wastes generated at the property?

☐ Yes ☒ No ☐ Unknown

If yes, please list the monthly volume generated and explain disposal method:_____

13. Is the property or any adjoining property currently used for an industrial use?

☐ Yes ☒ No ☐ Unknown

☐ Property ☐ Adjoining

If yes, explain briefly:_____

14. Is the property or any adjoining property currently used as a gasoline station, vehicle repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?

☐ Yes ☒ No ☐ Unknown

☐ Property ☐ Adjoining

If yes, explain briefly:_____

Please complete the current land use table below:

	Name/Owner	Land Use
Property		
North adjoining properties	Summit Pointe	Commercial
South adjoining properties	Kellogg Company	Green space
East adjoining properties	Battle Creek Unlimited	vacant
West adjoining properties	?	?

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15. Has the property or any adjoining property been used for an industrial use in the past?

☐ Yes ☐ No ☒ Unknown

☐ Property ☐ Adjoining

If yes, explain briefly:_____

16. Has the property or any adjoining property historically been used as a gasoline station, vehicle repair facility, commercial printing facility, dry cleaners, photo developing laboratory, junkyard or landfill, or as a waste treatment, storage, disposal, processing, or recycling facility?

☐ Yes ☐ No ☒ Unknown

☐ Property ☐ Adjoining

If yes, explain briefly:_____

Please complete the historical land use table below:

	Owner	Use	Dates
Previous use of Property	?	?	?
Previous use of properties to north			
Previous use of properties to south			
Previous use of properties to east			
Previous use of properties to west			

Current and Historical Property Conditions

17. Are there currently, or have there been previously, any damaged or discarded automotive or industrial batteries, pesticides, paints, or other chemicals (individual containers greater than 5 gallons or greater than 50 gallons total) stored on or used at the property or at the facility?

☐ Yes ☒ No ☐ Unknown

If yes, explain briefly:_____

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SME Project No. _____

18. Are there currently, or have there been previously, any industrial drums (typically 55-gallon) or sacks of chemicals stored on the property or at the facility?

☐ Yes ☐ No ☑ Unknown

If yes, describe the chemicals stored on the property (volume, contents and dates of storage):_

19. Have any hazardous substances, petroleum products, unidentified waste materials, tires, automotive or industrial batteries, or any other waste materials been dumped above grade, buried, and/or burned/incinerated on the property?

☐ Yes ☐ No ☑ Unknown

If yes, identify the location and date(s):_____

20. Are there currently, or have there been previously, any registered or unregistered storage tanks (aboveground or underground) located on the property?

☐ Yes ☑ No ☐ Unknown

If yes, identify the location, date(s) of use, and date(s) of removal (if applicable):_____

21. Are there currently, or have there been previously, any vent pipes, fill pipes protruding from the ground, areas of patched concrete or asphalt, or access ways indicating an underground storage tank on the property?

☐ Yes ☑ No ☐ Unknown

If yes, identify the location:_____

22. Are there transformers, capacitors, or hydraulic equipment on the property?

☐ Yes ☑ No ☐ Unknown

If yes, are there any records indicating the presence of PCBs?: no

23. Is there currently, or has there been previously, any stained soil on the property?

☐ Yes ☑ No ☐ Unknown

If yes, identify the location of the stained soil and date(s) it was present on the property:_____

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24. Has fill dirt been brought onto the property that is of unknown origin? Has fill dirt been brought onto the property that originated from a contaminated site?

☐ Yes ☒ No ☐ Unknown

If yes, identify the date and location of fill placement:_____

_____

25. Are there currently, or have there been previously, any leaks, spills, or staining by substances other than water, or foul odors, associated with any flooring, drains, walls, ceilings, or exposed grounds on the property?

☐ Yes ☐ No ☒ Unknown

If yes, identify the location and dates:_____

_____

26. Are there currently, or have there been previously, any pits, ponds, or lagoons associated with waste treatment or disposal located on the property?

☐ Yes ☒ No ☐ Unknown

If yes, identify the location and dates:_____

_____

27. Excluding storm water and sanitary waste discharge into an existing storm/sanitary sewer, does the property discharge wastewater on or adjacent to the property?

☐ Yes ☐ No ☒ Unknown

If yes, describe the type of wastewater and identify discharge location:_____

_____

_____

28. If the property is served by a private well or non-public water system, have contaminants been identified in the well or system that exceed applicable guidelines? Has the well been designated as contaminated by any government environmental/health agency?

☐ Yes ☒ No ☐ Unknown

If yes, identify the contaminants and dates of exceedances:_____

_____

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SME Project No. _____

Previously Identified Environmental Conditions

29. Have you been informed of the current or past existence of hazardous substances, petroleum products, or environmental violations with respect to the property or any facility located on the property?

☐ Yes ☐ No ☒ Unknown

If yes, briefly explain:_____

30. Do you have any knowledge of any environmental site assessment of the property that indicated the presence of hazardous substances or petroleum products on, or contamination of, the property?

☐ Yes ☐ No ☒ Unknown

If yes, briefly explain:_____

31. If the property is in Michigan, has a Baseline Environmental Assessment (BEA) been prepared for the property?

☒ Yes ☐ No ☐ Unknown

If yes, briefly explain: Former industrial site

32. Do you know of any pending, threatened, or past lawsuits or administrative proceedings concerning the release of any hazardous substances or petroleum products involving the property or any facility located on the property?

☐ Yes ☒ No ☐ Unknown

If yes, briefly explain:_____

33. Do you have any knowledge of environmental liens or government notification relating to past or recurrent violations of environmental laws with respect to the property or any facility located on the property?

☐ Yes ☒ No ☐ Unknown

If yes, briefly explain:_____

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SME Project No. _____

34. Are you aware of any activity and land use limitations (engineering controls or institutional controls/land use restrictions) that are in place at the property and/or have been filed or recorded in a registry under federal, tribal, state, or local law?

☐ Yes ☑ No ☐ Unknown

If yes, identify limitation/restriction:_____

Cheryl BEARD
Printed Name

CL Beard
Signature

BAttle Creek Unlimited
Company

Tech. mKting Director
Title

1.10.11
Date

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APPENDIX E

REGULATORY RECORDS DOCUMENTATION

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FirstSearch Technology Corporation

Environmental FirstSearch™ Report

Target Property:

171 WEST MICHIGAN AVE

BATTLE CREEK MI 49017

Job Number: KE60951C-13

PREPARED FOR:

12-30-10

Tel: (781) 551-0470 *Fax: (781) 551-0471*

Environmental FirstSearch is a registered trademark of FirstSearch Technology Corporation. All rights reserved.

Environmental FirstSearch
Search Summary Report

Target Site: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

FirstSearch Summary

Database	Sel	Updated	Radius	Site	1/8	1/4	1/2	1/2>	ZIP	TOTALS
NPL	Y	10-21-10	1.00	0	0	0	0	0	0	0
NPL Delisted	Y	10-21-10	0.50	0	0	0	0	0	0	0
CERCLIS	Y	11-30-10	0.50	0	0	1	0	0	0	1
NFRAP	Y	11-30-10	0.50	0	0	1	0	0	2	3
RCRA COR ACT	Y	11-10-10	1.00	0	0	0	0	0	0	0
RCRA TSD	Y	11-10-10	0.50	0	0	1	0	0	0	1
RCRA GEN	Y	11-10-10	0.25	0	3	10	0	0	1	14
Federal Brownfield	Y	10-01-10	0.50	0	0	0	1	0	0	1
ERNS	Y	10-21-10	0.12	0	0	0	0	0	0	0
Tribal Lands	Y	12-01-05	1.00	0	0	0	0	0	1	1
State/Tribal Sites	Y	10-18-10	1.00	0	0	2	2	6	3	13
State Spills 90	Y	NA	0.12	0	0	0	0	0	0	0
State/Tribal SWL	Y	08-06-03	0.50	0	0	0	0	0	2	2
State/Tribal LUST	Y	10-01-10	0.50	0	1	6	15	0	0	22
State/Tribal UST/AST	Y	10-01-10	0.25	0	2	11	0	0	0	13
State/Tribal EC	Y	NA	0.50	0	0	0	0	0	0	0
State/Tribal IC	Y	NA	0.25	0	0	0	0	0	0	0
State/Tribal VCP	Y	NA	0.50	0	0	0	0	0	0	0
State/Tribal Brownfields	Y	10-18-05	0.50	0	0	0	0	0	0	0
State Other	Y	06-07-10	0.25	0	3	2	0	0	0	5
Federal IC/EC	Y	11-04-10	0.50	0	0	0	0	0	0	0
-TOTALS-				0	9	34	18	6	9	76

Notice of Disclaimer

Due to the limitations, constraints, and inaccuracies and incompleteness of government information and computer mapping data currently available to FirstSearch Technology Corp., certain conventions have been utilized in preparing the locations of all federal, state and local agency sites residing in FirstSearch Technology Corp.'s databases. All EPA NPL and state landfill sites are depicted by a rectangle approximating their location and size. The boundaries of the rectangles represent the eastern and western most longitudes; the northern and southern most latitudes. As such, the mapped areas may exceed the actual areas and do not represent the actual boundaries of these properties. All other sites are depicted by a point representing their approximate address location and make no attempt to represent the actual areas of the associated property. Actual boundaries and locations of individual properties can be found in the files residing at the agency responsible for such information.

Waiver of Liability

Although FirstSearch Technology Corp. uses its best efforts to research the actual location of each site, FirstSearch Technology Corp. does not and can not warrant the accuracy of these sites with regard to exact location and size. All authorized users of FirstSearch Technology Corp.'s services proceeding are signifying an understanding of FirstSeaarch Technology Corp.'s searching and mapping conventions, and agree to waive any and all liability claims associated with search and map results showing incomplete and or inaccurate site locations.

Environmental FirstSearch
Sites Summary Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

TOTAL: 76 **GEOCODED:** 67 **NON GEOCODED:** 9 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
1	OTHER	HB SHERMAN ✓ BEA-0907-203/BEA	171 W MICHIGAN AVE BATTLE CREEK MI 49014	0.06 NE	+ 16	1
1	OTHER	HB SHERMAN ✓ BEA-KALA-1386/BEA	171 W MICHIGAN AVE BATTLE CREEK MI 49014	0.06 NE	+ 16	2
2	UST	ROBERT D.& CAROL B. WOLFE 0033393/CLOSED	172 WEST MICHIGAN AVE BATTLE CREEK MI 94111	0.07 NE	+ 16	3
3	RCRAGN	MAACO AUTO PAINTING MID038615472/SGN	194 MICHIGAN AVE W BATTLE CREEK MI 49014	0.08 NW	+ 16	4
3	RCRAGN	WOLFE AND ASSOC MID985578038/SGN	194 MICHIGAN AVE W BATTLE CREEK MI 49014	0.08 NW	+ 16	5
4	OTHER	H.B. SHERMAN BEA-2945/BEA	169 WEST MICHIGAN BATTLE CREEK MI	0.09 NW	+ 16	6
4	LUST	CITY OF BATTLE CREEK H.B. SHERMA C-1734-91/OPEN	207 MICHIGAN AVE W BATTLE CREEK MI 99999	0.09 NW	+ 16	7
5	UST	BURNHAM BROOK COMMUNITY CENTER HOL 0042093/CLOSED	200 W MICHIGAN AVE BATTLE CREEK MI 49015	0.10 NW	+ 16	8
6	RCRAGN	BURNAM BROOK CTR MID985664747/TR	245 WEST MICHIGAN AVE BATTLE CREEK MI 49017	0.11 NW	+ 16	9
7	NFRAP	MICHNER PLATING CO/UNITED STEEL WI MID006571087/NFRAP-NFRAP-N	105 S WASHINGTON BATTLE CREEK MI 49015	0.13 NW	+ 16	10
7	STATE	UNITED STEEL MICHNER PLATING 13000041/EVAL IN PROGRESS	105 S WASHINGTON BATTLE CREEK MI 49015	0.13 NW	+ 16	11
7	UST	UNITED STEEL & WIRE CO 0036816/CLOSED	105 S WASHINGTON BATTLE CREEK MI 49015	0.13 NW	+ 16	12
7	LUST	UNITED STEEL & WIRE CO C-0394-94/OPEN	105 S WASHINGTON BATTLE CREEK MI 49015	0.13 NW	+ 16	13
8	RCRAGN	BATTLE CREEK HEBBLES MID985572874/SGN	123 WEST MICHIGAN AVE BATTLE CREEK MI 49017	0.13 NE	- 1	14
8	UST	CITY OF BATTLE CREEK 0037129/CLOSED	123 WEST MICHIGAN AVE BATTLE CREEK MI 49016	0.13 NE	- 1	15
8	LUST	OLD HEBBLES SITE AREA C-0640-89/OPEN	123 WEST MICHIGAN AVE BATTLE CREEK MI 49016	0.13 NE	- 1	17
8	LUST	OLD HEBBLES SITE AREA C-2207-92/OPEN	123 WEST MICHIGAN AVE BATTLE CREEK MI 49016	0.13 NE	- 1	18
9	CERCLIS	MICHIGAN GRAVURE CORPORATION MIN000509087/NOT PROPOSED	301 W MICHIGAN AVE BATTLE CREEK MI 49014	0.14 NW	+ 16	19
9	RCRAGN	IVA/MICHIGAN MIR000011130/VGN	301 MICHIGAN AVE W BATTLE CREEK MI 49037	0.14 NW	+ 16	20
10	UST	ARCHITECTS INC 0037560/CLOSED	208 WEST VAN BUREN BATTLE CREEK MI 49017	0.14 NE	+ 16	21

Environmental FirstSearch
Sites Summary Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

TOTAL: 76 **GEOCODED:** 67 **NON GEOCODED:** 9 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
11	RCRAGN	BATTLE CREEK CITY OF MID985616556/SGN	100 MICHIGAN AVE W BATTLE CREEK MI 49014	0.16 SE	- 6	22
12	UST	CITY OF BATTLE CREEK 0036914/CLOSED	114 WEST MICHIGAN BATTLE CREEK MI 49015	0.19 SE	- 5	23
13	RCRAGN	FEDERATED PUBLICATIONS INC MID005357116/VGN	155 W VAN BUREN BATTLE CREEK MI 49017	0.20 NE	+ 16	24
13	UST	FEDERATED PUBL. DBA B C ENQUIRER 0033866/CLOSED	155 W VAN BUREN ST BATTLE CREEK MI 49017	0.20 NE	+ 16	26
13	LUST	FEDERATED PUBL. DBA B C ENQUIRER C-0953-90/CLOSED	155 W VAN BUREN ST BATTLE CREEK MI 49017	0.20 NE	+ 16	27
14	RCRAGN	LASSEN STAN PONT CAD INC MID985653872/VGN	320 WEST MICHIGAN AVE BATTLE CREEK MI 49037	0.20 NW	+ 16	28
14	UST	0014476/ACTIVE	320 WEST MICHIGAN AVE BATTLE CREEK MI 49017	0.20 NW	+ 16	29
14	LUST	STAN LASSEN PONTIAC/CADILLAC INC C-0361-85/CLOSED	320 WEST MICHIGAN AVE BATTLE CREEK MI 49017	0.20 NW	+ 16	32
15	OTHER	W.K. KELLOGG INSTITUTE BEA-2797/BEA	93 HAMBLIN AVE BATTLE CREEK MI 49017	0.20 SE	- 1	33
16	UST	RICHARD BRONSON 0039207/CLOSED	316 WEST VAN BUREN ST BATTLE CREEK MI 49017	0.21 NW	+ 21	34
17	RCRATSD	ENVIRONMENTAL DIAGNOSTICS MIR000023739/TSD	296 JACKSON ST W BATTLE CREEK MI 49017	0.22 NW	+ 13	36
17	RCRAGN	ENVIRONMENTAL DIAGNOSTICS MIR000023739/TRANSPORTER	296 JACKSON ST W BATTLE CREEK MI 49017	0.22 NW	+ 13	37
17	RCRAGN	MI DEPT/ENVIRONMENTAL QUALITY - RR MID000259267/LGN	296 JACKSON ST W BATTLE CREEK MI 49017	0.22 NW	+ 13	38
18	STATE	BATTLE CREEK AQUATIC CENTER 13000311/INTER RESPONSE CON	HAMBLIN & MCCALMLY ST BATTLE CREEK MI 49017	0.23 SE	- 3	39
19	RCRAGN	BATTLE CREEK EQUIPMENT CO MID001957422/SGN	307 WEST JACKSON ST BATTLE CREEK MI 49017	0.23 NW	+ 11	40
19	UST	0011106/ACTIVE	307 WEST JACKSON ST BATTLE CREEK MI 49017	0.23 NW	+ 11	41
20	UST	FEDERAL CENTER 9184259/AST	50 N WASHINGTON BATTLE CREEK MI 49017	0.23 NW	+ 31	43
21	RCRAGN	REFUSE SERVICE INC MID062235973/TRANSPORTER	64 S MCCAMLY ST BATTLE CREEK MI 49017	0.24 SE	- 3	44
22	OTHER	HAMBLIN (235) AVENUE BEA-0102-37/BEA	235 HAMBLIN AVE BATTLE CREEK MI 49016	0.24 SW	- 3	45
22	UST	WAGNER-FLOOK BUILDERS INC 0001824/CLOSED	235 HAMBLIN AVE BATTLE CREEK MI 49015	0.24 SW	- 3	46

Environmental FirstSearch
Sites Summary Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

TOTAL: 76 **GEOCODED:** 67 **NON GEOCODED:** 9 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
22	LUST	WAGNER-FLOOK BUILDERS INC C-0846-97/CLOSED	235 HAMBLIN AVE BATTLE CREEK MI 49015	0.24 SW	- 3	47
23	RCRAGN	US POSTAL SVC BATTLE CREEK MAIN MIR000025593/VGN	90 S MCCAMLY ST BATTLE CREEK MI 49017	0.25 SE	- 4	48
23	UST	UNITED STATES POSTAL SERV 0010981/CLOSED	90 S MCCAMLY ST BATTLE CREEK MI 49016	0.25 SE	- 4	49
24	LUST	GENERAL SERVICES ADMINISTRATION C-2604-91/CLOSED	74 N WASHINGTON AVE BATTLE CREEK MI 49017	0.28 NW	+ 41	50
25	FEDBROWNFIELD	50 WEST MICHIGAN AVENUE 69598621-97941/EPA BROWNFIELD	50 W MICHIGAN AVE BATTLE CREEK MI 49017	0.30 SE	- 3	51
26	LUST	EQUIPMENT DIVISION C-0435-89/OPEN	356 W MICHIGAN AVE BATTLE CREEK MI 49017	0.35 NW	+ 20	52
26	LUST	EQUIPMENT DIVISION C-0445-89/OPEN	356 W MICHIGAN AVE BATTLE CREEK MI 49017	0.35 NW	+ 20	53
26	LUST	EQUIPMENT DIVISION C-0436-03/OPEN	356 W MICHIGAN AVE BATTLE CREEK MI 49017	0.35 NW	+ 20	54
27	LUST	ABANDONED BLDG C-0828-96/CLOSED	305 WEST HAMBLIN AVE BATTLE CREEK MI 49015	0.35 SW	- 1	55
28	LUST	W K KELLOGG INSTITUTE C-0998-92/OPEN	2 EAST HAMBLIN AVE BATTLE CREEK MI 49017	0.39 SE	- 1	56
29	LUST	UNION PUMP CO C-0062-98/CLOSED	87 CAPITAL AVE SW BATTLE CREEK MI 49015	0.40 SE	0	57
29	LUST	UNION PUMP CO C-1732-91/OPEN	87 CAPITAL AVE SW BATTLE CREEK MI 49015	0.40 SE	0	58
30	LUST	TRUMBULL SERVICE C-1195-91/OPEN	94 NORTH AVE BATTLE CREEK MI 49017	0.44 NE	+ 23	59
31	LUST	SENIOR OIL #12 C-0080-99/OPEN	170 CAPITAL AVE SW BATTLE CREEK MI 49015	0.45 SE	- 2	60
32	LUST	HERITAGE CHEVROLET, INC C-0015-91/CLOSED	350 W DICKMAN RD BATTLE CREEK MI 49015	0.46 SW	- 1	61
33	LUST	SHOULDICE BROS C-0987-90/CLOSED	400 WEST DICKMAN BATTLE CREEK MI 49015	0.48 SW	+ 1	62
34	LUST	KMART #4065 C-2413-90/CLOSED	200 CAPITAL AVE SW BATTLE CREEK MI 49015	0.49 SW	+ 3	63
35	STATE	BATTLE CREEK ADVENTIST HOSPITAL 13000273/INTER RESPONSE CON	165 WASHINGTON AVE N BATTLE CREEK MI 49016	0.49 NW	+ 58	64
35	LUST	FIELDSTONE CENTER C-1354-98/CLOSED	165 WASHINGTON AVE N BATTLE CREEK MI 49017	0.49 NW	+ 58	65
36	STATE	CITY OF BATTLE CREEK-KENDALL ST 13000304/INTER RESPONSE CON	NE CORNER KENDALL & HAMBLI BATTLE CREEK MI	0.49 NW	- 1	66

Environmental FirstSearch
Sites Summary Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

TOTAL: 76 **GEOCODED:** 67 **NON GEOCODED:** 9 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
37	LUST	DO BAR INC C-0305-94/OPEN	114 S KENDALL ST BATTLE CREEK MI 49015	0.50 SW	- 3	67
38	STATE	MI PAPERBOARD CORP 13000075/INTER RESPONSE CON	79 E FOUNTAIN ST BATTLE CREEK MI 49016	0.54 SE	+ 2	68
39	STATE	A.K. ZINN PROPERTY 13000361/INTER RESPONSE- NFA	160 S KENDALL ST BATTLE CREEK MI 49017	0.56 SW	+ 3	69
40	STATE	K & M SALVAGE 13000366/INTER RESPONSE- NFA	170 S KENDALL ST BATTLE CREEK MI 49017	0.56 SW	+ 4	70
41	STATE	SE MICHIGAN GAS - BATTLE CREEK MGP 13000369/EVAL IN PROGRESS	150 E FOUNTAIN ST BATTLE CREEK MI	0.58 SE	+ 3	71
42	STATE	169 E. STATE STREET 130191/EVAL/INTERIM RESP-PRP/OTH	169 EAST STATE ST BATTLE CREEK MI 49014	0.75 SE	+ 6	72
43	STATE	SHAY MOTOR CO 13000037/INTER RESPONSE- NFA	200 ELM ST BATTLE CREEK MI 49017	0.95 SE	- 1	73

Environmental FirstSearch
Sites Summary Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

TOTAL: 76 **GEOCODED:** 67 **NON GEOCODED:** 9 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.
	NFRAP	BATTLE CREEK SALT STORAGE MID981188030/NFRAP-NFRAP-N	BENNETT ST BATTLE CREEK MI 49016	NON GC	N/A	N/A
	NFRAP	MAIN STREET DUMP MID981187438/NFRAP-NFRAP-N	MAIN ST BATTLE CREEK MI 49017	NON GC	N/A	N/A
	RCRAGN	SPEEDWAY/SUPERAMERICA LLC MID985577279/VGN	390 MICHIGAN AVE E BATTLE CREEK MI 49017	NON GC	N/A	N/A
	STATE	MAIN ST DUMP 13000025/INTER RESPONSE CON	MAIN ST BATTLE CREEK MI 49017	NON GC	N/A	N/A
	STATE	MORGAN RD GW CONTAMINATION 13000186/DELISTED	MORGAN RD BATTLE CREEK MI -0-	NON GC	N/A	N/A
	STATE	PENNFIELD LANDFILL (FORMER) 13000386/INTER RESPONSE- NFA	JESSUP RD BATTLE CREEK MI	NON GC	N/A	N/A
	SWL	PENNFIELD LANDFILL 13000020/INACTIVE	EMMETT ST BATTLE CREEK MI	NON GC	N/A	N/A
	SWL	UNIVERSAL CRANE DUMP 13000021/INACTIVE	HUBBARD ROAD BATTLE CREEK MI	NON GC	N/A	N/A
	TRIBALLAND	BUREAU OF INDIAN AFFAIRS CONTACT I BIA-49017/	UNKNOWN MI 49017	NON GC	N/A	N/A

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

OTHER

SEARCH ID: 29 **DIST/DIR:** 0.06 NE **ELEVATION:** 840 **MAP ID:** 1

NAME:	HB SHERMAN	**REV:**	6/7/10
ADDRESS:	171 W MICHIGAN AVE	**ID1:**	BEA-0907-203
	BATTLE CREEK MI 49014	**ID2:**	1153
	CALHOUN	**STATUS:**	BEA
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

BEA NUMBER: 1153
DISTRICT: KALAMAZOO
DATE RECEIVED: 7/25/2007 12:59:00 AM
SUBMITTER NAME: KELLOGG COMPANY
PETITION DISCLOSURE: 0 - DISCLOSURE
PETITION DETERMINATION: NO REQUEST
CATEGORY: N - NO CHEMICAL
DETERMINATION 20107a: NO REQUEST
REVIEWER: BEUKEMAS
DIVISION ASSIGNED: STD - STORAGE TANK DIVISION

Environmental FirstSearch
Target Site Summary Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

TOTAL: 76 **GEOCODED:** 67 **NON GEOCODED:** 9 **SELECTED:** 0

Map ID	DB Type	Site Name/ID/Status	Address	Dist/Dir	ElevDiff	Page No.

No sites found for target address

Environmental FirstSearch
Site Information Report

Request Date:	12-30-10	**Search Type:**	COORD
Requestor Name:	SARA BALS	**Job Number:**	KE60951C-13
Standard:	AAI	**Filtered Report**	

Target Site: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

Demographics

Sites: 76 **Non-Geocoded:** 9 **Population:** NA

Radon: 0.7 - 14.9 PCI/L

Fire Insurance Map Coverage: Yes

Site Location

	Degrees (Decimal)	Degrees (Min/Sec)		UTMs
Longitude:	-85.188663	-85:11:19	**Easting:**	649257.132
Latitude:	42.322748	42:19:22	**Northing:**	4686986.342
Elevation:	824		**Zone:**	16

Comment

Comment:

Additional Requests/Services

Adjacent ZIP Codes:

ZIP Code	City Name	ST	Dist/Dir	Sel
49037	Battle Creek	MI	0	Y

Services:

	Requested?	Date
Fire Insurance Maps	Yes	12-30-10
Aerial Photographs	No	
Historical Topos	No	
City Directories	No	
Title Search/Env Liens	No	
Municipal Reports	No	
Online Topos	No	

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 46 **DIST/DIR:** 0.09 NW **ELEVATION:** 840 **MAP ID:** 4

NAME: CITY OF BATTLE CREEK H.B. SHERMA
ADDRESS: 207 MICHIGAN AVE W
BATTLE CREEK MI 99999
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-1734-91
ID2: 5-000913
STATUS: OPEN
PHONE:

SITE INFORMATION

OWNER INFORMATION

NRT OWNER
UNKNOWN
UNKNOWN MI 99999

OWNER COUNTRY USA
CONTACT PERSON:

FACILITY ID: 50000913
RELEASE SUBSTANCE: Unknown
RELEASE NUMBER: C-1734-91
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: AUG 20 1991
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

OTHER

SEARCH ID: 27 **DIST/DIR:** 0.09 NW **ELEVATION:** 840 **MAP ID:** 4

NAME:	H.B. SHERMAN	**REV:**	6/7/10
ADDRESS:	169 WEST MICHIGAN BATTLE CREEK MI CALHOUN	**ID1:**	BEA-2945
		ID2:	64
		STATUS:	BEA
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

BEA NUMBER: 64
DISTRICT: JACKSON
DATE RECEIVED: 4/7/1997
SUBMITTER NAME: KELLOGG HERITAGE CENTER FOUNDATION
PETITION DISCLOSURE: 0 - DISCLOSURE
PETITION DETERMINATION: NO REQUEST
CATEGORY: N - NO CHEMICAL
DETERMINATION 20107a: NO REQUEST
REVIEWER: TEMPPM
DIVISION ASSIGNED: STD - STORAGE TANK DIVISION

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

NFRAP

SEARCH ID: 2 **DIST/DIR:** 0.13 NW **ELEVATION:** 840 **MAP ID:** 7

NAME:	MICHNER PLATING CO/UNITED STEEL WIRE	**REV:**	11/30/10
ADDRESS:	105 S WASHINGTON	**ID1:**	MID006571087
	BATTLE CREEK MI 49015	**ID2:**	0502396
	CALHOUN	**STATUS:**	NFRAP-NFRAP-N
CONTACT:		**PHONE:**	
SOURCE:	EPA		

DESCRIPTION:

ACTION/QUALITY AGENCY/RPS START/RAA END
ARCHIVE SITE EPA In-House 12/11/1987

DISCOVERY EPA Fund-Financed 8/1/1980

HRS PACKAGE EPA Fund-Financed 12/8/1986

PRELIMINARY ASSESSMENT State, Fund Financed 12/11/1987
NFRAP: NO FURTHER REMEDIAL ACTION PLANNED

SITE INSPECTION EPA Fund-Financed 3/31/1986
HIGHER PRIORITY FOR FURTHER ASSESSMENT

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

STATE

SEARCH ID: 26 **DIST/DIR:** 0.13 NW **ELEVATION:** 840 **MAP ID:** 7

NAME: UNITED STEEL MICHNER PLATING
ADDRESS: 105 S WASHINGTON
BATTLE CREEK MI 49015
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/18/10
ID1: 13000041
ID2:
STATUS: EVAL IN PROGRESS
PHONE:

SITE INFORMATION

SIC CLASSIFICATION: PLATING & POLISHING
CONTAMINANTS: CN; PB; PCE; HYDROCARBONS; METALS
SCORE OUT OF 48: 34
SCORE DATE: 3/23/2004
TOWNSHIP: 02S
RANGE: 08W
SECTION: 01
WK QS: SW
WK QQS: SE
OVERALL DESCRIPTION: EVALUATION IN PROGRESS

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 41 **DIST/DIR:** 0.13 NW **ELEVATION:** 840 **MAP ID:** 7

NAME:	UNITED STEEL & WIRE CO	**REV:**	10/1/10
ADDRESS:	105 S WASHINGTON	**ID1:**	0036816
	BATTLE CREEK MI 49015	**ID2:**	00036816
	CALHOUN	**STATUS:**	CLOSED
CONTACT:	TIMOTHY R MURINE	**PHONE:**	(517) 787-3393
SOURCE:	MI DEQ		

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 2

OWNER: UNITED STEEL & WIRE CO

4909 WAYNE RD
BATTLE CREEK MI

PHONE: (616) 962-5571

TANK INFORMATION:

TANK ID: 1
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 500
INSTALLATION DATE: JAN 1 1965
PRODUCT: GASOLINE
REMOVED/CLOSED: OCT 13 1995
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: BARE STEEL
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

TANK ID: 2
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 20000
INSTALLATION DATE: JAN 1 1965
PRODUCT: HAZARDOUS SUBSTANCE
REMOVED/CLOSED: MAY 17 1994
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: BARE STEEL
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 64 **DIST/DIR:** 0.13 NW **ELEVATION:** 840 **MAP ID:** 7

NAME:	UNITED STEEL & WIRE CO	**REV:**	10/1/10
ADDRESS:	105 S WASHINGTON	**ID1:**	C-0394-94
	BATTLE CREEK MI 49015	**ID2:**	0-036816
	CALHOUN	**STATUS:**	OPEN
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

OWNER INFORMATION

UNITED STEEL & WIRE CO
4909 WAYNE RD
BATTLE CREEK MI 49015-1023

OWNER COUNTRY USA
CONTACT PERSON:
(616) 962-5571

FACILITY ID: 00036816
RELEASE SUBSTANCE: Other
RELEASE NUMBER: C-0394-94
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: MAY 3 1995
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 6 **DIST/DIR:** 0.13 NE **ELEVATION:** 823 **MAP ID:** 8

NAME:	BATTLE CREEK HEBBLES	**REV:**	9/9/03
ADDRESS:	123 WEST MICHIGAN AVE	**ID1:**	MID985572874
	BATTLE CREEK MI 49017	**ID2:**	
	CALHOUN	**STATUS:**	SGN
CONTACT:	JANE PARKS	**PHONE:**	6169663390
SOURCE:	EPA		

SITE INFORMATION

UNIVERSE TYPE:

SQG - SMALL QUANTITY GENERATOR: GENERATES 100 - 1000 KG/MONTH OF HAZARDOUS WASTE

SIC INFORMATION:

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 35 **DIST/DIR:** 0.13 NE **ELEVATION:** 823 **MAP ID:** 8

NAME: CITY OF BATTLE CREEK
ADDRESS: 123 WEST MICHIGAN AVE
BATTLE CREEK MI 49016
CALHOUN
CONTACT: JANE PARKS
SOURCE: MI DEQ

REV: 10/1/10
ID1: 0037129
ID2: 00037129
STATUS: CLOSED
PHONE: (616) 966-3390

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 7

OWNER: CITY OF BATTLE CREEK

103 E MICHIGAN
BATTLE CREEK MI

PHONE: (616) 966-3000

TANK INFORMATION:

TANK ID: 1
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE:
PRODUCT: UNKNOWN
REMOVED/CLOSED: DEC 10 1992
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

TANK ID: 2
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE:
PRODUCT: UNKNOWN
REMOVED/CLOSED: DEC 10 1992
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

TANK ID: 3
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE:
PRODUCT: UNKNOWN
REMOVED/CLOSED: DEC 19 1982
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 35 **DIST/DIR:** 0.13 NE **ELEVATION:** 823 **MAP ID:** 8

NAME:	CITY OF BATTLE CREEK	**REV:**	10/1/10
ADDRESS:	123 WEST MICHIGAN AVE	**ID1:**	0037129
	BATTLE CREEK MI 49016	**ID2:**	00037129
	CALHOUN	**STATUS:**	CLOSED
CONTACT:	JANE PARKS	**PHONE:**	(616) 966-3390
SOURCE:	MI DEQ		

TANK ID: 4
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE:
PRODUCT: UNKNOWN
REMOVED/CLOSED: DEC 10 1992
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

TANK ID: 5
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE:
PRODUCT: UNKNOWN
REMOVED/CLOSED: DEC 10 1992
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

TANK ID: 6
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE:
PRODUCT: UNKNOWN
REMOVED/CLOSED: DEC 10 1992
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

TANK ID: 7
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE:
PRODUCT: UNKNOWN
REMOVED/CLOSED: DEC 10 1992
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 56 **DIST/DIR:** 0.13 NE **ELEVATION:** 823 **MAP ID:** 8

NAME: OLD HEBBLES SITE AREA
ADDRESS: 123 WEST MICHIGAN AVE
BATTLE CREEK MI 49016
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-0640-89
ID2: 0-037129
STATUS: OPEN
PHONE:

SITE INFORMATION

OWNER INFORMATION

CITY OF BATTLE CREEK
103 E MICHIGAN
BATTLE CREEK MI 49016

OWNER COUNTRY USA
CONTACT PERSON:
(616) 966-3000

FACILITY ID: 00037129
RELEASE SUBSTANCE:
RELEASE NUMBER: C-0640-89
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: OCT 6 1989
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 57 **DIST/DIR:** 0.13 NE **ELEVATION:** 823 **MAP ID:** 8

NAME:	OLD HEBBLES SITE AREA	**REV:**	10/1/10
ADDRESS:	123 WEST MICHIGAN AVE	**ID1:**	C-2207-92
	BATTLE CREEK MI 49016	**ID2:**	0-037129
	CALHOUN	**STATUS:**	OPEN
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

OWNER INFORMATION

CITY OF BATTLE CREEK
103 E MICHIGAN
BATTLE CREEK MI 49016

OWNER COUNTRY USA
CONTACT PERSON:
(616) 966-3000

FACILITY ID: 00037129
RELEASE SUBSTANCE: Other
RELEASE NUMBER: C-2207-92
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: DEC 10 1992
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

CERCLIS

SEARCH ID: 1 **DIST/DIR:** 0.14 NW **ELEVATION:** 840 **MAP ID:** 9

NAME:	MICHIGAN GRAVURE CORPORATION	**REV:**	11/30/10
ADDRESS:	301 W MICHIGAN AVE	**ID1:**	MIN000509087
	BATTLE CREEK MI 49014	**ID2:**	0509087
	CALHOUN	**STATUS:**	NOT PROPOSED
CONTACT:	5273694	**PHONE:**	5273694
SOURCE:	EPA		

ACTION/QUALITY AGENCY/RPS START/RAA END

notice letters issued Federal Enforcement 11/25/2003

notice letters issued Federal Enforcement 12/7/2005

issue request letters (104e) Federal Enforcement 2/3/2006

non-national priorities list potentially responsible party search Federal Enforcement 7/10/2007

claim in bankruptcy proceeding Federal Enforcement 6/30/2004 3/16/2005

consent agreement (administrative) Federal Enforcement 3/16/2005

removal EPA Fund-Financed 5/6/2004 8/4/2004
Cleaned up Primary

DESCRIPTION:
The MDEQ referred the site to the USEPA to conduct a Site Assessment and possible Removal Action based on hazardous waste inspections at the facility. MDEQ has been unable to compel compliance on the part of the building owner to remove and dispose of 28 drums of Copper, Sulfate, 3 large tank with dried sludge, and a number of other containers of unidentified substances.

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 4 **DIST/DIR:** 0.16 SE **ELEVATION:** 818 **MAP ID:** 11

NAME:	BATTLE CREEK CITY OF	**REV:**	9/9/03
ADDRESS:	100 MICHIGAN AVE W	**ID1:**	MID985616556
	BATTLE CREEK MI 49014	**ID2:**	
	CALHOUN	**STATUS:**	SGN
CONTACT:	JANE PARKS	**PHONE:**	6169663390
SOURCE:	EPA		

SITE INFORMATION

UNIVERSE TYPE:

SQG - SMALL QUANTITY GENERATOR: GENERATES 100 - 1000 KG/MONTH OF HAZARDOUS WASTE

SIC INFORMATION:

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 34 **DIST/DIR:** 0.19 SE **ELEVATION:** 819 **MAP ID:** 12

NAME: CITY OF BATTLE CREEK
ADDRESS: 114 WEST MICHIGAN
BATTLE CREEK MI 49015
CALHOUN
CONTACT: JANE PARKS
SOURCE: MI DEQ

REV: 10/1/10
ID1: 0036914
ID2: 00036914
STATUS: CLOSED
PHONE: (616) 966-3390

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 2

OWNER: CITY OF BATTLE CREEK

RM 200 TERMINAL BLDG
BATTLE CREEK MI

PHONE: (616) 966-3390

TANK INFORMATION:

TANK ID: 1
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE:
PRODUCT: GASOLINE
REMOVED/CLOSED: SEP 29 1992
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: BARE STEEL
PIPE TYPE: SUCTION: NO VALVE AT TANK
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

TANK ID: 2
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE:
PRODUCT: GASOLINE
REMOVED/CLOSED: SEP 29 1992
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: BARE STEEL
PIPE TYPE: SUCTION: NO VALVE AT TANK
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 9 **DIST/DIR:** 0.20 NE **ELEVATION:** 840 **MAP ID:** 13

NAME:	FEDERATED PUBLICATIONS INC	**REV:**	11/10/10
ADDRESS:	155 W VAN BUREN	**ID1:**	MID005357116
	BATTLE CREEK MI 49017	**ID2:**	
	CALHOUN	**STATUS:**	VGN
CONTACT:		**PHONE:**	
SOURCE:	EPA		

SITE INFORMATION

CONTACT INFORMATION: TIM EBRIGHT
155 W VAN BUREN
BATTLE CREEK MI 49017

PHONE: 2699660650

UNIVERSE INFORMATION:

GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

GPRA PERMIT: N - NO
GPRA POST CLOSURE: N - NO
GPRA CA: N - NO
GPRA COMPLIANCE MONITORING & ENFORCEMENT: N - NO

SUBJECT TO CORRECTIVE ACTION (SUBJCA)

SUBJCA: N - NO
SUBJCA TSD 3004: N - NO
SUBJCA NON TSD: N - NO

SIGNIFICANT NON-COMPLIANCE(SNC): N - NO
BEGINNING OF THE YEAR SNC: N - NO
PERMIT WORKLOAD: -----
CLOSURE WORKLOAD: -----
POST CLOSURE WORKLOAD: -----
PERMITTING /CLOSURE/POST-CLOSURE PROGRESS: -----
CORRECTIVE ACTION WORKLOAD: N - NO
GENERATOR STATUS: SQG - SMALL QUANTITY GENERATOR: GENERATES 100 - 1000 KG/MONTH OF HAZARDOUS WASTE

NAIC INFORMATION

51111 - NEWSPAPER PUBLISHERS

ENFORCEMENT INFORMATION:

AGENCY: S - STATE DATE: 4/28/1999
TYPE: 120 - WRITTEN INFORMAL

VIOLATION INFORMATION:

VIOLATION NUMBER: 0001 RESPONSIBLE: S - STATE
DETERMINED: 4/28/1999 DETERMINED BY: S - STATE
CITATION:
RESOLVED: 6/10/1999
TYPE: GENERATOR-PRE-TRANSPORT REQUIREMENTS

VIOLATION NUMBER: 0002 RESPONSIBLE: S - STATE
DETERMINED: 4/28/1999 DETERMINED BY: S - STATE
CITATION:
RESOLVED: 6/10/1999

- Continued on next page -

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 9 **DIST/DIR:** 0.20 NE **ELEVATION:** 840 **MAP ID:** 13

NAME:	FEDERATED PUBLICATIONS INC	**REV:**	11/10/10
ADDRESS:	155 W VAN BUREN	**ID1:**	MID005357116
	BATTLE CREEK MI 49017	**ID2:**	
	CALHOUN	**STATUS:**	VGN
CONTACT:		**PHONE:**	
SOURCE:	EPA		

TYPE: GENERATOR-PRE-TRANSPORT REQUIREMENTS

VIOLATION NUMBER: 0003 RESPONSIBLE: S - STATE
DETERMINED: 4/28/1999 DETERMINED BY: S - STATE
CITATION:
RESOLVED: 6/10/1999
TYPE: GENERATOR-PRE-TRANSPORT REQUIREMENTS

VIOLATION NUMBER: 0004 RESPONSIBLE: S - STATE
DETERMINED: 4/28/1999 DETERMINED BY: S - STATE
CITATION:
RESOLVED: 6/10/1999

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 37 **DIST/DIR:** 0.20 NE **ELEVATION:** 840 **MAP ID:** 13

NAME:	FEDERATED PUBL. DBA B C ENQUIRER	**REV:**	10/1/10
ADDRESS:	155 W VAN BUREN ST	**ID1:**	0033866
	BATTLE CREEK MI 49017	**ID2:**	00033866
	CALHOUN	**STATUS:**	CLOSED
CONTACT:	GERALD D. HECHT	**PHONE:**	(616) 964-7161
SOURCE:	MI DEQ		

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 1

OWNER: FEDERATED PUBL. DBA B C ENQUIRER

155 VAN BUREN ST W
BATTLE CREEK MI

PHONE: (616) 964-7161

TANK INFORMATION:

TANK ID: 1
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1500
INSTALLATION DATE:
PRODUCT: UNK
REMOVED/CLOSED: JUN 28 1990
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 51 **DIST/DIR:** 0.20 NE **ELEVATION:** 840 **MAP ID:** 13

NAME: FEDERATED PUBL. DBA B C ENQUIRER
ADDRESS: 155 W VAN BUREN ST
BATTLE CREEK MI 49017
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-0953-90
ID2: 0-033866
STATUS: CLOSED
PHONE:

SITE INFORMATION

OWNER INFORMATION

FEDERATED PUBL. DBA B C ENQUIRER
155 VAN BUREN ST W
BATTLE CREEK MI 49017-3002

OWNER COUNTRY USA
CONTACT PERSON:
(616) 964-7161

FACILITY ID: 00033866
RELEASE SUBSTANCE:
RELEASE NUMBER: C-0953-90
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: 6/12/1990
RELEASE STATUS: CLOSED
RELEASE CLOSED DATE: MAR 15 1997

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 11 **DIST/DIR:** 0.20 NW **ELEVATION:** 840 **MAP ID:** 14

NAME:	LASSEN STAN PONT CAD INC	**REV:**	11/10/10
ADDRESS:	320 WEST MICHIGAN AVE	**ID1:**	MID985653872
	BATTLE CREEK MI 49037	**ID2:**	
	CALHOUN	**STATUS:**	VGN
CONTACT:		**PHONE:**	
SOURCE:	EPA		

SITE INFORMATION

CONTACT INFORMATION: RL TURNER
320 W MICHIGAN AVE
BATTLE CREEK MI 49017

PHONE: 6169625544

UNIVERSE INFORMATION:

GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

GPRA PERMIT: N - NO
GPRA POST CLOSURE: N - NO
GPRA CA: N - NO
GPRA COMPLIANCE MONITORING & ENFORCEMENT: N - NO

SUBJECT TO CORRECTIVE ACTION (SUBJCA)

SUBJCA: N - NO
SUBJCA TSD 3004: N - NO
SUBJCA NON TSD: N - NO

SIGNIFICANT NON-COMPLIANCE(SNC): N - NO
BEGINNING OF THE YEAR SNC: N - NO
PERMIT WORKLOAD: -----
CLOSURE WORKLOAD: -----
POST CLOSURE WORKLOAD: -----
PERMITTING /CLOSURE/POST-CLOSURE PROGRESS: -----
CORRECTIVE ACTION WORKLOAD: N - NO
GENERATOR STATUS: CEG - CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS: GENERATES LESS THAN 100 KG/MONTH OF HAZA
NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 43 **DIST/DIR:** 0.20 NW **ELEVATION:** 840 **MAP ID:** 14

NAME:
ADDRESS: 320 WEST MICHIGAN AVE
BATTLE CREEK MI 49017
CALHOUN
CONTACT: R.L. TURNER
SOURCE: MI DEQ

REV: 10/1/10
ID1: 0014476
ID2: 00014476
STATUS: ACTIVE
PHONE: (616) 962-5544

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 23

OWNER: STAN LASSEN PONTIAC/CADILLAC INC

320 MICHIGAN AVE W
BATTLE CREEK MI49017-2314

PHONE: (616) 962-5544

TANK INFORMATION:

TANK ID: 1
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 500
INSTALLATION DATE: MAY 15 1971
PRODUCT: NEW OIL
REMOVED/CLOSED: JAN 1 1988
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

TANK ID: 2
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 500
INSTALLATION DATE: MAY 15 1971
PRODUCT: NEW OIL
REMOVED/CLOSED: JAN 1 1988
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

TANK ID: 3
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE: MAY 15 1971
PRODUCT: USED OIL
REMOVED/CLOSED: JAN 1 1988
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

- Continued on next page -

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 43 **DIST/DIR:** 0.20 NW **ELEVATION:** 840 **MAP ID:** 14

NAME:		**REV:**	10/1/10
ADDRESS:	320 WEST MICHIGAN AVE	**ID1:**	0014476
	BATTLE CREEK MI 49017	**ID2:**	00014476
	CALHOUN	**STATUS:**	ACTIVE
CONTACT:	R.L. TURNER	**PHONE:**	(616) 962-5544
SOURCE:	MI DEQ		

TANK ID: BE-3
TANK STATUS: CURRENTLY IN USE
TANK CAPACITY: 42
INSTALLATION DATE: MAY 15 1979
PRODUCT: PETROLEUM
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL,CATHODICALLY PROTECTED STEEL
IMPRESSED DEVICE: NO

TANK ID: BE-4
TANK STATUS: CURRENTLY IN USE
TANK CAPACITY: 42
INSTALLATION DATE: MAY 15 1979
PRODUCT: PETROLEUM
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL,CATHODICALLY PROTECTED STEEL
IMPRESSED DEVICE: NO

TANK ID: BE-5
TANK STATUS: CURRENTLY IN USE
TANK CAPACITY: 42
INSTALLATION DATE: MAY 15 1979
PRODUCT: PETROLEUM
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL,CATHODICALLY PROTECTED STEEL
IMPRESSED DEVICE: NO

TANK ID: BW-1
TANK STATUS: CURRENTLY IN USE
TANK CAPACITY: 42
INSTALLATION DATE: MAY 15 1979
PRODUCT: PETROLEUM
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL,CATHODICALLY PROTECTED STEEL
IMPRESSED DEVICE: NO

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 43 **DIST/DIR:** 0.20 NW **ELEVATION:** 840 **MAP ID:** 14

NAME:
ADDRESS: 320 WEST MICHIGAN AVE
BATTLE CREEK MI 49017
CALHOUN
CONTACT: R.L. TURNER
SOURCE: MI DEQ

REV: 10/1/10
ID1: 0014476
ID2: 00014476
STATUS: ACTIVE
PHONE: (616) 962-5544

TANK ID: BW-2
TANK STATUS: CURRENTLY IN USE
TANK CAPACITY: 42
INSTALLATION DATE: MAY 15 1979
PRODUCT: PETROLEUM
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL,CATHODICALLY PROTECTED STEEL
IMPRESSED DEVICE: NO

TANK ID: N-1
TANK STATUS: CURRENTLY IN USE
TANK CAPACITY: 42
INSTALLATION DATE: MAY 15 1979
PRODUCT: PETROLEUM
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL,CATHODICALLY PROTECTED STEEL
IMPRESSED DEVICE: NO

TANK ID: N-2
TANK STATUS: CURRENTLY IN USE
TANK CAPACITY: 42
INSTALLATION DATE: MAY 15 1979
PRODUCT: PEROLEUM
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL,CATHODICALLY PROTECTED STEEL
IMPRESSED DEVICE: NO

TANK ID: N-3
TANK STATUS: CURRENTLY IN USE
TANK CAPACITY: 42
INSTALLATION DATE: MAY 15 1979
PRODUCT: PETROLEUM
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL,CATHODICALLY PROTECTED STEEL
IMPRESSED DEVICE: NO

- More Details Exist For This Site; Max Page Limit Reached -

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 60 **DIST/DIR:** 0.20 NW **ELEVATION:** 840 **MAP ID:** 14

NAME:	STAN LASSEN PONTIAC/CADILLAC INC	**REV:**	10/1/10
ADDRESS:	320 WEST MICHIGAN AVE	**ID1:**	C-0361-85
	BATTLE CREEK MI 49017	**ID2:**	0-014476
	CALHOUN	**STATUS:**	CLOSED
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

OWNER INFORMATION

STAN LASSEN PONTIAC/CADILLAC INC
320 MICHIGAN AVE W
BATTLE CREEK MI 49017-2314

OWNER COUNTRY USA
CONTACT PERSON:
(616) 962-5544

FACILITY ID: 00014476
RELEASE SUBSTANCE:
RELEASE NUMBER: C-0361-85
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: 12/22/1987
RELEASE STATUS: CLOSED
RELEASE CLOSED DATE: JAN 12 1996

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

OTHER

SEARCH ID: 31 **DIST/DIR:** 0.20 SE **ELEVATION:** 823 **MAP ID:** 15

NAME:	W.K. KELLOGG INSTITUTE	**REV:**	6/7/10
ADDRESS:	93 HAMBLIN AVE BATTLE CREEK MI 49017 CALHOUN	**ID1:**	BEA-2797
		ID2:	396
		STATUS:	BEA
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

BEA NUMBER: 396
DISTRICT: KALAMAZOO
DATE RECEIVED: 7/28/2000
SUBMITTER NAME: KELLOGG COMPANY
PETITION DISCLOSURE: 0 - DISCLOSURE
PETITION DETERMINATION: NO REQUEST
CATEGORY: N - NO CHEMICAL
DETERMINATION 20107a: NO REQUEST
REVIEWER: TEMPPM
DIVISION ASSIGNED: ERD - ENVIRONMENTAL RESPONSE DIVISION

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 36 **DIST/DIR:** 0.23 NW **ELEVATION:** 855 **MAP ID:** 20

NAME: FEDERAL CENTER
ADDRESS: 50 N WASHINGTON
BATTLE CREEK MI 49017
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 7/01/01
ID1: 9184259
ID2:
STATUS: AST
PHONE:

SITE INFORMATION:

TANK ID: 1
TANK STATUS:
TANK CAPACITY:
PRODUCT:

OWNER: PLAN REVIEW OWNER

PHONE: ( ) -

TANK INFORMATION:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 44 **DIST/DIR:** 0.23 NW **ELEVATION:** 835 **MAP ID:** 19

NAME:		**REV:**	10/1/10
ADDRESS:	307 WEST JACKSON ST	**ID1:**	0011106
	BATTLE CREEK MI 49017	**ID2:**	00011106
	CALHOUN	**STATUS:**	ACTIVE
CONTACT:	DON FRANZ	**PHONE:**	(616) 962-6181
SOURCE:	MI DEQ		

TANK ID: ABC4
TANK STATUS: TEMPORARILY OUT OF USE
TANK CAPACITY: 4000
INSTALLATION DATE: MAY 6 1970
PRODUCT: #2 FUEL/CONSUMPTIVE
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 44 **DIST/DIR:** 0.23 NW **ELEVATION:** 835 **MAP ID:** 19

NAME:		**REV:**	10/1/10
ADDRESS:	307 WEST JACKSON ST	**ID1:**	0011106
	BATTLE CREEK MI 49017	**ID2:**	00011106
	CALHOUN	**STATUS:**	ACTIVE
CONTACT:	DON FRANZ	**PHONE:**	(616) 962-6181
SOURCE:	MI DEQ		

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 4

OWNER: BATTLE CREEK EQUIP CO

307 JACKSON ST W
BATTLE CREEK MI49017-2306

PHONE: (616) 962-6181

TANK INFORMATION:

TANK ID: ABC1
TANK STATUS: TEMPORARILY OUT OF USE
TANK CAPACITY: 2000
INSTALLATION DATE: MAY 6 1970
PRODUCT: #2 FUEL/CONSUMPTIVE
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

TANK ID: ABC2
TANK STATUS: TEMPORARILY OUT OF USE
TANK CAPACITY: 4000
INSTALLATION DATE: MAY 6 1970
PRODUCT: #2 FUEL/CONSUMPTIVE
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

TANK ID: ABC3
TANK STATUS: TEMPORARILY OUT OF USE
TANK CAPACITY: 4000
INSTALLATION DATE: MAY 6 1970
PRODUCT: #2 FUEL/CONSUMPTIVE
REMOVED/CLOSED:
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL:
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

- Continued on next page -

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 5 **DIST/DIR:** 0.23 NW **ELEVATION:** 835 **MAP ID:** 19

NAME: BATTLE CREEK EQUIPMENT CO
ADDRESS: 307 WEST JACKSON ST
BATTLE CREEK MI 49017
CALHOUN
CONTACT: GORDON BART
SOURCE: EPA

REV: 9/13/04
ID1: MID001957422
ID2:
STATUS: SGN
PHONE: 2699626181

SITE INFORMATION

CONTACT INFORMATION: GORDON BART
307 W JACKSON ST
BATTLE CREEK MI 49017

PHONE: 2699626181

UNIVERSE INFORMATION:

SNC: N - NO
BOYSNC: N - NO
GPRA PERMIT: N - NO
GPRA POSTCLOSURE: N - NO
GPRA CA: N - NO
GPRA CME: N - NO
PERM PROG: N - NO
PREM W
IMPORTER ACTIVITY: N - NO MIX WASTE GEN: N - NO
RECYCLER ACT: N - NO TRANS ACT: N - NO
TSD ACT: N - NO U GRND INJ ACT: N - NO
UNIV
USED OIL INFORMATION

BURNER: N - NO PROCESSOR: N - NO
REFINER: N - NO MARKET BURNER: N - NO
SPEC MARKETER: N - NO TRANSFER FAC: N - NO
TRANSPORTER:
SECOND ID: OFF SITE RECEIPT:
ACCESSIBILITY: COUNTY OWNER:
FED WSTE GEN OWNER: HQ FED WASTE GEN: 2
STATE WSTE GEN OWNER:
NAIC INFORMATION

33451 - NAVIGATIONAL, MEASURING, ELECTROMEDICAL, AND CONTROL INSTRUMENTS MANUFACTURING
33451 - NAVIGATIONAL, MEASURING, ELECTROMEDICAL, AND CONTROL INSTRUMENTS MANUFACTURING
33911 - MEDICAL EQUIPMENT AND SUPPLIES MANUFACTURING
33911 - MEDICAL EQUIPMENT AND SUPPLIES MANUFACTURING
33451 - NAVIGATIONAL, MEASURING, ELECTROMEDICAL, AND CONTROL INSTRUMENTS MANUFACTURING
33451 - NAVIGATIONAL, MEASURING, ELECTROMEDICAL, AND CONTROL INSTRUMENTS MANUFACTURING
33911 - MEDICAL EQUIPMENT AND SUPPLIES MANUFACTURING
33911 - MEDICAL EQUIPMENT AND SUPPLIES MANUFACTURING

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

STATE

SEARCH ID: 20 **DIST/DIR:** 0.23 SE **ELEVATION:** 821 **MAP ID:** 18

NAME:	BATTLE CREEK AQUATIC CENTER	**REV:**	10/18/10
ADDRESS:	HAMBLIN & MCCALMLY ST	**ID1:**	13000311
	BATTLE CREEK MI 49017	**ID2:**	
	CALHOUN	**STATUS:**	INTER RESPONSE CON
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

SIC CLASSIFICATION: SPORTS CLUBS & PROMOTERS
CONTAMINANTS: AS; BENZENE; ETHYLBENZENE; PB; TOLUENE; XYLENES; METALS; PNAS
SCORE OUT OF 48: 28
SCORE DATE: 3/31/2004
TOWNSHIP: 02S
RANGE: 08W
SECTION: 12
WK QS: NE
WK QQS: NW
OVERALL DESCRIPTION: INTERIM RESPONSE CONDUCTED

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 13 **DIST/DIR:** 0.22 NW **ELEVATION:** 837 **MAP ID:** 17

NAME:	MI DEPT/ENVIRONMENTAL QUALITY - RRD/EPA	**REV:**	6/13/05
ADDRESS:	296 JACKSON ST W	**ID1:**	MID000259267
	BATTLE CREEK MI 49017	**ID2:**	
	CALHOUN	**STATUS:**	LGN
CONTACT:	DAVID WAHL	**PHONE:**	5173733898
SOURCE:	EPA		

SITE INFORMATION

CONTACT INFORMATION: DAVID WAHL
296 W JACKSON ST
BATTLE CREEK MI 49017

PHONE: 5173733898

UNIVERSE INFORMATION:

SNC: N - NO
BOYSNC: N - NO
GPRA PERMIT: N - NO
GPRA POSTCLOSURE: N - NO
GPRA CA: N - NO
GPRA CME: N - NO
PERM PROG: -----

SUBJCA NON TSD: N - NO
CA WRKLD: N - NO
GEN STATUS: N

PREM WRKLD: -----
CLOSURE WRKLD: -----
P C WRKLD: -----
SUBJCA: N - NO
SUBJCA TSD 3004: N - NO

NAIC INFORMATION

56291 - REMEDIATION SERVICES

ENFORCEMENT INFORMATION:

AGENCY: S DATE: 3/7/2003
TYPE: 120

VIOLATION INFORMATION:

VIOLATION NUMBER: 0001 RESPONSIBLE: S - STATE
DETERMINED: 2/20/2003 DETERMINED BY: S - STATE
CITATION:
RESOLVED: 6/23/2003
TYPE: GPT - GENERATOR PRE-TRANSPORT REQUIREMENTS

VIOLATION NUMBER: 0002 RESPONSIBLE: S - STATE
DETERMINED: 2/20/2003 DETERMINED BY: S - STATE
CITATION:
RESOLVED: 6/23/2003

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 8 **DIST/DIR:** 0.22 NW **ELEVATION:** 837 **MAP ID:** 17

NAME:	ENVIRONMENTAL DIAGNOSTICS	**REV:**	9/22/05
ADDRESS:	296 JACKSON ST W	**ID1:**	MIR000023739
	BATTLE CREEK MI 49017	**ID2:**	
	CALHOUN	**STATUS:**	TRANSPORTER
CONTACT:	BEN LAWSON	**PHONE:**	6169649780
SOURCE:	EPA		

SITE INFORMATION

CONTACT INFORMATION: BEN LAWSON
296 W JACKSON
BATTLE CREEK MI 49017

PHONE: 6169649780

UNIVERSE INFORMATION:

SNC: N - NO
BOYSNC: N - NO
GPRA PERMIT: N - NO
GPRA POSTCLOSURE: N - NO
GPRA CA: N - NO
GPRA CME: N - NO
PERM PROG: -----

SUBJCA NON TSD: N - NO
CA WRKLD: N - NO
GEN STATUS: N

PREM WRKLD: -----
CLOSURE WRKLD: -----
P C WRKLD: -----
SUBJCA: N - NO
SUBJCA TSD 3004: N - NO

NAIC INFORMATION

56211 - WASTE COLLECTION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRATSD

SEARCH ID: 3 **DIST/DIR:** 0.22 NW **ELEVATION:** 837 **MAP ID:** 17

NAME: ENVIRONMENTAL DIAGNOSTICS
ADDRESS: 296 JACKSON ST W
BATTLE CREEK MI 49017
CALHOUN
CONTACT:
SOURCE: EPA

REV: 12/9/02
ID1: MIR000023739
ID2:
STATUS: TSD
PHONE:

SITE INFORMATION

CONTACT INFORMATION: BEN LAWSON
DIRECTOR
296 W JACKSON
BATTLE CREEK MI 49017

PHONE: 6169649780

UNIVERSE TYPE:

SIC INFORMATION:

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 39 **DIST/DIR:** 0.07 NE **ELEVATION:** 840 **MAP ID:** 2

NAME:	ROBERT D.& CAROL B. WOLFE	**REV:**	10/1/10
ADDRESS:	172 WEST MICHIGAN AVE	**ID1:**	0033393
	BATTLE CREEK MI 94111	**ID2:**	00033393
	CALHOUN	**STATUS:**	CLOSED
CONTACT:	ROBERT D.& CAROL B. WOLFE	**PHONE:**	( ) -
SOURCE:	MI DEQ		

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 3

OWNER: ROBERT D.& CAROL B. WOLFE

100 PINE ST STE 950
SAN FRANCISCO CA

PHONE: (415) 989-1200

TANK INFORMATION:

TANK ID: 1
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 4000
INSTALLATION DATE: FEB 27 1953
PRODUCT: HEATING OIL
REMOVED/CLOSED: AUG 17 1989
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

TANK ID: 2
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 4000
INSTALLATION DATE: FEB 27 1953
PRODUCT: HEATING OIL
REMOVED/CLOSED: AUG 17 1989
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

TANK ID: 3
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 3000
INSTALLATION DATE: FEB 27 1953
PRODUCT: HEATING OIL
REMOVED/CLOSED: AUG 17 1989
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

OTHER

SEARCH ID: 30 **DIST/DIR:** 0.06 NE **ELEVATION:** 840 **MAP ID:** 1

NAME:	HB SHERMAN	**REV:**	6/7/10
ADDRESS:	171 W MICHIGAN AVE BATTLE CREEK MI 49014 CALHOUN	**ID1:**	BEA-KALA-1386
		ID2:	1386
		STATUS:	BEA
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

BEA NUMBER: 1386
DISTRICT: KALAMAZOO
DATE RECEIVED: 6/24/2009 12:59:00 AM
SUBMITTER NAME: BATTLE CREEK UNLIMITED
PETITION DISCLOSURE: 0 - DISCLOSURE
PETITION DETERMINATION: NO REQUEST
CATEGORY: N - NO CHEMICAL
DETERMINATION 20107a: NO REQUEST
REVIEWER: BEUKEMAS
DIVISION ASSIGNED: STD - STORAGE TANK DIVISION

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 32 **DIST/DIR:** 0.14 NE **ELEVATION:** 840 **MAP ID:** 10

NAME:	ARCHITECTS INC	**REV:**	10/1/10
ADDRESS:	208 WEST VAN BUREN	**ID1:**	0037560
	BATTLE CREEK MI 49017	**ID2:**	00037560
	CALHOUN	**STATUS:**	CLOSED
CONTACT:	MR LARRY RIZOE	**PHONE:**	(616) 968-4300
SOURCE:	MI DEQ		

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 2

OWNER: ARCHITECTS INC

34 W JACKSON ST
BATTLE CREEK MI

PHONE: (616) 968-4300

TANK INFORMATION:

TANK ID: A
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 6000
INSTALLATION DATE: JAN 1 1960
PRODUCT: GASOLINE
REMOVED/CLOSED: JUN 2 1994
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

TANK ID: B
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 6000
INSTALLATION DATE: JAN 1 1960
PRODUCT: GASOLINE
REMOVED/CLOSED: JUN 2 1994
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 10 **DIST/DIR:** 0.14 NW **ELEVATION:** 840 **MAP ID:** 9

NAME: IVA/MICHIGAN
ADDRESS: 301 MICHIGAN AVE W
BATTLE CREEK MI 49037
CALHOUN
CONTACT:
SOURCE: EPA

REV: 11/10/10
ID1: MIR000011130
ID2:
STATUS: VGN
PHONE:

SITE INFORMATION

CONTACT INFORMATION: KEN PYLE
301 W MICHIGAN AVE
BATTLE CREEK MI 49017

PHONE: 6169622700

UNIVERSE INFORMATION:

GOVERNMENT PERFORMANCE AND RESULTS ACT (GPRA)

GPRA PERMIT: N - NO
GPRA POST CLOSURE: N - NO
GPRA CA: N - NO
GPRA COMPLIANCE MONITORING & ENFORCEMENT: N - NO

SUBJECT TO CORRECTIVE ACTION (SUBJCA)

SUBJCA: N - NO
SUBJCA TSD 3004: N - NO
SUBJCA NON TSD: N - NO

SIGNIFICANT NON-COMPLIANCE(SNC): N - NO
BEGINNING OF THE YEAR SNC: N - NO
PERMIT WORKLOAD: -----
CLOSURE WORKLOAD: -----
POST CLOSURE WORKLOAD: -----
PERMITTING /CLOSURE/POST-CLOSURE PROGRESS: -----
CORRECTIVE ACTION WORKLOAD: N - NO
GENERATOR STATUS: CEG - CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS: GENERATES LESS THAN 100 KG/MONTH OF HAZA
NAIC INFORMATION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 38 **DIST/DIR:** 0.21 NW **ELEVATION:** 845 **MAP ID:** 16

NAME:	RICHARD BRONSON	**REV:**	10/1/10
ADDRESS:	316 WEST VAN BUREN ST	**ID1:**	0039207
	BATTLE CREEK MI 49017	**ID2:**	00039207
	CALHOUN	**STATUS:**	CLOSED
CONTACT:	RICHARD BRONSON	**PHONE:**	(616) 968-7188
SOURCE:	MI DEQ		

TANK ID: 4
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 3000
INSTALLATION DATE:
PRODUCT: GASOLINE
REMOVED/CLOSED: DEC 3 1996
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID:	38	**DIST/DIR:**	0.21 NW	**ELEVATION:**	845	**MAP ID:**	16

NAME:	RICHARD BRONSON	**REV:**	10/1/10
ADDRESS:	316 WEST VAN BUREN ST	**ID1:**	0039207
	BATTLE CREEK MI 49017	**ID2:**	00039207
	CALHOUN	**STATUS:**	CLOSED
CONTACT:	RICHARD BRONSON	**PHONE:**	(616) 968-7188
SOURCE:	MI DEQ		

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 4

OWNER: RICHARD BRONSON

306 CANDLEWYCK DR APT 1507
KALAMAZOO MI

PHONE: (616) 968-7188

TANK INFORMATION:

TANK ID: 1
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 3000
INSTALLATION DATE:
PRODUCT: GASOLINE
REMOVED/CLOSED: DEC 4 1996
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: BARE STEEL
PIPE TYPE: SUCTION: NO VALVE AT TANK
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

TANK ID: 2
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 2000
INSTALLATION DATE:
PRODUCT: GASOLINE
REMOVED/CLOSED: DEC 4 1996
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: UNKNOWN
IMPRESSED DEVICE: NO

TANK ID: 3
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE:
PRODUCT: USED OIL
REMOVED/CLOSED: DEC 4 1996
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: BARE STEEL,UNKNOWN
PIPE TYPE: SUCTION: NO VALVE AT TANK
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

- Continued on next page -

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 33 **DIST/DIR:** 0.10 NW **ELEVATION:** 840 **MAP ID:** 5

NAME:	BURNHAM BROOK COMMUNITY CENTER HOLDING CORP	**REV:**	10/1/10
ADDRESS:	200 W MICHIGAN AVE	**ID1:**	0042093
	BATTLE CREEK MI 49015	**ID2:**	00042093
	CALHOUN	**STATUS:**	CLOSED
CONTACT:	MARY ANN TAYLOR	**PHONE:**	(269) 649-1003
SOURCE:	MI DEQ		

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 1

OWNER: BURNHAM BROOK COMMUNITY CENTER HOLDING CORP

34 JACKSON ST
BATTLE CREEK MI

PHONE: (269) 962-2181

TANK INFORMATION:

TANK ID: 1
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 1000
INSTALLATION DATE:
PRODUCT: GASOLINE, DIESEL
REMOVED/CLOSED: MAR 27 2008
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: UNKNOWN
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 7 **DIST/DIR:** 0.11 NW **ELEVATION:** 840 **MAP ID:** 6

NAME:	BURNAM BROOK CTR	**REV:**	7/8/03
ADDRESS:	245 WEST MICHIGAN AVE	**ID1:**	MID985664747
	BATTLE CREEK MI 49017	**ID2:**	
	CALHOUN	**STATUS:**	TR
CONTACT:	JACK FROST	**PHONE:**	6169662566
SOURCE:	EPA		

SITE INFORMATION

UNIVERSE NAME:

TR: TRANSPORTER

SIC INFORMATION:

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 16 **DIST/DIR:** 0.08 NW **ELEVATION:** 840 **MAP ID:** 3

NAME:	WOLFE AND ASSOC	**REV:**	9/9/03
ADDRESS:	194 MICHIGAN AVE W	**ID1:**	MID985578038
	BATTLE CREEK MI 49014	**ID2:**	
	CALHOUN	**STATUS:**	SGN
CONTACT:	ROBERT WOLFE	**PHONE:**	4159891200
SOURCE:	EPA		

SITE INFORMATION

UNIVERSE TYPE:

SQG - SMALL QUANTITY GENERATOR: GENERATES 100 - 1000 KG/MONTH OF HAZARDOUS WASTE

SIC INFORMATION:

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 12 **DIST/DIR:** 0.08 NW **ELEVATION:** 840 **MAP ID:** 3

NAME:	MAACO AUTO PAINTING	**REV:**	9/9/03
ADDRESS:	194 MICHIGAN AVE W BATTLE CREEK MI 49014 CALHOUN	**ID1:** **ID2:** **STATUS:**	MID038615472 SGN
CONTACT:	FRANK PERRONE	**PHONE:**	6169643796
SOURCE:	EPA		

SITE INFORMATION

UNIVERSE TYPE:

SQG - SMALL QUANTITY GENERATOR: GENERATES 100 - 1000 KG/MONTH OF HAZARDOUS WASTE

SIC INFORMATION:

ENFORCEMENT INFORMATION:

AGENCY: S - STATE DATE: 20-JUL-88
TYPE: 120 - WRITTEN INFORMAL

AGENCY: S - STATE DATE: 12-SEP-88
TYPE: 120 - WRITTEN INFORMAL

VIOLATION INFORMATION:

VIOLATION NUMBER: 0001 RESPONSIBLE: S - STATE
DETERMINED: 11-JUL-88 DETERMINED BY: S - STATE
CITATION: RESOLVED: 03-DEC-91
TYPE: GER - GENERATOR ALL REQUIREMENTS

VIOLATION NUMBER: 0002 RESPONSIBLE: S - STATE
DETERMINED: 12-SEP-88 DETERMINED BY: S - STATE
CITATION: RESOLVED: 03-DEC-91
TYPE: GER - GENERATOR ALL REQUIREMENTS

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 14 **DIST/DIR:** 0.24 SE **ELEVATION:** 821 **MAP ID:** 21

NAME:	REFUSE SERVICE INC	**REV:**	9/22/05
ADDRESS:	64 S MCCAMLY ST	**ID1:**	MID062235973
	BATTLE CREEK MI 49017	**ID2:**	
	CALHOUN	**STATUS:**	TRANSPORTER
CONTACT:	POOLEN VAN	**PHONE:**	6169624048
SOURCE:	EPA		

SITE INFORMATION

CONTACT INFORMATION: POOLEN VAN
64 S MCCAMLY ST
BATTLE CREEK MI 49017

PHONE: 6169624048

UNIVERSE INFORMATION:

SNC: N - NO
BOYSNC: N - NO
GPRA PERMIT: N - NO
GPRA POSTCLOSURE: N - NO
GPRA CA: N - NO
GPRA CME: N - NO
PERM PROG: -----

PREM WRKLD: -----
CLOSURE WRKLD: -----
P C WRKLD: -----
SUBJCA: N - NO
SUBJCA TSD 3004: N - NO

SUBJCA NON TSD: N - NO
CA WRKLD: N - NO
GEN STATUS: N

NAIC INFORMATION

562111 - SOLID WASTE COLLECTION

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

OTHER

SEARCH ID: 28 **DIST/DIR:** 0.24 SW **ELEVATION:** 821 **MAP ID:** 22

NAME: HAMBLIN (235) AVENUE
ADDRESS: 235 HAMBLIN AVE
BATTLE CREEK MI 49016
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 6/7/10
ID1: BEA-0102-37
ID2: 501
STATUS: BEA
PHONE:

SITE INFORMATION

BEA NUMBER: 501
DISTRICT: KALAMAZOO
DATE RECEIVED: 12/10/2001 12:59:00 AM
SUBMITTER NAME: BATTLE CREEK AREA AMBULANCE
PETITION DISCLOSURE: 1 - PETITION
PETITION DETERMINATION: AFFIRMED
CATEGORY: S - SAME CHEMICAL
DETERMINATION 20107a: AFFIRMED
REVIEWER: BALLOF
DIVISION ASSIGNED: ERD - ENVIRONMENTAL RESPONSE DIVISION

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 42 **DIST/DIR:** 0.24 SW **ELEVATION:** 821 **MAP ID:** 22

NAME:	WAGNER-FLOOK BUILDERS INC	**REV:**	10/1/10
ADDRESS:	235 HAMBLIN AVE	**ID1:**	0001824
	BATTLE CREEK MI 49015	**ID2:**	00001824
	CALHOUN	**STATUS:**	CLOSED
CONTACT:	JOHN FLOOK	**PHONE:**	(616) 962-9507
SOURCE:	MI DEQ		

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 3

OWNER: WAGNER-FLOOK BUILDERS INC

235 HAMBLIN AVE W
BATTLE CREEK MI

PHONE: (616) 962-9507

TANK INFORMATION:

TANK ID: 1
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 4000
INSTALLATION DATE: APR 9 1971
PRODUCT: GASOLINE
REMOVED/CLOSED: SEP 5 1997
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: GALVANIZED STEEL
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

TANK ID: 2
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 3000
INSTALLATION DATE: APR 9 1971
PRODUCT: GASOLINE
REMOVED/CLOSED: SEP 5 1997
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: GALVANIZED STEEL
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

TANK ID: 3
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 500
INSTALLATION DATE: APR 9 1971
PRODUCT: DIESEL
REMOVED/CLOSED: SEP 5 1997
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: GALVANIZED STEEL
PIPE TYPE:
CONSTRUCTION MATERIAL: ASPHALT COATED OR BARE STEEL
IMPRESSED DEVICE: NO

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 66 **DIST/DIR:** 0.24 SW **ELEVATION:** 821 **MAP ID:** 22

NAME:	WAGNER-FLOOK BUILDERS INC	**REV:**	10/1/10
ADDRESS:	235 HAMBLIN AVE	**ID1:**	C-0846-97
	BATTLE CREEK MI 49015	**ID2:**	0-001824
	CALHOUN	**STATUS:**	CLOSED
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

OWNER INFORMATION

WAGNER-FLOOK BUILDERS INC
235 HAMBLIN AVE W
BATTLE CREEK MI 49015-2229

OWNER COUNTRY USA
CONTACT PERSON:
(616) 962-9507

FACILITY ID: 00001824
RELEASE SUBSTANCE: Diesel
RELEASE NUMBER: C-0846-97
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: 9/17/1997
RELEASE STATUS: CLOSED
RELEASE CLOSED DATE: AUG 26 1998

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

RCRAGN

SEARCH ID: 15 **DIST/DIR:** 0.25 SE **ELEVATION:** 820 **MAP ID:** 23

NAME:	US POSTAL SVC BATTLE CREEK MAIN	**REV:**	9/9/03
ADDRESS:	90 S MCCAMLY ST	**ID1:**	MIR000025593
	BATTLE CREEK MI 49017	**ID2:**	
	CALHOUN	**STATUS:**	VGN
CONTACT:	KATHY GRIDLY	**PHONE:**	6169653286
SOURCE:	EPA		

SITE INFORMATION

UNIVERSE TYPE:

CEG - CONDITIONALLY EXEMPT SMALL QUANTITY GENERATORS: GENERATES LESS THAN 100 KG/MONTH OF HAZARDOUS WASTE

SIC INFORMATION:

ENFORCEMENT INFORMATION:

VIOLATION INFORMATION:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

UST

SEARCH ID: 40 **DIST/DIR:** 0.25 SE **ELEVATION:** 820 **MAP ID:** 23

NAME: UNITED STATES POSTAL SERV
ADDRESS: 90 S MCCAMLY ST
BATTLE CREEK MI 49016
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: 0010981
ID2: 00010981
STATUS: CLOSED
PHONE: (616) 965-3286

SITE INFORMATION:

TOTAL NUMBER OF TANKS: 2

OWNER: UNITED STATES POSTAL SERV

90 MCCAMLY ST S
BATTLE CREEK MI

PHONE: (616) 965-3286

TANK INFORMATION:

TANK ID: 1
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 6000
INSTALLATION DATE: APR 30 1979
PRODUCT: GASOLINE
REMOVED/CLOSED: OCT 5 1992
TANK RELEASE DETECTION:
PIPE RELEASE DETECTION:
PIPE MATERIAL: GALVANIZED STEEL
PIPE TYPE: PRESSURE,SUCTION: VALVE AT TANK
CONSTRUCTION MATERIAL: FIBERGLASS REINFORCED PLASTIC
IMPRESSED DEVICE: NO

TANK ID: 2
TANK STATUS: REMOVED FROM GROUND
TANK CAPACITY: 6000
INSTALLATION DATE: OCT 12 1992
PRODUCT: GASOLINE
REMOVED/CLOSED: JUL 16 1997
TANK RELEASE DETECTION: AUTOMATIC TANK GAUGING,INTER MONITORING DOUBLE WALLED TANK,INTER MONITORING/SECOND CONTAINMENT,INVENTORY CONTROL,TANK TIGHTNESS TESTING
PIPE RELEASE DETECTION: INTERSTITIAL MONITORING DOUBLE WALLED PIPING,INTERSTITIAL MONITORING/SECOND CONTAINMENT
PIPE MATERIAL: DOUBLE WALLED,FIBERGLASS REINFORCED PLASTIC,SECONDARY CONTAINMENT
PIPE TYPE: SUCTION: NO VALVE AT TANK
CONSTRUCTION MATERIAL: DOUBLE WALLED,FIBERGLASS REINFORCED PLASTIC
IMPRESSED DEVICE: NO

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 53 **DIST/DIR:** 0.28 NW **ELEVATION:** 865 **MAP ID:** 24

NAME:	GENERAL SERVICES ADMINISTRATION	**REV:**	10/1/10
ADDRESS:	74 N WASHINGTON AVE	**ID1:**	C-2604-91
	BATTLE CREEK MI 49017	**ID2:**	0-011099
	CALHOUN	**STATUS:**	CLOSED
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

OWNER INFORMATION

GENERAL SERV ADMIN
74 NORTH WASHINGTON AVE
BATTLE CREEK MI 49017

OWNER COUNTRY USA
CONTACT PERSON:
(616) 372-6301

FACILITY ID: 00011099
RELEASE SUBSTANCE: Unknown
RELEASE NUMBER: C-2604-91
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: 12/11/1991
RELEASE STATUS: CLOSED
RELEASE CLOSED DATE: DEC 8 1994

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

FEDBROWNFIELD

SEARCH ID: 67 **DIST/DIR:** 0.30 SE **ELEVATION:** 821 **MAP ID:** 25

NAME: 50 WEST MICHIGAN AVENUE
ADDRESS: 50 W MICHIGAN AVE
BATTLE CREEK MI 49017
CALHOUN
CONTACT: BATTLE CREEK UNLIMITED
SOURCE: EPA

REV: 10/1/10
ID1: 69598621-97941
ID2: 97941
STATUS: EPA BROWNFIELD
PHONE:

SITE INFORMATION:

PROPERTY SIZE (acres): 0.5
PARCEL NUMBER: 0252-00-050-0
CURRENT OWNER: BATTLE CREEK UNLIMITED
OWNERSHIP ENTITY: PRIVATE

MEDIA FOUND

SOIL: AIR:
SURFACE WATER: GROUND WATER:
DRINKING WATER: SEDIMENTS:

CONTAMINANTS CLEANED UP

PETROLEUM: CONTROLLED SUB:
ASBESTOS: PCB:
VOC: LEAD:
OTHER METAL: PAHS:
OTHER: UNKNOWN:
NONE:

MEDIA CLEANED UP

SOIL: AIR:
SURFACE WATER: GROUND WATER:
DRINKING WATER: SEDIMENTS:
UNKNOWN: NONE:

STATE/TRIBAL PROG ID:
STATE/TRIBE PROG ENROLL:
NOT ENROLLED: Y
NFA ISSUE DATE:
IC REQUIRED:
IC IN PLACE:
IC IN PLACE DATE:
PROPRIETARY CONTROLS:
GOVERNMENTAL CONTROLS:
ENFORCE PERM TOOLS:
INFORM DEVICES:
IC DATA ADDRESS:
PHOTO AVAIL:
VIDEO AVAIL:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID:	48	**DIST/DIR:**	0.35 NW	**ELEVATION:**	844	**MAP ID:**	26

NAME:	EQUIPMENT DIVISION	**REV:**	10/1/10
ADDRESS:	356 W MICHIGAN AVE	**ID1:**	C-0435-89
	BATTLE CREEK MI 49017	**ID2:**	0-016024
	CALHOUN	**STATUS:**	OPEN
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

OWNER INFORMATION

CITY OF BATTLE CREEK
150 S KENDALL RD
BATTLE CREEK MI 49015

OWNER COUNTRY USA
CONTACT PERSON:
269-966-3480

FACILITY ID: 00016024
RELEASE SUBSTANCE:
RELEASE NUMBER: C-0435-89
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: AUG 24 1989
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 49 **DIST/DIR:** 0.35 NW **ELEVATION:** 844 **MAP ID:** 26

NAME: EQUIPMENT DIVISION
ADDRESS: 356 W MICHIGAN AVE
BATTLE CREEK MI 49017
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-0445-89
ID2: 0-016024
STATUS: OPEN
PHONE:

SITE INFORMATION

OWNER INFORMATION

CITY OF BATTLE CREEK
150 S KENDALL RD
BATTLE CREEK MI 49015

OWNER COUNTRY USA
CONTACT PERSON:
269-966-3480

FACILITY ID: 00016024
RELEASE SUBSTANCE:
RELEASE NUMBER: C-0445-89
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: AUG 21 1989
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 50 **DIST/DIR:** 0.35 NW **ELEVATION:** 844 **MAP ID:** 26

NAME:	EQUIPMENT DIVISION	**REV:**	10/1/10
ADDRESS:	356 W MICHIGAN AVE	**ID1:**	C-0436-03
	BATTLE CREEK MI 49017	**ID2:**	0-016024
	CALHOUN	**STATUS:**	OPEN
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

OWNER INFORMATION

CITY OF BATTLE CREEK
150 S KENDALL RD
BATTLE CREEK MI 49015

OWNER COUNTRY USA
CONTACT PERSON:
269-966-3480

FACILITY ID: 00016024
RELEASE SUBSTANCE: Gasoline
RELEASE NUMBER: C-0436-03
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: OCT 15 2003
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 45 **DIST/DIR:** 0.35 SW **ELEVATION:** 823 **MAP ID:** 27

NAME: ABANDONED BLDG
ADDRESS: 305 WEST HAMBLIN AVE
BATTLE CREEK MI 49015
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-0828-96
ID2: 0-039109
STATUS: CLOSED
PHONE:

SITE INFORMATION

OWNER INFORMATION

S.L HAYES & ASSOCIATES INC
139 EMERSON AVE
YPSILANTI MI 48198-4209

OWNER COUNTRY USA
CONTACT PERSON:
(734) 484-2717

FACILITY ID: 00039109
RELEASE SUBSTANCE: Gasoline
RELEASE NUMBER: C-0828-96
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: 10/17/1996
RELEASE STATUS: CLOSED
RELEASE CLOSED DATE: NOV 1 1996

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 65 **DIST/DIR:** 0.39 SE **ELEVATION:** 823 **MAP ID:** 28

NAME:	W K KELLOGG INSTITUTE	**REV:**	10/1/10
ADDRESS:	2 EAST HAMBLIN AVE	**ID1:**	C-0998-92
	BATTLE CREEK MI 49017	**ID2:**	0-001258
	CALHOUN	**STATUS:**	OPEN
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

OWNER INFORMATION

KELLOGG CO
425 PORTER ST
BATTLE CREEK MI 49016

OWNER COUNTRY USA
CONTACT PERSON: BARB MANTARRO
(269) 961-2000

FACILITY ID: 00001258
RELEASE SUBSTANCE: Unknown
RELEASE NUMBER: C-0998-92
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: JUN 19 1992
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 62 **DIST/DIR:** 0.40 SE **ELEVATION:** 824 **MAP ID:** 29

NAME: UNION PUMP CO
ADDRESS: 87 CAPITAL AVE SW
BATTLE CREEK MI 49015
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-0062-98
ID2: 0-008800
STATUS: CLOSED
PHONE:

SITE INFORMATION

OWNER INFORMATION

UNION PUMP CO
4600 W DICKMAN RD
BATTLE CREEK MI 49015-1025

OWNER COUNTRY USA
CONTACT PERSON:
(616) 966-4600

FACILITY ID: 00008800
RELEASE SUBSTANCE: Unknown
RELEASE NUMBER: C-0062-98
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: NOV 29 1995
RELEASE STATUS: CLOSED
RELEASE CLOSED DATE: AUG 20 1996

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 63 **DIST/DIR:** 0.40 SE **ELEVATION:** 824 **MAP ID:** 29

NAME: UNION PUMP CO
ADDRESS: 87 CAPITAL AVE SW
BATTLE CREEK MI 49015
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-1732-91
ID2: 0-008800
STATUS: OPEN
PHONE:

SITE INFORMATION

OWNER INFORMATION

UNION PUMP CO
4600 W DICKMAN RD
BATTLE CREEK MI 49015-1025

OWNER COUNTRY USA
CONTACT PERSON:
(616) 966-4600

FACILITY ID: 00008800
RELEASE SUBSTANCE: Unknown
RELEASE NUMBER: C-1732-91
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: AUG 9 1991
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 61 **DIST/DIR:** 0.44 NE **ELEVATION:** 847 **MAP ID:** 30

NAME: TRUMBULL SERVICE
ADDRESS: 94 NORTH AVE
BATTLE CREEK MI 49017
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-1195-91
ID2: 0-015452
STATUS: OPEN
PHONE:

SITE INFORMATION

OWNER INFORMATION

ROY F KLINE
709 W HIGHLAND BLVD
BATTLE CREEK MI 49015-1714

OWNER COUNTRY USA
CONTACT PERSON:
(616) 962-4043

FACILITY ID: 00015452
RELEASE SUBSTANCE: Unknown
RELEASE NUMBER: C-1195-91
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: JUN 17 1991
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 58 **DIST/DIR:** 0.45 SE **ELEVATION:** 822 **MAP ID:** 31

NAME:	SENIOR OIL #12	**REV:**	10/1/10
ADDRESS:	170 CAPITAL AVE SW	**ID1:**	C-0080-99
	BATTLE CREEK MI 49015	**ID2:**	0-040065
	CALHOUN	**STATUS:**	OPEN
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

OWNER INFORMATION

SENIOR OIL CO
865 W MICHIGAN AVE WEST
BATTLE CREEK MI 49037

OWNER COUNTRY USA
CONTACT PERSON:
(269) 962-8549

FACILITY ID: 00040065
RELEASE SUBSTANCE: Unknown
RELEASE NUMBER: C-0080-99
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: NOV 23 1998
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 54 **DIST/DIR:** 0.46 SW **ELEVATION:** 823 **MAP ID:** 32

NAME: HERITAGE CHEVROLET, INC
ADDRESS: 350 W DICKMAN RD
BATTLE CREEK MI 49015
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-0015-91
ID2: 0-010942
STATUS: CLOSED
PHONE:

SITE INFORMATION

OWNER INFORMATION

HERITAGE CHEV INC
350 W DICKMAN RD
BATTLE CREEK MI 49015-2255

OWNER COUNTRY USA
CONTACT PERSON:
(616) 964-9431

FACILITY ID: 00010942
RELEASE SUBSTANCE:
RELEASE NUMBER: C-0015-91
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: 1/20/1991
RELEASE STATUS: CLOSED
RELEASE CLOSED DATE: MAY 28 1991

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 59 **DIST/DIR:** 0.48 SW **ELEVATION:** 825 **MAP ID:** 33

NAME:	SHOULDICE BROS	**REV:**	10/1/10
ADDRESS:	400 WEST DICKMAN	**ID1:**	C-0987-90
	BATTLE CREEK MI 49015	**ID2:**	5-000477
	CALHOUN	**STATUS:**	CLOSED
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

OWNER INFORMATION

NRT OWNER
UNKNOWN
UNKNOWN MI 99999

OWNER COUNTRY USA
CONTACT PERSON:

FACILITY ID: 50000477
RELEASE SUBSTANCE:
RELEASE NUMBER: C-0987-90
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: 6/4/1990
RELEASE STATUS: CLOSED
RELEASE CLOSED DATE: MAY 31 1991

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 55 **DIST/DIR:** 0.49 SW **ELEVATION:** 827 **MAP ID:** 34

NAME: KMART #4065
ADDRESS: 200 CAPITAL AVE SW
BATTLE CREEK MI 49015
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-2413-90
ID2: 0-000777
STATUS: CLOSED
PHONE:

SITE INFORMATION

OWNER INFORMATION

KMART CORP
3100 W BIG BEAVER RD
TROY MI 48084-3004

OWNER COUNTRY USA
CONTACT PERSON: BOB KEELER
(248) 614-1310

FACILITY ID: 00000777
RELEASE SUBSTANCE:
RELEASE NUMBER: C-2413-90
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: 11/16/1990
RELEASE STATUS: CLOSED
RELEASE CLOSED DATE: OCT 30 1996

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

STATE

SEARCH ID: 19 **DIST/DIR:** 0.49 NW **ELEVATION:** 882 **MAP ID:** 35

NAME: BATTLE CREEK ADVENTIST HOSPITAL
ADDRESS: 165 WASHINGTON AVE N
BATTLE CREEK MI 49016
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/18/10
ID1: 13000273
ID2:
STATUS: INTER RESPONSE CON
PHONE:

SITE INFORMATION

SIC CLASSIFICATION: GEN MEDICAL/SURGICAL HOSPITALS
CONTAMINANTS: PHENANTHRENE; PNAS
SCORE OUT OF 48: 30
SCORE DATE: 3/23/2004
TOWNSHIP: 02S
RANGE: 08W
SECTION: 01
WK QS: NW
WK QQS: SE
OVERALL DESCRIPTION: INTERIM RESPONSE CONDUCTED

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 52 **DIST/DIR:** 0.49 NW **ELEVATION:** 882 **MAP ID:** 35

NAME: FIELDSTONE CENTER
ADDRESS: 165 WASHINGTON AVE N
BATTLE CREEK MI 49017
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-1354-98
ID2: 0-007791
STATUS: CLOSED
PHONE:

SITE INFORMATION

OWNER INFORMATION

BATTLE CREEK HEALTH SYSTEM
300 NORTH AVE
BATTLE CREEK MI 49017-3307

OWNER COUNTRY USA
CONTACT PERSON:
(269) 964-5922

FACILITY ID: 00007791
RELEASE SUBSTANCE: Diesel
RELEASE NUMBER: C-1354-98
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: 3/30/1998
RELEASE STATUS: CLOSED
RELEASE CLOSED DATE: SEP 15 1998

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

STATE

SEARCH ID: 21 **DIST/DIR:** 0.49 NW **ELEVATION:** 823 **MAP ID:** 36

NAME: CITY OF BATTLE CREEK-KENDALL ST
ADDRESS: NE CORNER KENDALL & HAMBLIN
BATTLE CREEK MI
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/18/10
ID1: 13000304
ID2:
STATUS: INTER RESPONSE CON
PHONE:

SITE INFORMATION

SIC CLASSIFICATION: UNKNOWN
CONTAMINANTS: 1,1 DCA; PB; PCE; METALS; PNAS
SCORE OUT OF 48: 20
SCORE DATE: 3/23/2004
TOWNSHIP: 02S
RANGE: 08W
SECTION: 01
WK QS: SW
WK QQS: SW
OVERALL DESCRIPTION: INTERIM RESPONSE CONDUCTED

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

LUST

SEARCH ID: 47 **DIST/DIR:** 0.50 SW **ELEVATION:** 821 **MAP ID:** 37

NAME: DO BAR INC
ADDRESS: 114 S KENDALL ST
BATTLE CREEK MI 49015
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/1/10
ID1: C-0305-94
ID2: 0-037972
STATUS: OPEN
PHONE:

SITE INFORMATION

OWNER INFORMATION

DO BAR INC
326 PEPPERIDGE LN
BATTLE CREEK MI 49015-3114

OWNER COUNTRY USA
CONTACT PERSON:
(616) 965-2258

FACILITY ID: 00037972
RELEASE SUBSTANCE: Gasoline,Diesel
RELEASE NUMBER: C-0305-94
DISTRICT: KALAMAZOO DISTRICT OFFICE
RELEASE DATE: APR 6 1994
RELEASE STATUS: OPEN
RELEASE CLOSED DATE:

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

STATE

SEARCH ID: 23 **DIST/DIR:** 0.54 SE **ELEVATION:** 826 **MAP ID:** 38

NAME: MI PAPERBOARD CORP
ADDRESS: 79 E FOUNTAIN ST
BATTLE CREEK MI 49016
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/18/10
ID1: 13000075
ID2:
STATUS: INTER RESPONSE CON
PHONE:

SITE INFORMATION

SIC CLASSIFICATION: PAPER AND ALLIED PRODUCTS
CONTAMINANTS: ETHYLBENZENE; NAPHTHALENE; TOLUENE; XYLENES
SCORE OUT OF 48: 18
SCORE DATE: 6/24/2004
TOWNSHIP: 02S
RANGE: 08W
SECTION: 12
WK QS: NE
WK QQS: SE
OVERALL DESCRIPTION: INTERIM RESPONSE CONDUCTED

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

STATE

SEARCH ID: 18 **DIST/DIR:** 0.56 SW **ELEVATION:** 827 **MAP ID:** 39

NAME: A.K. ZINN PROPERTY
ADDRESS: 160 S KENDALL ST
BATTLE CREEK MI 49017
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/18/10
ID1: 13000361
ID2:
STATUS: INTER RESPONSE- NFA
PHONE:

SITE INFORMATION

SIC CLASSIFICATION:
CONTAMINANTS: AS; PB; TCE; VC; XYLENES; CIS-1,2 DCE
SCORE OUT OF 48: 30
SCORE DATE: 3/31/2004
TOWNSHIP:
RANGE:
SECTION:
WK QS:
WK QQS:
OVERALL DESCRIPTION: INTERIM RESPONSE CONDUCTED - NO FURTHER ACTIVITIES ANTICIPATED

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

STATE

SEARCH ID: 22 **DIST/DIR:** 0.56 SW **ELEVATION:** 828 **MAP ID:** 40

NAME: K & M SALVAGE
ADDRESS: 170 S KENDALL ST
BATTLE CREEK MI 49017
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/18/10
ID1: 13000366
ID2:
STATUS: INTER RESPONSE- NFA
PHONE:

SITE INFORMATION

SIC CLASSIFICATION:
CONTAMINANTS: CR+3; TCE; CIS-1,2 DCE
SCORE OUT OF 48: 34
SCORE DATE: 3/31/2004
TOWNSHIP:
RANGE:
SECTION:
WK QS:
WK QQS:
OVERALL DESCRIPTION: INTERIM RESPONSE CONDUCTED - NO FURTHER ACTIVITIES ANTICIPATED

Environmental FirstSearch
Site Detail Report

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

STATE

SEARCH ID: 24 **DIST/DIR:** 0.58 SE **ELEVATION:** 827 **MAP ID:** 41

NAME:	SE MICHIGAN GAS - BATTLE CREEK MGP	**REV:**	10/18/10
ADDRESS:	150 E FOUNTAIN ST	**ID1:**	13000369
	BATTLE CREEK MI	**ID2:**	
	CALHOUN	**STATUS:**	EVAL IN PROGRESS
CONTACT:		**PHONE:**	
SOURCE:	MI DEQ		

SITE INFORMATION

SIC CLASSIFICATION: GAS PRODUCTION & DISTRIBUTION
CONTAMINANTS:
SCORE OUT OF 48: 34
SCORE DATE: 4/13/2007
TOWNSHIP: T2S
RANGE: R8W
SECTION: 12
WK QS: NE
WK QQS: SW
OVERALL DESCRIPTION: EVALUATION IN PROGRESS

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

STATE

SEARCH ID: 17 **DIST/DIR:** 0.75 SE **ELEVATION:** 830 **MAP ID:** 42

NAME: 169 E. STATE STREET
ADDRESS: 169 EAST STATE ST
BATTLE CREEK MI 49014
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 11-01-00
ID1: 130191
ID2:
STATUS: EVAL/INTERIM RESP-PRP/OTH
PHONE:

SOURCE: SWITCHING & TERMINAL SERVICE
POLLUTANTS: LEAD
SAM SCORE: 33 DATE: 10/1/91 0:00:00
CHANGES: DATE:

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

STATE

SEARCH ID: 25 **DIST/DIR:** 0.95 SE **ELEVATION:** 823 **MAP ID:** 43

NAME: SHAY MOTOR CO
ADDRESS: 200 ELM ST
BATTLE CREEK MI 49017
CALHOUN
CONTACT:
SOURCE: MI DEQ

REV: 10/18/10
ID1: 13000037
ID2:
STATUS: INTER RESPONSE- NFA
PHONE:

SITE INFORMATION

SIC CLASSIFICATION: AUTO DEALER & SERVICE STATIONS
CONTAMINANTS: BENZENE; TOLUENE; TCE; VC
SCORE OUT OF 48: 34
SCORE DATE: 3/31/2004
TOWNSHIP: 02S
RANGE: 07W
SECTION: 07
WK QS: NW
WK QQS: NE
OVERALL DESCRIPTION: INTERIM RESPONSE CONDUCTED - NO FURTHER ACTIVITIES ANTICIPATED

Environmental FirstSearch Descriptions

NPL: EPA NATIONAL PRIORITY LIST - The National Priorities List is a list of the worst hazardous waste sites that have been identified by Superfund. Sites are only put on the list after they have been scored using the Hazard Ranking System (HRS), and have been subjected to public comment. Any site on the NPL is eligible for cleanup using Superfund Trust money. A Superfund site is any land in the United States that has been contaminated by hazardous waste and identified by the Environmental Protection Agency (EPA) as a candidate for cleanup because it poses a risk to human health and/or the environment.FINAL - Currently on the Final NPLPROPOSED - Proposed for NPL

NPL DELISTED: EPA NATIONAL PRIORITY LIST Subset - Database of delisted NPL sites. The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.DELISTED - Deleted from the Final NPL

CERCLIS: EPA COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM (CERCLIS)- CERCLIS is a database of potential and confirmed hazardous waste sites at which the EPA Superfund program has some involvement. It contains sites that are either proposed to be or are on the National Priorities List (NPL) as well as sites that are in the screening and assessment phase for possible inclusion on the NPL.PART OF NPL- Site is part of NPL siteDELETED - Deleted from the Final NPLFINAL - Currently on the Final NPLNOT PROPOSED - Not on the NPLNOT VALID - Not Valid Site or IncidentPROPOSED - Proposed for NPLREMOVED - Removed from Proposed NPLSCAN PLAN - Pre-proposal SiteWITHDRAWN - Withdrawn

NFRAP: EPA COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION AND LIABILITY INFORMATION SYSTEM ARCHIVED SITES - database of Archive designated CERCLA sites that, to the best of EPA's knowledge, assessment has been completed and has determined no further steps will be taken to list this site on the National Priorities List (NPL). This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.NFRAP – No Further Remedial Action PlanP - Site is part of NPL siteD - Deleted from the Final NPLF - Currently on the Final NPLN - Not on the NPLO - Not Valid Site or IncidentP - Proposed for NPLR - Removed from Proposed NPLS - Pre-proposal SiteW – Withdrawn

RCRA COR ACT: EPA RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.RCRAInfo facilities that have reported violations and subject to corrective actions.

RCRA TSD: EPA RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM TREATMENT, STORAGE, and DISPOSAL FACILITIES. - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are

required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.Facilities that treat, store, dispose, or incinerate hazardous waste.

RCRA GEN: EPA/MA DEP/CT DEP RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM GENERATORS - Database of hazardous waste information contained in the Resource Conservation and Recovery Act Information (RCRAInfo), a national program management and inventory system about hazardous waste handlers. In general, all generators, transporters, treaters, storers, and disposers of hazardous waste are required to provide information about their activities to state environmental agencies. These agencies, in turn pass on the information to regional and national EPA offices. This regulation is governed by the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments of 1984.Facilities that generate or transport hazardous waste or meet other RCRA requirements.LGN - Large Quantity GeneratorsSGN - Small Quantity GeneratorsVGN – Conditionally Exempt Generator.Included are RAATS (RCRA Administrative Action Tracking System) and CMEL (Compliance Monitoring & Enforcement List) facilities. CONNECTICUT HAZARDOUS WASTE MANIFEST – Database of all shipments of hazardous waste within, into or from Connecticut. The data includes date of shipment, transporter and TSD info, and material shipped and quantity. This data is appended to the details of existing generator records. MASSACHUSETTES HAZARDOUS WASTE GENERATOR – database of generators that are regulated under the MA DEP. VQN-MA = generates less than 220 pounds or 27 gallons per month of hazardous waste or waste oil.SQN-MA = generates 220 to 2,200 pounds or 27 to 270 gallons per month of waste oil.LQG-MA = generates greater than 2,200 lbs of hazardous waste or waste oil per month.

Fed Brownfield: EPA BROWNFIELD MANAGEMENT SYSTEM (BMS) - database designed to assist EPA in collecting, tracking, and updating information, as well as reporting on the major activities and accomplishments of the various Brownfield grant Programs./n CLEANUPS IN MY COMMUNITY (subset) - Sites, facilities and properties that have been contaminated by hazardous materials and are being, or have been, cleaned up under EPA's brownfield's program.

ERNS: EPA/NRC EMERGENCY RESPONSE NOTIFICATION SYSTEM (ERNS) - Database of incidents reported to the National Response Center. These incidents include chemical spills, accidents involving chemicals (such as fires or explosions), oil spills, transportation accidents that involve oil or chemicals, releases of radioactive materials, sightings of oil sheens on bodies of water, terrorist incidents involving chemicals, incidents where illegally dumped chemicals have been found, and drills intended to prepare responders to handle these kinds of incidents. Data since January 2001 has been received from the National Response System database as the EPA no longer maintains this data.

Tribal Lands: DOI/BIA INDIAN LANDS OF THE UNITED STATES - Database of areas with boundaries established by treaty, statute, and (or) executive or court order, recognized by the Federal Government as territory in which American Indian tribes have primary governmental authority. The Indian Lands of the United States map layer shows areas of 640 acres or more, administered by the Bureau of Indian Affairs. Included are Federally-administered lands within a reservation which may or may not be considered part of the reservation.BUREAU OF INDIAN AFFIARS CONTACT - Regional contact information for the Bureau of Indian Affairs offices.

State/Tribal Sites: MI DEQ LIST OF CONTAMINATED SITES - database of Part 201 Sites. The data includes sic_classiffication, contaminant, total score and score date.

State/Tribal SWL: MI DEQ SOLID WASTE LANDFILLS AND DISPOSAL SITES - database of solid waste landfills, disposal sites and transfers stations

State/Tribal LUST: MI DEQ LEAKING UNDERGROUND STORAGE TANK SITES LIST - database of sites that are open and corrective actions have not been completed as well as closed where corrective actions have been completed.

State/Tribal UST/AST: MI DEQ UNDERGROUND STORAGE TANK FACILITIES LIST - database of active and closed facilities that are regulated under Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environment Protection Act, 1994 PA 451 as amended (Act 451).

State/Tribal Brownfields: MI DEQ AVAILABLE BROWNFIELD PROPERTIES LISTING - database of specific brownfields sites that the Department of Environmental Quality has funded or assisted with cleanup at (including Part 201 and Part 213 sites).

State Other: US DOJ NATIONAL CLANDESTINE LABORATORY REGISTER - Database of addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the U.S. Department of Justice ("the Department"), and the Department has not verified the entry and does not guarantee its accuracy. All sites that are included in this data set will have an id that starts with NCLR.

State Other: MI DEQ BASELINE ENVIRONMENTAL ASSESSMENT(BEA) SITES - database of sites in which Baseline Environmental Assessments were performed. Under Part 211, Underground Storage Tank Regulations, of the Natural Resources and Environment Protection Act, 1994 PA 451 as amended (Act 451), Baseline Environmental Assessments are defined as an evaluation of environmental conditions which exist at a facility at the time of purchase, occupancy, or foreclosure that reasonably defines the existing conditions and circumstances at the facility so that in the event of a subsequent release, there is a means of distinguishing the new release from existing contamination.

Federal IC / EC: EPA FEDERAL ENGINEERING AND INSTITUTIONAL CONTROLS- Superfund sites that have either an engineering or an institutional control. The data includes the control and the media contaminated. RESOURCE CONSERVATION AND RECOVERY INFORMATION SYSTEM SITES (RCRA) – RCRA site the have institutional controls.

Environmental FirstSearch Database Sources

NPL: EPA Environmental Protection Agency

Updated quarterly

NPL DELISTED: EPA Environmental Protection Agency

Updated quarterly

CERCLIS: EPA Environmental Protection Agency

Updated quarterly

NFRAP: EPA Environmental Protection Agency.

Updated quarterly

RCRA COR ACT: EPA Environmental Protection Agency.

Updated quarterly

RCRA TSD: EPA Environmental Protection Agency.

Updated quarterly

RCRA GEN: EPA/MA DEP/CT DEP Environmental Protection Agency, Massachusetts Department of Environmental Protection, Connecticut Department of Environmental Protection

Updated quarterly

Fed Brownfield: EPA Environmental Protection Agency

Updated quarterly

ERNS: EPA/NRC Environmental Protection AgencyNational Response Center.

Updated annually

Tribal Lands: DOI/BIA United States Department of the InteriorBureau of Indian Affairs

Updated annually

State/Tribal Sites: MI DEQ Michigan Department of Environmental Quality.

Updated annually

State/Tribal SWL: MI DEQ Michigan Department of Environmental Quality.

Updated annually

State/Tribal LUST: MI DEQ Michigan Department of Environmental Quality.

Updated quarterly

State/Tribal UST/AST: MI DEQ Michigan Department of Environmental Quality.

Updated quarterly

State/Tribal Brownfields: MI DEQ Michigan Department of Environmental Quality.

Updated quarterly

State Other: US DOJ U.S. Department of Justice

Updated when available

State Other: MI DEQ Michigan Department of Environmental Quality.

Updated quarterly

Federal IC / EC: EPA Environmental Protection Agency

Updated quarterly

Environmental FirstSearch
Street Name Report for Streets within .25 Mile(s) of Target Property

Target Property: 171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

JOB: KE60951C-13

Street Name	Dist/Dir	Street Name	Dist/Dir
Archer Ct	0.14 NE		
Brook St	0.19 NE		
Carlyle St	0.11 SE		
Champion St	0.19 NE		
Gould St	0.09 NW		
Houston St	0.15 SW		
Jackson St W	0.11 SE		
Louise St	0.13 SW		
McCamly St S	0.24 SE		
N Washington Ave	0.14 NW		
S Washington Ave	0.13 NW		
State Highway 89	0.06 NE		
State St W	0.15 SE		
Tompkins St	0.14 NE		
Van Buren St W	0.13 NE		
W Hamblin Ave	0.10 SW		
W Michigan Ave	0.06 NE		

HISTORICAL FIRE INSURANCE MAPS

MAPS AVAILABLE

12-30-10
KE60951C-13
171 WEST MICHIGAN AVE
BATTLE CREEK MI 49017

A search of FirstSearch Technology Corporation's proprietary database of historical fire insurance map availability confirmed that there is a high probability that MAPS ARE AVAILABLE for the Subject Location as shown above.

FirstSearch Technology Corporation's proprietary database of historical fire insurance map availability represents abstracted information from the Sanborn® Map Company obtained through online access to the U.S. Library of Congress via local libraries.

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Environmental FirstSearch

1 Mile Radius

ASTM Map: NPL, RCRACOR, STATE Sites

171 WEST MICHIGAN AVE, BATTLE CREEK MI 49017

Source: Tele Atlas

Target Site (Latitude: 42.322748 Longitude: -85.188663) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

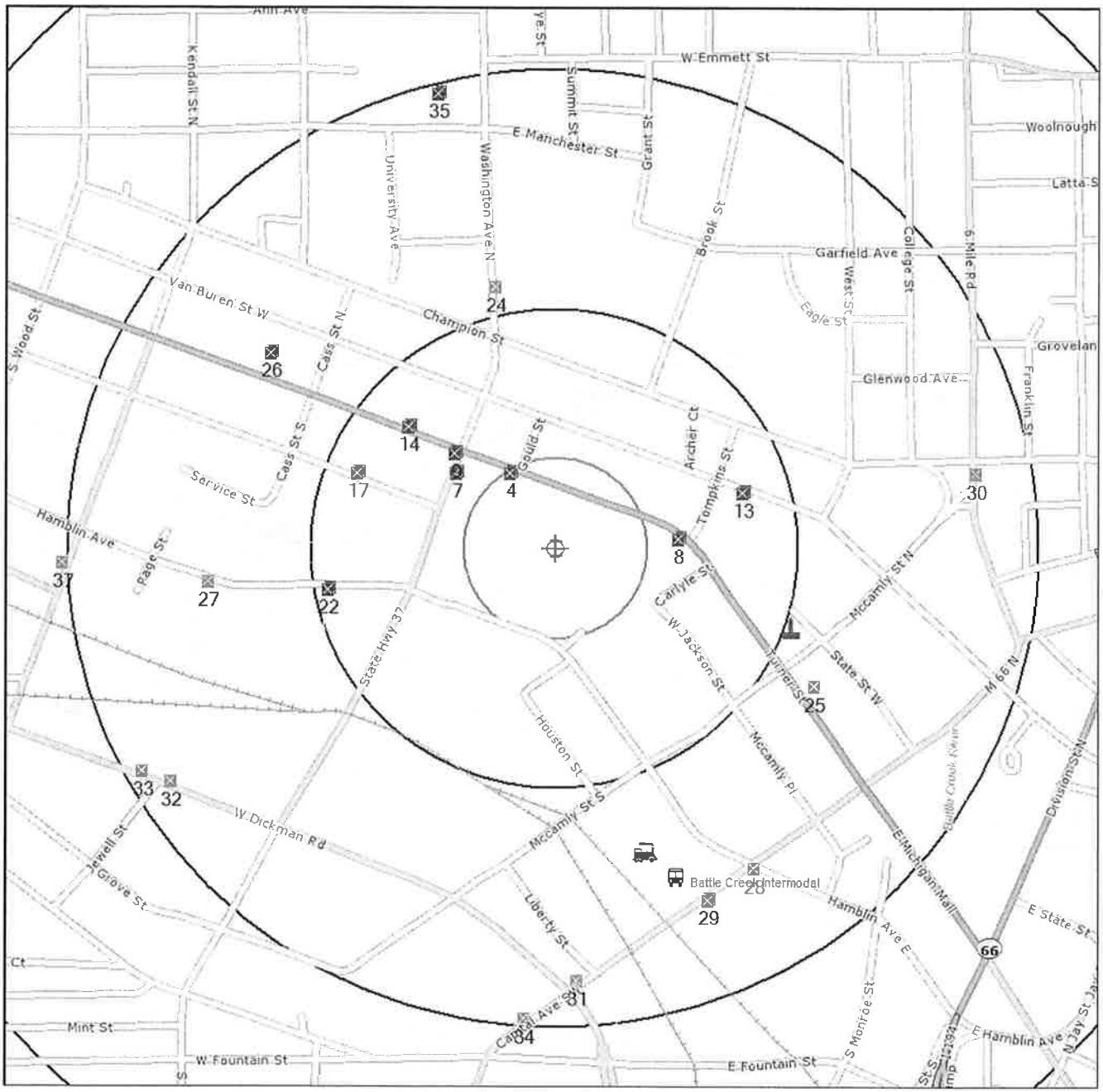
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.5 Mile Radius

ASTM Map: CERCLIS, RCRATSD, LUST, SWL

171 WEST MICHIGAN AVE, BATTLE CREEK MI 49017



Source: Tele Atlas

Target Site (Latitude: 42.322748 Longitude: -85.188663) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

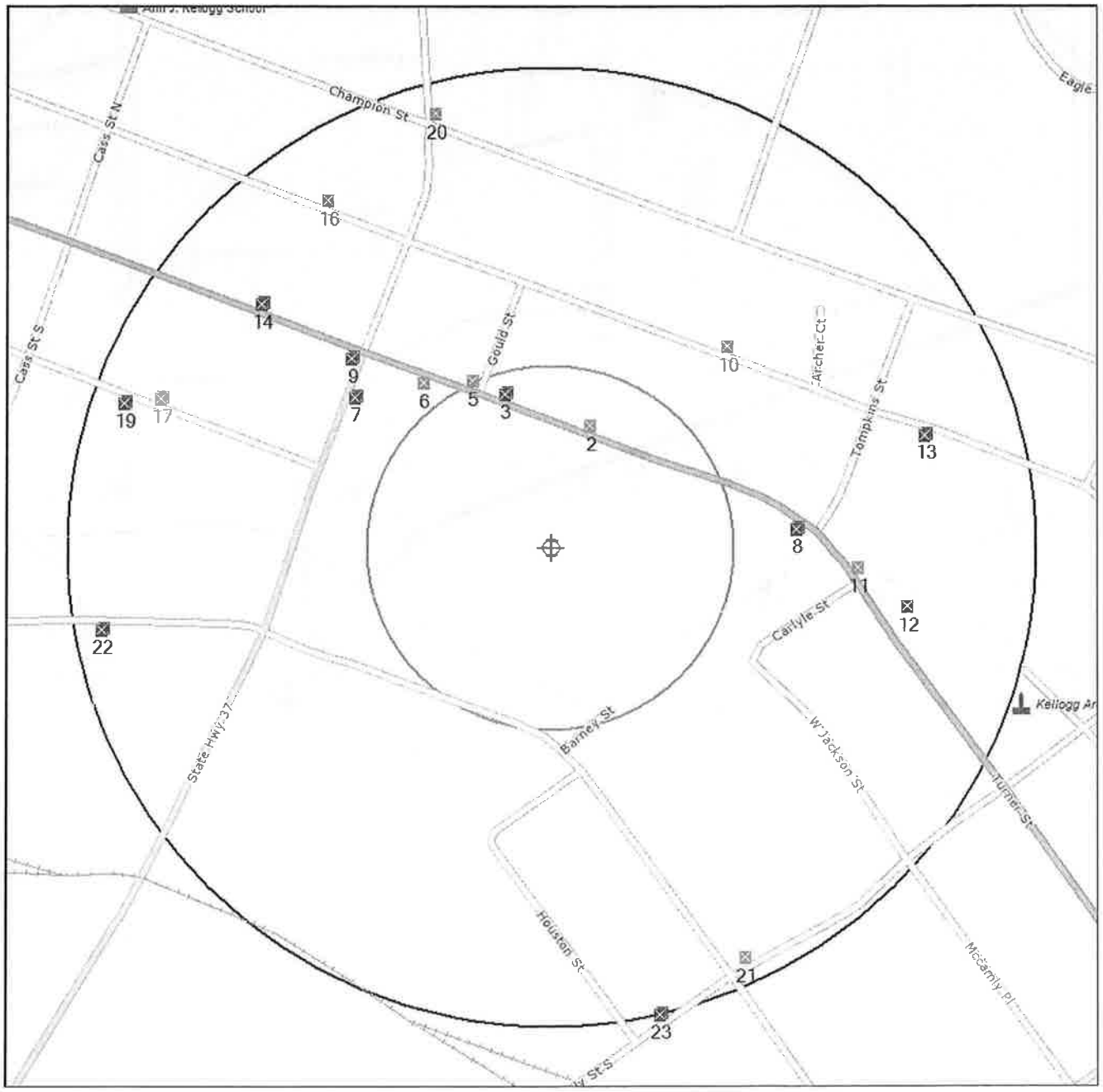
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.25 Mile Radius

ASTM Map: RCRAGEN, ERNS, UST, FED IC/EC, METH LABS

171 WEST MICHIGAN AVE, BATTLE CREEK MI 49017



Source: Tele Atlas

Target Site (Latitude: 42.322748 Longitude: -85.188663) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

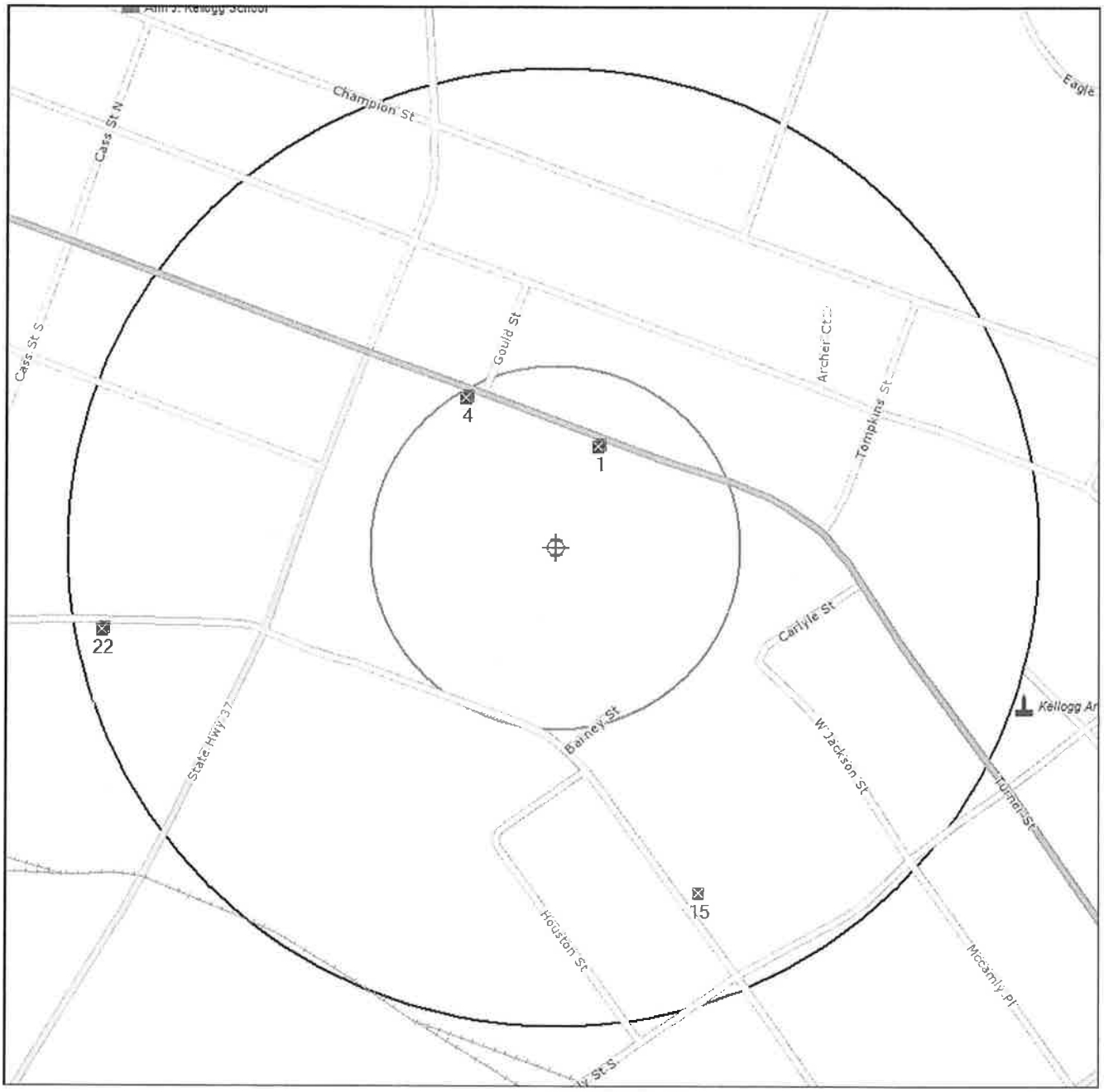
Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

Environmental FirstSearch

.25 Mile Radius

Non-ASTM Map: Other

171 WEST MICHIGAN AVE, BATTLE CREEK MI 49017



Source: Tele Atlas

Target Site (Latitude: 42.322748 Longitude: -85.188663) .....

Identified Site, Multiple Sites, Receptor .....

NPL, DELNPL, Brownfield, Solid Waste Landfill (SWL), Hazardous Waste

Triballand.....

National Historic Sites and Landmark Sites .....

Black Rings Represent 1/4 Mile Radius; Red Ring Represents 500 ft. Radius

APPENDIX F

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL(s)

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RESUME — *NATHAN B. BOLLES*

Staff Geologist

Performs environmental sampling of soil and water and prepares field activity reports. Performs Phase I Environmental Site Assessments and Updates, Phase II Assessments and Environmental Transaction Screen Process studies including report preparation. Also constructs groundwater models using numerical and analytical modeling software.

❖ Professional Qualifications:

- Skilled at conducting Environmental Site Assessments (ESAs) for real estate transactions including records research, site walkovers, and report preparation.
- Proficient with the use of geographic and geologic software including ArcGIS 9.1, Visual MODFLOW 4.2, WinFlow 3.0, AQTESOLV Pro 3.5, and Surfer 7.0.
- Experienced in conducting asbestos assessments and sampling procedures in compliance with federal, state and individual lending institution requirements.
- Experienced in conducting hydrogeological studies and evaluations using field methods and groundwater modeling software.

❖ Representative Project Experience:

- Conducted Phase I ESAs, Phase I ESA Updates and Transaction Screens on residential, commercial, industrial, agricultural and vacant land throughout Michigan's lower peninsula.
- Conducted Phase II ESAs consisting of soil and groundwater sampling to support property transactions.
- Conducted drilling observation and soil classification to determine historic groundwater levels to aid in the development of an artificial wetland.
- Built and calibrated a groundwater model and particle tracking evaluation to verify the effectiveness of current pumping wells using Visual MODFLOW and MODPATH.
- Conducted quarterly groundwater sampling using low-flow technology at various sites throughout Michigan.
- Built and calibrated a groundwater model to evaluate the effect of groundwater withdrawal for an open-loop geothermal system using WinFlow.

❖ **Career History:** SME since 2006

❖ **Education:** B.S. Geology, Grand Valley State University
M.S. Earth Science, Western Michigan University

❖ **Registration:** Member of Geological Society of America (GSA)

❖ **Certifications:** 40-Hour HAZWOPER Course and Annual Refreshers
40-Hour Asbestos Abatement Contractor Supervisor Training
Asbestos Contractor/Supervisor Refresher
Asbestos 24 Hour Initial Inspector
4-Hour Asbestos Inspector Refresher Course
Certified Nuclear Density Meter – Troxler
Indiana Department of Environmental Management (IDEM) Asbestos Inspector
IDEM Initial Asbestos Building Inspector
MDNRE Waterworks System Operator S-5
NIOSH 582 Equivalency
State of Michigan Asbestos Inspector
State of Michigan Asbestos Contractor/Supervisor

RESUME **DAVIN K. OJALA**

Project Consultant

Performs Phase I and Phase II Environmental Site Assessments (ESA), and prepares Baseline Environmental Assessments (BEA). Also responsible for performing asbestos building material assessments, supervision of drilling and monitoring well installation activities, field activities for underground storage tank (UST) removal, and assisting with the implementation of brownfield redevelopment plans.

❖ **Professional Qualifications:**

- Skilled in conducting ESAs for real estate transactions including report research, site reconnaissance and report preparation. Knowledgeable of ASTM E1527-00, E1528-00 and specific lending institution requirements.
- Skilled in environmental drilling, groundwater monitor well installation, and subsequent development and sampling.
- Skilled in field coordination of UST removals and associated sampling activities.
- Skilled in performing asbestos surveys and air quality sampling.

❖ **Representative Project Experience:**

- Performed over 125 Phase I and Phase II ESAs in Michigan and Indiana on commercial, industrial and agricultural properties.
- Completed Phase I and Phase II ESAs for a 400,000 square-foot industrial building in Elkhart, Indiana.
- Completed an asbestos building material assessment of a two-story, 40,000 square-foot building located in downtown Kalamazoo, Michigan.
- Completed a Category "S" BEA for an industrial site located in Kalamazoo, Michigan. To facilitate completion of the BEA, an isolation zone was established through Phase II ESA activities.
- Completed a Phase I ESA for a 770-acre site in Marshall, Michigan.
- Completed over 20 environmental projects within the Fort Custer Industrial Park in Battle Creek, Michigan.
- Performed groundwater sampling services for four former manufactured gas plants in Michigan.
- Assisted in asbestos building material and lead based paint assessments for a multi-story former hotel.
- Completed a hazardous materials assessment of a three-story hospital located in Jackson, Michigan. Work included an asbestos and lead-based paint assessment.
- Performed soil compaction testing for a landfill cap on a National Superfund Site located in Kalamazoo County.

❖ **Career History:** SME since 2000 - Other firms from 1998

❖ **Education:** B.S. Geography, Environmental Resource Management and Environmental Studies, Western Michigan University

❖ **Certifications:** 40-Hour HAZWOPER Course
8-Hour HAZWOPER Refresher Training - Health and Safety
Asbestos Building Inspector, Michigan
Certified Nuclear Density Meter Operator - Troxler

❖ **Affiliations:** Sigma Phi Epsilon - Geographic Honor Society
Risk Management Association

Senior Consultant

Mr. Egan provides senior technical consulting and project management expertise in the areas of brownfield redevelopment and financing, site investigation and remediation, environmental due diligence, RCRA Corrective Action, environmental regulatory compliance, and environmental chemistry.

- **Professional Qualifications:**
  - 33 years experience in environmental evaluations and consulting, including 13 years experience with the Ohio Voluntary Action Program (VAP).
  - Served as Certified Professional (CP) or principal author for 15 No Further Action (NFA) letters for redevelopment projects that received Covenant Not to Sue Status.
  - Obtained approximately $10 million in Clean Ohio Revitalization Fund (CORF) and Clean Ohio Assistance Fund (COAF) grants for redevelopment projects.
  - Successfully prepared a U.S. EPA Brownfield Pilot Project grant application.
  - Expert in liability management and due care planning for property transactions, brownfield redevelopment planning and environmental response actions, and identification and acquisition of financial incentives for brownfield redevelopments
  - Expert at environmental site investigations and development of remediation alternatives for industrial and commercial facilities, UST sites, and RCRA Corrective Action facilities.
- **Representative Project Experience:**
  - Successfully prepared the $2.9 million CORF grant application for Clean Ohio funds to remediate and redevelop a former shingle manufacturing facility in Lockland, Ohio. Funds were used to demolish buildings, remediate impacted soil and install underground utilities. Managed the site investigation, remediation, and redevelopment of the property as well as CORF budgeting and invoicing. Prepared the Phase I and II Property Assessments, Remedial Action Plan, and Remedial Implementation Report.
  - Served as the CP for a former asbestos-containing building material manufacturing facility. Prepared a work plan in response to deficiencies contained in a No Further Action Letter prepared by others. The plan addressed trace levels of asbestos in the soil. Recommended and monitored an air sampling plan approved by the State of Ohio. Prepared a revised Phase II Property Assessment, a Property-Specific Risk Assessment, new Executive Summary and Filing Document, and NFA letter for this COAF supported project.
  - Served as the CP for a former china manufacturing facility that was redeveloped for commercial and recreational use. The site was heavily impacted with lead requiring remediation of the soil and sediments. Remediation required interagency cooperation between VAP, the Division of Surface Water, Division of Hazardous Waste Management, and the Division of Solid and Infectious Waste. Prepared the Phase I and II Property Assessments, Property-Specific Risk Assessment, Remedial Implementation Report, and the Executive Summary and Filing Document. The project received Covenant Not to Sue status.
  - Project manager for the remedial investigation of five Superfund sites in Ohio, Kentucky and California.
  - Project manager for underground storage tank sites obtaining No Further Action status for over 50 Ohio sites using a risk-based approach.
  - Project manager for over 100 Phase I/II site assessments for due diligence related to property transfers and corporate acquisitions and divestitures in several states.
- **Career History:** SME since May, 2010 - Other firms from 1977
- **Education:** B.S., Environmental Science, University of Arkansas
  Graduate Studies in Geology, University of Oklahoma
- **Registrations:** Certified Professional – State of Ohio VAP Program
  40-Hour HAZWOPER Course

- Served as the CP for a former scrap metal recycling facility now developed for commercial use. This site was heavily impacted with metals and petroleum hydrocarbons requiring remediation of the soil. Prepared a Property-Specific Risk Assessment, Remedial Implementation Report, and the Executive Summary and Filing Document. The project received Covenant Not to Sue status.
- Project manager for all phases of the VAP project at a lead impacted property in Ohio. Developed a sampling strategy, provided oversight of field activities, and prepared Phase I and II Property Assessments and Remedial Implementation Reports. The project received Covenant Not to Sue status and is being transformed into a residential development.
- Managed all phases of the VAP projects at two aircraft parts machining facilities in Cincinnati, Ohio. Project included development of the sampling strategy, oversight of field activities, and preparation of the Phase II Property Assessment and Project-Specific Risk Assessment reports. A Covenant Not to Sue was issued for both properties.
- Managed the VAP assessment of a former linoleum manufacturing facility now developed for residential use. Project included development of the sampling strategy, oversight of field activities, and preparation of the Project-Specific Risk Assessment report. Remediation of this property was driven by residential direct contact and site-specific leaching standards. During the remediation, continually performed cumulative risk analysis and leaching modeling to assess if the current concentrations remaining at the property posed a risk to human receptors and groundwater. This approach prevented unnecessary soil remediation. A Covenant Not to Sue was issued for this property.
- Managed the VAP activities related to redevelopment of a former paper mill. Developed the sampling strategy, provided oversight of field activities, and prepared the Phase II Property Assessment and Project-Specific Risk Assessment reports. The key to the success of this project was development of a site-specific lead leaching standard based on bench scale leachability tests, the first to be approved by OEPA. A Covenant Not to Sue was issued for this site.

APPENDIX D

PREVIOUS ASSESSMENT REPORTS (CD-ROM)

RECEIVED
FEB 13 2002
STD - KALAMAZOO

Technical Memorandum

To: *Ken Kohs, City of Battle Creek*
From: *Edward A. Higuera, Prein&Newhof*
Date: *February 11, 2002*
Subject: *Phase II Results/Former H.B. Sherman Site, Battle Creek, Michigan*

The purpose of this Technical Memorandum is to summarize the results of soil and ground water sampling conducted at the former H.B. Sherman site that had been located at the 207 West Jackson Street, Battle Creek ("Site"). The former H.B. Sherman site has been redeveloped into the Cereal City Museum.

Background Information

According to the *Site Investigation Report*, dated May 28, 1993, prepared by Global Environmental Engineering, it was reported that free product was detected in SB-7. After evidence of potential free product was detected, attempts were made to recover free product using a perforated sump collection and recovery system. This use of this system was terminated after free product ceased to be recovered. The Site has been redeveloped as the Cereal City Museum and the features at the Site have changed significantly. The area near the former SB-7 consists of paved parking, access road and grass covered medium.

Soil and Ground Water Investigation

Seven Geoprobe® borings designated as GP-1 through GP-7 were advanced at the former H.B. Sherman site on April 10, 2001. The soil and ground sampling was conducted to further characterize the apparent contamination detected at the site and to supplement the previous environmental reports prepared in conjunction with the Site. Specifically, the investigation was conducted to confirm the absence of free product near former boring SB-7 and down gradient to SB-7. The approximate locations of Geoprobe® borings GP-1 through GP-7 are shown on the map from the *Site Assessment Report*, which has been annotated to show the locations of the new borings relative the to previous borings. A copy of this map is included in Attachment 1.

GP-1 and GP-2 were positioned to evaluate the areas near SB-7. These borings were placed immediately south of the former tank basins and near SB-7. Borings GP-3 through GP-6 were located to evaluate the areas down gradient of SB-7 and to further characterize the areas south of SB-9, SB-10, and SB-11 (see map in Attachment 1).

GP-1 was advanced to 20 feet below grade and encountered fine grain silty sand and then sandstone at approximately 14 feet below grade. The water table was encountered at approximately 17 feet in GP-1. No physical evidence (e.g. odors or staining) of contamination was detected in the boring. A soil sample was collected from 10 feet and a ground water sample was collected from 17-20 feet (Geoprobe® screen 16-20 feet). The samples were submitted for laboratory analysis of UST Volatiles and PNA compounds.

GP-2 was terminated at 12.5 feet after encountering sandstone, which prevented further advancement of the Geoprobe®. A soil sample was collected at 10 feet. Water was not encountered at boring termination depth. No physical evidence (e.g. odors or staining) of contamination was detected in the boring.

Geoprobe® borings GP-3 through GP-7 were placed south of the access road, within the landscaped areas between the access road and the Kalamazoo River (see map in Attachment 1).

GP-3 was advanced to a depth of 24 feet below grade. Sediments between one and 10 feet consisted of dark brown sand with pebbles. Slag, indicative of fill material, was detected in the one to two foot interval. Odors were detected in the 10-12 foot interval, and a soil sample for laboratory analysis was collected from 11' below grade. A soil sample was also collected from six feet below grade. The odor appeared to be less noticeable in the 12-16 foot interval. Water was encountered at approximately 14 feet below grade and a water sample was secured from 14-16 interval (Geoprobe® screen set from 12-16'). A second water sample was collected from the 22-24 foot interval.

GP-4, located east of GP-3, was advanced to 18 feet below grade and encountered fill material (e.g. brick fragments, slag) from two to eight feet below grade. Sandstone was encountered at 12 feet and ground water was encountered at 14 feet below grade. No physical evidence (e.g. odors or staining) of contamination was detected in the boring. A soil sample was collected from 10 feet and the ground water sample was collected from 16-18 feet below grade.

GP-5 was placed west of GP-3 and advanced to 21 feet below grade. From one to eight feet below grade, the material consisted of sand, gravel with cinders and slag, which is typical of historical fill. Below eight feet, the sediments consisted of fine silty sand. The geoprobe could not be advanced past 21 feet. Water was encountered at 14 feet below grade. Odors were detected in the saturated sediments from 14 to 20 feet below grade. A soil sample was collected from 10 feet and a water sample was collected from 14-16 feet (geoprobe screen set from 12-16'). The physical evidence of ground water contamination was observed in the ground water sample.

GP-6 was placed down gradient from GP-5 and advanced to 21 feet below grade. Fill material was encountered from one to seven feet. A fine-grain, silty sand was encountered from eight to 16 feet. Water was encountered at approximately 14.5 feet. No physical evidence (e.g. odors or staining) of contamination was detected in the boring. A water sample was collected from 14.5 to 16.5 feet.

GP-7 was placed west of GP-5 and advanced to 20 feet below grade. Subsurface sediments consisted of fill material, sand with clay and silty sandstone. Water was encountered at 14 feet below grade. No physical evidence (e.g. odors or staining) of contamination was detected in the boring. A ground water sample was collected from 15-17 feet below grade.

Boring logs which record our descriptions of the sediment encountered are included in Attachment 2.

Analytical Results

Soil analytical results are summarized in Table 1. Copies of the soil laboratory reports are included in Attachment 3. Ground water results are summarized in Table 2. Copies of the ground water laboratory results are included in Attachment 4.

None of the target parameters were detected in soil samples from GP-1 (10'), GP-2 (10'), GP-3 (6'), and GP-5 (10'). Anthracene, 2-methylnaphthalene, and phenanthracene were detected in the soil samples from GP-3 (11'), but the concentrations were well below the Tier I Protection of Ground Water Criteria. UST volatiles were not detected in this soil sample. In GP-4 (10'), toluene, ethylbenzene, and xylenes were detected, but the concentrations were well below the Tier I Criteria. No PNA compounds were detected in GP-4 (10').

None of the target parameters were detected in the ground water samples collected from GP-1, GP-3, and GP-4. In GP-5 (12-16'), no UST volatiles were detected; only the PNA compounds chrysene and pyrene were detected in the water samples from GP-5, but only chrysene at 47.5 ug/L was detected in excess of its Tier I Criterion of 5 ug/L. In GP-6 (14.5-16.5), only 1,2,4 trimethylbenzene at 8 ug/L and 1,3,5 trimethylbenzene at 1 ug/L were detected, but these concentrations were well below the Tier I Criteria of 63 ug/L and 72 ug/L, respectively. No PNA compounds were detected in the ground water sample collected from GP-6.

In GP-7 (15-17'), xylene was detected at 2 ug/L and 1,2,4 trimethylbenzene was detected at 5 ug/L. These concentrations are well below the Tier I Criteria. No PNA compounds were detected in the water sample collected from GP-7.

Discussion of Results

GP-1 through GP-7 did not detect measurable free-phase hydrocarbon as was reported in SB-7. GP-1 and GP-2 were placed immediately south of the former tank basins, and physical evidence of contamination was not revealed by the analytical testing. GP-3, GP-4, GP-5 and GP-7 were placed south of SB-7 and SB-9, SB-10, and SB-11 (see map). Although minor concentrations of

VOCs were detected in GP-6 and GP-7, none of the target VOC parameters were detected above the Tier I Criteria. Although chrysene was detected in excess of its Tier I Criteria in GP-5, chrysene was not detected in the borings placed east, west and south of GP-5. Based on these ground water results, the residual contamination detected in GP-5 appears localized to a very small area. Further evidence suggesting that the residual contamination is very limited is provided by reviewing the current results to the results from SB-9. The target constituents detected in SB-9 were not detected in the ground water samples collected immediately down gradient in GP-3, GP-4, GP-5, GP-6 and GP-7. Based on the ground water results from GP-3, GP-4, GP-6 and GP-7, contamination at concentrations in excess of the GSI criteria does not appear to be migrating into the river.

Based on the absence of measurable free-phase hydrocarbon in the recent borings and the limited extent of the residual contamination, it appears that previous response measures to remove impacted soil and free-product have significantly reduced the amount of residual contamination, so that now only one constituent in one boring was detected at a concentration in excess of its Tier I Drinking Water Criterion. Therefore, additional testing and active remediation are not warranted.

Enclosures:

Table 1	Summary of Soil Results
Table 2	Summary of Ground Water Results

Attachment 1	Annotated Site Map
Attachment 2	Soil Boring Logs
Attachment 3	Soil Laboratory Reports
Attachment 4	Ground Water Laboratory Reports

H.B. Sherman Site
Battle Creek, MI

Table 1

SUMMARY OF SOIL ANALYTICAL RESULTS

Sample	GP-1	GP-2	GP-3	GP-3	GP-4	GP-5		
Sample Depth, feet	10	10	6	11	10	10		
Date Sample Collected	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/10/2001		
VOCs, ug/L							Protection of GW Criteira	GSI Protection Criteria
Date Analyzed	4/13/2001	4/13/2001	4/13/2001	4/13/2001	4/13/2001	4/13/2001		
Method # Used	8260	8260	8260	8260	8260	8260		
Benzene	<47	<45.4	<43.4	<47.6	<45.4	<50.6	100	4000
Toluene	<47	<45.4	<43.4	<47.6	93.1	<50.6	16000	2800
Ethylbenzene	<47	<45.4	<43.4	<47.6	61.3	<50.6	1500	360
Xylene, m/p	<47	<45.4	<43.4	<47.6	252.0	<50.6	5600	700
Xylene, o	<47	<45.4	<43.4	<47.6	<45.4	<50.6	5600	700
Methyl tert-butyl Ether	<247	<227	<217	<238	<227	<253	800	15000
1,2,4-Trimethylbenzene	<94.1	<90.9	<86.9	<95.2	<90.9	<101	2,100	ID
1,3,5-Trimethylbenzene	<94.1	<90.9	<86.9	<95.2	<90.9	<101	1,800	ID
1,2-Dibromoethane	<47	<45.4	<43.4	<47.6	<45.4	<50.6	10	20
1,2-Dichloroethane	<47	<45.4	<43.4	<47.6	<45.4	<50.6	100	7,200
PNAs, ug/L*								
Date Extracted	04/11/01	04/11/01	04/11/01	04/11/01	04/11/01	04/11/01	Protection of GW Criteria	GSI Protection Criteria
Date Analyzed	04/13/01	04/13/01	04/13/01	04/13/01	04/13/01	04/16/01		
Method # Used	8310	8310	8310	8310	8310	8310		
Anthracene	<294	<284	<271	384	<284	<316	41000	ID
2-Methyl Naphthalene	<294	<284	<271	473	<284	<316	57,000	ID
Phenanthrene	<294	<284	<271	784	<284	<316	56,000	2,300

*** Only PNAs detected are listed. PNA compounds not listed were below the reported detection limit.**

Former HB Sherman Site
Battle Creek, MI

TABLE 2

SUMMARY OF GROUND WATER ANALYTICAL RESULTS

Sample	GP-1	GP-3	GP-3	GP-4	GP-5	GP-6	GP-7		
Sample Depth, feet	16-20	12-16	22-24	16-18	12-16	14.5-16.5	15-17		
Date Sample Collected	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/10/2001	4/10/2001		
VOCs, ug/L									
Date Analyzed	4/13/2001	4/16/2001	4/16/2001	4/16/2001	4/16/2001	4/16/2001	4/16/2001	Criteria Protective of Drinking Water [1]	Groundwater Surface Water Interface [1]
Method # Used	8260	8260	8260	8260	8260	8260	8260		
Benzene	<1	<1	<1	<1	<1	<1	<1	5	200
Toluene	<1	<1	<1	<1	<1	<1	<1	790	140
Ethylbenzene	<1	<1	<1	<1	<1	<1	<1	74	18
Xylene, m/p	<1	<1	<1	<1	<1	<1	2.0	280 [2]	35 [2]
Xylene, o	<1	<1	<1	<1	<1	<1	<1	280 [2]	35 [2]
Methyl tert-butyl Ether	<5	<5	<5	<5	<5	<5	<5	40	730
1,2,4-Trimethylbenzene	<1	<1	<1	<1	<1	8.0	5.0	63	ID [3]
1,3,5-Trimethylbenzene	<1	<1	<1	<1	<1	1.0	<1	72	ID
1,2-Dibromoethane	<1	<1	<1	<1	<1	<1	<1	1	1
1,2-Dichloroethane	<1	<1	<1	<1	<1	<1	<1	5	ID
PNAs, ug/L*									
Date Extracted	04/11/01	04/11/01	04/11/01	04/11/01	04/11/01	04/11/01	04/11/01	Criteria Protective of Drinking Water [1]	Groundwater Surface Water Interface [1]
Date Analyzed	04/13/01	04/13/01	04/13/01	04/13/01	04/16/01	04/13/01	04/13/01		
Method # Used	8310	8310	8310	8310	8310	8310	8310		
Chrysene	<5	<5	<5	<5	47.5	<5	<5	5	ID
Pyrene	<5	<5	<5	<5	37.9	<5	<5	140	ID

*** Only PNAs detected are listed. PNA compounds not listed were below the reported detection limit.**

Battle Creek
Former HB Sherman Site

FOOTNOTES TO TABLES

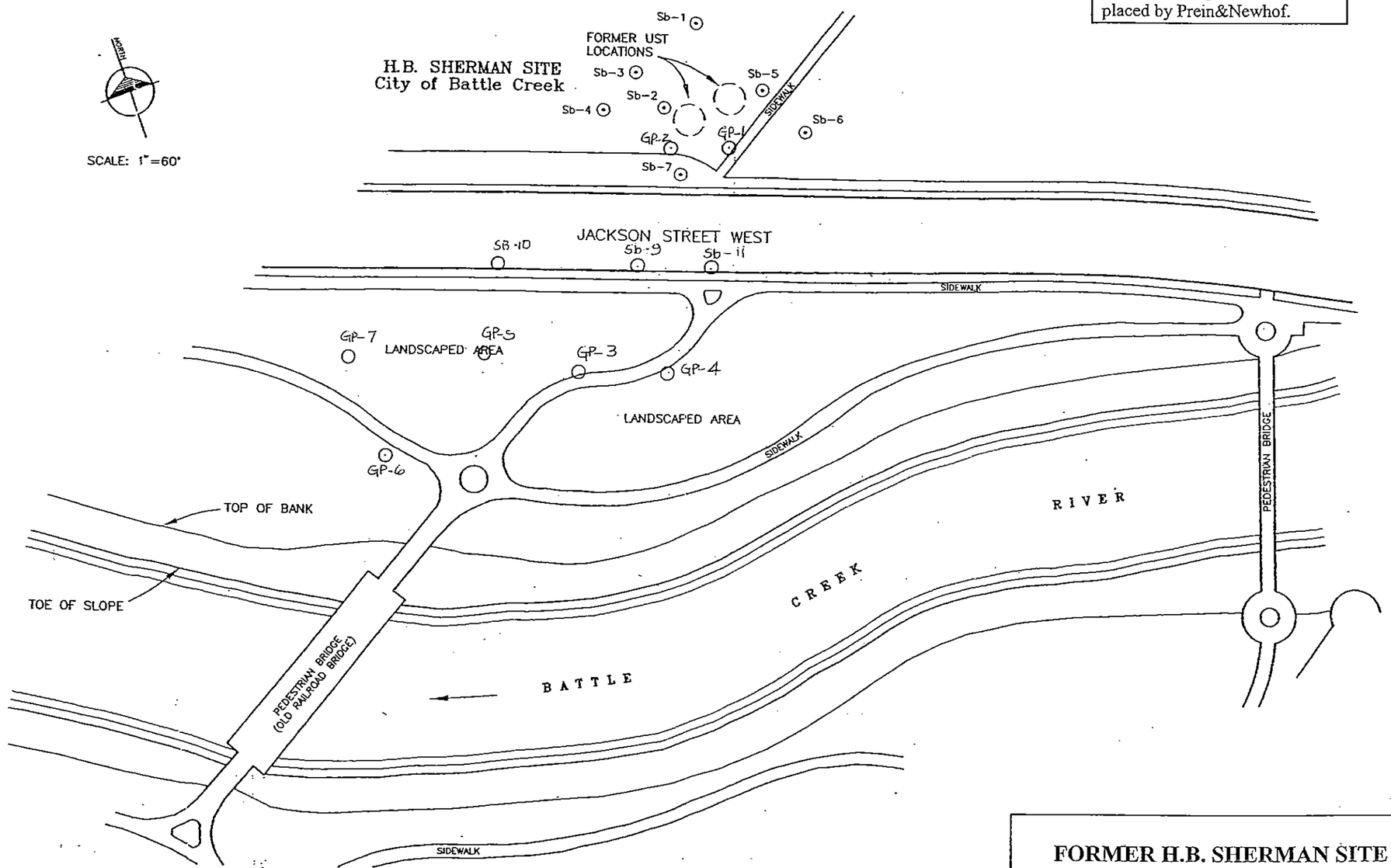
1. Reference:
MERA Operational Memorandum #4, Revision 5. Cleanup Criteria Tables, June 2000 with addendums.

2. Criteria values are for combined Xylenes (m/p and o)

3. ID: Inadequate data to develop criterion.

- *Site Map*

Notes: Information on this map was compiled from several maps: Earth Tech Phase II Investigation Work Plan (January 1995), Horizon Environmental Boring Location Map, Figure 3 (April 1996) and Global Environmental Site Sketch, Figure 1. This map, which was the Earth Tech Work Plan, was annotated to include the previous boring information and the Geoprobe® locations placed by Prein&Newhof.



FORMER H.B. SHERMAN SITE
BATTEL CREEK, MICHIGAN

1,2 - Dibromoethane (EDB)	<1	µg/L	8260	1	DEAN	4/16/01
1,2 - Dichloroethane	<1	µg/L	8260	1	DEAN	4/16/01
1,2,4 - Trimethylbenzene	8.00	µg/L	8260	1.00	DEAN	4/16/01
1,3,5 - Trimethylbenzene	1.00	µg/L	8260	1.00	DEAN	4/16/01
Benzene	<1	µg/L	8260	1	DEAN	4/16/01
Ethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
Methyl tert-butyl Ether (MTBE)	<5	µg/L	8260	5	DEAN	4/16/01
Toluene	<1	µg/L	8260	1	DEAN	4/16/01
Xylene, m/p	<1	µg/L	8260	1	DEAN	4/16/01
Xylene, o	<1	µg/L	8260	1	DEAN	4/16/01

Lab Log #: 2001:0001341-7 Sample ID: GP - 7: 15-17' Date Received: 4/11/01
Date Sampled: 4/10/01

Analyte	Result	Units	Method #	Detection Limit	Analyst	Analysis Date
Prep: SVOA Extraction					DEWITT	4/11/01
2 Methyl Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthylene	<5	µg/L	8310	5	DEWITT	4/13/01
Anthracene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(a)anthracene	<1	µg/L	8310	1	DEWITT	4/13/01
Benzo(a)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(b)fluoranthene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(ghi)perylene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(k)fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Chrysene	<5	µg/L	8310	5	DEWITT	4/13/01
Dibenzo(a,h)anthracene	<2	µg/L	8310	2	DEWITT	4/13/01
Fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Fluorene	<5	µg/L	8310	5	DEWITT	4/13/01
Indeno(1,2,3-cd)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Phenanthrene	<5	µg/L	8310	5	DEWITT	4/13/01
Pyrene	<5	µg/L	8310	5	DEWITT	4/13/01
1,2 - Dibromoethane (EDB)	<1	µg/L	8260	1	DEAN	4/16/01
1,2 - Dichloroethane	<1	µg/L	8260	1	DEAN	4/16/01
1,2,4 - Trimethylbenzene	5.00	µg/L	8260	1.00	DEAN	4/16/01
1,3,5 - Trimethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
Benzene	<1	µg/L	8260	1	DEAN	4/16/01
Ethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
Methyl tert-butyl Ether (MTBE)	<5	µg/L	8260	5	DEAN	4/16/01
Toluene	<1	µg/L	8260	1	DEAN	4/16/01
Xylene, m/p	2.00	µg/L	8260	1.00	DEAN	4/16/01
Xylene, o	<1	µg/L	8260	1	DEAN	4/16/01

Samples received on ice.

Robert Erickson, Laboratory Director

1,2 - Dibromoethane (EDB)	<1	µg/L	8260	1	DEAN	4/16/01
1,2 - Dichloroethane	<1	µg/L	8260	1	DEAN	4/16/01
1,2,4 - Trimethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
1,3,5 - Trimethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
Benzene	<1	µg/L	8260	1	DEAN	4/16/01
Ethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
Methyl tert-butyl Ether (MTBE)	<5	µg/L	8260	5	DEAN	4/16/01
Toluene	<1	µg/L	8260	1	DEAN	4/16/01
Xylene, m/p	<1	µg/L	8260	1	DEAN	4/16/01
Xylene, o	<1	µg/L	8260	1	DEAN	4/16/01

Lab Log #: 2001:0001341-5 **Sample ID: GP - 5: 12-16'** Date Received: 4/11/01
Date Sampled: 4/10/01

Analyte	Result	Units	Method #	Detection Limit	Analyst	Analysis Date
Prep: SVOA Extraction					DEWITT	4/11/01
2 Methyl Naphthalene	<5	µg/L	8310	5	DEWITT	4/16/01
Acenaphthene	<5	µg/L	8310	5	DEWITT	4/16/01
Acenaphthylene	<5	µg/L	8310	5	DEWITT	4/16/01
Anthracene	<5	µg/L	8310	5	DEWITT	4/16/01
Benzo(a)anthracene	<1	µg/L	8310	1	DEWITT	4/16/01
Benzo(a)pyrene	<2	µg/L	8310	2	DEWITT	4/16/01
Benzo(b)fluoranthene	<2	µg/L	8310	2	DEWITT	4/16/01
Benzo(ghi)perylene	<5	µg/L	8310	5	DEWITT	4/16/01
Benzo(k)fluoranthene	<5	µg/L	8310	5	DEWITT	4/16/01
Chrysene	47.5	µg/L	8310	5.00	DEWITT	4/16/01
Dibenzo(a,h)anthracene	<2	µg/L	8310	2	DEWITT	4/16/01
Fluoranthene	<5	µg/L	8310	5	DEWITT	4/16/01
Fluorene	<5	µg/L	8310	5	DEWITT	4/16/01
Indeno(1,2,3-cd)pyrene	<2	µg/L	8310	2	DEWITT	4/16/01
Naphthalene	<5	µg/L	8310	5	DEWITT	4/16/01
Phenanthrene	<5	µg/L	8310	5	DEWITT	4/16/01
Pyrene	37.9	µg/L	8310	5.00	DEWITT	4/16/01
1,2 - Dibromoethane (EDB)	<1	µg/L	8260	1	DEAN	4/16/01
1,2 - Dichloroethane	<1	µg/L	8260	1	DEAN	4/16/01
1,2,4 - Trimethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
1,3,5 - Trimethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
Benzene	<1	µg/L	8260	1	DEAN	4/16/01
Ethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
Methyl tert-butyl Ether (MTBE)	<5	µg/L	8260	5	DEAN	4/16/01
Toluene	<1	µg/L	8260	1	DEAN	4/16/01
Xylene, m/p	<1	µg/L	8260	1	DEAN	4/16/01
Xylene, o	<1	µg/L	8260	1	DEAN	4/16/01

Lab Log #: 2001:0001341-6 **Sample ID: GP - 6: 14.5-16.5'** Date Received: 4/11/01
Date Sampled: 4/10/01

Analyte	Result	Units	Method #	Detection Limit	Analyst	Analysis Date
Prep: SVOA Extraction					DEWITT	4/11/01
2 Methyl Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthylene	<5	µg/L	8310	5	DEWITT	4/13/01
Anthracene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(a)anthracene	<1	µg/L	8310	1	DEWITT	4/13/01
Benzo(a)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(b)fluoranthene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(ghi)perylene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(k)fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Chrysene	<5	µg/L	8310	5	DEWITT	4/13/01
Dibenzo(a,h)anthracene	<2	µg/L	8310	2	DEWITT	4/13/01
Fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Fluorene	<5	µg/L	8310	5	DEWITT	4/13/01
Indeno(1,2,3-cd)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Phenanthrene	<5	µg/L	8310	5	DEWITT	4/13/01
Pyrene	<5	µg/L	8310	5	DEWITT	4/13/01

1,2 - Dibromoethane (EDB)	<1	µg/L	8260	1	DEAN	4/16/01
1,2 - Dichloroethane	<1	µg/L	8260	1	DEAN	4/16/01
1,2,4 - Trimethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
1,3,5 - Trimethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
Benzene	<1	µg/L	8260	1	DEAN	4/16/01
Ethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
Methyl tert-butyl Ether (MTBE)	<5	µg/L	8260	5	DEAN	4/16/01
Toluene	<1	µg/L	8260	1	DEAN	4/16/01
Xylene, m/p	<1	µg/L	8260	1	DEAN	4/16/01
Xylene, o	<1	µg/L	8260	1	DEAN	4/16/01

Lab Log #: 2001:0001341-3 Sample ID: GP - 3: 22-24'

Date Received: 4/11/01
Date Sampled: 4/10/01

Analyte	Result	Units	Method #	Detection Limit	Analyst	Analysis Date
Prep: SVOA Extraction					DEWITT	4/11/01
2 Methyl Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthylene	<5	µg/L	8310	5	DEWITT	4/13/01
Anthracene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(a)anthracene	<1	µg/L	8310	1	DEWITT	4/13/01
Benzo(a)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(b)fluoranthene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(ghi)perylene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(k)fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Chrysene	<5	µg/L	8310	5	DEWITT	4/13/01
Dibenzo(a,h)anthracene	<2	µg/L	8310	2	DEWITT	4/13/01
Fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Fluorene	<5	µg/L	8310	5	DEWITT	4/13/01
Indeno(1,2,3-cd)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Phenanthrene	<5	µg/L	8310	5	DEWITT	4/13/01
Pyrene	<5	µg/L	8310	5	DEWITT	4/13/01
1,2 - Dibromoethane (EDB)	<1	µg/L	8260	1	DEAN	4/16/01
1,2 - Dichloroethane	<1	µg/L	8260	1	DEAN	4/16/01
1,2,4 - Trimethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
1,3,5 - Trimethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
Benzene	<1	µg/L	8260	1	DEAN	4/16/01
Ethylbenzene	<1	µg/L	8260	1	DEAN	4/16/01
Methyl tert-butyl Ether (MTBE)	<5	µg/L	8260	5	DEAN	4/16/01
Toluene	<1	µg/L	8260	1	DEAN	4/16/01
Xylene, m/p	<1	µg/L	8260	1	DEAN	4/16/01
Xylene, o	<1	µg/L	8260	1	DEAN	4/16/01

Lab Log #: 2001:0001341-4 Sample ID: GP - 4: 16-18'

Date Received: 4/11/01
Date Sampled: 4/10/01

Analyte	Result	Units	Method #	Detection Limit	Analyst	Analysis Date
Prep: SVOA Extraction					DEWITT	4/11/01
2 Methyl Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthylene	<5	µg/L	8310	5	DEWITT	4/13/01
Anthracene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(a)anthracene	<1	µg/L	8310	1	DEWITT	4/13/01
Benzo(a)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(b)fluoranthene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(ghi)perylene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(k)fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Chrysene	<5	µg/L	8310	5	DEWITT	4/13/01
Dibenzo(a,h)anthracene	<2	µg/L	8310	2	DEWITT	4/13/01
Fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Fluorene	<5	µg/L	8310	5	DEWITT	4/13/01
Indeno(1,2,3-cd)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Phenanthrene	<5	µg/L	8310	5	DEWITT	4/13/01
Pyrene	<5	µg/L	8310	5	DEWITT	4/13/01

3260 Evergreen NE Grand Rapids, MI 49525 Telephone 616-364-7600 Fax 616-364-4222 lab@preinnewhof.com

Prein&Newhof

Engineers ▪ Surveyors ▪ Environmental & Soils Laboratory

Delivery Group #: 2001:0001341

Customer Name: Prein & Newhof
Address: 3355 Evergreen Dr NE
Grand Rapids, MI 49525

Contact Name: Mr Ed Higuera PE
: 3355 Evergreen Dr NE
: Grand Rapids, MI 49525

Project Name: Battle Creek Former HB Sherman Site
Project #: 2010127L

Sampled By: T Woodburne P&N

Lab Log #: 2001:0001341-1 **Sample ID: GP - 1: 16-20'**

Date Received: 4/11/01
Date Sampled: 4/10/01

Analyte	Result	Units	Method #	Detection Limit	Analyst	Analysis Date
Prep: SVOA Extraction					DEWITT	4/11/01
2 Methyl Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthylene	<5	µg/L	8310	5	DEWITT	4/13/01
Anthracene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(a)anthracene	<1	µg/L	8310	1	DEWITT	4/13/01
Benzo(a)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(b)fluoranthene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(ghi)perylene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(k)fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Chrysene	<5	µg/L	8310	5	DEWITT	4/13/01
Dibenzo(a,h)anthracene	<2	µg/L	8310	2	DEWITT	4/13/01
Fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Fluorene	<5	µg/L	8310	5	DEWITT	4/13/01
Indeno(1,2,3-cd)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Phenanthrene	<5	µg/L	8310	5	DEWITT	4/13/01
Pyrene	<5	µg/L	8310	5	DEWITT	4/13/01
1,2 - Dibromoethane (EDB)	<1	µg/L	8260	1	DEAN	4/13/01
1,2 - Dichloroethane	<1	µg/L	8260	1	DEAN	4/13/01
1,2,4 - Trimethylbenzene	<1	µg/L	8260	1	DEAN	4/13/01
1,3,5 - Trimethylbenzene	<1	µg/L	8260	1	DEAN	4/13/01
Benzene	<1	µg/L	8260	1	DEAN	4/13/01
Ethylbenzene	<1	µg/L	8260	1	DEAN	4/13/01
Methyl tert-butyl Ether (MTBE)	<5	µg/L	8260	5	DEAN	4/13/01
Toluene	<1	µg/L	8260	1	DEAN	4/13/01
Xylene, m/p	<1	µg/L	8260	1	DEAN	4/13/01
Xylene, o	<1	µg/L	8260	1	DEAN	4/13/01

Lab Log #: 2001:0001341-2 **Sample ID: GP - 3: 12-16'**

Date Received: 4/11/01
Date Sampled: 4/10/01

Analyte	Result	Units	Method #	Detection Limit	Analyst	Analysis Date
Prep: SVOA Extraction					DEWITT	4/11/01
2 Methyl Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthene	<5	µg/L	8310	5	DEWITT	4/13/01
Acenaphthylene	<5	µg/L	8310	5	DEWITT	4/13/01
Anthracene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(a)anthracene	<1	µg/L	8310	1	DEWITT	4/13/01
Benzo(a)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(b)fluoranthene	<2	µg/L	8310	2	DEWITT	4/13/01
Benzo(ghi)perylene	<5	µg/L	8310	5	DEWITT	4/13/01
Benzo(k)fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Chrysene	<5	µg/L	8310	5	DEWITT	4/13/01
Dibenzo(a,h)anthracene	<2	µg/L	8310	2	DEWITT	4/13/01
Fluoranthene	<5	µg/L	8310	5	DEWITT	4/13/01
Fluorene	<5	µg/L	8310	5	DEWITT	4/13/01
Indeno(1,2,3-cd)pyrene	<2	µg/L	8310	2	DEWITT	4/13/01
Naphthalene	<5	µg/L	8310	5	DEWITT	4/13/01
Phenanthrene	<5	µg/L	8310	5	DEWITT	4/13/01
Pyrene	<5	µg/L	8310	5	DEWITT	4/13/01

- *Ground Water Laboratory Results*

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Solids, Total (TS)	%	88.0		DEWITT	160.3	4/13/01	0.010
1,2 - Dibromoethane (EDB)	µg/kg	<40	<45.4	DEAN	5035/8260	4/13/01	40
1,2 - Dichloroethane	µg/kg	<40	<45.4	DEAN	5035/8260	4/13/01	40
1,2,4 - Trimethylbenzene	µg/kg	<80	<90.9	DEAN	5035/8260	4/13/01	80
1,3,5 - Trimethylbenzene	µg/kg	<80	<90.9	DEAN	5035/8260	4/13/01	80
Benzene	µg/kg	<40	<45.4	DEAN	5035/8260	4/13/01	40
Ethylbenzene	µg/kg	54.0	61.3	DEAN	5035/8260	4/13/01	40.0
Methyl tert-butyl Ether (MTBE)	µg/kg	<200	<227	DEAN	5035/8260	4/13/01	200
Toluene	µg/kg	82.0	93.1	DEAN	5035/8260	4/13/01	40.0
Xylene, m/p	µg/kg	222	252	DEAN	5035/8260	4/13/01	40.0
Xylene, o	µg/kg	<40	<45.4	DEAN	5035/8260	4/13/01	40

Lab Log #: 2001:0001340-6 **Client Sample ID:** GP - 5 @ 10'

Sample Received: 4/11/01
Sample Date: 4/10/01

Parameter	Units	As Received	Dry Wt. Basis	Analyst	Method #	Analysis Date	As Recvd MDL
Prep: SVOA Extraction				DEWITT		4/13/01	
2 Methyl Naphthalene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Acenaphthene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Acenaphthylene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Anthracene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Benzo(a)anthracene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Benzo(a)pyrene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Benzo(b)fluoranthene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Benzo(ghi)perylene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Benzo(k)fluoranthene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Chrysene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Dibenzo(a,h)anthracene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Fluoranthene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Fluorene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Indeno(1,2,3-cd)pyrene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Naphthalene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Phenanthrene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Pyrene	µg/kg	<250	<316	DEWITT	8310	4/13/01	250
Solids, Total (TS)	%	79.0		DEWITT	160.3	4/13/01	0.010
1,2 - Dibromoethane (EDB)	µg/kg	<40	<50.6	DEAN	5035/8260	4/13/01	40
1,2 - Dichloroethane	µg/kg	<40	<50.6	DEAN	5035/8260	4/13/01	40
1,2,4 - Trimethylbenzene	µg/kg	<80	<101	DEAN	5035/8260	4/13/01	80
1,3,5 - Trimethylbenzene	µg/kg	<80	<101	DEAN	5035/8260	4/13/01	80
Benzene	µg/kg	<40	<50.6	DEAN	5035/8260	4/13/01	40
Ethylbenzene	µg/kg	<40	<50.6	DEAN	5035/8260	4/13/01	40
Methyl tert-butyl Ether (MTBE)	µg/kg	<200	<253	DEAN	5035/8260	4/13/01	200
Toluene	µg/kg	<40	<50.6	DEAN	5035/8260	4/13/01	40
Xylene, m/p	µg/kg	<40	<50.6	DEAN	5035/8260	4/13/01	40
Xylene, o	µg/kg	<40	<50.6	DEAN	5035/8260	4/13/01	40

Samples received on ice.

Robert Erickson, Laboratory Director

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Lab Log #: 2001:0001340-4 Client Sample ID: GP - 3 @ 11'

Sample Received: 4/11/01
Sample Date: 4/10/01

Parameter	Units	As Received	Dry Wt Basis	Analyst	Method #	Analysis Date	As Recvd MDL
Prep: SVOA Extraction				DEWITT		4/13/01	
2 Methyl Naphthalene	µg/kg	398	473	DEWITT	8310	4/13/01	250
Acenaphthene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Acenaphthylene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Anthracene	µg/kg	323	384	DEWITT	8310	4/13/01	250
Benzo(a)anthracene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Benzo(a)pyrene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Benzo(b)fluoranthene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Benzo(ghi)perylene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Benzo(k)fluoranthene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Chrysene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Dibenzo(a,h)anthracene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Fluoranthene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Fluorene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Indeno(1,2,3-cd)pyrene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Naphthalene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Phenanthrene	µg/kg	659	784	DEWITT	8310	4/13/01	250
Pyrene	µg/kg	<250	<297	DEWITT	8310	4/13/01	250
Solids, Total (TS)	%	84.0		DEWITT	160.3	4/13/01	0.010
1,2 - Dibromoethane (EDB)	µg/kg	<40	<47.6	DEAN	5035/8260	4/13/01	40
1,2 - Dichloroethane	µg/kg	<40	<47.6	DEAN	5035/8260	4/13/01	40
1,2,4 - Trimethylbenzene	µg/kg	<80	<95.2	DEAN	5035/8260	4/13/01	80
1,3,5 - Trimethylbenzene	µg/kg	<80	<95.2	DEAN	5035/8260	4/13/01	80
Benzene	µg/kg	<40	<47.6	DEAN	5035/8260	4/13/01	40
Ethylbenzene	µg/kg	<40	<47.6	DEAN	5035/8260	4/13/01	40
Methyl tert-butyl Ether (MTBE)	µg/kg	<200	<238	DEAN	5035/8260	4/13/01	200
Toluene	µg/kg	<40	<47.6	DEAN	5035/8260	4/13/01	40
Xylene, m/p	µg/kg	<40	<47.6	DEAN	5035/8260	4/13/01	40
Xylene, o	µg/kg	<40	<47.6	DEAN	5035/8260	4/13/01	40

Lab Log #: 2001:0001340-5 Client Sample ID: GP - 4 @ 10'

Sample Received: 4/11/01
Sample Date: 4/10/01

Parameter	Units	As Received	Dry Wt Basis	Analyst	Method #	Analysis Date	As Recvd MDL
Prep: SVOA Extraction				DEWITT		4/13/01	
2 Methyl Naphthalene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Acenaphthene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Acenaphthylene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Anthracene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Benzo(a)anthracene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Benzo(a)pyrene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Benzo(b)fluoranthene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Benzo(ghi)perylene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Benzo(k)fluoranthene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Chrysene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Dibenzo(a,h)anthracene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Fluoranthene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Fluorene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Indeno(1,2,3-cd)pyrene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Naphthalene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Phenanthrene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Pyrene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250

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Chrysene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Dibenzo(a,h)anthracene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Fluoranthene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Fluorene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Indeno(1,2,3-cd)pyrene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Naphthalene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Phenanthrene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Pyrene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Solids, Total (TS)	%	88.0		DEWITT	160.3	4/13/01	0.010
1,2 - Dibromoethane (EDB)	µg/kg	<40	<45.4	DEAN	5035/8260	4/13/01	40
1,2 - Dichloroethane	µg/kg	<40	<45.4	DEAN	5035/8260	4/13/01	40
1,2,4 - Trimethylbenzene	µg/kg	<80	<90.9	DEAN	5035/8260	4/13/01	80
1,3,5 - Trimethylbenzene	µg/kg	<80	<90.9	DEAN	5035/8260	4/13/01	80
Benzene	µg/kg	<40	<45.4	DEAN	5035/8260	4/13/01	40
Ethylbenzene	µg/kg	<40	<45.4	DEAN	5035/8260	4/13/01	40
Methyl tert-butyl Ether (MTBE)	µg/kg	<200	<227	DEAN	5035/8260	4/13/01	200
Toluene	µg/kg	<40	<45.4	DEAN	5035/8260	4/13/01	40
Xylene, m/p	µg/kg	<40	<45.4	DEAN	5035/8260	4/13/01	40
Xylene, o	µg/kg	<40	<45.4	DEAN	5035/8260	4/13/01	40

Lab Log #: 2001:0001340-3 Client Sample ID: GP - 3 @ 6'

Sample Received: 4/11/01
Sample Date: 4/10/01

Parameter	Units	As Received	Dry Wt. Basis	Analyst	Method #	Analysis Date	As Recvd MDL
Prep: SVOA Extraction				DEWITT		4/13/01	
2 Methyl Naphthalene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Acenaphthene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Acenaphthylene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Anthracene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Benzo(a)anthracene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Benzo(a)pyrene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Benzo(b)fluoranthene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Benzo(ghi)perylene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Benzo(k)fluoranthene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Chrysene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Dibenzo(a,h)anthracene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Fluoranthene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Fluorene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Indeno(1,2,3-cd)pyrene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Naphthalene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Phenanthrene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Pyrene	µg/kg	<250	<271	DEWITT	8310	4/13/01	250
Solids, Total (TS)	%	92.0		DEWITT	160.3	4/13/01	0.010
1,2 - Dibromoethane (EDB)	µg/kg	<40	<43.4	DEAN	5035/8260	4/13/01	40
1,2 - Dichloroethane	µg/kg	<40	<43.4	DEAN	5035/8260	4/13/01	40
1,2,4 - Trimethylbenzene	µg/kg	<80	<86.9	DEAN	5035/8260	4/13/01	80
1,3,5 - Trimethylbenzene	µg/kg	<80	<86.9	DEAN	5035/8260	4/13/01	80
Benzene	µg/kg	<40	<43.4	DEAN	5035/8260	4/13/01	40
Ethylbenzene	µg/kg	<40	<43.4	DEAN	5035/8260	4/13/01	40
Methyl tert-butyl Ether (MTBE)	µg/kg	<200	<217	DEAN	5035/8260	4/13/01	200
Toluene	µg/kg	<40	<43.4	DEAN	5035/8260	4/13/01	40
Xylene, m/p	µg/kg	<40	<43.4	DEAN	5035/8260	4/13/01	40
Xylene, o	µg/kg	<40	<43.4	DEAN	5035/8260	4/13/01	40

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Delivery Group #2001:0001340
Customer Name: Prein & Newhof
Address: 3355 Evergreen Dr NE

Grand Rapids, MI 49525

Project Name: Battle Creek Former HB Sherman Site

Project #: 2010127L
Contact Name: Mr Ed Higuera PE
: 3355 Evergreen Dr NE

: Grand Rapids, MI 49525
Sampled By : T Woodburne P&N

4/18/01

Lab Log #: 2001:0001340-1 Client Sample ID: GP - 1 @ 10'

Sample Received: 4/11/01
Sample Date: 4/10/01

Parameter	Units	As Received	Dry Wt. Basis	Analyst	Method #	Analysis Date	As Recvd MDL
Prep: SVOA Extraction				DEWITT		4/13/01	
2 Methyl Naphthalene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Acenaphthene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Acenaphthylene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Anthracene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Benzo(a)anthracene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Benzo(a)pyrene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Benzo(b)fluoranthene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Benzo(ghi)perylene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Benzo(k)fluoranthene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Chrysene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Dibenzo(a,h)anthracene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Fluoranthene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Fluorene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Indeno(1,2,3-cd)pyrene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Naphthalene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Phenanthrene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Pyrene	µg/kg	<250	<294	DEWITT	8310	4/13/01	250
Solids, Total (TS)	%	85.0		DEWITT	160.3	4/13/01	0.010
1,2 - Dibromoethane (EDB)	µg/kg	<40	<47	DEAN	5035/8260	4/13/01	40
1,2 - Dichloroethane	µg/kg	<40	<47	DEAN	5035/8260	4/13/01	40
1,2,4 - Trimethylbenzene	µg/kg	<80	<94.1	DEAN	5035/8260	4/13/01	80
1,3,5 - Trimethylbenzene	µg/kg	<80	<94.1	DEAN	5035/8260	4/13/01	80
Benzene	µg/kg	<40	<47	DEAN	5035/8260	4/13/01	40
Ethylbenzene	µg/kg	<40	<47	DEAN	5035/8260	4/13/01	40
Methyl tert-butyl Ether (MTBE)	µg/kg	<200	<235	DEAN	5035/8260	4/13/01	200
Toluene	µg/kg	<40	<47	DEAN	5035/8260	4/13/01	40
Xylene, m/p	µg/kg	<40	<47	DEAN	5035/8260	4/13/01	40
Xylene, o	µg/kg	<40	<47	DEAN	5035/8260	4/13/01	40

Lab Log #: 2001:0001340-2 Client Sample ID: GP - 2 @ 10'

Sample Received: 4/11/01
Sample Date: 4/10/01

Parameter	Units	As Received	Dry Wt. Basis	Analyst	Method #	Analysis Date	As Recvd MDL
Prep: SVOA Extraction				DEWITT		4/13/01	
2 Methyl Naphthalene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Acenaphthene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Acenaphthylene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Anthracene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Benzo(a)anthracene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Benzo(a)pyrene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Benzo(b)fluoranthene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Benzo(ghi)perylene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250
Benzo(k)fluoranthene	µg/kg	<250	<284	DEWITT	8310	4/13/01	250

- *Soil Laboratory Results*

PREIN&NEWHOF
CONSULTING ENGINEERS
3355 EVERGREEN DRIVE N.E. GRAND RAPIDS, MICHIGAN 49525 PHONE (616) 364-8491

CLIENT Battle Creek JOB NO. 2010217G DATE 4-10-01

PROJECT LOCATION Former HB Sherman Site, 207 W. Michigan Avenue, Battle Creek, MI

EQUIPMENT & OPERATOR Geoprobe operated by Brad Masserant of Environmental Investigation Inc

SOILS TECHNICIAN Tim Woodburne of Prein&Newhof

BORING LOCATION 69' West of GP-5, 29' South of South Side of Sidewalk

BORING NO. GP-7 APPROX. GROUND ELEVATION

BORING DEPTH (feet)		Sediment Description
FROM	TO	
0	1	Topsoil
1	4	Brown sand with coal and slag
4	8	Brown fine, medium sand with clay binder
8	12	Grayish-tan fine grained sand with silt
12	20	Gray fine grained silty sand stone
20		EOB
		Water sample secured from 15-17' for UST VOCs and PNAs
		Boring backfilled with soil cuttings mixed with bentonite chips.

W.T. AT 14 FT.

PREIN&NEWHOF
CONSULTING ENGINEERS
3355 EVERGREEN DRIVE N.E. GRAND RAPIDS, MICHIGAN 49525 PHONE (616) 364-8491

CLIENT Battle Creek JOB NO. 2010217G DATE 4-10-01

PROJECT LOCATION Former HB Sherman Site, 207 W. Michigan Avenue, Battle Creek, MI

EQUIPMENT & OPERATOR Geoprobe operated by Brad Masserant of Environmental Investigation Inc

SOILS TECHNICIAN Tim Woodburne of Prein&Newhof

BORING LOCATION 51' West of GP-5 84' South of Sidewalk, South side of street

BORING NO. GP-6 APPROX. GROUND ELEVATION

BORING DEPTH (feet)		Sediment Description
FROM	TO	
0	1	Topsoil
1	8	Black slag and coal fill
8	12	Orange fine grained silty sand
12	14	Tan fine grained silty sand
14	16	Gray-light brown
16	16.5	Push water sampler. Sediment not recovered
16.5		EOB
		Water sample secured from 14.5-16.5' for UST VOCs and PNAs
		Boring backfilled with soil cuttings mixed with bentonite chips.

W.T. AT 14.5 FT.

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3355 EVERGREEN DRIVE N.E. GRAND RAPIDS, MICHIGAN 49525 PHONE (616) 364-8491

CLIENT Battle Creek JOB NO. 2010217G DATE 4-10-01

PROJECT LOCATION Former HB Sherman Site, 207 W. Michigan Avenue, Battle Creek, MI

EQUIPMENT & OPERATOR Geoprobe operated by Brad Masserant of Environmental Investigation Inc

SOILS TECHNICIAN Tim Woodburne of Prein&Newhof

BORING LOCATION 50' West of GP-3

BORING NO. GP-5 APPROX. GROUND ELEVATION

BORING DEPTH (feet)		Sediment Description
FROM	TO	
0	1	Topsoil
1	4	Dark brown sand and gravel with cinders and slag (fill)
4	8	Dark brown sand and gravel with cinders and slag (fill)
8	9	Tan/orange fine grained sand
9	10	Brown clay
10	12	Brown fine-medium grained sand
12	16	Gray fine grained silty sand – odor
16	20	Gray fine grained silty sand – odor
20	21	Push to refusal at 21'
		Soil sample at 10' for UST VOCs and PNAs
		Water sample 12-16' for UST VOCs and PNAs.
		Boring backfilled with soil cuttings mixed with bentonite chips.

W.T. AT 14 FT.

PREIN&NEWHOF
CONSULTING ENGINEERS
3355 EVERGREEN DRIVE N.E. GRAND RAPIDS, MICHIGAN 49525 PHONE (616) 364-8491

CLIENT Battle Creek JOB NO. 2010217G DATE 4-10-01

PROJECT LOCATION Former HB Sherman Site, 207 W. Michigan Avenue, Battle Creek, MI

EQUIPMENT & OPERATOR Geoprobe operated by Brad Masserant of Environmental Investigation Inc

SOILS TECHNICIAN Tim Woodburne of Prein&Newhof

BORING LOCATION In groundcover, about 5 feet east of path and about 50' south of fire hydrant

BORING NO. GP-4 APPROX. GROUND ELEVATION

BORING DEPTH (feet)		Sediment Description
FROM	TO	
0	2	Topsoil
2	4	Black cinders and brick – fill
4	8	Black cinders, slag, brick – fill
8	12	Tan, orangish, fine grained silty sand
12	16	Gray fine grained silty sand stone
16	18	Sediment not observed. Push water sampler to 18'
18		EOB
		Sampled soil 10' for UST VOCs and PNAs
		Sampled groundwater 16-18' for UST VOCs and PNAs
		Boring backfilled with soil cuttings mixed with bentonite chips.

W.T. AT 14 FT.

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CLIENT Battle Creek JOB NO. 2010217G DATE 4-10-01

PROJECT LOCATION Former HB Sherman Site, 207 W. Michigan Avenue, Battle Creek, MI

EQUIPMENT & OPERATOR Geoprobe operated by Brad Masserant of Environmental Investigation Inc

SOILS TECHNICIAN Tim Woodburne of Prein&Newhof

BORING LOCATION Next to Pine Trees, South of Trees, 45' west of GP-4

BORING NO. GP-3 APPROX. GROUND ELEVATION

BORING DEPTH (feet)		Sediment Description
FROM	TO	
0	1	Topsoil
1	2	Dark brown soil with slag, black no odors
2	4	Tan fine-medium grained sand with pebbles
4	8	Tan fine-medium grained sand with pebbles
8	10	Tan fine-medium grained sand with pebbles
10	12	Dark brown/black sand – strong odor
12	16	Gray fine grained silty sand – odors (slight)
16	20	Gray fine grained silty sand
20		Push water sampler – Sediment type not observed. Secured water sample
		Soil sample secured at 11' for UST VOCs and PNAs
		Water sample secured from 12-16' for UST VOCs and PNAs
		Water sample secured from 22-24' for UST VOCs and PNAs
		Boring backfilled with soil cuttings mixed with bentonite chips.

W.T. AT 14 FT.

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CLIENT Battle Creek JOB NO. 2010217G DATE 4-10-01

PROJECT LOCATION Former HB Sherman Site, 207 W. Michigan Avenue, Battle Creek, MI

EQUIPMENT & OPERATOR Geoprobe operated by Brad Masserant of Environmental Investigation Inc

SOILS TECHNICIAN Tim Woodburne of Prein&Newhof

BORING LOCATION North side of street in grass between street and parking lot, 49' west of fire hydrant, 1 foot south of concrete curb

BORING NO. GP-2 APPROX. GROUND ELEVATION

BORING DEPTH (feet)		Sediment Description
FROM	TO	
0	1	Topsoil
1	4	Tan/orange fine grained silty sand
4	8	Tan/orange fine grained silty sand
8	12	Tan fine grained sand (silty)
12	12.5	Gray fine grained silty sand stone
12.5		EOB Refusal
		Additional boring attempts:
		Moved over 1 foot – refusal at 12'. Water table not intersected.
		Moved over 6 feet – refusal at 17'. Water table not intersected.
		Boring backfilled with soil cuttings mixed with bentonite chips.

W.T. AT Not intersected FT.

PREIN&NEWHOF
CONSULTING ENGINEERS
3355 EVERGREEN DRIVE N.E. GRAND RAPIDS, MICHIGAN 49525 PHONE (616) 364-8491

CLIENT Battle Creek JOB NO. 2010217G DATE 4-10-01

PROJECT LOCATION Former HB Sherman Site, 207 W. Michigan Avenue, Battle Creek, MI

EQUIPMENT & OPERATOR Geoprobe operated by Brad Masserant of Environmental Investigation Inc

SOILS TECHNICIAN Tim Woodburne of Prein&Newhof

BORING LOCATION North side of street in grass between street and parking lot. 19' west of fire hydrant, 1 foot south of concrete curb

BORING NO. GP-1 APPROX. GROUND ELEVATION

BORING DEPTH (feet)		Sediment Description
FROM	TO	
0	1	Topsoil
1	4	Brown sand
4	8	Orange tan fine silty sand
8	10	Orange tan fine grained silty sand
10	12	Orange tan fine grained silty sand stone
12	14	Gray fine grained silty sand stone
14	16	Gray fine grained silty sand stone
16	18	Gray fine grained silty sand stone
18	20	Gray fine grained silty sand stone
20		EOB
		Sampled soil at 10' for UST VOCs and PNAs
		Sampled water 16-20' for UST VOCs and PNAs
		Boring backfilled with soil cuttings mixed with bentonite chips.

W.T. AT 17 FT.

- *Soil Boring Logs*

HORIZON ENVIRONMENTAL
4595 Broadmoor, SE, Suite 200
Grand Rapids, MI 49512
Phone (616)554-3210
FAX (616) 554-3211

MEMORANDUM

To: **Ken Tsuchiyama, City of Battle Creek**

From: **Bill Farrell, Horizon Environmental**

Date: **November 12, 1996**

Re: **Investigative Results for the former H.B. Sherman/Gallagher Laundry/Redbird Lounge Properties**

On October 14, 1996 Horizon Environmental performed a limited hydrogeological investigation at the former H.B. Sherman/Gallagher Laundry/Redbird Lounge properties (hereafter referred to as the site). The purpose of this investigation was to determine the absence or presence of contamination associated with four areas of potential environmental concern identified during completion of the Phase I environmental site assessment (ESA) for the site. As described in the Phase I ESA, the following areas of potential environmental concern were identified:

- A former railroad spur passed through the H.B. Sherman property. In 1993 the railroad tracks were removed (but not the ballasts) and the ballasts were paved over with asphalt. The former ballasts are a potential source of contamination on the H. B. Sherman property.

- An approximately 120 gallon underground storage tank (UST) was present on the former Gallagher Laundry property. This UST was removed from the site in the late 1970's; however, no soil/ground water sampling was performed to determine the absence or presence of contamination associated with historical use of the UST system.

- An auto body and paint shop occupied a portion of the Gallagher Industrial Laundry property. The former auto body and paint shop building was bought by Gallagher Industrial Laundry in the early 1980's and annexed to the existing Gallagher Industrial Laundry building.

- A gasoline station operated on the former Redbird Lounge property in the 1950's and early 1960's.

The following describes the scope of work and results of investigative sampling completed to determine the absence or presence of environmental impact associated with the above identified areas of concern.

Former Railroad Tracks

In order to determine if historical operation of the railroad has resulted in environmental impact to underlying soils, a total of three soil samples were collected from the location of the former railroad track. An ATV-mounted drilling rig was used to core through the asphalt path and old railroad ballast at three locations (identified as RR-East, RR-Mid, and RR-West on Figure 2). One soil sample was collected at each location at an approximate depth of 2 to 3 feet beneath the asphalt path. There were no odors noted in the soil samples and the samples were submitted for laboratory analyses for the Michigan 10 metals, volatile organic compounds (MDEQ Scan 1 and Scan 2), and polynuclear aromatic hydrocarbons (PNAs).

The analytical results for the soil samples collected from beneath the old railroad ballast are presented on Table 1. As shown on the table, volatile organic compounds were not detected in the soil samples collected from beneath the old railroad ballast. Several PNAs were detected in the RR-East sample at concentrations below their respective Part 201 generic residential direct human contact soil criteria. As shown on the table, copper and zinc were the only metals detected in the soil samples above their respective site-specific background values. However, these metals were not detected at concentrations exceeding their respective Part 201 generic residential direct human contact soil criteria.

Former 120 gallon UST Located on Gallagher Laundry Property

In order to determine if operation of the former 120 gallon UST on the Gallagher Laundry property resulted in environmental impact, one soil and one ground water sample were collected at the approximate location of the former UST (see Figure 2 for location). The soil boring was drilled using a 2 1/2" inch auger to a depth of 16 feet. Soil samples were collected at 4-foot intervals from the surface to the total depth of the boring using a split-spoon sampling device. Upon retrieval of the split spoon, the soil samples were placed in a clean glass jar, capped and agitated to maximize the release of VOCs potentially present in the sample. Field measurements of each soil sample were taken using a photoionization detector (PID). The attached boring log (labeled Gal-UST) shows the PID readings measured for each sampling interval. A soil sample from the 7-8 foot interval (interval exhibiting highest PID reading) was submitted for laboratory analyses for benzene, toluene, ethylbenzene, and xylene (collectively termed BTEX compounds), PNAs, and lead.

A temporary monitoring well was set at a depth of approximately 12 to 16 feet. Ground water samples were collected and submitted for laboratory analyses for BTEX and PNA compounds and lead. The ground water sample collected for lead analyses was field filtered during collection. The ground water sample was submitted for laboratory analyses for BTEX and PNA compounds and lead.

The analytical results for the soil and ground water samples collected at the location of the former UST are presented on Table 1 and 2, respectively. As shown on Table 1, BTEX and

PNA compounds were not detected in the soil sample (labeled Gal-UST) collected near the former UST. Lead was detected at a concentration (116 mg/kg) exceeding its site-specific background value (21 mg/kg). However, lead was not detected at a concentration exceeding its Part 201 generic residential direct human contact soil criteria.

The analytical results for the ground water sample collected near the former UST are presented on Table 2 (labeled Gal-UST on table). As shown on the table, lead, BTEX, and PNA compounds were not detected in the ground water sample.

Former Auto Body and Paint Shop (Gallagher Laundry Property)

In order to determine if historical operation of the former auto body and paint shop has resulted in environmental impact, a total of two soil samples were collected beneath the floor of the former auto body and paint shop (see Figure 2 for locations). An ATV-mounted drilling rig was used to core through the concrete floor of the former auto body and paint shop at the two locations shown on Figure 2. The soil sample at location Core M was collected at depth of approximately 3 feet below the concrete floor. Soils at this location were fine sands and gravel to a depth of approximately 3.5 feet. There were no odors noted in soils during sample collection.

The soil sample at location Core J was collected at a depth of approximately 3 to 4 feet below the concrete floor. Soils at this location were primarily sands with some fine silt. There were no odors noted in soils during sample collection. The soil samples were submitted for laboratory analyses for VOCs (MDEQ Scan 1 and Scan 2) and PNAs.

The analytical results for the soil samples are presented on Table 1. As shown on the table, Scan 1 and Scan 2 compounds were not detected in the soil samples. One PNA compound (phenanthrene at 386 ug/kg) was detected at a concentration below its Part 201 generic residential soil criteria.

Former Gasoline Station on the Redbird Lounge Property

A 1952 Sanborn map shows two gasoline USTs being formerly located on the Redbird Lounge Property. In order to determine if operation of these USTs resulted in environmental impact, one soil boring was drilled at the approximate location of the former USTs (see Figure 2 for location). The soil boring was drilled to depth of approximately 20 feet. Soil samples were collected at 4-foot intervals from the surface to the total depth of the boring using a split-spoon sampling device. Upon retrieval of the sampling spoon, the unsaturated soil sample was placed in a clean glass jar, capped and agitated to maximize the release of VOCs potentially present in the sample. Field measurements of each soil sample were taken using a PID. As shown on the boring log for this sample (RBL), soils were predominantly sand with some clay and gravel. No ground water was encountered during drilling of this boring. The soil sample collected from the 11 to 12 foot depth interval was submitted for laboratory analyses for lead, BTEX, and PNA compounds.

The analytical results for the soil sample are presented on Table 1. As shown on the table, BTEX and PNA compounds were not detected in the soil sample. Lead was detected at a concentration (2.08 mg/kg) below its site-specific background value.

CONCLUSIONS

A limited investigation was performed in order to determine the absence or presence of environmental impact associated with four areas of potential environmental concern identified during completion of a Phase I ESA for the former H.B. Sherman/Gallagher Industrial Laundry/Redbird Lounge properties. This investigation did not identify environmental impact associated with these four areas of concern. Based on the results of this investigation, no further investigation is warranted for the H.B. Sherman/Gallagher Laundry/Redbird Lounge properties.

HORIZON ENVIRONMENTAL

Page: 1 of 1
Boring No.: Core-M
Completed Well No.: -
Client: Kellogg Heritage Foundation
Project No.: KHF-0101
Date: Started: 10/14/96 Finished: 10/14/96
Time: Started: 9:00 am Finished: 9:20 am

Well/Boring Log Sheet

State	County	Township	Fraction	Section	T	R
MI	Calhoun	Battle Creek	NW 1/4 SE 1/4	1	2S	8W

Contractor: B.E.S.T.
Address: 4687 N. Van Atta
Okemos, MI 48864
Equipment: Simco Earth Probe 200
Crew Chief: Rick Brye
Horizon Supervisor: Mark Roslaniec

Drilling Method(s)	Depth
Probe	4.0'

Ground Surface Elevation (ft.):
TOC Elevation (ft.)
Datum (ft.):
Static Water Level:
Reference:

Grout/Seal Depth/to	Material/Method
0.0-4.0'	Bentonite

Location: 2nd room north of southeast corner of the Gallagher Laundry Bldg.
2.5' from east wall of room
8.5' from north wall of room

Construction: ☐ Abandonment: ☐ Additional Field Notes: Log Books: ☐ Computer File: ☐

Thickness (feet)	Depth to Base (feet)	USCS*	Lithologic Description	Sample Depth	Blow Counts 6"	12"	18"	24"	Headspace	Background
0.4	0.4	-	Concrete							
1.0	1.4	SP	Sand, fine, and gravel to 1", dark brown, dry							
2.6	4.0	SP	Sand, fine, and gravel to 1", brown, dry							

* = The USCS symbol assigned is based on visual and manual observations and not on tests performed in the laboratory.

HORIZON ENVIRONMENTAL

Page: 1 of 1
Boring No.: Core-J
Completed Well No.: -
Client: Kellogg Heritage Foundation
Project No.: KHF-0101
Date: Started: 10/14/96 Finished: 10/14/96
Time: Started: 9:20 am Finished: 9:50 am

Well/Boring Log Sheet

State	County	Township	Fraction	Section	T	R
MI	Calhoun	Battle Creek	NW 1/4 SE 1/4	1	2S	8W

Contractor: B.E.S.T.
Address: 4687 N. Van Atta
Okemos, MI 48867
Equipment: Simco Earthprobe 200
Crew Chief: Rick Brye
Horizon Supervisor: Mark Roslaniec

Drilling Method(s)	Depth
Probe	4.0'

Ground Surface Elevation (ft.):
TOC Elevation (ft.)
Datum (ft.):
Static Water Level:
Reference:

Grout/Seal

Depth/to	Material/Method
0.0-4.0'	Bentonite

Location: Southeast corner room of the Gallagher Laundry Bldg.
3' from east wall of room
10' from north wall of room

Construction: ☐ Abandonment: ☐ Additional Field Notes: Log Books: ☐ Computer File: ☐

Thickness (feet)	Depth to Base (feet)	USCS*	Lithologic Description	Sample Depth	Blow Counts 6"	12"	18"	24"	Headspace	Background
0.4	0.4	-	Concrete							
3.6	4.0	SP	Sand, fine, some silt, light brown, powdery, dry							

* = The USCS symbol assigned is based on visual and manual observations and not on tests performed in the laboratory.

HORIZON ENVIRONMENTAL

Page: 1 of 1
Boring No.: RR-West
Completed Well No.: -
Client: Kellogg Heritage Foundation
Project No.: KHF-0101
Date: Started: 10/14/96 Finished: 10/14/96
Time: Started: 11:40 am Finished: 12:00 pm

Well/Boring Log Sheet

State	County	Township	Fraction	Section	T	R
MI	Calhoun	Battle Creek	NW 1/4 SE 1/4	1	2S	8W

Contractor: B.E.S.T.
Address: 4687 N. Van Atta
Okemos, MI 48867
Equipment: Simco Earthprobe 200
Crew Chief: Rick Brye
Horizon Supervisor: Mark Roslaniec

Drilling Method(s)	Depth
Probe	4.0'

Ground Surface Elevation (ft.):
TOC Elevation (ft.)
Datum (ft.):
Static Water Level:
Reference:

Grout/Seal

Depth/to	Material/Method
0.0-4.0'	Bentonite

Location: 288' southwest of Barney Street sidewalk in the middle of the bike path.

Construction: ☐ Abandonment: ☐ Additional Field Notes: Log Books: ☐ Computer File: ☐

Thickness (feet)	Depth to Base (feet)	USCS*	Lithologic Description	Sample Depth	Blow Counts 6"	12"	18"	24"	Headspace	Background
0.4	0.4		Asphalt							
1.1	1.5	SP	Sand, fine, tan, with railroad ballast							
2.5	4.0	SP	Sand, fine, some gravel to 1", brown, dry							

* = The USCS symbol assigned is based on visual and manual observations and not on tests performed in the laboratory.

HORIZON ENVIRONMENTAL

Page: 1 of 1
Boring No.: RR-Mid
Completed Well No.: -
Client: Kellogg Heritage Foundation
Project No.: KHF-0101
Date: Started: 10/14/96 Finished: 10/14/96
Time: Started: 11:20 am Finished: 11:40 am

Well/Boring Log Sheet

State	County	Township	Fraction	Section	T	R
MI	Calhoun	Battle Creek	NW 1/4 SE 1/4	1	2S	8W

Contractor: B.E.S.T.
Address: 4687 N. Van Atta
Okemos, MI 48867
Equipment: Simco Earthprobe 200
Crew Chief: Rick Brye
Horizon Supervisor: Mark Roslaniec

Drilling Method(s)	Depth
Probe	4.0'

Ground Surface Elevation (ft.):
TOC Elevation (ft.)
Datum (ft.):
Static Water Level:
Reference:

Grout/Seal Depth/to	Material/Method
0.0-4.0'	Bentonite

Location: 146' southwest of the sidewalk on Barney Street in the middle of the bike path.

Construction: ☐ Abandonment: ☐ Additional Field Notes: Log Books: ☐ Computer File: ☐

Thickness (feet)	Depth to Base (feet)	USCS*	Lithologic Description	Sample Depth	Blow Counts 6"	12"	18"	24"	Headspace	Background
0.4	0.4		Asphalt							
1.0	1.4	SP	Sand, fine, tan with railroad ballast, dry							
2.0	3.4	SP	Sand, little silt, brown, dry							
0.6	4.0	SP	Sand, little silt, light brown, dry							

* = The USCS symbol assigned is based on visual and manual observations and not on tests performed in the laboratory.

HORIZON ENVIRONMENTAL

Page: 1 of 1
Boring No.: RR-East
Completed Well No.: -
Client: Kellogg Heritage Foundation
Project No.: KHF-0101
Date: Started: 10/14/96 Finished: 10/14/96
Time: Started: 11:00 am Finished: 11:20 am

Well/Boring Log Sheet

State	County	Township	Fraction	Section	T	R
MI	Calhoun	Battle Creek	NW 1/4 SE 1/4	1	2S	8W

Contractor: B.E.S.T.
Address: 4687 N. Van Atta
Okemos, MI 48867
Equipment: Simco Earthprobe 200
Crew Chief: Rick Brye
Horizon Supervisor: Mark Roslaniec

Drilling Method(s)	Depth
Probe	4.0'

Ground Surface Elevation (ft.):
TOC Elevation (ft.)
Datum (ft.):
Static Water Level:
Reference:

Grout/Seal Depth/to	Material/Method
0.0-4.0'	Bentonite

Location: 17' southwest of the sidewalk on Barney in the middle of the bike path.

Construction: ☐ Abandonment: ☐ Additional Field Notes: Log Books: ☐ Computer File: ☐

Thickness (feet)	Depth to Base (feet)	USCS*	Lithologic Description	Sample Depth	Blow Counts 6"	12"	18"	24"	Headspace	Background
0.4	0.4	-	Asphalt							
1.1	1.5	SW	Sand, fine, well sorted, tan, dry							
1.0	2.5		Railroad ballast							
1.0	3.5	SP	Sand, fine, little clay, dark brown, dry							
0.5	4.0	SW	Sand, fine, little clay, brown, dry							

* = The USCS symbol assigned is based on visual and manual observations and not on tests performed in the laboratory.

HORIZON ENVIRONMENTAL

Page: 1 of 1
Boring No.: RBL
Completed Well No.: -
Client: Kellogg Heritage Foundation
Project No.: KHF-0101
Date: Started: 10/14/96 Finished: 10/14/96
Time: Started: 1:00 pm Finished: 2:30 pm

Well/Boring Log Sheet

State	County	Township	Fraction	Section	T	R
MI	Calhoun	Battle Creek	NW 1/4 SE 1/4	1	2S	8W

Contractor: B.E.S.T.
Address: 4687 N. Van Atta
Okemos, MI 48867
Equipment: Simco Earthprobe 200
Crew Chief: Rick Brye
Horizon Supervisor: Mark Roslaniec

Drilling Method(s)	Depth
Probe	20.0'

Ground Surface Elevation (ft.):
TOC Elevation (ft.)
Datum (ft.):
Static Water Level:
Reference:

Grout/Seal Depth/to	Material/Method
0.0-20.0	Bentonite

Location: 59' west of Red Bird Lounge.
77' south of centerline of Michigan Avenue.

Construction: ☐ Abandonment: ☐ Additional Field Notes: Log Books: ☐ Computer File: ☐

Thickness (feet)	Depth to Base (feet)	USCS*	Lithologic Description	Sample Depth	Blow Counts 6"	12"	18"	24"	Headspace	Background
0.3	0.3		Asphalt	4.0					3.2	0
0.7	1.0	SP	Sand, fine, little silt, dark brown, gravel to 3/4"	8.0					3.6	0
0.5	1.5	SW	Sand, fine, well sorted, tan, dry	12.0					6.1	0
4.5	6.0	SP	Sand, fine, little silt, dark brown, with gravel to 1"	16.0					0.5	0
2.0	8.0	SW	Sand, fine and silt, light brown, occasional gravel to 11/2', dry	20.0					0.2	0
1.0	9.0	SP	Sand, little clay, light brown, occasional gravel to 1 1/2", dry							
1.0	10.0	SP	Sand, little clay, light brown, occasional gravel to 1 1/2", moist							
8.0	18.0	SP	Sand, fine, some clay, light brown, occasional gravel to 1",							
			friable, dry							
1.5	19.5	CL	Clay, firm, light brown							
0.5	20.0	SP	Sand, fine, little silt, olive brown, dry							

* = The USCS symbol assigned is based on visual and manual observations and not on tests performed in the laboratory.

HORIZON ENVIRONMENTAL

Page: 1 of 1
Boring No.: GAL-UST
Completed Well No.: -
Client: Kellogg Heritage Foundation
Project No.: KHF-0101
Date: Started: 10/14/96 Finished: 10/14/96
Time: Started: 2:30 pm Finished: 6:00 pm

Well/Boring Log Sheet

State	County	Township	Fraction	Section	T	R
MI	Calhoun	Battle Creek	NW 1/4 SE 1/4	1	2S	8W

Contractor: B.E.S.T.
Address: 4687 N. Van Atta
Okemos, MI 48867
Equipment: Simco Earthprobe 200
Crew Chief: Rick Brye
Horizon Supervisor: Mark Roslaniec

Drilling Method(s)	Depth
Probe	16.0'

Ground Surface Elevation (ft.):
TOC Elevation (ft.)
Datum (ft.):
Static Water Level:
Reference:

Grout/Seal

Depth/to	Material/Method
0.0-13.0	Bentonite
13.0-16.0	Natural Collapse

Location: Near former 120 gallon UST

Construction: ☐ Abandonment: ☐ Additional Field Notes: Log Books: ☐ Computer File: ☐

Thickness (feet)	Depth to Base (feet)	USCS*	Lithologic Description	Sample Depth	Blow Counts 6"	12"	18"	24"	Headspace	Background
1.0	1.0	SP	Sand, fine, little silt, dark brown	4.0					8.2	0
0.2	1.2		Gravel to 1"	8.0					11.0	0
1.5	2.7	SP	Sand, fine, some clay, brown, gravel to 3/4"	12.0 NS					5.1	0
1.3	4.0	SW	Sand, fine, well sorted, brown, dry							
4.0	8.0	SP	Sand, coarse, with gravel to 1 1/2", brown, dry							
2.0	10.0	SP	Sand, fine, some silt, dark brown, dry							
2.0	12.0	SW	Sand, fine, well sorted, brown, dry							
			No sample below 12'							

* = The USCS symbol assigned is based on visual and manual observations and not on tests performed in the laboratory.

BIO-CHEM
ENVIRONMENTAL
ANALYTICAL
LABORATORY

Bio-Chem Laboratories
1049 - 28th ST SE
Grand Rapids, MI 49548
Ph 616/878-1188
Fax 616/878-0044
In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 24, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/17/96
SAMPLE NAME:--------- RR-EAST
ANALYSIS BY:---------- MLD
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- OCT17MTL\04.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35262

****

RESULTS

****

TARGET METALS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 SILVER (GRAPHITE FURNACE METHOD 7761) ------	BDL (< 500)	DL (500)
2 ARSENIC (GRAPHITE FURNACE METHOD 7060A) ----	BDL (< 100)	DL (100)
3 BARIUM (FLAME METHOD 7080A) ----------	27,800	DL (1000)
4 CADMIUM (GRAPHITE FURNACE METHOD 7131A) ----	10,600	DL (50)
5 CHROMIUM (GRAPHITE FURNACE METHOD 7191) ----	10,800	DL (2500)
6 COPPER (FLAME METHOD 7211) ----------	115,000	DL (1000)
7 LEAD (GRAPHITE FURNACE METHOD 7421) --------	47,500	DL (1000)
8 SELENIUM (GRAPHITE FURNACE METHOD 7740) ----	BDL (< 500)	DL (500)
9 ZINC (FLAME METHOD 7950) ----------	137,000	DL (1000)
10 MERCURY (COLD VAPOR METHOD 7471A) ----------	BDL (< 100)	DL (100)

MICHAEL L. DOUGLASS
QUALITY CONTROL DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

BIO-CHEM
ENVIRONMENTAL
ANALYTICAL
LABORATORY

Bio-Chem Laboratories
1049 - 28th ST SE
Grand Rapids, MI 49548
Ph 616/878-1188
Fax 616/878-0044
In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/15/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/15/96
SAMPLE NAME:--------- RR-EAST
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101596\D101521.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35262

****

RESULTS

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MDNR SCANS 1 & 2		RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1	VINYL CHLORIDE	BDL (< 10)	DL (10)
2	CHLOROMETHANE	BDL (< 10)	DL (10)
3	BROMOMETHANE	BDL (< 10)	DL (10)
4	CHLOROETHANE	BDL (< 10)	DL (10)
5	TRICHLOROFLUOROMETHANE	BDL (< 10)	DL (10)
6	1,1-DICHLOROETHENE	BDL (< 10)	DL (10)
7	METHYLENE CHLORIDE	BDL (< 10)	DL (10)
8	1,1-DICHLOROETHANE	BDL (< 10)	DL (10)
9	CHLOROFORM	BDL (< 10)	DL (10)
10	1,1,1-TRICHLOROETHANE	BDL (< 10)	DL (10)
11	1,2-DICHLOROETHANE	BDL (< 10)	DL (10)
12	BENZENE	BDL (< 10)	DL (10)
13	CARBON TETRACHLORIDE	BDL (< 10)	DL (10)
14	1,2-DICHLOROPROPANE	BDL (< 10)	DL (10)
15	TRICHLOROETHENE	BDL (< 10)	DL (10)
16	BROMODICHLOROMETHANE	BDL (< 10)	DL (10)
17	TOLUENE	BDL (< 10)	DL (10)
18	TRANS-1,3-DICHLOROPROPENE	BDL (< 10)	DL (10)
19	1,1,2-TRICHLOROETHANE	BDL (< 10)	DL (10)
20	DIBROMOCHLOROMETHANE	BDL (< 10)	DL (10)
21	TETRACHLOROETHENE	BDL (< 10)	DL (10)
22	CHLOROBENZENE	BDL (< 10)	DL (10)
23	ETHYLBENZENE	BDL (< 10)	DL (10)
24	BROMOFORM	BDL (< 10)	DL (10)
25	1,1,2,2-TETRACHLOROETHANE	BDL (< 10)	DL (10)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8260 GC/MS Volatiles Analysis
Capillary Column Type: [phase: DB-624 ID: 180uM; film: VTK; 1 uM film thickness; length: 20m]
Enrichment: [Tekmar concentrator with 40:1 split direct injection onto the microbore column]

BIO-CHEM
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Bio-Chem Laboratories
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In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/15/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/15/96
SAMPLE NAME:--------- RR-EAST
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101596\D101521.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35262

****

RESULTS

****

MDNR SCANS 1 & 2	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
26 XYLENES ----------	BDL (< 30)	DL (30)
27 CIS-1,2-DICHLOROETHENE ----------	BDL (< 10)	DL (10)
28 TRANS-1,2-DICHLOROETHENE ----------	BDL (< 10)	DL (10)
29 CIS-1,3-DICHLOROPROPENE ----------	BDL (< 10)	DL (10)
30 METHYL ETHYL KETONE ----------	BDL (< 100)	DL (100)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8260 GC/MS Volatiles Analysis
Capillary Column Type: [phase: DB-624 ID: 180uM; film: VTK; 1 uM film thickness; length: 20m]
Enrichment: [Tekmar concentrator with 40:1 split direct injection onto the microbore column]

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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/18/96
SAMPLE NAME:--------- RR-EAST
ANALYSIS BY:---------- JAZ
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101796\7301025.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35262

****

RESULTS

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8270 PNA ANALYSIS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 NAPHTHALENE	359	DL (330)
2 ACENAPHTHYLENE	BDL (< 330)	DL (330)
3 ACENAPHTHENE	BDL (< 330)	DL (330)
4 FLUORENE	BDL (< 330)	DL (330)
5 PHENANTHRENE	1,500	DL (330)
6 ANTHRACENE	676	DL (330)
7 FLUORANTHENE	806	DL (330)
8 PYRENE	704	DL (330)
9 BENZO(A)ANTHRACENE	BDL (< 330)	DL (330)
10 CHRYSENE	BDL (< 330)	DL (330)
11 BENZO(B)FLUORANTHENE	5,450	DL (330)
12 BENZO(K)FLUORANTHENE	BDL (< 330)	DL (330)
13 BENZO(A)PYRENE	1,610	DL (330)
14 INDENO(1,2,3-CD)PYRENE	465	DL (330)
15 DIBENZO(A,H)ANTHRACENE	BDL (< 330)	DL (330)
16 BENZO(G,H,I)PERYLENE	440	DL (330)

James A. Zylstra

JAMES A. ZYLSTRA
LABORATORY DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's SW846 Method 8270 GC/MS Semi-Volitiles Analysis
Capillary Column Type: [phase: DB-5; ID: 320 uM; film: VTK; .25 uM film thickness]

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ANALYTICAL RESULTS

DATE: October 24, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/17/96
SAMPLE NAME:--------- RR-MID
ANALYSIS BY:---------- MLD
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- OCT17MTL\05.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35263

****

RESULTS

****

TARGET METALS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 SILVER (GRAPHITE FURNACE METHOD 7761) ------	BDL (< 500)	DL (500)
2 ARSENIC (GRAPHITE FURNACE METHOD 7060A) ----	BDL (< 100)	DL (100)
3 BARIUM (FLAME METHOD 7080A) ----------	8,870	DL (1000)
4 CADMIUM (GRAPHITE FURNACE METHOD 7131A) ----	4,820	DL (50)
5 CHROMIUM (GRAPHITE FURNACE METHOD 7191) ----	4,370	DL (2500)
6 COPPER (FLAME METHOD 7211) ----------	8,360	DL (1000)
7 LEAD (GRAPHITE FURNACE METHOD 7421) --------	3,220	DL (1000)
8 SELENIUM (GRAPHITE FURNACE METHOD 7740) ----	BDL (< 500)	DL (500)
9 ZINC (FLAME METHOD 7950) ----------	19,200	DL (1000)
10 MERCURY (COLD VAPOR METHOD 7471A) ----------	BDL (< 100)	DL (100)

MICHAEL L. DOUGLASS
QUALITY CONTROL DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/15/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/15/96
SAMPLE NAME:--------- RR-MID
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101596\D101522.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35263

****

RESULTS

****

MDNR SCANS 1 & 2		RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1	VINYL CHLORIDE	BDL (< 10)	DL (10)
2	CHLOROMETHANE	BDL (< 10)	DL (10)
3	BROMOMETHANE	BDL (< 10)	DL (10)
4	CHLOROETHANE	BDL (< 10)	DL (10)
5	TRICHLOROFLUOROMETHANE	BDL (< 10)	DL (10)
6	1,1-DICHLOROETHENE	BDL (< 10)	DL (10)
7	METHYLENE CHLORIDE	BDL (< 10)	DL (10)
8	1,1-DICHLOROETHANE	BDL (< 10)	DL (10)
9	CHLOROFORM	BDL (< 10)	DL (10)
10	1,1,1-TRICHLOROETHANE	BDL (< 10)	DL (10)
11	1,2-DICHLOROETHANE	BDL (< 10)	DL (10)
12	BENZENE	BDL (< 10)	DL (10)
13	CARBON TETRACHLORIDE	BDL (< 10)	DL (10)
14	1,2-DICHLOROPROPANE	BDL (< 10)	DL (10)
15	TRICHLOROETHENE	BDL (< 10)	DL (10)
16	BROMODICHLOROMETHANE	BDL (< 10)	DL (10)
17	TOLUENE	BDL (< 10)	DL (10)
18	TRANS-1,3-DICHLOROPROPENE	BDL (< 10)	DL (10)
19	1,1,2-TRICHLOROETHANE	BDL (< 10)	DL (10)
20	DIBROMOCHLOROMETHANE	BDL (< 10)	DL (10)
21	TETRACHLOROETHENE	BDL (< 10)	DL (10)
22	CHLOROBENZENE	BDL (< 10)	DL (10)
23	ETHYLBENZENE	BDL (< 10)	DL (10)
24	BROMOFORM	BDL (< 10)	DL (10)
25	1,1,2,2-TETRACHLOROETHANE	BDL (< 10)	DL (10)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8260 GC/MS Volatiles Analysis
Capillary Column Type: [phase: DB-624 ID: 180uM; film: VTK; 1 uM film thickness; length: 20m]
Enrichment: [Tekmar concentrator with 40:1 split direct injection onto the microbore column]

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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/15/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/15/96
SAMPLE NAME:--------- RR-MID
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101596\D101522.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35263

****

RESULTS

****

MDNR SCANS 1 & 2	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
26 XYLENES ----------	BDL (< 30)	DL (30)
27 CIS-1,2-DICHLOROETHENE ----------	BDL (< 10)	DL (10)
28 TRANS-1,2-DICHLOROETHENE ----------	BDL (< 10)	DL (10)
29 CIS-1,3-DICHLOROPROPENE ----------	BDL (< 10)	DL (10)
30 METHYL ETHYL KETONE ----------	BDL (< 100)	DL (100)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8260 GC/MS Volatiles Analysis
Capillary Column Type: [phase: DB-624 ID: 180uM; film: VTK; 1 uM film thickness; length: 20m]
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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/18/96
SAMPLE NAME:--------- RR-MID
ANALYSIS BY:---------- JAZ
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101796\7401026.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35263

****

RESULTS

****

8270 PNA ANALYSIS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 NAPHTHALENE	BDL (< 330)	DL (330)
2 ACENAPHTHYLENE	BDL (< 330)	DL (330)
3 ACENAPHTHENE	BDL (< 330)	DL (330)
4 FLUORENE	BDL (< 330)	DL (330)
5 PHENANTHRENE	BDL (< 330)	DL (330)
6 ANTHRACENE	BDL (< 330)	DL (330)
7 FLUORANTHENE	BDL (< 330)	DL (330)
8 PYRENE	BDL (< 330)	DL (330)
9 BENZO(A)ANTHRACENE	BDL (< 330)	DL (330)
10 CHRYSENE	BDL (< 330)	DL (330)
11 BENZO(B)FLUORANTHENE	BDL (< 330)	DL (330)
12 BENZO(K)FLUORANTHENE	BDL (< 330)	DL (330)
13 BENZO(A)PYRENE	BDL (< 330)	DL (330)
14 INDENO(1,2,3-CD)PYRENE	BDL (< 330)	DL (330)
15 DIBENZO(A,H)ANTHRACENE	BDL (< 330)	DL (330)
16 BENZO(G,H,I)PERYLENE	BDL (< 330)	DL (330)

James A. Zylstra

JAMES A. ZYLSTRA
LABORATORY DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's SW846 Method 8270 GC/MS Semi-Volitiles Analysis
Capillary Column Type: [phase: DB-5; ID: 320 uM; film: VTK; .25 uM film thickness]

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ANALYTICAL RESULTS

DATE: October 24, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/17/96
SAMPLE NAME:--------- RR-WEST
ANALYSIS BY:---------- RRD
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- OCT17MTL\06.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35264

****

RESULTS

****

	TARGET METALS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1	SILVER (GRAPHITE FURNACE METHOD 7761) ------	BDL (< 500)	DL (500)
2	ARSENIC (GRAPHITE FURNACE METHOD 7060A) ----	BDL (< 100)	DL (100)
3	BARIUM (FLAME METHOD 7080A) ----------	33,900	DL (1000)
4	CADMIUM (GRAPHITE FURNACE METHOD 7131A) ----	5,540	DL (50)
5	CHROMIUM (GRAPHITE FURNACE METHOD 7191) ----	6,190	DL (2500)
6	COPPER (FLAME METHOD 7211) ----------	40,600	DL (1000)
7	LEAD (GRAPHITE FURNACE METHOD 7421) --------	7,490	DL (1000)
8	SELENIUM (GRAPHITE FURNACE METHOD 7740) ----	BDL (< 500)	DL (500)
9	ZINC (FLAME METHOD 7950) ----------	116,000	DL (1000)
10	MERCURY (COLD VAPOR METHOD 7471A) ----------	BDL (< 100)	DL (100)

Ramon R. David

RAMON R. DAVID
DIRECTOR, ANALYTICAL SERVICES

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/15/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/15/96
SAMPLE NAME:--------- RR-WEST
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101596\D101523.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35264

****

RESULTS

****

MDNR SCANS 1 & 2		RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1	VINYL CHLORIDE	BDL (< 10)	DL (10)
2	CHLOROMETHANE	BDL (< 10)	DL (10)
3	BROMOMETHANE	BDL (< 10)	DL (10)
4	CHLOROETHANE	BDL (< 10)	DL (10)
5	TRICHLOROFLUOROMETHANE	BDL (< 10)	DL (10)
6	1,1-DICHLOROETHENE	BDL (< 10)	DL (10)
7	METHYLENE CHLORIDE	BDL (< 10)	DL (10)
8	1,1-DICHLOROETHANE	BDL (< 10)	DL (10)
9	CHLOROFORM	BDL (< 10)	DL (10)
10	1,1,1-TRICHLOROETHANE	BDL (< 10)	DL (10)
11	1,2-DICHLOROETHANE	BDL (< 10)	DL (10)
12	BENZENE	BDL (< 10)	DL (10)
13	CARBON TETRACHLORIDE	BDL (< 10)	DL (10)
14	1,2-DICHLOROPROPANE	BDL (< 10)	DL (10)
15	TRICHLOROETHENE	BDL (< 10)	DL (10)
16	BROMODICHLOROMETHANE	BDL (< 10)	DL (10)
17	TOLUENE	BDL (< 10)	DL (10)
18	TRANS-1,3-DICHLOROPROPENE	BDL (< 10)	DL (10)
19	1,1,2-TRICHLOROETHANE	BDL (< 10)	DL (10)
20	DIBROMOCHLOROMETHANE	BDL (< 10)	DL (10)
21	TETRACHLOROETHENE	BDL (< 10)	DL (10)
22	CHLOROBENZENE	BDL (< 10)	DL (10)
23	ETHYLBENZENE	BDL (< 10)	DL (10)
24	BROMOFORM	BDL (< 10)	DL (10)
25	1,1,2,2-TETRACHLOROETHANE	BDL (< 10)	DL (10)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8260 GC/MS Volatiles Analysis
Capillary Column Type: [phase: DB-624 ID: 180uM; film: VTK; 1 uM film thickness; length: 20m]
Enrichment: [Tekmar concentrator with 40:1 split direct injection onto the microbore column]

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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/15/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/15/96
SAMPLE NAME:--------- RR-WEST
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101596\D101523.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35264

****

RESULTS

****

MDNR SCANS 1 & 2	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
26 XYLENES ----------	BDL (< 30)	DL (30)
27 CIS-1,2-DICHLOROETHENE ----------	BDL (< 10)	DL (10)
28 TRANS-1,2-DICHLOROETHENE ----------	BDL (< 10)	DL (10)
29 CIS-1,3-DICHLOROPROPENE ----------	BDL (< 10)	DL (10)
30 METHYL ETHYL KETONE ----------	BDL (< 100)	DL (100)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8260 GC/MS Volatiles Analysis
Capillary Column Type: [phase: DB-624 ID: 180uM; film: VTK; 1 uM film thickness; length: 20m]
Enrichment: [Tekmar concentrator with 40:1 split direct injection onto the microbore column]

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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/19/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/18/96
SAMPLE NAME:--------- RR-WEST
ANALYSIS BY:---------- JAZ
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101796\7901031.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35264

****

RESULTS

****

8270 PNA ANALYSIS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 NAPHTHALENE	BDL (< 330)	DL (330)
2 ACENAPHTHYLENE	BDL (< 330)	DL (330)
3 ACENAPHTHENE	BDL (< 330)	DL (330)
4 FLUORENE	BDL (< 330)	DL (330)
5 PHENANTHRENE	BDL (< 330)	DL (330)
6 ANTHRACENE	BDL (< 330)	DL (330)
7 FLUORANTHENE	BDL (< 330)	DL (330)
8 PYRENE	BDL (< 330)	DL (330)
9 BENZO(A)ANTHRACENE	BDL (< 330)	DL (330)
10 CHRYSENE	BDL (< 330)	DL (330)
11 BENZO(B)FLUORANTHENE	BDL (< 330)	DL (330)
12 BENZO(K)FLUORANTHENE	BDL (< 330)	DL (330)
13 BENZO(A)PYRENE	BDL (< 330)	DL (330)
14 INDENO(1,2,3-CD)PYRENE	BDL (< 330)	DL (330)
15 DIBENZO(A,H)ANTHRACENE	BDL (< 330)	DL (330)
16 BENZO(G,H,I)PERYLENE	BDL (< 330)	DL (330)

James A. Zylstra

JAMES A. ZYLSTRA
LABORATORY DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's SW846 Method 8270 GC/MS Semi-Volitiles Analysis
Capillary Column Type: [phase: DB-5; ID: 320 uM; film: VTK; .25 uM film thickness]

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In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/15/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/15/96
SAMPLE NAME:--------- CORE-J
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101596\D101520.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35261

****

RESULTS

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MDNR SCANS 1 & 2		RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1	VINYL CHLORIDE	BDL (< 10)	DL (10)
2	CHLOROMETHANE	BDL (< 10)	DL (10)
3	BROMOMETHANE	BDL (< 10)	DL (10)
4	CHLOROETHANE	BDL (< 10)	DL (10)
5	TRICHLOROFLUOROMETHANE	BDL (< 10)	DL (10)
6	1,1-DICHLOROETHENE	BDL (< 10)	DL (10)
7	METHYLENE CHLORIDE	BDL (< 10)	DL (10)
8	1,1-DICHLOROETHANE	BDL (< 10)	DL (10)
9	CHLOROFORM	BDL (< 10)	DL (10)
10	1,1,1-TRICHLOROETHANE	BDL (< 10)	DL (10)
11	1,2-DICHLOROETHANE	BDL (< 10)	DL (10)
12	BENZENE	BDL (< 10)	DL (10)
13	CARBON TETRACHLORIDE	BDL (< 10)	DL (10)
14	1,2-DICHLOROPROPANE	BDL (< 10)	DL (10)
15	TRICHLOROETHENE	BDL (< 10)	DL (10)
16	BROMODICHLOROMETHANE	BDL (< 10)	DL (10)
17	TOLUENE	BDL (< 10)	DL (10)
18	TRANS-1,3-DICHLOROPROPENE	BDL (< 10)	DL (10)
19	1,1,2-TRICHLOROETHANE	BDL (< 10)	DL (10)
20	DIBROMOCHLOROMETHANE	BDL (< 10)	DL (10)
21	TETRACHLOROETHENE	BDL (< 10)	DL (10)
22	CHLOROBENZENE	BDL (< 10)	DL (10)
23	ETHYLBENZENE	BDL (< 10)	DL (10)
24	BROMOFORM	BDL (< 10)	DL (10)
25	1,1,2,2-TETRACHLOROETHANE	BDL (< 10)	DL (10)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8260 GC/MS Volatiles Analysis
Capillary Column Type: [phase: DB-624 ID: 180uM; film: VTK; 1 uM film thickness; length: 20m]
Enrichment: [Tekmar concentrator with 40:1 split direct injection onto the microbore column]

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1049 - 28th ST SE
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Fax 616/878-0044
In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/15/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/15/96
SAMPLE NAME:--------- CORE-J
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101596\D101520.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35261

****

RESULTS

****

MDNR SCANS 1 & 2	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
26 XYLENES ----------	BDL (< 30)	DL (30)
27 CIS-1,2-DICHLOROETHENE ----------	BDL (< 10)	DL (10)
28 TRANS-1,2-DICHLOROETHENE ----------	BDL (< 10)	DL (10)
29 CIS-1,3-DICHLOROPROPENE ----------	BDL (< 10)	DL (10)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8260 GC/MS Volatiles Analysis
Capillary Column Type: [phase: DB-624 ID: 180uM; film: VTK; 1 uM film thickness; length: 20m]
Enrichment: [Tekmar concentrator with 40:1 split direct injection onto the microbore column]

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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
PROJECT NO:---------- N/A
SAMPLE NAME:--------- CORE-M
SAMPLE TYPE:---------- SOIL
DATE TAKEN:---------- 10/14/96

DATE RECEIVED:---------- 10/15/96
EXTRACTION DATE:----- 10/16/96
ANALYSIS DATE:---------- 10/16/96
ANALYSIS BY:---------- DRF
QA/QC #:---------- 101696\D101610.D
SAMPLE REF #:---------- 35260

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RESULTS

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MDNR SCANS 1 & 2	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 VINYL CHLORIDE ----------	BDL (< 10)	DL (10)
2 CHLOROMETHANE ----------	BDL (< 10)	DL (10)
3 BROMOMETHANE ----------	BDL (< 10)	DL (10)
4 CHLOROETHANE ----------	BDL (< 10)	DL (10)
5 TRICHLOROFLUOROMETHANE ----------	BDL (< 10)	DL (10)
6 1,1-DICHLOROETHENE ----------	BDL (< 10)	DL (10)
7 METHYLENE CHLORIDE ----------	BDL (< 10)	DL (10)
8 1,1-DICHLOROETHANE ----------	BDL (< 10)	DL (10)
9 CHLOROFORM ----------	BDL (< 10)	DL (10)
10 1,1,1-TRICHLOROETHANE ----------	BDL (< 10)	DL (10)
11 1,2-DICHLOROETHANE ----------	BDL (< 10)	DL (10)
12 BENZENE ----------	BDL (< 10)	DL (10)
13 CARBON TETRACHLORIDE ----------	BDL (< 10)	DL (10)
14 1,2-DICHLOROPROPANE ----------	BDL (< 10)	DL (10)
15 TRICHLOROETHENE ----------	BDL (< 10)	DL (10)
16 BROMODICHLOROMETHANE ----------	BDL (< 10)	DL (10)
17 TOLUENE ----------	BDL (< 10)	DL (10)
18 TRANS-1,3-DICHLOROPROPENE ----------	BDL (< 10)	DL (10)
19 1,1,2-TRICHLOROETHANE ----------	BDL (< 10)	DL (10)
20 DIBROMOCHLOROMETHANE ----------	BDL (< 10)	DL (10)
21 TETRACHLOROETHENE ----------	BDL (< 10)	DL (10)
22 CHLOROBENZENE ----------	BDL (< 10)	DL (10)
23 ETHYLBENZENE ----------	BDL (< 10)	DL (10)
24 BROMOFORM ----------	BDL (< 10)	DL (10)
25 1,1,2,2-TETRACHLOROETHANE ----------	BDL (< 10)	DL (10)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8260 GC/MS Volatiles Analysis
Capillary Column Type: [phase: DB-624 ID: 180uM; film: VTK; 1 uM film thickness; length: 20m]
Enrichment: [Tekmar concentrator with 40:1 split direct injection onto the microbore column]

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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/16/96
SAMPLE NAME:--------- CORE-M
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101696\D101610.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35260

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RESULTS

****

MDNR SCANS 1 & 2	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
26 XYLENES ----------	BDL (< 30)	DL (30)
27 CIS-1,2-DICHLOROETHENE ----------	BDL (< 10)	DL (10)
28 TRANS-1,2-DICHLOROETHENE ----------	BDL (< 10)	DL (10)
29 CIS-1,3-DICHLOROPROPENE ----------	BDL (< 10)	DL (10)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8260 GC/MS Volatiles Analysis
Capillary Column Type: [phase: DB-624 ID: 180uM; film: VTK; 1 uM film thickness; length: 20m]
Enrichment: [Tekmar concentrator with 40:1 split direct injection onto the microbore column]

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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/18/96
SAMPLE NAME:--------- CORE-J
ANALYSIS BY:---------- JAZ
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101796\7201024.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35261

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RESULTS

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8270 PNA ANALYSIS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 NAPHTHALENE	BDL (< 330)	DL (330)
2 ACENAPHTHYLENE	BDL (< 330)	DL (330)
3 ACENAPHTHENE	BDL (< 330)	DL (330)
4 FLUORENE	BDL (< 330)	DL (330)
5 PHENANTHRENE	BDL (< 330)	DL (330)
6 ANTHRACENE	BDL (< 330)	DL (330)
7 FLUORANTHENE	BDL (< 330)	DL (330)
8 PYRENE	BDL (< 330)	DL (330)
9 BENZO(A)ANTHRACENE	BDL (< 330)	DL (330)
10 CHRYSENE	BDL (< 330)	DL (330)
11 BENZO(B)FLUORANTHENE	BDL (< 330)	DL (330)
12 BENZO(K)FLUORANTHENE	BDL (< 330)	DL (330)
13 BENZO(A)PYRENE	BDL (< 330)	DL (330)
14 INDENO(1,2,3-CD)PYRENE	BDL (< 330)	DL (330)
15 DIBENZO(A,H)ANTHRACENE	BDL (< 330)	DL (330)
16 BENZO(G,H,I)PERYLENE	BDL (< 330)	DL (330)

James A. Zylstra

JAMES A. ZYLSTRA
LABORATORY DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's SW846 Method 8270 GC/MS Semi-Volitiles Analysis
Capillary Column Type: [phase: DB-5; ID: 320 uM; film: VTK; .25 uM film thickness]

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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/18/96
SAMPLE NAME:--------- CORE-M
ANALYSIS BY:---------- JAZ
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101796\7101023.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35260

****

RESULTS

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8270 PNA ANALYSIS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 NAPHTHALENE	BDL (< 330)	DL (330)
2 ACENAPHTHYLENE	BDL (< 330)	DL (330)
3 ACENAPHTHENE	BDL (< 330)	DL (330)
4 FLUORENE	BDL (< 330)	DL (330)
5 PHENANTHRENE	386	DL (330)
6 ANTHRACENE	BDL (< 330)	DL (330)
7 FLUORANTHENE	BDL (< 330)	DL (330)
8 PYRENE	BDL (< 330)	DL (330)
9 BENZO(A)ANTHRACENE	BDL (< 330)	DL (330)
10 CHRYSENE	BDL (< 330)	DL (330)
11 BENZO(B)FLUORANTHENE	732	DL (330)
12 BENZO(K)FLUORANTHENE	BDL (< 330)	DL (330)
13 BENZO(A)PYRENE	BDL (< 330)	DL (330)
14 INDENO(1,2,3-CD)PYRENE	BDL (< 330)	DL (330)
15 DIBENZO(A,H)ANTHRACENE	BDL (< 330)	DL (330)
16 BENZO(G,H,I)PERYLENE	BDL (< 330)	DL (330)

James A. Zylstra
JAMES A. ZYLSTRA
LABORATORY DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's SW846 Method 8270 GC/MS Semi-Volitiles Analysis
Capillary Column Type: [phase: DB-5; ID: 320 uM; film: VTK; .25 uM film thickness]

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ANALYTICAL RESULTS

DATE: October 24, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/17/96
SAMPLE NAME:--------- GAL-UST 7-8'
ANALYSIS BY:---------- MLD
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- OCT17MTL\02.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35266

****

RESULTS

****

TOTAL METALS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 LEAD (GRAPHITE FURNACE METHOD 7421) --------	116,000	DL (1000)

MICHAEL L. DOUGLASS
QUALITY CONTROL DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

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ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/16/96
SAMPLE NAME:--------- GAL-UST 7-8'
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- DUALPIDA\A15A028
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35266

****

RESULTS

****

MDNR SCAN 2 TARGET COMPOUNDS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 BENZENE ----------	BDL (< 10)	DL (10)
2 TOLUENE ----------	BDL (< 10)	DL (10)
3 ETHYL BENZENE ----------	BDL (< 10)	DL (10)
4 M & P - XYLENES ----------	BDL (< 20)	DL (20)
5 O - XYLENE ----------	BDL (< 10)	DL (10)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8020 Volatiles Analysis

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1049 - 28th ST SE
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In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/18/96
SAMPLE NAME:--------- GAL-UST 7-8'
ANALYSIS BY:---------- JAZ
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101796\8701039.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35266

****

RESULTS

****

8270 PNA ANALYSIS		RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1	NAPHTHALENE	BDL (< 330)	DL (330)
2	ACENAPHTHYLENE	BDL (< 330)	DL (330)
3	ACENAPHTHENE	BDL (< 330)	DL (330)
4	FLUORENE	BDL (< 330)	DL (330)
5	PHENANTHRENE	BDL (< 330)	DL (330)
6	ANTHRACENE	BDL (< 330)	DL (330)
7	FLUORANTHENE	BDL (< 330)	DL (330)
8	PYRENE	BDL (< 330)	DL (330)
9	BENZO(A)ANTHRACENE	BDL (< 330)	DL (330)
10	CHRYSENE	BDL (< 330)	DL (330)
11	BENZO(B)FLUORANTHENE	BDL (< 330)	DL (330)
12	BENZO(K)FLUORANTHENE	BDL (< 330)	DL (330)
13	BENZO(A)PYRENE	BDL (< 330)	DL (330)
14	INDENO(1,2,3-CD)PYRENE	BDL (< 330)	DL (330)
15	DIBENZO(A,H)ANTHRACENE	BDL (< 330)	DL (330)
16	BENZO(G,H,I)PERYLENE	BDL (< 330)	DL (330)

James A. Zylstra

JAMES A. ZYLSTRA
LABORATORY DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's SW846 Method 8270 GC/MS Semi-Volitiles Analysis
Capillary Column Type: [phase: DB-5; ID: 320 uM; film: VTK; .25 uM film thickness]

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1049 - 28th ST SE
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Fax 616/878-0044
In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 24, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/17/96
SAMPLE NAME:--------- RBL 11'-12'
ANALYSIS BY:---------- MLD
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- OCT17MTL\01.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35265

****

RESULTS

****

TOTAL METALS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 LEAD (GRAPHITE FURNACE METHOD 7421) --------	2,080	DL (1000)

MICHAEL L. DOUGLASS
QUALITY CONTROL DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

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In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/16/96
SAMPLE NAME:--------- RBL 11'-12'
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- DUALPIDA\A15A027
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35265

****

RESULTS

****

MDNR SCAN 2 TARGET COMPOUNDS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 BENZENE ----------	BDL (< 10)	DL (10)
2 TOLUENE ----------	BDL (< 10)	DL (10)
3 ETHYL BENZENE ----------	BDL (< 10)	DL (10)
4 M & P - XYLENES ----------	BDL (< 20)	DL (20)
5 O - XYLENE ----------	BDL (< 10)	DL (10)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8020 Volatiles Analysis

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Bio-Chem Laboratories
1049 - 28th ST SE
Grand Rapids, MI 49548
Ph 616/878-1188
Fax 616/878-0044
In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 23, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/17/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/21/96
SAMPLE NAME:--------- GAL UST
ANALYSIS BY:---------- JAZ
SAMPLE TYPE:---------- AQUEOUS
QA/QC #:---------- DATA\102196\9301006.
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35267

****

RESULTS

****

8270 PNA ANALYSIS	RESULTS (ug/L) : ppb	DETECTION LIMITS (ug/L) : ppb
1 NAPHTHALENE	BDL (< 5)	DL (5)
2 ACENAPHTHYLENE	BDL (< 5)	DL (5)
3 ACENAPHTHENE	BDL (< 5)	DL (5)
4 FLUORENE	BDL (< 5)	DL (5)
5 PHENANTHRENE	BDL (< 5)	DL (5)
6 ANTHRACENE	BDL (< 5)	DL (5)
7 FLUORANTHENE	BDL (< 5)	DL (5)
8 PYRENE	BDL (< 5)	DL (5)
9 BENZO(A)ANTHRACENE	BDL (< 5)	DL (5)
10 CHRYSENE	BDL (< 5)	DL (5)
11 BENZO(B)FLUORANTHENE	BDL (< 5)	DL (5)
12 BENZO(K)FLUORANTHENE	BDL (< 5)	DL (5)
13 BENZO(A)PYRENE	BDL (< 5)	DL (5)
14 INDENO(1,2,3-CD)PYRENE	BDL (< 5)	DL (5)
15 DIBENZO(A,H)ANTHRACENE	BDL (< 5)	DL (5)
16 BENZO(G,H,I)PERYLENE	BDL (< 5)	DL (5)

James A. Zylstra

JAMES A. ZYLSTRA
LABORATORY DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's SW846 Method 8270 GC/MS Semi-Volitiles Analysis
Capillary Column Type: [phase: DB-5; ID: 320 uM; film: VTK; .25 uM film thickness]

BIO-CHEM
ENVIRONMENTAL
ANALYTICAL
LABORATORY

Bio-Chem Laboratories
1049 - 28th ST SE
Grand Rapids, MI 49548
Ph 616/878-1188
Fax 616/878-0044
In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/16/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/18/96
SAMPLE NAME:--------- RBL 11'-12'
ANALYSIS BY:---------- JAZ
SAMPLE TYPE:---------- SOIL
QA/QC #:---------- 101796\8501037.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35265

****

RESULTS

****

8270 PNA ANALYSIS	RESULTS (ug/Kg) : ppb	DETECTION LIMITS (ug/Kg) : ppb
1 NAPHTHALENE	BDL (< 330)	DL (330)
2 ACENAPHTHYLENE	BDL (< 330)	DL (330)
3 ACENAPHTHENE	BDL (< 330)	DL (330)
4 FLUORENE	BDL (< 330)	DL (330)
5 PHENANTHRENE	BDL (< 330)	DL (330)
6 ANTHRACENE	BDL (< 330)	DL (330)
7 FLUORANTHENE	BDL (< 330)	DL (330)
8 PYRENE	BDL (< 330)	DL (330)
9 BENZO(A)ANTHRACENE	BDL (< 330)	DL (330)
10 CHRYSENE	BDL (< 330)	DL (330)
11 BENZO(B)FLUORANTHENE	BDL (< 330)	DL (330)
12 BENZO(K)FLUORANTHENE	BDL (< 330)	DL (330)
13 BENZO(A)PYRENE	BDL (< 330)	DL (330)
14 INDENO(1,2,3-CD)PYRENE	BDL (< 330)	DL (330)
15 DIBENZO(A,H)ANTHRACENE	BDL (< 330)	DL (330)
16 BENZO(G,H,I)PERYLENE	BDL (< 330)	DL (330)

James A. Zylstra

JAMES A. ZYLSTRA
LABORATORY DIRECTOR

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's SW846 Method 8270 GC/MS Semi-Volitiles Analysis
Capillary Column Type: [phase: DB-5; ID: 320 uM; film: VTK; .25 uM film thickness]

BIO-CHEM
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1049 - 28th ST SE
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Fax 616/878-0044
In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 22, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/15/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/16/96
SAMPLE NAME:--------- GAL UST
ANALYSIS BY:---------- DRF
SAMPLE TYPE:---------- AQUEOUS
QA/QC #:---------- DUALPIDA\A15A010
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35267

****

RESULTS

****

MDNR SCAN 2 TARGET COMPOUNDS	RESULTS (ug/L) : ppb	DETECTION LIMITS (ug/L) : ppb
1 BENZENE ----------	BDL (< 1)	DL (1)
2 TOLUENE ----------	BDL (< 1)	DL (1)
3 ETHYL BENZENE ----------	BDL (< 1)	DL (1)
4 M & P - XYLENES ----------	BDL (< 2)	DL (2)
5 O - XYLENE ----------	BDL (< 1)	DL (1)

DAVID R. FARLOW, JR
GC/MS CHEMIST

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

Analysis in compliance with Environmental Protection Agency's Method 8020 Volatiles Analysis

BIO-CHEM
ENVIRONMENTAL
ANALYTICAL
LABORATORY

Bio-Chem Laboratories
1049 - 28th ST SE
Grand Rapids, MI 49548
Ph 616/878-1188
Fax 616/878-0044
In Michigan 800/362-LABS

ANALYTICAL RESULTS

DATE: October 24, 1996

CLIENT NAME:---------- HORIZON ENVIRONMENTAL
ATTN:---------- CHRIS MIRON
ADDRESS:---------- 4595 BROADMOOR
GRAND RAPIDS, MI 49512

DATE RECEIVED:---------- 10/15/96
PROJECT:---------- HB SHERMAN-GALLEGER LAUNDRY
EXTRACTION DATE:----- 10/15/96
PROJECT NO:---------- N/A
ANALYSIS DATE:---------- 10/24/96
SAMPLE NAME:--------- GAL UST
ANALYSIS BY:---------- RRD
SAMPLE TYPE:---------- AQUEOUS
QA/QC #:---------- OCT17MTS\03.D
DATE TAKEN:---------- 10/14/96
SAMPLE REF #:---------- 35267

****

RESULTS

****

TOTAL METALS	RESULTS (ug/L) : ppb	DETECTION LIMITS (ug/L) : ppb
1 LEAD (GRAPHITE FURNACE METHOD 239.2) -------	BDL (< 3)	DL (3)

RAMON R. DAVID
DIRECTOR, ANALYTICAL SERVICES

BDL = BELOW DETECTION LIMITS / DL = DETECTION LIMITS - SAMPLE RECEIVED PACKED IN REGULAR ICE.

A RISK EVALUATION OF CHEMICALS IN SOILS AT THE HEBBLE SITE IN BATTLE CREEK, MICHIGAN

Prepared for:

The City of Battle Creek
102 East Michigan Avenue
Battle Creek, Michigan 49017

Prepared by:

EARTH TECH
5555 Glenwood Hills Parkway, SE
Grand Rapids, MI 49588

September 1994

91064

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OCT 1994
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1.0 INTRODUCTION

The objective of this report is to characterize the potential human health risks associated with chemicals in soils as a result of historical releases at the Hebble site in Battle Creek, Michigan (Hebble site). The results of this risk evaluation will be used to support development of a corrective action plan for the Hebble site. This assessment was completed in accordance with Sections 8 and 9 of the Michigan Leaking Underground Storage Tank Act (Public act 478 of 1988). The LUST Act adopts by reference the rules and regulations promulgated under the Michigan Environmental Response Act (Public Act 307 of 1982, as amended). The human health risks potentially posed by the chemicals detected in soils at the Hebble site were evaluated by comparing data derived from the chemical analyses of soil to Type B direct human contact cleanup criteria developed under Act 307.

This report evaluates the human health risks associated with exposure to chemicals in soil associated primarily with releases from the former UST's at the site. Specifically, the risk evaluation was completed to identify areas of the site which would require remediation activities to mitigate unacceptable direct human contact risks. For this report unacceptable risks were determined to be exceedances of Type B direct human contact criteria.

This document presents only an evaluation of potential risks associated with direct human contact exposures to chemicals in soils at the Hebble site. Currently, the City of Battle Creek is investigating the potential impact to groundwater associated with chemicals in soils at the Hebble site.

1.1 REGULATORY REQUIREMENTS

The Michigan Environmental Response Act (P.A. 307 of 1982, as amended) provides a framework for responding to environmental conditions at locations in the State of Michigan. This risk evaluation has been completed in a manner consistent with the regulations promulgated pursuant to Act 307. These requirements are described in Part 5, Part 6, and Part 7 of the Act 307 administrative rules.

Act 307 establishes three alternative methods for developing criteria to determine whether environmental conditions represent a threat to human health or the environment. A brief description of these criteria is provided below.

The Type A cleanup criteria require the concentrations of each chemical in any affected environmental medium to be at or below background levels or the analytical method detection limit for that chemical, whichever is higher.

The Type B and Type C cleanup criteria are both risk-assessment based. Type B criteria require cleanup to levels that do not pose an unacceptable risk on the basis of standardized risk assessment calculations. Type B criteria protective of human health are determined assuming residential uses of a site.

Unlike the Type B criteria which are based on standard residential-use exposure assumptions, site-specific characteristics are considered when developing Type C criteria. It must be demonstrated, however, that the assumptions used in the site-specific risk assessment are appropriate and consistent with all current and reasonable expected future land uses. For example, by controlling current and future uses of the site or impacted media (via institutional controls or deed restrictions), site-specific modification of exposure assumptions may be permitted.

The Act 307 administrative rules provide flexibility in the design of remedial programs. A combination of the three approaches may be adopted at a single site. For example, different approaches may be selected for each environmental medium; different approaches may be applied to each chemical at a site; or the site may be subdivided into various units and different approaches may be applied to each unit.

2.0 BACKGROUND INFORMATION

The Hebble site is a triangular-shaped parcel located on the south side of west Michigan Avenue along the west shore of Battle Creek (see Figure 1). The property is bounded on the west by the former Gallagher Laundry, an industrial uniform service.

Triple D Auto Parts was formerly located at the site. Among other activities, Triple D conducted battery recycling on the property.

During demolition of the Hebble site, seven underground storage tanks were identified on the east side of the property approximately 25 feet from the river's edge. Four of the tanks were in the vertical position suggesting they were used to store materials other than fuel. The tank contents and historical uses of the tanks were unknown. Samples were collected from the tanks and analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX), polynuclear aromatic compounds (PNAs), polychlorinated biphenyls (PCB) and

total organic halogens (TOX). The tanks were removed and a release was confirmed on December 10, 1992 based on odors emanating from the excavation.

The site is currently vacant and the ground is bare with some sparse weed growth. The excavation from the tank removal remains open and is approximately ten feet deep. A sanitary sewer, approximately four feet in diameter, bounds the excavation on the east side and separates the excavation from the river. The property is secured by a chain link fence and locked gate.

2.1 HISTORICAL INVESTIGATIONS

The results of previous investigations conducted at the Hebble site are presented in the June 1993 report prepared by Terra Environmental Corporation titled "City of Battle Creek Hebble Property Site Investigation Report". The analytical results for three investigative borings (SB-1, SB-2, and SB-3 shown on Figure 1) drilled during removal of the seven USTs indicated the presence of BTEX and PNAs in site soils. Additionally, the analytical results for samples collected from the tanks indicated the presence of halogenated hydrocarbons. No polychlorinated biphenyls were detected in the tank or soil samples.

Subsequent to excavation of impacted soils, a total of 11 additional borings were installed at the site (see Figure 1). These borings were spaced approximately 20 to 40 feet radially away from the excavation and downgradient. Soil samples were collected from these borings from three to five and eight to ten feet depth intervals. The soil samples were analyzed for BTEX, PNAs, volatile halocarbons, cadmium, chromium, and lead.

On September 12, 1994, Earth Tech collected additional soil samples at the site. A total of seven surface soil samples were collected at locations throughout the site. These samples were collected in order to characterize the nature and extent of impact in surface soils at the Hebble site, since, previous investigations did not include the collection of surface soil samples. Additionally, four samples each were collected at locations north, south, east, and west of previous sample locations SB-1 and SB-10. The purpose of these samples was to define the extent of lead impact in soils above Type B direct human contact criteria.

Previous investigations have also included the collection of groundwater samples at the Hebble site.

2.2 SITE PHYSICAL CHARACTERISTICS

2.2.1 GEOLOGY AND HYDROGEOLOGY

The site geology consists of brown silty sand mixed with rubble and fill material from the ground surface to approximately ten feet below grade. Soil greater than ten feet consists of silty sand with traces of gravel across the site to depths of 25 feet. The silt is underlain by medium tan sand to a depth of 54 feet in SB-1.

Groundwater beneath the site flows in a southwest direction toward the Battle Creek River.

3.0 ANALYTICAL RESULTS

Table 1 presents the analytical results for soil samples collected at the site. The Type A criteria presented on this table for the inorganic chemicals are the Michigan default background values presented in MERA Operational Memorandum # 15, September 30, 1993. The Type B direct human contact criteria are those presented in MERA Operational Memorandum #8, Revision 3, February 4, 1994.

As shown on the table, a total of 18 soil samples were collected at the site and analyzed for PNAs. At least one PNA compound was detected in 11 soil samples at concentrations exceeding Act 307 Type B direct human contact criteria. Specifically, the following PNAs were detected in soil samples at concentrations exceeding Act 307 Type B direct human contact criteria: benzo(a)anthracene, benzo(b and/or k)fluoranthene, benzo(a)pyrene, dibenz(a,h) anthracene, and indeno(1,2,3-cd) pyrene.

The analytical results for soil samples analyzed for BTEX compounds are also presented in Table 1. A total of 11 soil samples were analyzed for BTEX compounds and no BTEX compounds were detected in the soil samples at concentrations exceeding Act 307 Type B direct human contact criteria.

A total of 14 soil samples were analyzed for cadmium and chromium. Cadmium and chromium were not detected in the soil samples at concentrations exceeding Act 307 Type B direct human contact criteria.

A total of 36 soil samples were analyzed for lead. Lead was detected in five of the samples at concentrations exceeding Act 307 Type B direct human contact criteria.

4.0 RISK CHARACTERIZATION

As described previously, the objective of this document is to evaluate the potential risks associated with direct human contact exposures to chemicals in soil at the Hebble site. Chemicals are present at individual locations at the site at concentrations exceeding Type B direct human contact criteria. However, when evaluating potential direct human contact exposures to soils at a site, it is reasonable to assume that an individual would have an equal probability of exposure to soils at any particular location across the site. Consequently, a point-by-point comparison of analytical results to Type B direct human contact criteria does not provide an accurate representation of the actual risks associated with direct human contact exposures to chemicals in soils at a site. This assertion is supported by USEPA guidance. Specifically, as stated in USEPA risk assessment guidance (RAGS Part A, section 6.5.3), the spatial distribution of soil contamination can be used as basis for estimating the average concentrations contacted over time if it is assumed that contact with soil is spatially random (i.e., if contact with soil in all areas of the site is equally probable).

Based on the above discussion, the risks posed by chemicals in soils were characterized by comparing soil analytical data to Type B direct human contact criteria. However, rather than evaluating potential risks through a point-by-point comparison, the 95% upper confidence limit on the arithmetic mean concentration (the 95% UCL) for each chemical in soil was used for purposes of comparison. As recommended by USEPA, this concentration is regarded as a reasonable estimate of the concentration of a chemical likely to be contacted over a period of time. In cases where the 95% UCL concentration exceeded the maximum detected concentration, the maximum detected concentration was used.

Ninety-five percent UCL concentrations were calculated according to the methodology presented in Gilbert (1987) assuming a log normal distribution of the analytical data. Distribution tests conducted on the data indicated that the data best fit a log normal distribution. For purposes of calculating the 95% UCL concentrations, data which were not present above detection limits were considered to be present at one-half the sample detection limit.

4.1 ALL SOILS

As an initial screen of potential human health risks associated with exposure to soils at any location of the site, all site data were combined to determine a single 95% UCL concentration for each chemical, and this concentration was compared to the Type B direct human contact criterion for that particular chemical. The results of this evaluation are presented in Table 2.

When considering all site soils, six chemicals were determined to be present in site soils at concentrations exceeding their respective Type B direct human contact criterion. These chemicals are: benzo(a)anthracene, benzo(b and/or k) fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd) pyrene, and lead.

4.2 SURFACE SOILS

An evaluation of exposures to chemicals in surface soils was completed since surface soils represent those soils an individual likely would be exposed to through direct human contact exposures. For this analyses, surface soils were defined as those soils at depths of less than 3 feet. Table 3 presents the 95% UCL for chemicals present in surface soils. As shown on the table, three chemicals were identified in surface soils at concentrations exceeding their respective Type B direct human contact criteria. These chemicals are: benzo(a)anthracene, benzo(b and/or k) fluoranthene, and benzo(a) pyrene.

5.0 CONCLUSIONS

The risk assessment presented in this document was designed to evaluate potential human health risks associated with direct human contact exposures to chemicals in soils at the Hebble site. The major conclusions of the risk assessment are presented below.

- When all soil depths are considered collectively, a total of six chemicals (benzo(a)anthracene, benzo(b and/or k) fluoranthene, benzo(a)pyrene, dibenz(a,h)anthracene, indeno(1,2,3-cd) pyrene, and lead) were identified in site soils as exceeding Type B direct human contact criteria.

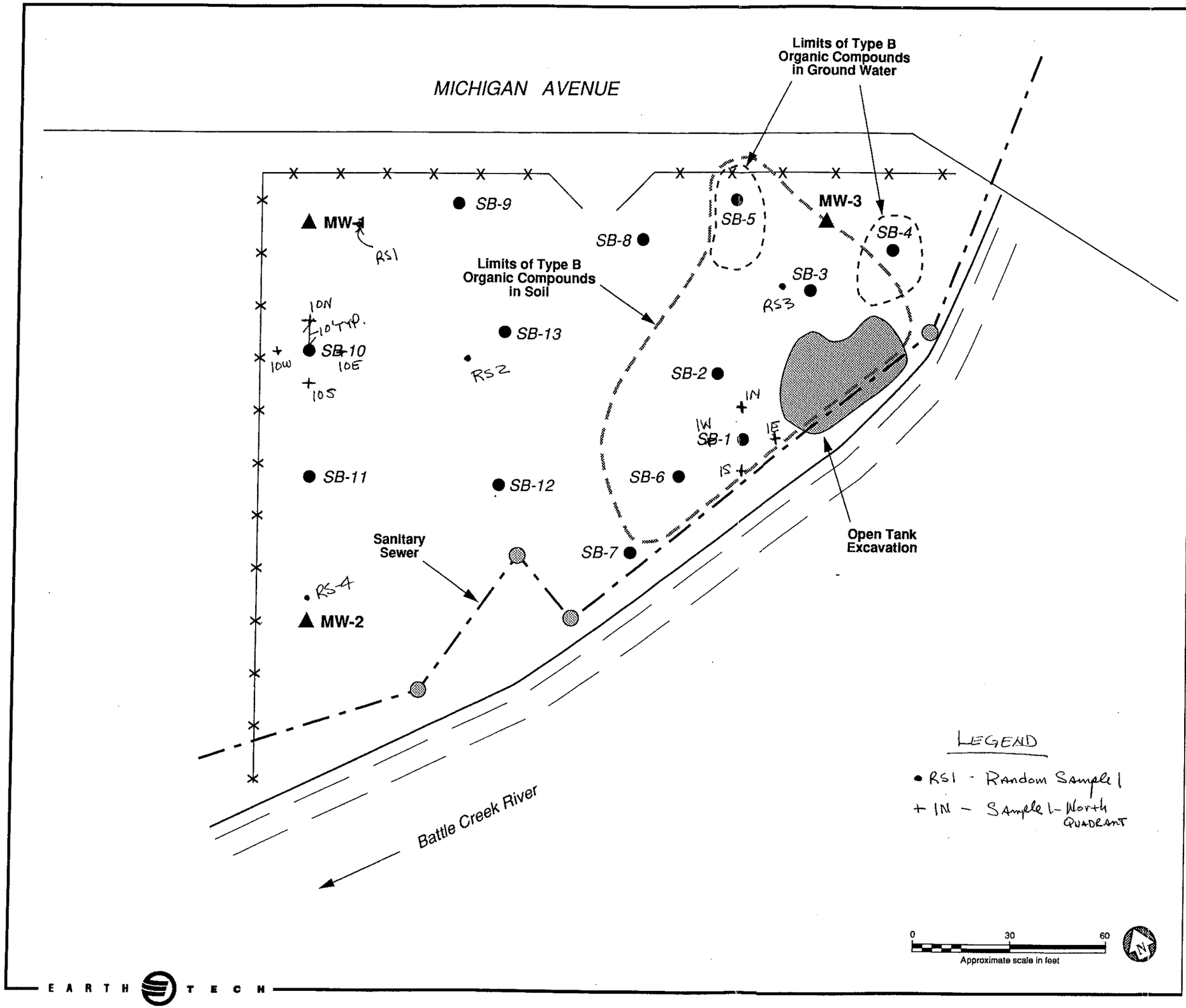
- A more specific analyses of shallow soils (i.e., those soils most likely to be contacted through direct human contact exposures) was also completed. Viewing only shallow soils at the Hebble site indicates that fewer chemicals (only benzo(a)anthracene,

benzo(b and/or k) fluoranthene, and benzo(a) pyrene) are present above Type B direct human contact criteria at the site.

- The analytical results for the surface soil samples indicate that mitigating activities will need to be completed to eliminate potentially unacceptable direct human contact exposures to surface soils. Mitigating activities could include targeted excavation or the capping of site soils to prevent exposure to chemicals in soil.

FIGURES

91064/0894/TW/02



LEGEND

- ▲ Monitoring Well
- ● Soil Boring
- ◍ Manhole Cover

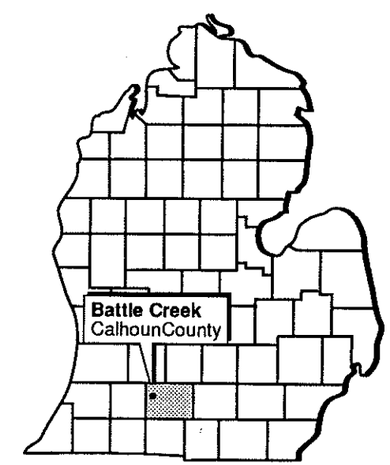


Figure 1

Site Map
Hebble Site

City of Battle Creek, Michigan

August 1994

91064

EARTH TECH

TABLES

Table 1
Analytical Results for Soil Samples
Hebble Site, Battle Creek, Michigan
Units as Given

Site Identification:		Act 307 Criteria		RS #1	RS #2	RS #3	RS #4	SB-1	SB-1	SB-1E	SB-1N	SB-1S	SB-1 Surface
Sample Identification:			Type B	E97216	E97217	E97220	E97222	P01258	P01259	E97214	E97215	E97213	E97219
Sample Date:		Type A		9/12/94	9/12/94	9/12/94	9/12/94	3/29/93	3/29/93	9/12/94	9/12/94	9/12/94	9/12/94
Sample Depth: (feet)			DHC	-	-	-	-	3 - 5	8 - 10	1-1.5	0-0.67	0-0.67	0 - 1
MDNR Scan 7	***Units***												
Acenaphthene	ug/kg	330	45000000	<165	<165	<165	<165	<125	<125	--	--	--	<165
Acenaphthylene	ug/kg	330	930000	<165	<165	<165	<165	5300	<125	--	--	--	<165
Anthracene	ug/kg	330	260000000	440	480	<165	<165	<125	<125	--	--	--	410
Benzo(a)anthracene	ug/kg	330	1800(m)	2000	1800	450	1200	<125	840	--	--	--	840
Benzo(b and/or k)fluoranther	ug/kg	330	1800(m)	3700	2400	910	1900	3400	<125	--	--	--	1400
Benzo(a)pyrene	ug/kg	330	180(m)	1600	1600	520	1200	<125	670	--	--	--	810
Chrysene	ug/kg	330	180000(m)	1900	1500	340	1100	<125	840	--	--	--	750
Dibenz(a,h)anthracene	ug/kg	330	180(m)	360	<165	<165	<165	<125	670	--	--	--	<165
Fluoranthene	ug/kg	330	31000000	3700	3600	990	2000	<125	<125	--	--	--	2000
Fluorene	ug/kg	330	31000000	<165	<165	<165	<165	<125	320	--	--	--	<165
Indeno(1,2,3-cd)pyrene	ug/kg	330	1800(m)	1100	700	<165	530	<125	<125	--	--	--	390
Naphthalene	ug/kg	330	9300000	<165	<165	<165	<165	<125	<125	--	--	--	<165
Phenanthrene	ug/kg	330	930000	2200	2300	610	940	<125	<125	--	--	--	1800
Pyrene	ug/kg	330	19000000	3500	3200	670	1900	<125	770	--	--	--	1500
MDNR Scan 1	***Units***												
Chloroform	ug/kg	10	62000	--	--	--	--	<2.5	<2.5	--	--	--	--
1,2-Dichloroethane	ug/kg	10	4300	--	--	--	--	<2.5	<2.5	--	--	--	--
Tetrachloroethylene	ug/kg	10	7800	--	--	--	--	74	<2.5	--	--	--	--
1,1,1-Trichloroethane	ug/kg	10	2200000	--	--	--	--	21	10	--	--	--	--
MDNR Scan 2	***Units***												
Benzene	ug/kg	10	13000	--	--	--	--	15	<2.5	--	--	--	--
Ethylbenzene	ug/kg	10	7500000	--	--	--	--	75	<2.5	--	--	--	--
Toluene	ug/kg	10	17000000	--	--	--	--	330	31	--	--	--	--
Xylene, total	ug/kg	30	140000000	--	--	--	--	<2.5	<2.5	--	--	--	--
Inorganics	***Units***												
Cadmium, total	ug/kg	1200(d)	130000	--	--	--	--	16200	395	--	--	--	--
Chromium, total	ug/kg	18000(d)	1200000(VI)	--	--	--	--	28300	28900	--	--	--	--
Lead, total	ug/kg	21000(d)	400000	225000	231000	142000	311000	1112000	201000	440000	143000	131000	128000

(m) = From Addemdum to Operational Memo #8, 7/22/94.
(d) = Default Type A criteria from MERA Operational Memorandum #15, 9/30/93, MDNR.
(VI) = Value is for hexavalent chromium (most conservative).

-- = Not Analyzed.
= Values exceed both Type A and Type B DHC criteria.
RS = Random Sample

Table 1
Analytical Results for Soil Samples
Hebble Site, Battle Creek, Michigan
Units as Given

Site Identification:		Act 307 Criteria		SB-1W	SB-2	SB-2	SB-3	SB-3	SB-4	SB-5	SB-6	SB-6	SB-6 Surface
Sample Identification:			Type B	E97212	P01272	P01273	P01274	P01275	P01276	P01277	P01311	P01312	E97218
Sample Date:		Type A		9/12/94	3/30/93	3/30/93	3/30/93	3/30/93	3/30/93	3/30/93	3/31/93	3/31/93	9/12/94
Sample Depth: (feet)			DHC	3-5	3 - 5	8 - 10	3 - 5	8 - 10	3 - 5	3 - 5	3 - 5	8 - 10	0 - 1
MDNR Scan 7	***Units***												
Acenaphthene	ug/kg	330	45000000	--	<125	<125	<125	<125	<125	<125	190000	<125	<165
Acenaphthylene	ug/kg	330	930000	--	4400	<125	<125	<125	<125	330	<125	4200	<165
Anthracene	ug/kg	330	260000000	--	<125	<125	<125	<125	<125	<125	<125	<125	<165
Benzo(a)anthracene	ug/kg	330	1800(m)	--	720	<125	<125	<125	<125	290	109000	2000	1000
Benzo(b and/or k)fluoranther	ug/kg	330	1800(m)	--	<125	<125	470	<125	<125	720	<125	4700	1500
Benzo(a)pyrene	ug/kg	330	180(m)	--	530	<125	<125	<125	<125	300	80300	1800	930
Chrysene	ug/kg	330	180000(m)	--	720	<125	<125	<125	<125	290	109000	2000	980
Dibenz(a,h)anthracene	ug/kg	330	180(m)	--	530	<125	<125	<125	<125	300	80300	1800	<165
Fluoranthene	ug/kg	330	31000000	--	<125	<125	<125	<125	<125	<125	<125	<125	2100
Fluorene	ug/kg	330	31000000	--	340	<125	<125	<125	<125	<125	33900	<125	<165
Indeno(1,2,3-cd)pyrene	ug/kg	330	1800(m)	--	<125	<125	<125	<125	<125	<125	52100	380	430
Naphthalene	ug/kg	330	9300000	--	<125	<125	<125	<125	<125	<125	69800	2500	<165
Phenanthrene	ug/kg	330	930000	--	<125	<125	<125	<125	<125	<125	69500	<125	1300
Pyrene	ug/kg	330	19000000	--	<125	<125	480	<125	<125	<125	164000	<125	1900
MDNR Scan 1	***Units***												
Chloroform	ug/kg	10	62000	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	37	18	--
1,2-Dichloroethane	ug/kg	10	4300	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	11	<2.5	--
Tetrachloroethylene	ug/kg	10	7800	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	--
1,1,1-Trichloroethane	ug/kg	10	2200000	--	<2.5	<2.5	<2.5	<2.5	<2.5	14	44	12	--
MDNR Scan 2	***Units***												
Benzene	ug/kg	10	13000	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	76	<2.5	--
Ethylbenzene	ug/kg	10	7500000	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	300	<2.5	--
Toluene	ug/kg	10	17000000	--	15	<2.5	<2.5	13	<2.5	<2.5	1400	42	--
Xylene, total	ug/kg	30	140000000	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	2170	32	--
Inorganics	***Units***												
Cadmium, total	ug/kg	1200(d)	130000	--	272	57	490	135	439	860	2140	1710	--
Chromium, total	ug/kg	18000(d)	1200000(VI)	--	13600	30500	17100	37600	15400	15400	17200	29600	--
Lead, total	ug/kg	21000(d)	400000	4770000	22900	2380	12600	5920	12400	50700	171000	112000	205000

(m) = From Addemdum to Operational Memo #8, 7/22/94.
(d) = Default Type A criteria from MERA Operational Memorandum #15, 9/30/93, MDNR.
(VI) = Value is for hexavalent chromium (most conservative).

-- = Not Analyzed.
= Values exceed both Type A and Type B DHC criteria.

Table 1
Analytical Results for Soil Samples
Hebble Site, Battle Creek, Michigan
Units as Given

Site Identification:		Act 307 Criteria		SB-8	SB-9	SB-9	SB-10	SB-10	SB-10E	SB-10N	SB-10S	SB-10 Surface	SB-10W
Sample Identification:			Type B	P01313	P01314	P01315	P01316	P01317	E97211	E97208	E97209	E97221	E97210
Sample Date:		Type A		3/31/93	3/31/93	3/31/93	3/31/93	3/31/93	9/12/94	9/12/94	9/12/94	9/12/94	9/12/94
Sample Depth: (feet)			DHC	3 - 5	3 - 5	8 - 10	3 - 5	8 - 10	3-5	3-5	3-5	0 - 1	5-7
MDNR Scan 7	***Units***												
Acenaphthene	ug/kg	330	45000000	<125	--	--	--	--	--	--	--	<165	--
Acenaphthylene	ug/kg	330	930000	<125	--	--	--	--	--	--	--	<165	--
Anthracene	ug/kg	330	260000000	<125	--	--	--	--	--	--	--	<165	--
Benzo(a)anthracene	ug/kg	330	1800(m)	<125	--	--	--	--	--	--	--	<165	--
Benzo(b and/or k)fluoranther	ug/kg	330	1800(m)	<125	--	--	--	--	--	--	--	**360**	--
Benzo(a)pyrene	ug/kg	330	180(m)	<125	--	--	--	--	--	--	--	<165	--
Chrysene	ug/kg	330	180000(m)	<125	--	--	--	--	--	--	--	<165	--
Dibenz(a,h)anthracene	ug/kg	330	180(m)	<125	--	--	--	--	--	--	--	<165	--
Fluoranthene	ug/kg	330	31000000	<125	--	--	--	--	--	--	--	**590**	--
Fluorene	ug/kg	330	31000000	<125	--	--	--	--	--	--	--	<165	--
Indeno(1,2,3-cd)pyrene	ug/kg	330	1800(m)	<125	--	--	--	--	--	--	--	<165	--
Naphthalene	ug/kg	330	9300000	<125	--	--	--	--	--	--	--	<165	--
Phenanthrene	ug/kg	330	930000	<125	--	--	--	--	--	--	--	**330**	--
Pyrene	ug/kg	330	19000000	<125	--	--	--	--	--	--	--	**470**	--
MDNR Scan 1	***Units***												
Chloroform	ug/kg	10	62000	<2.5	--	--	--	--	--	--	--	--	--
1,2-Dichloroethane	ug/kg	10	4300	<2.5	--	--	--	--	--	--	--	--	--
Tetrachloroethylene	ug/kg	10	7800	<2.5	--	--	--	--	--	--	--	--	--
1,1,1-Trichloroethane	ug/kg	10	2200000	**49**	--	--	--	--	--	--	--	--	--
MDNR Scan 2	***Units***												
Benzene	ug/kg	10	13000	<2.5	--	--	--	--	--	--	--	--	--
Ethylbenzene	ug/kg	10	7500000	<2.5	--	--	--	--	--	--	--	--	--
Toluene	ug/kg	10	17000000	**27**	--	--	--	--	--	--	--	--	--
Xylene, total	ug/kg	30	140000000	**83**	--	--	--	--	--	--	--	--	--
Inorganics	***Units***												
Cadmium, total	ug/kg	1200(d)	130000	**134**	**2320**	**120**	**654**	**297**	--	--	--	--	--
Chromium, total	ug/kg	18000(d)	1200000(VI)	**44400**	**51500**	**47900**	**49100**	**80000**	--	--	--	--	--
Lead, total	ug/kg	21000(d)	400000	**3460**	**191000**	**5460**	**4384000**	**2390**	**66000**	**26000**	**38000**	**67000**	**27000**

(m) = From Addemdum to Operational Memo #8, 7/22/94.
(d) = Default Type A criteria from MERA Operational Memorandum #15, 9/30/93, MDNR.
(VI) = Value is for hexavalent chromium (most conservative).

-- = Not Analyzed.
= Values exceed both Type A and Type B DHC criteria.

Table 1
Analytical Results for Soil Samples
Hebble Site, Battle Creek, Michigan
Units as Given

Site Identification:		Act 307 Criteria		SB-11	SB-11	SB-12	SB-12	SB-13	SB-13
Sample Identification:			Type B	P01318	P01319	P01320	P01321	P01322	P01323
Sample Date:		Type A		3/31/93	3/31/93	3/31/93	3/31/93	3/31/93	3/31/93
Sample Depth: (feet)			DHC	3 - 5	8 - 10	3 - 5	8 - 10	5 - 7	8 - 10
MDNR Scan 7	***Units***								
Acenaphthene	ug/kg	330	45000000	--	--	--	--	--	--
Acenaphthylene	ug/kg	330	930000	--	--	--	--	--	--
Anthracene	ug/kg	330	260000000	--	--	--	--	--	--
Benzo(a)anthracene	ug/kg	330	1800(m)	--	--	--	--	--	--
Benzo(b and/or k)fluoranther	ug/kg	330	1800(m)	--	--	--	--	--	--
Benzo(a)pyrene	ug/kg	330	180(m)	--	--	--	--	--	--
Chrysene	ug/kg	330	180000(m)	--	--	--	--	--	--
Dibenz(a,h)anthracene	ug/kg	330	180(m)	--	--	--	--	--	--
Fluoranthene	ug/kg	330	31000000	--	--	--	--	--	--
Fluorene	ug/kg	330	31000000	--	--	--	--	--	--
Indeno(1,2,3-cd)pyrene	ug/kg	330	1800(m)	--	--	--	--	--	--
Naphthalene	ug/kg	330	9300000	--	--	--	--	--	--
Phenanthrene	ug/kg	330	930000	--	--	--	--	--	--
Pyrene	ug/kg	330	19000000	--	--	--	--	--	--
MDNR Scan 1	***Units***								
Chloroform	ug/kg	10	62000	--	--	--	--	--	--
1,2-Dichloroethane	ug/kg	10	4300	--	--	--	--	--	--
Tetrachloroethylene	ug/kg	10	7800	--	--	--	--	--	--
1,1,1-Trichloroethane	ug/kg	10	2200000	--	--	--	--	--	--
MDNR Scan 2	***Units***								
Benzene	ug/kg	10	13000	--	--	--	--	--	--
Ethylbenzene	ug/kg	10	7500000	--	--	--	--	--	--
Toluene	ug/kg	10	17000000	--	--	--	--	--	--
Xylene, total	ug/kg	30	140000000	--	--	--	--	--	--
Inorganics	***Units***								
Cadmium, total	ug/kg	1200(d)	130000	**310**	**135**	**416**	**196**	**377**	**487**
Chromium, total	ug/kg	18000(d)	1200000(VI)	**62900**	**13000**	**64800**	**15800**	**69700**	**5980**
Lead, total	ug/kg	21000(d)	400000	**5350**	**4580**	**8360**	**69100**	**69900**	**59600**

(m) = From Addemdum to Operational Memo #8, 7/22/94.
(d) = Default Type A criteria from MERA Operational Memorandum #15, 9/30/93, MDNR.
(VI) = Value is for hexavalent chromium (most conservative).

-- = Not Analyzed.
= Values exceed both Type A and Type B DHC criteria.

Table 2
Comparison of 95% UCL Concentrations to Act 307 Type B Direct Human Contact Criteria
Hebble Site, Battle Creek, Michigan
Units as Given

Site Identification: / Sample Identification: / Sample Date: / Sample Depth: (feet)		Act 307 Criteria		Calculation of Upper 95% Confidence Limit for All Data (assuming a Lognormal Distribution of data)							
		Type A	Type B DHC	Ln Ave	Ln St. Dev.	n	H	UCL95	Max	Value to Use	Basis
MDNR Scan 7	***Units***										
Acenaphthene	ug/kg	330	45000000	5.3433	1.7054	18	3.7796	4280	190000	**4280**	UCL95
Acenaphthylene	ug/kg	330	930000	5.5915	1.33	18	3.1439	1790	5300	**1790**	UCL95
Anthracene	ug/kg	330	260000000	5.1007	0.4714	18	1.9926	230	480	**230**	UCL95
Benzo(a)anthracene	ug/kg	330	1800(m)	6.3442	1.7005	18	3.7711	11400	109000	**11400**	UCL95
Benzo(b and/or k)fluoranther	ug/kg	330	1800(m)	6.3291	1.3939	18	3.2488	4440	4700	**4440**	UCL95
Benzo(a)pyrene	ug/kg	330	180(m)	6.2767	1.6192	18	3.6298	8210	80300	**8210**	UCL95
Chrysene	ug/kg	330	180000(m)	6.3034	1.691	18	3.7544	10600	109000	**10600**	UCL95
Dibenz(a,h)anthracene	ug/kg	330	180(m)	5.7091	1.5756	18	3.5549	4060	80300	**4060**	UCL95
Fluoranthene	ug/kg	330	31000000	5.8692	1.3994	18	3.2579	2850	3700	**2850**	UCL95
Fluorene	ug/kg	330	31000000	5.3554	1.302	18	3.0984	1310	33900	**1310**	UCL95
Indeno(1,2,3-cd)pyrene	ug/kg	330	1800(m)	5.6847	1.479	18	3.3909	2970	52100	**2970**	UCL95
Naphthalene	ug/kg	330	9300000	5.4541	1.5806	18	3.5635	3200	69800	**3200**	UCL95
Phenanthrene	ug/kg	330	930000	6.033	1.7263	18	3.8162	9140	69500	**9140**	UCL95
Pyrene	ug/kg	330	19000000	6.3755	1.8904	18	4.1064	23000	164000	**23000**	UCL95
MDNR Scan 1	***Units***										
Chloroform	ug/kg	10	62000	1.3407	0.9579	11	2.9151	14.6	37	**14.6**	UCL95
1,2-Dichloroethane	ug/kg	10	4300	1.051	0.4467	11	2.1078	4.26	11	**4.26**	UCL95
Tetrachloroethylene	ug/kg	10	7800	1.2243	1.0215	11	3.0361	15.3	74	**15.3**	UCL95
1,1,1-Trichloroethane	ug/kg	10	2200000	2.0662	1.2005	11	3.3931	58.8	49	**49**	Max
MDNR Scan 2	***Units***										
Benzene	ug/kg	10	13000	1.3896	1.1138	11	3.2174	23.2	76	**23.2**	UCL95
Ethylbenzene	ug/kg	10	7500000	1.6607	1.685	11	4.4358	231	300	**231**	UCL95
Toluene	ug/kg	10	17000000	2.9499	2.1043	11	5.3862	6300	1400	**1400**	Max
Xylene, total	ug/kg	30	140000000	2.0816	2.2274	11	5.6698	5200	2170	**2170**	Max
Inorganics	***Units***										
Cadmium, total	ug/kg	1200(d)	130000	6.098	1.2651	21	2.9457	2280	16200	**2280**	UCL95
Chromium, total	ug/kg	18000(d)	1200000(VI)	10.2626	0.6923	21	2.1824	51000	80000	**51000**	UCL95
Lead, total	ug/kg	21000(d)	400000	10.9906	1.9175	36	3.5821	1190000	4770000	**1190000**	UCL95

Shaded values exceed the Type A and Type B DHC criteria.

Table 3
Comparison of 95% UCL Concentrations to Act 307 Type B Direct Human Contact Criteria
Hebble Site, Battle Creek, Michigan
Units as Given

Site Identification:		Act 307 Criteria		Calculation of Upper 95% Confidence Limit (for 0-3' Soils) (assuming a Lognormal Distribution of data)							
Sample Identification:			Type B								
Sample Date:		Type A		Ln	Ln St.					Value	
Sample Depth: (feet)			DHC	Ave	Dev.	n	H	UCL95	Max	to Use	Basis
MDNR Scan 7	***Units***										
Acenaphthene	ug/kg	330	45000000	NA	NA	NA	NA	NA	ND	**NA**	-
Acenaphthylene	ug/kg	330	930000	NA	NA	NA	NA	NA	ND	**NA**	-
Anthracene	ug/kg	330	260000000	5.5286	0.5292	7	2.5232	500	480	**480**	Max
Benzo(a)anthracene	ug/kg	330	1800(m)	6.7204	0.8687	7	3.3357	3950	2000	**2000**	Max
Benzo(b and/or k)fluoranther	ug/kg	330	1800(m)	7.258	0.7485	7	3.0237	4730	3700	**3700**	Max
Benzo(a)pyrene	ug/kg	330	180(m)	6.6768	0.7985	7	3.1511	3050	1600	**1600**	Max
Chrysene	ug/kg	330	180000(m)	6.4598	0.8322	6	3.2819	3060	1900	**1900**	Max
Dibenz(a,h)anthracene	ug/kg	330	180(m)	5.2174	0.2949	7	2.1176	249	360	**249**	UCL95
Fluoranthene	ug/kg	330	31000000	7.5049	0.6641	7	2.8187	4860	3700	**3700**	Max
Fluorene	ug/kg	330	31000000	NA	NA	NA	NA	NA	ND	**NA**	-
Indeno(1,2,3-cd)pyrene	ug/kg	330	1800(m)	6.0098	0.7056	7	2.9177	1210	1100	**1100**	Max
Naphthalene	ug/kg	330	9300000	NA	NA	NA	NA	NA	ND	**NA**	-
Phenanthrene	ug/kg	330	930000	7.023	0.7204	7	2.9538	3470	2300	**2300**	Max
Pyrene	ug/kg	330	19000000	7.3291	0.7526	7	3.0339	5140	3500	**3500**	Max
MDNR Scan 1	***Units***										
Chloroform	ug/kg	10	62000	NA	NA	NA	NA	NA	ND	**ND**	-
1,2-Dichloroethane	ug/kg	10	4300	NA	NA	NA	NA	NA	ND	**ND**	-
Tetrachloroethylene	ug/kg	10	7800	NA	NA	NA	NA	NA	ND	**ND**	-
1,1,1-Trichloroethane	ug/kg	10	2200000	NA	NA	NA	NA	NA	ND	**ND**	-
MDNR Scan 2	***Units***										
Benzene	ug/kg	10	13000	NA	NA	NA	NA	NA	ND	**ND**	-
Ethylbenzene	ug/kg	10	7500000	NA	NA	NA	NA	NA	ND	**ND**	-
Toluene	ug/kg	10	17000000	NA	NA	NA	NA	NA	ND	**ND**	-
Xylene, total	ug/kg	30	140000000	NA	NA	NA	NA	NA	ND	**ND**	-
Inorganics	***Units***										
Cadmium, total	ug/kg	1200(d)	130000	NA	NA	NA	NA	NA	ND	**ND**	-
Chromium, total	ug/kg	18000(d)	1200000(VI)	NA	NA	NA	NA	NA	ND	**ND**	-
Lead, total	ug/kg	21000(d)	400000	12.0936	0.5301	10	2.2629	307000	440000	**307000**	UCL95

Shaded values exceed the Type A and Type B DHC criteria.

Global Environmental Engineering Inc.

August 30, 1993

Mr. Rod Brown
Terra Environmental
5100 West Michigan Ave.
Kalamazoo, Michigan 49007

file

RE: City of Battle Creek - H.B. Sherman
Addendum to May 28, 1993 Site Investigation Report
Additional Boring Results

Dear Rod:

Per our discussion with the City of Battle Creek four additional borings were completed at the subject site to investigate the depth to the clean, high capacity aquifer beneath the site and the extent of free product and ground water contamination down gradient from the former tank location. Boring logs are attached.

SCOPE OF WORK

Soil Boring SB-8 was drilled on the up gradient side of the former tank location to penetrate the well cemented sand and silt encountered during the initial investigation and determine the presence of a high flow capacity aquifer below. The boring was advance to until auger refusal at 38 feet below the ground surface. Interbeded hard and wet silt and sand was encountered throughout this boring. No high capacity aquifer was encountered.

Soil borings SB-9, SB-10, and SB-11, were drilled along the south side of Jackson Street to transect the path of ground water flow from the site toward the river (Figure 1). SB-9 was drilled directly across from the tank excavation. Split spoon soil samples were collected from 16 to 18 feet and from 18 to 20 feet. The 16 to 18 foot sample was hard dry silt with no evidence of contamination. The sample from 18 to 20 feet was saturated silt with streaks of oil present. A water sample was taken from this depth through the screened auger by a plastic bailer. Free product was visible in this sample. Both the soil and water samples from 18 to 20 feet were submitted to the laboratory for analysis of benzene, toluene, ethyl benzene, and xylene (BTEX) and polynuclear aromatic compounds (PNAs).

Soil boring SB-10 was drilled 70 northwest from SB-9. A split spoon sample was collected from 18 to 20 feet. Wet gray silt was recovered. There was no evidence of free product. A water sample was collected. The soil and water samples were submitted to the lab for BTEX and PNA analysis.

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Soil boring SB-11, was drilled approximately 39 feet southeast from SB-9. A split spoon sample was collected from 14 to 16 feet. There was no evidence of free product. Split spoon sampling at 18 and 20 feet was attempted but no sample was recovered. A ground water sample was collected and sent to the lab for analysis.

All sampling equipment (i.e., bailers, split spoon samplers, and down-hole hammer, etc.) was steam cleaned between sampling and the augers and drilling equipment were steamed cleaned between borings.

RESULTS

No BTEX was detected in any of the samples collected and submitted to the laboratory for analysis. Naphthalene was detected in both soil samples analyzed but at concentrations below P.A. 307 type B standards. The ground water sample from SB-9 was the only ground water sample with detected quantities of PNAs. Phenanthrene and benzo(k)fluoranthene were present at concentrations exceeding P.A. 307 type B clean up standards. Laboratory results are attached.

CONCLUSIONS

Base on these results, the extent of ground water contamination is defined. Borings SB-10 and SB-11 have identified the down gradient flanks of the plume and SB-9 has nearly identified the leading edge of the plume. The extent of ground water contamination is minimal and may be adequately addressed with the planned interim response of ground water and free product recovery at the edge of the excavation. The limited migration of ground water contamination which has been retarded by the silty well cemented aquifer material may enhance the ability of the recovery system to draw the contaminated ground water back toward the excavation.

If you have any questions, please call.

Sincerely,

Robert H. Douglass, P.E.
Project Manager

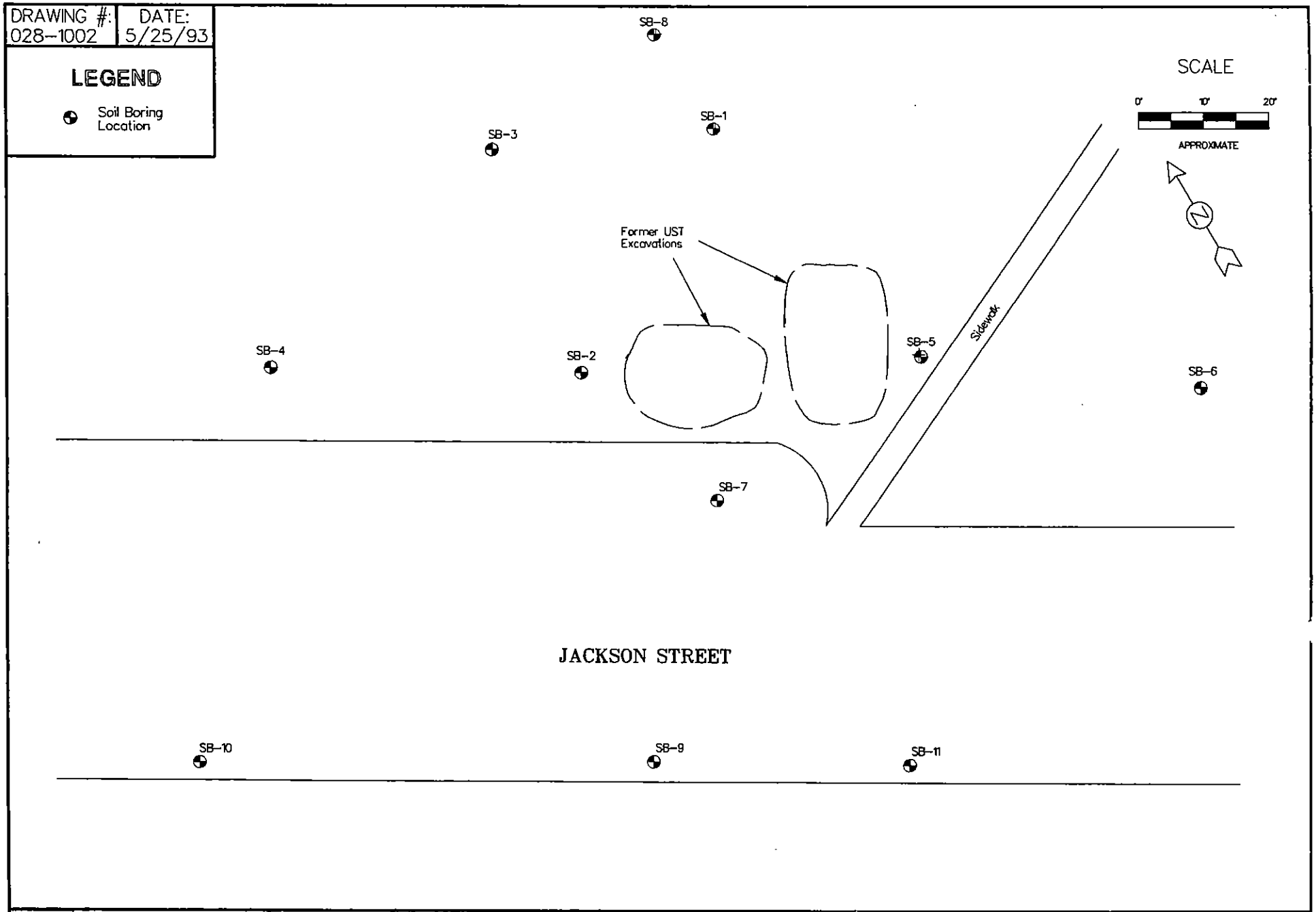

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Figure 1
Site Sketch

HB Sherman Site
Battle Creek, MI

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SOIL BORING LOG

Site: Sherman
Project No.: 28
Date: 7/8/93

LOCATION	Sherman – Battle Creek, MI	BORING/WELL NO.	SB-8
CLIENT	Terra Environmental/City of Battle City	GROUND ELEV.	NA
DRILLER	Norm Jones	TOP OF CASING ELEV.	NA
HELPER		STATIC WATER LEVEL	18'
WEATHER	Partly Cloudy – Hot	DEVELOPMENT METHOD	Bailer

DEPTH: 0, 10, 20, 20, 25, 30, 40, 45, 50

SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION	
			Silty Brown Sand	4'
			Silty Gray Sand	10'
			Fine Brown Sand	15'
			Hard Silty Sand	18'
			Silty Stone	
			Wet	
			E.O.B.	38'

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SOIL BORING LOG

Site: Sherman
Project No.: 28
Date: 7/8/93

LOCATION: Sherman – Battle Creek, MI
BORING/WELL NO.: SB-9
CLIENT: Terra Environmental/City of Battle Creek
GROUND ELEV.: NA
DRILLER: Norm Jones
TOP OF CASING ELEV.: NA
HELPER:
STATIC WATER LEVEL: 16'
WEATHER: Partly Cloudy – Hot
DEVELOPMENT METHOD: Bailer

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				6" Asphalt
				Fine Brown Sand w/ Gravel
5				5'
				Silty Dark Brown Sand
10				10'
				Hard Silty Brown Clay
				12'
15				Hard Silty Grey Stone
	SS	SS		
20	WS	Bailer		E.O.B. 20'
25				
30				
35				
40				

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SOIL BORING LOG

Site: Sherman
Project No.: 28
Date: 7/8/93

LOCATION	Sherman – Battle Creek, MI	BORING/WELL NO.	SB–10
CLIENT	Terra Environmental/City of Battle Creek	GROUND ELEV.	NA
DRILLER	Norm Jones	TOP OF CASING ELEV.	NA
HELPER		STATIC WATER LEVEL	16'
WEATHER	Partly Cloudy – Hot	DEVELOPMENT METHOD	Bailer

DEPTH	SAMPLE	DRILL METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				4" Asphalt
				Fine Brown Sand
5				5'
				Dark Brown Sand w/ Trace of Gravel
10				Soft Silty Brown Clay
				12'
15				Hard Silty Grey Stone
	SS	SS		
				E.O.B.
				19'
20	WS	Bailer		
25				
30				
35				
40				

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SOIL BORING LOG

Site: Sherman
Project No.: 28
Date: 7/8/93

LOCATION	Sherman – Battle Creek, MI	BORING/WELL NO.	SB-11
CLIENT	Terra Environmental/City of Battle Creek	GROUND ELEV.	NA
DRILLER	Norm Jones	TOP OF CASING ELEV.	NA
HELPER		STATIC WATER LEVEL	16.5'
WEATHER	Partly Cloudy – Hot	DEVELOPMENT METHOD	Bailer

DEPTH: 0, 5, 10, 15, 20, 25, 30, 35, 40

SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION	
			6" Asphalt	
			Fine Brown Sand w/ Gravel	5'
			Silty Brown Sand w/ Trace of Gravel	11'
			Hard Silty Brown Clay	14'
SS	SS			
WS	Bailer		Hard Silty Stone	
			E.O.B.	22'

July 26,1993
92245L

Mr. Pat Taplin
Terra Environmental Corporation
P.O. Box 19160
Kalamazoo, MI 49019

RE: Project: Battle Creek-Sherman
Received 7/9/93

LABORATORY RESULTS

Soil Sample:	SB 9	SB 10
Depth	18-20'	18-20'
Lab Log #	2883	2884
Polynuclear Aromatic Hydrocarbons,ug/Kg		
Naphthalene	430	760
Acenaphthylene	ND*	ND
Acenaphthene	ND	ND
Fluorene	ND	ND
Phenanthrene	ND	ND
Anthracene	ND	ND
Flouranthene	ND	ND
Pyrene	ND	ND
Benzo(a)anthracene	ND	ND
Chrysene	ND	ND
Benzo(b)fluoranthene	ND	ND
Benzo(k)fluoranthene	ND	ND
Benzo(a)pyrene	ND	ND
Dibenzo(a,h)anthracene	ND	ND
Benzo(g,h,i)perylene	ND	ND
Indeno(1,23-cd)pyrene	ND	ND

ND*indicates none detected at or above the method detection limit of 330 ug/Kg

BTEX,ug/Kg		
Benzene	ND**	ND
Ethylbenzene	ND	ND
Toluene	ND	ND
m/p-Xylene	ND	ND
o-Xylene	ND	ND

ND**indicates none detected at or above the method detection limit of 10 ug/Kg

Terra- Battle Creek-Sherman
7/26/93
Page 2

Water Sample:	SB9	SB10	SB11
Lab Log #	2885	2886	2887
Polynuclear Aromatic Hydrocarbons,ug/L			
Naphthalene	ND*	ND	ND
Acenaphthylene	ND	ND	ND
Acenaphthene	7	ND	ND
Fluorene	41	ND	ND
Phenanthrene	115	ND	ND
Anthracene	ND	ND	ND
Flouranthene	ND	ND	ND
Pyrene	ND	ND	ND
Benzo(a)anthracene	ND	ND	ND
Chrysene	ND	ND	ND
Benzo(b)fluoranthene	ND	ND	ND
[illegible]	832	ND	ND
[illegible]	ND	ND	ND
Dibenzo(a,h)anthracene	ND	ND	ND
Benzo(g,h,i)perylene	ND	ND	ND
Indeno(1,23-cd)pyrene	ND	ND	ND

ND*indicates none detected at or above the method detection limit of 5 ug/L

BTEX,ug/L			
Benzene	ND**	ND	ND
Ethylbenzene	ND	ND	ND
Toluene	ND	ND	ND
m/p-Xylene	ND	ND	ND
o-Xylene	ND	ND	ND

ND**indicates none detected at or above the method detection limit of 1 ug/L

PREIN & NEWHOF
Environmental Laboratory

Robert Erickson
Laboratory Director

PREIN & NEWHOF, P.C.

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July 26,1993
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Chrysene	ND	ND
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Benzo(k)fluoranthene	ND	ND
Benzo(a)pyrene	ND	ND
Dibenzo(a,h)antracene	ND	ND
Benzo(g,h,I)perylene	ND	ND
Indeno(1,23-cd)pyrene	ND	ND

ND*indicates none detected at or above the method detection limit of 330 ug/Kg

BTEX,ug/Kg		
Benzene	ND**	ND
Ethylbenzene	ND	ND
Toluene	ND	ND
m/p-Xylene	ND	ND
o-Xylene	ND	ND

ND**indicates none detected at or above the method detection limit of 10 ug/Kg

Terra- Battle Creek-Sherman
7/26/93
Page 2

Water Sample:	SB9	SB10	SB11
Lab Log #	2885	2886	2887

Polynuclear Aromatic Hydrocarbons,ug/L

Naphthalene	ND*	ND	ND
Acenaphthylene	ND	ND	ND
Acenaphthene	7	ND	ND
Fluorene	41	ND	ND
Phenanthrene	115	ND	ND
Anthracene	ND	ND	ND
Flouranthene	ND	ND	ND
Pyrene	ND	ND	ND
Benzo(a)anthracene	ND	ND	ND
Chrysene	ND	ND	ND
Benzo(b)fluoranthene	ND	ND	ND
Benzo(k)fluoranthene	632	ND	ND
Benzo(a)pyrene	ND	ND	ND
Dibenzo(a,h)antracene	ND	ND	ND
Benzo(g,h,l)perylene	ND	ND	ND
Indeno(1,23-cd)pyrene	ND	ND	ND

ND*indicates none detected at or above the method detection limit of 5 ug/L

BTEX,ug/L

Benzene	ND**	ND	ND
Ethylbenzene	ND	ND	ND
Toluene	ND	ND	ND
m/p-Xylene	ND	ND	ND
o-Xylene	ND	ND	ND

ND**indicates none detected at or above the method detection limit of 1 ug/L

PREIN & NEWHOF
Environmental Laboratory

Robert Erickson
Laboratory Director

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CHAIN OF CUSTODY

CLIENT: TERRA ENVIRONMENTAL / CITY B.C. PROJECT NAME: BATTLE CREEK SHERMAN PROJECT NO:

SAMPLING PERSONNEL: LISA HARRIGER SAMPLING SITE

	DATE	TIME	SAMPLE ID/DESCRIPTION	TYPE	COMP.	GRAB	NO. OF CONTAINERS	PARAMETERS	REMARKS
183	7/8/93	12 NOON	SB9 18'-20'	Soil		X	2	PNA, BTEX	
185	7/8/93	12 NOON	SB9	Wtr		X	3	PNA, BTEX	
184	7/8/93	4:30pm	SB10 18'-20'	Soil		X	2	PNA, BTEX	
186	7/8/93	4:30pm	SB10	Wtr		X	3	PNA, BTEX	
187	7/8/93	6:00pm	SB11	Wtr		X	3	PNA, BTEX	

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
Lisa Harriger	7/9/93	4:10pm									
Relinquished by: (Signature)	**Date:**	**Time:**	**Received by: (Signature)**	**Date:**	**Time:**	**Method of Shipment:**			**Bill of Lading:**		
№ 007862	**Received for Laboratory by: (Signature)**		**Date:**	**Time:**		**Data Package Relinquished by Lab:**	**Date:**	**Time:**	**Data Received by: (Signature)**	**Date:**	**Time:**
	Jane Hock		7/9/93	4PM			7/9/93	4:00P			

WHITE copy to be Returned with Data Package YELLOW copy to Laboratory PINK copy to Field File / Project Documentation

CITY OF BATTLE CREEK

HEBBLE PROPERTY

SITE INVESTIGATION REPORT

JUNE 8, 1993

Prepared for:

The City of Battle Creek
102 East Michigan Avenue
Battle Creek, Michigan 49017

Global Environmental Engineering Inc.

Terra Environmental Corporation

CITY OF BATTLE CREEK

HEBBLE PROPERTY

SITE INVESTIGATION REPORT

June 8, 1993

Prepared for:

The City of Battle Creek
102 East Michigan Ave.
Battle Creek, Michigan 49017

Prepared by:

Global Environmental Engineering, Inc.
2640 Aero Park Drive
Traverse City, Michigan 49684

and

Terra Environmental Corporation
5100 West Michigan Avenue
Kalamazoo, Michigan 49007

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INTRODUCTION

As a result of the reported underground storage tank (UST) release at the Hebble site owned by the City of Battle Creek and located at 123 - 151 W. Michigan Avenue, Battle Creek, Michigan (Figure 1), a site investigation to determine the presence and extent of soil and ground water contamination has been conducted. The investigation was completed in accordance with the recommendations included in the 45-Day Remedial Investigation Work Plan prepared by Terra Environmental Corporation dated January 22, 1993. Field work was conducted from March 29 to 31, 1993.

The following report chronicles site activities, describes the investigative approach. documents drilling, sampling, and analytical methodologies, presents hydrogeologic and analytical data, provides data interpretation, and proposes initial corrective action.

BACKGROUND

The Hebble site is a triangular-shaped parcel located on the south side of West Michigan Avenue along the west shore of the Battle Creek (Figure 1). The property is bounded on the west by the former Gallagher Laundry, an industrial uniform service.

Triple D Auto Parts was formerly located at the site. Among other activities, Triple D conducted battery recycling on the property.

Seven underground storage tanks located on the east side of the property approximately 25 feet from the river's edge were discovered during site demolition. The number and capacities of the tanks were two 1,000-gallon, two 500-gallon, and three 200-gallon. All tanks were constructed of steel. One 1,000-gallon, one 500-gallon, and the three 200-gallon tanks were vertical suggesting that they were used to store materials other than fuel. Since tank contents and historical uses were unknown, samples were collected and analyzed for benzene, toluene, ethylbenzene and xylene (BTEX), polynuclear aromatic compounds (PNA), polychlorinated biphenyl (PCB) and total organic halogens (TOX). The tanks were removed and a release was confirmed on December 10, 1992 based on odors emanating from the excavation.

Analytical results from ground water and soil samples collected at the time of tank removal indicated the presence of BTEX and PNAs while samples of tank residues indicated that halogenated hydrocarbons were present. No PCBs were detected.

The site is currently vacant and the ground is bare with some sparse weed growth. The excavation from the tank removal remains open and is approximately ten feet deep. A sanitary sewer, approximately four feet in diameter, bounds the excavation on the east side and separates the excavation from the river. The property is secured by a chain link fence and locked gate.

INVESTIGATIVE APPROACH

The investigation was designed to determine the direction of ground water flow and to define the limits of soil and ground water contamination. To fulfill these goals, three temporary ground water wells were installed on March 29, 1993 to determine ground water flow. These wells were placed at the three corners of the property. Casing top elevations and static water levels were measured to determine ground water flow. MW-1 was sampled and removed on March 31. MW-2 was also removed on March 31. MW-3 was sampled and permanently completed with a flush mount protective cover.

After ground water flow was determined, eight auger borings were placed around and down gradient from the tank excavation to sample soil and ground water (Figure 2). As contamination was encountered, subsequent borings were placed farther away from the excavation. Borings were spaced approximately 20 to 40 feet radially away from the excavation and down gradient. Borings SB-4, SB-6, and SB-7 were placed along the sewer line transecting the property to determine if it serves as a conduit for contaminant migration.

Five additional borings (SB-9 through SB-13) were drilled in areas of the site believed unaffected by the UST release for collection of soil samples to determine background concentrations of cadmium, chromium, and lead.

Soil samples were collected from three to five and eight to ten feet. Ground water samples

were collected every ten feet from the water table at approximately ten feet until obvious ground water contamination was no longer detected.

No soil was recovered while sampling SB-4 and SB-5 from eight to ten feet, or during sampling of SB-7 from three to five feet and eight to ten feet.

Because the contamination was from a system containing unknown constituents, the investigation targeted a wide range of compounds. Samples were analyzed for BTEX, PNAs, volatile halocarbons, cadmium, chromium, and lead.

Ground water samples for dissolved metals analysis could not be collected from SB-4, SB-5 at 9 to 14 feet and 19 to 24 feet, SB-7, SB-8, MW-1 or MW-3 since high silt content prevented field-filtering the samples.

METHODOLOGY

Established and accepted procedures were followed throughout the investigation and were consistently applied.

Drilling and Sampling Procedure

Drilling was conducted using a Mobile B-57 auger drilling rig equipped with 4 1/4-inch inside diameter hollow-stem augers. The lead five-foot section was screened to allow ground

water sampling while drilling. Rubber "o" rings were used to seal the connection between each five-foot auger section. Between each boring, the augers were decontaminated using a steam cleaner to prevent cross-contamination.

Soil samples were collected at five-foot intervals from three feet to the water table using a stainless steel split spoon sampler connected to the bottom of a 140-pound down hole hammer. The boring was advanced to the top of the desired sample interval and the hammer and split spoon sampler were lowered by the rig's speed line cable through the hollow augers and through the opening on the bit at the bottom of the augers. The spilt spoon sampler was driven approximately 18 to 24 inches to collect the sample. When the bottom of the sample interval was reached or when the sampler could be advanced no further, the hammer and sampler were retrieved.

The split spoon sampler was opened and the soil was classified, screened for the obvious presence of contamination and immediately containerized for laboratory analysis. Soil samples were collected in wide-mouth glass jars and sealed with teflon-lined caps.

Ground water sampling was accomplished by advancing the augers to the bottom of the desired sample interval allowing ground water entry into the auger stem through the screened auger. Prior to sampling, a minimum of three auger volumes of ground water were purged from the augers with a ten-foot long, two-inch diameter bailer to promote entry

of water from the desired sample depth, to prevent cross contamination, and to remove silt and fines. After the augers were sufficiently purged, a clear plastic bailer was lowered on a 1/8-inch diameter nylon rope into the augers and the sample was retrieved. The water was immediately containerized and placed in coolers awaiting laboratory analysis. Two 40 ml VOA vials with a septa-lined cap were filled for BTEX analysis. PNA samples were collected in one-liter amber bottles and samples for dissolved cadmium, chromium, and lead analysis were immediately field-filtered through a .45 micron filter and placed in a 500 ml plastic bottle preserved with nitric acid..

The bailers and split spoon samplers were steam cleaned between uses to prevent cross-contamination. New nylon rope was attached to the bailer before collecting each sample.

Monitor Well Construction

The three monitor wells were constructed of two-inch diameter PVC flush joint threaded casing and five foot long PVC screens. The wells were set through the hollow stem augers with the screens placed at the water table. MW-3, which was completed as a permanent well, was grouted with bentonite chips from one foot above the screen to one foot below the ground surface. The top of the casing and flush mount cover were grouted with concrete.

Analytical Methods

All samples collected were analyzed by MDNR-approved and EPA-established methods as specified in MERA Operational Memorandum #6, Revision #2 and supplements. All samples were analyzed for BTEX, PNAs, cadmium, chromium, and lead. Method numbers and analytical detection limits are summarized below.

Analyte	Method	Method Description	Method Detection Level	
			Water, µg/l	Soil, µg/kg
BTEX	602/8020	GC/PID	1	5
PNA	8310	HPLC	5	250
Halocarbons	601/8010	GC/ECD	1	5
Lead	239.2/7421	AA/GF	1	100
Cadmium	213.2/7131A	AA/GF	.2	20
Chromium	218.2/7191	AA/GF	1	50

Samples were analyzed by Prein Newhoff Analytical Laboratory in Grand Rapids.

Upon collection, all samples were labeled, registered on a chain of custody form and placed

in an ice-filled cooler until delivery to the laboratory. Laboratory reports and chain of custody forms are included in Appendix B.

After collecting and containerizing the soil samples for laboratory analysis a separate aliquot of soil from each split spoon sample was placed in a zip-lock bag for field screening. The samples were warmed by the truck heater to promote volatilization, then screened by inserting the wand of an HNu meter into the bag to detect contaminant vapors. The results were recorded and the investigation continued.

RESULTS

The site geology consisted of brown silty sand mixed with rubble and fill material from the ground surface to approximately ten feet below grade. Soil from ten feet consisted of silty sand with traces of gravel across the site to depths of 25 feet. The silt was underlain by medium tan sand to a depth of 54 feet in SB-1. Boring SB-3 encountered a soft clay at 50 feet after drilling through 20 feet of medium sand. Stratigraphic cross sections of the investigation area are presented in Figures 3 and 4. The boring and well logs in Appendix A detail the geology encountered in each boring.

Based on static water levels measured in the monitor wells twice during the day on March 30, the ground water beneath the site flows south 60° west. Table 1 summarizes static water levels and water table elevations.

Tables 2, 3, and 4 summarize detected contaminant concentrations in soil and ground water and compare the results to selected Type B criteria. Laboratory reports are included in Appendix B.

Except for samples collected from SB-2 at eight to ten feet and from SB-4 at three to five feet, all soil samples had detectable amounts of at least one of the targeted organic compounds (PNAs, BTEX, and volatile halocarbons). However, concentrations of these compounds above Type B levels were limited. The boundaries of Type B contamination are shown on Figure 5.

The soil sample from boring SB-1 at three to five feet was the only soil sample with volatile halocarbons exceeding Type B levels. SB-6 at three to five feet with 76 μg/kg of benzene was the only soil sample with a BTEX compound detected above Type B. PNAs were more widespread, with concentrations exceeding Type B standards in SB-1, SB-2, SB-3, SB-5, and SB-6 at varying depths. A maximum total PNA concentration of 768,600 μg/kg was detected in SB-6 at three to five feet. That concentration dropped to 15,580 μg/kg at eight to ten feet. No odor was detected in these samples, but coal fragments were visible.

Organic compound contamination above Type B levels in ground water samples was confined to 106 μg/l of benzo (a) anthracene and/or chrysene (the chromatogram peaks coeluted) in SB-5 at 19-24 feet and benzene ranging from 1 to 4 μg/l in SB-4 from 10 to 15

feet, SB-5 from 9 to 14 and 19 to 24 feet.

Dissolved lead was the only metal detected in ground water above Type B standards. SB-6 from 19 to 24 feet contained 5 $\mu g/l$ of dissolved lead.

Concentrations of cadmium and lead above Type B standards for ground water protection were found in all soil samples. Background soil samples were collected from three to five feet and eight to ten feet. These sample depths represent the two soil types encountered in the unsaturated zone across the site.

Background values calculated according to the Draft MDNR Cleanup Verification Guidance Document, Part 2, November 1991 are presented in Table 2. Variability for lead at three to five feet and eight to ten feet was too great to establish a reliable background value in these soil types.

Chromium was not detected at concentrations above Type B levels.

CONCLUSIONS AND RECOMMENDATIONS

Contamination from the former underground storage tanks appears minimal and has affected only a small area immediately around the excavation. The sewer line transecting the property has not affected contaminant migration.

Organic contamination in soils beneath the site appears widespread but is generally confined to the top three to five feet of fill material. The high concentrations of PNAs in soils at SB-6, the observation of coal fragments in the samples and the isolated occurrence of PNAs in the ground water at SB-5 suggest that the PNAs are immobile. The BTEX and PNAs in ground water that exceed Type B levels were found in borings hydrologically up gradient from the former tank location.

Metals contamination in the soils is excessive and may be characteristic of the fill material present across the site. The concentrations of dissolved lead, chromium, and cadmium in the ground water indicate that ground water quality has not been impacted. The risk posed by the high metals concentrations in the soil samples, however, should be evaluated by performing a TCLP analysis on the samples with the highest concentrations of each metal. This will establish site-specific Type B standards. Lead concentrations in two samples, SB-1 at three to five feet and SB-10 at three to five feet, exceeded the Type B direct contact limit of 400,000 μg/kg. These areas will require remediation.

The limited ground water contamination can be addressed by installation of a ground water purge system placed near SB-4 and 5.

The PNA, halocarbon, benzene and high lead concentrations detected in soil may require excavation and off-site treatment.

The following three action items are recommended:

1. Prepare a corrective action plan to address ground water contamination.

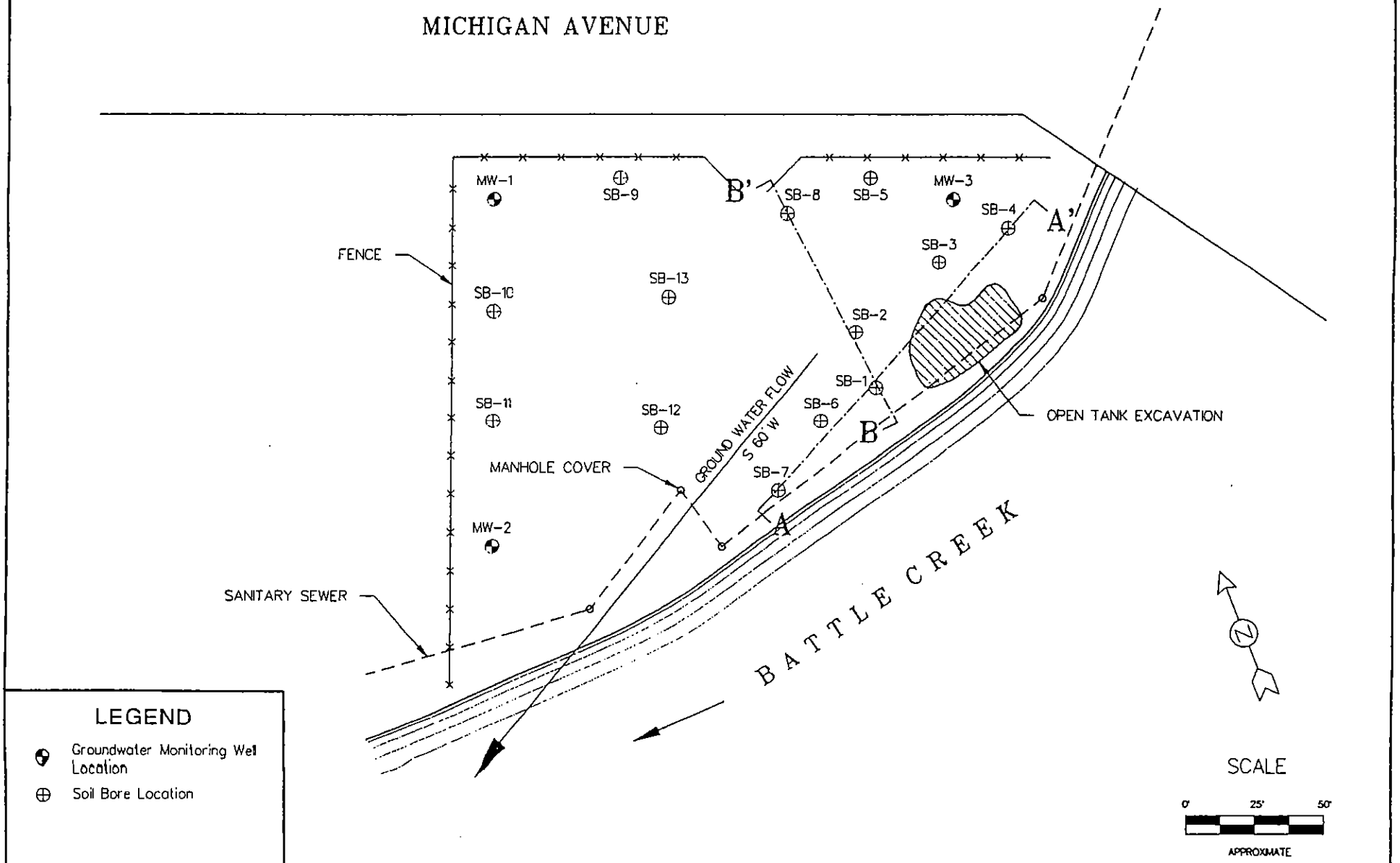
2. Conduct TCLP lead and cadmium test.

3. Evaluate the need for soil remediation based on the TCLP results and organic contamination.

Table 1.
Water Table Measurements
3/30/93

Monitor Well	Top of Casing Elevation	Time	Static Water Level (ft)	Water Table Elevation (ft)
MW-1	100.00	8:05 18:55	12.41 12.39	87.59 87.61
MW-2	99.78	8:05 18:55	12.36 12.40	87.42 87.38
MW-3	96.49	8:05 18:55	8.70 8.72	87.79 87.77

DRAWING #:	DATE:
024-1001	6/1/93



LEGEND

- Groundwater Monitoring Well Location
- Soil Bore Location

Global Environmental Engineering Inc.

Figure 2

SITE SKETCH

City of Battle Creek
Hebble Site
Battle Creek, MI

TABLE 2.

DETECTED VOCs AND METALS IN SOIL

Boring I.D.	Date	Depth (ft)	Concentration µg/kg										
			Chloroform	1,2-Dichloro-ethane	Tetra-chloro-ethene	1,1,1-Trichloroethane	Benzene	Ethylbenzene	Toluene	Xylene	Cadmium	Chromium	Lead
SB-1	3/29/93	3-5	ND	ND	74	21	15	75	330	ND	**16,200**	28,300	**1,112,000**
		8-10	ND	ND	ND	10	ND	ND	31	ND	395	28,900	**201,000**
SB-2	3/30/93	3-5	ND	ND	ND	ND	ND	ND	15	ND	272	13,600	**22,900**
		8-10	ND	ND	ND	ND	ND	ND	ND	ND	57	30,500	**2,380**
SB-3	3/30/93	3-5	ND	ND	ND	ND	ND	ND	ND	ND	490	17,100	**12,600**
		8-10	ND	ND	ND	ND	ND	ND	13	ND	135	37,600	**5,920**
SB-4	3/30/93	3-5	ND	ND	ND	ND	ND	ND	ND	ND	439	15,400	**12,400**
SB-5	3/30/93	3-5	ND	ND	ND	14	ND	ND	ND	ND	**860**	15,400	**50,700**
SB-6	3/31/93	3-5	37	**11**	ND	44	**76**	300	1,400	2,170	**2140**	17,200	**171,000**
		8-10	18	ND	ND	12	ND	ND	42	32	**1710**	29,600	**112,000**
SB-8	3/31/93	3-5	ND	ND	ND	49	ND	ND	27	83	134	44,400	**3,460**
BACKGROUND METALS SAMPLES													
SB-9	3/31/93	3-5									2320	51,500	191,000
		8-10									120	47,900	5,460
SB-10	3/31/93	3-5									654	49,100	4,384,000
		8-10									297	80,000	2,390
SB-11	3/31/93	3-5									310	62,900	5,350
		8-10									135	13,000	4,580
SB-12	3/31/93	3-5									416	64,800	8,360
		8-10									196	15,800	69,100
SB-13	3/31/93	5-7									377	69,700	69,900
		8-10									487	5,980	59,600
P. A. 307 Standards			120	8	14	4,000	20	1,400	16,000	6,000	80*	140,000*	80*
Calculated Background Metals Concentration (3 to 5 feet / 8 to 10 feet)											886/427	NOT APPLICABLE	TOO VARIABLE

ND - Compound not detected

Values in bold indicate concentrations exceeding P.A.307 Type B standards

* Values protective of ground water

TABLE 3.

DETECTED PNAs IN SOIL

Boring I.D.	Date	Depth (ft)	Concentration µg/kg									
			Acenaphthene	Acenaphthylene	Benzo(a)anthracene & chrysene	Benzo(a)pyrene & Dibenzo(a,h) anthracene	Benzo(b,k) fluoranthene	Indeno(1,2,3-cd) pyrene	Fluorene	Naphthalene	Phenanthrene	Pyrene
SB-1	3/29/93	3-5	ND	**5,300**	ND	ND	**3,400**	ND	ND	ND	ND	ND
		8-10	ND	ND	**840**	**670**	ND	ND	320	ND	ND	**770**
SB-2	3/30/93	3-5	ND	**4,400**	**720**	**530**	ND	ND	340	ND	ND	ND
		8-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-3	3/30/93	3-5	ND	ND	ND	ND	**470**	ND	ND	ND	ND	**480**
		8-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-4	3/30/93	3-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB-5	3/30/93	3-5	ND	**330**	**290**	**300**	**720**	ND	ND	ND	ND	ND
SB-6	3/31/93	3-5	**190,000**	ND	**109,000**	**80,300**	ND	**52,100**	**33,900**	**69,800**	**69,500**	**164,000**
		8-10	ND	**4,200**	**2,000**	**1,800**	**4,700**	**380**	ND	**2,500**	ND	ND
SB-8	3/31/93	3-5	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
P.A. 307 Standards			8,000	330 (MDL)	330 (MDL)	330 (MDL)	330 (MDL)	330 (MDL)	6,000	600	330 (MDL)	4,000

ND - Compound not detected

Values in **bold** indicate concentrations exceeding P.A. 307 Type B standards.

TABLE 4. DETECTED VOCs, PNAs AND METALS IN GROUND WATER

Boring I.D.	Date	Depth (ft)	Concentration µg/l								
			Benzo(a)anthracene & Chrysene	Anthracene	Fluoranthene	Pyrene	Benzene	Toluene	Cadmium	Chromium	Lead
SB-1	3/29/93	9-14	ND	ND	ND	ND	ND	8	.4	5	**
		19-24	ND	ND	ND	ND	ND	13	*	2	**
		29-34	ND	ND	ND	ND	ND	18	*	2	1
		39-44	ND	ND	ND	ND	ND	2	*	**	**
		49-54	ND	ND	ND	ND	ND	18	*	3	3
SB-2	3/30/93	9-14	ND	ND	ND	ND	ND	1	.3	2	**
		19-24	ND	ND	ND	ND	ND	ND	*	2	**
SB-3	3/30/93	9-14	ND	ND	27	26	ND	2	*	2	**
		19-24	ND	ND	ND	ND	ND	ND	*	**	**
		29-34	ND	ND	ND	ND	ND	4	*	2	**
		39-44	ND	ND	ND	ND	ND	2	*	**	**
SB-4	3/30/93	10-15	ND	ND	ND	ND	1	4	NS	NS	NS
		19-24	ND	ND	ND	ND	ND	2	NS	NS	NS
SB-5	3/30/93	9-14	ND	ND	ND	ND	4	4	NS	NS	NS
		19-24	**106**	13	ND	143	1	18	NS	NS	NS
		29-34	ND	ND	ND	ND	ND	2	*	1	**
		39-44	ND	ND	ND	ND	ND	3	*	**	**
SB-6	3/31/93	9-14	ND	ND	ND	ND	ND	7	*	30	**
		19-24	ND	ND	ND	ND	ND	4	*	1	5
SB-7	3/31/93	9-14	ND	ND	ND	ND	ND	6	NS	NS	NS
SB-8	3/31/93	14-19	ND	ND	ND	ND	ND	3	NS	NS	NS
MW-1	3/31/93	NA	ND	ND	ND	ND	ND	8	NS	NS	NS
MW-3	3/31/93	NA	ND	ND	ND	ND	ND	9	NS	NS	NS
P.A. 307 Standards			5 (MDL)	2,000	300	200	1	1,000	4	100	4

* - Less than MDL of .2 µg/l
** - Less than MDL of 1 µg/l
ND - Compound not detected
NS - No sample collected because of sediment
Values in bold indicate concentrations exceeding P.A. 307 Type B standards.

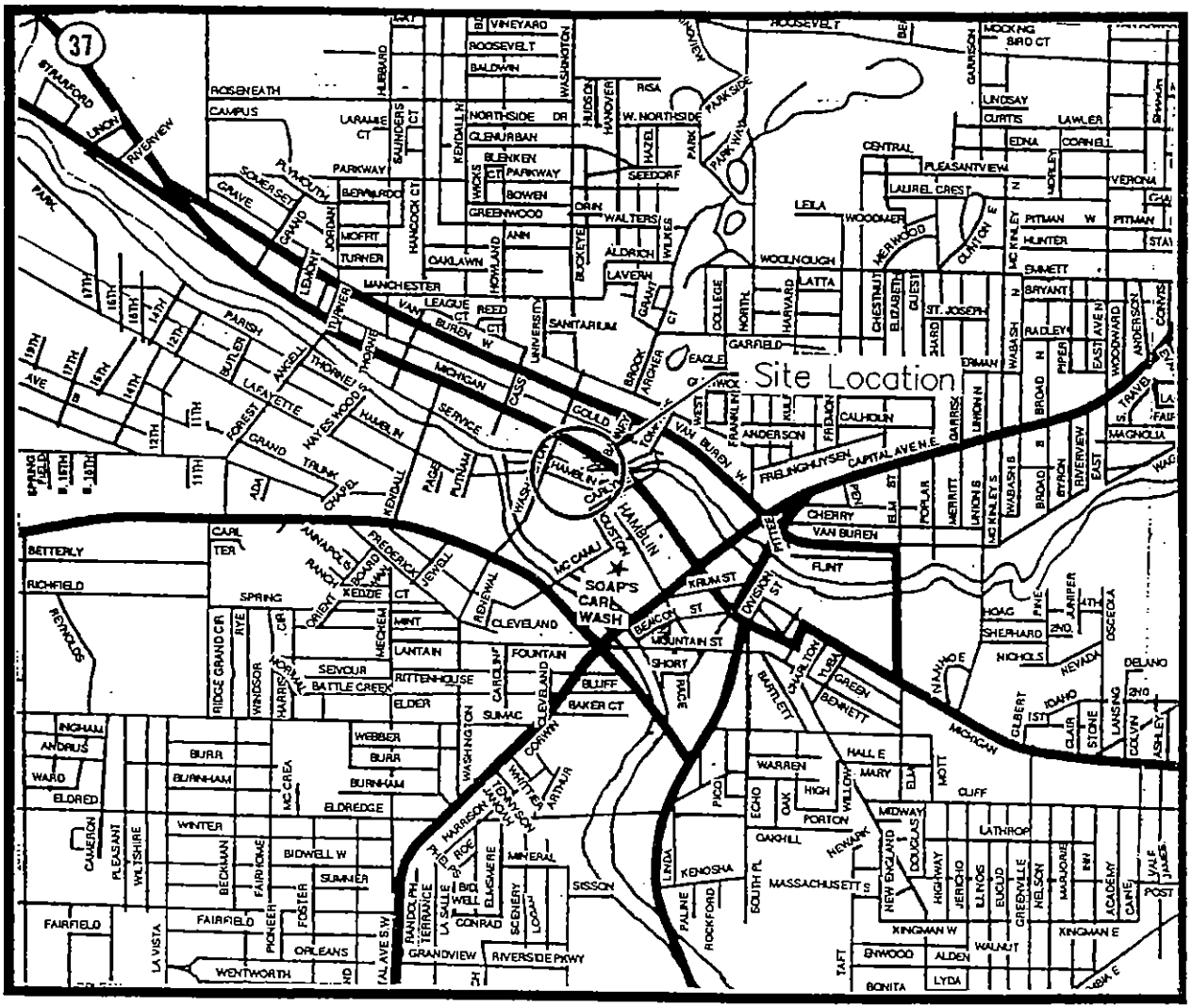
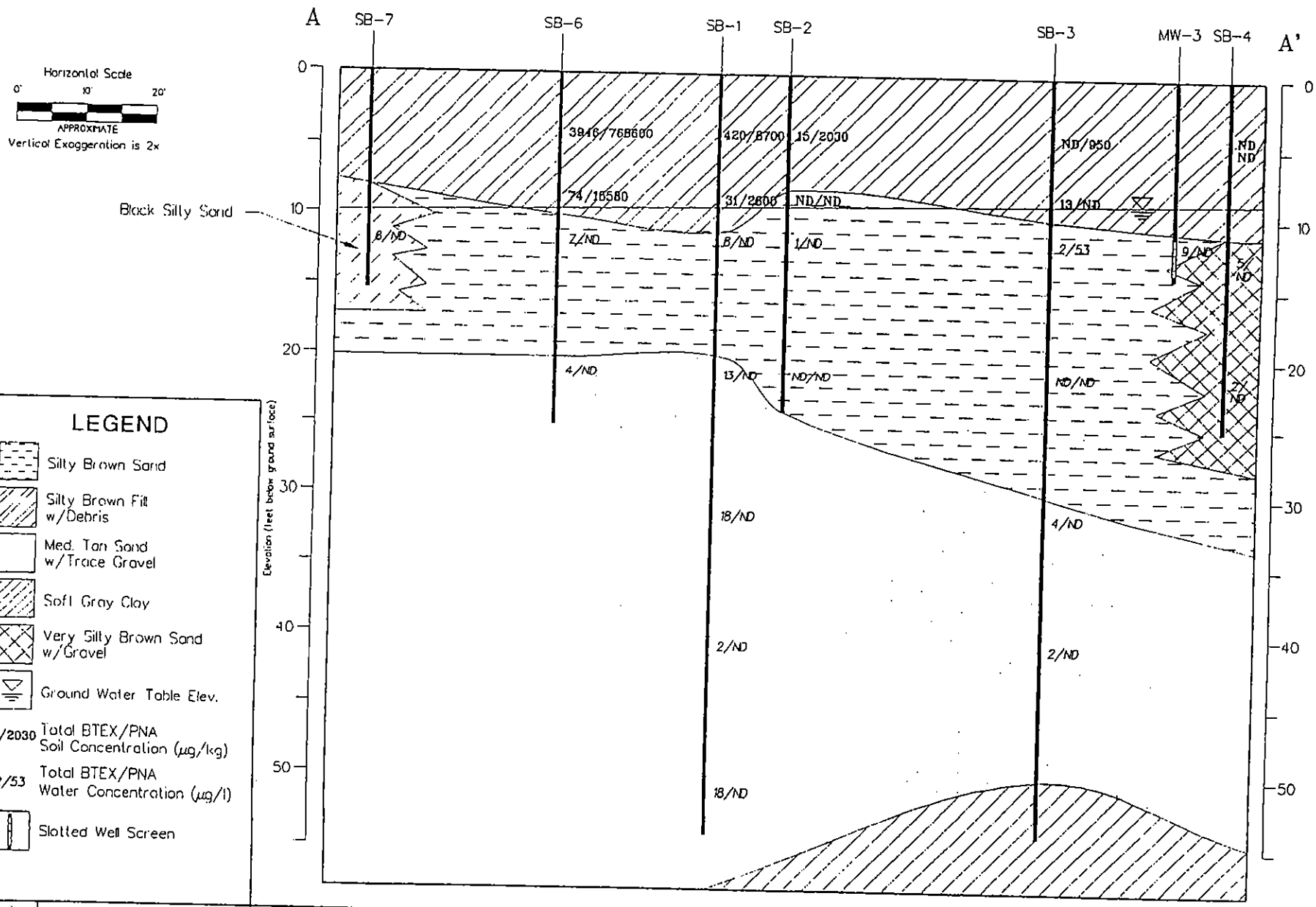


Figure 1

SITE LOCATION MAP

City of Battle Creek
Hebble Site
Battle Creek, Michigan

DRA #:	DATE:
024-1002	6/1/93



LEGEND

- Silty Brown Sand
- Silty Brown Fill w/Debris
- Med. Tan Sand w/Trace Gravel
- Soft Gray Clay
- Very Silty Brown Sand w/Gravel
- Ground Water Table Elev.
- 15/2030 Total BTEX/PNA Soil Concentration (µg/kg)
- 2/53 Total BTEX/PNA Water Concentration (µg/l)
- Slotted Well Screen

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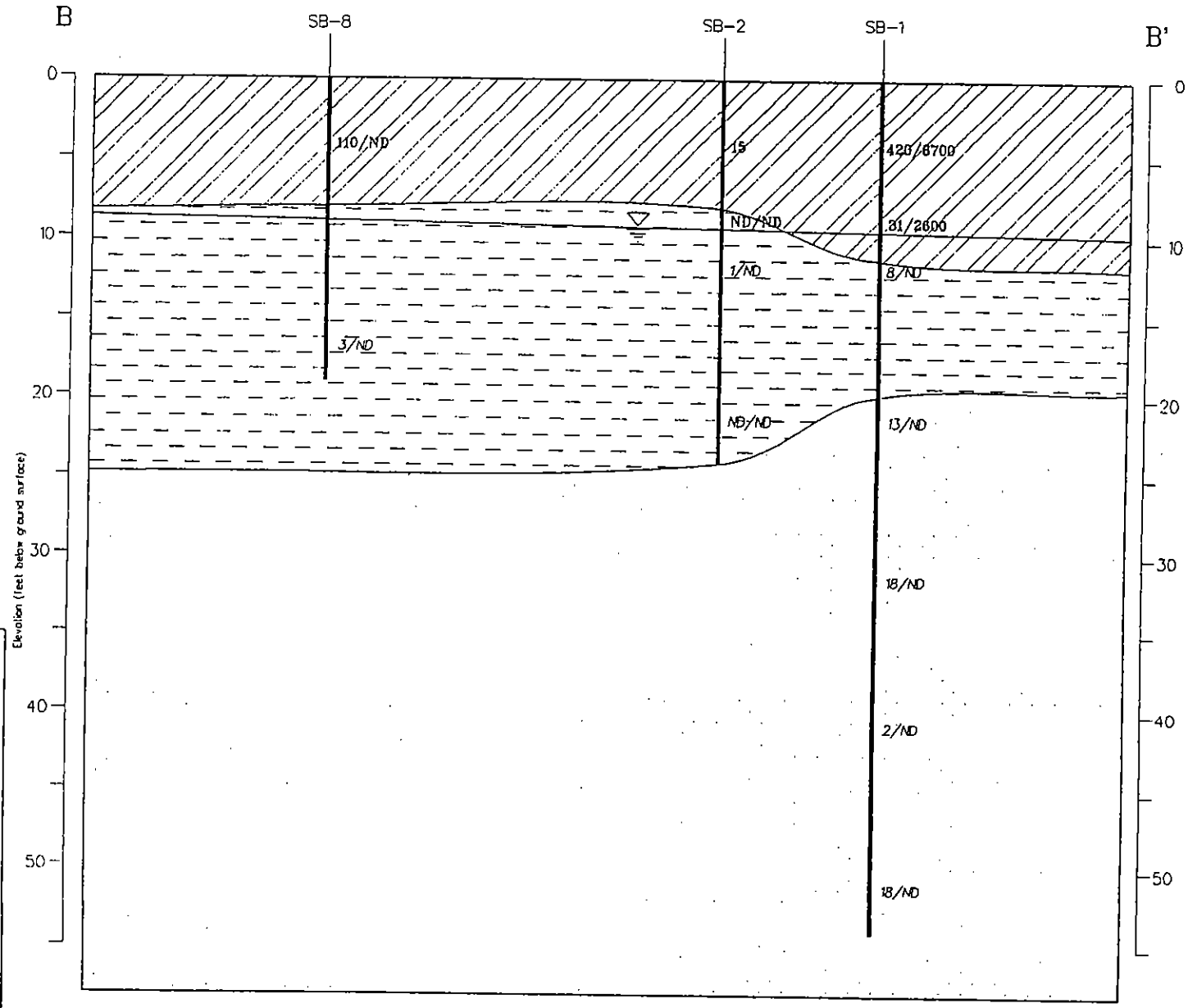
Figure 3

Vertical Profile A–A'

City of Battle Creek
Hebble Site
Battle Creek, MI

DRAWING #:	DATE:
024-1003	6/1/93



LEGEND

- Silty Brown Sand
- Silty Brown Fill w/Debris
- Med. Tan Sand w/Trace Gravel
- Ground Water Table Elev.
- 15/2030 Total BTEX/PNA Soil Concentration (µg/kg)
- 2/53 Total BTEX/PNA Water Concentration (µg/l)

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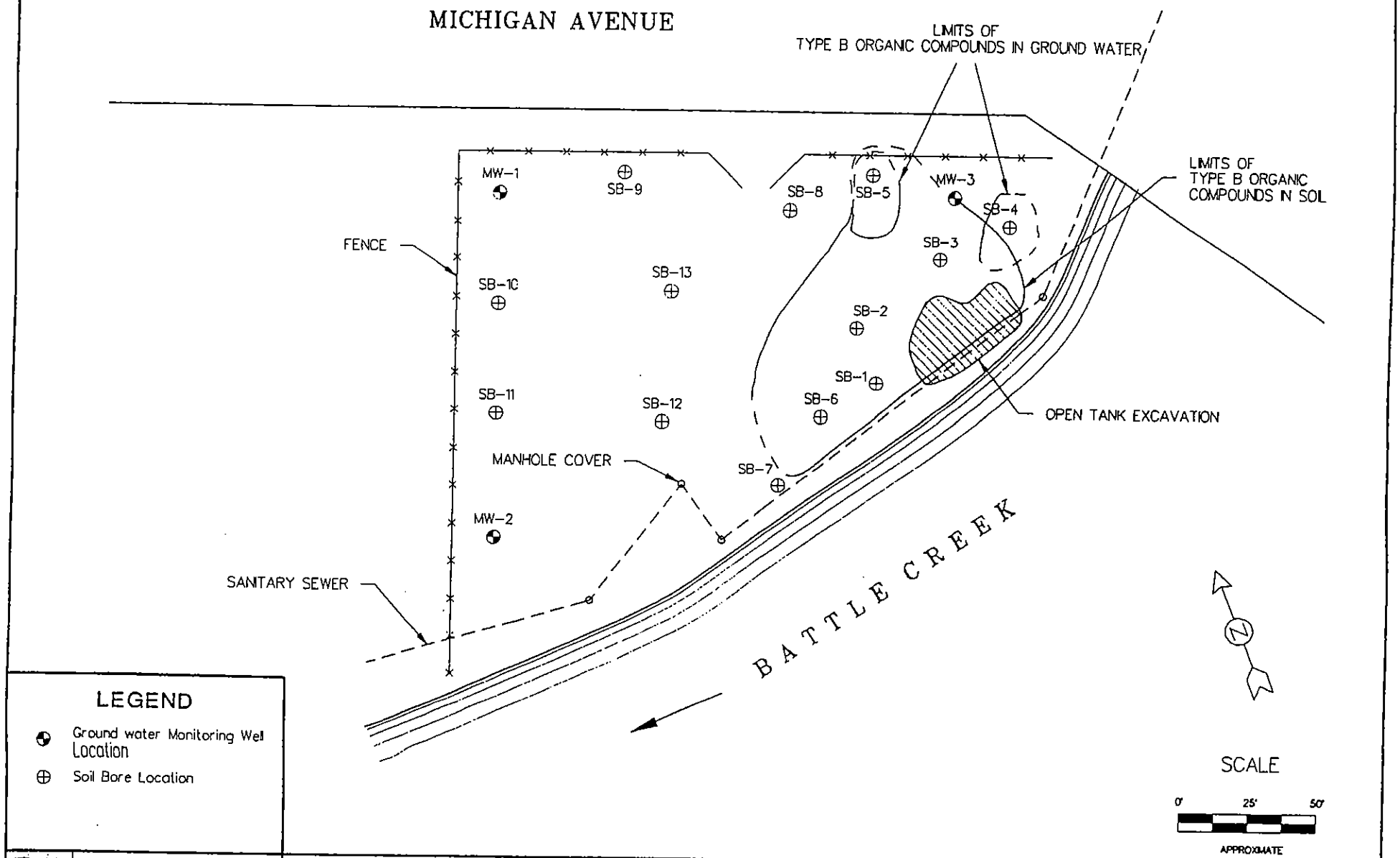
Figure 4

Vertical Profile B–B'

City of Battle Creek
Hebble Site
Battle Creek, MI

DRAWING #:	DATE:
024-1004	6/1/93



LEGEND

- Ground water Monitoring Well Location
- Soil Bore Location

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Figure 5

TYPE B CONTAMINANT BOUNDARIES

City of Battle Creek
Hebble Site
Battle Creek, MI

APPENDIX A

Global Environmental Engineering Inc.

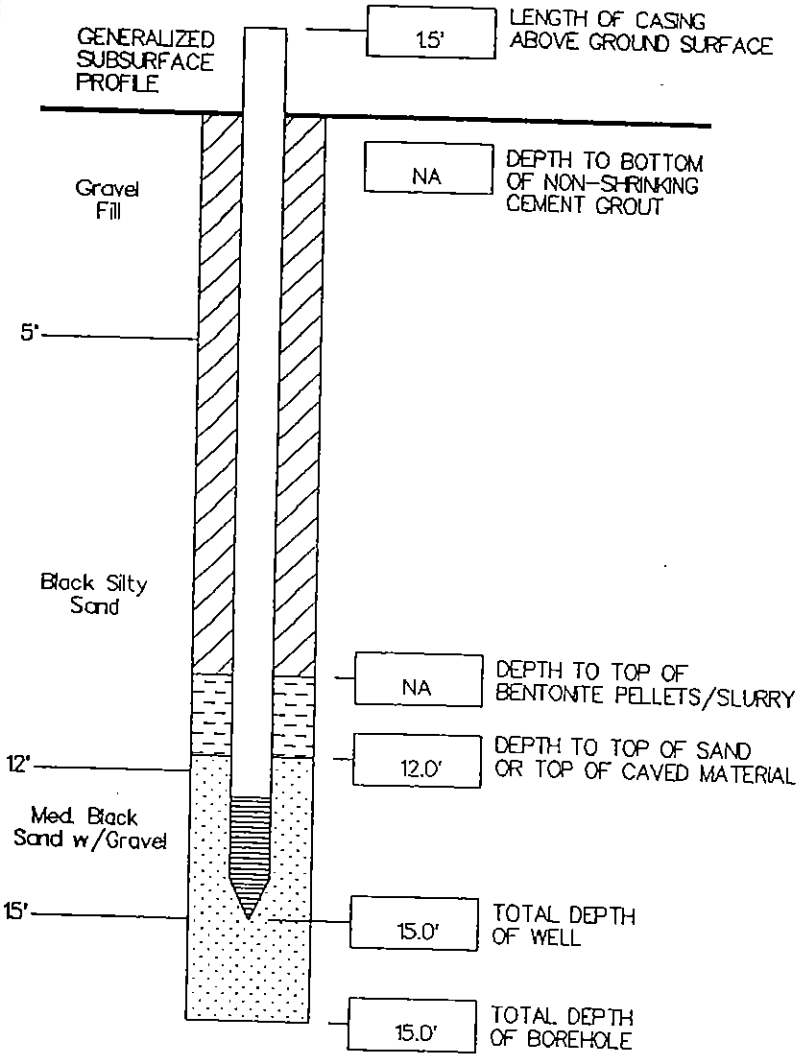
2640 Aero Park Drive • Traverse City, MI 49684

LOG OF WELL INSTALLATION

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/29/93

WELL NUMBER: MW-1

INSTALLATION DATE: 3/29/93



TOP OF CASING ELEVATION: 100.00

GROUND SURFACE ELEVATION:

WELL SCREEN TIP ELEVATION:

WELL CASING
- DIAMETER: 2"
- TOTAL LENGTH: 10.0'
- MATERIAL: PVC
- CAP?: Yes

WELL SCREEN
- DIAMETER: 2"
- LENGTH: 5'
- SLOT: 10
- MATERIAL: PVC
- SCREEN PLUG?: Point

PROTECTIVE CASING
- MATERIAL:
- DIAMETER:
- LENGTH:
- LENGTH ABOVE GROUND:
- LOCK?:

DRILLER: Norm Jones
EQUIPMENT: B-57

WATER LEVEL DATA

DATUM: TOC

DATE	WATER LEVEL
3/30/93	12.41
3/31/93	12.39

NOTES:

Well Removed 3/31/93

BAGS OF SAND USED: 0

BAGS OF CEMENT USED: 0

BAGS OF BENTONITE USED: 0

DEPTH TO FIRST COUPLING: –

OTHER MATERIALS USED: 2" Locking Cap

Global Environmental Engineering Inc.

2640 Aero Park Drive - Traverse City, MI 49684

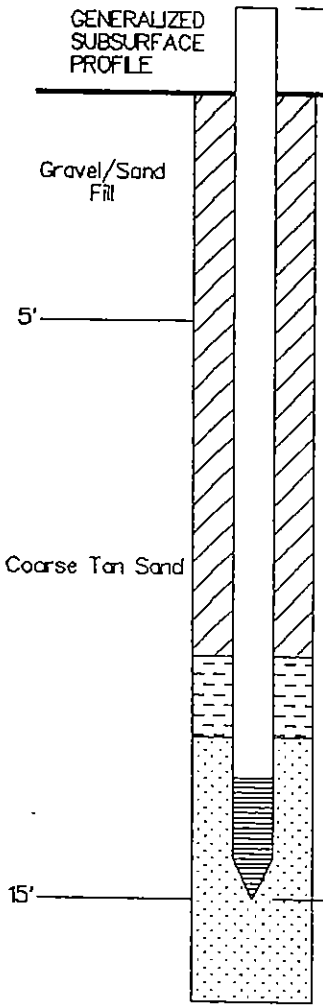
LOG OF WELL INSTALLATION

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/29/93

WELL NUMBER: MW-2

INSTALLATION DATE: 3/29/93

GENERALIZED SUBSURFACE PROFILE



3.0'	LENGTH OF CASING ABOVE GROUND SURFACE
NA	DEPTH TO BOTTOM OF NON-SHRINKING CEMENT GROUT
NA	DEPTH TO TOP OF BENTONITE PELLETS/SLURRY
11.0'	DEPTH TO TOP OF SAND OR TOP OF CAVED MATERIAL
15.0'	TOTAL DEPTH OF WELL
15.0'	TOTAL DEPTH OF BOREHOLE

TOP OF CASING ELEVATION:	99.78
GROUND SURFACE ELEVATION:	
WELL SCREEN TIP ELEVATION:	

WELL CASING	DIAMETER:	2"
	TOTAL LENGTH:	10.0'
	MATERIAL:	PVC
	CAP?:	Yes
WELL SCREEN	DIAMETER:	2"
	LENGTH:	5'
	SLOT:	10
	MATERIAL:	PVC
	SCREEN PLUG?:	Yes
PROTECTIVE CASING	MATERIAL:	
	DIAMETER:	
	LENGTH:	
	LENGTH ABOVE GROUND:	
	LOCK?:	

DRILLER: Norm Jones
EQUIPMENT: B-57

WATER LEVEL DATA

DATUM: TOC

DATE	WATER LEVEL
3/30/93	12.36
3/31/93	12.40

NOTES:

Well Removed 3/31/93

BAGS OF SAND USED:
BAGS OF CEMENT USED:
BAGS OF BENTONITE USED:
DEPTH TO FIRST COUPLING:
OTHER MATERIALS USED: 2" Locking Cap

Global Environmental Engineering Inc.

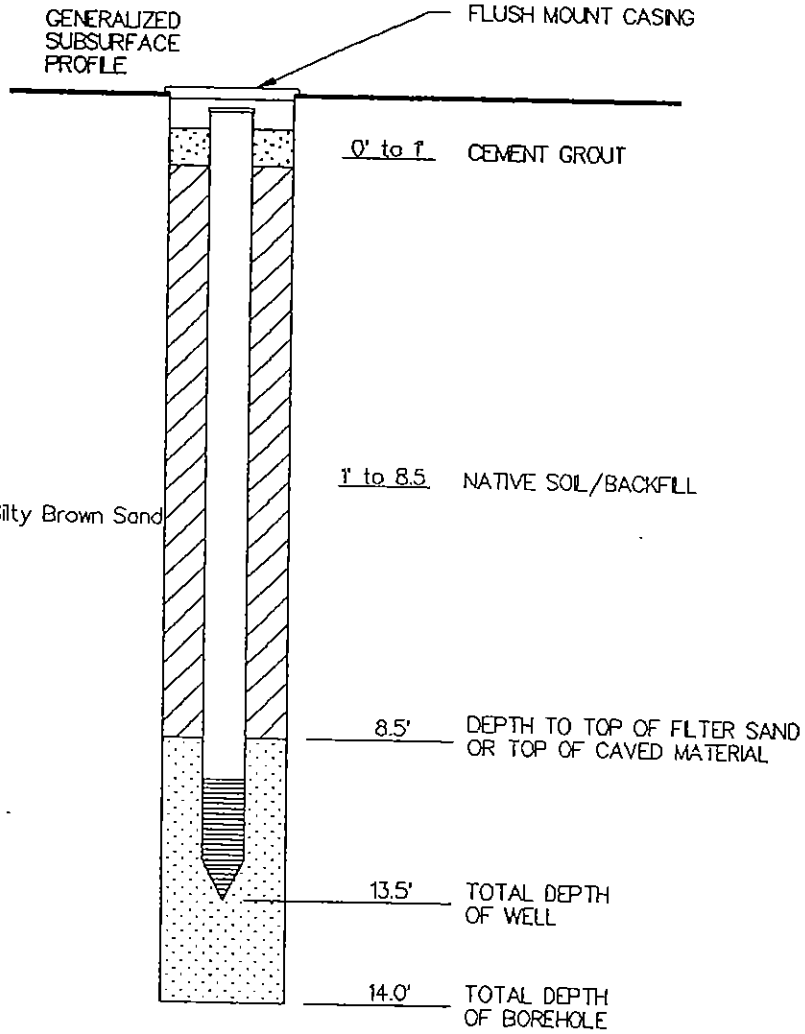
2640 Aero Park Drive · Traverse City, MI 49684

LOG OF WELL INSTALLATION

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/29/93

WELL NUMBER: MW-3

GENERALIZED SUBSURFACE PROFILE



TOP OF CASING ELEVATION:	96.49'
GROUND SURFACE ELEVATION:	NA
WELL SCREEN TIP ELEVATION:	NA

WELL CASING

DIAMETER:	2"
TOTAL LENGTH:	10'
MATERIAL:	Galv.
1st COUPLING:	8.5'
CAP?:	Yes

WELL SCREEN

DIAMETER:	2"
LENGTH:	3.5'
SLOT:	10
MATERIAL:	SS
SCREEN PLUG?:	Point

PROTECTIVE CASING

MATERIAL:	NA
DIAMETER:	NA
LENGTH:	NA
LENGTH ABOVE GROUND:	NA
LOCK?:	NA

DRILLER: Norm Jones
EQUIPMENT: B-57

WATER LEVEL DATA

DATUM: TOC

DATE	WATER LEVEL
3/30/93	8.70
3/31/93	8.72

NOTES:

BAGS OF SAND USED: NA
BAGS OF CEMENT USED: 1
BAGS OF BENTONITE USED: NA
DEPTH TO FIRST COUPLING: 8.5'
OTHER MATERIALS USED: NA

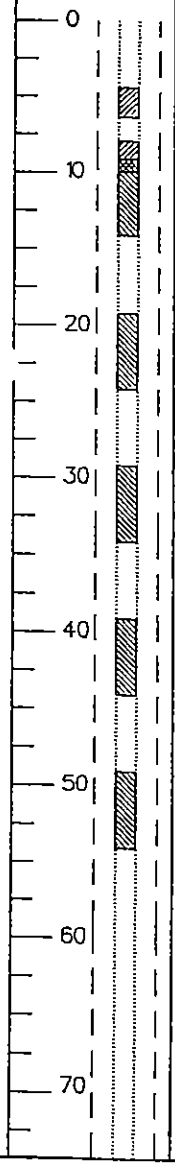
Global Environmental Engineering Inc.
2640 Aero Park Drive - Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek - Hebble
Project No.: 24
Date: 3/29/93

LOCATION W. Michigan Ave.
CLIENT Terra Environmental
DRILLER Norm Jones
HELPER Paul Bristol
WEATHER Partly cloudy - Cool

BORING/WELL NO. SB-1
GROUND ELEV. NA
TOP OF CASING ELEV. NA
STATIC WATER LEVEL 11'
DEVELOPMENT METHOD Bailer



SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
SS	SS		Silty Brown Sand w/Coal
SS	SS		
WS	Bailer		11'
			Silty Tan Sand
			20'
WS	Bailer		
WS	Bailer		Med. Tan Sand w/Trace Gravel
WS	Bailer		
WS	Bailer		
			E.O.B. 54'

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD Bensed 0'-11'

_____ DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.

2640 Aero Park Drive - Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek - Hebble
Project No.: 24
Date: 3/30/93

LOCATION W. Michigan Ave.
BORING/WELL NO. SB-2
CLIENT Terra Environmental
GROUND ELEV. NA
DRILLER Norm Jones
TOP OF CASING ELEV. NA
HELPER Paul Bristol
STATIC WATER LEVEL 11'
WEATHER Partly cloudy - Cool
DEVELOPMENT METHOD Bailer

DEPTH: 0, 10, 20, 30, 40, 50, 60, 70

SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
SS	SS		Fill Sand, Concrete, Coal and Black Silt
SS	SS		8'
WS	Bailer		Silty Tan Sand
WS	Bailer		E.O.B.
			24'

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD Benseal 0'-11'

DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.
2640 Aero Park Drive · Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/30/93

LOCATION W. Michigan Ave.
CLIENT Terra Environmental
DRILLER Norm Jones
HELPER Paul Bristol
WEATHER Partly cloudy – Cool

BORING/WELL NO. SB-3
GROUND ELEV. NA
TOP OF CASING ELEV. NA
STATIC WATER LEVEL 10'
DEVELOPMENT METHOD Bailer

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0	SS	SS		Fill Sand w/Concrete and Brick Rubble
10	SS	SS		
	WS	Bailer		10'
20	WS	Bailer		Silty Brown Sand w/Trace Gravel
30	WS	Bailer		30'
40	WS	Bailer		Fine Tan Sand W/Small Gravel
50	WS	Bailer		50'
				Soft Gray Silty Clay
				E.O.B. 54'
60				
70				

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD Benseal 0'–11'

DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.

2640 Aero Park Drive - Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/30/93

LOCATION W. Michigan Ave.
CLIENT Terra Environmental
DRILLER Norm Jones
HELPER Paul Bristol
WEATHER Partly cloudy – Cool

BORING/WELL NO. SB-4
GROUND ELEV. NA
TOP OF CASING ELEV. NA
STATIC WATER LEVEL 10'
DEVELOPMENT METHOD Bailer

DEPTH: 0, 10, 20, 30, 40, 50, 60, 70

SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
SS	SS		Silty Brown Sand w/Concrete, Bricks and Lg. Rocks
SS	SS		
WS	Bailer		11'
			Very Silty Brown Sand w/Gravel (muddy)
WS	Bailer		
			E.O.B. 25'

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD Benseal 0'-11'

_____ DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.

2640 Aero Park Drive • Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/30/93

LOCATION W. Michigan Ave.
CLIENT Terra Environmental
DRILLER Norm Jones
HELPER Paul Bristol
WEATHER Partly cloudy – Cool

BORING/WELL NO. SB-5
GROUND ELEV. NA
TOP OF CASING ELEV. NA
STATIC WATER LEVEL 10'
DEVELOPMENT METHOD Bailer

DEPTH: 0, 10, 20, 30, 40, 50, 60, 70

SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
SS	SS		Silty Brown Sand w/Concrete, Brick and Rocks
SS	SS		
WS	Bailer		10'
WS	Bailer		Silty Brown Sand (very muddy)
WS	Bailer		30'
WS	Bailer		Med. Tan Sand W/Lg. Gravel
			E.O.B. 45'

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD Benseal 0'–11'

DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.

2640 Aero Park Drive · Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/31/93

LOCATION: W. Michigan Ave.
CLIENT: Terra Environmental
DRILLER: Norm Jones
HELPER: Paul Bristol
WEATHER: Partly cloudy – Cool

BORING/WELL NO.: SB-6
GROUND ELEV.: NA
TOP OF CASING ELEV.: NA
STATIC WATER LEVEL: 10'
DEVELOPMENT METHOD: Bailer

DEPTH: 0, 10, 20, 30, 40, 50, 60, 70

SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
SS	SS		Silty Black Sand w/Concrete, Bricks, Coal and Sticks
SS	SS		
WS	Bailer		10'
			Med. Dark Brown Sand w/Trace Gravel
			20'
WS	Bailer		Med. Tan Sand w/Gravel
			E.O.B.
			25'

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD: Benseal 0'–10'

DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.
2640 Aero Park Drive · Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/31/93

LOCATION W. Michigan Ave.
CLIENT Terra Environmental
DRILLER Norm Jones
HELPER Paul Bristol
WEATHER Partly cloudy – Cool

BORING/WELL NO. SB–7
GROUND ELEV. NA
TOP OF CASING ELEV. NA
STATIC WATER LEVEL 11'
DEVELOPMENT METHOD Bailer

DEPTH: 0, 10, 20, 30, 40, 50, 60, 70

SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
			Fill Sand w/Bricks and Concrete — 8'
SS	SS		
WS	Bailer		Silty Black Sand — 15'
			E.O.B.

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD Benseal 0'–5'

DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.

2640 Aero Park Drive - Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek - Hebble
Project No.: 24
Date: 3/31/93

LOCATION W. Michigan Ave.
CLIENT Terra Environmental
DRILLER Norm Jones
HELPER Paul Bristol
WEATHER Cloudy - Cool

BORING/WELL NO. SB-8
GROUND ELEV. NA
TOP OF CASING ELEV. NA
STATIC WATER LEVEL 12'
DEVELOPMENT METHOD Bailer

DEPTH: 0, 10, 20, 30, 40, 50, 60, 70

SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION	
SS	SS		Silty Brown Sand w/Rocks,Bricks	5'
SS	SS		Black Silty Sand w/Brick, Coal and Cement	8'
WS	Bailer		Silty Brown Sand	15'
			Poorly Sorted Silty Brown Sands	19'
			E.O.B.	

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD Benseal 0'-10'

DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.
2640 Aero Park Drive · Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/31/93

LOCATION W. Michigan Ave.
CLIENT Terra Environmental
DRILLER Norm Jones
HELPER Paul Bristol
WEATHER Cloudy – Cool

BORING/WELL NO. SB-9
GROUND ELEV. NA
TOP OF CASING ELEV. NA
STATIC WATER LEVEL 11'
DEVELOPMENT METHOD Bailer

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				
	SS	SS		Silty Brown Clay w/Large Rocks — 5'
10	SS	SS		Silty Brown Sand Some Fines E.O.B. — 10'
20				
30				
40				
50				
60				
70				

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD _____

_____ DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.
2640 Aero Park Drive · Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/31/93

LOCATION W. Michigan Ave.
CLIENT Terra Environmental
DRILLER Norm Jones
HELPER Paul Bristol
WEATHER Cloudy – Cool

BORING/WELL NO. SB-10
GROUND ELEV. NA
TOP OF CASING ELEV. NA
STATIC WATER LEVEL 11'
DEVELOPMENT METHOD Bailer

DEPTH: 0, 10, 20, 30, 40, 50, 60, 70

SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION	
			Silty Brown Sand w/Lg. Rocks	3'
SS	SS		Black Silty Sand	8'
SS	SS		E.O.B. Fine Brown Sand	10'

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD _____

DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.

2640 Aero Park Drive · Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/31/93

LOCATION W. Michigan Ave. BORING/WELL NO. SB-11
CLIENT Terra Environmental GROUND ELEV. NA
DRILLER Norm Jones TOP OF CASING ELEV. NA
HELPER Paul Bristol STATIC WATER LEVEL NA
WEATHER Cloudy – Cool DEVELOPMENT METHOD NA

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				Silty Brown Sand w/Gravel — 1'
	SS	SS		Black Silty Sand w/Bricks and Coal — 3.5'
5				Fine Brown Sand w/Sm. Gravel
	SS	SS		
10				E.O.B. — 10'
15				
20				
25				
30				
35				

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD Benseal 0'–5'

_____ DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.
2640 Aero Park Drive · Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/31/93

LOCATION W. Michigan Ave.
CLIENT Terra Environmental
DRILLER Norm Jones
HELPER Paul Bristol
WEATHER Cloudy – Cool

BORING/WELL NO. SB-12
GROUND ELEV. NA
TOP OF CASING ELEV. NA
STATIC WATER LEVEL NA
DEVELOPMENT METHOD NA

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				Silty Brown Sand w/Lg. Gravel — 2'
5	SS	SS		Black Silty Sand w/Bricks and Coal — 5'
10	SS	SS		Fine To Med. Brown Sand w/Gravel — E.O.B. — 10'
15				
20				
25				
30				
35				

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD Benseal 0'–5'

DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.
2640 Aero Park Drive · Traverse City, MI 49684

SOIL BORING LOG

Site: City of Battle Creek – Hebble
Project No.: 24
Date: 3/31/93

LOCATION W. Michigan Ave.
CLIENT Terra Environmental
DRILLER Norm Jones
HELPER Paul Bristol
WEATHER Cloudy – Cool

BORING/WELL NO. SB-13
GROUND ELEV. NA
TOP OF CASING ELEV. NA
STATIC WATER LEVEL NA
DEVELOPMENT METHOD NA

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				Fine Brown Sand w/Lg. Rocks and Bricks
	SS	SS		3'
5	SS	SS		Black Silty Sand w/Bricks
	SS	SS		8'
10				Fine Tan Sand w/Sm. Gravel E.O.B.
				10'
15				
20				
25				
30				
35				

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD Benseal 0'–5'

DRILLERS SIGNATURE _____

APPENDIX B

PREIN & NEWHOF, P.C.

ENGINEERS — SURVEYORS — ENVIRONMENTAL & SOILS LABORATORIES

OFFICE:
3355 EVERGREEN DR., N.E.
GRAND RAPIDS, MI 49505
TELEPHONE (616) 364-8491
TELECOPIER (616) 364-6953

LABORATORY:
3260 EVERGREEN DR., N.E.
GRAND RAPIDS, MI 49505
TELEPHONE (616) 364-7600
TELECOPIER (616) 364-4222

BRANCH OFFICE:
400 136th AVE., SUITE 517
HOLLAND, MI 49424
TELEPHONE (616) 394-0200
TELECOPIER (616) 394-5914

H. EDWARD PREIN, P.E., R.L.S.
THOMAS NEWHOF, P.E.
WILSON D. McCREEN, P.E.
MICHAEL S. BERGSTROM, P.E.
MICHAEL S. FULLER, P.E.
PHILIP C. GLUPKER, P.E.
JAMES A. COOK, P.E.
ROBERT J. VANDER MALE, P.E.
ROBERT J. REINKE, P.E.
ARTHUR W. BRINTNALL, R.L.S.
REX A. MELSON, R.L.S.
SIDNEY P. WAGNER JR., P.E.
BASIL J. ANDRESS JR., R.L.S.
RICHARD J. REINBOLD, P.E.
LARRY D. STEHOUWER, P.E.
BARBARA S. MARCZAK, P.E.
CATHERINE A. PREIN, P.E.
DENNIS R. COLE, P.E.
ROBERT F. GOODHEART, P.E.
KENNETH A. BOSMA, P.E.

April 16, 1993
92245L

Post-it™ brand fax transmittal memo 7671	# of pages ▸ 15
To Rob	From Rod Brown
Co. Global	Co. Terra
Dept. Hebble SITE	Phone # 616-375-9575
Fax # 947-1844	Fax # 375-2930

Mr. Rod Brown
Terra Environmental Corporation
P.O. Box 19160
Kalamazoo, MI 49019

Re: Terra Project: City of Battle Creek-Hebble
Site: Hebble
Samples received 3/31/93

LABORATORY RESULTS

Water Sample:	SB-1	SB-1	SB-1	SB-1	SB-1
Depth	9-14'	19-24'	29-34'	39-44'	49-54'
Date:	3/29	3/29	3/29	3/29	3/29
Lab Log #	01252	01254	01255	01256	01257
Dissolved Cadmium,mg/L	0.0004	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Chromium,mg/L	0.005	0.002	0.002	<0.001	0.003
Dissolved Lead,mg/L	<0.001	<0.001	0.001	<0.001	0.003
EPA 8310: Polynuclear Aromatic Hydrocarbons,ug/L					
Acenaphthene	ND*	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND	ND	ND	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	ND	ND	ND
Benzo(ghi)perylene	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND	ND

ND* indicates none detected at or above the method detection limit of 5 ug/L
**Coelute

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Water Sample:	SB-1	SB-1	SB-1	SB-1	SB-1
Depth	9-14'	19-24'	29-34'	39-44'	49-54'
Date:	3/29	3/29	3/29	3/29	3/29
Lab Log #	01253	01254	01255	01256	01257
EPA 601 reported as ug/L					
Bromodichloromethane	ND*	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND
Bromomethane**	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND
Chloromethane**	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND
Methylene Chloride**	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND
Trichlorofluoromethane**	ND	ND	ND	ND	ND
Vinyl Chloride**	ND	ND	ND	ND	ND
EPA 602, reported as ug/L					
Benzene	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND
Toluene	8.	13	18	2	18

ND* indicates none detected at or above the method detection limit of 1 ug/L
ND** indicates none detected at or above the method detection limit of 5 ug/L

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Water Sample:	SB2	SB2	SB3	SB3	SB3	SB3
Depth:	9-14'	19-24'	9-14'	19-24'	29-34'	39-44'
Date:	3/30	3/30	3/30	3/30	3/30	3/30
Lab Log #	01260	01261	01262	01263	01264	01265
Dissolved Cadmium,mg/L	0.0003	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Dissolved Chromium,mg/L	0.002	0.002	0.002	<0.001	0.002	<0.001
Dissolved Lead,mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Method 8310: Polynuclear Aromatic Hydrocarbons,ug/L						
Acenaphthene	ND*	ND	ND	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND	ND	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND	ND	ND	ND	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	ND	ND	ND	ND
Benzo(ghi)perylene	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	27	ND	ND	ND
Fluorene	ND	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND	ND
Pyrene	ND	ND	26	ND	ND	ND

ND* indicates none detected at or above the method detection limit of 5 ug/L
**Coelute

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Water Sample:	SB2	SB2	SB3	SB3	SB3	SB3
Depth:	9-14'	19-24'	9-14'	19-24'	29-34'	39-44'
Date:	3/30	3/30	3/30	3/30	3/30	3/30
Lab Log #	01260	01261	01262	01263	01264	01265
EPA 601 reported as ug/L						
Bromodichloromethane	ND*	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND
Bromomethane**	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND	ND	ND
2-Chloroethylvinyl ether	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND
Chloromethane**	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND
Dichlorodifluoromethane	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND
Methylene Chloride**	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane**	ND	ND	ND	ND	ND	ND
Vinyl Chloride**	ND	ND	ND	ND	ND	ND
EPA 602, reported as ug/L						
Benzene	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND
Toluene	1	ND	2	ND	4	2

ND* indicates none detected at or above the method detection limit of 1 ug/L
ND** indicates none detected at or above the method detection limit of 5 ug/L

Water Sample:	SB4	SB4	SB5	SB5
Depth	10-15'	19-24'	9-14'	19-24'
Lab Log #	01266	01267	01268	10269

Method 8310: Polynuclear Aromatic Hydrocarbons,ug/L

Dilution factor	1	1	1	2
Acenaphthene	ND*	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND
Anthracene	ND	ND	ND	13
Benzo(a)anthracene & Chrysene**	ND	ND	ND	106
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND	ND	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	ND	ND
Benzo(ghi)perylene	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND
Pyrene	ND	ND	ND	143

ND* indicates none detected at or above the method detection limit of 5 ug/L multiplied by the dilution factor
**Coelute

Water Sample:	SB4	SB4	SB5	SB5
Depth	10-15'	19-24'	9-14'	19-24'
Lab Log #	01266	01267	01268	10269
EPA 601 reported as ug/L				
Bromodichloromethane	ND*	ND	ND	ND
Bromoform	ND	ND	ND	ND
Bromomethane**	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND
Chloroethane	ND	ND	ND	ND
2-Chloroethylvinyl ether	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND
Chloromethane**	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Dichlorodifluoromethane	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND
Methylene Chloride**	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND
Tetrachloroethane	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND
Trichloroethene	ND	ND	ND	ND
Trichlorofluoromethane**	ND	ND	ND	ND
Vinyl Chloride**	ND	ND	ND	ND
EPA 602, reported as ug/L				
Benzene	1	ND	4	1
Chlorobenzene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Toluene	4	2	4	18

ND* indicates none detected at or above the method detection limit of 1 ug/L
ND** indicates none detected at or above the method detection limit of 5 ug/L

Water Sample:	SB53	SB5
Depth	29-24'	39-44'
Lab Log #	01270	01271
Dissolved Cadmium,mg/L	<0.0002	<0.0002
Dissolved Chromium,mg/L	0.001	<0.001
Dissolved Lead,mg/L	<0.001	<0.001
Method 8310: Polynuclear Aromatic Hydrocarbons,ug/L		
Acenaphthene	ND*	ND
Acenaphthylene	ND	ND
Anthracene	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND
Benzo(ghi)perylene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Fluoranthene	ND	ND
Fluorene	ND	ND
Naphthalene	ND	ND
Phenanthrene	ND	ND
Pyrene	ND	ND

ND* indicates none detected at or above the method detection limit of 5 ug/L
**Coelute

Water Sample:	SB5 3	SB5
Depth	29-24'	39-44'
Lab Log #	01270	01271
EPA 601 reported as ug/L		
Bromodichloromethane	ND*	ND
Bromoform	ND	ND
Bromomethane**	ND	ND
Carbon Tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
2-Chloroethylvinyl ether	ND	ND
Chloroform	ND	ND
Chloromethane**	ND	ND
Dibromochloromethane	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Dichlorodifluoromethane	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane	ND	ND
1,1-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Methylene Chloride**	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachloroethene	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Trichlorofluoromethane**	ND	ND
Vinyl Chloride**	ND	ND.
EPA 602, reported as ug/L		
Benzene	ND	ND
Chlorobenzene	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Ethylbenzene	ND	ND
Toluene	2	3.

ND* indicates none detected at or above the method detection limit of 1 ug/L
ND** indicates none detected at or above the method detection limit of 5 ug/L

Water Sample:	SB-6	SB-6
Depth	9-14'	19-24'
Lab Log #	01324	01325
Dissolved Cadmium,mg/L	<0.0002	<0.0002
Dissolved Chromium,mg/L	0.030	0.001
Dissolved Lead,mg/L	<0.001	0.005
Method 8310: Polynuclear Aromatic Hydrocarbons,ug/L		
Acenaphthene	ND*	ND
Acenaphthylene	ND	ND
Anthracene	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND
Benzo(ghi)perylene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Fluoranthene	ND	ND
Fluorene	ND	ND
Naphthalene	ND	ND
Phenanthrene	ND	ND
Pyrene	ND	ND

ND* indicates none detected at or above the method detection limit of 5 ug/L
**=Coelute

Water Sample:	SB-5	SB-5
Depth	9-14'	19-24'
Lab Log #	01324	01325
Method 8010/8020, ug/L		
Bromodichloromethane	ND*	ND
Bromoform	ND	ND
Bromomethane**	ND	ND
Carbon Tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
2-Chloroethylvinyl ether	ND	ND
Chloroform	ND	ND
Chloromethane**	ND	ND
Dibromochloromethane	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Dichlorodifluoromethane	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane	ND	ND
1,1-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Methylene Chloride**	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachloroethene	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Trichlorofluoromethane**	ND	ND
Vinyl Chloride**	ND	ND
Benzene	ND	ND
Chlorobenzene	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Ethylbenzene	ND	ND
Toluene	7	4
m/p-Xylene	ND	ND
o-Xylene	ND	ND

ND*indicates none detected at or above the method detection limit of 1 ug/L
ND**indicates none detected at or above the method detection limit of 5 ug/L

Water Sample:	SB-7	SB-8
Depth	9-14'	14-19'
Lab Log #	01326	01327
Method 8310: Polynuclear Aromatic Hydrocarbons, ug/L		
Acenaphthene	ND*	ND
Acenaphthylene	ND	ND
Anthracene	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND
Benzo(ghi)perylene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Fluoranthene	ND	ND
Fluorene	ND	ND
Naphthalene	ND	ND
Phenanthrene	ND	ND
Pyrene	ND	ND

ND* indicates none detected at or above the method detection limit of 5 ug/L
**Coelute

Water Sample:	SB-7	SB-8
Depth	9-14'	14-19'
Lab Log #	01326	01327
Method 8010/8020, ug/L		
Bromodichloromethane	ND*	ND
Bromoform	ND	ND
Bromomethane**	ND	ND
Carbon Tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chloroethane	ND	ND
2-Chloroethylvinyl ether	ND	ND
Chloroform	ND	ND
Chloromethane**	ND	ND
Dibromochloromethane	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Dichlorodifluoromethane	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane	ND	ND
1,1-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Methylene Chloride**	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachloroethene	ND	ND
1,1,1-Trichloroethane	ND	ND
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Trichlorofluoromethane**	ND	ND
Vinyl Chloride**	ND	ND
Benzene	ND	ND
Chlorobenzene	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Ethylbenzene	ND	ND
Toluene	6	3
m/p-Xylene	ND	ND
o-Xylene	ND	ND

ND*indicates none detected at or above the method detection limit of 1 ug/L
ND**indicates none detected at or above the method detection limit of 5 ug/L

Water Sample:	MW-3
Lab Log #	01329
Method 8010/8020,ug/L	
Bromodichloromethane	ND*
Bromoform	ND
Bromomethane**	ND
Carbon Tetrachloride	ND
Chlorobenzene	ND
Chloroethane	ND
2-Chloroethylvinyl ether	ND
Chloroform	ND
Chloromethane**	ND
Dibromochloromethane	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Dichlorodifluoromethane	ND
1,1-Dichloroethane	ND
1,2-Dichloroethane	ND
1,1-Dichloroethene	ND
trans-1,2-Dichloroethene	ND
1,2-Dichloropropane	ND
cis-1,3-Dichloropropene	ND
trans-1,3-Dichloropropene	ND
Methylene Chloride**	ND
1,1,2,2-Tetrachloroethane	ND
Tetrachloroethene	ND
1,1,1-Trichloroethane	ND
1,1,2-Trichloroethane	ND
Trichloroethene	ND
Trichlorofluoromethane**	ND
Vinyl Chloride**	ND
Benzene	ND
Chlorobenzene	ND
1,2-Dichlorobenzene	ND
1,3-Dichlorobenzene	ND
1,4-Dichlorobenzene	ND
Ethylbenzene	ND
Toluene	3
m/p-Xylene	ND
o-Xylene	ND

ND*indicates none detected at or above the method detection limit of 1 ug/L
ND**indicates none detected at or above the method detection limit of 5 ug/L

PREIN & NEWHOF
Environmental Laboratory

Robert Erickson
Laboratory Director

Terra-City of Battle Creek-Hebble
4/16/93
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Soil Sample:	SB-1	SB-1
Depth	3-5'	8-10'
Date:	3/29	3/29
Lab Log #	01258	01259
EPA 601, reported as ug/Kg		
Bromodichloromethane	ND*	ND
Bromoform	ND	ND
Carbon Tetrachloride	ND	ND
Chlorobenzene	ND	ND
Chloroform	ND	ND
Dibromochloromethane	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
1,1-Dichloroethane	ND	ND
1,2-Dichloroethane	ND	ND
1,1-Dichloroethene	ND	ND
trans-1,2-Dichloroethene	ND	ND
1,2-Dichloropropane	ND	ND
cis-1,3-Dichloropropene	ND	ND
trans-1,3-Dichloropropene	ND	ND
Methylene Chloride	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND
Tetrachloroethene	74.	ND
1,1,1-Trichloroethane	21.	10.
1,1,2-Trichloroethane	ND	ND
Trichloroethene	ND	ND
Trichlorofluoromethane	ND	ND
EPA 602, reported as ug/Kg		
Benzene	15.	ND
Chlorobenzene	ND	ND
1,2-Dichlorobenzene	ND	ND
1,3-Dichlorobenzene	ND	ND
1,4-Dichlorobenzene	ND	ND
Ethylbenzene	75.	ND
Toluene	330	31

ND* indicates none detected at or above the method detection limit of ug/Kg

Terra-City of Battle Creek-Hebble
4/16/93
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Soil Sample:	SB2	SB2	SB3	SB3	SB4	SB5
Depth	3-5'	8-10'	3-5'	8-10'	3-5'	3-5'
Lab Log #	01272	01273	01274	01275	01276	01277
EPA 601, ug/Kg						
Bromodichloromethane	ND*	ND	ND	ND	ND	ND
Bromoform	ND	ND	ND	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND
Dibromochloromethane	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND	ND	ND	ND
1,2-Dichloroethane	ND	ND	ND	ND	ND	ND
1,1-Dichloroethene	ND	ND	ND	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND	ND	ND	ND
Methylene Chloride	ND	ND	ND	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND
1,1,1-Trichloroethane	ND	ND	ND	ND	ND	ND
1,1,2-Trichloroethane	ND	ND	ND	ND	ND	14
Trichloroethene	ND	ND	ND	ND	ND	ND
Trichlorofluoromethane	ND	ND	ND	ND	ND	ND
EPA 602, ug/Kg						
Benzene	ND	ND	ND	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND	ND	ND
Toluene	15	ND	ND	13	ND	ND

ND***indicates none detected at or above the method detection limit of 5 ug/Kg

PERIN & NEWHOF
Environmental Laboratory

Robert Erickson
Laboratory Director

Soil Sample:	SB-6	SB-6	SB-8
Depth	3-5'	8-10'	3-5'
Lab Log #	01311	01312	01313
Method 8010/8020, ug/Kg			
Bromodichloromethane	ND***	ND	ND
Bromoform	ND	ND	ND
Carbon Tetrachloride	ND	ND	ND
Chlorobenzene	ND	ND	ND
Chloroethane	ND	ND	ND
2-Chloroethylvinyl ether	ND	ND	ND
Chloroform	37	18	ND
Dibromochloromethane	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND
Dichlorodifluoromethane	ND	ND	ND
1,1-Dichloroethane	ND	ND	ND
1,2-Dichloroethane	11	ND	ND
1,1-Dichloroethene	ND	ND	ND
trans-1,2-Dichloroethene	ND	ND	ND
1,2-Dichloropropane	ND	ND	ND
cis-1,3-Dichloropropene	ND	ND	ND
trans-1,3-Dichloropropene	ND	ND	ND
Methylene Chloride	ND	ND	ND
1,1,2,2-Tetrachloroethane	ND	ND	ND
Tetrachloroethene	ND	ND	ND
1,1,1-Trichloroethane	44	12	49
1,1,2-Trichloroethane	ND	ND	ND
Trichloroethene	ND	ND	ND
Benzene	76	ND	ND
Chlorobenzene	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND
Ethylbenzene	300	ND	ND
Toluene	1,400	42	27
m/p-Xylene	1,700	32	83
o-Xylene	470	ND	ND

ND= indicates none detected at or above the method detection limit of 5 ug/Kg

Terra-City of Battle Creek-Hebble
4/16/93
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Soil Sample:	SB-1	SB-1
Depth	3-5'	8-10'
Date:	3/29	3/29
Lab Log #	01258	01259
Total Solids,%	80	79
Total Cadmium,mg/Kg	16.2	0.395
Total Chromium,mg/Kg	28.3	28.9
Total Lead,mg/Kg	1,112	201

EPA 8310: Polynuclear Aromatic Hydrocarbons,ug/Kg

Dilution factor	2	1
Acenaphthene	ND*	ND
Acenaphthylene	5,300	ND
Anthracene	ND	ND
Benzo(a)anthracene & Chrysene**	ND	840
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	670
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	3,400	ND
Benzo(ghi)perylene	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND
Fluoranthene	ND	ND
Fluorene	ND	320
Naphthalene	ND	ND
Phenanthrene	ND	ND
Pyrene	ND	770

ND* indicates none detected at or above the method detection limit of 250 ug/Kg multiplied by the dilution factor
**Coelute

Soil Sample:	SB2	SB2	SB3	SB3	SB4	SB5
Depth	3-5'	8-10'	3-5'	8-10'	3-5'	3-5'
Lab Log #	01272	01273	01274	01275	01276	01277
Total Solids,%	81	70	85	87	85	89
Total Cadmium,mg/Kg	0.272	0.057	0.490	0.135	0.439	0.860
Total Chromium,mg/Kg	13.6	30.5	17.1	37.6	15.4	15.4
Total Lead,mg/Kg	22.9	2.38	12.6	5.92	12.4	50.7
EPA 8310: Polynuclear Aromatic Hydrocarbons,ug/Kg						
Acenaphthene	ND*	ND	ND	ND	ND	ND
Acenaphthylene	4,400	ND	ND	ND	ND	330
Anthracene	ND	ND	ND	ND	ND	ND
Benzo(a)anthracene & Chrysene**	720	ND	ND	ND	ND	290
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	530	ND	ND	ND	ND	300
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	470	ND	ND	720
Benzo(ghi)perylene	ND	ND	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND	ND	ND
Fluorene	340	ND	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND	ND	ND
Pyrene	ND	ND	480	ND	ND	ND

ND* indicates none detected at or above the method detection limit of 250 ug/Kg
**Coelute

PREIN & NEWHOF, P.C.

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April 26, 1993
92245L

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To Rob Douglas	From Rod Brown
Co. Global	Co.
Dept.	Phone #
Fax # 1-947-1044	Fax #

Mr. Rod Brown
Terra Environmental Corporation
P.O. Box 19160
Kalamazoo, MI 49019

Re: Terra Project: City of Battle Creek-Hebble
Samples received 4/5/93

LABORATORY RESULTS

Soil Sample: X	SB-6	SB-6	SB-8
Depth	3-5'	8-10'	3-5'
Lab Log #	01311	01312	01313
Total Solids,%	85	77	90
Total Cadmium,mg/Kg	2.14	1.71	0.134
Total Chromium,mg/Kg	17.2	29.6	44.4
Total Lead,mg/Kg	171	112	3.45

Method 8310: Polynuclear Aromatic Hydrocarbons.ug/Kg

	Dilution factor	50	1	1
1	Acenaphthene	120,000	ND*	ND
2	Acenaphthylene	ND	4,200	ND
	Anthracene	ND	ND	ND
3	Benzo(a)anthracene & Chrysene**	109,000	2,000	ND
4	Benzo(a)pyrene & Dibenzo(a,h)anthracene**	80,300	1,800	ND
5	Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	4,700	ND
	Benzo(ghi)perylene	ND	ND	ND
6	Indeno(1,2,3-cd)pyrene	52,100	380	ND
	Fluoranthene	ND	ND	ND
7	Fluorene	33,900	ND	ND
8	Naphthalene	69,800	2,500	ND
9	Phenanthrene	69,500	ND	ND
10	Pyrene	164,000	ND	ND

ND* indicates none detected at or above the method detection limit of 250 ug/Kg multiplied by the dilution factor.
**Coelute

Terra-City of Battle Creek

Soil Sample:	SB-9	SB-9	SB-10	SB-10	SB-11
Depth	5-3'	8-10'	3-5'	8-10'	3-5'
Lab Log #	01314	01315	01316	01317	01318
Total Solids,%	83	86	76	84	83
Total Cadmium,mg/Kg	2.32	0.120	0.654	0.297	0.310
Total Chromium,mg/Kg	51.5	47.9	49.1	80.0	62.9
Total Lead,mg/Kg	191	5.46	4.384	2.39	5.35

Soil Sample:	SB-11	SB-12	SB-12	SB-13	SB-13
Depth	8-10'	3-5'	8-10'	5-7'	8-10'
Lab Log #	01319	01320	01321	01322	01323
Total Solids,%	87	90	86	86	74
Total Cadmium,mg/Kg	0.135	0.415	0.196	0.377	0.467
Total Chromium,mg/Kg	13.0	54.8	15.3	69.7	5.98
Total Lead,mg/Kg	4.58	8.36	6.31	69.9	59.6

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Grand Rapids, Michigan 4950
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Send Results to Rod Brown - Terra
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CHAIN OF CUSTODY

CLIENT: Terra Environmental PROJECT NAME: City of Battle Creek - Hebble PROJECT NO:

SAMPLING PERSONNEL: R. Douglass SAMPLING SITE: Hebble

	DATE	TIME	SAMPLE ID/DESCRIPTION	TYPE	COMP	GRAB	NO. OF CONTAINERS	PARAMETERS	REMARKS
258	3/29	1640	SB-1, 3'-5'	Soil		x	2	PNA, VOC, * Total Pb, Cr, Cd	* Client said VOC = 601/602 (SW)
59	3/29	1650	SB-1, 8-10'	Soil		x	2	" " " " "	Slightly Odorous
1253		1700	SB-1, 9'-14'	wtr		x	4	PNA, VOCs, Dis. Pb, Cr, Cd	Dis. Metals samples add Have been field filtered
54		1720	SB-1, 19'-24	wtr		x	4	" " " " "	" Slight Odor
55		17:35	SB-1, 29'-34'	wtr		x	4	" " " " "	"
56		18:00	SB-1, 39'-44'	wtr		x	4	" " " " "	"
57		18:20	SB-1, 49'-54'	wtr		x	4	" " " " "	"

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[signature]	3/31/93	8:00									
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№ 006347	Received for Laboratory by: (Signature)	Date:	Time:	Data Package Relinquished by Lab:	Date:	Time:	Data Received by: (Signature)	Date:	Time:
	Jane Hood	3/31/93	8:20 am	[signature]	4/1/93	8:00 A			

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CHAIN OF CUSTODY

CLIENT: Terra Environmental PROJECT NAME: City of Battle Creek PROJECT NO:
SAMPLING PERSONNEL: R. Douglass SAMPLING SITE: Hebble

	DATE	TIME	SAMPLE ID/DESCRIPTION	TYPE	COMP.	GRAB	NO. OF CONTAINERS	PARAMETERS	REMARKS
1172	3/30/93	08:30	SB-2, 3'-5'	Soil		X	2	PNA, VOC*, Total Pb, Cr, Cd.	*client: 524 VOC "60/60 oz" (pH) 3/31/93
1173		08:55	SB-2, 8'-10'	Soil		X	2	" " " " "	
1260		09:10	SB-2, 9'-14'	wtr		X	4	PNA, VOC, Dis. Pb, Cr, Cd	Dis. Metal Samples were field-filtered
1261		09:25	SB-2, 19'-24'	wtr		X	4	" " " " "	" "
1274		10:10	SB-3, 3'-5'	Soil		X	1	PNA, VOC, Total Pb, Cr, Cd.	
1275		10:20	SB-3, 8'-10'	Soil		X	1	" " " " "	
262		10:30	SB-3, 9'-14'	wtr		X	4	PNA, VOC, Dis. Pb, Cr, Cd	Dis. Metal Samples field filtered Strong odor & sheen
263		10:55	SB-3, 19'-24'	wtr		X	4	" " " " "	" Slight Odor
264		11:15	SB-3, 29'-34'	wtr		X	4	" " " " "	"
265		11:30	SB-3, 39'-44'	wtr		X	4	" " " " "	"
1276		12:55	SB-4, 3'-5'	Soil		X	2	PNA, VOC, Total Pb, Cr, Cd	
266	✓	13:30	SB-4, 10'-15'	wtr		X	3	PNA, VOC	

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CHAIN OF CUSTODY

CLIENT: Terra Environmental PROJECT NAME: City of Battle Creek PROJECT NO:
SAMPLING PERSONNEL: R. Douglass SAMPLING SITE: Hobble

	DATE	TIME	SAMPLE ID/DESCRIPTION	TYPE	COMP.	GRAB	NO. OF CONTAINERS	PARAMETERS	REMARKS
267	3/30/93	14:15	SB-4, 19'-24'	Wtr		X	3	PNA, VOC *	
277		17:10	SB-5, 3-5'	Soil		X	1	PNA, VOC, Total Pb, Cr, Cd	
268		17:30	SB-5, 9'-14'	Wtr		X	3	PNA, VOC	
69		17:55	SB-5, 19-24	Wtr		X	3	" "	Sheen, evidence of free product.
70		18:15	SB-5, 29'-24'	Wtr		X	4	PNA, VOC, Dis. Pb, Cr, Cd	Dis. Metal Sample Field Filtered 5 light odor
1271		18:30	SB-5, 39'-44'	Wtr		X	4	" " " " "	"

*Note Client stated VOC = 601/602 JH 3/31/93

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Bill to: City of Battle Creek

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Dept.	Phone #
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CHAIN OF CUSTODY

CLIENT: Terra Environmental PROJECT NAME: City Battle Creek PROJECT NO:

SAMPLING PERSONNEL: R. Douglas SAMPLING SITE: Hebble

	DATE	TIME	SAMPLE ID/DESCRIPTION	TYPE	COMP	GRAB	NO. OF CONTAINERS	PARAMETERS	REMARKS
1311	3/31/93	11:15	SB-6, 3'-5'	Soil		X	2	PNA, VOC, Total Pb, Cr, Cd.	Method 8010 + 8020
312		11:20	SB-6, 8'-10'	Soil		X	2	" " " " "	"
324		11:30	SB-6, 9-14'	wtr		X	4	PNA, VOC, Dis. Pb, Cr, Cd.	Methods 8010 + 8020 Metals were field filtered.
325		11:45	SB-6, 19-24'	Wtr		X	4	" " " " "	"
326		12:50	SB-7, 9'-14'	wtr		X	3	PNA, VOC	Method 8010 + 8020
313		13:40	SB-8, 3'-5'	Soil		X	2	PNA, VOC, Total Pb, Cr, Cd.	"
327		14:30	SB-8, 14'-19'	wtr		X	3	PNA, VOC	"
314		15:50	SB-9, 5'-3'	Soil		X	1	Total Pb, Cr, Cd	Collected SB-9 5-5' 4/6/93
315		15:55 ~~16:15~~	SB-9, 8'-10'	Soil		X	1	"	
316		16:15 ~~16:30~~	SB-10, 3-5'	Soil		X	1	"	
317		16:20	SB-10, 8'-10'	Soil		X	1	"	
318		16:30	SB-11, 3'-5'	Soil		X	1	"	

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CHAIN OF CUSTODY

CLIENT: Terra Environmental PROJECT NAME: City of Battle Creek PROJECT NO: _____

SAMPLING PERSONNEL: J. Douglas SAMPLING SITE: Hebble

	DATE	TIME	SAMPLE ID/DESCRIPTION	TYPE	COMP	GRAB	NO. OF CONTAINERS	PARAMETERS	REMARKS
319	3/31/93	16:35	SB-11, 8'-10'	Soil		x	1	Total Pb, Cr, Cd.	
320		16:55	SB-12, 3'-5'	Soil		x	1	" " "	
321		17:00	SB-12, 8'-10'	Soil		x	1	" " "	
322		17:30	SB-13, 5'-7'	Soil		x	1	" " "	
323		17:35	SB-13, 8'-10'	Soil		x	1	" " "	
28		17:15	MW-1	Water		x	2	VOC	Methods 8010 & 8020
329		17:50	MW-3	Water		x	3	PNA, VOC	"

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[signature]	4/6/93	1840	[signature]	4/6/93	1840						
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Method of Shipment:			Bill of Lading:		
[signature]	4/6/93	1825									
№ 006324	Received for Laboratory by: (Signature)	Date:	Time:	Date Package Relinquished by Lab:		Date:	Time:	Date Received by: (Signature)	Date:	Time:	
	[signature]	4/6/93	8:28	[signature]		4/6/93	9:00				

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(8)

SITE INVESTIGATION REPORT

CITY OF BATTLE CREEK
H.B. SHERMAN PROPERTY

MAY 28, 1993

Prepared for:

The City of Battle Creek
102 East Michigan Ave.
Battle Creek, Michigan 49017

Submitted by:

Global Environmental Engineering Inc.
2640 Aero Park Drive
Traverse City, Michigan 49684
(616) 947-1000

and

Terra Environmental Corporation
5100 West Michigan Ave.
Kalamazoo, Michigan 49007
(616) 375-9595

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CONCLUSIONS AND RECOMMENDATIONS 8

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Figure 1. Site Location Map
Figure 2. Site Sketch
Figure 3. Maximum Soil Contamination
Figure 4. Maximum Ground Water Contamination
Figure 5. Vertical Profile A-A'
Figure 6. Verical Profile B-B'

Appendix A

Boring Logs

Appendix B

Analytical Reports

INTRODUCTION

As a result of the reported underground storage tank (UST) release at the H. B. Sherman site owned by the City of Battle Creek, located at 207 W. Jackson Street, Battle Creek Michigan, (Figure 1) a site investigation to determine the presence and extent of soil contamination has been conducted. The investigation was completed in accordance with the recommendations included in the Soil Investigation report dated December 1991. Field work was conducted on April 2, 1993.

The following report chronicles site activities, describes the investigative approach, documents drilling, sampling, and analytical methodologies, presents hydrogeologic and analytical data, provides data interpretation, and proposes initial corrective action.

BACKGROUND

The H.B Sherman Manufacturing site is located on the block bounded by West Michigan Avenue on the north, Jackson Street on the south, Barney Street on the east and Washington Street on the west (Figure 1). It is approximately 300 feet north of the Battle Creek and 1,000 feet east from the confluence of the Battle Creek and Kalamazoo River. Ground water, as stated in the 45-Day Report, reportedly flows to the south.

Manufacturing activities on the site date back to the early 1900s when H.B. Sherman Manufacturing Company made clamps and nails on the site. A fire in 1991 destroyed many

of the structures on the block and resulted in the demolition and clearing of those adjacent to the former UST locations.

The site is currently vacant with several large piles of rubble and remnants of concrete and asphalt strewn across it. The ground is bare with some sparse weed growth.

A release from two underground fuel oil storage tanks was reported on August 16, 1991 during their excavation and removal. The tanks, one of 7,500-gallon capacity and the other of 18,000-gallon capacity, were found to be in poor condition, suffering from severe corrosion. Approximately 350 cubic yards of contaminated soil were removed and disposed. The UST excavation, which is approximately ten feet deep, remains open and has been fenced for safety and security. A subsequent investigation to determine the presence of soil contamination indicated that aromatic hydrocarbons (BTEX) and polynuclear aromatic compounds (PNAs) above Type B clean up standards established under 1982 P.A. 307, as amended, were present in soil samples collected adjacent to the UST excavation. The soil investigation was documented in a report prepared by SEG and dated December 1991. No ground water was encountered during the tank removals or the soil investigation.

INVESTIGATIVE APPROACH

The expanded investigation was designed to define the limits of soil contamination and, if ground water was encountered, to determine if it had been affected by the release. To fulfill

these goals, seven auger borings were placed around the perimeter of the former tank excavation (Figure 2). As contamination was encountered, subsequent borings were placed farther away from the excavation. Borings were spaced approximately 20 to 40 feet radially away from the excavation. Boring SB-7 was placed in the west-bound lane of Jackson Street south of the excavation.

Soil samples were collected every five feet starting at three feet below the ground surface and continuing to the water table. Soil samples from 3 to 5, 8 to 10, 13 to 15 and 18 to 20 feet were collected from each boring. No sample was recovered from 3 to 5 feet in soil borings SB-3 and SB-4. A geologic description of each sample was recorded, an aliquot of sample was placed in a zip-lock bag for field screening and the remainder of the sample was containerized for laboratory analysis.

Because the contamination was from a system containing fuel oil, the investigation targeted benzene, toluene, ethylbenzene, and xylene (BTEX) and polynuclear aromatic compounds (PNAs).

Ground water was encountered at approximately 18 feet below the ground surface in all borings so one ground water sample was collected from each boring.

METHODOLOGY

Established and accepted procedures were followed throughout the investigation and were consistently applied.

Drilling and Sampling Procedure

Drilling was conducted using a Mobile B-57 auger drilling rig equipped with 4 1/4-inch inside diameter hollow-stem augers. The lead five-foot section was screened to allow ground water sampling while drilling. Rubber "o" rings were used to seal the connection between each five foot-auger section. Between each boring, the augers were decontaminated using a steam cleaner to prevent cross-contamination.

Soil samples were collected at five-foot intervals from three feet to the water table using a stainless steel split spoon sampler connected to the bottom of a 140-pound down hole hammer. The boring was advanced to the top of the desired sample interval and the hammer and split spoon sampler were lowered by the rig's speed line cable through the hollow augers and through the opening on the bit at the bottom of the augers. The spilt spoon sampler was driven approximately 18 to 24 inches to collect the sample. When the bottom of the sample interval was reached or the sampler could be advanced no further, the hammer and sampler were retrieved.

The split spoon sampler was opened and the soil was classified, screened for the obvious

presence of contamination and immediately containerized for laboratory analysis. Soil samples were collected in wide mouth glass jars and sealed with teflon-lined caps.

Ground water sampling was accomplished by advancing the augers to the bottom of the desired sample interval allowing ground water entry into the auger stem through the screened auger. Samples were collected from the five-foot auger at the water table. Prior to sampling, a minimum of three auger volumes of ground water were purged from the augers with a ten-foot long, two-inch diameter bailer to promote entry of water from the desired sample depth, prevent cross contamination, and remove silt and fines. After the augers were sufficiently purged, a clear PVC bailer was lowered on a 1/8-inch diameter nylon rope into the augers and the sample was retrieved. The water was immediately containerized and placed in coolers awaiting laboratory analysis. Two 40 ml VOA vials with a septa-lined cap were filled for BTEX analysis. PNA samples were collected in one-liter amber bottles.

The bailers and split spoon samplers were steam cleaned between uses to prevent cross-contamination. New nylon rope was attached to the bailer before collecting each sample.

Analytical Methods

All samples collected were analyzed by MDNR-approved and EPA-established methods as specified in MERA operational memorandum #6, Revision #2 and supplements. All

samples were analyzed for benzene, toluene, ethylbenzene, and xylene (BTEX), and polynuclear aromatic hydrocarbons (PNA). Method numbers and analytical detection limits are summarized below.

Analyte	Method	Method Description	Method Detection Level	
			Water, μg/l	Soil, μg/kg
BTEX	602/8020	GC/PID	1	10*
PNA	8310	HPLC	5	250

* The MDNR-required MDL for xylene is 30 μg/kg.

Samples were analyzed by Prein Newhoff Analytical Laboratory in Grand Rapids.

Upon collection, all samples were labeled, registered on a chain of custody form and placed in an ice-filled cooler until delivery to the laboratory. Laboratory reports and chain of custody forms are included in Appendix B.

Soil samples were field screened by placing an aliquot of soil from each split spoon sample in a zip-lock bag, warming the sample by the truck heater to promote volatilization, then inserting the wand of an HNu meter into the bag to detect contaminant vapors. The results

were recorded and the investigation continued.

RESULTS

Figure 3 presents maximum contaminant concentrations detected in soil samples from each boring. Figure 4 presents maximum ground water contaminant concentrations.

The site geology consisted of black silty sand mixed with rubble and fill material from the ground surface to approximately two feet. Soil from two to ten feet varied from soft clays to very hard silt and sand. Below this, hard, dry silt with varying degrees of cementation was generally encountered to 18 to 20 feet. Saturated intervals varied with as little as two inches perched at 17 feet on top of a dry hard silt layer in SB-4 to two feet of aquifer from 18 to 20 feet in most other borings. Stratigraphic cross sections of the investigation area are presented in Figures 5 and 6. The boring and well logs in Appendix A detail the geology encountered in each boring.

Boring SB-2 and SB-7 indicated the presence of free product at the ground water surface. This was evidenced by the heavy black oil coating on the sampling equipment and augers and the floating layer found in the bailer when retrieving ground water samples.

Analytical results indicated soil and ground water contamination above Type B clean up

levels. Laboratory reports are included in Appendix B.

Contaminants detected in at least one soil sample are summarized in Table 1 and similarly, ground water sample results are summarized in Table 2. Sample results presented are compared to MDNR Type B clean up levels for interpretation purposes.

No BTEX above Type B levels was found in the soil samples, however, selected PNA compounds were detected at concentrations above Type B levels in SB-1, 2, 5 and 7. Soil samples from approximately 18 to 20 feet (at the water table) had the highest occurrence and concentrations of PNAs. SB-2, 5 and 7 had PNAs present at the water table. SB-7 was the only boring with PNAs spread throughout the vertical section from 8 to 20 feet. SB-1 had isolated PNAs at three to five feet but none were detected below that depth.

Ground water sample results indicated that the low concentrations of benzene and toluene were the only aromatic compounds detected. Benzene at 5 μg/l and 16 μg/l in SB-2 and SB-7, respectively, was the only aromatic compound exceeding its clean up level in ground water. PNA concentrations in ground water exceeded clean up levels in SB-2, 5, and 7.

CONCLUSIONS AND RECOMMENDATIONS

The results of the investigation indicate that soil contamination resulting from the UST release is limited on three sides of the former tank location. Clean boundaries of both soil

and ground water have been identified to the north, east and west of the excavation. However, the occurrence of free product and high PNA concentrations in SB-7 indicate that the contamination may be migrating with the ground water flow to the south or southwest. The distance of SB-7 from the excavation and the distribution of the contamination through the unsaturated zone in this boring also suggest that the migration may be stratigraphically influenced and therefore may be resulting in unsaturated zone migration parallel to the southerly ground water flow.

Additional investigation to the south, across Jackson Street, will be necessary to define the extent of contaminant migration.

Before corrective action is initiated, the limits of contamination should be identified. The proximity of the contaminant to Jackson Street, water, sewer, telephone, and electrical lines will limit remedial options and require significant planning and coordination.

The PNA contamination located around SB-1 is shallow, appears localized, and should be excavated and removed from the site.

Table 1.

H.B. Sherman Site
Detected PNA and BTEX Concentrations in Soil.

Boring I.D.	Date	Depth (ft)	Concentration µg/kg									
			Acenaphthene	Acenaphthylene	Benzo(a) anthracene & Chrysene	Benzo(a)pyrene & Dibenzo(a,h) anthracene	Benzo(b,k) fluoranthene	Fluorene	Naphthalene	Ethylbenzene	Toluene	Xylene
SB-1	4/2/93	3-5	ND	ND	ND	**3,100**	**3,700**	ND	ND	ND	32	ND
		8-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		13-15	ND	ND	ND	ND	ND	ND	ND	ND	135	ND
		18-20	ND	ND	ND	ND	ND	ND	ND	ND	20	ND
SB-2	4/2/93	3-5	ND	ND	ND	ND	ND	ND	ND	ND	78	ND
		8-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		13-15	ND	ND	ND	ND	ND	ND	ND	ND	115	ND
		18-20	4,200	**2,000**	ND	**14,100**	**24,500**	790	ND	ND	112	ND
SB-3	4/2/93	8-10	ND	ND	ND	ND	ND	ND	ND	ND	49	ND
		13-15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		18-20	ND	ND	ND	ND	ND	ND	ND	ND	18	ND
SB-4	4/2/93	8-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		13-15	ND	ND	ND	ND	ND	ND	ND	ND	14	ND
		18-20	ND	ND	ND	ND	ND	ND	ND	ND	48	ND
SB-5	4/2/93	3-5	ND	ND	ND	ND	ND	ND	ND	ND	46	ND
		8-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
		13-15	ND	ND	ND	ND	ND	ND	ND	ND	52	ND
		18-20	980	ND	ND	**4,300**	**5,600**	440	ND	ND	55	ND
SB-6	4/2/93	3-5	ND	ND	ND	ND	ND	ND	ND	ND	10	ND
		8-10	ND	ND	ND	ND	ND	ND	ND	ND	17	ND
		13-15	ND	ND	ND	ND	ND	ND	ND	ND	62	ND
		18-20	ND	ND	ND	ND	ND	ND	ND	ND	130	ND
SB-7	4/2/93	3-5	ND	ND	ND	ND	ND	ND	ND	ND	100	ND
		8-10	ND	**12,600**	ND	**126,000**	**158,000**	**8,500**	820	380	1,500	1,800
		13-15	**9,300**	**11,600**	ND	**59,700**	**73,700**	**7,000**	ND	290	1,300	1410
		18-20	3,400	**1,400**	**13,900**	**18,200**	**19,600**	850	ND	ND	110	16
P.A. 307 Type B Standard			8,000	330 (MDL)	330 (MDL)	330 (MDL)	330 (MDL)	6,000	600	1,400	16,000	6,000

Values in **bold** indicate concentrations exceeding Type B standards
ND - Compound Not Detected.
(MDL) - Established Type B Standard has been set at the Method Detection Limit.

Table 2.

H.B. Sherman Site
Detected PNA and BTEX Concentrations
in Groundwater.

Boring I.D.	Date	Depth (ft)	Concentration µg/l								
			Acenaphthene	Acenaphthylene	Benzo(a)pyrene & Dibenzo(a,h) anthracene	Benzo(b,k) fluoranthene	Fluorene	Naphthalene	Pyrene	Benzene	Toluene
SB-1	4/2/93	13-18	ND	ND	ND	ND	ND	ND	ND	ND	1
SB-2	4/2/93	13-18	**432**	**226**	**1,220**	**1,810**	77	ND	ND	**5**	**6**
SB-3	4/2/93	13-18	ND	ND	ND	ND	ND	ND	ND	ND	4
SB-4	4/2/93	13-18	ND	ND	ND	ND	ND	ND	ND	ND	21
SB-5	4/2/93	13-18	43	**25**	ND	ND	9	ND	30	ND	2
SB-6	4/2/93	13-18	ND	ND	ND	ND	ND	ND	ND	ND	3
SB-7	4/2/93	13-18	**967**	**475**	**2,210**	**3,520**	132	**101**	ND	**16**	4
P.A. Type B Standard			400	5 (MDL)	5 (MDL)	5 (MDL)	300	30	200	1	1,000

Values in **bold** indicate concentrations exceeding Type B standards.
ND - Compound Not Detected.
(MDL) - Established Type B Standard has been set at the Method Detection Limit.

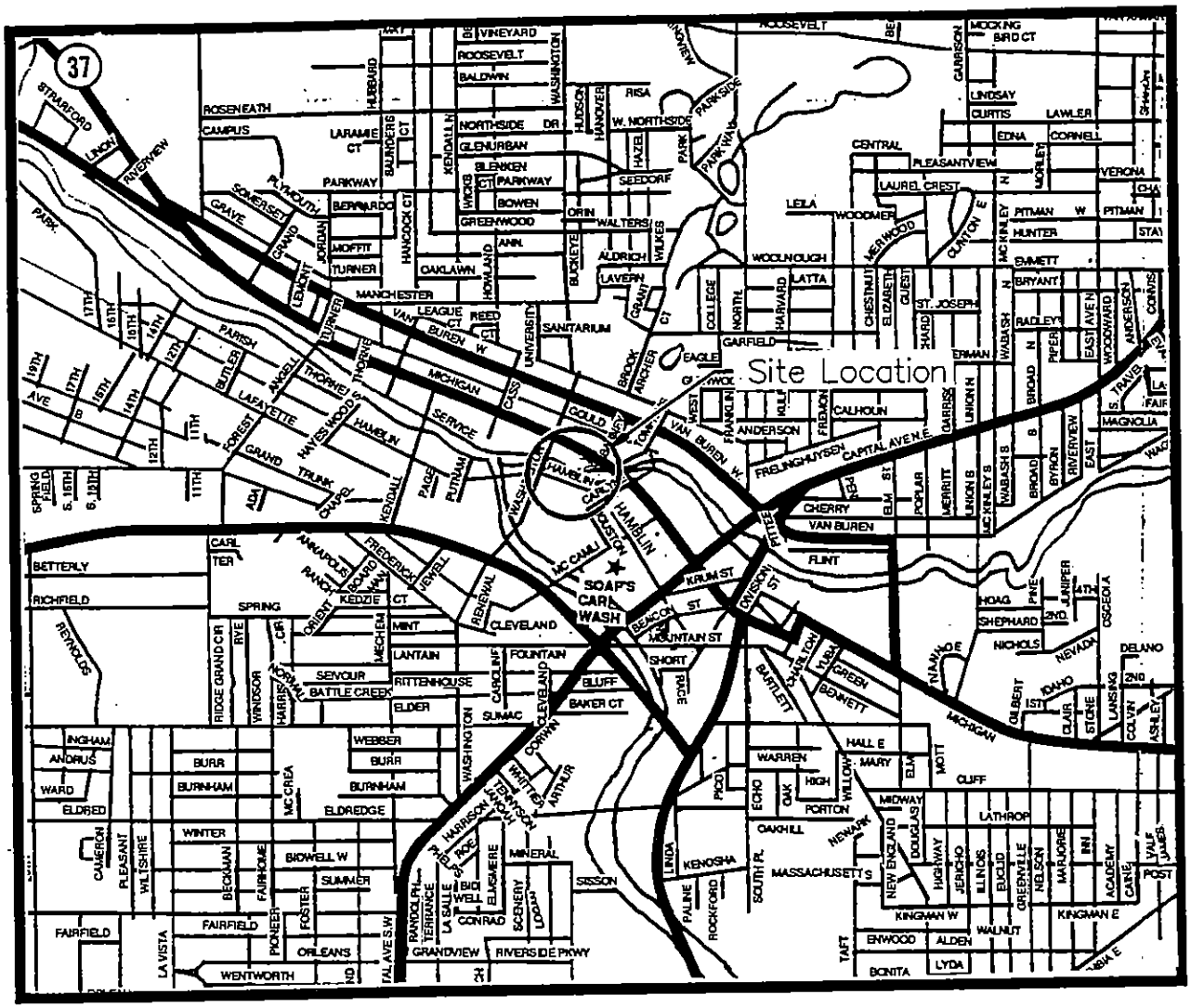
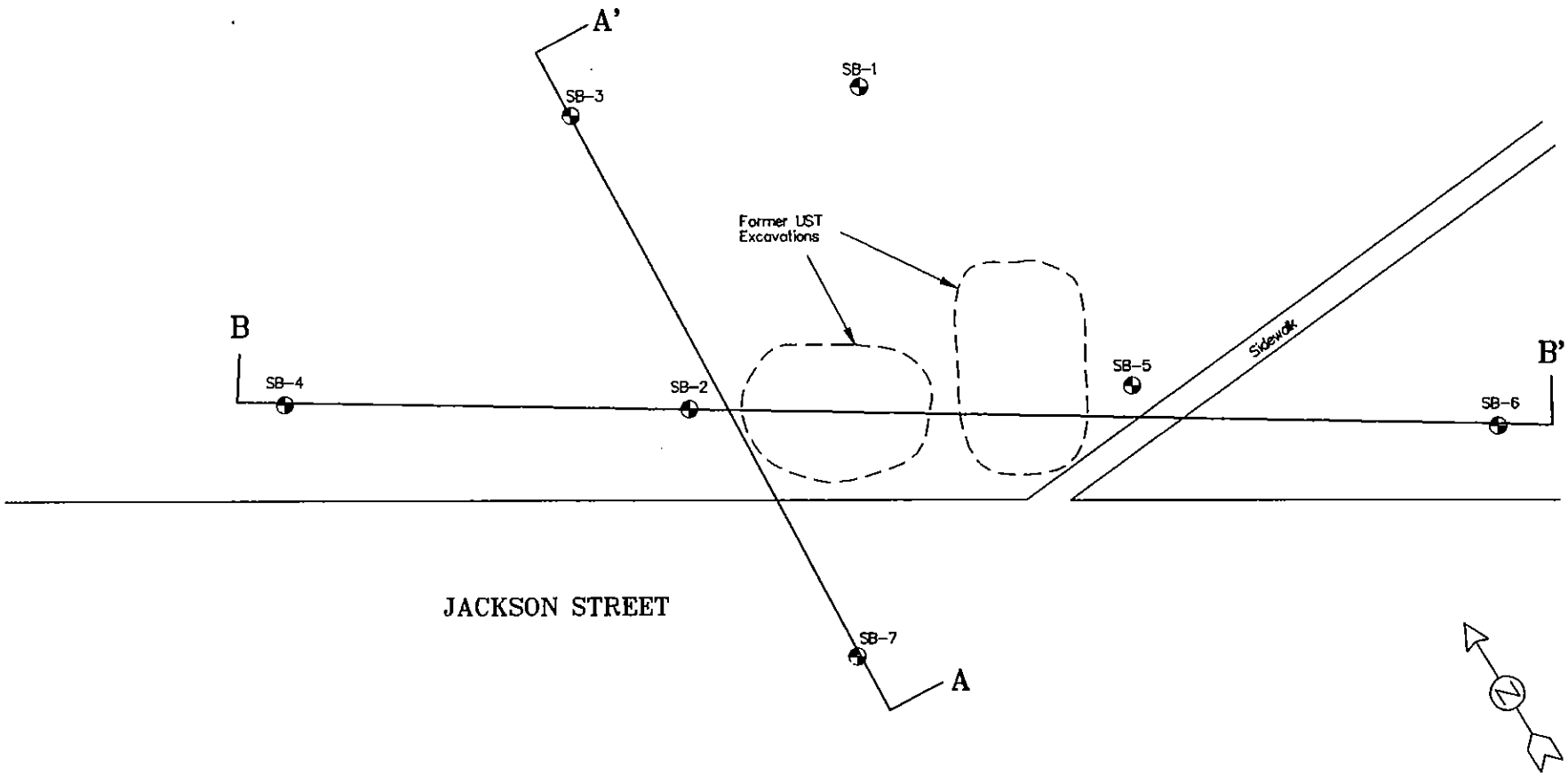


Figure 1

SITE LOCATION MAP

H. B. Sherman Manufacturing
Battle Creek, Michigan

DRAWING #:	DATE:
028-1002	5/25/93



LEGEND

Soil Boring Location

SCALE

0' 10' 20'

APPROXIMATE

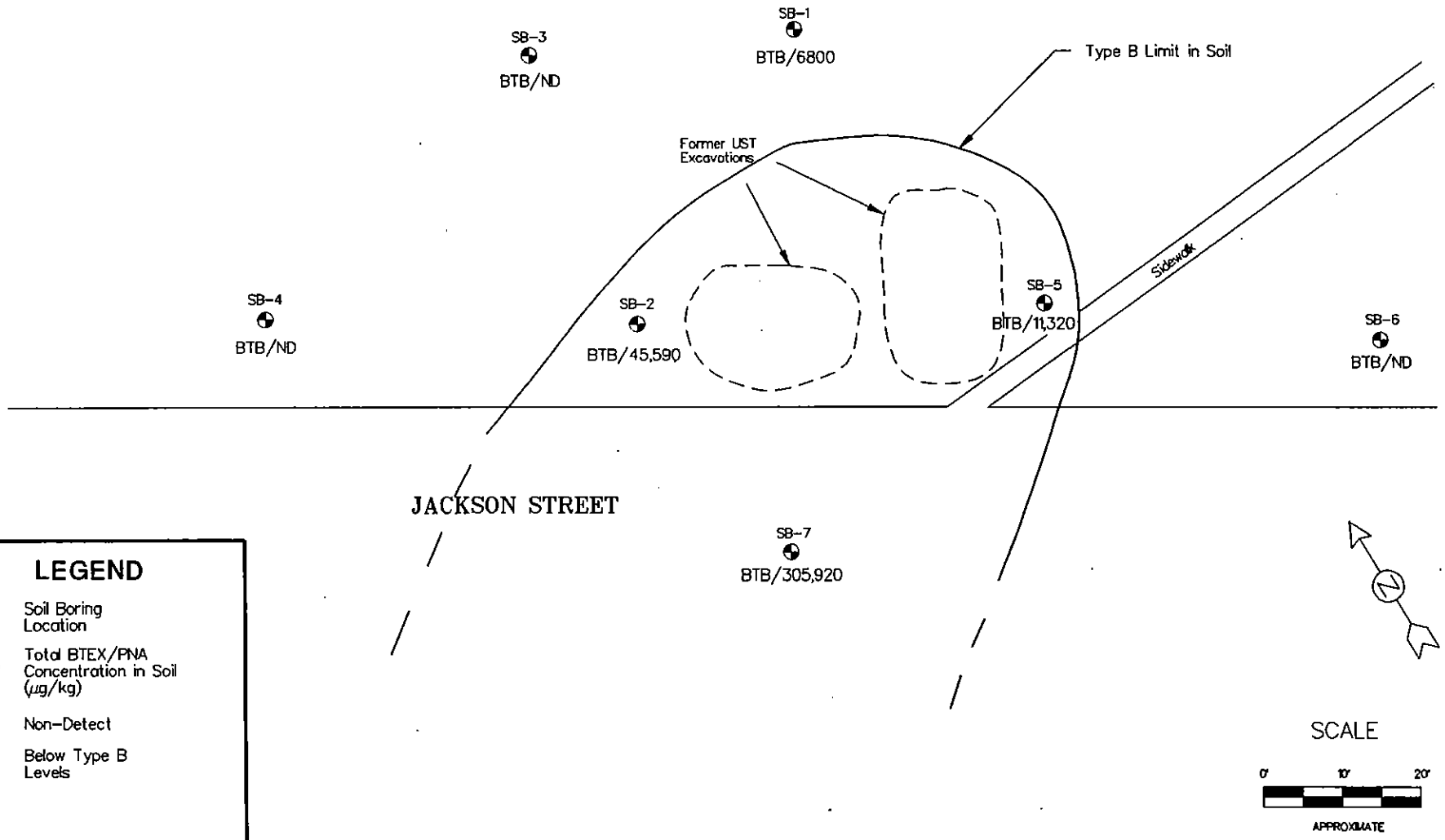
Global Environmental Engineering Inc.

Figure 2

Site Sketch

HB Sherman Site
Battle Creek, MI

DRAWING #:	DATE:
028-1003	5/25/93



LEGEND

◐	Soil Boring Location
BTB/17	Total BTEX/PNA Concentration in Soil (µg/kg)
ND	Non-Detect
BTB	Below Type B Levels

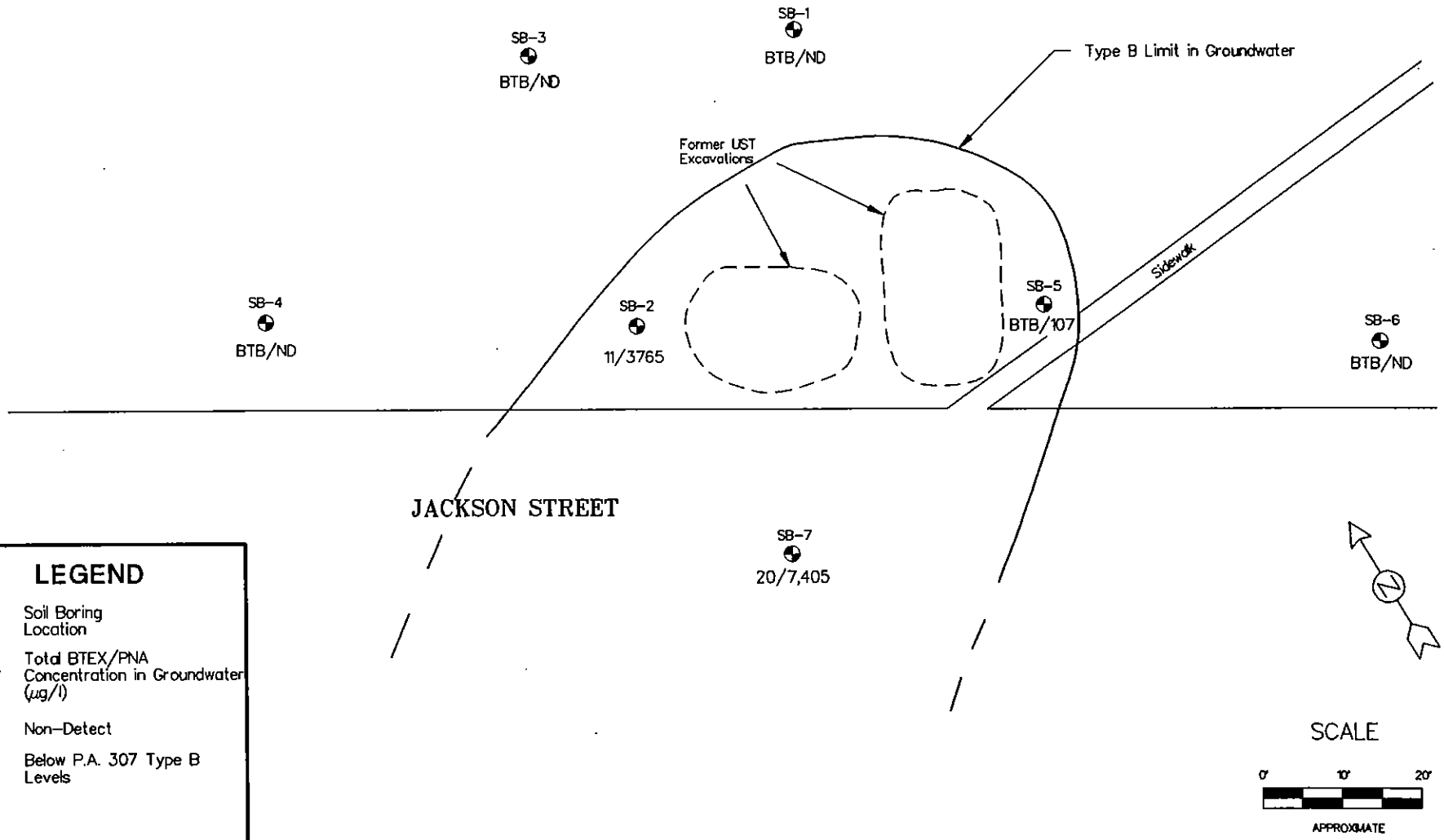
Global Environmental Engineering Inc.

Figure 3

Maximum Soil Contamination

HB Sherman Site
Battle Creek, MI

DRAWING #:	DATE:
028-1004	5/25/93



LEGEND

◐	Soil Boring Location
BTB/17	Total BTEX/PNA Concentration in Groundwater (µg/l)
ND	Non-Detect
BTB	Below P.A. 307 Type B Levels

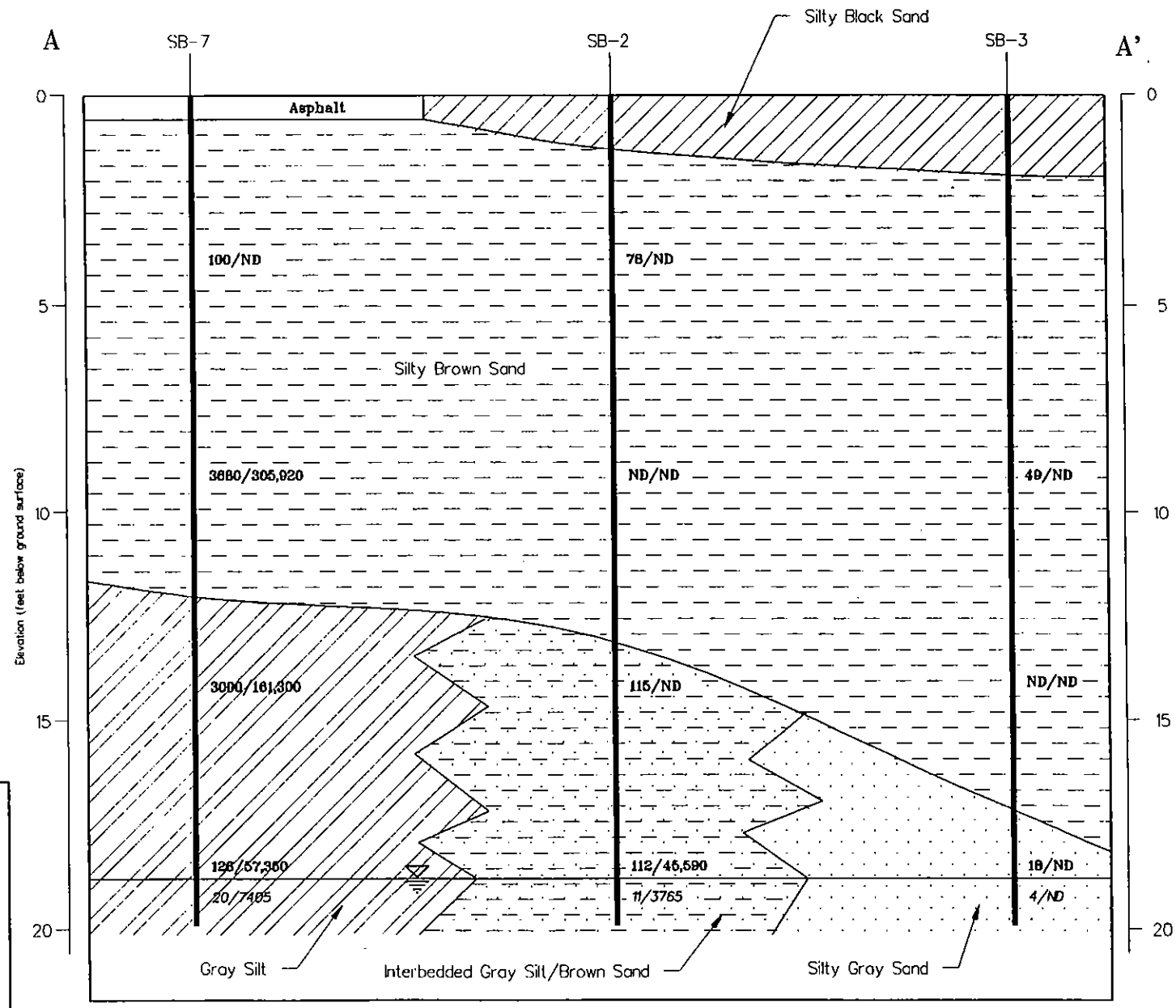
Global Environmental Engineering Inc.

Figure 4

Maximum Groundwater Contamination

HB Sherman Site
Battle Creek, MI

DRAWING #:	DATE:
028-1005	5/25/93



Horizontal Scale

0' 15'

APPROXIMATE

Vertical Exaggeration is 4x

LEGEND

Ground Water Table Elev.

15/2030 Total BTEX/PNA Soil Concentration (μg/kg)

2/53 Total BTEX/PNA Water Concentration (μg/l)

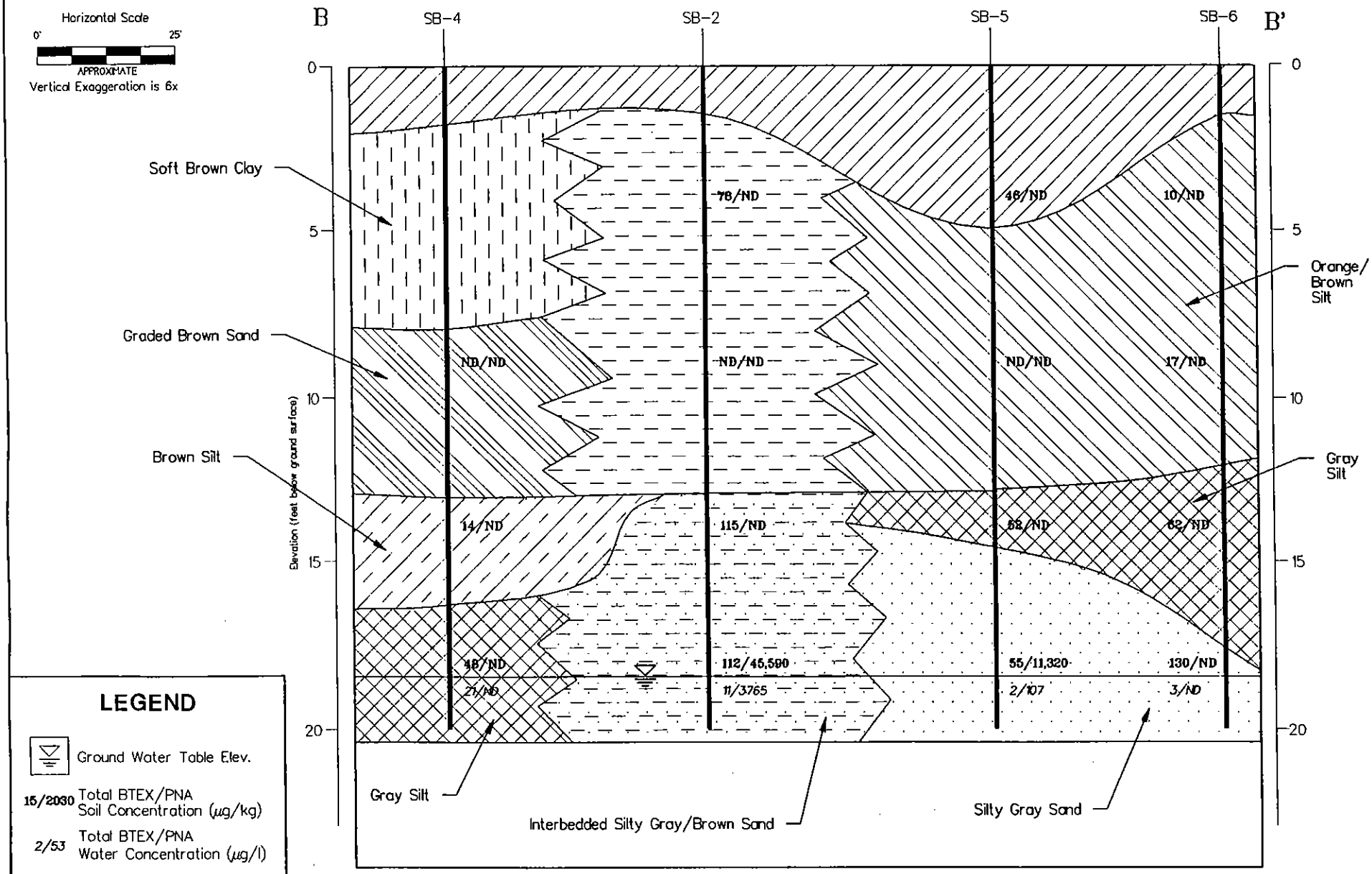
Global Environmental Engineering Inc.

Figure 5

Vertical Profile A–A'

HB Sherman Site
Battle Creek, MI

DRAWING #:	DATE:
028-1006	5/25/93



LEGEND

Ground Water Table Elev.

15/2030 Total BTEX/PNA Soil Concentration (µg/kg)

2/53 Total BTEX/PNA Water Concentration (µg/l)

Global Environmental Engineering Inc.

Figure 6

Vertical Profile B–B'

HB Sherman Site
Battle Creek, MI

APPENDIX A

Global Environmental Engineering Inc.
2640 Aero Park Drive - Traverse City, MI 49684

SOIL BORING LOG

Site: Sherman
Project No.: 28
Date: 4/2/93

LOCATION: Sherman – Battle Creek, MI
CLIENT: Terra Environmental
DRILLER: Norm Jones
HELPER: Paul Bristol
WEATHER: Partly Cloudy – 38°

BORING/WELL NO.: SB-1
GROUND ELEV.: NA
TOP OF CASING ELEV.: NA
STATIC WATER LEVEL: 18'
DEVELOPMENT METHOD: Bailer

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				Fill Sand w/Bricks,Rocks — 1.5'
5	SS	SS		Silty Brown Sand w/Trace Gravel and Trace Clay
10	SS	SS		12'
15	SS	SS		Hard Gray Silt
	WS	Bailer		18'
20	SS	SS		Hard Gray Silt Interbedded w/Hard Brown Silt (wet) — E.O.B. — 20'
25				
30				
35				

CASING: DIAMETER ____ LENGTH ____ TYPE ____
SCREEN: DIAMETER ____ LENGTH ____ TYPE ____ SLOT ____
PLUGGING/SEALING METHOD: Bensed 13'–15' and 18'–20'

DRILLERS SIGNATURE ____

Global Environmental Engineering Inc.
2640 Aero Park Drive • Traverse City, MI 49684

SOIL BORING LOG

Site: Sherman
Project No.: 28
Date: 4/2/93

LOCATION: Sherman – Battle Creek, MI
CLIENT: Terra Environmental
DRILLER: Norm Jones
HELPER: Paul Bristol
WEATHER: Partly Cloudy – 38°

BORING/WELL NO.: SB-2
GROUND ELEV.: NA
TOP OF CASING ELEV.: NA
STATIC WATER LEVEL: 18'
DEVELOPMENT METHOD: Bailer

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				Black Silty Sand
				1.5'
5	SS	SS		Silty Brown Sand w/Trace Gravel
10	SS	SS		
				13'
15	SS	SS		Hard Silty Gray and Brown Interbedded Sand (wet)
	WS	Bailer		
20	SS	SS		F.O.B. (Oily, Free Product on Bailer at Water Level) 20'
25				
30				
35				

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD: Benseal 13'–15' and 18'–20'

_____ DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.
2640 Aero Park Drive • Traverse City, MI 49684

SOIL BORING LOG

Site: Sherman
Project No.: 28
Date: 4/2/93

LOCATION: Sherman – Battle Creek, MI
CLIENT: Terra Environmental
DRILLER: Norm Jones
HELPER: Paul Bristol
WEATHER: Partly Cloudy – 38°

BORING/WELL NO.: SB-3
GROUND ELEV.: NA
TOP OF CASING ELEV.: NA
STATIC WATER LEVEL: 18'
DEVELOPMENT METHOD: Bailer

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				Black Silty Sand — 2'
5	SS	SS		
10	SS	SS		Hard Silty Brown Sand
15	SS	SS		
				4" to 6" of Water Between Brown and Gray Sand — 17'
	WS	Bailer		Silty Gray Sand (Dry)
20	SS	SS		E.O.B. — 20'
25				
30				
35				

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD: Bensed 3' – 8'

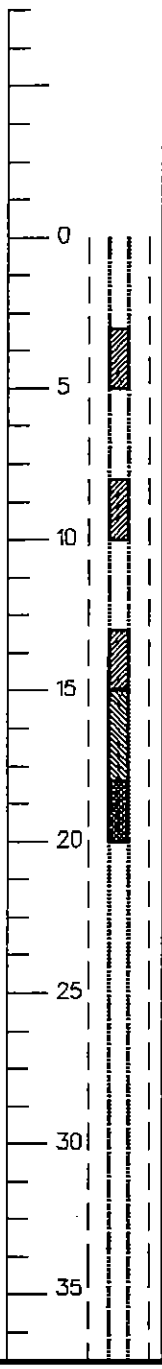
DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.
2640 Aero Park Drive • Traverse City, MI 49684

SOIL BORING LOG

Site: Sherman
Project No.: 28
Date: 4/2/93

LOCATION: Sherman – Battle Creek, MI
BORING/WELL NO.: SB-4
CLIENT: Terra Environmental
GROUND ELEV.: NA
DRILLER: Norm Jones
TOP OF CASING ELEV.: NA
HELPER: Paul Bristol
STATIC WATER LEVEL: 18'
WEATHER: Partly Cloudy – 38°
DEVELOPMENT METHOD: Bailer



SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION	
			Black Silty Sand w/Bricks,Rocks	2'
SS	SS			
			Soft Brown Clay	8'
SS	SS			
			Well Graded Brown Sand	13'
SS	SS			
			Brown Silt w/Trace Gravel	17'
WS	Bailer		Hard Gray Silt (dry) w/ 2" to 3" of Saturated Brown Silt on top	
SS	SS		E.O.B.	20'

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD: Benseal 0' – 8'

_____ DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.
2640 Aero Park Drive - Traverse City, MI 49684

SOIL BORING LOG

Site: Sherman
Project No.: 28
Date: 4/2/93

LOCATION: Sherman – Battle Creek, MI
BORING/WELL NO.: SB-5
CLIENT: Terra Environmental
GROUND ELEV.: NA
DRILLER: Norm Jones
TOP OF CASING ELEV.: NA
HELPER: Paul Bristol
STATIC WATER LEVEL: 18'
WEATHER: Partly Cloudy – 38°
DEVELOPMENT METHOD: Bailer

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				Black Silty Sand w/Rocks, Bricks
5	SS	SS		5'
10	SS	SS		Hard Tan and Orange Silt
				13'
15	SS	SS		Hard Gray Silt (dry)
				15'
	WS	Bailer		Silty Gray Sand (Wet)
20	SS	SS		E.O.B. 20'
25				
30				
35				

CASING: DIAMETER _____ LENGTH _____ TYPE _____
SCREEN: DIAMETER _____ LENGTH _____ TYPE _____ SLOT _____
PLUGGING/SEALING METHOD: Bensead 2'– 8'

_____ DRILLERS SIGNATURE _____

Global Environmental Engineering Inc.
2640 Aero Park Drive • Traverse City, MI 49684

SOIL BORING LOG

Site: Sherman
Project No.: 28
Date: 4/2/93

LOCATION: Sherman – Battle Creek, MI
CLIENT: Terra Environmental
DRILLER: Norm Jones
HELPER: Paul Bristol
WEATHER: Partly Cloudy – 38°

BORING/WELL NO.: SB-6
GROUND ELEV.: NA
TOP OF CASING ELEV.: NA
STATIC WATER LEVEL: 18'
DEVELOPMENT METHOD: Bailer

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				Black Silty Sand
				15'
5	SS	SS		Orange/Brown Silt
10	SS	SS		
				12'
15	SS	SS		Gray Silt
	WS	Bailer		18'
				Gray Silt (wet)
20	SS	SS		E.O.B.
				20'
25				
30				
35				

CASING: DIAMETER ____ LENGTH ____ TYPE ____
SCREEN: DIAMETER ____ LENGTH ____ TYPE ____ SLOT ____
PLUGGING/SEALING METHOD: Benseal 2'–8'

DRILLERS SIGNATURE ____

Global Environmental Engineering Inc.
2640 Aero Park Drive • Traverse City, MI 49684

SOIL BORING LOG

Site: Sherman
Project No.: 28
Date: 4/2/93

LOCATION: Sherman – Battle Creek, MI
CLIENT: Terra Environmental
DRILLER: Norm Jones
HELPER: Paul Bristol
WEATHER: Partly Cloudy – 38°

BORING/WELL NO.: SB-7
GROUND ELEV.: NA
TOP OF CASING ELEV.: NA
STATIC WATER LEVEL: 18'
DEVELOPMENT METHOD: Bailer

DEPTH	SAMPLE	SAMPLING METHOD	PENETRATION RESISTANCE	SOIL CLASSIFICATION
0				4" – Asphalt
5	SS	SS		Silty Brown Sand
10	SS	SS		
				12'
15	SS	SS		Gray Silt
	WS	Bailer		
20	SS	SS		E.O.B. 20'
25				
30				
35				

CASING: DIAMETER ____ LENGTH ____ TYPE ____
SCREEN: DIAMETER ____ LENGTH ____ TYPE ____ SLOT ____
PLUGGING/SEALING METHOD: Bensed 3'–8'

DRILLERS SIGNATURE ____

APPENDIX B

PREIN & NEWHOF, P.C.

ENGINEERS — SURVEYORS — ENVIRONMENTAL & SOILS LABORATORIES

OFFICE:
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GRAND RAPIDS, MI 49505
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ROBERT F. GOODHEART, P.E.
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April 27, 1993
92245L

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To Rob Douglas	From Rod Brown
Co. Global	Co.
Dept.	Phone #
Fax # 1-947-1044	Fax #

Mr. Pat Taplin
Terra Environmental Corporation
P.O. Box 19160
Kalamazoo, MI 49019

Re: Terra Project: City of Battle Creek-Sherman
Samples received 4/6/93

LABORATORY RESULTS

Soil Sample:	SB-1	SB-1	SB-1	SB-1
Depth	3-5'	8-10'	13-15'	18-20'
Lab Log #	01342	01343	01344	01345
Total Solids,%	90	89	87	81
Method 8310: Polynuclear Aromatic Hydrocarbons,ug/Kg				
Acenaphthene	ND*	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	3,100	ND	ND	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	3,700	ND	ND	ND
Benzo(ghi)perylene	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND

ND* indicates none detected at or above the method detection limit of 250 ug/Kg
**Coelute

Terra-City of Battle Creek-Sherman
4/27/93
Page 2

Soil Sample:	SB-1	SB-1	SB-1	SB-1
Depth	3-5'	8-10'	13-15'	18-20'
Lab Log #	01342	01343	01344	01345
Method 8020: EPA 602 Scan,ug/Kg				
Benzene	ND***	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Toluene	32	ND	135	20
m/p-Xylene	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND

ND***indicates none detected at or above the method detection limit of 5 ug/Kg

Terra-City of Battle Creek-Sherman
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Soil Sample:	SB-2	SB-2	SB-2	SB-2
Depth	3-5'	8-10'	13-15'	18-20'
Lab Log #	01346	01347	01348	01349
Total Solids,%	88	86	88	84
Method 8310: Polynuclear Aromatic Hydrocarbons,ug/Kg				
Acenaphthene	ND*	ND	ND	4,200
Acenaphthylene	ND	ND	ND	2,000
Anthracene	ND	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND	ND	14,100
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	ND	24,500
Benzo(ghi)perylene	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND
Fluorene	ND	ND	ND	790
Naphthalene	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND

ND* indicates none detected at or above the method detection limit of 250 ug/Kg
**Coelute

Method 8020: EPA 602 Scan,ug/Kg				
Benzene	ND***	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Toluene	73	ND	115	112
m/p-Xylene	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND

ND***indicates none detected at or above the method detection limit of 5 ug/Kg

Terra-City of Battle Creek-Sherman
4/27/93
Page 4

Soil Sample:	SB-3	SB-3	SB-3
Depth	8-10'	13-15'	18-20'
Lab Log #	01350	01351	01352
Total Solids,%	87	74	86
Method 8310: Polynuclear Aromatic Hydrocarbons.ug/Kg			
Acenaphthene	ND*	ND	ND
Acenaphthylene	ND	ND	ND
Anthracene	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	ND
Benzo(ghi)perylene	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND
Fluoranthene	ND	ND	ND
Fluorene	ND	ND	ND
Naphthalene	ND	ND	ND
Phenanthrene	ND	ND	ND
Pyrene	ND	ND	ND

ND* indicates none detected at or above the method detection limit of 250 ug/Kg
**Coelute

Method 8020: EPA 602 Scan,ug/Kg			
Benzene	ND***	ND	ND
Chlorobenzene	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND
Ethylbenzene	ND	ND	ND
Toluene	49	ND	18
m/p-Xylene	ND	ND	ND
o-Xylene	ND	ND	ND

ND***indicates none detected at or above the method detection limit of 5 ug/Kg

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Soil Sample:	SB-4	SB-4	SB-4
Depth	8-10'	13-15'	18-20'
Lab Log #	01353	01354	01355
Total Solids,%	88	87	88
Method 8310: Polynuclear Aromatic Hydrocarbons,ug/Kg			
Acenaphthene	ND*	ND	ND
Acenaphthylene	ND	ND	ND
Anthracene	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	ND
Benzo(ghi)perylene	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND
Fluoranthene	ND	ND	ND
Fluorene	ND	ND	ND
Naphthalene	ND	ND	ND
Phenanthrene	ND	ND	ND
Pyrene	ND	ND	ND

ND* indicates none detected at or above the method detection limit of 250 ug/Kg
**Coelute

Method 8020: EPA 602 Scan.ug/Kg			
Benzene	ND***	ND	ND
Chlorobenzene	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND
Ethylbenzene	ND	ND	ND
Toluene	ND	14	48
m/p-Xylene	ND	ND	ND
o-Xylene	ND	ND	ND

ND***indicates none detected at or above the method detection limit of 5 ug/Kg

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Soil Sample:	SB-5	SB-5	SB-5	SB-5
Depth	3-5'	8-10'	13-15'	18-20'
Lab Log #	01356	01357	01358	01359
Total Solids,%	86	87	87	84
Method 8310: Polynuclear Aromatic Hydrocarbons,ug/Kg				
Acenaphthene	ND*	ND	ND	980
Acenaphthylene	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND	ND	4,300
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	ND	5,600
Benzo(ghi)perylene	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND
Fluorene	ND	ND	ND	440
Naphthalene	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND

ND* indicates none detected at or above the method detection limit of 250 ug/Kg
**Coelute

Method 8020: EPA 602 Scan,ug/Kg				
Benzene	ND***	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Toluene	46	ND	52	55
m/p-Xylene	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND

ND***indicates none detected at or above the method detection limit of 5 ug/Kg

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Soil Sample:	SB-6	SB-6	SB-6	SB-6
Depth	3-5'	8-10'	13-15'	18-20'
Lab Log #	01360	01361	01362	01363
Total Solids,%	89	84	86	83
Method 8310: Polynuclear Aromatic Hydrocarbons.ug/Kg				
Acenaphthene	ND*	ND	ND	ND
Acenaphthylene	ND	ND	ND	ND
Anthracene	ND	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND	ND	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	ND	ND
Benzo(ghi)perylene	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND

ND* indicates none detected at or above the method detection limit of 250 ug/Kg
**Coelute

Method 8020: EPA 602 Scan,ug/Kg				
Benzene	ND***	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Toluene	10	17	52	130
m/p-Xylene	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND

ND***indicates none detected at or above the method detection limit of 5 ug/Kg

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Soil Sample:	SB-7	SB-7	SB-7	SB-7
Depth	3-5'	8-10'	13-15'	18-20'
Lab Log #	01364	01365	01366	01367
Total Solids,%	91	88	84	81

Method 8310: Polynuclear Aromatic Hydrocarbons,ug/Kg

Dilution factor	1	3	5	2
Acenaphthene	ND*	ND	9,300	3,400
Acenaphthylene	ND	12,600	11,600	1,400
Anthracene	ND	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND	13,900
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	126,000	59,700	18,200
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	158,000	73,700	19,600
Benzo(ghi)perylene	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND
Fluorene	ND	8,500	7,000	850
Naphthalene	ND	820	ND	ND
Phenanthrene	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND

ND* indicates none detected at or above the method detection limit of 250 ug/Kg multiplied by the dilution factor
**Coelute

Method 8020: EPA 602 Scan,ug/Kg

Benzene	ND***	ND	ND	ND
Chlorobenzene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Ethylbenzene	ND	380	290	ND
Toluene	100	1,500	1,300	110
m/p-Xylene	ND	1,300	920	16
o-Xylene	ND	500	490	ND

ND***indicates none detected at or above the method detection limit of 5 ug/Kg

Terra-City of Battle Creek-Sherman
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Water Sample:	SB-2	SB-1	SB-3	SB-4
Depth	13-18'	13-18'	13-18'	13-18'
Lab Log #	01368	01369	01370	01371

Method 8310: Polynuclear Aromatic Hydrocarbons,ug/L

Dilution factor	10	1	1	1
Acenaphthene	432	ND	ND	ND
Acenaphthylene	226	ND	ND	ND
Anthracene	ND	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	1,220	ND	ND	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	1,810	ND	ND	ND
Benzo(ghi)perylene	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	ND
Fluoranthene	ND	ND	ND	ND
Fluorene	77	ND	ND	ND
Naphthalene	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND
Pyrene	ND	ND	ND	ND

ND* indicates none detected at or above the method detection limit of 5 ug/L multplied by the dilution factor
**Coelute

Method 8020: EPA 602 Scan,ug/L

Benzene	5	ND*	ND	ND
Chlorobenzene	ND	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Toluene	6	1	4	21
m/p-Xylene	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND

ND***indicates none detected at or above the method detection limit of 1 ug/L

Terra-City of Battle Creek-Sherman
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Water Sample:	SB-5	SB-6	SB-7
Depth	13-18'	13-18'	13-18'
Lab Log #	01372	01373	01374

Method 8310: Polynuclear Aromatic Hydrocarbons,ug/L

Dilution factor	1	1	10
Acenaphthene	43	ND*	987
Acenaphthylene	25	ND	475
Anthracene	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND	2,210
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	3,520
Benzo(ghi)perylene	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND
Fluoranthene	ND	ND	ND
Fluorene	9	ND	132
Naphthalene	ND	ND	101
Phenanthrene	ND	ND	ND
Pyrene	30	ND	ND

ND* indicates none detected at or above the method detection limit of 5 ug/L multiplied by the dilution factor
**Coelute

Method 8020: EPA 602 Scan,ug/L

Benzene	ND***	ND	16
Chlorobenzene	ND	ND	ND
1,2-Dichlorobenzene	ND	ND	ND
1,3-Dichlorobenzene	ND	ND	ND
1,4-Dichlorobenzene	ND	ND	ND
Ethylbenzene	ND	ND	ND
Toluene	2	3	4
m/p-Xylene	ND	ND	ND
o-Xylene	ND	ND	ND

ND***indicates none detected at or above the method detection limit of 1 ug/L

PREIN & NEWHOF
Environmental Laboratory

Robert Erickson
Laboratory Director

3 of 3

PREIN & NEWHOF, P.C.
ENGINEERS — SURVEYORS — ENVIRONMENTAL & SOILS LABORATORIES

3260 Evergreen Drive, N.E.
Grand Rapids, Michigan 49505
616-364-7600
Telecopier 616-364-4222

CHAIN OF CUSTODY

CLIENT: Terra Environmental PROJECT NAME: City of Battle Creek PROJECT NO: _____
SAMPLING PERSONNEL: R. Douglass SAMPLING SITE: Sherman

	DATE	TIME	SAMPLE ID/DESCRIPTION	TYPE	COMP.	GRAB	NO. OF CONTAINERS	PARAMETERS	REMARKS
361	4/2/93	16:40	SB-6, 8'-10'	Soil		X	1	PNA, 8020	
362		16:55	SB-6, 13-15'	Soil		X	1	" "	
363		17:05	SB-6, 18-20	Soil		X	1	" "	
373		17:10	SB-6, 13-18	wtr		X	3	" "	
364		1800	SB-7, 3-5	Soil		X	1	" "	
365		1810	SB-7, 8'-10'	Soil		X	1	" "	
366		1820	SB-7, 13'-15'	Soil		X	1	" "	
367		18:25	SB-7, 18-20	Soil		X	1	" "	
374		18:30	SB-7, 13-18	wtr		X	3	" "	

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[illegible]	4/2/93	1840	[illegible]	4/2/93	1840						
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Method of Shipment:			Bill of Lading:		
[illegible]	4/6/93	1828									
№ 006334	Received for Laboratory by: (Signature)	Date:	Time:	Data Package Relinquished by Lab:	Date:	Time:	Data Received by: (Signature)	Date:	Time:		
	[illegible]	4/6/93	1828	[illegible]	4/6/93	[illegible]					

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2 of 3

PREIN & NEWHOF, P.C.
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3260 Evergreen Drive, N.E.
Grand Rapids, Michigan 49505
616-364-7600
Telecopier 616-364-4222

Results to: Rod Brown (Terra)
Bill to: City of Battle Creek

CHAIN OF CUSTODY

CLIENT: Terra Environmental PROJECT NAME: City of Battle Creek PROJECT NO:
SAMPLING PERSONNEL: R. Douglas SAMPLING SITE: Sherman

	DATE	TIME	SAMPLE ID/DESCRIPTION	TYPE	COMP.	GRAB	NO. OF CONTAINERS	PARAMETERS		REMARKS
352	4/2/93	13:05	SB-3, 18-20	Soil		x	1	PNA, 8020		
370		13:10	SB-3, 13'-18'	Wtr		x	3	"	"	Vial Labelled SB-3, 13-20 JCH 4/6/93
353		13:55	SB-4, 8'-10'	Soil		x	1	"	"	
354		14:00	SB-4, 13'-15'	Soil		x	1	"	"	
355		14:10	SB-4, 18-20	Soil		x	1	"	"	
371		14:15	SB-4, 13-18	Wtr		x	3	"	"	
356		15:10	SB-5, 3'-5'	Soil		x	1	"	"	
357		15:15	SB-5, 8'-10'	Soil		x	1	"	"	
358		15:20	SB-5, 13-15	Soil		x	1	"	"	
359		15:30	SB-5, 18-20	Soil		x	1	"	"	
372		15:35	SB-5, 13-18'	Wtr		x	3	"	"	
360		16:30	SB-6, 3'-5'	Soil		x	1	"	"	

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	4/2/93	1840	[signature]	4-3-93	1840						
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Method of Shipment:			Bill of Lading:		
[signature]	4/6/93	8:24									
№ 006328	Received for Laboratory by: (Signature)	Date:	Time:	Data Package Relinquished by Lab:		Date:	Time:		Data Received by: (Signature)	Date:	Time:
	[signature]	4/6/93	8:28	[signature]		4/28/93	9:00 AM				

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APR 30 '93 13:37 FROM TERRA-ENVIRONMENTAL PAGE.012

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Grand Rapids, Michigan 49505
616-364-7600
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Results to: Rod Brown (Terra)
Bill to: City of Battle Creek.

CHAIN OF CUSTODY

CLIENT: Terra Environmental PROJECT NAME: City of Battle Creek PROJECT NO: _____
SAMPLING PERSONNEL: R. Douglass SAMPLING SITE: Sherman

	DATE	TIME	SAMPLE ID/DESCRIPTION	TYPE	COMP	GRAB	NO. OF CONTAINERS	PARAMETERS	REMARKS
342	4/2/93	9:10	SB-1, 3'-5'	Soil		X	1	PNA, 8020	
343		9:20	SB-1, 8'-10'	Soil		X	1	" "	
344		9:30	SB-1, 13'-15'	Soil		X	1	" "	
345		9:40	SB-1, 18'-20'	Soil Water		X	1	" "	
346		10:40	SB-2, 3-5	Soil		X	1	" "	
347		10:45	SB-2, 8'-10'	Soil		X	1	" "	
348		10:50	SB-2, 13-15	Soil		X	1	" "	
349		11:05	SB-2, 18-20	Soil Water		X	1	" "	
368		11:15	SB-2, 13'-18'	Water		X	3	" "	
369		9:50	SB-1, 13'-18	Water		X	3	" "	
350		12:50	SB-3, 8'-10'	Soil		X	1	" "	
351		12:55	SB-3, 13'-15'	Soil		X	1	" "	

Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:
[signature]	4/2/93	1840	[signature]	4-2-93	1840						
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)	Date:	Time:	Method of Shipment:			Bill of Lading:		
[signature]	4/6/93	928									
Received for Laboratory by: (Signature)	Date:	Time:	Data Package Relinquished by Lab:	Date:	Time:	Data Received by: (Signature)	Date:	Time:			
[signature]	4/6/93	8:25	[signature]	4/6/93	[illegible]						

№ 006327

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APR 30 '93 13:36 FROM TERRA-ENVIRONMENTAL PAGE.011

terra
Environmental Corporation

45 Day Site Characterization Report

Prepared For:
Jane Parks
City of Battle Creek
123-151 West Michigan
Battle Creek, MI 49017

Site Location:
103 E. Michigan Ave
Battle Creek, MI 49017

Prepared By:

Terra Environmental Corporation
3708 Centennial Drive
Midland, MI 48642

Terra Project # 132-00862

January 22, 1993

Introduction

The City of Battle Creek (City) has retained the services of Terra Environmental Corporation (Terra) to provide assistance in delineating the spread of hydrocarbon contamination resulting from a confirmed release from a Leaking Underground Storage Tank System (LUST) located at 123-151 West Michigan Ave. Battle Creek, Calhoun County, Michigan. The USTs at this location were discovered during a demolition project and subsequently registered to the city of Battle Creek. The former contents of these tanks is unknown as is the purpose of the tanks. The tanks were constructed of steel and the sizes were as follows; 2-1000 gal., 2-500 gal. and 3-200 gallon.

The confirmed release was discovered during a demolition project when the tanks were exposed and a mineral spirit type odor was noticed being emitted from the exposed soils. The Michigan State Police Fire Marshall Division was notified of a confirmed release on December 10, 1992, via voice mail. The Remedial Investigation Work Plan proposed herein is being submitted on behalf of the City of Battle Creek pursuant to the Leaking Underground Storage Tank Act, P.A. 478 of 1988, as amended.

Site History

The site was the location of the OLD Hobble Site Area and was under demolition. The function of the tanks as they relate to the Hobble operation is unknown. As additional information is discovered about the Hobble operation it will be incorporated into subsequent reports.

Upon removal of the USTs and the source impacted soils, Terra collected nine (9) soil samples from the excavation side walls and floor. The samples were submitted for laboratory analysis of benzene, toluene, ethylbenzene and xylenes (BTEX), Polynuclear Aromatic Hydrocarbons (PNAs). A sample of tank residues was also collected and submitted for laboratory analysis of PCBs and TOX. The results of those tests are included in Appendix 1.

Analytical Data Review

In review of the analytical data sheets it is apparent that contamination exists at the subject site in excess of clean closure limits. Due to the elevated concentrations in several of the samples it is also apparent that not all of the source impacted soils have been removed. The work plan proposed herein shall complete the delineation of the spread of contamination.

Proposed Investigations

Terra proposes to advance a minimum of six (6) soil borings about the periphery of the initial excavation, boring locations are shown on Figure 1. The borings shall be completed using hollow stem drilling techniques with slit spoon samples being collected at five (5) intervals starting at three (3) feet below the ground surface, split spoon sampling shall continue until saturation is encountered. Upon reaching saturation the investigation methods shall be changed so as to install temporary monitoring wells, that will be developed and sampled.

Field Screening

Recovered soil samples shall be classified by Terra's field engineer/geologist with particular attention being paid for the presence of hydrocarbon contamination. All relevant observation and the soil descriptions shall be recorded on the soil boring logs.

Upon completing the visual inspection of the soils the engineer/geologist shall split the sample in half, with one half being placed into a clean glass jar, sealed and placed on ice pending possible laboratory submittal, the other half shall be placed into a clean glass jar, the opening sealed with Saran Wrap, the lid screwed on and the sample will be allowed to volatilize.

The lid will then be removed and the Saran Wrap pierced with the tip of an photoionization device H-Nu). Observed H-Nu readings shall be recorded on the soil boring logs. If elevated readings are observed, the boring will offset twenty (20) feet and the same drilling techniques as previously described will be utilized. This process will continue until field screening indicates that all samples are non-detectable.

Monitoring Well Placement/Construction

In the event that groundwater is encountered a minimum of three (3) monitoring wells shall be installed in a triangular manner to facilitate flow direction determination. Upon completion the wells shall be surveyed, using a site established bench mark, and the static levels measured.

A minimum of one (1) well shall be installed so as to straddle the zone of highest contamination. Additional monitoring wells shall be installed, one (1) up-gradient and one (1) down-gradient of the plume to measure movement. Monitoring wells shall be installed in accordance with MDNR's Hydrogeologic Study Guidance Document, dated November 1990.

Auger cuttings

Auger cuttings generated during the implementation of this work plan shall be placed into 17H DOT spec drums. A representative sample of the cuttings shall be collected and submitted for laboratory analysis for waste classification. Upon receipt of the laboratory data, disposal authorization will be obtained.

Equipment Decontamination

All sampling tools shall be scrubbed with a hot detergent solution and triple rinsed between uses. All drilling tools shall be cleaned with hot, high pressure water between soil boring locations. Decontamination fluids shall be stored in 17H DOT spec drums pending disposal approval.

Project Analytical Methods

All samples submitted for laboratory analysis shall be analyzed for benzene, toluene, ethylbenzene and xylenes (BTEX), Polynuclear Aromatic Hydrocarbons (PNAs) and Scan 601.

Interim Corrective Action

The City of Battle Creek proposes to address the remaining contamination in two (2) phases, the first being to excavate and dispose of the remaining source impacted soils. Closure sampling shall be completed on the remediated area.

If clean closure cannot be achieved by the excavation of the remaining contamination the work plan purposed in the 45 day Remedial Investigation Work Plan shall be implemented.

Project Schedule

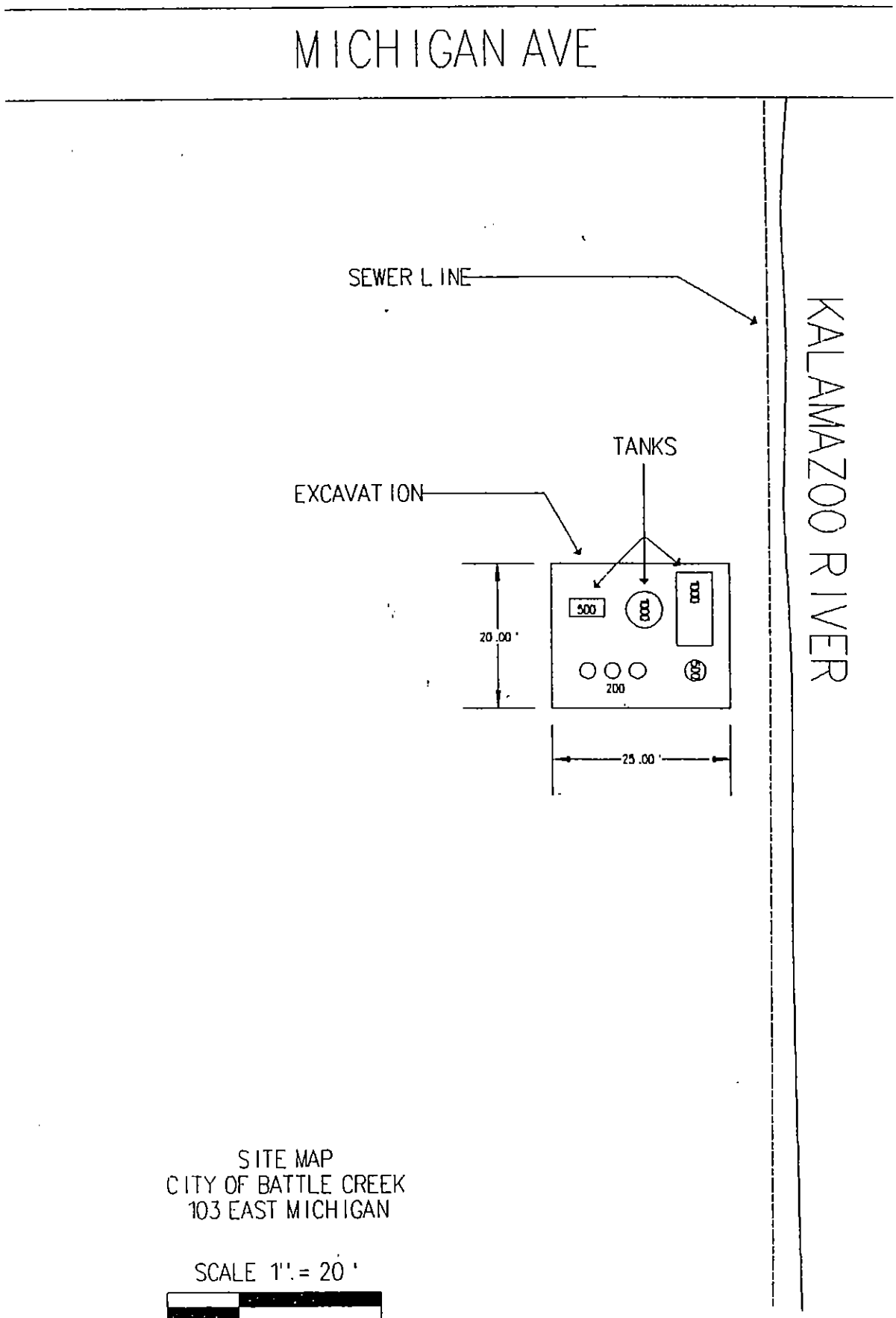
The excavation and disposal of the source impacted soils can begin within five (5) days of receipt of MDNR's approval to proceed. The remediation of these soils is anticipated to take 3-4 days to complete, with laboratory data being available in fourteen (14) days.

The remedial investigation can commence within fifteen (15) days of receipt of MDNR's approval of the work plan. Three to four days are being planned to complete the field investigation. Laboratory data will be available for review in fourteen days of submittal. A final Corrective Action Plan report will be available for MDNR review in thirty days of our receipt of laboratory data.

This report was prepared by

Eugene W. Boyce

Sr. Project Manager

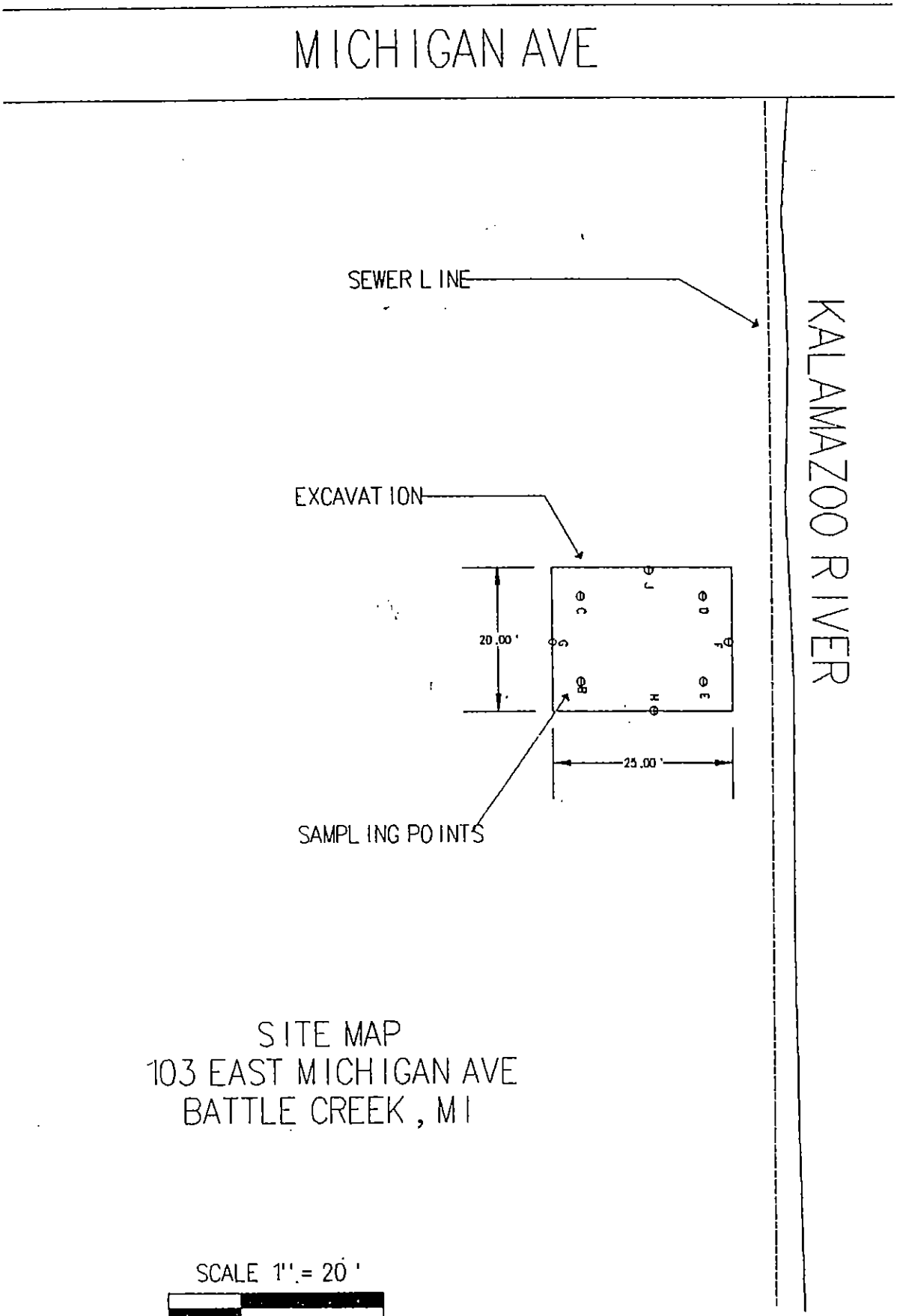


SITE MAP
CITY OF BATTLE CREEK
103 EAST MICHIGAN

SCALE 1" = 20'

0' 10' 30'

MAP DRAWN BY:
MARK SIEGMAN
TERRA ENVIRONMENTAL CORP.



SITE MAP
103 EAST MICHIGAN AVE
BATTLE CREEK, MI

MAP DRAWN BY:
MARK SIEGMAN
TERRA ENVIRONMENTAL CORP.

SCALE 1" = 20'

0' 10' 30'

terra
Environmental Corporation

December 29, 1992

Ms. Lee Carter
MDNR, ERD
Jackson District Office
301 East Louis Glick Building
Jackson, Michigan 48201

Terra # 132-00862

Re: 20-Day Initial Abatement Report

Dear Ms. Lee Carter:

Enclosed you will find two (2) copies of a 20-Day Initial Abatement Report being submitted on behalf of Jane Parks, City of Battle Creek, site location at 103 E. Michigan Avenue, Battle Creek, Michigan.

The enclosed 20 day report is being submitted pursuant to the Leaking Underground Storage Tank Act P.A. 478 of 1988 as amended.

If you have any questions regarding this report or require any additional information regarding this site please call our office at (517) 496-3346.

Best regards,
Terra Environmental Corporation

Mark A. Siegman

Mark Siegman
Geologist

P.O. Box 19160 • Kalamazoo, MI 49019-0160 • In Michigan: 1-800-632-4176 • Other States: 1-616-375-9595
GRAND RAPIDS • KALAMAZOO • MIDLAND

COPY

20 Day Initial Abatement Report

Prepared For:
Jane Parks
City of Battle Creek
123-151 West Michigan
Battle Creek, MI 49017.

Site Location:
103 E Michigan Ave
Battle Creek, MI 49017

Prepared by:

Terra Environmental Corp.
3708 Centennial Drive
Midland, MI 48642

Terra Project # 132-00862

12-29-92

INTRODUCTION

Terra Environmental Corporation (Terra) HAS BEEN retained by the City of Battle Creek to remove seven (7) underground storage tanks (USTs) that were discovered during a demolition project at 103 East Michigan, the contact person for the City of battle Creek is Jane Parks, 123-151 West Michigan, Battle Creek, MI 49017.

On December 8, Terra inspected the tanks and registered them with the Fire Marshal's office. The following tanks were found at the site:

2 - 1,000 [illegible]

2 - 500 [illegible]

3 - [illegible]

The product that was stored in the tanks is u[illegible]. The tank piping was missing and may have been removed during demolition. A copy of the registration form is included in appendix A.

EXCAVATION / UST REMOVAL

The tanks were excavated on December 10,1992. While excavating, soils were encountered that had a strong mineral spirit odor. A confirmed release was reported to the Fire Marshal's office on December 10, 1992.

After removing the tanks, the excavation was sampled per VSR guidelines, lined with a 6 mil plastic liner and backfilled with the excavated contaminated soil.

The final size of the excavation was 25 feet long, 20 feet wide, and 7 feet deep.

FREE PRODUCT

Free Product was not encountered during the excavation.

At the request of the City of Battle Creek, Terra inspected the Kalamazoo River for the presence of a plume from the buried tanks. Terra discovered that the suspected plume at the river bank was actually cutting slag from the demolition process.

Explosive vapors were not found in near by sumps.

TANKS

The three 200-gallon tanks, with conical bottoms, were found in a vertical position in the excavation. The bottoms of the tanks contained many rust holes.

One of the two 500-gallon tanks was also vertically positioned in the excavation. The first tank contained approximately 100 gallons of unknown liquid and the second tank contained approximately 200 gallons. Both tanks contained several small pin holes.

One of the two 1,000-gallon tanks was positioned vertically in the excavation. One tank contained approximately 500 gallons of unknown liquid and the second tank contained approximately 200 gallons of fluid. Both tanks possessed several small pin holes.

The tanks were pumped dry, cleaned, cut in half, and transported to a scrap yard for disposal. The unknown tank liquids and tank wash water (approximately 1,100 gallons) are stored on site in a poly tank and will be to an appropriate disposal facility once approval is granted.

SAMPLE COLLECTION AND ANALYSIS

Four sidewall samples and 4 floor samples were collected in 16 oz glass wide mouth jars with Teflon lined lids. The 4 sidewall samples were collected at a depth of 4 feet. The sample jars were labeled, sealed, placed in an iced cooler chest, transported to the selected laboratory, and analyzed for PNA and BTEX.

A sample from the tank liquid storage tank was collected, labeled, sealed, placed in an iced cooler chest, transported to the selected laboratory, and analyzed for PCB and TOX analysis.

Laboratory results will be submitted with the 45-day report.

If you have any questions regarding this report please feel free to contact our office.

Report prepared by:

Mark A. Siegman

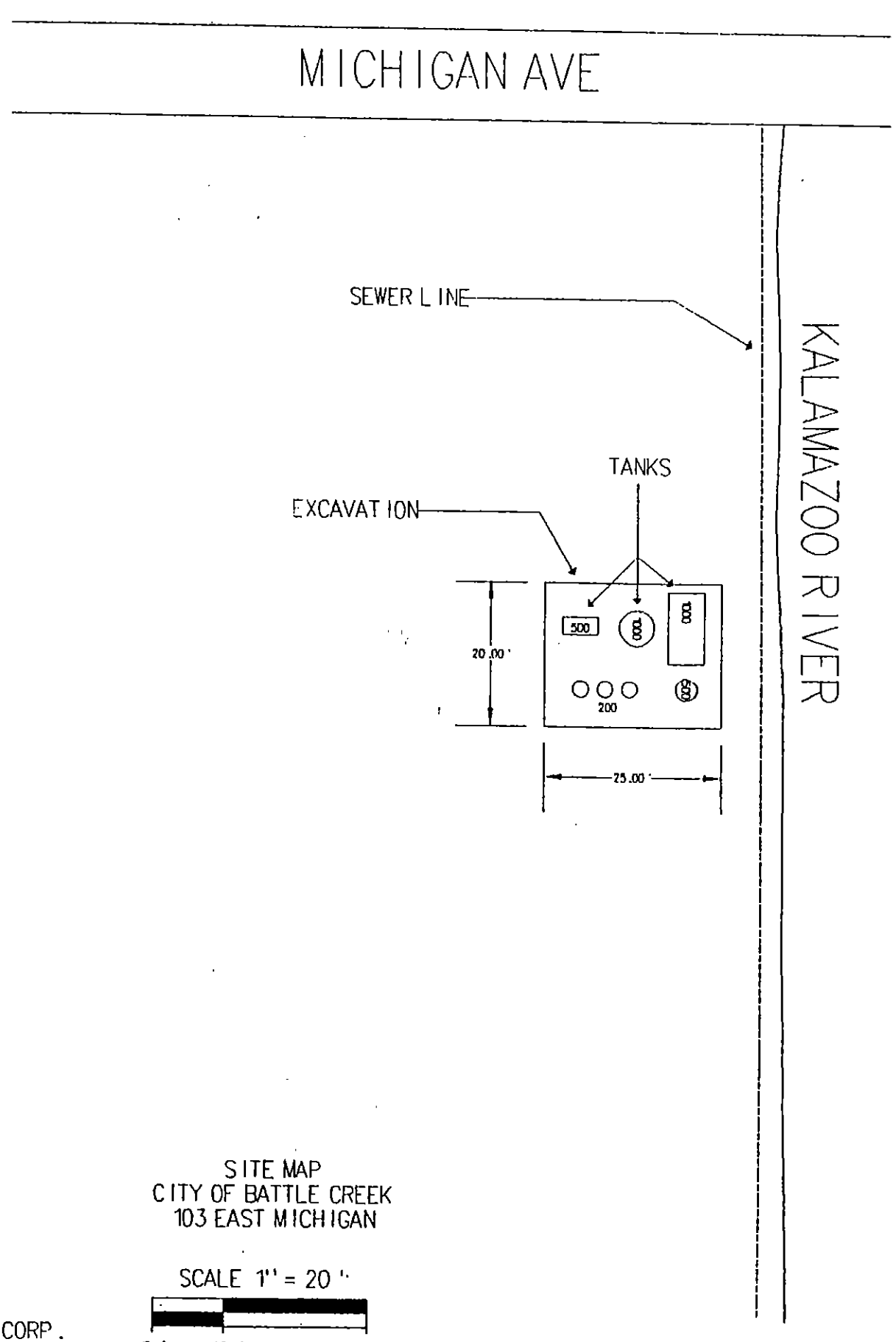
Terra Environmental Corp.

Report reviewed by:

Gene Boyce

Project Manager

Terra Environmental Corp.

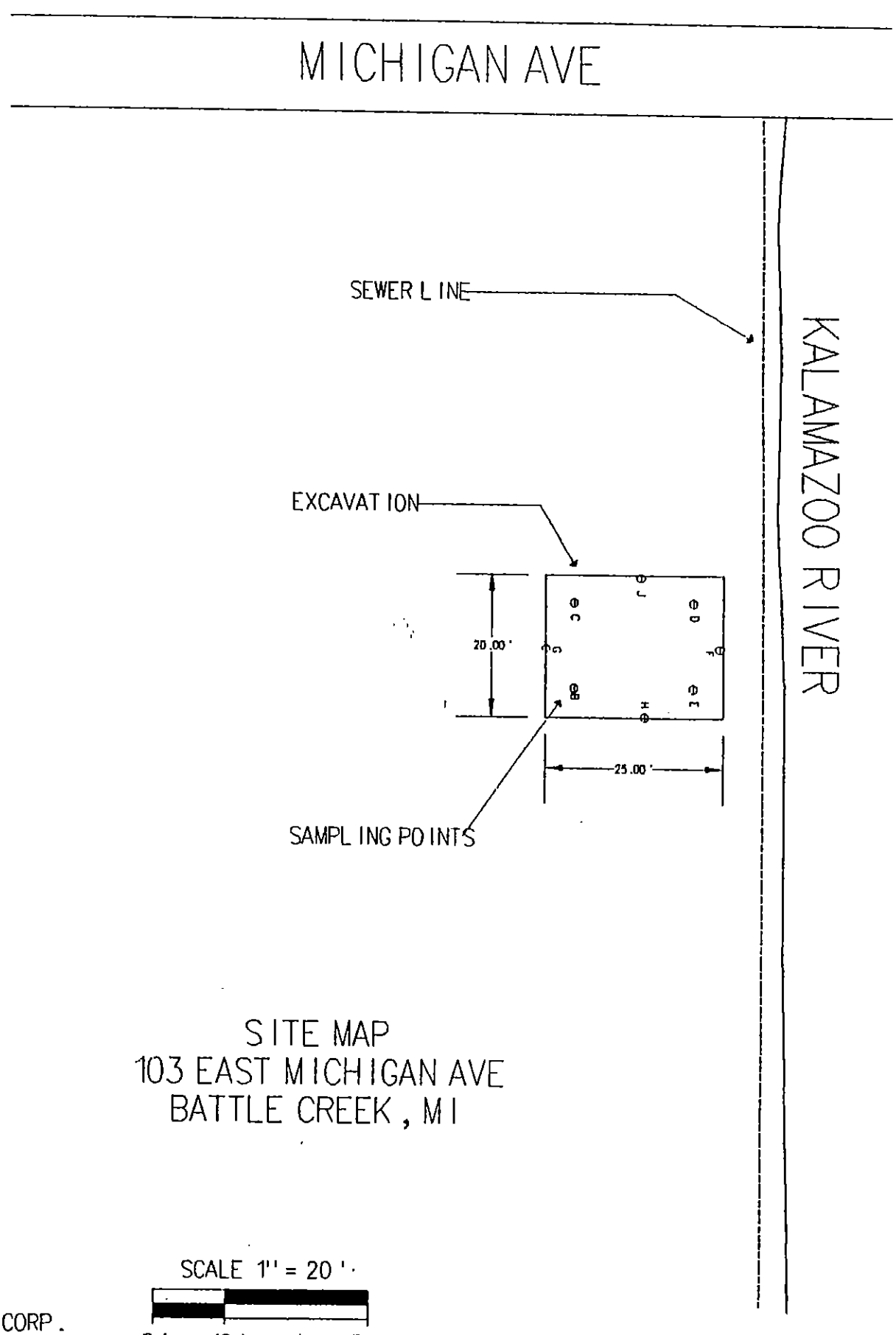


SITE MAP
CITY OF BATTLE CREEK
103 EAST MICHIGAN

SCALE 1" = 20'

0' 10' 30'

MAP DRAWN BY:
MARK SIEGMAN
TERRA ENVIRONMENTAL CORP.



SITE MAP
103 EAST MICHIGAN AVE
BATTLE CREEK, MI

MAP DRAWN BY:
MARK SIEGMAN
TERRA ENVIRONMENTAL CORP.

SCALE 1" = 20'

0' 10' 30'

terra
Environmental Corporation

45 Day Remedial Investigation Work Plan

Prepared For:
[illegible] Park[illegible]
[illegible] Batt[illegible] [illegible]eek
[illegible] W[illegible] [illegible]chi[illegible]
[illegible]

[illegible]
[illegible] Ave
[illegible]

Prepared By:

Terra Environment[illegible]
3708 Centennial [illegible]
Midland, MI 48642

Terra Project # 132-00862

Introduction

The City of Battle Creek (City) has retained Terra Environmental Corporation (Terra) to provide assistance in completing the 45 Day Site Characterization Report as it pertains to a Leaking Underground Storage Tank system (LUST) located at the Old Hebble Site Area 123-151 W. Michigan Ave., Battle Creek, Calhoun County Michigan.

[illegible] to store unknown materials. Mineral spirit type odors were noticed being emitted from the exposed soils during the removal of the USTs. The Michigan State Po[illegible] (MSPFMD) was notified of a confirmed release on December 10, 1992. The site characterization information contained herein is being submitted on behalf of the the City of Battle Creek pursuant to the Leaking Underground Storage Tank Act P.A. 478 of 1988, as amended.

Site Location/Land Use

The Old Hebble Site is located in the center of the City of Battle Creek, Calhoun County, Michigan, adjacent to highways Business I-94, I-194 and US-37. Land use surrounding the Old Hebble Site facility is primarily commercial properties. The 1990 US Census for the City of Battle Creek is listed at 53540.

The Old Hebble site and surrounding area rely on the Battle Creek Municipal Water system for potable water. There are no known drinking water wells in close proximity to the subject site. Sanitary wastes are disposed of through the City of Battle Creek's waste water treatment system. Storm run-off water is directed away from the site via subsurface conduits.

Site Hydrogeology

The Old Hebble Site is located adjacent to the Kalamazoo River, The surface flow of water is toward the Kalamzoo River depending on [illegible] y. The flow of groundwater mimics the ground surface and actual flow direction and velocities can not be determined without installation of groundwater monitoring wells. Monitoring wells are proposed to be installed as part of the Remedial Investigation Work Plan that is included with this 45 Day Report.

Regional Geology

The surficial geology of the Battle Creek area is generally described as glacial outwash along the ancient river (Kalamazoo) bed. Soils examined during the excavation of source impacted soils are described as medium to coarse sands and gravels. In order to establish groundwater flow, a minimum of three (3) monitoring wells will be installed.

The physiography of Calhoun County is described as rolling plains to hilly uplands. The topography of the immediate area is flat to gently sloping toward the adjacent rivers.

Climatological Conditions

Calhoun County is located in the southern half of lower Michigan where the climate is referred to as cool and humid. The prevailing winds are from the southwest and help moderate the counties weather due to the lake effect. Annual precipitation is 32" - 34" per year.

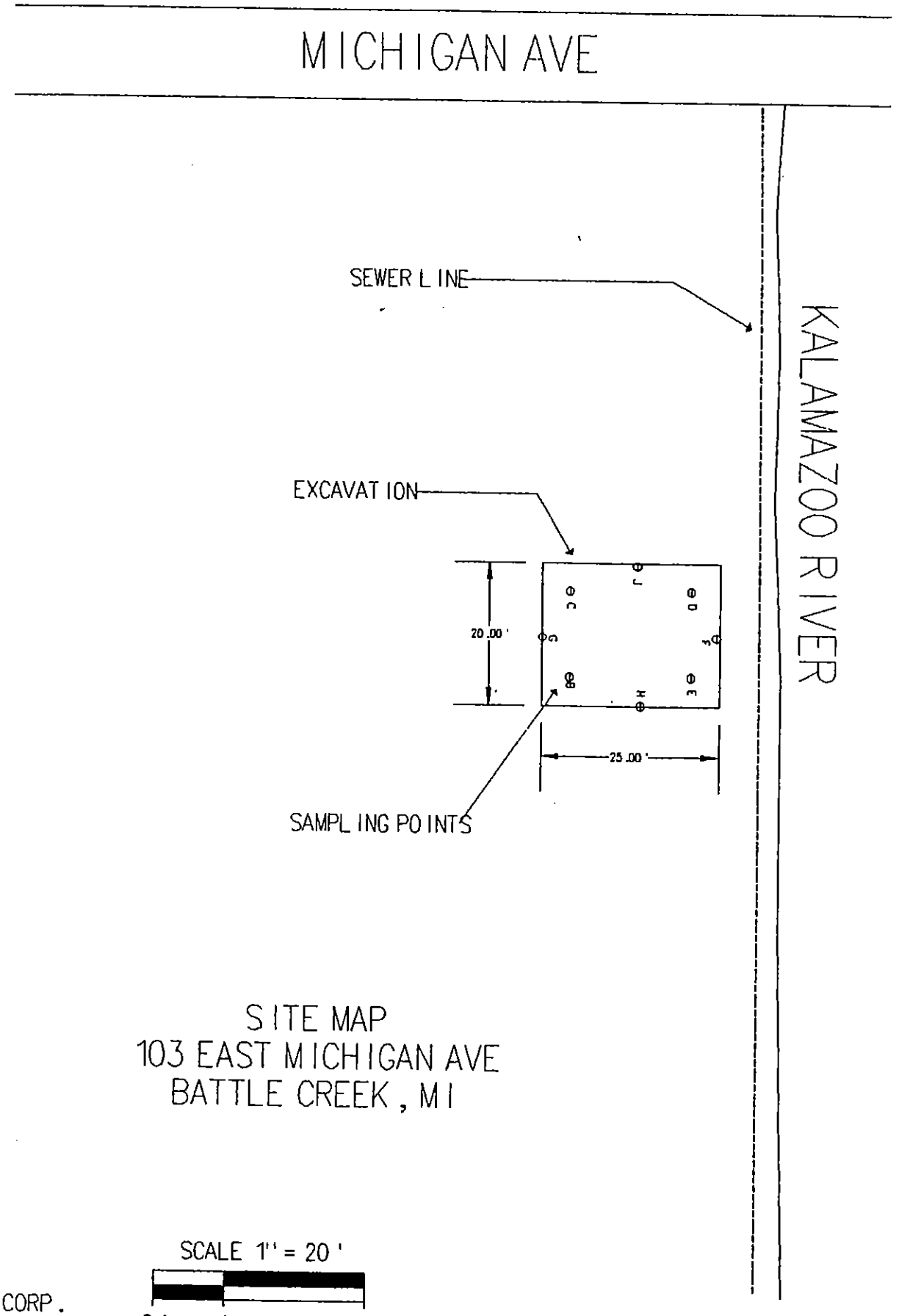
Free Product Recovery

Free product has not been discovered at the Old Hebble Site Area.

This report was prepared by

Eugene W. Boyce

Sr. Project Manager



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BATTLE CREEK, MI

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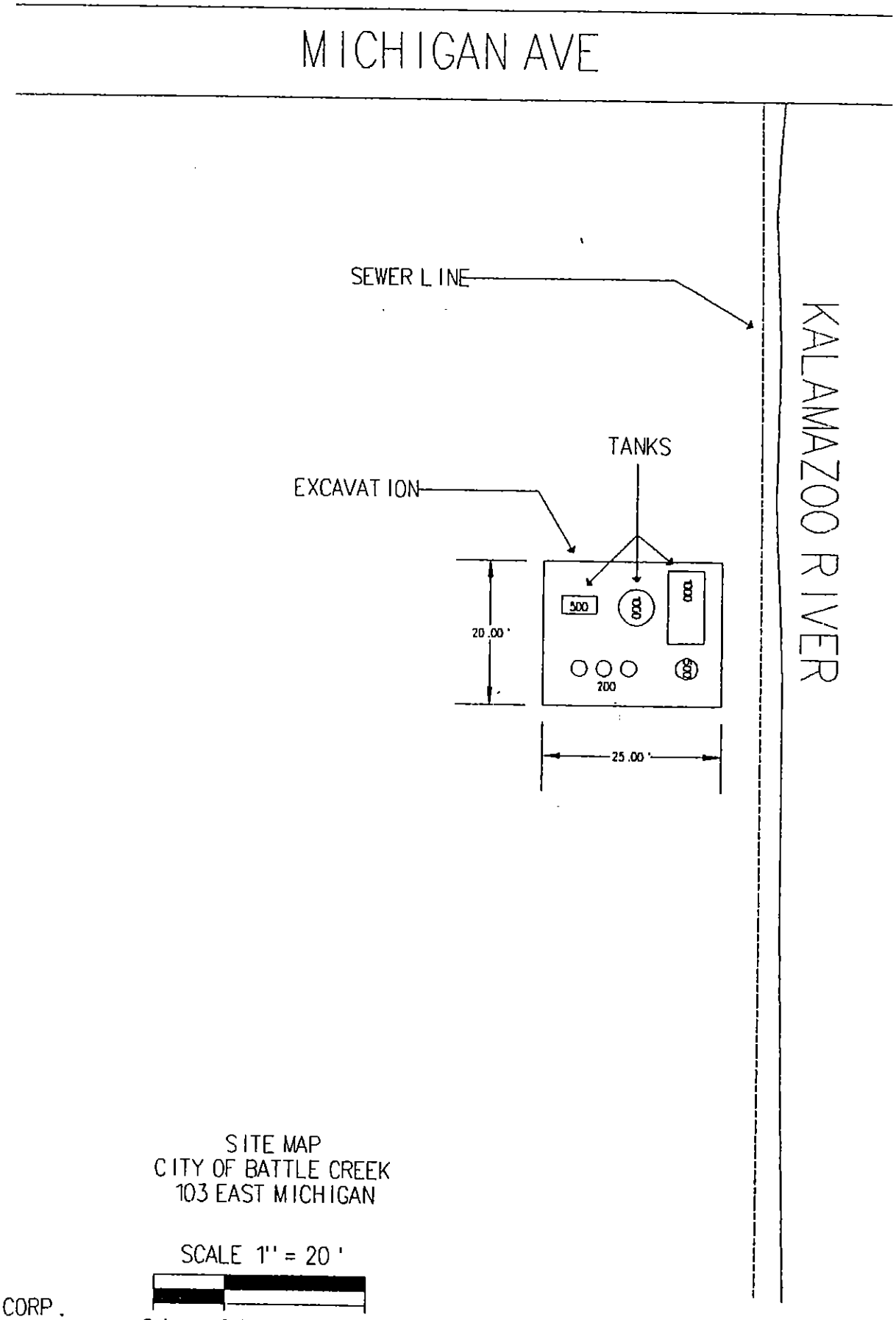
0' 10' 30'



SITE MAP
CITY OF BATTLE CREEK
103 EAST MICHIGAN

SCALE 1" = 20'

0' 10' 30'

MAP DRAWN BY:
MARK SIEGMAN
TERRA ENVIRONMENTAL CORP.

PREIN & NEWHOF, P.C.

ENGINEERS — SURVEYORS — ENVIRONMENTAL & SOILS LABORATORIES

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MICHAEL S. FULLER, P.E.
PHILIP C. GLUPKER, P.E.
JAMES A. COOK, P.E.
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ROBERT J. REIMINK, P.E.
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LARRY D. STEKOUWER, P.E.
BARBARA E. MARCZAK, P.E.
CATHERINE A. PREIN, P.E.
DENNIS R. COLE, P.E.
ROBERT F. GOODHEART, P.E.
KENNETH A. BOSMA, P.E.

January 8, 1993
92245L

Mr. Pat Taplin
Terra Environmental Corporation
P.O. Box 19160
Kalamazoo, MI 49019

Re: Terra [illegible]
Terra Project: City of Battle Creek, Hobble Site
Chain of Custody # 1161
Samples received 12/18/92

LABORATORY RESULTS

92201 Sample:	B	C	D	E
Lab Log #	10769	10770	10771	10772
Total Solids,%	86	84	88	89

Method 8310: Polynuclear Aromatic Hydrocarbons, ug/L

Dilution factor	1	1	1	5
Acenaphthene	ND*	ND	ND	11,000
Acenaphthylene	ND	ND	ND	7,500
Anthracene	ND	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	ND	4,600
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND	ND	4,000
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	ND	ND
Benzo(ghi)perylene	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	ND	3,300
Fluoranthene	ND	ND	ND	ND
Fluorene	ND	ND	ND	1,400
Naphthalene	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	2,900
Pyrene	ND	ND	ND	6,200

ND* indicates none detected at or above the method detection limit of 250 ug/Kg multitplied by the dilution factor
**Coelute

City of Battle Creek-Hobble Site
1/8/93
Page 2

92201 Sample:	B	C	D	E
Lab Log #	10769	10770	10771	10772
BTEX, reported as ug/Kg				
Benzene	ND***	ND	ND	ND
Ethylbenzene	248	206	ND	ND
Toluene	ND	ND	ND	ND
m/p-Xylene	735	670	ND	ND
o-Xylene	ND	ND	ND	ND

ND***indicates none detected at or above the method detection limit of 5 ug/Kg

City of Battle Creek-Hobble Site
1/8/93

92201 Sample:	F	G	H	J
Lab Log #	10773	10774	10775	10776
Total Solids,%	89	91	91	89

Method 8310: Polynuclear Aromatic Hydrocarbons,ug/L

Dilution factor	1	1	3	1
Acenaphthene	ND*	ND	3,100	ND
Acenaphthylene	ND	ND	2,100	ND
Anthracene	ND	ND	ND	ND
Benzo(a)anthracene & Chrysene**	ND	ND	970	ND
Benzo(a)pyrene & Dibenzo(a,h)anthracene**	ND	ND	1,100	ND
Benzo(b)fluoranthene & Benzo(k)fluoranthene**	ND	ND	ND	ND
Benzo(ghi)perylene	ND	ND	ND	ND
Indeno(1,2,3-cd)pyrene	ND	ND	1,100	ND
Fluoranthene	ND	ND	ND	ND
Fluorene	ND	ND	ND	ND
Naphthalene	ND	ND	ND	ND
Phenanthrene	ND	ND	ND	ND
Pyrene	ND	ND	1,000	ND

ND* indicates none detected at or above the method detection limit of 250 ug/Kg multiplied by the dilution factor
**Coelute

BTEX,reported as ug/Kg

Benzene	ND***	ND	ND	ND
Ethylbenzene	ND	ND	ND	ND
Toluene	ND	ND	ND	ND
m/p-Xylene	ND	ND	ND	ND
o-Xylene	ND	ND	ND	ND

ND***indicates none detected at or above the method detection limit of 5 ug/Kg

City of Battle Creek-Hobble Site
1/8/93
Page 4

Sample:	92201-A
Lab Log #	10768
PCB's,mg/Kg	
PCB-1016	<0.33
PCB-1221	<0.33
PCB-1232	<0.33
PCB-1242	<0.33
PCB-1248	<0.33
PCB-1254	<0.33
PCB-1260	<0.33
TOX,mg/L	
Total Organic Halogens as Chlorine	269

PREIN & NEWHOF
Environmental Laboratory

Robert Erickson
Laboratory Director

5

SOIL INVESTIGATION

H.B. SHERMAN MANUFACTURING COMPANY
207 WEST JACKSON STREET
BATTLE CREEK, MICHIGAN 49016

DECEMBER 1991

SNELL ENVIRONMENTAL GROUP, INC.

SNELL ENVIRONMENTAL GROUP, INC.

December 3, 1991

Ms. Jane Parks
Purchasing Agent
City of Battle Creek
P.O. Box 1717
Battle Creek, Michigan 49016

RE: Soil Investigation
H.B. Sherman Manufacturing Company
207 West Jackson Street
Battle Creek, Michigan 49016

Dear Ms. Parks:

Transmitted herewith are two copies of the soil investigation for the above referenced site. The report discusses the findings of the investigation and provides recommendations. Soils within and surrounding the tank basins are contaminated with petroleum products. As indicated in the report we recommend further study of the areal extent of soil contamination and determining groundwater contamination.

If you have any questions regarding the investigation or need additional information, do not hesitate to contact this office at (517) 374-6800. Thank you for the opportunity to provide these services to the City of Battle Creek.

Sincerely,

Curtis G. Roebuck
Geologist

Timothy J. Miller, CPG
Sr. Geologist

CGR/TJM/skv

1120 May Street, Lansing, Michigan 48906 • (517) 374-6800 • FAX (517) 374-7390

TABLE OF CONTENTS

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2.0	SOIL INVESTIGATION METHODOLOGY	1
3.0	SOIL INVESTIGATION RESULTS	3
4.0	DISCUSSION OF RESULTS	5
5.0	RECOMMENDATIONS	5

FIGURES

FIGURE 1 - BORING LOCATION PLAN 2

TABLES

TABLE 1 - FIELD ANALYSIS RESULTS 3

TABLE 2 - ANALYTICAL RESULTS 4

ATTACHMENTS

ATTACHMENT A - LABORATORY ANALYTICAL RESULTS

1.0 INTRODUCTION

In September 1991, Snell Environmental Group (SEG), Inc. submitted a 45-Day Report pursuant to PA 478 for the H. B. Sherman site in Battle Creek, Michigan. Outlined within this report was an additional soil investigation which included soil borings in the vicinity of the former underground storage tanks (USTS) and laboratory analysis of soil samples.

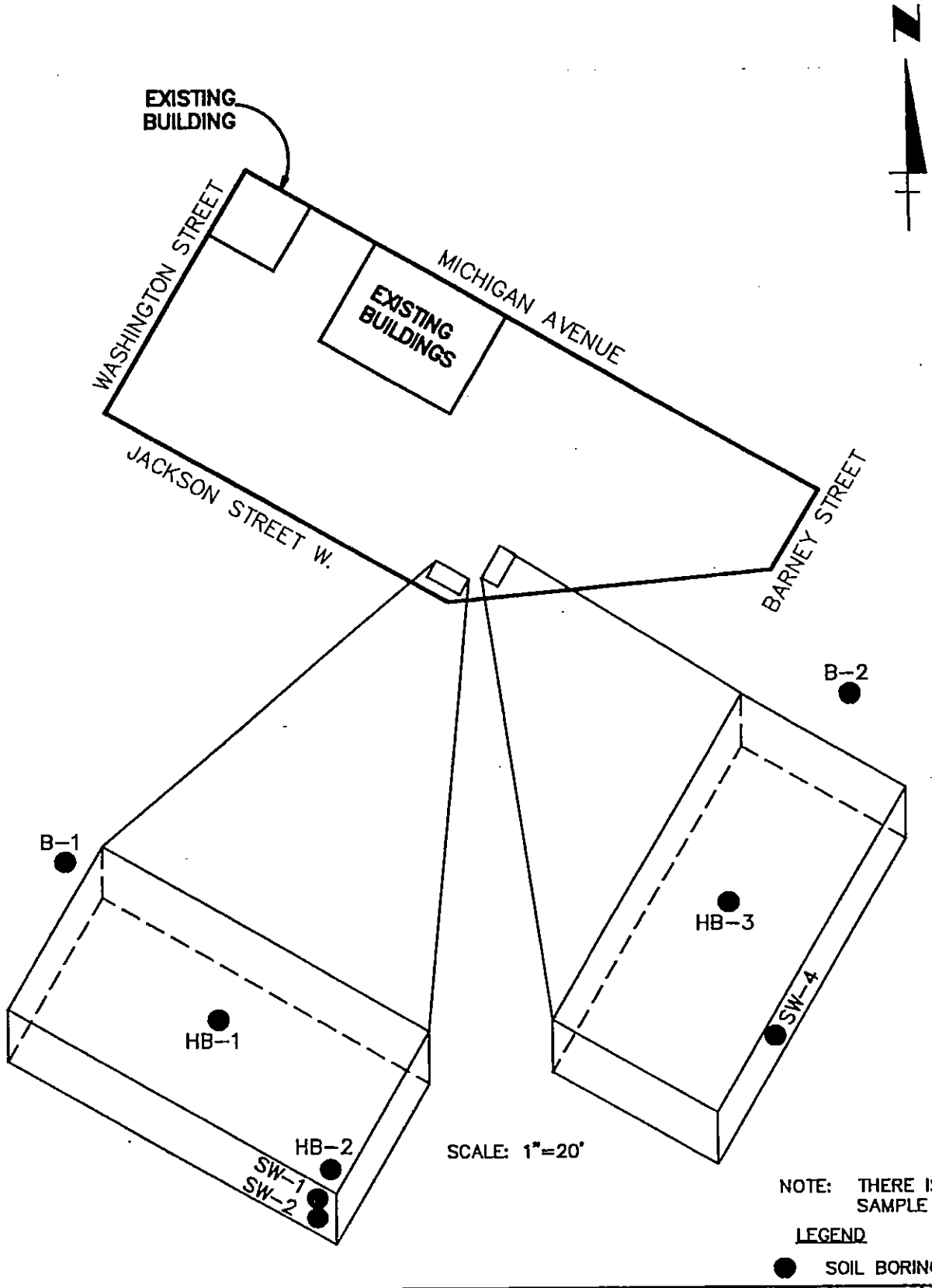
This report serves to describe the field methodologies, present analytical data and discuss the findings of the soil investigation.

2.0 SOIL INVESTIGATION METHODOLOGY

On October 24, 1991, SEG drilled two borings (B-1 and B-2) in the vicinity of the former USTS. Boring locations are depicted in Figure 1. The south and east sides of the former USTS were inaccessible by the drill rig. The borings were advanced using hollow stem augers powered by a truck-mounted drill rig. Boring B-1 was drilled to a depth of 13.0 feet below grade, at which depth a rock was encountered and the boring terminated. Boring B-2 was drilled to a depth of 15 feet. Split-spoon samples were collected at 2.5 foot intervals and field analyzed for organic vapors using a photoionization detector (PID). Laboratory samples were collected at 8.5-10.0 feet and 12.5-13.0 feet from B-1 and 8.5-10.0 feet, and 13.5-15.0 feet from B-2. The samples were analyzed for EPA methods 8020 (BTEX) and 8270 (PNA) The drilling equipment was steam-cleaned and rinsed in accordance with proper decontamination procedures. Split-spoons were decontaminated with a solution of deionized water and Alconox and thoroughly rinsed with deionized water between samples.

On October 25, 1991, four hand auger borings were drilled in the vicinity of the west former UST. Borings HB-1 and HB-2 were augered vertically through the basin floor. Borings SW-1 and SW-2 were side wall borings augered horizontally through the south side wall. Boring locations are depicted in Figure 1. Borings in the vicinity of the east former UST were not possible due to the basin being filled with approximately 1-foot of water. Each boring was advanced using a stainless steel hand-auger. Boring HB-1 was advanced to 6-feet below the basin floor. Boring HB-2 was advanced one foot below the excavation floor at which depth water was encountered. Boring HB-2 grade is approximately 4-5 feet below HB-1 grade. Boring SW-1 was advanced 1.5 feet horizontally into the south side wall at a depth of 3-feet below grade. Boring SW-2 was advanced 4-feet horizontally into the south side wall at a depth of 8-feet below grade (approximately level with the basin floor). Soil samples were collected every 2.5 feet and field analyzed with a PID for organic vapors. Laboratory samples were collected at 3.0-3.5 feet and 5.0-5.5 feet in boring HB-1, 0.0-1.0 feet in boring HB-2, 1.0-1.5 feet horizontally in boring SW-1 and 1.0-1.5 feet and 3.0-3.5 feet horizontally in boring SW-2. Sampling equipment was decontaminated as previously described for the split-spoons.

On November 6, 1991, the collected water within the east basin was pumped into the west basin by Battle Creek City Water Department. On November 8, 1991, two hand augured borings (HB-3 and SW-4) were drilled in the basin using procedures previously described. Boring locations are depicted in Figure 1. Boring HB-3 was advanced 3-feet below the floor of the basin. From approximately 0.5 feet to 2.5 feet below the basin floor, the soil was saturated with water. Below 2.5 feet an unsaturated silty clay layer was encountered. Boring SW-4 was advanced 5-feet horizontally into the east side wall 7-feet below grade (approximately level to the basin floor). Laboratory samples were collected at 0.0-0.5 feet and 2.5-3.0 feet in boring HB-3 and 1.5-2.0 feet and 4.5-5.0 feet horizontally in boring SW-4.



NOTE: THERE IS NO SW-3 SAMPLE LOCATION

LEGEND

● SOIL BORING LOCATION

SNEL ENVIRONMENTAL GROUP, INC. ENGINEERS LANDSCAPE ARCHITECTS, SURVEYORS	HB SHERMAN SITE BATTLE CREEK, MICHIGAN	BORING LOCATION PLAN	SCALE: 1"=200'
			FIGURE 1

Sampling equipment was decontaminated as previously described for the split-spoons.

3.0 SOIL INVESTIGATION RESULTS

Soil samples collected during the investigation indicated the general lithology of the study area to be dark brown, silty/clayey sand to a depth of approximately 8.5 feet below grade which were underlain by a greenish-gray, silty/sandy clay to a depth of about 15 feet below grade. Groundwater was not encountered in borings B-1 and B-2. Boring B-1 was moist from approximately 6.0 feet to 8.5 feet below grade. Borings HB-1, HB-2, and HB-3 encountered water saturated soil conditions around 7 feet to 8 feet below grade. In boring HB-3 the water saturated layer was underlain by the silty/sandy clay which appeared to be dry at approximately 9 to 10 feet below grade.

Soil samples were analyzed in the field for organic vapors using a PID. Readings in parts per million ranged from 0 to 27.1. Results of field analysis are provided in Table 1.

TABLE 1
FIELD ANALYTICAL RESULTS

Boring	Depth (Ft.)	PID Result
B-1	1.0-2.5	0 ppm
	3.5-5.0	0 ppm
	6.0-7.5	0 ppm
	8.5-10.0	1.7 ppm*
	12.5-13.0	0 ppm*
B-2	1.0-2.5	0 ppm
	3.5-5.0	0 ppm
	6.0-7.5	0 ppm
	8.5-10.0	21.2 ppm*
	11.0-12.5	0.7 ppm
	13.5-15.0	27.1 ppm*
HB-1	1.0-1.5	0.7 ppm
	3.0-3.5	7.3 ppm*
	5.0-5.5	16.2 ppm*
HB-2	0.0-1.0	0.7 ppm*
HB-3	0.0-0.5	0.0 ppm*
	2.5-3.0	16.1 ppm*
SW-1	1.0-1.5	0.7 ppm
SW-2	1.0-1.5	22.0 ppm*
	3.0-3.5	25.0 ppm*
SW-4	1.5-2.0	1.7 ppm*
	3.0-3.5	1.4 ppm
	4.5-5.0	0.7 ppm*

* Soil Samples Laboratory Analyzed

Based upon high PID readings and boring termination depth, samples were collected for laboratory analysis. Samples chosen for laboratory analysis are asterisk in table 1. Each sample was analyzed for BTEX and PNA's. Provided below in Table 2 is a summary of the laboratory analytical results. Actual laboratory reports are included as an attachment to this report.

TABLE 2
ANALYTICAL RESULTS

Location	Parameter	Result (ug/l)
B-2/8.5'-10.0'	Total Xylene	13
	Acenaphthene	700
	Fluorene	930
	Phenanthrene	350
	Anthracene	410
	Pyrene	340
	Benzo (a) anthracene	370
	Chrysene	400
B-2/13.5'-15.0'	Benzene	38
	Acenaphthene	660
	Fluorene	390
	Phenanthrene	550
	Anthracene	640
	Fluoranthene	1300
HB-1/3'	Ethylbenzene	12
	Total Xylene	35
	Acenaphthene	2200
	Fluorene	1900
	Phenanthrene	3000
	Anthracene	3500
	Fluoranthene	3000
HB-1/5'	Benzene	32
	Ethylbenzene	49
	Total Xylene	40
	Naphthalene	2900
	Acenaphthene	4100
	Fluorene	4100
	Phenanthrene	7100
	Anthracene	8200
	Fluoranthene	3100
HB-2/1'	Fluoranthene	2300
	Benzo (a) anthracene	2000
	Chrysene	2200
SW-2/3'	Benzene	29
	Ethylbenzene	110
	Total Xylene	153
	Naphthalene	4200
	Acenaphthene	7400
	Fluorene	11000
	Phenanthrene	19000
	Anthracene	27000
	Fluoranthene	11000
	Pyrene	4700
HB-3/0'-0.5'	Ethylbenzene	28
HB-3/2.5'-3.0'	Total Xylene	122
	Phenanthrene	6700
	Anthracene	7800
	Benzo (a) anthracene	5400
	Chrysene	5900

4.0 DISCUSSION OF RESULTS

The field PID analyses indicated suspected contamination in borings; B-2, HB-1, HB-3 and SW-2 based upon elevated readings. Laboratory analyses of soil samples collected from each boring confirmed petroleum contamination primarily from polynuclear aromatic hydrocarbons at the site. The compounds identified are typically associated with diesel fuel and/or heating oils. The contamination appears to have migrated beyond the tank basins to the northeast and off-site to the south into the West Jackson Street Right-of-Way based upon the laboratory analytical results from borings B-2 and SW-2. The vertical extent of the contamination is at least 15 feet below grade in boring B-2 which is the deepest boring.

5.0 RECOMMENDATIONS

SEG recommends an additional 4-6 borings be drilled at the site to determine the areal extent of soil contamination. We also recommend drilling two additional borings near the areas of known contamination to depths greater than 15 feet below grade to delineate the vertical extent of contamination and determine groundwater depth. Upon defining the limits of contamination, SEG can develop a Corrective Action Plan to remediate the site.

ATTACHMENT A

LABORATORY ANALYTICAL RESULTS

SEG LABORATORIES, INC.

MR. PETER F COLE
SEG ENGINEERS & CONSULTANTS
1120 MAY STREET
LANSING, MICHIGAN 48906

Lab Number: SE01139-1
Page 1
PROJECT: NONE GIVEN
Report Date: 12 NOV 91

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED DATE/TIME	RECEIVED
B-1 8.5-10.0' HB SHERMAN BLDG	Soil	24 OCT 91/14:20	25 OCT 91

CONSTITUENT	RESULT	*D.L.	UNITS	METHOD
PURGEABLE AROMATICS				
Benzene	<10	10	ug/kg	EPA 8020
Toluene	<10	10	ug/kg	EPA 8020
Ethylbenzene	<10	10	ug/kg	EPA 8020
Chlorobenzene	<10	10	ug/kg	EPA 8020
1,3-Dichlorobenzene	<10	10	ug/kg	EPA 8020
1,4-Dichlorobenzene	<10	10	ug/kg	EPA 8020
1,2-Dichlorobenzene	<10	10	ug/kg	EPA 8020
p-Xylene	<10	10	ug/kg	EPA 8020
m-Xylene	<10	10	ug/kg	EPA 8020
o-Xylene	<10	10	ug/kg	EPA 8020

* Detection Limit

SEG Laboratories, Inc.

Lori A. Vachon
Approved

1120 May Street, Lansing, Michigan 48906 • (517) 374-6800 • FAX (517) 374-7390
A Snell Environmental Group Company

Lab Number: SE01139-1
Page 2

MR. PETER F COLE
SEG ENGINEERS & CONSULTANTS
1120 MAY STREET
LANSING, MICHIGAN 48906

PROJECT: NONE GIVEN
Report Date: 12 NOV 91

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED DATE/TIME	RECEIVED
B-1 8.5-10.0' HB SHERMAN BLDG	Soil	24 OCT 91/14:20	25 OCT 91

CONSTITUENT	RESULT	*D.L.	UNITS	METHOD
PNA COMPOUNDS				
Naphthalene	<330	330	ug/kg	EPA 8270
Acenaphthylene	<330	330	ug/kg	EPA 8270
Acenaphthene	<330	330	ug/kg	EPA 8270
Fluorene	<330	330	ug/kg	EPA 8270
Phenanthrene	<330	330	ug/kg	EPA 8270
Anthracene	<330	330	ug/kg	EPA 8270
Fluoranthene	<330	330	ug/kg	EPA 8270
Pyrene	<330	330	ug/kg	EPA 8270
Benzo(a)anthracene	<330	330	ug/kg	EPA 8270
Chrysene	<330	330	ug/kg	EPA 8270
Benzo(b)fluoranthene	<330	330	ug/kg	EPA 8270
Benzo(k)fluoranthene	<330	330	ug/kg	EPA 8270
Benzo(a)pyrene	<330	330	ug/kg	EPA 8270
Indeno(1,2,3-cd)pyrene	<330	330	ug/kg	EPA 8270
Dibenzo(a,h)anthracene	<330	330	ug/kg	EPA 8270
Benzo(ghi)perylene	<330	330	ug/kg	EPA 8270

* Detection Limit

SEG Laboratories, Inc.

Lori A Vachon
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LANSING, MICHIGAN 48906

Lab Number: SE01139-2

PROJECT: NONE GIVEN
Report Date: 12 NOV 91

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED DATE/TIME	RECEIVED
B-1 12.5-13.0' HB SHERMAN BLDG	Soil	24 OCT 91/14:35	25 OCT 91

CONSTITUENT	RESULT	*D.L.	UNITS	METHOD
PURGEABLE AROMATICS				
Benzene	<10	10	ug/kg	EPA 8020
Toluene	<10	10	ug/kg	EPA 8020
Ethylbenzene	<10	10	ug/kg	EPA 8020
Chlorobenzene	<10	10	ug/kg	EPA 8020
1,3-Dichlorobenzene	<10	10	ug/kg	EPA 8020
1,4-Dichlorobenzene	<10	10	ug/kg	EPA 8020
1,2-Dichlorobenzene	<10	10	ug/kg	EPA 8020
p-Xylene	<10	10	ug/kg	EPA 8020
m-Xylene	<10	10	ug/kg	EPA 8020
o-Xylene	<10	10	ug/kg	EPA 8020

* Detection Limit

SEG Laboratories, Inc.

Lori A. Vachon
Approved

MR. PETER F COLE
SEG ENGINEERS & CONSULTANTS
1120 MAY STREET
LANSING, MICHIGAN 48906

Lab Number: SE01139-2

PROJECT: NONE GIVEN
Report Date: 12 NOV 91

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED DATE/TIME	RECEIVED
B-1 12.5-13.0' HB SHERMAN BLDG	Soil	24 OCT 91/14:35	25 OCT 91

CONSTITUENT	RESULT	*D.L.	UNITS	METHOD
PNA COMPOUNDS				
Naphthalene	<330	330	ug/kg	EPA 8270
Acenaphthylene	<330	330	ug/kg	EPA 8270
Acenaphthene	<330	330	ug/kg	EPA 8270
Fluorene	<330	330	ug/kg	EPA 8270
Phenanthrene	<330	330	ug/kg	EPA 8270
Anthracene	<330	330	ug/kg	EPA 8270
Fluoranthene	<330	330	ug/kg	EPA 8270
Pyrene	<330	330	ug/kg	EPA 8270
Benzo(a)anthracene	<330	330	ug/kg	EPA 8270
Chrysene	<330	330	ug/kg	EPA 8270
Benzo(b)fluoranthene	<330	330	ug/kg	EPA 8270
Benzo(k)fluoranthene	<330	330	ug/kg	EPA 8270
Benzo(a)pyrene	<330	330	ug/kg	EPA 8270
Indeno(1,2,3-cd)pyrene	<330	330	ug/kg	EPA 8270
Dibenzo(a,h)anthracene	<330	330	ug/kg	EPA 8270
Benzo(ghi)perylene	<330	330	ug/kg	EPA 8270

* Detection Limit

SEG Laboratories, Inc.

Lori A. Wachon
Approved

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1120 MAY STREET
LANSING, MICHIGAN 48906

Lab Number: SE01139-3

PROJECT: NONE GIVEN
Report Date: 12 NOV 91

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED DATE/TIME	RECEIVED
B-2 8.5-10.0' HB SHERMAN BLDG	Soil	24 OCT 91/15:40	25 OCT 91

CONSTITUENT	RESULT	*D.L.	UNITS	METHOD
PURGEABLE AROMATICS				
Benzene	<10	10	ug/kg	EPA 8020
Toluene	<10	10	ug/kg	EPA 8020
Ethylbenzene	<10	10	ug/kg	EPA 8020
Chlorobenzene	<10	10	ug/kg	EPA 8020
1,3-Dichlorobenzene	<10	10	ug/kg	EPA 8020
1,4-Dichlorobenzene	<10	10	ug/kg	EPA 8020
1,2-Dichlorobenzene	<10	10	ug/kg	EPA 8020
p-Xylene	<10	10	ug/kg	EPA 8020
m-Xylene	<10	10	ug/kg	EPA 8020
o-Xylene	13	10	ug/kg	EPA 8020

* Detection Limit

SEG Laboratories, Inc.

Lori A. Vachon
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1120 MAY STREET
LANSING, MICHIGAN 48906

Lab Number: SE01139-3

PROJECT: NONE GIVEN
Report Date: 12 NOV 91

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED DATE/TIME	RECEIVED
B-2 8.5-10.0' HB SHERMAN BLDG	Soil	24 OCT 91/15:40	25 OCT 91

CONSTITUENT	RESULT	*D.L.	UNITS	METHOD
PNA COMPOUNDS				
Naphthalene	<330	330	ug/kg	EPA 8270
Acenaphthylene	<330	330	ug/kg	EPA 8270
Acenaphthene	700	330	ug/kg	EPA 8270
Fluorene	930	330	ug/kg	EPA 8270
Phenanthrene	350	330	ug/kg	EPA 8270
Anthracene	410	330	ug/kg	EPA 8270
Fluoranthene	<330	330	ug/kg	EPA 8270
Pyrene	340	330	ug/kg	EPA 8270
Benzo(a)anthracene	370	330	ug/kg	EPA 8270
Chrysene	400	330	ug/kg	EPA 8270
Benzo(b)fluoranthene	<330	330	ug/kg	EPA 8270
Benzo(k)fluoranthene	<330	330	ug/kg	EPA 8270
Benzo(a)pyrene	<330	330	ug/kg	EPA 8270
Indeno(1,2,3-cd)pyrene	<330	330	ug/kg	EPA 8270
Dibenzo(a,h)anthracene	<330	330	ug/kg	EPA 8270
Benzo(ghi)perylene	<330	330	ug/kg	EPA 8270

* Detection Limit

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Lori A Cochran
Approved

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LANSING, MICHIGAN 48906

Lab Number: SE01139-4

PROJECT: NONE GIVEN
Report Date: 12 NOV 91

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED DATE/TIME	RECEIVED
B-2 13.5-15.0' HB SHERMAN BLDG	Soil	24 OCT 91/15:45	25 OCT 91

CONSTITUENT	RESULT	*D.L.	UNITS	METHOD
PURGEABLE AROMATICS				
Benzene	38	10	ug/kg	EPA 8020
Toluene	<10	10	ug/kg	EPA 8020
Ethylbenzene	<10	10	ug/kg	EPA 8020
Chlorobenzene	<10	10	ug/kg	EPA 8020
1,3-Dichlorobenzene	<10	10	ug/kg	EPA 8020
1,4-Dichlorobenzene	<10	10	ug/kg	EPA 8020
1,2-Dichlorobenzene	<10	10	ug/kg	EPA 8020
p-Xylene	<10	10	ug/kg	EPA 8020
m-Xylene	<10	10	ug/kg	EPA 8020
o-Xylene	<10	10	ug/kg	EPA 8020

* Detection Limit

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LANSING, MICHIGAN 48906

Lab Number: SE01139-4

PROJECT: NONE GIVEN
Report Date: 12 NOV 91

REPORT OF ANALYTICAL RESULTS

SAMPLE DESCRIPTION	MATRIX	SAMPLED DATE/TIME	RECEIVED
B-2 13.5-15.0' HB SHERMAN BLDG	Soil	24 OCT 91/15:45	25 OCT 91

CONSTITUENT	RESULT	*D.L.	UNITS	METHOD
PNA COMPOUNDS				
Naphthalene	<330	330	ug/kg	EPA 8270
Acenaphthylene	<330	330	ug/kg	EPA 8270
Acenaphthene	660	330	ug/kg	EPA 8270
Fluorene	390	330	ug/kg	EPA 8270
Phenanthrene	550	330	ug/kg	EPA 8270
Anthracene	640	330	ug/kg	EPA 8270
Fluoranthene	1,300	330	ug/kg	EPA 8270
Pyrene	<330	330	ug/kg	EPA 8270
Benzo(a)anthracene	<330	330	ug/kg	EPA 8270
Chrysene	<330	330	ug/kg	EPA 8270
Benzo(b)fluoranthene	<330	330	ug/kg	EPA 8270
Benzo(k)fluoranthene	<330	330	ug/kg	EPA 8270
Benzo(a)pyrene	<330	330	ug/kg	EPA 8270
Indeno(1,2,3-cd)pyrene	<330	330	ug/kg	EPA 8270
Dibenzo(a,h)anthracene	<330	330	ug/kg	EPA 8270
Benzo(ghi)perylene	<330	330	ug/kg	EPA 8270

* Detection Limit

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SEG LABORATORIES, INC.

LOG NO: SE01149

Received: 28 OCT 91
Reported: 14 NOV 91

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SEG ENGINEERS & CONSULTANTS
1120 MAY STREET
LANSING, MICHIGAN 48906

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SL SAMPLES	DATE SAMPLED
SE01149-1	HB-1 3' HB SHERMAN BLDG.	25 OCT 91
SE01149-2	HB-1 5' HB SHERMAN BLDG.	25 OCT 91
SE01149-3	HB-2 1' HB SHERMAN BLDG.	25 OCT 91
SE01149-4	SW-2 3' HB SHERMAN BLDG.	25 OCT 91

PARAMETER	SE01149-1	SE01149-2	SE01149-3	SE01149-4
PURGEABLE AROMATICS				
Benzene, ug/kg	<10	32	<10	29
Toluene, ug/kg	<10	<10	<10	<10
Ethylbenzene, ug/kg	12	49	<10	110
Chlorobenzene, ug/kg	<10	<10	<10	<10
1,3-Dichlorobenzene, ug/kg	<10	<10	<10	<10
1,4-Dichlorobenzene, ug/kg	<10	<10	<10	<10
1,2-Dichlorobenzene, ug/kg	<10	<10	<10	<10
p-Xylene, ug/kg	12	<10	<10	89
m-Xylene, ug/kg	11	<10	<10	24
o-Xylene, ug/kg	12	40	<10	40

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LOG NO: SE01149

Received: 28 OCT 91
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1120 MAY STREET
LANSING, MICHIGAN 48906

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SL SAMPLES	DATE SAMPLED
SE01149-1	HB-1 3' HB SHERMAN BLDG.	25 OCT 91
SE01149-2	HB-1 5' HB SHERMAN BLDG.	25 OCT 91
SE01149-3	HB-2 1' HB SHERMAN BLDG.	25 OCT 91
SE01149-4	SW-2 3' HB SHERMAN BLDG.	25 OCT 91

PARAMETER	SE01149-1	SE01149-2	SE01149-3	SE01149-4
PNA COMPOUNDS				
Naphthalene, ug/kg	<1650	2,900	<1650	4,200
Acenaphthylene, ug/kg	<1650	<1650	<1650	<1650
Acenaphthene, ug/kg	2,200	4,100	<1650	7,400
Fluorene, ug/kg	1,900	4,100	<1650	11,000
Phenanthrene, ug/kg	3,000	7,100	<1650	19,000
Anthracene, ug/kg	3,500	8,200	<1650	22,000
Fluoranthene, ug/kg	3,000	3,100	2,300	11,000
Pyrene, ug/kg	<1650	<1650	<1650	<1650
Benzo(a)anthracene, ug/kg	<1650	<1650	2,000	<1650
Chrysene, ug/kg	<1650	<1650	2,200	<1650
Benzo(b)fluoranthene, ug/kg	<1650	<1650	<1650	<1650
Benzo(k)fluoranthene, ug/kg	<1650	<1650	<1650	<1650
Benzo(a)pyrene, ug/kg	<1650	<1650	<1650	<1650
Indeno(1,2,3-cd)pyrene, ug/kg	<1650	<1650	<1650	<1650
Dibenzo(a,h)anthracene, ug/kg	<1650	<1650	<1650	<1650
Benzo(ghi)perylene, ug/kg	<1650	<1650	<1650	<1650

Lori A. Vachon
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SEG LABORATORIES, INC.

LOG NO: SE01237

Received: 11 NOV 91
Reported: 22 NOV 91

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:EG ENGINEERS & CONSULTANTS
1120 MAY STREET
LANSING, MICHIGAN 48906

Project: NONE GIVEN

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SL SAMPLES	DATE SAMPLED
SE01237-1	HB-3 0-0.5 HB SHERMAN	08 NOV 91
SE01237-2	HB-3 2.5-3.0 HB SHERMAN	08 NOV 91
SE01237-3	SW-4 1.5-2.0 HB SHERMAN	08 NOV 91
SE01237-4	SW-4 4.5-5.0 HB SHERMAN	08 NOV 91

PARAMETER	SE01237-1	SE01237-2	SE01237-3	SE01237-4
PURGEABLE AROMATICS				
Benzene, ug/kg	<10	<10	<10	<10
Toluene, ug/kg	<10	<10	<10	<10
Ethylbenzene, ug/kg	<10	28	<10	<10
Chlorobenzene, ug/kg	<10	<10	<10	<10
1,3-Dichlorobenzene, ug/kg	<10	<10	<10	<10
1,4-Dichlorobenzene, ug/kg	<10	<10	<10	<10
1,2-Dichlorobenzene, ug/kg	<10	<10	<10	<10
p-Xylene, ug/kg	<10	74	<10	<10
m-Xylene, ug/kg	<10	20	<10	<10
o-Xylene, ug/kg	<10	28	<10	<10

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1120 MAY STREET
LANSING, MICHIGAN 48906

Project: NONE GIVEN

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, SL SAMPLES	DATE SAMPLED
SE01237-1	HB-3 0-0.5 HB SHERMAN	08 NOV 91
SE01237-2	HB-3 2.5-3.0 HB SHERMAN	08 NOV 91
SE01237-3	SW-4 1.5-2.0 HB SHERMAN	08 NOV 91
SE01237-4	SW-4 4.5-5.0 HB SHERMAN	08 NOV 91

PARAMETER	SE01237-1	SE01237-2	SE01237-3	SE01237-4
PNA COMPOUNDS				
Naphthalene, ug/kg	<3300	<3300	<330	<330
Acenaphthylene, ug/kg	<3300	<3300	<330	<330
Acenaphthene, ug/kg	<3300	<3300	<330	<330
Fluorene, ug/kg	<3300	<3300	<330	<330
Phenanthrene, ug/kg	<3300	6,700	<330	<330
Anthracene, ug/kg	<3300	7,800	<330	<330
Fluoranthene, ug/kg	<3300	<3300	<330	<330
Pyrene, ug/kg	4,700	<3300	<330	<330
Benzo(a)anthracene, ug/kg	<3300	5,400	<330	<330
Chrysene, ug/kg	<3300	5,900	<330	<330
Benzo(b)fluoranthene, ug/kg	<3300	<3300	<330	<330
Benzo(k)fluoranthene, ug/kg	<3300	<3300	<330	<330
Benzo(a)pyrene, ug/kg	<3300	<3300	<330	<330
Indeno(1,2,3-cd)pyrene, ug/kg	<3300	<3300	<330	<330
Dibenzo(a,h)anthracene, ug/kg	<3300	<3300	<330	<330
Benzo(ghi)perylene, ug/kg	<3300	<3300	<330	<330

Approved

BASELINE ENVIRONMENTAL ASSESSMENT

Conducted Pursuant to Section 20126(1)(c) of 1994 PA 451, Part 201, as amended, and the Rules promulgated thereunder

for the

Former Cereal City USA Property
171 W. Michigan Avenue
Battle Creek, Michigan

Prepared for:

Battle Creek Unlimited
4950 W. Dickman Road
Battle Creek, MI 49037

Prepared by:

Horizon Environmental Corporation
4771 – 50th Street SE, Suite One
Grand Rapids, Michigan 49512

June 3, 2009

BCU-0101

HORIZON ENVIRONMENTAL

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1.0 IDENTIFICATION OF AUTHOR AND DATE BEA WAS CONDUCTED AND COMPLETED

The person primarily responsible for the data assembly, interpretation, and technical conclusions in the preparation of this Baseline Environmental Assessment ("BEA") is Elizabeth Bartz of Horizon Environmental Corporation ("Horizon"). The author's qualifications are provided in Appendix A. This BEA was conducted on May 26, 2009 and completed on June 3, 2009.

2.0 INTRODUCTION

This report presents a Category N BEA prepared for the subject property located at 171 W. Michigan Avenue in Battle Creek, Michigan ("the site"). The site location is illustrated on Figure 1. The subject property was acquired through donation to Battle Creek Unlimited ("BCU") on May 19, 2009. The subject property is approximately 6.94 acres and is currently occupied by the former Cereal City USA, which includes a three-story, 48,000 ft^2 building, surface parking lots, and landscaped areas. Prior to the current use, the site has had multiple commercial and industrial uses including: former Cereal City USA (an interactive museum), HB Sherman Company (nail and clamp manufacturer); lumber, coal and fuel storage yard; Gallagher Industrial Laundry (hot water wash laundry); auto body and paint shop; automobile service station and repair shop; Hebble Funeral Home; and, Redbird Lounge (restaurant and bar). The layout of the subject property and the location of relevant features are illustrated on Figure 2.

This BEA is intended to evaluate environmental conditions at the site prior to the date BCU acquired or commences operations on the site and to reasonably define existing conditions and circumstances at the site so that in the event of a subsequent release, there is a means of distinguishing a potential future release from existing contamination.

2.1 BACKGROUND

According to a Phase I Environmental Site Assessment ("ESA") Update completed for the site in June 2009 by Horizon Environmental Corporation (provided in Appendix B), the property was formerly used by Cereal City USA; a gasoline service station; lumber and coal yard; gun store; bakery; foundry (with nickel and brass plating); planing mill; sash, door and blind factory; laundry; portions of a print shop; crude oil pump house; grocery; broom factory; door bell shop; bookshop; pattern shop; machine shop; fuel and feed coal yard; drug store manufacturer; paper and paint store; church; cement manufacturer; auto repair garage; undertaker; auto body and paint shop; and, sewage pump station. Historical urban fill material is also present on the site. The Phase I ESA Update identified the following recognized environmental conditions ("RECs") at the subject property:

1. *One Above Ground Storage Tank ("AST"):* One hydraulic oil containing AST is located inside the elevator maintenance room to support the building's elevator.
2. *Lubrication Oil Container Release:* A 2-gallon sprayer containing lubrication oil for elevator maintenance was observed leaking onto and into seams associated with the concrete floor adjacent to the sprayer in the elevator room.
3. *Two Leaking Underground Storage Tanks ("LUSTs") and Industrial Use:* The H.B. Sherman property formerly located at 207 W. Michigan Avenue/207 W. Jackson Avenue (addressed both ways) reported releases from two underground storage tanks ("USTs"). In addition, this property was the location of a former foundry that included metal plating and stamping. This site is currently listed on the Environmental Data Resources ("EDR") database as a Brownfield site and as an open LUST site on the Michigan Department of Environmental Quality ("MDEQ") LUST database.
4. *Seven LUSTs:* The Hebble Funeral Home property formerly located at 123-151 W. Michigan Avenue/123 W. Michigan Avenue (addressed both ways) contained seven USTs. Two releases were reported during UST removal in 1989 and 1992. This site is currently listed on the EDR database as a Brownfield site and as an open LUST site on the MDEQ LUST database.
5. *Railroad Bed:* Portions of the property are traversed by a former railroad track bed. Reportedly, the railroad tracks were removed but not the railroad ballast.

Historical RECs

1. *One LUST and Industrial Use:* Historical records indicate that a used car business with a 120-gallon UST and an auto body and paint shop were located at the former Gallagher Industrial property located at 169 W. Michigan Avenue.
2. *Historic Operations:* Historical records indicate the following on-site historic operations included: gasoline service station; lumber and coal yard; gun store; bakery; foundry (with nickel and brass plating); planning mill, sash, door and blind factory; laundry; portions of a print shop; crude oil pump house; grocery; broom factory; door bell shop; bookshop; pattern shop; machine shop; fuel and feed coal yard; drug store manufacturer; paper and paint store; church; cement manufacturer; auto repair garage; undertaker; auto body and paint shop; and, sewage pump station.

Numerous environmental investigations have occurred on the subject property between the years of 1990 and 2001, and the nature and location of contamination is well documented. For this reason, additional intrusive studies were not warranted to establish pre-existing soil and groundwater quality for purposes of this BEA.

Soil and/or groundwater at the site has been impacted by benzene, ethylbenzene, xylene, acenaphthene, acenaphthylene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, naphthalene, phenanthrene, arsenic, cadmium, chromium, lead and mercury from historic operations at the site prior to the

former use of the property as Cereal City USA, at concentrations greater than the current generic residential cleanup criteria developed by the MDEQ pursuant to Part 201 of Public Act 451 of 1994, as amended. Therefore, this site is a "facility" as defined in Part 201.

2.2 CURRENT AND INTENDED ACTIVITIES

The subject property is currently occupied by the former Cereal City USA building and associated surface parking lot. Cereal City USA was an interactive museum and tourist attraction. Due to declining attendance, Cereal City USA was closed in early 2007. CC Real Estate Holdings purchased the subject property in 2007 and leased the property to the Kellogg Company ("Kellogg"). Kellogg was planning to renovate the building into offices and additional parking but later made the decision not to proceed with renovations with the exception of interior demolition. The building has been vacant since the closing of Cereal City USA.

BCU anticipates marketing the subject property for reacquisition and development, and will maintain the building utilities and landscaping until the property can be sold. Because no significant quantities of hazardous substances will be used at the subject property, this BEA has been conducted to meet the requirements for a "Category N" BEA.

3.0 PROPERTY DESCRIPTION AND INTENDED HAZARDOUS SUBSTANCE USE

3.1 PROPERTY DESCRIPTION

The property subject to this BEA is located at 171 W. Michigan Avenue in Battle Creek, Michigan. According to a Phase I ESA prepared for the property in June 2007, the subject property was formed by the merger of twelve parcels. The exact date of the merger is not known but was likely concurrent with the time the Cereal City Development Corporation initially purchased the property from the City of Battle Creek on January 27, 1998. The current property tax identification number for the subject property is 0254-00-060-0. Prior to this date, the site parcels have had multiple addresses including;

Street Address	Parcel Number
180 Jackson St W.	0254-00-084-0
129 Michigan Ave W.	0254-00-054-0
183 Michigan Ave W.	0254-00-062-0
169 Michigan Ave W	0254-00-060-0
157 Michigan Ave W.	0254-00-058-0
Carlyle St	0253-00-065-0
123 Michigan Ave W	0253-00-063-0

Street Address (continued)	Parcel Number
Michigan Ave W.	0254-00-059-0
Sewage Pump Station	0254-00-056-0
Michigan Ave W	0254-00-055-0
Jackson St W	0254-00-085-0
Barney Blvd	0254-00-086-0

Previous property tax identification numbers for the subject property are detailed above. The current legal description for the subject property is provided in Appendix C.

3.2 INTENDED LAND USE

Battle Creek Unlimited intends to maintain the building and grounds until such time as the property is acquired and developed by a third party.

3.3 INTENDED HAZARDOUS SUBSTANCE USE

Battle Creek Unlimited purchased the property on May 19, 2009 and intends to maintain the building and grounds until such time as the property is acquired and developed by a third party. Battle Creek Unlimited will not conduct any activities which will involve the use, storage, or handling of significant quantities of hazardous substances. Because the known future use of the subject property does not include hazardous substance use, this BEA has been completed to fulfill the requirements of a Category N BEA.

4.0 KNOWN CONTAMINATION

4.1 CURRENT PROPERTY CONDITIONS

Numerous environmental site assessments have been performed at the site including:

- June 2007; Phase I Environmental Site Assessment and Baseline Environmental Assessment for Kellogg Company, Horizon Environmental.
- February 11, 2002; Phase II Results/Former H.B. Sherman Site, Battle Creek, Michigan, Prein & Newhof.
- January 1997; Section 7A Compliance Assessment for the H.B. Sherman/Gallagher Industrial Laundry/Redbird Lounge Properties, Horizon Environmental.
- January 1997; Baseline Environmental Assessment and Due Care Compliance Assessment for the H.B. Sherman/Gallagher Industrial Laundry/Redbird Lounge Properties, Horizon Environmental.

- November 1996; Phase I and Phase II Environmental Site Assessments for the Former H.B.Sherman/Gallagher Industrial Laundry/Redbird Lounge Properties, Horizon Environmental.

- January 1995; Phase II Hydrogeologic Investigation Work Plan, H.B. Sherman Site, Battle Creek, Michigan, Earth Tech.

- August 30, 1993; HB Sherman Addendum to May 28, 1993 Site Investigation Report, Global Environmental Engineering.

- June 8, 1993; Hebble Property Site Investigation Report, Global Environmental Engineering.

- May 28, 1993; Site Investigation Report, City of Battle Creek H.B. Sherman Property, Global Environmental Engineering and Terra Environmental Corporation.

- January 22, 1993; 45 Day Site Characterization Report, 103 E. Michigan Avenue, Battle Creek, Michigan, Terra Environmental Corporation (available report copy is incomplete).

- December 29, 1992; 20-Day Initial Abatement Report, 103 E. Michigan Avenue, Battle Creek, Michigan, Terra Environmental Corporation (available report copy is incomplete).

- December 1991; Soil Investigation, H.B. Sherman Manufacturing Company, Snell Environmental Group, Inc.

- November 1991; Phase I ESA, H.B. Sherman Manufacturing Company, Battle Creek, Michigan, Snell Environmental Group, Inc.

- September 1991; 45-Day Report, H.B. Sherman, Snell Environmental Group, Inc.

- Asbestos Evaluation and Site Investigation at H.B. Sherman and Triple D Motors, Battle Creek, Michigan, Snell Environmental Group, Inc.

- April 23, 1991; Asbestos Evaluation and Site Investigation at H.B. Sherman and Triple D Motors, Battle Creek, Michigan, Snell Environmental Group, Inc.

- September 1990; Report of Environmental Site Audit for Gallagher Industrial Laundry, Inc. Battle Creek Michigan, Snell Environmental Group, Inc.

Soil and/or groundwater at the site have been impacted by benzene, ethylbenzene, xylene, acenaphthene, acenaphthylene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, naphthalene, phenanthrene, arsenic,

cadmium, chromium, lead and mercury from historic operations at the site prior to the former use as Cereal City USA. The historic operations that have been specifically investigated include the former H.B. Sherman Foundry, Hebble Funeral Home Property, Gallagher Industrial Laundry, Triple D Motors and Redbird Lounge. Groundwater and soil impact from historic operations at the site is considered a REC at the subject property. The analytical results for soil and groundwater samples collected from the site are summarized on Tables 1 and 2, respectively, which are provided in the attachments.

4.1.1 SOIL

Table 1 presents the analytical results for soil samples collected from the site. The sample locations are depicted on the figures included in Appendix D. The analytical results for the soil samples were compared to Part 201 generic residential cleanup criteria for the following exposure/migration pathways: 1) residential drinking water protection ("DWP") criteria; 2) groundwater/surface water interface protection ("GSIP") criteria; 3) direct human contact, 4) volatilization to indoor air inhalation criteria, 5) volatile soil inhalation criteria, and 6) particulate soil inhalation criteria. These generic residential soil criteria are the most conservative of the exposure/migration pathway soil criteria for all relevant pathways of exposure at the site. Therefore, these criteria were chosen for purposes of establishing facility conditions for the site.

As highlighted on Table 1, the following constituents were detected in one or more soil samples at concentrations exceeding either the residential DWP criteria, GSIP criteria, or direct contact criteria. The generic residential soil volatilization to indoor air inhalation criteria, volatile soil inhalation infinite criteria, and particulate soil inhalation criteria were not exceeded.

Summary of Constituents Exceeding Part 201 Residential Soil Criteria

Chemical	CAS No.	Max. Concentration Detected (ug/kg)
VOCs		
Ethylbenzene	100-41-4	380
Xylene	1330-20-7	1,800
PNAs		
Acenaphthene	83-32-9	37,600
Acenaphthylene	208-96-8	12,600
Benzo(a)pyrene	50-32-8	126,000
Benzo(b)fluoranthene	205-99-2	158,000
Dibenzo(a,h)anthracene	53-70-3	8,300
Fluoranthene	206-44-0	11,000
Fluorene	86-73-7	11,000
Naphthalene	91-20-3	4,200
Phenanthrene	85-01-8	19,000

Chemical	CAS No.	Max. Concentration Detected (ug/kg)
Metals		
Arsenic	7440-38-2	27,700
Cadmium	7440-43-9	10,600
Chromium	7440-47-3	62,400
Lead	7439-92-1	4,770,000
Mercury	7439-97-6	184

4.1.2 GROUNDWATER

Table 2 presents the analytical results for groundwater samples from the site. Groundwater sampling locations are depicted on the figures included in Appendix D. The analytical results for the groundwater samples were compared to Part 201 generic residential groundwater cleanup criteria for the following exposure/migration pathways: 1) drinking water; 2) GSI; and 3) groundwater volatilization to indoor air criteria. The generic residential volatilization to indoor air inhalation criteria were not exceeded in groundwater collected at the site.

As highlighted on Table 2, the following constituents were detected in one or more groundwater samples at concentrations exceeding either the residential drinking water criteria and/or GSI criteria

Summary of Constituents Exceeding Part 201 Residential Groundwater Criteria

Chemical	CAS No.	Max. Concentration Detected (ug/l)
VOCs		
Benzene	71-43-2	16
PNAs		
Acenaphthene	83-32-9	967
Acenaphthylene	208-96-8	475
Benzo(a)pyrene	50-32-8	2,210
Benzo(b)fluoranthene	205-99-2	3,520
Chrysene	218-01-9	47.5
Fluorene	86-73-7	132
Naphthalene	91-20-3	101
Phenanthrene	85-01-8	115

4.1.3 DISCARDED OR ABANDONED CONTAINERS

There was one above ground hydraulic oil containing reservoir noted in the 2009 Phase I ESA that was identified as a REC at the subject property. The reservoir was located inside the elevator maintenance room to support the elevator and is still present.

This reservoir associated with the elevator is not considered an issue for the BEA. In accordance with BEA Update Bulletin, March 2006, *the hydraulic fluid [in elevators] is not considered a significant hazardous substance use for the BEA process under the following conditions: 1) If there are 3 or less elevators, 2) if additional hydraulic fluid is completely contained with the elevator and reservoir system, and 3) if additional hydraulic fluid (new or used) is not stored on site. Hydraulic elevator systems that meet these conditions would not need to provide a means to distinguish a new release from existing contamination.* There is only one elevator in the building and the oil is completely contained in the reservoir system. In addition, BCU is discontinuing use of storing additional hydraulic fluids on-site.

The lubrication oil container release in the elevator maintenance room should be cleaned up, and the sprayer should be repaired or replaced, and placed in secondary containment.

Horizon recommends that the household quantities of paint and solvent containers observed in the maintenance room on the third floor during the Phase I ESA Update be reduced to *de minimus* quantities and placed in a flammable cabinet.

4.2 DEMONSTRATION THAT SITE IS A FACILITY

The exceedances of generic residential cleanup criteria in soil and groundwater at the subject property described in Tables 1 and 2 demonstrate that the subject property meets the definition of a "facility" pursuant to Part 201 of Michigan's Natural Resources and Environmental Protection Act (NREPA; Public Act 451 of 1994, as amended).

5.0 LIKELIHOOD OF OTHER CONTAMINATION

The June 2009 Phase I ESA Update (Appendix B) and multiple environmental investigations (Appendix E of the June 2009 Phase I ESA Update) document the site history and recognized environmental conditions identified at the subject property. Given the urban setting of the subject property and long industrial history, additional sampling and analysis could potentially detect additional contaminants such as metals, VOCs, and PNAs commonly associated with the past industrial use of the property and with urban fill material.

6.0 CONCLUSIONS

This BEA demonstrates that the subject property meets the definition of a "facility" due to the presence of arsenic, cadmium, chromium, lead, mercury, acenaphthene, acenaphthylene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, fluoranthene, fluorene, naphthalene, phenanthrene, ethylbenzene, and xylene in soils at concentrations exceeding the residential direct contact criteria, residential DWP criteria, and/or the GSIP criteria developed by the MDEQ pursuant to Part 201 of Public Act 451 of 1994, as amended. It also meets the facility definition based on the presence of acenaphthene, acenaphthylene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, fluorene, naphthalene, phenanthrene, and benzene in groundwater at concentrations greater than residential drinking water criteria, groundwater contact criteria and/or groundwater/surface water interface criteria described in Part 201.

This BEA is sufficient to distinguish existing contamination from a potential future release because no significant quantities of hazardous substances will be used at the subject property. Therefore, there will not be any new releases of hazardous substances and any issues related to contamination of the soil will be related to previously existing contamination.

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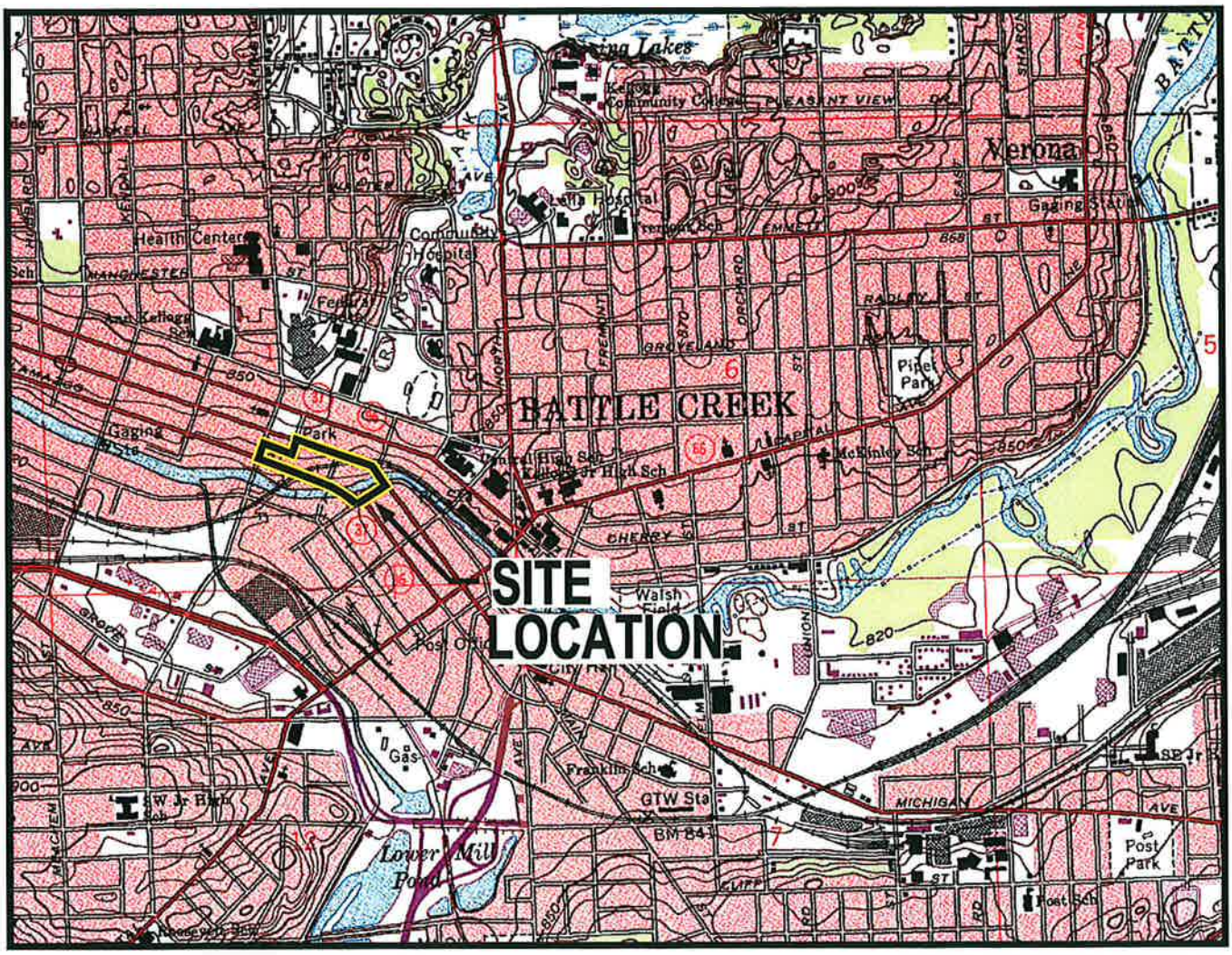
BCU00101SM01



TAKEN FROM 7.5 MINUTE SERIES TOPOGRAPHIC MAP
BATTLE CREEK QUADRANGLE PHOTOREVISED 1985
SCALE = 1:24,000

North

HORIZON ENVIRONMENTAL

PROJECT NUMBER: BCU-0101

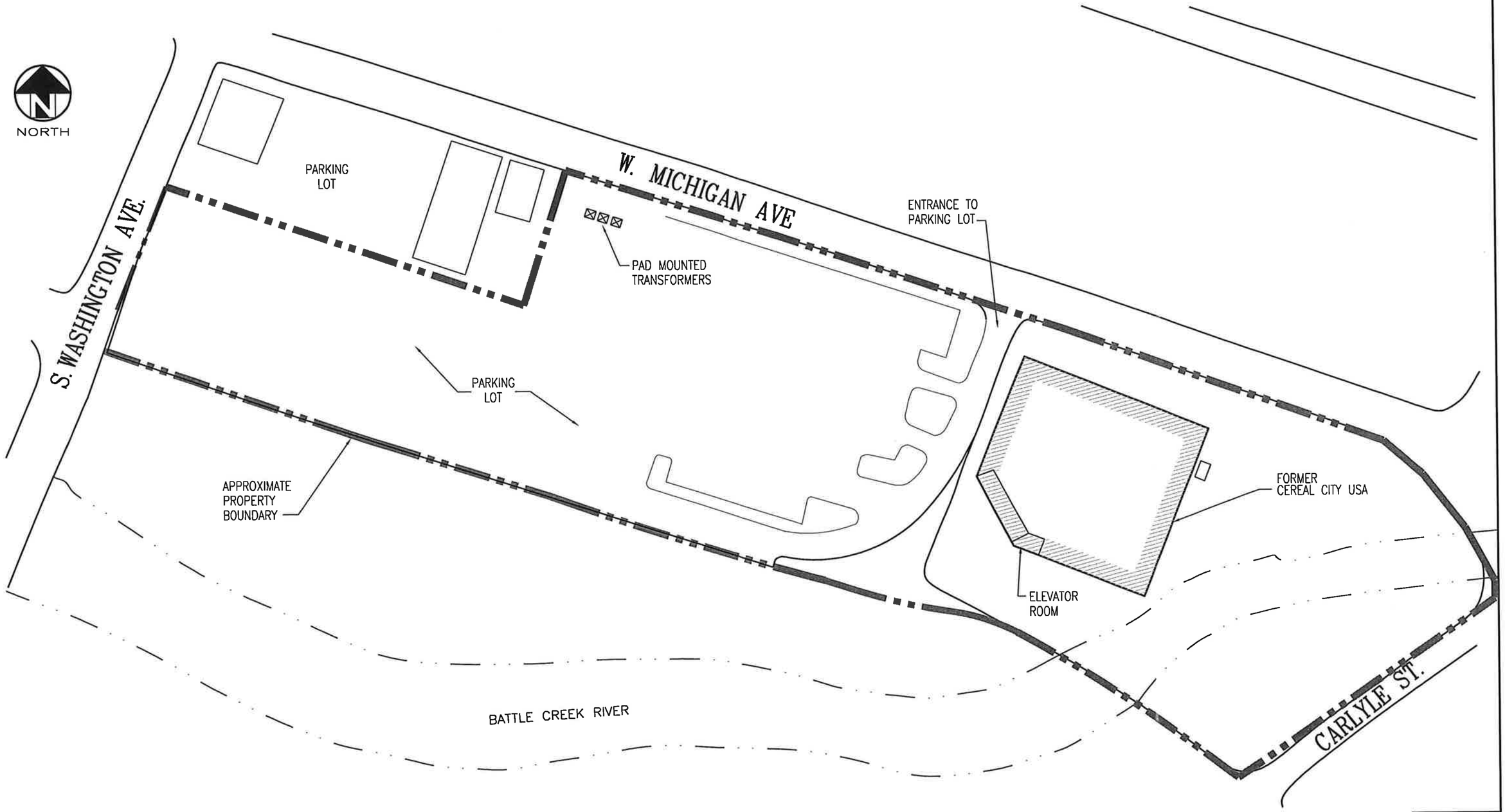
Former Cereal City USA
171 W.Michigan Ave., Battle Creek, Michigan

FIGURE: 1

SITE LOCATION MAP

JUNE 2009

BCU0101FIG02



0 50 100 200

APPROXIMATE SCALE IN FEET

HORIZON ENVIRONMENTAL

Former Cereal City USA
171 W.Michigan Ave., Battle Creek, Michigan

SITE MAP

PROJECT NUMBER: BCU–0101

FIGURE: 2

JUNE 2009

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Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	92-069 A Terra Prein 05/12/92 9	92-069 B Terra Prein 05/12/91 9	A Terra Prein 08/04/93	A Terra Prein 09/29/93	B 10769 P&N P&N 12/10/92	B Terra Prein 08/04/93	B Terra Prein 09/29/93
Inorganics	***Units***																
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	**8.67**	**2.29**	**5.78**	---	---	**13**	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	**28.5**	**32.5**	**13.6**	---	---	**40**	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	<0.5	**0.5**	**0.053**	---	---	**0.055**	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	**24.4**	**27.4**	**3.02**	---	---	**4.49**	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	<2	<2	**6**	---	---	**38**	**3.86**
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	**14.6**	**11**	**2.43**	---	---	**18.6**	<1.65
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	<0.2	<0.2	**0.12**	---	---	**0.11**	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	<0.1	<0.1	<0.1	---	---	<0.1	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	<1	<1	<1	---	---	<1	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	**39.8**	**32.5**	**11.2**	**104**	---	**41.8**	---
Misc.	***Units***																
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	---	---	**86**	---	---
PCB's	*Units*																
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	<100	<100	---	---	---	---	---
Semi-Volatiles	***Units***																
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	**6380**	**37600**	<6700	---	<250	<330	---
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	**3370**	<330	<6700	---	<250	<330	---
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	<250	<330	<6700	---	<250	<330	---
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<330	<6700	---	<250	<330	---
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	<250	<330	**51000**	---	<250	<330	---
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	<250	<330	**66000**	---	<250	<330	---
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	<250	<330	**52000**	---	<250	<330	---
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	---	---	<250	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<250	**9470**	**18000**	---	<250	<330	---
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<250	<330	**8300**	---	<250	<330	---
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	<250	<330	**11000**	---	<250	<330	---
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	**3050**	**5350**	**6700**	---	<250	<330	---
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<330	**15000**	---	<250	<330	---
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	**868**	<330	<6700	---	<250	<330	---
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	<250	<330	**7000**	---	<250	<330	---
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	<250	<330	**13000**	---	<250	<330	---
Volatiles	***Units***																
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<5	<5	---	---	<5	<10	---
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	<5	<5	---	---	**248**	<10	---
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---	---

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	92-069 A Terra Prein 05/12/92 9	92-069 B Terra Prein 05/12/91 9	A Terra Prein 08/04/93	A Terra Prein 09/29/93	B 10769 P&N 12/10/92	B Terra Prein 08/04/93	B Terra Prein 09/29/93
Volatiles Cont.	***Units***																
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	<5	<5	---	---	<5	<10	---
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	<5	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	735	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<5	<5	---	---	---	<10	---

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location		*Background*	Residential	Groundwater	Groundwater	Residential	Residential	Residential	Residential	Residential	B-1	B-1	B-2	B-2	C	C	C
Lab Sample ID		Target	Drinking	Surface	Contact	Soil	Volatile	Volatile	Particulate	Direct					10770		
Sampled By		Method	Water	Water	Protection	Volatilization to	Soil	Soil	Soil	Contact	SEG	SEG	SEG	SEG	P&N	Terra	Terra
Analyzed By		Detection	Protection	Interface	Criteria	Indoor Air	Inhalation	Inhalation	Inhalation	Criteria	SEG	SEG	SEG	SEG	P&N	Prein	Prein
Sample Date		Limit	Criteria	Protection		Inhalation	Infinite	2-Meter	Criteria		10/24/91	10/24/91	10/24/91	10/24/91	12/10/92	08/04/93	09/29/93
Sample Depth (ft.)				Criteria		Criteria	Criteria	Criteria			8.5-10	12.5-13	8.5-10	13.5-15			
Inorganics	***Units***																
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	---	---	---	---	**5.83**	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	---	---	---	---	**32.8**	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	---	---	---	---	**1.16**	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	---	---	---	---	**3.36**	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	---	---	---	---	**1903**	**654**
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	---	---	---	---	---	**36**	**1410**
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	---	---	---	---	**0.138**	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	---	---	---	---	<0.1	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	---	---	---	---	<1	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	---	---	---	---	**318**	**549**
Misc.	***Units***																
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	---	---	**84**	---	---
PCB's	*Units*																
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---	---
Semi-Volatiles	***Units***																
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	<330	<330	**700**	**660**	<250	<330	---
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	<330	<330	<330	<330	<250	<330	---
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	<330	<330	**410**	**640**	<250	<330	---
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<330	<330	**370**	<330	<250	<330	---
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	<330	<330	<330	<330	<250	<330	---
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	<330	<330	<330	<330	<250	<330	---
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	<330	<330	<330	<330	<250	<330	---
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	---	---	<250	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<330	<330	**400**	<330	<250	<330	---
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<330	<330	<330	<330	<250	<330	---
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	<330	<330	<330	**1300**	<250	<330	---
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	<330	<330	<330	**390**	<250	<330	---
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<330	<330	<330	<330	<250	<330	---
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	<330	<330	<330	<330	<250	<330	---
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	<330	<330	**350**	**550**	<250	<330	---
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	<330	<330	**340**	<330	<250	<330	---
Volatiles	***Units***																
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<10	<10	<10	**38**	<5	<10	---
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	<10	<10	<10	<10	**206**	<10	---
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---	---

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171 W. Michigan Avenue
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Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	B-1 SEG SEG 10/24/91 8.5-10	B-1 SEG SEG 10/24/91 12.5-13	B-2 SEG SEG 10/24/91 8.5-10	B-2 SEG SEG 10/24/91 13.5-15	C 10770 P&N P&N 12/10/92	C Terra Prein 08/04/93	C Terra Prein 09/29/93
Volatiles Cont.	*Units*																
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	<10	<10	<10	<10	<5	<10	---
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	<5	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	670	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<10	<10	<10	<10	---	<10	---

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Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	Core-J Horizon Bio-Chem 10/14/96	Core-M Horizon Bio-Chem 10/14/96	D 10771 P&N P&N 12/10/92	D Terra Prein 08/04/93	E 10772 P&N P&N 12/10/92	E Terra Prein 08/04/93
Inorganics	***Units***															
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	---	---	**1.48**	---	**2.34**
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	---	---	<10	---	**22.6**
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	---	---	<0.02	---	<0.02
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	---	---	**3.98**	---	**13.4**
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	---	---	**3.92**	---	**18.3**
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	---	---	---	**5.55**	---	**4.45**
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	---	---	**0.113**	---	**0.103**
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	---	---	<.1	---	<0.1
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	---	---	<1	---	<1
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	---	---	**2.48**	---	**17.7**
Misc.	***Units***															
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	**88**	---	**89**	---
PCB's	***Units***															
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---
Semi-Volatiles	***Units***															
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	<330	<330	<250	<330	**11000**	<330
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	<330	<330	<250	<330	**7500**	<330
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	<330	<330	<250	<330	<1250	<330
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<330	<330	<250	<330	**4600**	<330
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	<330	<330	<250	<330	**4000**	<330
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	<330	**732**	<250	<330	<1250	<330
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	<330	<330	<250	<330	<1250	<330
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	<250	---	<1250	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<330	<330	<250	<330	**4600**	<330
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<330	<330	<250	<330	**4000**	<330
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	<330	<330	<250	<330	<1250	<330
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	<330	<330	<250	<330	**1400**	<330
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<330	<330	<250	<330	**3300**	<330
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	<330	<330	<250	<330	<1250	<330
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	<330	**386**	<250	<330	**2900**	<330
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	<330	<330	<250	<330	**6200**	<330
Volatiles	***Units***															
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<10	<10	<5	<10	<5	<10
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	<10	<10	<5	<10	<5	<10
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---

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Volatiles Cont.	*Units*															
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	<10	<10	<5	<10	<5	<10
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	<5	---	<5	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	<5	---	<5	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<30	<30	---	<10	---	<10

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	F 10773 P&N P&N 12/10/92	F Terra Prein 08/04/93	G 10774 P&N P&N 12/10/92	G Terra Prein 08/04/93	G Terra Prein 09/29/93	Gal-UST Horizon Bio-Chem 10/14/96 7-8'	GP-1 1340-1 P&N P&N 04/10/01 10
Inorganics	***Units***																
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	**1.32**	---	**3.43**	---	---	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	**11.3**	---	**17**	---	---	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	<0.02	---	**1.62**	---	---	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	**2.74**	---	**3.41**	---	---	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	**6.91**	---	**365**	**315**	---	---
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	---	**4.41**	---	**36.9**	**8.74**	**116**	---
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	**0.115**	---	**0.154**	---	---	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	<0.1	---	<0.1	---	---	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	<1	---	<1	---	---	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	**5.49**	---	**409**	**26.2**	---	---
Misc.	***Units***																
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	**89**	---	**91**	---	---	---	**85.0**
PCB's	***Units***																
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---	---
Semi-Volatiles	***Units***																
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	<250	<330	<250	<330	---	<330	<250
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	<250	<330	<250	<330	---	<330	<250
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	<250	<330	<250	<330	---	<330	<250
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<330	<250	<330	---	<330	<250
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	<250	<330	<250	<330	---	<330	<250
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	<250	<330	<250	<330	---	<330	<250
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	<250	<330	<250	<330	---	<330	<250
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	<250	---	<250	---	---	---	<250
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<250	<330	<250	<330	---	<330	<250
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<250	<330	<250	<330	---	<330	<250
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	<250	<330	<250	<330	---	<330	<250
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	<250	<330	<250	<330	---	<330	<250
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<330	<250	<330	---	<330	<250
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---	<250
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	<250	<330	<250	<330	---	<330	<250
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	<250	<330	<250	<330	---	<330	<250
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	<250	<330	<250	<330	---	<330	<250
Volatiles	***Units***																
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<5	<10	<5	<10	---	<10	<40
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---	<40
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---	<40
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	<5	<10	<5	<10	---	<10	<40
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---	<200

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Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	F 10773 P&N P&N 12/10/92	F Terra Prein 08/04/93	G 10774 P&N P&N 12/10/92	G Terra Prein 08/04/93	G Terra Prein 09/29/93	Gal-UST Horizon Bio-Chem 10/14/96 7-8'	GP-1 1340-1 P&N P&N 04/10/01 10
Volatiles Cont.	***Units***																
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	<5	<10	<5	<10	---	<10	<40
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---	<80
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---	<80
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<5	---	<5	---	---	---	<40
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<5	---	<5	---	---	---	<40
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	<10	---	<10	---	<30	---

Table 1
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Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	GP-2 1340-2 P&N P&N 04/10/01 10	GP-3 1340-3 P&N P&N 04/10/01 6	GP-3 1340-4 P&N P&N 04/10/01 11	GP-4 1340-5 P&N P&N 04/10/01 10	GP-5 1340-6 P&N P&N 04/10/01 10	H 10775 P&N P&N 12/10/92	H Terra Prein 08/04/93
Inorganics	***Units***																
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	---	---	---	---	---	**11.8**
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	---	---	---	---	---	**26.7**
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	---	---	---	---	---	**0.03**
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	---	---	---	---	---	**18.5**
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	---	---	---	---	---	**6.54**
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	---	---	---	---	---	---	**5.46**
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	---	---	---	---	---	**0.131**
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	---	---	---	---	---	<0.1
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	---	---	---	---	---	<1
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	---	---	---	---	---	**38.9**
Misc.	***Units***																
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	**88.0**	**92.0**	**84.0**	**88.0**	**79.0**	**91**	---
PCB's	*Units*																
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---	---
Semi-Volatiles	***Units***																
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	<250	<250	<250	<250	<250	**3100**	<330
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	<250	<250	<250	<250	<250	**2100**	<330
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	<250	<250	**323**	<250	<250	<250	<330
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<250	<250	<250	<250	**970**	<330
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	<250	<250	<250	<250	<250	**1100**	<330
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	<250	<250	<250	<250	<250	<250	<330
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	<250	<250	<250	<250	<250	<250	<330
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	<250	<250	<250	<250	<250	<250	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<250	<250	<250	<250	<250	**970**	<330
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<250	<250	<250	<250	<250	**1100**	<330
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	<250	<250	<250	<250	<250	<250	<330
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	<250	<250	<250	<250	<250	<250	<330
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<250	<250	<250	<250	**1100**	<330
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	<250	<250	**398**	<250	<250	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	<250	<250	<250	<250	<250	<250	<330
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	<250	<250	**659**	<250	<250	<250	<330
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	<250	<250	<250	<250	<250	**1000**	<330
Volatiles	***Units***																
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<40	<40	<40	<40	<40	<5	<10
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	<40	<40	<40	<40	<40	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	<40	<40	<40	<40	<40	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	<40	<40	<40	**54.0**	<40	<5	<10
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	<200	<200	<200	<200	<200	---	---

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Volatiles Cont.	***Units***																
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	—	—	—	—	—	—	—
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	<40	<40	<40	**82.0**	<40	<5	<10
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	—	—	—	—	—	—	—
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	<80	<80	<80	<80	<80	—	—
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	<80	<80	<80	<80	<80	—	—
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<40	<40	<40	<40	<40	<5	—
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<40	<40	<40	**222**	<40	<5	—
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	—	—	—	—	—	—	<10

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Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	HB-1 SEG SEG 10/25/91 3	HB-1 SEG SEG 10/25/91 5	HB-2 SEG SEG 10/25/91 1	HB-3 SEG SEG 11/11/91 0-0.5	HB-3 SEG SEG 11/11/91 2.5-3	I Terra Prein 08/04/93	I Terra Prein 09/29/93
Inorganics	***Units***																
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	---	---	---	---	**27.7**	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	---	---	---	---	**67.7**	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	---	---	---	---	**1.11**	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	---	---	---	---	**62.4**	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	---	---	---	---	**7.07**	---
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	---	---	---	---	---	**10.6**	---
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	---	---	---	---	**0.122**	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	---	---	---	---	<0.1	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	---	---	---	---	<1	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	---	---	---	---	**757**	**20.4**
Misc.	***Units***																
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	---	---	---	---	---
PCB's	*Units*																
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---	---
Semi-Volatiles	***Units***																
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	**2200**	**4100**	<1650	<3300	<3300	<330	---
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	<1650	<1650	<1650	<3300	<3300	<330	---
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	**3500**	**8200**	<1650	<3300	**7800**	<330	---
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<1650	<1650	**2000**	<3300	**5400**	<330	---
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	<1650	<1650	<1650	<3300	<3300	<330	---
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	<1650	<1650	<1650	<3300	<3300	<330	---
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	<1650	<1650	<1650	<3300	<3300	<330	---
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	---	---	---	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<1650	<1650	**2200**	<3300	**5900**	<330	---
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<1650	<1650	<1650	<3300	<3300	<330	---
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	**3000**	**3100**	**2300**	<3300	<3300	<330	---
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	**1900**	**4100**	<1650	<3300	<3300	<330	---
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<1650	<1650	<1650	<3300	<3300	<330	---
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	<1650	**2900**	<1650	<3300	<3300	<330	---
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	**3000**	**7100**	<1650	<3300	**6700**	<330	---
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	<1650	<1650	<1650	**4700**	<3300	<330	---
Volatiles	***Units***																
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<10	**32**	<10	<10	<10	<10	---
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	**12**	**49**	<10	<10	**28**	<10	---
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---	---

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	HB-1 SEG SEG 10/25/91 3	HB-1 SEG SEG 10/25/91 5	HB-2 SEG SEG 10/25/91 1	HB-3 SEG SEG 11/11/91 0-0.5	HB-3 SEG SEG 11/11/91 2.5-3	I Terra Prein 08/04/93	I Terra Prein 09/29/93
Volatiles Cont.	***Units***																
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	<10	<10	<10	<10	<10	<10	---
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	**35**	**40**	<10	<10	**132**	<10	---

Table 1
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171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	J 10776 P&N P&N 12/10/92	J Terra Prein 08/04/93	J Terra Prein 09/29/93	K Terra Prein 08/04/93	L Terra Prein 08/04/93	RBL Horizon Bio-Chem 10/14/96 11-12'
Inorganics	***Units***															
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	**5.2**	---	**10.3**	**26.3**	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	**11.1**	---	**26.6**	**41.4**	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	<0.02	---	**0.125**	<0.02	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	**39.6**	---	**8.84**	**14.2**	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	**5.95**	---	**7.02**	**9.8**	---
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	---	**4**	---	**5.25**	**5.31**	**2.08**
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	**0.175**	---	**0.184**	**0.15**	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	<0.1	---	<0.1	<0.1	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	<1	---	<1	<1	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	**49.7**	**31.8**	**24.9**	**75.3**	---
Misc.	***Units***															
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	**89**	---	---	---	---	---
PCB's	*Units*															
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---
Semi-Volatiles	***Units***															
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	<250	<330	---	<330	<330	<330
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	<250	<330	---	<330	<330	<330
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	<250	<330	---	<330	<330	<330
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<330	---	<330	<330	<330
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	<250	<330	---	<330	<330	<330
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	<250	<330	---	<330	<330	<330
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	<250	<330	---	<330	<330	<330
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	<250	---	---	---	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<250	<330	---	<330	<330	<330
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<250	<330	---	<330	<330	<330
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	<250	<330	---	<330	<330	<330
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	<250	<330	---	<330	<330	<330
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<330	---	<330	<330	<330
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	<250	<330	---	<330	<330	<330
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	<250	<330	---	<330	<330	<330
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	<250	<330	---	<330	<330	<330
Volatiles	*Units*															
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<5	<10	---	<10	<10	<10
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	<5	<10	---	<10	**31**	<10
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---

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Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	J 10776 P&N P&N 12/10/92	J Terra Prein 08/04/93	J Terra Prein 09/29/93	K Terra Prein 08/04/93	L Terra Prein 08/04/93	RBL Horizon Bio-Chem 10/14/96 11-12'
Volatiles Cont.	***Units***															
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	<5	<10	---	<10	26	<10
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<5	---	---	---	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<5	---	---	---	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	<10	---	<10	65	<30

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Inorganics	***Units***															
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	<.1	<.1	<.1	---	---	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	**27.8**	**8.87**	**33.9**	---	---	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	**10.6**	**4.82**	**5.54**	---	---	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	**10.8**	**4.37**	**6.19**	---	---	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	**115**	**8.36**	**40.6**	---	---	---
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	**47.5**	**3.22**	**7.49**	**225**	**231**	**142**
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	<.1	<.1	<.1	---	---	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	<.5	<.5	<.5	---	---	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	<.5	<.5	<.5	---	---	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	**137**	**19.2**	**116**	---	---	---
Misc.	***Units***															
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	---	---	---	---
PCB's	*Units*															
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---
Semi-Volatiles	***Units***															
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	<330	<330	<330	<165	<165	<165
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	<330	<330	<330	<165	<165	<165
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	**676**	<330	<330	**440**	**480**	<165
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<330	<330	<330	**2000**	**1800**	**450**
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	**1610**	<330	<330	**1600**	**1600**	**520**
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	**5450**	<330	<330	**3700**	**2400**	**910**
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	**440**	<330	<330	---	---	---
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	---	---	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<330	<330	<330	**1900**	**1500**	**340**
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<330	<330	<330	**360**	<165	<165
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	**806**	<330	<330	**3700**	**3600**	**990**
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	<330	<330	<330	<165	<165	<165
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	**465**	<330	<330	**1100**	**700**	<165
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	**359**	<330	<330	<165	<165	<165
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	**1500**	<330	<330	**2200**	**2300**	**610**
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	**704**	<330	<330	**3500**	**3200**	**670**
Volatiles	***Units***															
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<10	<10	<10	---	---	---
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	<10	<10	<10	---	---	---
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	RR-East Horizon Bio-Chem 10/14/96	RR-Mid Horizon Bio-Chem 10/14/96	RR-West Horizon Bio-Chem 10/14/96	RS#1 E97216 09/12/94	RS#2 E97217 09/12/94	RS#3 E97220 09/12/94
Volatiles Cont.	***Units***															
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	<10	<10	<10	---	---	---
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<30	<30	<30	---	---	---

Table 1
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171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	RS#4 E97222 09/12/94	SB-1 Terra Prein 04/06/93 3-5	SB-1 Terra Prein 04/06/93 8-10	SB-1 Terra Prein 04/06/93 13-15	SB-1 Terra Prein 04/06/93 18-20	SB-1E E97214 ET ET 09/12/94 1-1.5'	SB-1N E97215 ET ET 09/12/94 0-0.67
Inorganics	***Units***																
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	---	---	---	---	---	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	---	---	---	---	---	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	---	---	---	---	---	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	---	---	---	---	---	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	---	---	---	---	---	---
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	**311**	---	---	---	---	**440**	**143**
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	---	---	---	---	---	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	---	---	---	---	---	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	---	---	---	---	---	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	---	---	---	---	---	---
Misc.	***Units***																
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	---	---	---	---	---
PCB's	***Units***																
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---	---
Semi-Volatiles	***Units***																
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	<165	<250	<250	<250	<250	---	---
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	<165	<250	<250	<250	<250	---	---
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	<165	<250	<250	<250	<250	---	---
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	**1200**	**<250**	<250	<250	<250	---	---
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	**1200**	**3100**	<250	<250	<250	---	---
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	**1900**	**3700**	<250	<250	<250	---	---
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	---	**<250**	<250	<250	<250	---	---
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	---	---	---	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	**1100**	<250	<250	<250	<250	---	---
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<165	<250	<250	<250	<250	---	---
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	**2000**	<250	<250	<250	<250	---	---
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	<165	<250	<250	<250	<250	---	---
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	**530**	<250	<250	<250	<250	---	---
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	<165	<250	<250	<250	<250	---	---
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	**940**	<250	<250	<250	<250	---	---
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	**1900**	<250	<250	<250	<250	---	---
Volatiles	***Units***																
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	---	<5	<5	<5	<5	---	---
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	---	<5	<5	<5	<5	---	---
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---	---

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
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Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	RS#4 E97222 09/12/94	SB-1 Terra Prein 04/06/93 3-5	SB-1 Terra Prein 04/06/93 8-10	SB-1 Terra Prein 04/06/93 13-15	SB-1 Terra Prein 04/06/93 18-20	SB-1E E97214 ET ET 09/12/94 1-1.5'	SB-1N E97215 ET ET 09/12/94 0-0.67
Volatiles Cont.	***Units***																
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	---	**32**	<5	**135**	**20**	---	---
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	<5	<5	<5	<5	---	---

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Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	SB-1S E97213 ET ET 09/12/94 0-0.67	SB-1 Surface E97219 ET ET 09/12/94 0-1'	SB-1 W E97212 ET ET 09/12/94 3-5'	SB-2 Terra Prein 04/06/93 3-5	SB-2 Terra Prein 04/06/93 8-10	SB-2 Terra Prein 04/06/93 13-15
Inorganics	***Units***															
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	---	---	---	---	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	---	---	---	---	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	---	---	---	---	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	---	---	---	---	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	---	---	---	---	---
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	**131**	**128**	**4770**	---	---	---
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	---	---	---	---	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	---	---	---	---	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	---	---	---	---	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	---	---	---	---	---
Misc.	***Units***															
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	---	---	---	---
PCB's	*Units*															
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---
Semi-Volatiles	***Units***															
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	---	<165	---	<250	<250	<250
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	---	<165	---	<250	<250	<250
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	---	**410**	---	<250	<250	<250
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	---	**840**	---	<250	<250	<250
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	---	**810**	---	<250	<250	<250
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	---	**1400**	---	<250	<250	<250
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	---	---	---	<250	<250	<250
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	---	---	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	---	**750**	---	<250	<250	<250
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	---	<165	---	<250	<250	<250
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	---	**2000**	---	<250	<250	<250
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	---	<165	---	<250	<250	<250
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	---	**390**	---	<250	<250	<250
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	---	<165	---	<250	<250	<250
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	---	**1800**	---	<250	<250	<250
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	---	**1500**	---	<250	<250	<250
Volatiles	***Units***															
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	---	---	---	<5	<5	<5
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	---	---	---	<5	<5	<5
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	SB-1S E97213 ET ET 09/12/94 0-0.67	SB-1 Surface E97219 ET ET 09/12/94 0-1'	SB-1 W E97212 ET ET 09/12/94 3-5'	SB-2 Terra Prein 04/06/93 3-5	SB-2 Terra Prein 04/06/93 8-10	SB-2 Terra Prein 04/06/93 13-15
Volatiles Cont.	*Units*															
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	---	---	---	**73**	<5	**115**
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	<5	<5	<5

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location		*Background*	Residential	Groundwater	Groundwater	Residential	Residential	Residential	Residential	Residential	SB-2	SB-3	SB-3	SB-3	SB-4	SB-4	SB-4
Lab Sample ID		Target	Drinking	Surface	Contact	Soil	Volatile	Volatile	Particulate	Direct							
Sampled By		Method	Water	Water	Protection	Volatilization to	Soil	Soil	Soil	Contact	Terra	Terra	Terra	Terra	Terra	Terra	Terra
Analyzed By		Detection	Protection	Interface	Criteria	Indoor Air	Inhalation	Inhalation	Inhalation	Criteria	Prein	Prein	Prein	Prein	Prein	Prein	Prein
Sample Date		Limit	Criteria	Protection		Inhalation	Infinite	2-Meter	Criteria		04/06/93	04/06/93	04/06/93	04/06/93	04/06/93	04/06/93	04/06/93
Sample Depth (ft.)				Criteria		Criteria	Criteria	Criteria			18-20	8-10	13-15	18-20	8-10	13-15	18-20
Inorganics	***Units***																
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	---	---	---	---	---	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	---	---	---	---	---	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	---	---	---	---	---	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	---	---	---	---	---	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	---	---	---	---	---	---
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	---	---	---	---	---	---	---
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	---	---	---	---	---	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	---	---	---	---	---	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	---	---	---	---	---	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	---	---	---	---	---	---
Misc.	***Units***																
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	---	---	---	---	---
PCB's	*Units*																
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---	---
Semi-Volatiles	***Units***																
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	**4200**	<250	<250	<250	<250	<250	<250
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	**2000**	<250	<250	<250	<250	<250	<250
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	<250	<250	<250	<250	<250	<250	<250
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<250	<250	<250	<250	<250	<250
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	**14100**	<250	<250	<250	<250	<250	<250
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	**24500**	<250	<250	<250	<250	<250	<250
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	<250	<250	<250	<250	<250	<250	<250
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	---	---	---	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<250	<250	<250	<250	<250	<250	<250
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<250	<250	<250	<250	<250	<250	<250
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	<250	<250	<250	<250	<250	<250	<250
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	**790**	<250	<250	<250	<250	<250	<250
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<250	<250	<250	<250	<250	<250
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	<250	<250	<250	<250	<250	<250	<250
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	<250	<250	<250	<250	<250	<250	<250
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	<250	<250	<250	<250	<250	<250	<250
Volatiles	***Units***																
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<5	<5	<5	<5	<5	<5	<5
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	<5	<5	<5	<5	<5	<5	<5
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---	---

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	SB-2 Terra Prein 04/06/93 18-20	SB-3 Terra Prein 04/06/93 8-10	SB-3 Terra Prein 04/06/93 13-15	SB-3 Terra Prein 04/06/93 18-20	SB-4 Terra Prein 04/06/93 8-10	SB-4 Terra Prein 04/06/93 13-15	SB-4 Terra Prein 04/06/93 18-20
Volatiles Cont.	***Units***																
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	**112**	**49**	<5	**18**	<5	**14**	**48**
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<5	<5	<5	<5	<5	<5	<5

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171 W. Michigan Avenue
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Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	SB-5 Terra Prein 04/06/93 3-5	SB-5 Terra Prein 04/06/93 8-10	SB-5 Terra Prein 04/06/93 13-15	SB-5 Terra Prein 04/06/93 18-20	SB-6 Terra Prein 04/06/93 3-5	SB-6 Terra Prein 04/06/93 8-10	SB-6 Terra Prein 04/06/93 13-15
Inorganics	***Units***																
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	---	---	---	---	---	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	---	---	---	---	---	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	---	---	---	---	---	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	---	---	---	---	---	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	---	---	---	---	---	---
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	---	---	---	---	---	---	---
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	---	---	---	---	---	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	---	---	---	---	---	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	---	---	---	---	---	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	---	---	---	---	---	---
Misc.	***Units***																
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	---	---	---	---	---
PCB's	*Units*																
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---	---
Semi-Volatiles	***Units***																
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	<250	<250	<250	**980**	<250	<250	<250
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	<250	<250	<250	**<250**	<250	<250	<250
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	<250	<250	<250	**<250**	<250	<250	<250
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<250	<250	**<250**	<250	<250	<250
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	<250	<250	<250	**4300**	<250	<250	<250
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	<250	<250	<250	**5600**	<250	<250	<250
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	<250	<250	<250	**<250**	<250	<250	<250
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	---	---	---	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<250	<250	<250	**<250**	<250	<250	<250
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<250	<250	<250	**<250**	<250	<250	<250
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	<250	<250	<250	**<250**	<250	<250	<250
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	<250	<250	<250	**440**	<250	<250	<250
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	<250	<250	<250	<250	<250	<250
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	<250	<250	<250	<250	<250	<250	<250
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	<250	<250	<250	<250	<250	<250	<250
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	<250	<250	<250	<250	<250	<250	<250
Volatiles	***Units***																
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<5	<5	<5	<5	<5	<5	<5
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	<5	<5	<5	<5	<5	<5	<5
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---	---

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	SB-5 Terra Prein 04/06/93 3-5	SB-5 Terra Prein 04/06/93 8-10	SB-5 Terra Prein 04/06/93 13-15	SB-5 Terra Prein 04/06/93 18-20	SB-6 Terra Prein 04/06/93 3-5	SB-6 Terra Prein 04/06/93 8-10	SB-6 Terra Prein 04/06/93 13-15
Volatiles Cont.	***Units***																
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	**46**	<5	**52**	**55**	**10**	**17**	**62**
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<5	<5	<5	<5	<5	<5	<5

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171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	SB-6 Terra Prein 04/06/93 18-20	SB-6 Surface E97218 ET 09/12/94 0-1	SB-7 Terra Prein 04/06/93 3-5	SB-7 Terra Prein 04/06/93 8-10	SB-7 Terra Prein 04/06/93 13-15	SB-7 Terra Prein 04/06/93 18-20
Inorganics	***Units***															
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	---	---	---	---	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	---	---	---	---	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	---	---	---	---	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	---	---	---	---	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	---	---	---	---	---
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	---	**205**	---	---	---	---
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	---	---	---	---	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	---	---	---	---	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	---	---	---	---	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	---	---	---	---	---
Misc.	***Units***															
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	---	---	---	---
PCB's	*Units*															
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---
Semi-Volatiles	***Units***															
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	<250	<165	<250	<250	**9300**	**3400**
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	<250	<165	<250	**12600**	**11600**	**1400**
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	<250	<165	<250	<250	<250	<250
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	**1000**	<250	<250	<250	**13900**
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	<250	**930**	<250	**126000**	**59700**	**18200**
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	<250	**1500**	<250	**158000**	**73700**	**19600**
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	<250	---	<250	<250	<250	<250
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	---	---	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<250	**980**	<250	<250	<250	<250
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<250	<165	<250	<250	<250	<250
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	<250	**2100**	<250	<250	<250	<250
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	<250	<165	<250	**8500**	**7000**	**850**
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<250	**430**	<250	**1100**	<250	<250
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	<250	<165	<250	<250	<250	<250
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	<250	**1300**	<250	<250	<250	<250
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	<250	**1900**	<250	<250	<250	<250
Volatiles	*Units*															
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<5	---	<5	<5	<5	<5
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	<5	---	<5	**380**	**290**	<5
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---

Table 1
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171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	SB-6 Terra Prein 04/06/93 18-20	SB-6 Surface E97218 ET 09/12/94 0-1	SB-7 Terra Prein 04/06/93 3-5	SB-7 Terra Prein 04/06/93 8-10	SB-7 Terra Prein 04/06/93 13-15	SB-7 Terra Prein 04/06/93 18-20
Volatiles Cont.	***Units***															
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	**130**	---	**100**	**1500**	**1300**	**110**
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<5	---	<5	**1800**	**1410**	**16**

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location		*Background*	Residential	Groundwater	Groundwater	Residential	Residential	Residential	Residential	Residential	SB-9	SB-10	SB-10E	SB-10N	SB-10S	SB-10 Surface
Lab Sample ID		Target	Drinking	Surface	Contact	Soil	Volatile	Volatile	Particulate	Direct			E97211	E97208	E97209	E97221
Sampled By		Method	Water	Water	Protection	Volatilization to	Soil	Soil	Soil	Contact	Terra	Terra	ET	ET	ET	ET
Analyzed By		Detection	Protection	Interface	Criteria	Indoor Air	Inhalation	Inhalation	Inhalation	Criteria	Prein	Prein	ET	ET	ET	ET
Sample Date		Limit	Criteria	Protection		Inhalation	Infinite	2-Meter	Criteria		07/09/93	07/09/93	09/12/94	09/12/94	09/12/94	09/12/94
Sample Depth (ft.)				Criteria		Criteria	Criteria	Criteria			18-20	18-20	3-5	3-5	3-5	0-1
Inorganics	***Units***															
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	---	---	---	---	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	---	---	---	---	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	---	---	---	---	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	---	---	---	---	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	---	---	---	---	---
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	---	---	**66**	**26**	**38**	**67**
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	---	---	---	---	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	---	---	---	---	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	---	---	---	---	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	---	---	---	---	---
Misc.	***Units***															
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	---	---	---	---
PCB's	***Units***															
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---	---	---
Semi-Volatiles	***Units***															
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	<330	<330	---	---	---	<165
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	<330	<330	---	---	---	<165
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	<330	<330	---	---	---	<165
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<330	<330	---	---	---	<165
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	<330	<330	---	---	---	<165
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	<330	<330	---	---	---	**360**
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	<330	<330	---	---	---	---
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	---	---	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	<330	<330	---	---	---	<165
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	<330	<330	---	---	---	<165
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	<330	<330	---	---	---	**590**
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	<330	<330	---	---	---	<165
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	<330	<330	---	---	---	<165
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	**430**	**760**	---	---	---	<165
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	<330	<330	---	---	---	**330**
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	<330	<330	---	---	---	**470**
Volatiles	***Units***															
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	<10	<10	---	---	---	---
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	<10	<10	---	---	---	---
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---	---	---

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Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	SB-9 Terra Prein 07/09/93 18-20	SB-10 Terra Prein 07/09/93 18-20	SB-10E E97211 ET ET 09/12/94 3-5	SB-10N E97208 ET ET 09/12/94 3-5	SB-10S E97209 ET ET 09/12/94 3-5	SB-10 Surface E97221 ET ET 09/12/94 0-1
Volatiles Cont.	***Units***															
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	<10	<10	---	---	---	---
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	<10	<10	---	---	---	---

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	SB-10W E97210 ET ET 09/12/94 5-7	SW-2 SEG SEG 10/25/91 3	SW-4 SEG SEG 11/11/91 1.5-2	SW-4 SEG SEG 11/11/91 4.5-5
Inorganics	***Units***													
Arsenic	mg/Kg	*5.8*	4.6	70 (X)	2000	NLV	NLV	NLV	720	7.6	---	---	---	---
Barium (B)	mg/Kg	*75*	1300	(G,X)	1000000 (D)	NLV	NLV	NLV	330000	37000	---	---	---	---
Cadmium (B)	mg/Kg	*1.2*	6	(G,X)	230000	NLV	NLV	NLV	1700	550	---	---	---	---
Chromium (Total) [1]	mg/Kg	*18*	30	3.3	140000	NLV	NLV	NLV	260	2500	---	---	---	---
Copper (B)	mg/Kg	*32*	5800	(G)	1000000 (D)	NLV	NLV	NLV	130000	20000	---	---	---	---
Lead (B)	mg/Kg	*21*	700	(G,X)	ID	NLV	NLV	NLV	100000	400	**27**	---	---	---
Mercury (Total) (B,Z)	mg/Kg	*0.13*	1.7	0.05 (M)	47	48	52	52	20000	160	---	---	---	---
Selenium (B)	mg/Kg	*0.41*	4	0.4	78000	NLV	NLV	NLV	130000	2600	---	---	---	---
Silver (B)	mg/Kg	*1*	4.5	0.1 (M); 0.027	200000	NLV	NLV	NLV	6700	2500	---	---	---	---
Zinc (B)	mg/Kg	*47*	2400	(G)	1000000 (D)	NLV	NLV	NLV	ID	170000	---	---	---	---
Misc.	***Units***													
Percent Solids	%	NA	NA	NA	NA	NA	NA	NA	NA	NA	---	---	---	---
PCB's	*Units*													
PCB's, Total	ug/Kg	330	NLL	NLL	NLL	3.0E+6	2.4E+5	7.9E+6	5.2E+6	4000 {T}	---	---	---	---
Semi-Volatiles	***Units***													
Acenaphthene	ug/Kg	330	3.0E+5	4400	9.7E+5	1.9E+8	8.1E+7	8.1E+7	1.4E+10	4.1E+7	---	**7400**	<330	<330
Acenaphthylene	ug/Kg	330	5900	ID	4.4E+5	1.6E+6	2.2E+6	2.2E+6	2.3E+9	1.6E+6	---	<1650	<330	<330
Anthracene	ug/Kg	330	41000	ID	41000	1.0E+9 (D)	1.4E+9	1.4E+9	6.7E+10	2.3E+8	---	<1650	<330	<330
Benzo(a)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	---	<1650	<330	<330
Benzo(a)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	1.5E+6	2000	---	**1100**	<330	<330
Benzo(b)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	20000	---	**2200**	<330	<330
Benzo(g,h,i)perylene	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	8.0E+8	2.5E+6	---	**490**	<330	<330
Benzo(k)fluoranthene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2.0E+5	---	---	---	---
Chrysene (Q)	ug/Kg	330	NLL	NLL	NLL	ID	ID	ID	ID	2.0E+6	---	<1650	<330	<330
Dibenzo(a,h)anthracene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	2000	---	<1650	<330	<330
Fluoranthene	ug/Kg	330	7.3E+5	5500	7.3E+5	1.0E+9 (D)	7.4E+8	7.4E+8	9.3E+9	4.6E+7	---	**11000**	<330	<330
Fluorene	ug/Kg	330	3.9E+5	5300	8.9E+5	5.8E+8	1.3E+8	1.3E+8	9.3E+9	2.7E+7	---	**11000**	<330	<330
Indeno(1,2,3-cd)pyrene (Q)	ug/Kg	330	NLL	NLL	NLL	NLV	NLV	NLV	ID	20000	---	<1650	<330	<330
2-Methylnaphthalene	ug/Kg	330	57000	ID	5.5E+6	ID	ID	ID	ID	8.1E+6	---	---	---	---
Naphthalene	ug/Kg	330	35000	870	2.1E+6	2.5E+5	3.0E+5	3.0E+5	2.0E+8	1.6E+7	---	**4200**	<330	<330
Phenanthrene	ug/Kg	330	56000	5300	1.1E+6	2.8E+6	1.6E+5	1.6E+5	6.7E+6	1.6E+6	---	**19000**	<330	<330
Pyrene	ug/Kg	330	4.8E+5	ID	4.8E+5	1.0E+9 (D)	6.5E+8	6.5E+8	6.7E+9	2.9E+7	---	<1650	<330	<330
Volatiles	***Units***													
Benzene (I)	ug/Kg	50	100	4000 (X)	2.2E+5	1600	13000	79000	3.8E+8	1.8E+5	---	**29**	<10	<10
Chloroform	ug/Kg	50	1600 (W)	3400 (X)	1.5E+6 (C)	7200	45000	2.7E+5	1.3E+9	1.2E+6	---	---	---	---
1,2-Dibromoethane	ug/Kg	20	20 (M); 1.0	20 (M); 4.0	500	670	1700	3300	1.4E+7	92	---	---	---	---
1,2-Dichloroethane (I)	ug/Kg	50	100	7200 (X)	3.8E+5	2100	6200	26000	1.2E+8	91000	---	---	---	---
Ethylbenzene (I)	ug/Kg	50	1500	360	1.4E+5 (C)	87000	7.2E+5	2.2E+6	1.0E+10	1.4E+5 (C)	---	**110**	<10	<10
Methyl-tert-butyl ether (MTBE)	ug/Kg	250	800	15000 (X)	5.9E+6 (C)	5.9E+6 (C)	2.5E+7	8.7E+7	2.0E+11	1.5E+6	---	---	---	---

Table 1
Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Lab Sample ID Sampled By Analyzed By Sample Date Sample Depth (ft.)		*Background* Target Method Detection Limit	Residential Drinking Water Protection Criteria	Groundwater Surface Water Interface Protection Criteria	Groundwater Contact Protection Criteria	Residential Soil Volatilization to Indoor Air Inhalation Criteria	Residential Volatile Soil Inhalation Infinite Criteria	Residential Volatile Soil Inhalation 2-Meter Criteria	Residential Particulate Soil Inhalation Criteria	Residential Direct Contact Criteria	SB-10W E97210 ET ET 09/12/94 5-7	SW-2 SEG SEG 10/25/91 3	SW-4 SEG SEG 11/11/91 1.5-2	SW-4 SEG SEG 11/11/91 4.5-5
Volatiles Cont.	***Units***													
Tetrachloroethylene	ug/Kg	50	100	900 (X)	88000 (C)	11000	1.8E+5	1.1E+6	5.4E+9	88000 (C)	---	---	---	---
Toluene (I)	ug/Kg	100	16000	2800	2.5E+5 (C)	2.5E+5 (C)	2.8E+6	1.2E+7	2.7E+10	2.5E+5 (C)	---	<10	<10	<10
1,1,1-Trichloroethane	ug/Kg	50	4000	4000	4.6E+5 (C)	2.5E+5	3.8E+6	2.8E+7	6.7E+10	4.6E+5 (C)	---	---	---	---
1,2,4-Trimethylbenzene (I)	ug/Kg	100	2100	570	1.1E+5 (C)	1.1E+5 (C)	2.1E+7	5.0E+8	8.2E+10	1.1E+5 (C)	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/Kg	100	1800	1100	94000 (C)	94000 (C)	1.6E+7	3.8E+8	8.2E+10	94000 (C)	---	---	---	---
Xylene, o (I)	ug/Kg	50	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---
Xylene, p&m (I)	ug/Kg	100	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	---	---	---
Xylenes (I)	ug/Kg	150	5600	700	1.5E+5 (C)	1.5E+5 (C)	4.6E+7	1.3E+8	2.9E+11	1.5E+5 (C)	---	153	<10	<10

Summary of Analytical Results for Soil Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Footnotes

Criteria from Part 201 RRD Operational Memo#1, January 23, 2006.
» Target Method Detection Limit (TMDL) from MDEQ RRD Operational Memo#2 October 22, 2004.
Results Qualifiers:
Bolded value denotes parameter detected above detection limit
Shaded values exceed TMDL and Residential Direct Contact Criteria
Boxes values exceed TMDL and Residential Drinking Water Protection Criteria
Underlined values exceed TMDL and Groundwater Surface Water Interface Protection Criteria

Criteria Qualifiers:
[1] Although criteria are for hexavalent Chromium, results are total of hexavalent and trivalent chromium.
(B) Background, may be substituted if higher than cleanup criterion.
(C) Value presented is a screening level based on the chemical-specific generic Csat.
(D) Calculated criterion exceeds 100% hence is reduced to 100% or 1.0E+9 ppb
(G) Criterion is dependant upon pH and/or hardness value of the receiving surface water.
(I) Hazardous substance may exhibit the characteristic of ignitability as defined in 40 C.F.R. 261.21.
(M) Calculated criterion is below the analytical Target Detection Limit (TDL), therefore, the criterion defaults to the TDL.
(Q) Criteria for carcinogenic PAHs were developed using RPPs to benzo(a)pyrene
(T) Refer to the TSCA.
(X) GSI shown is not protective for surface water that is used as a drinking water source
(Z) Mercury is typically measured as total mercury. The generic cleanup criteria, however, are based on data for different species of mercury. Comparison to criteria shall be based on species-specific analytical data only if sufficient facility characterization has been conducted to rule out the presence of other species of mercury.
ID = Inadequate data to develop criterion
NA = Criterion or value is not available, or not applicable
NLL = Hazardous substance is not likely to leach under most soil conditions
NLV = Hazardous substance is not likely to volatilize under most conditions
—=Not Analyzed.

Table 2
Summary of Analytical Results for Groundwater Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Sample Identification Sampled By Analyzed By Sample Date Sample Depth (ft)		TMDL	Residential & Commercial I Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs	SB-1 Terra Prein 4/24/1993 13-18	SB-2 Terra Prein 4/24/1993 13-18	SB-3 Terra Prein 4/24/1993 13-18	SB-4 Terra Prein 4/24/1993 13-18	SB-5 Terra Prein 4/24/1993 13-18	SB-6 Terra Prein 4/24/1993 13-18
Inorganics	***Units***											
Lead, total (B)	ug/L	3	4.0 (L)	(G,X)	NLV	ID	---	---	---	---	---	---
Semi-Volatiles	***Units***											
Acenaphthene	ug/L	5	1300	19	4200 (S)	4200 (S)	<5	**432**	<5	<5	**43**	<5
Acenaphthylene	ug/L	5	52	ID	3900 (S)	3900 (S)	<5	**226**	<5	<5	**25**	<5
Anthracene	ug/L	5	43 (S)	ID	43 (S)	43 (S)	<5	<5	<5	<5	<5	<5
Benzo(a)anthracene (Q)	ug/L	1	2.1	ID	NLV	9.4 (S,AA)	<5	<5	<5	<5	<5	<5
Benzo(a)pyrene (Q)	ug/L	1	5.0 (A)	ID	NLV	1.0 (M,AA)	<5	**1220**	<5	<5	<5	<5
Benzo(b)fluoranthene (Q)	ug/L	1	1.5 (S, AA)	ID	ID	1.5 (S,AA)	<5	**1810**	<5	<5	<5	<5
Benzo(g,h,i)perylene	ug/L	1	1.0 (M)	NA	NLV	1.0 (M,AA)	<5	<5	<5	<5	<5	<5
Benzo(k)fluoranthene (Q)	ug/L	1	1.0 (M)	NA	NLV	1.0 (M,AA)	<5	<5	<5	<5	<5	<5
Chrysene (Q)	ug/L	1	1.6 (S)	ID	ID	1.6 (S,AA)	<5	<5	<5	<5	<5	<5
Dibenzo(a,h)anthracene (Q)	ug/L	2	2.0 (M)	ID	NLV	2.0 (M,AA)	---	---	---	---	---	---
Fluoranthene	ug/L	1	210 (S)	1.6	210 (S)	210 (S)	<5	<5	<5	<5	<5	<5
Fluorene	ug/L	5	880	12	2000 (S)	2000 (S)	<5	**77**	<5	<5	**9**	<5
Indeno(1,2,3-cd)pyrene (Q)	ug/L	2	2.0 (M)	ID	NLV	2.0 (M, AA)	<5	<5	<5	<5	<5	<5
2-Methylnaphthalene	ug/L	5	260	ID	ID	25000 (S)	---	---	---	---	---	---
Naphthalene	ug/L	5	520	13	31000 (S)	31000 (S)	<5	<5	<5	<5	<5	<5
Phenanthrene	ug/L	2	52	2.4	1000 (S)	1000 (S)	<5	<5	<5	<5	<5	<5
Pyrene	ug/L	5	140 (S)	ID	140 (S)	140 (S)	<5	<5	<5	<5	**30**	<5
Volatiles	***Units***											
Benzene (I)	ug/L	1	5.0 (A)	200 (X)	5600	11000	<1	**5**	<1	<1	<1	<1
1,2-Dibromoethane	ug/L	0.05	0.05 (A)	0.2 (X)	2400	25	---	---	---	---	---	---
1,2-Dichloroethane (I)	ug/L	1	5.0 (A)	360 (X)	9600	19000	---	---	---	---	---	---
Ethylbenzene (I)	ug/L	1	74 (E)	18	1.1E+5	1.7E+5 (S)	<1	<1	<1	<1	<1	<1
Methyl-tert-butyl ether (MTBE)	ug/L	5	40 (E)	730 (X)	4.7E+7 (S)	6.1E+5	---	---	---	---	---	---
Toluene (I)	ug/L	1	790 (E)	140	5.3E+5 (S)	5.3E+5 (S)	<1	**6**	**4**	**21**	**2**	**3**
1,2,4-Trimethylbenzene (I)	ug/L	1	63 (E)	17	56000 (S)	56000 (S)	---	---	---	---	---	---
1,3,5-Trimethylbenzene (I)	ug/L	1	72 (E)	45	61000 (S)	61000 (S)	---	---	---	---	---	---
Xylenes, total (I)	ug/L	3	280 (E)	35	1.9E+5 (S)	1.9E+5 (S)	<1	<1	<1	<1	<1	<1
m,p-Xylenes (I)	ug/L	2	280 (E)	35	1.9E+5 (S)	1.9E+5 (S)	---	---	---	---	---	---
o-Xylenes (I)	ug/L	1	280 (E)	35	1.9E+5 (S)	1.9E+5 (S)	---	---	---	---	---	---

Table 2
Summary of Analytical Results for Groundwater Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Sample Identification Sampled By Analyzed By Sample Date Sample Depth (ft)		TMDL	Residential & Commercial I Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs	SB-7 Terra Prein 4/24/1993 13-18	SB-9 Terra Prein 7/3/1993	SB-10 Terra Prein 7/3/1993	SB-11 Terra Prein 7/3/1993	Gal-UST Horizon Bio-Chem 10/14/1996	GP-1 1341-1 P&N P&N 4/10/2001 16-20'
Inorganics	***Units***											
Lead, total (B)	ug/L	3	4.0 (L)	(G,X)	NLV	ID	---	---	---	---	<3	---
Semi-Volatiles	***Units***											
Acenaphthene	ug/L	5	1300	19	4200 (S)	4200 (S)	**967**	7	<5	<5	<5	<5
Acenaphthylene	ug/L	5	52	ID	3900 (S)	3900 (S)	**475**	<5	<5	<5	<5	<5
Anthracene	ug/L	5	43 (S)	ID	43 (S)	43 (S)	<5	<5	<5	<5	<5	<5
Benzo(a)anthracene (Q)	ug/L	1	2.1	ID	NLV	9.4 (S,AA)	<5	<5	<5	<5	<5	<1
Benzo(a)pyrene (Q)	ug/L	1	5.0 (A)	ID	NLV	1.0 (M,AA)	**2210**	<5	<5	<5	<5	<2
Benzo(b)fluoranthene (Q)	ug/L	1	1.5 (S, AA)	ID	ID	1.5 (S,AA)	**3520**	**632**	<5	<5	<5	<2
Benzo(g,h,i)perylene	ug/L	1	1.0 (M)	NA	NLV	1.0 (M,AA)	<5	<5	<5	<5	<5	<5
Benzo(k)fluoranthene (Q)	ug/L	1	1.0 (M)	NA	NLV	1.0 (M,AA)	<5	<5	<5	<5	<5	<5
Chrysene (Q)	ug/L	1	1.6 (S)	ID	ID	1.6 (S,AA)	<5	<5	<5	<5	<5	<5
Dibenzo(a,h)anthracene (Q)	ug/L	2	2.0 (M)	ID	NLV	2.0 (M,AA)	---	---	---	---	---	<2
Fluoranthene	ug/L	1	210 (S)	1.6	210 (S)	210 (S)	<5	<5	<5	<5	<5	<5
Fluorene	ug/L	5	880	12	2000 (S)	2000 (S)	**132**	**41**	<5	<5	<5	<5
Indeno(1,2,3-cd)pyrene (Q)	ug/L	2	2.0 (M)	ID	NLV	2.0 (M, AA)	<5	<5	<5	<5	<5	<2
2-Methylnaphthalene	ug/L	5	260	ID	ID	25000 (S)	---	---	---	---	---	<5
Naphthalene	ug/L	5	520	13	31000 (S)	31000 (S)	**101**	<5	<5	<5	<5	<5
Phenanthrene	ug/L	2	52	2.4	1000 (S)	1000 (S)	<5	**115**	<5	<5	<5	<5
Pyrene	ug/L	5	140 (S)	ID	140 (S)	140 (S)	<5	<5	<5	<5	<5	<5
Volatiles	***Units***											
Benzene (I)	ug/L	1	5.0 (A)	200 (X)	5600	11000	**16**	<1	<1	<1	<1	<1
1,2-Dibromoethane	ug/L	0.05	0.05 (A)	0.2 (X)	2400	25	---	---	---	---	---	<1
1,2-Dichloroethane (I)	ug/L	1	5.0 (A)	360 (X)	9600	19000	---	---	---	---	---	<1
Ethylbenzene (I)	ug/L	1	74 (E)	18	1.1E+5	1.7E+5 (S)	<1	<1	<1	<1	<1	<1
Methyl-tert-butyl ether (MTBE)	ug/L	5	40 (E)	730 (X)	4.7E+7 (S)	6.1E+5	---	---	---	---	---	<5
Toluene (I)	ug/L	1	790 (E)	140	5.3E+5 (S)	5.3E+5 (S)	**4**	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene (I)	ug/L	1	63 (E)	17	56000 (S)	56000 (S)	---	---	---	---	---	<1
1,3,5-Trimethylbenzene (I)	ug/L	1	72 (E)	45	61000 (S)	61000 (S)	---	---	---	---	---	<1
Xylenes, total (I)	ug/L	3	280 (E)	35	1.9E+5 (S)	1.9E+5 (S)	<1	<1	<1	<1	<1	---
m,p-Xylenes (I)	ug/L	2	280 (E)	35	1.9E+5 (S)	1.9E+5 (S)	---	---	---	---	---	<1
o-Xylenes (I)	ug/L	1	280 (E)	35	1.9E+5 (S)	1.9E+5 (S)	---	---	---	---	---	<1

Table 2
Summary of Analytical Results for Groundwater Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Sample Location Sample Identification Sampled By Analyzed By Sample Date Sample Depth (ft)		TMDL	Residential & Commercial I Drinking Water Criteria & RBSLs	Groundwater Surface Water Interface Criteria & RBSLs	Residential Groundwater Volatilization to Indoor Air Inhalation Criteria & RBSLs	Groundwater Contact Criteria & RBSLs	GP-3 1341-2 P&N P&N 4/10/2001 12-16'	GP-3 1341-3 P&N P&N 4/10/2001 22-24'	GP-4 1341-4 P&N P&N 4/10/2001 16-18'	GP-5 1341-5 P&N P&N 4/10/2001 12-16'	GP-6 1341-6 P&N P&N 4/10/2001 14.5-16.5'	GP-7 1341-7 P&N P&N 4/10/2001 16-20'
Inorganics	***Units***											
Lead, total (B)	ug/L	3	4.0 (L)	(G,X)	NLV	ID	---	---	---	---	---	---
Semi-Volatiles	***Units***											
Acenaphthene	ug/L	5	1300	19	4200 (S)	4200 (S)	<5	<5	<5	<5	<5	<5
Acenaphthylene	ug/L	5	52	ID	3900 (S)	3900 (S)	<5	<5	<5	<5	<5	<5
Anthracene	ug/L	5	43 (S)	ID	43 (S)	43 (S)	<5	<5	<5	<5	<5	<5
Benzo(a)anthracene (Q)	ug/L	1	2.1	ID	NLV	9.4 (S,AA)	<1	<1	<1	<1	<1	<1
Benzo(a)pyrene (Q)	ug/L	1	5.0 (A)	ID	NLV	1.0 (M,AA)	<2	<2	<2	<2	<2	<2
Benzo(b)fluoranthene (Q)	ug/L	1	1.5 (S, AA)	ID	ID	1.5 (S,AA)	<2	<2	<2	<2	<2	<2
Benzo(g,h,i)perylene	ug/L	1	1.0 (M)	NA	NLV	1.0 (M,AA)	<5	<5	<5	<5	<5	<5
Benzo(k)fluoranthene (Q)	ug/L	1	1.0 (M)	NA	NLV	1.0 (M,AA)	<5	<5	<5	<5	<5	<5
Chrysene (Q)	ug/L	1	1.6 (S)	ID	ID	1.6 (S,AA)	<5	<5	<5	47.5	<5	<5
Dibenzo(a,h)anthracene (Q)	ug/L	2	2.0 (M)	ID	NLV	2.0 (M,AA)	<2	<2	<2	<2	<2	<2
Fluoranthene	ug/L	1	210 (S)	1.6	210 (S)	210 (S)	<5	<5	<5	<5	<5	<5
Fluorene	ug/L	5	880	12	2000 (S)	2000 (S)	<5	<5	<5	<5	<5	<5
Indeno(1,2,3-cd)pyrene (Q)	ug/L	2	2.0 (M)	ID	NLV	2.0 (M, AA)	<2	<2	<2	<2	<2	<2
2-Methylnaphthalene	ug/L	5	260	ID	ID	25000 (S)	<5	<5	<5	<5	<5	<5
Naphthalene	ug/L	5	520	13	31000 (S)	31000 (S)	<5	<5	<5	<5	<5	<5
Phenanthrene	ug/L	2	52	2.4	1000 (S)	1000 (S)	<5	<5	<5	<5	<5	<5
Pyrene	ug/L	5	140 (S)	ID	140 (S)	140 (S)	<5	<5	<5	**37.9**	<5	<5
Volatiles	***Units***											
Benzene (I)	ug/L	1	5.0 (A)	200 (X)	5600	11000	<1	<1	<1	<1	<1	<1
1,2-Dibromoethane	ug/L	0.05	0.05 (A)	0.2 (X)	2400	25	<1	<1	<1	<1	<1	<1
1,2-Dichloroethane (I)	ug/L	1	5.0 (A)	360 (X)	9600	19000	<1	<1	<1	<1	<1	<1
Ethylbenzene (I)	ug/L	1	74 (E)	18	1.1E+5	1.7E+5 (S)	<1	<1	<1	<1	<1	<1
Methyl-tert-butyl ether (MTBE)	ug/L	5	40 (E)	730 (X)	4.7E+7 (S)	6.1E+5	<5	<5	<5	<5	<5	<5
Toluene (I)	ug/L	1	790 (E)	140	5.3E+5 (S)	5.3E+5 (S)	<1	<1	<1	<1	<1	<1
1,2,4-Trimethylbenzene (I)	ug/L	1	63 (E)	17	56000 (S)	56000 (S)	<1	<1	<1	<1	**8.00**	**5.00**
1,3,5-Trimethylbenzene (I)	ug/L	1	72 (E)	45	61000 (S)	61000 (S)	<1	<1	<1	<1	**1.00**	<1
Xylenes, total (I)	ug/L	3	280 (E)	35	1.9E+5 (S)	1.9E+5 (S)	---	---	---	---	---	---
m,p-Xylenes (I)	ug/L	2	280 (E)	35	1.9E+5 (S)	1.9E+5 (S)	<1	<1	<1	<1	<1	**2.00**
o-Xylenes (I)	ug/L	1	280 (E)	35	1.9E+5 (S)	1.9E+5 (S)	<1	<1	<1	<1	<1	<1

Table 2
Summary of Analytical Results for Groundwater Samples
171 W. Michigan Avenue
Battle Creek, Michigan
Baseline Environmental Assessment

Footnotes

Criteria from Part 201 RRD Operational Memo#1, January 23, 2006.
» Target Method Detection Limit (TMDL) from MDEQ RRD Operational Memo#2 October 22, 2004.
Bolded value denotes parameter detected above detection limit
Shaded values exceed TMDL and Residential / Commercial I Drinking Water Criteria
Boxed values exceed TMDL and Groundwater Surface Water Interface Criteria
Underlined values exceed TMDL and Groundwater Contact Criteria

Criteria Qualifiers:
(A) Criterion is MI Drinking Water Standard.
(B) Background, may be substituted if higher than cleanup criterion.
(E) Criterion is the aesthetic DW value, as required by section 20120a(5) of the act.
A notice of aesthetic impact may be employed as an institutional control mechanism if groundwater concentrations exceed the aesthetic drinking water criterion, but do not exceed the applicable health-based drinking water values for Aluminum, tertiary Amyl methyl ether, Copper, Diethyl ether, Ethylbenzene, Iron, Manganese, MTBE, Toluene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene and Xylenes.
(G) Criterion is dependant upon pH and/or hardness value of the receiving surface water.
(I) Hazardous substance may exhibit the characteristic of ignitability as defined in 40 C.F.R. 261.21.
(L) Criteria for Lead are derived using a biologically based model, as allowed for under section 20120a(10) of the NREPA.
(M) Calculated criterion is below the analytical Target Detection Limit (TDL), therefore, the criterion defaults to the TDL.
(Q) Criteria for carcinogenic PAHs were developed using RPPs to benzo(a)pyrene
(S) Criterion defaults to the hazardous substance-specific water solubility limit
(X) GSI shown is not protective for surface water that is used as a drinking water source
(AA) Comparison to these criteria may take into account an evaluation of whether the hazardous substances are adsorbed to particulates rather than dissolved in water and whether filtered groundwater samples were used to evaluate groundwater.
ID = Inadequate data to develop criterion
NLV = Hazardous substance is not likely to volatilize under most conditions
---=Not Analyzed.

APPENDIX A

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

Elizabeth U. Bartz — Senior Project Geologist

EDUCATION

M.S., Geology, Southern Illinois University, 1992
B.S., Geosciences, University of Arizona, 1982

PROFESSIONAL SUMMARY

Ms. Bartz evaluates environmental conditions at subject properties to determine if those conditions are protective of human health and the surrounding environment in accordance with local, state and federal environmental regulations. She has performed a variety of traditional environmental investigations in the Midwest including transactional support assessments, Michigan Part 201 site investigations and closures, CERCLA remedial investigations/feasibility studies, and remedial design/remedial actions. In addition, she has implemented National Environment Policy Act (NEPA) related to surface and air transportation studies.

PROFESSIONAL EXPERIENCE

TRANSACTIONAL SUPPORT

- **Phase I and II Environmental Site Assessment (ESA), Baseline Environmental Assessment (BEA), and Due Care Plan (DCP), 3-Story Vacant Building, Grand Rapids, Michigan.** Principal Investigator for Phase I and II Environmental Site Assessments of a 3-story vacant building in the Heartside Historical District of Grand Rapids, Michigan. In addition to "All Appropriate Inquiry" standards, the Phase I and II ESAs were performed in accordance with Michigan State Housing Development Authority (MSHDA) requirements. The project also included asbestos and lead based paint sampling and abatement. A positive determination was received for the BEA and DCP by the Michigan Department of Environmental Quality. The developer was successful in earning a MSDHA tax credit.

- **Phase I and II ESAs, BEA and Due Care Plans, City of Muskegon Brownfield Redevelopment Authority (BRA) and City of Grand Rapids BRA, Michigan.** Prepared Phase I and Phase II ESA Reports, BEAs and Due Care Plans for brownfield sites in the Cities of Grand Rapids and Muskegon under environmental site assessment grants provided by the State of Michigan.

- **Phase I and II ESAs for a Major Local Retailer at sites located in Michigan and Indiana.** Principal Investigator for Phase I and II ESAs of vacant and occupied propertie typically 80 to 100 acres in size. Also implement remediation activities for resolution of recognized environmental conditions.

- **Phase I ESA, Distribution Warehouse, Grand Rapids, Michigan.** Principal Investigator for Phase I ESA of a 100-acre site containing a 100,000 ft^2 distribution

warehouse and several other structures. Oil filled equipment included hydraulic elevators, boilers, back-up generators, trash compactors, conveyor system, and balers.

- **Phase I ESA, BEA and Due Care Plan, Amusement Attraction, Battle Creek, Michigan.** Principal Investigator for a Phase I ESA, BEA, and DCP at a former cereal-related amusement attraction. Numerous investigations had occurred on the site through time and existing data was reviewed utilized to develop a BEA. A DCP was also prepared for the new users of the property.

- **Limited Phase II ESA, BEA and Due Care Plan, Agricultural Property, Coopersville, Michigan** Principal Investigator for a Limited Phase II ESA consisting of soil sampling in the vicinity of an old on-site underground storage tank (UST). During the BEA process, the UST was removed from the site. A BEA and DCP were prepared in anticipation of the site to be re-developed into a residential condominium development.

- **Phase I ESA, Automobile Dealership, Wyoming, Michigan.** Project Manager for a Phase I ESA at 30-year old automobile dealership. Recognized Environmental Conditions (RECs) related to leaking underground storage tanks (LUSTs), hydraulic hoists and former septic systems were identified. A Phase II ESA and Baseline Environmental Assessment were recommended.

- **Phase I ESA, Commercial Office Building, Cascade Township, Michigan.** Project Manager for a Phase I ESA at 20-year old, three story office building.

- **Phase I ESA, Nursing Home Facility, Hamtramck, Michigan.** Project Manager for a Phase I ESA at a 30-year old nursing home facility. Project also included asbestos sampling and analysis.

- **Phase I ESA, Commercial Office Buildings, Houston, Indianapolis, Atlanta, and Minneapolis.** Project Manager for Phase I ESAs prepared for a confidential real estate investment trust located in Boston, Massachusetts. The office buildings ranged in size from four to thirty-five stories and typically included open or enclosed parking structures. Investigations also included indoor air monitoring to screen for sick building syndrome.

- **Phase I and II ESAs, Metal Fabricating Facility, Battle Creek, Michigan.** Project Manager for a Phase I and II ESA at a metal fabricating facility for Bank of America. RECs related to drum storage; floor drains and a fire were identified and evaluated.

- **Fifteen Phase I ESAs, Propane Distribution Centers, Western Michigan.** Principal Investigator for fifteen Phase I ESAs performed on an expedited basis for a national propane gas company. RECs related to methanol use to denature the propane and past property uses were identified on several of the properties.

- **Phase I ESA, Proposed Location for Whitehall Public Schools High School, Whitehall, Michigan.** Principal Investigator for a Phase I ESA of rural property near Whitehall, Michigan.

- **Phase I ESAs for Federal Aviation Administration, South Bend Regional Airport, South Bend, Indiana.** Principal Investigator for four Phase I ESAs in support of citing a new airport traffic control tower at the South Bend Regional Airport.

- **Phase I ESAs for Federal Aviation Administration, Kalamazoo/Battle Creek International Airport, Kalamazoo, Michigan.** Principal Investigator for three Phase I ESAs in support of citing a new airport traffic control tower at the Kalamazoo/Battle Creek International Airport.

- **Phase I ESA, Industrial Property, Grand Rapids, Michigan.** Principal Investigator for a Phase I ESA of property in downtown Grand Rapids with a 100+year history of industrial use. A Phase II ESA, BEA and Due Care Plan were recommended.

- **Phase II ESAs, Indiana Dunes National Lakeshore, National Park Service, Chesterton, Indiana.** Project Manager for Phase II ESAs on three properties incorporated into the park boundaries due to the expiration of life leases. Properties included a gas station and two residences with historical chemical usage.

TRAINING

- American Red Cross First Aid, CPR, and AED Trained

- 40 hour OSHA HAZWOPER and 8 hour refreshers

- National Brownfields Organization, All Appropriate Inquiry (AAI) Training

ORGANIZATIONS

- City of Kentwood Economic Development Corporation and Brownfield Redevelopment Authority (Appointed Member)

APPENDIX B

JUNE 2009 PHASE I ENVIRONMENTAL SITE ASSESSMENT UPDATE

PHASE I
ENVIRONMENTAL SITE ASSESSMENT
UPDATE

of

Former Cereal City USA Property
171 W. Michigan Avenue
Battle Creek, Michigan

Prepared for:

Battle Creek Unlimited
4950 W. Dickman Road
Battle Creek, MI 49037

Prepared by:

Horizon Environmental
4771 – 50th Street, S.E., Suite One
Grand Rapids, Michigan 49512

BCU-0101

June 2009

HORIZON ENVIRONMENTAL

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EXECUTIVE SUMMARY

Horizon Environmental ("Horizon") performed a Phase I Environmental Site Assessment ("ESA") Update of the property located at 171 W. Michigan Avenue in Battle Creek, Michigan (the subject property) in accordance with the requirements of 40 CFR Part 312 (*Standards and Practices for All Appropriate Inquiries*) and the American Society for Testing and Materials ("ASTM") Method E 1527-05 (*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*).

The subject property is approximately 6.94 acres and is currently occupied by the former Cereal City USA interactive museum, which includes a three-story, 45,000 ft^2 building, surface parking lots, and landscaped areas. CC Real Estate Holdings purchased the subject property in 2007 and leased the property to the Kellogg Company ("Kellogg"). Kellogg was planning to renovate the building into offices and additional parking but later made the decision not to proceed with renovations with the exception of interior demolition. The building has been vacant since early 2007. Prior to the current use, the site has had multiple commercial and industrial uses including: H.B. Sherman Company (nail and clamp manufacturer); lumber, coal and fuel storage yard; Gallagher Industrial Laundry (hot water wash laundry); auto body and paint shop; automobile service station and repair shop; Hebble Funeral Home ("Hebble"); and, the Redbird Lounge (restaurant and bar)). This assessment has revealed no evidence of recognized environmental conditions ("RECs") in connection with the property except for the following:

Known or Suspected RECs

1. *One Above Ground Storage Tank ("AST"):* One hydraulic oil containing AST is located inside the elevator maintenance room to support the building's elevator.
2. *Lubrication Oil Container Release:* A 2-gallon sprayer containing lubrication oil for elevator maintenance was observed leaking onto and into seams associated with the concrete floor adjacent to the sprayer in the elevator room.
3. *Two Leaking Underground Storage Tanks ("LUSTs") and Industrial Use:* The H.B. Sherman property formerly located at 207 W. Michigan Avenue/207 W. Jackson Avenue (addressed both ways) reported releases from two underground storage tanks ("USTs"). In addition, this property was the location of a former foundry that included metal plating and stamping. This site is currently listed on the Environmental Data Resources ("EDR") database as a Brownfield site and as an open LUST site on the Michigan Department of Environmental Quality ("MDEQ") LUST database.
4. *Seven LUSTs:* The Hebble property formerly located at 123-151 W. Michigan Avenue/123 W. Michigan Avenue (addressed both ways) contained seven USTs. Two releases were reported during UST removal in 1989 and 1992. This site is currently listed on the EDR database as a Brownfield site and as an open LUST site on the MDEQ LUST database.

5. *Railroad Bed:* Portions of the property were traversed by a former railroad. Reportedly, the railroad tracks were removed but not the railroad ballast.

Historical RECs

1. *One LUST and Industrial Use:* Historical records indicate that a used car business with a 120-gallon UST and an auto body and paint shop were located at the former Gallagher Industrial property located at 169 W. Michigan Avenue.
2. *Historic Operations:* Historical records indicate the following on-site historic operations included: gasoline service station; lumber and coal yard; gun store; bakery; foundry (with nickel and brass plating); planning mill, sash, door and blind factory; laundry; portions of a print shop; crude oil pump house; grocery; broom factory; door bell shop; bookshop; pattern shop; machine shop; fuel and feed coal yard; drug store manufacturer; paper and paint store; church; cement manufacturer; auto repair garage; undertaker; auto body and paint shop; and, sewage pump station.

Several environmental investigations have occurred on the subject property, and the nature and extent of contamination is well documented. For this reason, it is Horizon's opinion that additional studies are not warranted Horizon recommends that the following items be addressed as follow-up issues:

1. Open LUSTs on the former H.B. Sherman and Hebble parcels should be accounted for in future property development plans.
2. The lubrication oil container release in the elevator maintenance room should be cleaned up, and the sprayer should be repaired and placed in secondary containment.

1.0 INTRODUCTION

Horizon performed this Phase I ESA Update in accordance with the requirements of 40 CFR Part 312 (*Standards and Practices for All Appropriate Inquiries*) and the ASTM Method E 1527-05 (*Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*).

1.1 PURPOSE

The purpose of this Phase I ESA Update is to comply with the "all appropriate inquiry" requirements of 40 CFR Part 312 that are intended to result in the identification of conditions indicative of releases and threatened releases of hazardous substances on, at, in, or to the subject property. As specified in §312.11, compliance with the "all appropriate inquiry" requirements of 40 CFR Part 312 may be accomplished by following the procedures of ASTM standard E1527-05 which are designed to identify RECs in connection with the subject property. The term REC means the presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies. Conditions determined to be *de minimis* are not RECs.

1.2 DETAILED SCOPE OF SERVICES

The scope of work for this Phase I ESA Update included a records review; on-site reconnaissance of the interior and exterior portions of subject property; visual reconnaissance of the adjoining properties; interview of the user of this Phase I ESA Update, the evaluation of information obtained from these sources; and, preparation of this report. This Phase I ESA Update report also relies on the following information presented in Phase I ESA reports previously completed for the subject property: historical documentation; interviews with present and past owners, operators and occupants of the subject property; and interviews with local government officials. The issues identified in Section 13 (*Non-Scope Considerations*[1]) of ASTM Method E 1527-05 are considered outside the scope of this assessment unless specifically described in Section 11 (*Additional Services)* of this report.

[1] Non-scope considerations include but are not limited to asbestos-containing building materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historic resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, biological agents, and mold.

2.0 SITE DESCRIPTION

2.1 LOCATION AND LEGAL DESCRIPTION

The subject property is located at 171 W. Michigan Avenue, Battle Creek, Michigan. The City of Battle Creek parcel ID number for this property is 0254-00-060-0. The property is bounded by W. Michigan Avenue on the north, Carlyle Street on the east, W. Jackson Avenue on the south, and S. Washington Street on the west. This location is also generally described as Section 1, Township 2 South, Range 8 West, Calhoun County, Michigan. The site location is illustrated in Figure 1, and the site layout and location of relevant features are illustrated in Figure 2. A legal description is provided in Appendix A.

2.2 SITE AND VICINITY GENERAL CHARACTERISTICS

The subject property encompasses approximately 6.94 acres and is located in an area of commercial development. The subject property is currently occupied by the former Cereal City USA building and associated surface parking lot. The remaining portions of the site are landscaped with grass, trees and plantings. The Battle Creek River intersects the eastern portion of the property.

2.3 CURRENT USE OF THE PROPERTY

The subject property is currently occupied by the former Cereal City USA building and associated surface parking lot. CC Real Estate Holdings purchased the subject property in 2007 and leased the property to the Kellogg. Kellogg was planning to renovate the building into offices and additional parking but later made the decision not to renovate the building with the exception of interior demolition. The building has been vacant since early 2007. More detailed information on the current use of the property is provided in Section 5.0.

2.4 PROPERTY IMPROVEMENTS

The subject property includes a three story building and an associated surface parking lot. The building has a concrete slab-on-grade floor with no basement. The exterior of the building is a combination of stone, brick and siding. The first and second floor interior finishes have been removed. The remaining third floor interior finishes include drywall, and some drop ceilings, but the majority of the carpet and linoleum floor tile has been removed. The building is heated with a natural gas-fired furnace and cooled with an electric-powered central air conditioning unit. The building is serviced by the City of Battle Creek municipal water and sewer systems (sanitary and storm). Electric service is provided by Consumers Energy and natural gas service is provided by Detroit Edison. More detailed information on property improvements is provided in Section 5.2.

2.5 CURRENT USES OF ADJOINING PROPERTIES

The current use of the adjoining properties is commercial (e.g., offices, restaurants) with the exception of a recreational parcel located adjacent to the south of the subject property, adjacent to the Battle Creek River. More detailed information on current uses of adjoining properties is provided in Section 5.2.

3.0 USER PROVIDED INFORMATION

Ms. Cheryl Beard, Technology Marketing Director for Battle Creek Unlimited ("BCU"), provided the following information regarding the subject property.

3.1 TITLE RECORDS

Title records were not provided by BCU. However, the following information regarding ownership of the subject property was obtained by Horizon from MDEQ files.

H.B. Sherman Parcel

The City of Battle Creek ("City") was gifted the H.B. Sherman Site in 1987 when Citation Walther Company was closing and going out of business. The Heritage Center Foundation acquired the property from the City in 1998.

Hebble Funeral Home Parcel

The City voluntarily acquired the Hebble site (123-151 S. Washington Avenue) from the Hebble Funeral Home in 1987. The City owned the site until 1998 when the City transferred the property to the Heritage Center Foundation with a quit claim deed.

C.C. Real Estate Holdings purchased the property on June 29, 2007 and leased the property to Kellogg. Kellogg anticipated renovating the building into additional offices; however, Kellogg did not proceed with their development plans.

According to Cheryl Beard, C.C. Real Estate Holdings donated the property to the BCU on May 19, 2009.

3.2 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

BCU is not aware of: 1) any environmental cleanup liens against the subject property that are filed or recorded under federal, tribal, state or local law; or 2) any activity and land use limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the subject property and/or have been filed or recorded in a registry under federal, tribal, state or local law (Appendix B). In addition, the site was not on the MDEQ Remediation Redevelopment Division ("RRD") Perfected Lien List (last updated 3/24/2009).

There was one "temporary easement" granted to the City from the Heritage Center Foundation for "the right to install, access, and maintain up to five (5) monitoring wells for tracking leakage from a former underground storage tank on the property." A description of the temporary easement is provided in Appendix A. The portion of the property involved with the temporary easement noted in the agreement is located in the surface parking lot west of the former Cereal City USA building.

3.3 SPECIALIZED KNOWLEDGE

BCU does not have any specialized knowledge or experience related to the subject property or nearby properties (Appendix B) with the exception of the following: BCU is aware of the Phase I ESA performed by Horizon for Kellogg in 2007.

3.4 COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

BCU is not aware of: 1) commonly known or reasonably ascertainable information about the subject property that would help Horizon Environmental to identify conditions indicative of releases or threatened releases; or 2) any obvious indicators that point to the presence or likely presence of contamination at the subject property (Appendix B) with the exception of the following: BCU is aware of the Phase I ESA performed by Horizon for Kellogg in 2007.

3.5 VALUATION FOR ENVIRONMENTAL ISSUES

According to Cheryl Beard, Kellogg donated the property to BCU (Appendix B).

3.6 OWNER AND OPERATOR INFORMATION

The property was owned by the C.C. Real Estate Holdings and leased to Kellogg up until May 19, 2009 when the property was donated to BCU. The subject property was the site of the former Cereal City USA which opened in 1998 and closed in January 2007. The building is currently vacant; however, Kellogg performed interior demolition upon their acquisition in June 2007.

3.7 REASON FOR PERFORMING PHASE I ESA UPDATE

The reason for performing this Phase I ESA Update is to qualify BCU for landowner liability protection to CERCLA liability (Appendix B).

3.8 OTHER INFORMATION

BCU does not have any knowledge of: 1) any pending, threatened, or past litigation, relevant to hazardous substances or petroleum products in, on, or from the property; 2) any pending, threatened, or past administrative proceedings relevant to hazardous

substances or petroleum products in, on, or from the property; and 3) any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products (Appendix B) with the exception of the following.

Cheryl Beard, BCU, was on the Board of Directors of the Heritage Foundation who sold the property to C.C. Real Estate Holdings in 2007. Ms. Beard was aware of the Phase I ESA performed by Horizon for Kellogg for the 2007 acquisition. The following reports were reviewed and discussed as part of the 2007 due diligence activities.

- February 11, 2002; Phase II Results/Former H.B. Sherman Site, Battle Creek, Michigan, Prein & Newhof.

- January 1997; Section 7A Compliance Assessment for the H.B. Sherman/Gallagher Industrial Laundry/Redbird Lounge Properties, Horizon Environmental.

- January 1997; Baseline Environmental Assessment and Due Care Compliance Assessment for the H.B. Sherman/Gallagher Industrial Laundry/Redbird Lounge Properties, Horizon Environmental.

- November 1996; Phase I and Phase II Environmental Site Assessments for the Former H.B.Sherman/Gallagher Industrial Laundry/Redbird Lounge Properties, Horizon Environmental.

- January 1995; Phase II Hydrogeologic Investigation Work Plan, H.B. Sherman Site, Battle Creek, Michigan, Earth Tech.

- August 30, 1993; HB Sherman Addendum to May 28, 1993 Site Investigation Report, Global Environmental Engineering.

- June 8, 1993; Hebble Property Site Investigation Report: Global Environmental Engineering.

- May 28, 1993; Site Investigation Report, City of Battle Creek H.B. Sherman Property, Global Environmental Engineering and Terra Environmental Corporation.

- January 22, 1993; 45 Day Site Characterization Report, 103 E. Michigan Avenue, Battle Creek, Michigan, Terra Environmental Corporation (available report copy is incomplete).

- December 29, 1992; 20-Day Initial Abatement Report, 103 E. Michigan Avenue, Battle Creek, Michigan, Terra Environmental Corporation (available report copy is incomplete).

- December 1991; Soil Investigation, H.B. Sherman Manufacturing Company, Snell Environmental Group, Inc.

- November 1991; Phase I ESA, H.B. Sherman Manufacturing Company, Battle Creek, Michigan, Snell Environmental Group, Inc.

- September 1991; 45-Day Report, H.B. Sherman, Snell Environmental Group, Inc.

- Asbestos Evaluation and Site Investigation at H.B. Sherman and Triple D Motors, Battle Creek, Michigan, Snell Environmental Group, Inc.

- April 23, 1991; Asbestos Evaluation and Site Investigation at H.B. Sherman and Triple D Motors, Battle Creek, Michigan, Snell Environmental Group, Inc.

- September 1990; Report of Environmental Site Audit for Gallagher Industrial Laundry, Inc. Battle Creek Michigan, Snell Environmental Group, Inc.

4.0 RECORDS REVIEW

4.1 STANDARD ENVIRONMENTAL RECORD SOURCES

Databases maintained by various state and federal agencies were reviewed for the subject property. This included Horizon's review of government agency database information acquired from EDR (a database research firm) for the specified area. A copy of the EDR database report is provided in Appendix C.

Five records were found for the subject property in state and federal environmental databases. The Michigan (171) Avenue West site was listed on the State of Michigan Baseline Environmental Assessment ("BEA") database and was a result of the 2007 due diligence activities performed for Kellogg. The remaining four sites were former individual parcels included in the recently formed larger, single parcel.

Business Name	Business Address	Notable Database Listings
Michigan (171) Avenue, West	171 W. Michigan Ave	BEA
H.B. Sherman	207 W. Michigan Ave	Brownfields, BEA, LUST
City of Battle Creek	123-151 W. Michigan Ave	Brownfields
Battle Creek Hebbles	123 W. Michigan Ave	RCRA-Non Gen, LUST
Citation Co Inc/Sherman Manufacturing Co	22 Barney Blvd	RCRA-Non Gen

The EDR database report identified several nearby sites in the federal and state databases.

Database	Search Radius *(miles)*	Number of Sites Located
CERC-NFRAP	0.5	1
RCRA Small Quantity Generator ("SQG")	0.25	1
RCRA Conditionally Exempt SQG	0.25	5
State Hazardous Waste Sites ("SHWS")	1	8
LUST	0.5	18
UST	0.25	17
Brownfields	0.5	4
US Brownfields	0.5	1
Deleted SHWS	1.0	3
RCRA – Non Generator ("Non Gen")	0.25	16
Baseline Environmental Assessment	0.5	11
Manufactured Gas Plants	1	1

Their location relative to the subject site was reviewed and their potential impact on the subject property was evaluated. The nearby sites identified on federal and state environmental databases are as follows:

Business Name	Business Address	Notable Database Listings
United Steel & Wire Co	105 S. Washington	CERC NFRAP, SHWS, LUST, UST, RCRA-Non Gen

The RCRA-SQG, RCRA-CESQG, RCRA-Non Gen, UST and certain other databases do not indicate the release of hazardous substances to the environment. Therefore, additional information on these sites was not reviewed. Additional information was also not requested for sites in the LUST database that had clearly attained "Closed" status, sites that were considered downgradient of the subject property, and BEA sites that were not in close proximity to the subject property.

The EDR database report identified thirty-four sites as unplottable due to inadequate address information. The relative location of the unplottable sites to the subject property, as well as the type of databases in which the unplottable sites were listed, were reviewed. Based on this review, Horizon determined that the following unplottable site was located on the subject property and could pose an environmental concern to the subject property. This appears to be a duplicate listing as a "BEA" is also listed for H.B. Sherman located at 207 W. Michigan Avenue.

Business Name	Business Address	Notable Database Listings

H.B. Sherman	No address provided	BEA

4.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

4.2.1 STATE ENVIRONMENTAL AGENCY

According to the Freedom of Information Act ("FOIA") response, the MDEQ did not have any new files (June 2007 to present) pertaining to the subject property (Appendix D). Relevant information collected from an environmental records review included in the 2007 Phase I ESA (Appendix E) is summarized below.

City of Battle Creek/H.B. Sherman (207 W. Michigan Ave and/or 207 W. Jackson Street):

The former H.B. Sherman property is the site of a former nail and clamp manufacturing facility. Historical operations performed on the property included foundry operations. Foundry operations can potentially result in releases of metals, volatile organic compounds ("VOCs") and polynuclear aromatic hydrocarbons ("PNAs") to the environment. The analytical results for soil samples collected to investigate historical releases from an on-site UST indicated elevated levels of several metals (i.e., arsenic, copper, lead and zinc) in soil. The elevated metal concentrations identified during these investigations are likely indicative of an area-wide impact of metals in soil as a result of historical foundry operations and the presence of urban fill at the former H.B. Sherman property.

On August 16, 1991 a release from two USTs located on the former H.B. Sherman property was reported to the State Fire Marshall's Office. The 7,500-gallon and 18,000-gallon capacity tanks stored fuel oil #7, which was used to power H.B. Sherman's standby generators. The tanks were found to be in poor condition upon excavation. Approximately 350 cubic yards of contaminated soil were removed during excavation activities and disposed off-site.

Several hydrogeological investigations were performed to evaluate the extent of contamination associated with the UST release. The results of these investigations are summarized in: 1) the Snell Environmental Group ("SEG") September 1991 report titled *45-Day Report, H.B. Sherman;* 2) the SEG December 1991 report titled *Soil Investigation, H.B. Sherman Manufacturing Company 207 West Jackson Street Battle Creek, Michigan;* 3) the May 26, 1992 letter report from Ron Brown, Senior Project Manager for Terra Environmental Corporation ("Terra") to Mr. Steve Noble of the Michigan Department of Natural Resources; 4) the May 23, 1993 Terra report titled *Site Investigation Report City of Battle Creek H.B. Sherman Property*; 5) the August 30, 1993 Terra Addendum to the May 23, 1993 report; and, 6) the November 1996 Horizon Environmental report titled *Phase I and Phase II Environmental Site Assessments for the Former H.B. Sherman/Gallagher Industrial Laundry/Redbird Lounge Properties, Battle Creek, Michigan.*

Soil and groundwater samples were collected from approximately 30 borings drilled in and adjacent to the former tank excavations. The soil and groundwater samples were analyzed for benzene, toluene, ethylbenzene, xylene (collectively termed "BTEX"), PNAs, polychlorinated biphenyls ("PCBs") (several samples only), and the Michigan 10 metals. Elevated concentrations of benzene and PNAs were detected in soil and groundwater.

In 1993, a passive groundwater collection system was installed adjacent to the Jackson Street right-of-way at the H.B. Sherman site. The collection system consisted of a six foot diameter manhole with perforated pipe at the bottom of the manhole. The manhole was set into the sandstone approximately seven feet below the top of the water table. Oil residual booms were placed in the bottom of the manhole for purposes of collecting residual oil. According to Ken Kohs, Environmental Services Administrator for the City, the City maintained the system for several years. Toward the end of the period of time they maintained it, they were not observing free product on the absorbent socks anymore. Mr. Kohs recalled that the manhole was removed during construction of Cereal City USA.

The latest correspondence in the MDEQ file is a memorandum dated May 8, 2003 from the MDEQ indicating that the City is still liable for the contamination at the site. The MDEQ LUST database indicates that the LUST site is open. It is our opinion that impact from this site represents a REC on the subject property.

City of Battle Creek/Former Hebbles (123-151 W. Michigan Ave):

The site of the former Hebble property was acquired by the City of Battle Creek from the Hebble Funeral Home, Inc. in 1987. Seven USTs were discovered during a demolition project, and the Michigan State Police Fire Marshal Division was notified of a confirmed release on December 10, 1992. The tanks were constructed of steel and the following sizes (2-1000 gallons, 2-500 gallons and 3-200 gallons). It is suspected that the tanks were related to the Triple D Auto Parts business, formerly located on the property.

In order to investigate the extent of contamination associated with the UST release, several hydrogeological investigations were performed. The results of these investigations are summarized in: 1) the Terra December 29, 1992 report titled *20-Day Initial Abatement Report, 103 E. Michigan Avenue, Battle Creek, Michigan;* 2) the Terra January 22, 1993 report titled *45-Day Site Characterization Report, 103 E. Michigan Avenue, Battle Creek, Michigan;* 3) the June 8, 1993 Global Environmental Engineering report titled *Hebble Property Site Investigation Report;* and, 4) the November 1996 Horizon Environmental report titled *Phase I and Phase II Environmental Site Assessments for the Former H.B. Sherman/Gallagher Industrial Laundry/Redbird Lounge Properties, Battle Creek, Michigan.*

The USTs and impacted soils were removed on December 10, 1992. The final size of the excavation was 25 feet long x 20 feet wide x 7 feet deep. Eight samples were collected

from the excavation. PNAs and BTEX were detected in several of the soil samples collected from the excavation An additional investigation performed in March 1993 indicated the presence of VOCs, PNAs and metals in soil. In addition, toluene was detected in groundwater.

A letter is present in the MDEQ file dated May 9, 2002 to the Heritage Center Foundation, indicating that the Foundation was not liable for the impact related to the USTs at the site since they had filed a BEA with the MDEQ on April 2, 1997. The latest correspondence in the MDEQ file is a memorandum dated May 8, 2003 from the MDEQ indicating that the City is still liable for the contamination at the site. The MDEQ LUST database indicates that the LUST site is still open. It is our opinion that impact from this site represents a REC on the subject property.

United Steel & Wire Company (105 S. Washington Street):

The location of this site was determined to have been inaccurately reported in the EDR database. The location of this site is south of the Battle Creek River, which provides a shallow groundwater divide. In Horizon's opinion, this location does not pose an environmental concern to the subject property.

4.2.2 FIRE DEPARTMENT

Horizon contacted the City Fire Department regarding potential environmental concerns for the subject property; specifically, fires, storage tanks, or releases to the environment since our last FOIA request in June 2007 (Appendix D). In a response dated May 28, 2009, the City Fire Department indicated it did not have any relevant information in its files.

4.2.3 HEALTH DEPARTMENT

The Calhoun County Health Department was contacted for information regarding water wells, septic systems and any environmental health concerns related to the subject property since our last FOIA request in June 2007 (Appendix D). In a response dated May 28, 2009, the County Health Department indicated it did not have any relevant information in its files.

4.3 PHYSICAL SETTING SOURCES

The current USGS 7.5 minute series topographic map of the area (Battle Creek Quadrangle; [1980; photorevised 1985]) indicates that the elevation of the subject property ranges from 820 feet to 830 feet above mean sea level. Based on the location of the closest major surface water body (i.e., the Battle Creek River), shallow groundwater is likely to flow in a south to southeast direction from the portion of the property north of the river and in a west direction from the property adjacent to Carlyle Street. However, the suburban setting of the area (including utility corridors) may allow groundwater

movement to depart from that predicted by the local setting. Verification of the direction of groundwater flow for the subject property was beyond the scope of this Phase I ESA Update, and as such was not performed.

According to the EDR database report (Appendix C), soils in the area of the subject property consist of loam from the surface to 11 inches, clay loam from 11 inches to 38 inches below grade, sand from 38 inches to 55 inches and stratified 55 inches to 60 inches below grade. The Marshall Sandstone is encountered in Section 1, T2S, R8W at an average depth of approximately 55 feet below ground surface.

4.4 HISTORICAL USE INFORMATION FOR THE PROPERTY AND ADJOINING PROPERTIES

Historical sources were reviewed during the 2007 due diligence activities (Appendix E) to develop a history of the previous uses of the subject property and surrounding area, and to assist with identifying the likelihood of past uses having led to RECs in connection with the subject property. The historical sources included various aerial photographs of the subject and adjoining properties, Sanborn Fire Insurance maps, historical topographic maps and local city directories. Unless otherwise noted, all obvious uses of the property were identified from the present, back to the property's first developed use, or back to 1940, whichever was earlier. The term "developed use" includes agricultural uses and placement of fill dirt. In accordance with Section 8.3.3 of ASTM E 1527-05, historical use information for adjoining properties was identified only to the extent that this information was revealed in the course of researching the subject property.

A detailed discussion of the historical reference materials reviewed and the conclusions drawn from the historical sources are provided in the 2007 Phase I ESA report prepared for Kellogg and included in Appendix E. A summary of the historic uses of the subject property is provided below.

Soil and groundwater at the site have been impacted by benzene, toluene, ethylbenzene, PNAs, and metals (i.e., arsenic, copper, lead and zinc) from historic operations prior to the properties' use as Cereal City USA. The historic operations that have been specifically investigated include the former H.B. Sherman Foundry, Hebble Property, Gallagher Industrial Laundry, Triple D Motors, and Redbird Lounge. Groundwater and soil impact from historic operations is considered a REC at the subject property.

In our opinion, historical uses of the property causing environmental concern date back to at least 1887 with the first appearance of crude oil tanks on the southwest corner of the property. Impact from additional historical uses through time include a filling station, auto repair shop, auto body and paint shop, activities related to an on-site foundry, USTs and LUSTs, mortuary, steam laundry, fuel and coal yard. Past investigations have demonstrated these activities have impacted soil and groundwater at the site above Michigan Part 201 generic soil and groundwater cleanup criteria.

5.0 SITE RECONNAISSANCE

The objective of the site reconnaissance was to obtain information indicating the likelihood of RECs in connection with the property. The site reconnaissance was performed by Horizon Environmental Professional, Elizabeth Bartz, on May 21, 2009. Mr. Peter Francisco from the Kellogg Engineering Department and Mr. Dan Beatty from BCU provided Horizon access to the building for the interior inspection and answered questions regarding Kellogg demolition activities and on-going utility maintenance operations at the site.

5.1 METHODOLOGY AND LIMITING CONDITIONS

The property was viewed from all adjacent public thoroughfares. During the exterior inspection, the periphery of the property and the periphery of structures on the property were directly inspected by the Environmental Professional. The property was also systematically traversed by the Environmental Professional to provide an overlapping field of view of exterior conditions. Adjoining properties were viewed from the subject property. Photographs taken during the site reconnaissance are provided in Appendix F.

The site reconnaissance was limited by the following conditions:

- The presence of the building, landscaped, and paved areas surrounding the building prevented a direct inspection of underlying soils; and,

- A large asphalt-paved parking lot located on the west side of the subject property prevented a direct inspection of the underlying soils.

5.2 GENERAL SITE SETTING

The subject property is currently occupied by the former Cereal City USA, which includes a three-story, 45,000 ft^2 building, surface parking lots, and landscaped areas.

The adjoining properties are developed for commercial use except for the southern adjoining property, which is a linear park (i.e., recreational use). 2007 interviews and historic records indicate the past use of the adjoining properties was residential, commercial and industrial to at least 1887. According to historical records, the most recent development occurred in 2007.

The topography of the site slopes from the northern portion of the site adjacent to W. Michigan Avenue toward the southern portion of the site. Surface drainage on the subject property is generally toward storm drains located throughout the property.

The former Cereal City USA building is located on the southeastern side of the subject property. Cereal City USA operated from 1998 to January 2007. CC Real Estate Holdings purchased the subject property in 2007 and leased the property to the Kellogg.

Kellogg was planning to renovate the building into offices and additional parking but later made the decision not to renovate the building with the exception of interior demolition. The building has been vacant since early 2007.

The property is bounded by W. Michigan Avenue on the north, Carlyle Street on the east, W. Jackson Avenue on the south, and S. Washington Street on the west. A large asphalt-paved parking lot is located west of the former Cereal City building. The Battle Creek River intersects the property east of the former Cereal City building.

Potable water, as well as storm and sanitary sewer, is provided to the site from the City municipal water supply and sewer system. At the time of the site reconnaissance visit, the potable water service was shut off.

5.3 EXTERIOR OBSERVATIONS

The exterior of the property was observed from all directions. The subject property includes one-three story building. The exterior of the building is a combination of stone, brick and siding. An asphalt-paved surface parking lot with adjoining sidewalks is located to the west of the building. The remaining portions of the site are landscaped with grass, trees and plantings. The Battle Creek River intersects the eastern portion of the property.

Three pad-mounted transformers were observed at the northwest corner of the parking lot. The transformers were labeled as the property of the Consumers Energy and are considered unlikely to contain PCBs given the time of their installation (1998). There were no indications of leaks or oil stains around the transformers at the time of the site inspection. During the 2007 due diligence, Tony Aurino of Consumers Energy confirmed that Consumers Energy owns the transformers and indicated they have not purchased transformers containing PCBs since 1979 (Appendix E).

Minor oil stains from parked vehicles were observed on the asphalt pavement in the parking lot but are considered *de minimis* and, therefore, are not RECs.

All of the utilities appear to be underground as evidenced by electrical boxes, water main covers, underground sprinkler heads, and storm drain man hole covers. There is a high pressure natural gas line marker located adjacent to W. Michigan Avenue on the west side of the bridge crossing the Battle Creek River.

The exterior inspection did not identify any of the following: hazardous substances or petroleum products in connection with identified uses; storage tanks; odors; pools of liquid, drums, containers of hazardous substances; containers of unidentified substances; PCBs; pits, ponds or lagoons; stained soil or pavement; stressed vegetation (from something other than insufficient water), solid waste; or, waste water.

5.4 INTERIOR OBSERVATIONS

The former Cereal City USA building is a three-story building built on a concrete slab-on-grade floor with no basement. The first floor contains operational support rooms but the remainder of the interiors have been removed. The interior demolition performed by Kellogg since 2007 includes the removal of interior walls, exterior wall drywall, restrooms, flooring, some light fixtures, and all former commercial kitchen equipment. In addition, cuts were observed in the concrete where according to Mr. Francisco, floor drains and drain lines have been removed. With the exception of floor drain removal, similar interior demolition has occurred on the second floor. Individual HVAC units have been removed and stored on the second floor.

Interior demolition of the third floor has been limited. Drywall and restrooms remained; however, the majority of the flooring has been removed. The mechanical room is intact as had been observed in 2007. The building is heated with natural gas-fired boilers and cooled with an electric-powered central air conditioning unit. During the site reconnaissance visit, however, Mr. Francisco indicated that Kellogg recently turned off the air handling units.

Environmental concerns, oil containing materials and hazardous substances observed in the interior of the building are summarized below.

First Floor

- The communications room contained one dry-type transformer;
- The fire protection room contained two floor drains;
- An air compressor associated with the water softener contained *de minimis* quantities of oil;
- The elevator maintenance room contained a 30-gallon AST with hydraulic oil to service the elevator (Figure 2). The room also contained a 2-gallon sprayer containing lubricating oil. Lubricating oil released from the 2-gallon sprayer was observed on the concrete floor and appeared to spread into seams within the concrete.

Second Floor

- The electrical room contained one dry-type transformer.

Third Floor

- The mechanical room contained four floor drains. No odors or staining were noted on the concrete near the floor drains. The room contained three dry-type transformers. The room also contained approximately 20 gallons of paint, two 5-gallon containers of parking lot paint marked "flammable", and three 5-gallon

containers of carpet adhesive. The mechanical room housed the boilers, air handling units, hot water heater, and electrical panels.

The lubricating oil release is considered a REC as the oil appears to extend down into the seams of the concrete (or structure). With that exception, the interior inspection did not identify any of the following: strong odors, pools of liquid, drums, PCB-containing equipment, or stains or corrosion.

6.0 INTERVIEWS

The objective of the interviews was to obtain information indicating RECs in connection with the property. Interviewees were asked to be as specific as reasonably feasible in answering questions and to answer in good faith and to the extent of their knowledge. The interviews were conducted by Horizon Environmental Professional, Elizabeth Bartz.

6.1 INTERVIEW WITH OPERATOR'S REPRESENTATIVE

Ms. Barbara Mantarro, Operator's Environmental Representative, provided answers to the questions on the operator interview questionnaire included in Appendix B. Ms. Mantarro's responses confirmed information obtained from other sources which are described in other sections of this report.

6.5 INTERVIEWS WITH OTHERS

Prior site assessments included interviews with other individuals who were not interviewed again concerning the content of their previous answers (per Section 10.5.3 of ASTM Method E 1527-05). Rather, relevant information obtained during these previous interviews and reported in the prior site assessment reports has been included in the summaries of historic uses (Section 4.4).

7.0 FINDINGS AND OPINIONS

This section summarizes the findings of this report including 1) known or suspect RECs, 2) historical RECs, and 3) *de minimis* conditions. This section also provides the Environmental Professional's opinion of the impact on the property of the findings.

Known or Suspected RECs

1. *One Above Ground Storage Tank ("AST"):* One hydraulic oil containing AST is located inside the elevator maintenance room to support the building's elevator.
2. *Lubrication Oil Container Release:* A 2-gallon sprayer containing lubrication oil for elevator maintenance was observed leaking onto and into seams associated with the concrete floor adjacent to the sprayer in the elevator room.
3. *Two Leaking Underground Storage Tanks ("LUSTs") and Industrial Use:* The H.B. Sherman property formerly located at 207 W. Michigan Avenue/207 W. Jackson Avenue (addressed both ways) reported releases from two underground storage tanks ("USTs"). In addition, this property was the location of a former foundry that included metal plating and stamping. This site is currently listed on the Environmental Data Resources ("EDR") database as a Brownfield site and as an open LUST site on the Michigan Department of Environmental Quality ("MDEQ") LUST database.
4. *Seven LUSTs:* The Hebble property formerly located at 123-151 W. Michigan Avenue/123 W. Michigan Avenue (addressed both ways) contained seven USTs. Two releases were reported during UST removal in 1989 and 1992. This site is currently listed on the EDR database as a Brownfield site and as an open LUST site on the MDEQ LUST database.
5. *Railroad Bed:* Portions of the property were traversed by a former railroad. Reportedly, the railroad tracks were removed but not the railroad ballast.

Historical RECs

1. *One LUST and Industrial Use:* Historical records indicate that a used car business with a 120-gallon UST and an auto body and paint shop were located at the former Gallagher Industrial property located at 169 W. Michigan Avenue.
2. *Historic Operations:* Historical records indicate the following on-site historic operations included: gasoline service station; lumber and coal yard; gun store; bakery; foundry (with nickel and brass plating); planning mill, sash, door and blind factory; laundry; portions of a print shop; crude oil pump house; grocery; broom factory; door bell shop; bookshop; pattern shop; machine shop; fuel and feed coal yard; drug store manufacturer; paper and paint store; church; cement manufacturer; auto repair garage; undertaker; auto body and paint shop; and, sewage pump station.

De minimis Conditions

1. *Oil stains in the parking lot.* The oil stains from vehicles were considered typical of most parking lots.
2. *Oil in air compressors.* The oil contained in the air compressors at the site is typical and as long as they are managed properly, they are not considered an environmental concern.

Opinion of Additional Investigation

Several environmental investigations have occurred on subject property and the nature and extent of contamination is well documented. For this reason, it is Horizon's opinion that additional studies are not warranted Horizon recommends that the following items be addressed as follow-up issues:

1. Open LUSTs on the former H.B. Sherman and Hebble parcels should be accounted for in future property development plans.
2. The lubrication oil container release in the elevator maintenance room should be cleaned up, and the sprayer should be repaired and placed in secondary containment.

8.0 CONCLUSIONS

Horizon Environmental performed a Phase I Environmental Site Assessment Update in conformance with the scope and limitations of 40 CFR Part 312 and ASTM Practice E1527 of the property located at 171 W. Michigan Avenue in Battle Creek, Calhoun County, Michigan, the subject property. Any exceptions to, or deletions from, this practice are described in Section 9 of this report. This assessment has revealed no evidence of recognized environmental conditions in connection with the property except for the following:

Known or Suspected RECs

1. *One Above Ground Storage Tank ("AST"):* One hydraulic oil containing AST is located inside the elevator maintenance room to support the building's elevator.
2. *Lubrication Oil Container Release:* A 2-gallon sprayer containing lubrication oil for elevator maintenance was observed leaking onto and into seams associated with the concrete floor adjacent to the sprayer in the elevator room.
3. *Two Leaking Underground Storage Tanks ("LUSTs") and Industrial Use:* The H.B. Sherman property formerly located at 207 W. Michigan Avenue/207 W. Jackson Avenue (addressed both ways) reported releases from two underground storage tanks ("USTs"). In addition, this property was the location of a former foundry that included metal plating and stamping. This site is currently listed on the Environmental Data Resources ("EDR") database as a Brownfield site and as an open LUST site on the Michigan Department of Environmental Quality ("MDEQ") LUST database.
4. *Seven LUSTs:* The Hebble property formerly located at 123-151 W. Michigan Avenue/123 W. Michigan Avenue (addressed both ways) contained seven USTs. Two releases were reported during UST removal in 1989 and 1992. This site is

currently listed on the EDR database as a Brownfield site and as an open LUST site on the MDEQ LUST database.

5. *Railroad Bed:* Portions of the property were traversed by a former railroad. Reportedly, the railroad tracks were removed but not the railroad ballast.

Historical RECs

1. *One LUST and Industrial Use:* Historical records indicate that a used car business with a 120-gallon UST and an auto body and paint shop were located at the former Gallagher Industrial property located at 169 W. Michigan Avenue.
2. *Historic Operations:* Historical records indicate the following on-site historic operations included: gasoline service station; lumber and coal yard; gun store; bakery; foundry (with nickel and brass plating); planning mill, sash, door and blind factory; laundry; portions of a print shop; crude oil pump house; grocery; broom factory; door bell shop; bookshop; pattern shop; machine shop; fuel and feed coal yard; drug store manufacturer; paper and paint store; church; cement manufacturer; auto repair garage; undertaker; auto body and paint shop; and, sewage pump station.

Several environmental investigations have occurred on the subject property, and the nature and extent of contamination is well documented.

9.0 DEVIATIONS

There were no deletions, additions or deviations from ASTM Practice E1527-05 while conducting this Phase I Environmental Site Assessment Update, except for minor changes in the report format which did not affect the content of the report. For example, information regarding assumptions, limitations, conditions and reliance was removed from Section 1 and placed in Section 10.

10.0 ASSUMPTIONS, LIMITATIONS, CONDITIONS, AND RELIANCE

10.1 SIGNIFICANT ASSUMPTIONS

During the preparation of this Phase I ESA Update, it was assumed that information provided by others, including, but not limited to, the user of this Phase I ESA Update, present and past owners, occupants and managers of the property, government agencies, third-party vendors, and prior assessments of the property, was correct, unless the Environmental Professional had actual knowledge that certain information was incorrect or unless it was obvious that certain information was incorrect based on other information obtained in the Phase I ESA Update process or otherwise actually known to the Environmental Professional.

10.2 LIMITATIONS AND EXCEPTIONS

This Phase I ESA Update report has been prepared by Horizon Environmental for BCU and Horizon has no obligation to report any facts contained herein to anyone other than BCU. This report does not constitute legal advice and should not be construed as legal advice. Specific information contained in this report has been provided by various government agencies and personal interviews. Horizon makes no representation or warranty that this information is true or accurate. No additional investigation will be performed to verify the validity or accuracy of this information.

This Phase I ESA Update was performed in accordance with the standards recommended by ASTM E 1527-05, *Standard Practice for Environmental Site Assessments (ESA); Phase I ESA Process*. This assessment describes the results of Horizon's investigation to identify the potential presence of recognized environmental conditions involving or affecting the subject property. It was prepared through reliance on and in accordance with activities described herein, namely: a review of environmental records and historical use information; a site reconnaissance; and interviews with the user of this Phase I ESA Update, the owner, occupant, and manager of the property, and local government officials.

The following issues are considered outside the scope of this assessment (i.e., non-scope considerations) and unless specifically noted herein have not been addressed: asbestos-containing building materials, radon, lead-based paint, lead in drinking water, wetlands, regulatory compliance, cultural and historical resources, industrial hygiene, health and safety, ecological resources, endangered species, indoor air quality, biological agents, and mold.

As defined in the Professional Services Agreement ("PSA") by and between BCU and Horizon, this ESA Update was conducted using the highest standard of diligence, care and skill that experienced professionals in the field relevant to the ESA Update would use in performing the ESA Update under similar circumstances as of the period of time at which the ESA Update was performed.

Horizon makes no warranty, expressed or implied in fact or by law, as to the merchantability, fitness for any particular purpose or otherwise, concerning the property or site for which this assessment was performed.

The information contained in this report has received appropriate technical review and approval. The conclusions and opinions presented represent best professional judgments and are based upon the findings from the assessment identified in the report and the interpretation of such data based on our experience and background. This acknowledgment is made *in lieu* of all warranties, either expressed or implied.

10.3 SPECIAL TERMS AND CONDITIONS

This Phase I ESA Update was conducted pursuant to the standard terms and conditions of a PSA by and between BCU.

10.4 USER RELIANCE

This report was prepared by Horizon solely for the benefit of its client, BCU. This client may release this report to third parties, who may use and rely on this report at their own discretion. Any use or reliance upon this report by a third party shall be solely at the risk of such third party and without legal recourse against Horizon, its subsidiaries and affiliates, or their respective employees, officers or directors, regardless of whether the action in which recovery of damages is sought is based upon contract, tort (including the sole, concurrent or other negligence and strict liability of Horizon), statute or otherwise. This report shall not be used or relied upon by a party which does not agree to be bound by the above statement.

11.0 ADDITIONAL SERVICES

No additional services were contracted between the user of this Phase I ESA Update and Horizon. Examples of additional services are identified in Section 1.2 as Non-Scope Considerations.

12.0 REFERENCES

The following published reference sources were relied upon to prepare this assessment.

- Michigan Department of Environmental Quality, Water Resources, Water Well Record Database. www.deq.state.mi.us/well-logs/

- Michigan Department of Environmental Quality, Leaking Underground Storage Tanks. www.deq.state.mi.us/sid-web/LUST_Search .aspx

- Michigan Department of Environmental Quality, RRD, Perfected Environmental Lien List. www.deq.state.mi.us/documents/deq-rrd-liens.pdf.

- Environmental Data Resources, Inc., 440 Wheeler Farms Road, Milford, Connecticut 06461. 800-352-0050. www.edrnet.com

13.0 SIGNATURE AND QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

The Environmental Professional responsible for the Phase I Environmental Site Assessment Update is Elizabeth U. Bartz., Senior Project Geologist. The qualifications of the Environmental Professional are included in Appendix G. The following statements are included pursuant to 40 CFR 312.21(d) and Section 12.13 of ASTM E 1527-05:

> "I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in §312.10 of 40 CFR 312" and,
>
> "I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. I have developed and performed the all appropriate inquiries in conformance with the standards and practices set forth in 40 CFR Part 312."

Elizabeth U. Bartz

Elizabeth U. Bartz
Senior Project Geologist/Project Manager

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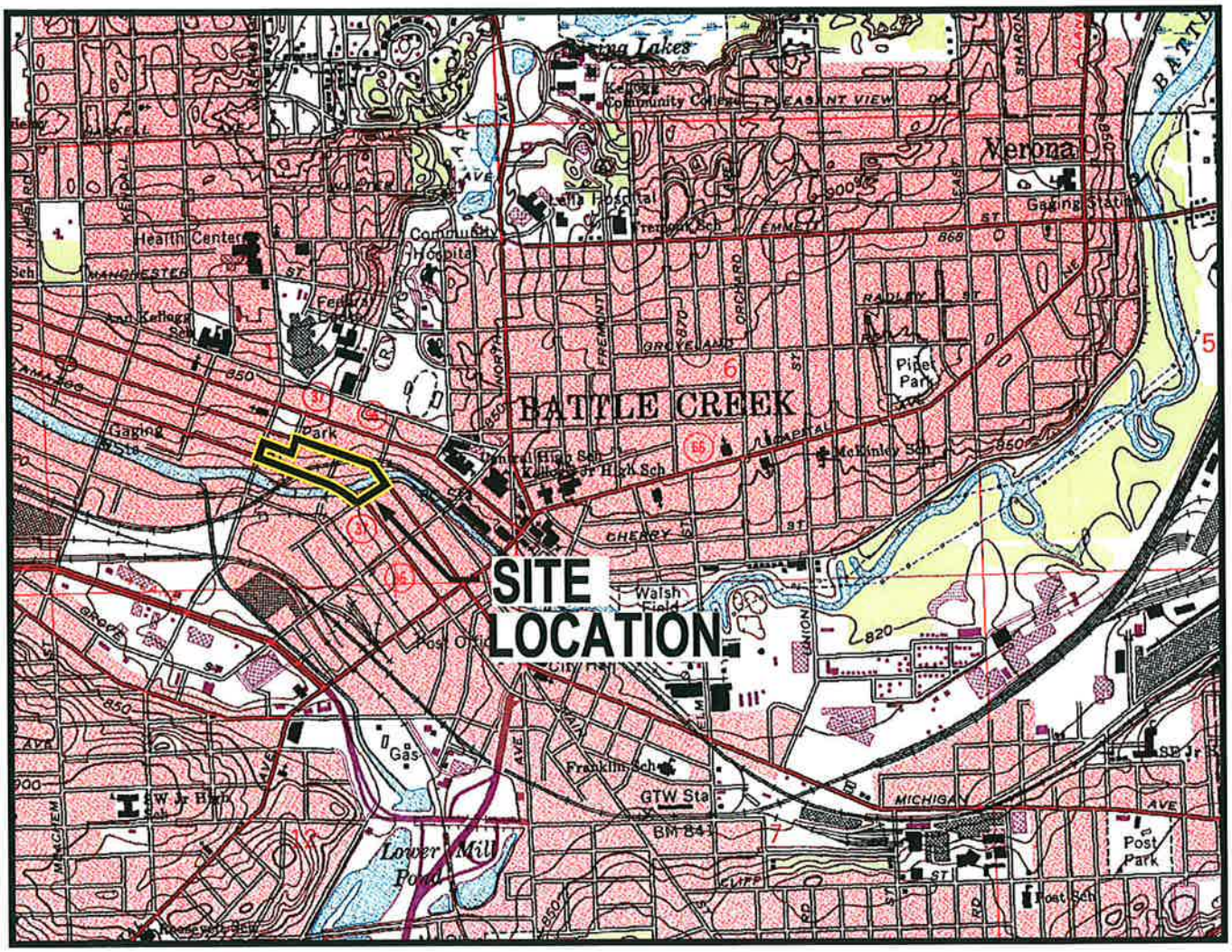
BCU00101SM01



TAKEN FROM 7.5 MINUTE SERIES TOPOGRAPHIC MAP
BATTLE CREEK QUADRANGLE PHOTOREVISED 1985
SCALE = 1:24,000

North

HORIZON ENVIRONMENTAL

PROJECT NUMBER:
BCU-0101

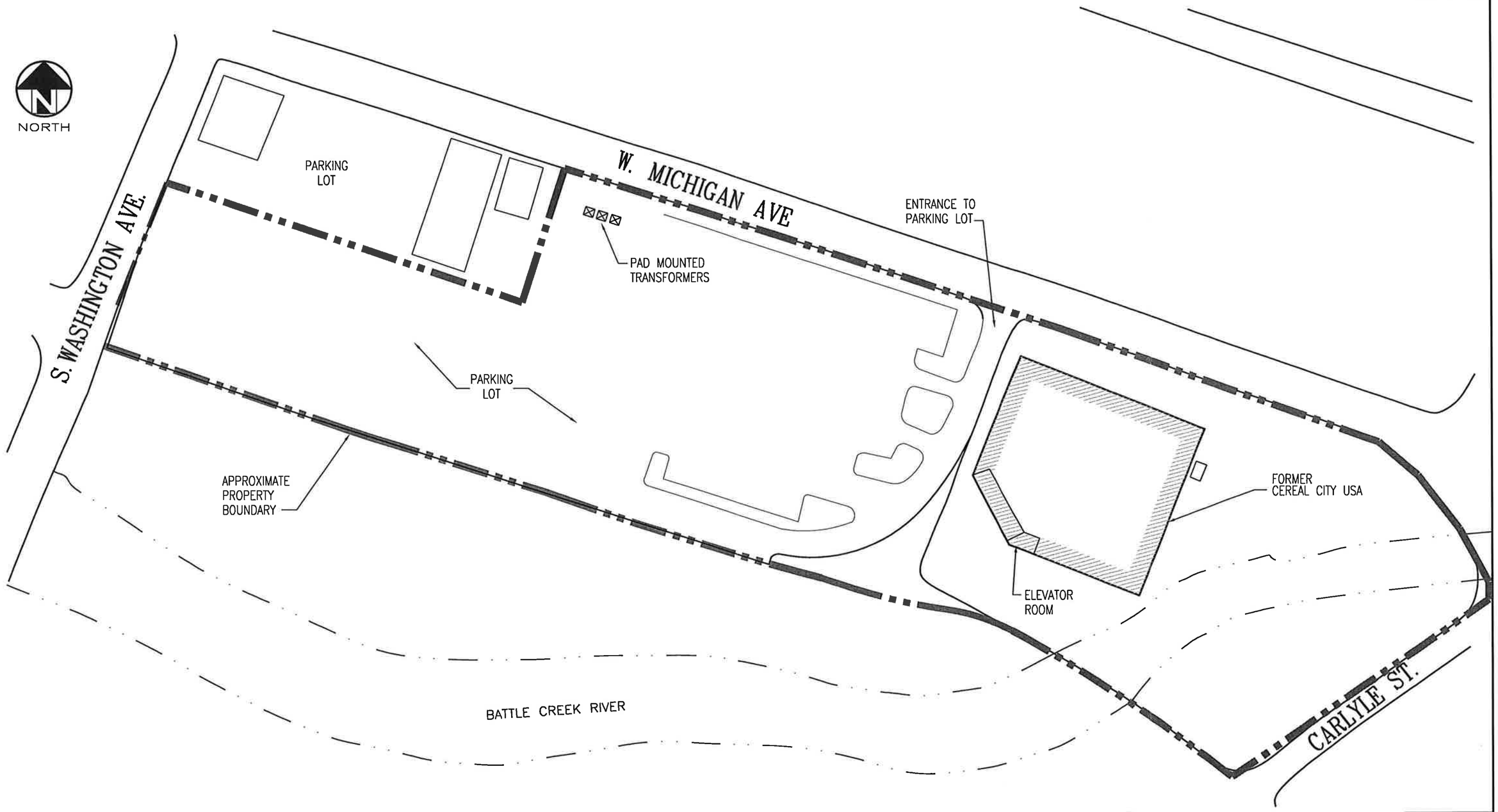
Former Cereal City USA
171 W.Michigan Ave., Battle Creek, Michigan

FIGURE:
1

SITE LOCATION MAP

JUNE 2009

BCU0101FIG02



0 50 100 200

APPROXIMATE SCALE IN FEET

HORIZON ENVIRONMENTAL

PROJECT NUMBER: BCU–0101

Former Cereal City USA
171 W.Michigan Ave., Battle Creek, Michigan

SITE MAP

FIGURE: 2

JUNE 2009

F:\Lvanprc \DWGS\BCU\0101\BCU0101FIG02.dwg, 5/27/2009 4:36:58 PM

APPENDIX A

LEGAL DESCRIPTION AND TEMPORARY EASEMENT

General Property Information

[Back to Non-Printer Friendly Version] [Send To Printer]

Parcel: 0254-00-060-0

Property Address [collapse]

171 W MICHIGAN AVE
BATTLE CREEK, MI 49017-3662

Owner Information [collapse]

CC REAL ESTATE HOLDINGS LLC
N/A

Unit: 52

Taxpayer Information [collapse]

BATTLE CREEK UNLIMITED INC
4950 W DICKMAN RD STE A
BATTLE CREEK, MI 49037-7362

General Information for Tax Year 2009 [collapse]

Property Class:	201	**Assessed Value:**	$958,466
School District:	13020 - BATTLE CREEK SCHOOLS	**Taxable Value:**	$958,466
State Equalized Value:	$958,466	**Map #**	601SE
# UNITS	0	**Date of Last Name Chg:**	05/22/2009

Date Filed:	
Principal Residence Exemption (2009 May 1):	0.0000 %
Principal Residence Exemption (2009 Final):	0.0000 %
Principal Residence Exemption (2010 May 1):	0.0000 %

Previous Year Info	MBOR Assessed	Final S.E.V.	Final Taxable
2008	$958,466	$958,466	$958,466
2007	$0	$0	$0

Land Information [collapse]

Acreage:	6.94	**Frontage:**	0.00 Ft.
Zoning Code:	REF	**Depth:**	0.00 Ft.
Land Value:	$588,362	**Mortgage Code:**	N/A
Land Improvements:	$360,249	**Lot Dimensions/Comments:**	
Renaissance Zone:	NO		
ECF Neighborhood Code:	00511		

Legal Information for 0254-00-060-0 [collapse]

BC CITY RB4 PART OF LOTS 48, 49, 50, 59, 61 THRU 65, 70, 71 & 72, ALL OF LOTS 51 THRU 58, 66 THRU 69, 73 THRU 79, MORE PARTICULARY DESC AS FOLLOWS: COMM NW COR OF LOT 65 OF SD PLAT - S 74 DEG 30 MIN 00 SEC E ALG SLY LI OF MICHIGAN AVE 400.29 FT TO TRUE POB - CONTN S 74 DEG 30 MIN 00 SEC E ALG SD SLY LI 684.34 FT - SELY ALG SD ALG ARC TO RT & SLY LI OF RELOCATED MICHIGAN AVE 324.10 FT (RAD 539.96 FT; CHORD BRG S 57 DEG 18 MIN 17 SEC E 319.25 FT) - CONT ALG SLY LI OF RELOCATED MICHIGAN AVE 7.08 FT - S 49 DEG 44 MIN 42 SEC W ALG NWLY LI OF CARLYLE ST (49.5 FT WIDE) 265.03 FT - N 40 DEG 07 MIN 39 SEC W ALG NWLY EXT OF SLY LI OF 72 THRU 81 OF BC CITY RB3 DIST OF 95.85 FT - N 74 DEG 33 MIN 05 SEC W ALG SLY LI OF LOTS 66 TROUGH 77 OF BC CITY RB4 & ELY EXT THEREOF 1169.93 FT - N 16 DEG 05 MIN 29 SEC E ALG WLY LI OF LOTS 66 & 65 OF BC CITY RB4 DIST OF 141.90 FT - S 74 DEG 30 MIN 00 SEC E 278.76 FT - S 15 DEG 30 MIN 00 SEC W 12.50 FT - S 74 DEG 30 MIN 00 SEC E 122.79 FT - N 15 DEG 30 MIN 00 SEC E 135

FT TO POB ((ASSESSED WITH 0254-00-054-0, -055-0, -056-0, -058-0, -059-0, -060-0, -062-0, -063-0, -065-0, -084-0, -084-1, -084-2, 084-3, -086-0 IN 1998))

Sales Information

5 sale record(s) found.

Sale Date	Sale Price	Instrument	Grantor	Grantee	Terms Of Sale	Liber/Page
05/19/2009	$2,700,000.00	04	CC REAL ESTATE HOLDINGS LLC	BATTLE CREEK UNLIMITED INC	04 P T A	
06/29/2007	$0.00	05	HERITAGE CENTER FOUNDATION	CC REAL ESTATE HOLDINGS LLC	25 WD/LC N.USED	3294/632
05/23/2003	$1.00	12	HERITAGE CENTER FOUNDATION	CITY OF BATTLE CREEK	12 QCD/OTHER	2646/0783
06/08/1998	$1.00	11	CITY OF BATTLE CREEK	HERITAGE CENTER FOUNDATION	11 MULTIPLE ASSMTS	2032/0009
01/27/1998	$725,000.00	11	CEREAL CITY DEVELOPMENT CORP	CITY OF BATTLE CREEK	11 MULTIPLE ASSMTS	2032/0006

Building Information

1 building(s) found.

	Description	Floor Area	Yr Built
⊟	Commercial/Industrial Building 1 - *Office Building*	44606 Sq. Ft.	1998

General Information

Floor Area:	44606 Sq. Ft.	**Estimated TCV:**	N/A
Occupancy:	Office Building	**Class:**	C
Stories Above Ground:	3	**Average Story Height:**	14
Basement Wall Height:	N/A		
Year Built:	1998	**Year Remodeled:**	0
Percent Complete:	30%	**Heat:**	Package Heating & Cooling
Physical Percent Good:	80%	**Functional Percent Good:**	100%
Economic Percent Good:	100%	**Effective Age:**	12 yrs.

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Privacy Policy

RECEIVED
CITY CLERK BATTLE CREEK

TEMPORARY EASEMENT

KNOW ALL MEN BY THESE PRESENTS that Heritage Center Foundation, a Michigan Nonprofit Corporation, hereinafter referred to as "Grantor", whose address is 171 West Michigan Ave., Battle Creek, MI 49014, and the City of Battle Creek, a Michigan municipal corporation, Calhoun County, Michigan, and its successors and assigns, hereinafter referred to as "Grantee", whose address is 10 N. Division Street, P.O. Box 1717, Battle Creek, MI 49016-1717.

WITNESSETH

For and in consideration of One ($1.00) Dollar and other good and valuable consideration, Grantor hereby grants to Grantee the right to install, access and maintain up to five (5) monitoring wells for tracking leakage from a former underground storage tank on the property located in the City of Battle Creek, Calhoun County, Michigan, more particularly described as:

AN EASEMENT FOR ACCESS TO THOSE LOTS AND PART OF LOTS NUMBERED 56 THRU 59, AND 70 THRU 75, INCLUSIVE, OF RANGE OF BLOCKS NO. 4 OF ORIGINAL BATTLE CREEK, ACCORDING TO THE PLAT THEREOF RECORDED IN LIBER 2 OF PLATS, ON PAGE 42, IN THE OFFICE OF THE REGISTER OF DEEDS FOR CALHOUN COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS:

COMMENCING AT THE SOUTHWEST CORNER OF LOT NO. 66 OF SAID RANGE OF BLOCKS NO. 4; THENCE S. 74°33'05" E. ALONG THE NORTH LINE OF JACKSON STREET, 264.00 FEET TO THE SOUTHWEST CORNER OF LOT NO. 70 OF SAID PLAT, AND THE POINT OF BEGINNING; THENCE N. 16°05'26" E. ALONG THE WEST LINE OF SAID LOT 70, 129.16 FEET; THENCE S. 74°30' E. PARALLEL WITH THE SOUTH LINE OF WEST MICHIGAN AVENUE, 137.68 FEET; THENCE N. 16°05'26" E. 37.61 FEET; THENCE S. 74°30' E. PARALLEL WITH SAID SOUTH LINE OF WEST MICHIGAN AVENUE, 258.71 FEET, TO THE WEST LINE OF LOT NO. 55 OF SAID RANGE OF BLOCKS NO. 4; THENCE S. 16°05'26" W. ALONG THE WEST LINE OF LOTS 55 AND 76, 166.42 FEET TO THE SOUTHWEST

CORNER OF SAID LOT NO. 76 AND THE NORTH LINE OF JACKSON STREET; THENCE N. 74°33'05" W. ALONG SAID NORTH LINE, 396.00 FEET TO THE POINT OF BEGINNING.

It is a condition of this Easement that it will expire February 28, 2003. The termination of this Easement shall be completed by filing a "Termination of Easement" with the Register of Deeds of Calhoun County, Michigan, duly executed by Grantee, or its assignees nevertheless and notwithstanding anything herein to the contrary.

Grantee and its assignees are further hereby granted the right to enter into and upon the easement premises and the premises of Grantor adjacent to the area of the easement, in order to property maintain said easement and to maintain the premises which are subject to the easement herein granted. Grantee and its assignees shall be obligated to restore or repair any portion of Grantor's premises, which may become damaged, or in need of repair or maintenance as a result of the use or function of the easement.

This easement is executed and delivered subject to the following terms:

(1) Grantee and its assignees shall monitor the monitoring well and shall be responsible for clean up of contaminants resulting from use of the well.

(2) Upon failure of Grantee and its assignees to abide by the conditions of this easement and after fifteen (15) days written notice to Grantee and its assignees, served personally upon the City Manager of the City of Battle Creek, Michigan, or delivered by posting by first class mail, postage prepaid, certified and return receipt requested, if Grantee and its assignees have not corrected any default, Grantor may terminate this Easement.

The Grantee agrees to indemnify and hold Grantor harmless from any claim of liability arising out of the grant herein given except any claim or liability, which results from the intentional or negligent acts of Grantor.

This instrument shall be binding upon and inure to the benefit of the parties hereto, and their respective representatives, successors, and assigns.

IN WITNESS WHEEOF, the Grantor has duly authorized the undersigned to execute this document on behalf of the Grantor this 28 day of FEB, 2001.

WITNESSES:

Laura [illegible]

Paula Boyer

GRANTOR:
HERITAGE CENTER FOUNDATION

William Calloway

By: William Calloway
Its: Executive Director

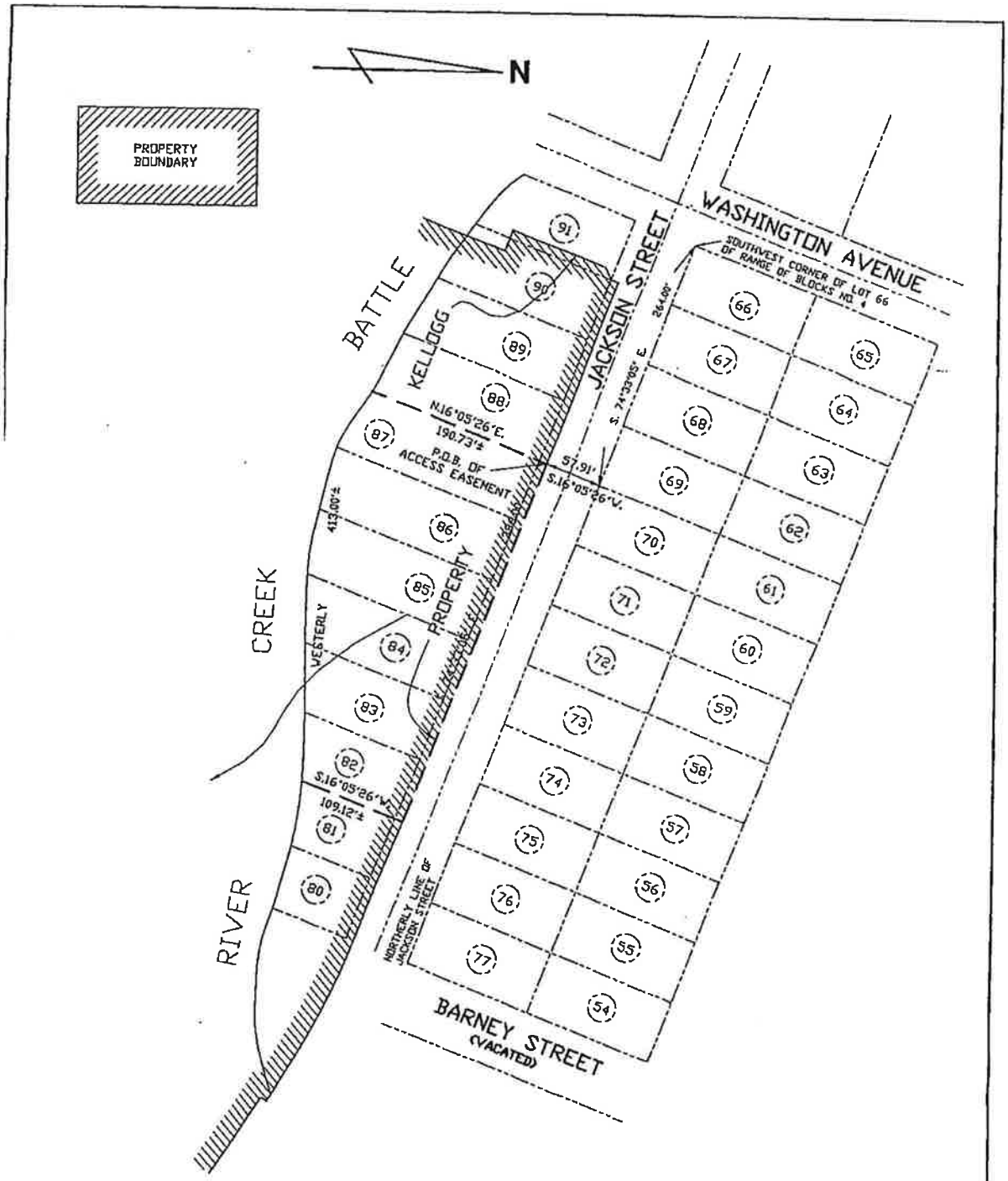
STATE OF MICHIGAN)
)ss
COUNTY OF CALHOUN)

On this 28 day of February 2001, before me, a notary public in and for said County, personally appeared William Calloway, to me personally known, who, being by me duly sworn, did for him/herself say that he/she is the Executive Director of the Heritage Center Foundation and that said instrument was signed and sealed in behalf of said corporation and acknowledged the said instrument to be the free act and deed of said Grantor.

Notary Public
Calhoun County, Michigan
My Commission Expires:

LAURA ANN GINNEBAUGH
Notary Public, Calhoun County, MI
My Commission Expires Oct 26, 2004

This Easement Drafted By:
Clyde J. Robinson, Esquire
P O Box 1717
Battle Creek, MI 49016-1717
616/966-3385



DESCRIPTION OF ACCESS EASEMENT:

AN EASEMENT FOR ACCESS TO THOSE LOTS AND PART OF LOTS NUMBERED 82 THRU 87, INCLUSIVE, AND THAT PART OF JACKSON STREET, OF RANGE OF BLOCKS NO. 4 OF ORIGINAL BATTLE CREEK, ACCORDING TO THE PLAT THEREOF RECORDED IN LIBER 2 OF PLATS, ON PAGE 42, IN THE OFFICE OF THE REGISTER OF DEEDS FOR CALHOUN COUNTY, MICHIGAN, BEING MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHWEST CORNER OF LOT NO. 66 OF SAID RANGE OF BLOCKS NO. 4; THENCE S. 74°33'05'E. ALONG THE NORTH LINE OF JACKSON STREET, 264.00 FEET TO THE SOUTHWEST CORNER OF LOT NO. 70 OF SAID PLAT; THENCE S. 16°05'26' W. ALONG THE EXTENSION OF THE WEST LINE OF SAID LOT NO. 70, 57.91 FEET TO THE POINT OF BEGINNING; THENCE S. 74°33'05' E. PARALLEL WITH THE SOUTH LINE OF JACKSON STREET, 396.00 FEET TO THE EXTENSION OF THE WEST LINE OF LOT NO. 81 OF SAID RANGE OF BLOCKS 4; THENCE S. 16°05'26' W. ALONG SAID WEST LINE, 109.12 FEET, MORE OR LESS, TO THE NORTHERLY EDGE OF THE BATTLE CREEK RIVER; THENCE WESTERLY ALONG SAID NORTHERLY EDGE, 413.00 FEET, MORE OR LESS, TO THE WEST LINE OF LOT NO. 87 OF SAID RANGE OF BLOCKS 4; THENCE N. 16°05'26 E. 190.73 FEET, MORE OR LESS, TO THE POINT OF BEGINNING.

ENGINEERING DEPARTMENT CITY OF BATTLE CREEK, MICHIGAN		
TITLE: DESCRIPTION OF ACCESS EASEMENT		
DRAWN BY: RHP	APPROVED:	DATE: 2/02/2001
SCALE: 1" = 100'	SHEET 2 OF 2 SHEETS	DWG. NO.

APPENDIX B

INTERVIEW DOCUMENTATION

Questionnaire for the User of a Phase I Environmental Site Assessment

In order to qualify for one of the Landowner Liability Protections (LLPs) offered by the Small Business Liability Relief and Brownfields Revitalization Act of 2001 (the "Brownfields Amendments"), the user of the ESA must provide the following information (if available) to the environmental professional. Failure to provide this information could result in a determination that "all appropriate inquiry" is not complete.

Property:	Form Completed By:
Name: Former Cereal City Property	Name: Cheryl Beard
Address: 171 W. Michigan Avenue	Title: Tech. Mktng Dir.
Battle Creek, Michigan	Date: 5.13.09

IF YOU ANSWER "YES" TO ANY OF THE FOLLOWING QUESTIONS, PLEASE EXPLAIN

	YES	NO
1. Are you aware of any environmental cleanup liens against the property that are filed or recorded under federal, tribal, state or local law?[1]	☐	☒
2. Are you aware of any activity and land use limitations, such as engineering controls, land use restrictions or institutional controls that are in place at the site and/or have been filed or recorded in a registry under federal, tribal, state or local law?[1]	☐	☒
3. As the user of this ESA, do you have any specialized knowledge or experience related to the property or nearby properties? For example, are you involved in the same line of business as the current or former occupants of the property or an adjoining property so that you would have specialized knowledge of the chemicals and processes used by this type of business?	☐	☒
4. a. Does the purchase price being paid for this property reasonably reflect the fair market value of the property?	☐	☒ donation
b. If you conclude that there is a difference, have you considered whether the lower purchase price is because contamination is known or believed to be present?	☐	☒
5. Are you aware of commonly known or reasonably ascertainable information about the property that would help the environmental professional to identify conditions indicative of releases or threatened releases? For example,	☒	☐
a. Do you know the past uses of the property?	☒	☐
b. Do you know of specific chemicals that are present or once were present at the property?	☐	☒
c. Do you know of spills or other chemical releases that have taken place at the property?	☐	☒
d. Do you know of any environmental cleanups that have taken place at the property?	☐	☒

[1] Section 6.2 of ASTM 1527-05 suggests that the user engage a title professional to review recorded land title records for environmental liens or activity and use limitations recorded against or related to the property.

Questionnaire for the User of a Phase I Environmental Site Assessment

	YES	NO
6. As the user of this ESA, based on your knowledge and experience related to the property, are there any obvious indicators that point to the presence or likely presence of contamination at the property?	☐	☒
7. Are you aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on or from the property?	☐	☒
8. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property?	☐	☒
9. Are you aware of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products in, on or from the property?	☐	☒
10. Do you know whether any of the following documents exist for the property and, if so, whether copies can and will be provided to the environmental professional within reasonable time and cost constraints? Even partial information may be useful.	☒	☐
a. Environmental site assessment reports	☒	☐
b. Environmental compliance audit reports	☐	☒
c. Environmental permits (for example, solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits)	☐	☒
d. Registrations for underground and aboveground storage tanks	☐	☒
e. Registrations for underground injection systems	☐	☒
f. Material safety data sheets (MSDS's)	☐	☒
g. Community right-to-know plan	☐	☒
h. Safety plans; preparedness and prevention plans (PPP); spill prevention, countermeasure, and control plans (SPCC); etc.	☐	☒
i. Reports regarding hydrogeologic conditions on or near the property	☐	☒
j. Notices or other correspondence from any government agency relating to past or current violations of environmental laws with regard to the property or relating to environmental liens encumbering the property	☐	☒
k. Hazardous waste generator notices or reports	☐	☒
l. Geotechnical studies	☐	☒
m. Risk assessments	☐	☒
n. Recorded activity and land use limitations (AULs)	☐	☒

IF YOU ANSWERED "YES" TO ANY OF THESE QUESTIONS, PLEASE EXPLAIN ON THE FOLLOWING PAGE

Questionnaire for the User of a Phase I Environmental Site Assessment

11. What is the reason for performing the Phase I ESA? *(circle all that apply)*

    a. To qualify for landowner liability protection to CERCLA liability.
    b. To understand the potential environmental conditions that could materially impact the operation of the business associated with the subject property.
    c. Other

12. Please provide contact information and any relevant information regarding the property owner, manager and occupants.

IF YOU ANSWERED "YES" TO ANY OF THE PREVIOUS QUESTIONS, PLEASE EXPLAIN BELOW. PLEASE INCLUDE ANY ADDITIONAL INFORMATION THAT MAY BE RELEVANT TO EVALUATING THE ENVIRONMENTAL CONDITION OF THE SUBJECT PROPERTY.

I was board Chair of Heritage Center Foundation which sold the property to ~~[illegible]~~ Current owner.

Phase I Environmental Site Assessment Questionnaire for an Owner, Manager or Occupant

Property:	Form Completed By:
Name: Former Cereal City Property	Name: Barb Mantarro
Address: 171 W. Michigan Ave, Battle Creek, MI	Association With Property: Owner's Environmental Rep.
Acres/# Bldgs: 6.94 acres/ 1 Building	Date: May 18, 2009

PLEASE ANSWER THE FOLLOWING QUESTIONS IN GOOD FAITH AND TO THE EXTENT OF YOUR KNOWLEDGE. BE AS SPECIFIC AS REASONABLY FEASIBLE.

1. How long have you *(circle one)* **owned** / **managed** / **leased** the property? 2 years (approx)
2. What are the current uses of the property? *(circle one)* **Residential** / **Commercial** / **Industrial**
3. If commercial or industrial uses, identify the specific business(es): Vacant / office space
4. Please provide any information about past ownership or uses of the property
   The extent of Kellogg knowledge of past site usage is included in the Baseline Environmental Assessment prepared at the time of acquisition.
5. Identify the property's current and past source(s) of heating fuel. *(circle all that apply):*
   Natural Gas **Heating oil** **Propane** **Electricity** **Coal** **Other**
6. Identify the property's current and past source(s) of water. *(circle all that apply):*
   Well **City System** **None** **Other**
7. Identify the property's current and past sewage disposal systems. *(circle all that apply):*
   Septic **City Sewer** **None** **Other**
8. Are there currently or have there ever been hazardous substances or petroleum products (oils, gas) used on the property? *(circle one)* **YES** **NO**
9. Are you aware of any pending, threatened, or past litigation relevant to hazardous substances or petroleum products in, on or from the property? *(circle one)* **YES** **NO**
10. Are you aware of any pending, threatened, or past administrative proceedings relevant to hazardous substances or petroleum products in, on or from the property? *(circle one)* **YES** **NO**
11. Are you aware of any notices from any governmental entity regarding any possible violation of environmental laws or possible liability relating to hazardous substances or petroleum products in, on or from the property? *(circle one)* **YES** **NO**

12. Are you aware of any of the following on the property, either past or present?

	YES	NO		YES	NO
Aboveground storage tanks	☑	☐	Leachate, seepage	☐	☑
Underground storage tanks	☑	☐	Incinerator, burn pits	☐	☑
Chemical, solvent, oil storage and handling areas	☑	☐	Fill material, man-made land	☑	☐
Waste storage areas	☐	☑	Landfill, dump, disposal area	☐	☑
Equipment repair areas	☑	☐	Debris, refuse	☐	☑
Battery storage areas	☐	☑	Floor drains, trenches	☐	☑
Transformers or capacitors	☐	☑	Stains, spills, corrosion	☐	☑
Hydraulic lifts/hoists/equipment (Building elevator)	☑	☐	Stressed vegetation	☐	☑
Wells (dry, oil, water, other)	☐	☑	Fires or explosions	☐	☑
Waste ponds, pits or lagoons	☐	☑	Railroad spur	☐	☑
Sumps, pits, oil/water separators	☐	☑	Rock, sand, gravel quarry	☐	☑

	YES	NO
13. Do you know whether any of the following documents exist for the property and, if so, whether copies can and will be provided to the environmental professional within reasonable time and cost constraints? Even partial information may be useful.	☐	☐
a. Environmental site assessment reports	☑	☐
b. Environmental compliance audit reports	☐	☑
c. Environmental permits (e.g., solid waste disposal permits, hazardous waste disposal permits, wastewater permits, NPDES permits, underground injection permits)	☐	☑
d. Registrations for underground and aboveground storage tanks	☑	☐
e. Registrations for underground injection systems	☐	☑
f. Material safety data sheets (MSDS's)	☐	☑
g. Community right-to-know plan	☐	☑
h. Safety plans; preparedness and prevention plans (PPP); spill prevention, countermeasure, and control plans (SPCC); etc.	☐	☑
i. Reports regarding hydrogeologic conditions on or near the property	☑	☐
j. Notices or other correspondence from any government agency relating to past or current violations of environmental laws with regard to the property or relating to environmental liens encumbering the property	☐	☑
k. Hazardous waste generator notices or reports	☐	☑
l. Geotechnical studies	☐	☑
m. Risk assessments	☐	☑
n. Recorded activity and land use limitations (AULs)	☐	☑
14. Are you aware of any current or past environmental concerns on adjacent properties?	☑	☐

IF YOU ANSWERED "YES" TO ANY OF THESE QUESTIONS, PLEASE EXPLAIN

All information known about this site is included in the BEA prepared at the time of acquisition.

APPENDIX C

ENVIRONMENTAL DATABASE REPORT

Former Cereal City Property
171 Michigan Ave W
Battle Creek, MI 49017

Inquiry Number: 2493670.1s
May 14, 2009

The EDR Radius Map™ Report

EDR® Environmental Data Resources Inc

440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

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Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	7
Orphan Summary	115
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

GeoCheck - Not Requested

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E 1527-05) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

171 MICHIGAN AVE W
BATTLE CREEK, MI 49017

COORDINATES

Latitude (North):	42.323600 - 42' 19' 25.0"
Longitude (West):	85.188200 - 85' 11' 17.5"
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	649292.9
UTM Y (Meters):	4687082.0
Elevation:	839 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	42085-C2 BATTLE CREEK, MI
Most Recent Revision:	1985

TARGET PROPERTY SEARCH RESULTS

The target property was identified in the following records. For more information on this property see page 7 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
MICHIGAN (171) AVENUE, WEST 171 WEST MICHIGAN AVENUE BATTLE CREEK, MI 49014	BEA	N/A

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL..... National Priority List

EXECUTIVE SUMMARY

Proposed NPL..... Proposed National Priority List Sites
NPL LIENS..... Federal Superfund Liens

Federal Delisted NPL site list

Delisted NPL..... National Priority List Deletions

Federal CERCLIS list

CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System

Federal RCRA CORRACTS facilities list

CORRACTS..... Corrective Action Report

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF..... RCRA - Transporters, Storage and Disposal

Federal RCRA generators list

RCRA-LQG..... RCRA - Large Quantity Generators

Federal institutional controls / engineering controls registries

US ENG CONTROLS..... Engineering Controls Sites List
US INST CONTROL..... Sites with Institutional Controls

Federal ERNS list

ERNS..... Emergency Response Notification System

State and tribal landfill and/or solid waste disposal site lists

SWF/LF..... Solid Waste Facilities Database

State and tribal leaking storage tank lists

INDIAN LUST..... Leaking Underground Storage Tanks on Indian Land

State and tribal registered storage tank lists

AST..... Aboveground Tanks
INDIAN UST..... Underground Storage Tanks on Indian Land

State and tribal institutional control / engineering control registries

AUL..... Engineering and Institutional Controls

State and tribal voluntary cleanup sites

INDIAN VCP..... Voluntary Cleanup Priority Listing

ADDITIONAL ENVIRONMENTAL RECORDS

Local Lists of Landfill / Solid Waste Disposal Sites

ODI..... Open Dump Inventory

EXECUTIVE SUMMARY

DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
HIST LF ..... Inactive Solid Waste Facilities
INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands

Local Lists of Hazardous waste / Contaminated Sites

US CDL ..... Clandestine Drug Labs
CDL ..... Clandestine Drug Lab Listing

Local Land Records

LIENS 2 ..... CERCLA Lien Information
LUCIS ..... Land Use Control Information System
LIENS ..... Lien List

Records of Emergency Release Reports

HMIRS ..... Hazardous Materials Information Reporting System
SPILLS ..... Pollution Emergency Alerting System

Other Ascertainable Records

DOT OPS ..... Incident and Accident Data
DOD ..... Department of Defense Sites
FUDS ..... Formerly Used Defense Sites
CONSENT ..... Superfund (CERCLA) Consent Decrees
ROD ..... Records Of Decision
UMTRA ..... Uranium Mill Tailings Sites
MINES ..... Mines Master Index File
TRIS ..... Toxic Chemical Release Inventory System
TSCA ..... Toxic Substances Control Act
FTTS ..... FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
HIST FTTS ..... FIFRA/TSCA Tracking System Administrative Case Listing
SSTS ..... Section 7 Tracking Systems
ICIS ..... Integrated Compliance Information System
PADS ..... PCB Activity Database System
MLTS ..... Material Licensing Tracking System
RADINFO ..... Radiation Information Database
FINDS ..... Facility Index System/Facility Registry System
RAATS ..... RCRA Administrative Action Tracking System
DRYCLEANERS ..... Drycleaning Establishments
NPDES ..... List of Active NPDES Permits
AIRS ..... Permit and Emissions Inventory Data
INDIAN RESERV ..... Indian Reservations
SCRD DRYCLEANERS ..... State Coalition for Remediation of Drycleaners Listing

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Federal CERCLIS NFRAP site List

CERC-NFRAP: Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

A review of the CERC-NFRAP list, as provided by EDR, and dated 12/03/2007 has revealed that there is 1 CERC-NFRAP site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNITED STEEL & WIRE CO INC	***105 SOUTH WASHINGTON***	***WNW 0 - 1/8 (0.001 mi.)***	***C7***	***14***

Federal RCRA generators list

RCRA-SQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

A review of the RCRA-SQG list, as provided by EDR, and dated 11/12/2008 has revealed that there is 1 RCRA-SQG site within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
FEDERATED PUBLICATIONS INC	***155 WEST VAN BUREN STRE***	***NE 0 - 1/8 (0.082 mi.)***	***F19***	***41***

RCRA-CESQG: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

A review of the RCRA-CESQG list, as provided by EDR, and dated 11/12/2008 has revealed that there are 5 RCRA-CESQG sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
IVA/MICHIGAN	301 MICHIGAN AVE W	NNE 0 - 1/8 (0.021 mi.)	C11	26
LASSEN STAN PONT CAD INC	***320 MICHIGAN AVE W***	***NW 0 - 1/8 (0.061 mi.)***	***E15***	***30***
CITY OF BATTLE CREEK	***356 MICHIGAN AVE W***	***WNW 1/8 - 1/4 (0.160 mi.)***	***I29***	***60***
US DEFENSE LOGISTICS AGENCY	74 WASHINGTON AVE N	N 1/8 - 1/4 (0.192 mi.)	J34	68

Lower Elevation	Address	Direction / Distance	Map ID	Page
KELLOGG COMPANY	35 MCCAMLY PLACE	SE 1/8 - 1/4 (0.179 mi.)	33	66

State- and tribal - equivalent CERCLIS

SHWS: The State Hazardous Waste Sites records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. The data come from the Department of Environmental Quality's' Contaminated Sites List on Diskette With Address.

A review of the SHWS list, as provided by EDR, and dated 02/16/2009 has revealed that there are 8 SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNITED STEEL & WIRE CO INC	***105 SOUTH WASHINGTON***	***WNW 0 - 1/8 (0.001 mi.)***	***C7***	***14***
Facility Status: Evaluation in progress				
BATTLE CREEK ADVENTIST HOSPITA	165 N. WASHINGTON AVE	N 1/4 - 1/2 (0.430 mi.)	M54	100
Facility Status: Interim Response conducted				

Lower Elevation	Address	Direction / Distance	Map ID	Page
A.K. ZINN PROPERTY	***160 S. KENDALL***	***WSW 1/4 - 1/2 (0.437 mi.)***	***N55***	***100***
Facility Status: Interim Response conducted - No further activities anticipated				
K&M SALVAGE	***170 S. KENDALL***	***WSW 1/4 - 1/2 (0.449 mi.)***	***N58***	***102***
Facility Status: Interim Response conducted - No further activities anticipated				
MI PAPERBOARD CORP	79 EAST FOUNTAIN STREET	S 1/4 - 1/2 (0.481 mi.)	66	108
Facility Status: Interim Response conducted				
SHAY MOTOR CO	***200 ELM ST***	***ESE 1/2 - 1 (0.816 mi.)***	***72***	***111***
Facility Status: Interim Response conducted - No further activities anticipated				
MCLEIEER OIL INC	***252 ELM ST***	***SE 1/2 - 1 (0.901 mi.)***	***73***	***112***
Facility Status: Interim Response conducted - No further activities anticipated				
W. MICHIGAN AVE. ADJ. TO BC	701 W. MICHIGAN AVE	WNW 1/2 - 1 (0.916 mi.)	74	114
Facility Status: Interim Response conducted - No further activities anticipated				

State and tribal leaking storage tank lists

LUST: The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Environmental Quality's Leaking Underground Storage Tank (LUST) Database.

A review of the LUST list, as provided by EDR, and dated 03/19/2009 has revealed that there are 18 LUST sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
UNITED STEEL & WIRE CO INC	***105 SOUTH WASHINGTON***	***WNW 0 - 1/8 (0.001 mi.)***	***C7***	***14***
Facility Status: Open				
STAN LASSEN PONTIAC/CADILLAC I	***320 MICHIGAN AVE W***	***NW 0 - 1/8 (0.061 mi.)***	***E16***	***32***
Facility Status: Closed				
FEDERATED PUBL. DBA B C ENQUIR	***155 VAN BUREN ST W***	***NE 0 - 1/8 (0.082 mi.)***	***F18***	***40***
Facility Status: Closed				
EQUIPMENT DIVISION	***356 MICHIGAN AVE W***	***WNW 1/8 - 1/4 (0.160 mi.)***	***I28***	***57***
Facility Status: Open				
Facility Status: Open				

**Additional key fields are available in the Map Findings section*

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
GENERAL SERVICES ADMINISTRATIO Facility Status: Closed	***74 N WASHINGTON AVE***	***N 1/8 - 1/4 (0.193 mi.)***	***J39***	***78***
TRUMBULL SERVICE Facility Status: Open	***94 NORTH AVE***	***ENE 1/4 - 1/2 (0.293 mi.)***	***46***	***89***
FIELDSTONE CENTER Facility Status: Closed	***165 WASHINGTON AVE N***	***N 1/4 - 1/2 (0.430 mi.)***	***M53***	***98***
COMMUNITY HOSPITAL ASSOCIATION Facility Status: Closed	***183 WEST ST.***	***NNE 1/4 - 1/2 (0.460 mi.)***	***O61***	***104***

Lower Elevation	Address	Direction / Distance	Map ID	Page
WAGNER-FLOOK BUILDERS INC Facility Status: Closed	***235 HAMBLIN AVE W***	***SW 1/8 - 1/4 (0.139 mi.)***	***H27***	***55***
ABANDONED BLDG Facility Status: Closed	***305 HAMBLIN AVE W***	***WSW 1/8 - 1/4 (0.245 mi.)***	***L44***	***85***
W K KELLOGG INSTITUTE Facility Status: Open	***2 HAMBLIN AVE E***	***SSE 1/4 - 1/2 (0.288 mi.)***	***45***	***87***
UNION PUMP CO Facility Status: Open Facility Status: Closed	***87 CAPITAL AVE SW***	***S 1/4 - 1/2 (0.309 mi.)***	***47***	***91***
HERITAGE CHEVROLET, INC Facility Status: Closed	350 W DICKMAN RD	SW 1/4 - 1/2 (0.381 mi.)	49	94
DO BAR INC Facility Status: Open	***114 KENDALL ST S***	***W 1/4 - 1/2 (0.386 mi.)***	***50***	***95***
SENIOR OIL #12 Facility Status: Open	***170 CAPITAL AVE SW***	***S 1/4 - 1/2 (0.406 mi.)***	***51***	***96***
SHOULDICE BROS Facility Status: Closed	400 W DICKMAN RD	SW 1/4 - 1/2 (0.411 mi.)	52	97
KMART #4065 Facility Status: Closed	***200 CAPITAL AVE SW***	***SSW 1/4 - 1/2 (0.458 mi.)***	***59***	***103***
BATTLE CREEK POLICE DEPT Facility Status: Open Facility Status: Open	***20 N DIVISION ST***	***SE 1/4 - 1/2 (0.481 mi.)***	***65***	***106***

**Additional key fields are available in the Map Findings section*

State and tribal registered storage tank lists

UST: The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Environmental Quality's Michigan UST database.

A review of the UST list, as provided by EDR, and dated 03/09/2009 has revealed that there are 17 UST sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
OLD SUPER BEE MUFFLER SHOP	172-176 WEST MICHIGAN A	0 - 1/8 (0.000 mi.)	A2	9
UNITED STEEL & WIRE CO INC	***105 SOUTH WASHINGTON***	***WNW 0 - 1/8 (0.001 mi.)***	***C7***	***14***

EXECUTIVE SUMMARY

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
CITY OF BATTLE CREEK	191 W MICHIGAN	WNW 0 - 1/8 (0.009 mi.)	D9	22
BURNHAM BROOK CENTER	200 W MICHIGAN AVE	NNE 0 - 1/8 (0.023 mi.)	D13	28
STAN LASSEN PONTIAC/CADILLAC I	***320 MICHIGAN AVE W***	***NW 0 - 1/8 (0.061 mi.)***	***E16***	***32***
FORMER ASHLEY DAIRY INC	208 W VAN BUREN	NNE 0 - 1/8 (0.062 mi.)	17	39
FEDERATED PUBL. DBA B C ENQUIR	***155 VAN BUREN ST W***	***NE 0 - 1/8 (0.082 mi.)***	***F18***	***40***
D & H EXHAUST SERVOCE	316 VAN BUREN ST W	N 0 - 1/8 (0.094 mi.)	22	49
BATTLE CREEK EQUIPMENT CO	***307 W JACKSON ST***	***WNW 0 - 1/8 (0.109 mi.)***	***G24***	***51***
EQUIPMENT DIVISION	***356 MICHIGAN AVE W***	***WNW 1/8 - 1/4 (0.160 mi.)***	***I28***	***57***
MI-2	352 VAN BUREN	NW 1/8 - 1/4 (0.163 mi.)	30	63
GENERAL SERVICES ADMINISTRATIO	***74 N WASHINGTON AVE***	***N 1/8 - 1/4 (0.193 mi.)***	***J39***	***78***

Lower Elevation	Address	Direction / Distance	Map ID	Page
TRANSAMERICA PARKING LOT	114 WEST MICHIGAN	NE 0 - 1/8 (0.004 mi.)	B8	21
WAGNER-FLOOK BUILDERS INC	***235 HAMBLIN AVE W***	***SW 1/8 - 1/4 (0.139 mi.)***	***H27***	***55***
BATTLE CREEK MAIN POST OFFICE	90 MCCAMLY ST S	SSW 1/8 - 1/4 (0.198 mi.)	K40	79
REED MOTOR SPORTS	298 HAMBLIN AVE W	WSW 1/8 - 1/4 (0.235 mi.)	L43	85
ABANDONED BLDG	***305 HAMBLIN AVE W***	***WSW 1/8 - 1/4 (0.245 mi.)***	***L44***	***85***

State and tribal Brownfields sites

BROWNFIELDS: Brownfields and USTfield Site Database.

A review of the BROWNFIELDS list, as provided by EDR, and dated 12/16/2008 has revealed that there are 4 BROWNFIELDS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
H. B. SHERMAN	207 W MICHIGAN AVENUE	NNE 0 - 1/8 (0.023 mi.)	D12	28

Lower Elevation	Address	Direction / Distance	Map ID	Page
CITY OF BATTLE CREEK-W. MICH.	123-151 WEST MICHIGAN A	0 - 1/8 (0.000 mi.)	B4	12
A.K. ZINN PROPERTY	***160 S. KENDALL***	***WSW 1/4 - 1/2 (0.437 mi.)***	***N55***	***100***
K&M SALVAGE	***170 S. KENDALL***	***WSW 1/4 - 1/2 (0.449 mi.)***	***N58***	***102***

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: The EPA's listing of Brownfields properites addressed by Cooperative Agreement Recipients and Brownfields properties addressed by Targeted Brownfields Assessments

A review of the US BROWNFIELDS list, as provided by EDR, and dated 10/01/2008 has revealed that there is 1 US BROWNFIELDS site within approximately 0.5 miles of the target property.

Lower Elevation	Address	Direction / Distance	Map ID	Page
AK ZINC	160 SOUTH KENDALL	WSW 1/4 - 1/2 (0.445 mi.)	N57	101

EXECUTIVE SUMMARY

Local Lists of Hazardous waste / Contaminated Sites

DEL SHWS: Sites that have been delisted or deleted from the List of Contaminated Sites.The available documentation for the site does support it's listing or the site no longer meets criteria specified in rules.

A review of the DEL SHWS list, as provided by EDR, and dated 02/20/2009 has revealed that there are 3 DEL SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
OLD SULLIVAN WATERFRONT REDEVE	343 W. JACKSON STREET	WNW 1/8 - 1/4 (0.175 mi.)	32	66

Lower Elevation	Address	Direction / Distance	Map ID	Page
BEHNKE TRUCKING	77 S MONROE ST	SSE 1/4 - 1/2 (0.483 mi.)	P67	108
CITY OF BATTLE CREEK	***177 E MICHIGAN***	***SE 1/2 - 1 (0.661 mi.)***	***71***	***110***

Other Ascertainable Records

RCRA-NonGen: RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

A review of the RCRA-NonGen list, as provided by EDR, and dated 11/12/2008 has revealed that there are 16 RCRA-NonGen sites within approximately 0.25 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
BURNAM BROOK CTR	***245 MICHIGAN AVE W***	***0 - 1/8 (0.000 mi.)***	***A1***	***7***
UNITED STEEL & WIRE CO INC	***105 SOUTH WASHINGTON***	***WNW 0 - 1/8 (0.001 mi.)***	***C7***	***14***
MAACO AUTO PAINTING & BODYWORK	***194 MICHIGAN AVE W***	***WNW 0 - 1/8 (0.019 mi.)***	***D10***	***23***
SEVENTH DAY ADVENTIST TABERNAC	19 N WASHINGTON AVE	NNE 0 - 1/8 (0.061 mi.)	14	29
BATTLE CREEK EQUIPMENT CO	***307 W JACKSON ST***	***WNW 0 - 1/8 (0.109 mi.)***	***G24***	***51***
US DEPT/DEFENSE	***74 WASHINGTON AVE N***	***N 1/8 - 1/4 (0.192 mi.)***	***J35***	***70***
BATTLE CREEK SCHOOLS	***60 W VAN BUREN ST***	***E 1/8 - 1/4 (0.192 mi.)***	***36***	***71***
US GENERAL SERVICES ADMINISTRA	***74 WASHINGTON AVE N***	***N 1/8 - 1/4 (0.193 mi.)***	***J37***	***74***
DEFENSE REUTILIZATION & MARKET	74 WASHINGTON AVE N	N 1/8 - 1/4 (0.193 mi.)	J38	76
ZIEBART OF BATTLE CREEK	***379 MICHIGAN AVE W***	***WNW 1/8 - 1/4 (0.213 mi.)***	***42***	***83***

Lower Elevation	Address	Direction / Distance	Map ID	Page
BATTLE CREEK HEBBLES	***123 MICHIGAN AVE W***	***0 - 1/8 (0.000 mi.)***	***B3***	***10***
CITATION CO INC SHERMAN MFG CO	***22 BARNEY BLVD***	***0 - 1/8 (0.000 mi.)***	***5***	***12***
ENVIRONMENTAL DIAGNOSTICS	***296 W JACKSON ST***	***WNW 0 - 1/8 (0.089 mi.)***	***G20***	***44***
MI DEPT/ENVIRONMENTAL QUALITY	***296 JACKSON ST W***	***WNW 0 - 1/8 (0.089 mi.)***	***G21***	***46***
REFUSE SERVICE INC	***64 S MCCAMLY ST***	***S 1/8 - 1/4 (0.163 mi.)***	***31***	***64***
US POSTAL SERVICE	***90 MCCAMLY ST S***	***SSW 1/8 - 1/4 (0.198 mi.)***	***K41***	***80***

EXECUTIVE SUMMARY

BEA: Baseline Environmental Assessment.

A review of the BEA list, as provided by EDR, and dated 03/30/2009 has revealed that there are 11 BEA sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
EMMETT (169) STREET WEST	169 WEST EMMETT STREET	N 1/4 - 1/2 (0.440 mi.)	56	101
183 WEST STREET	183 WEST STREET	NNE 1/4 - 1/2 (0.460 mi.)	O62	105
183 WEST ST.	183 WEST ST.	NNE 1/4 - 1/2 (0.460 mi.)	O63	106

Lower Elevation	Address	Direction / Distance	Map ID	Page
W.K. KELLOGG INSTITUTE	93 HAMBLIN AVENUE	SSW 0 - 1/8 (0.097 mi.)	23	51
MICHIGAN (50) AVENUE, WEST	50 WEST MICHIGAN AVENUE	SE 1/8 - 1/4 (0.133 mi.)	25	55
HAMBLIN (235) AVENUE	235 HAMBLIN AVENUE	SW 1/8 - 1/4 (0.139 mi.)	H26	55
MICHIGAN (17) AVENUE, WEST	17 WEST MICHIGAN AVENUE	SE 1/4 - 1/2 (0.326 mi.)	48	94
W.K. KELLOGG INSTITUTE (WKKI)	72 E. HAMBLIN AVENUE	SE 1/4 - 1/2 (0.458 mi.)	60	104
MONROE (73) STREET, SOUTH	73 MONROE STREET SOUTH	SSE 1/4 - 1/2 (0.476 mi.)	P64	106
BEHNKE TRUCKING	77 SOUTH MONROE STREET	SSE 1/4 - 1/2 (0.483 mi.)	P68	109
W.K. KELLOGG INSTITUTE (WKKI)	77 S. MONROE STREET	SSE 1/4 - 1/2 (0.483 mi.)	P69	109

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

A review of the Manufactured Gas Plants list, as provided by EDR, has revealed that there is 1 Manufactured Gas Plants site within approximately 1 mile of the target property.

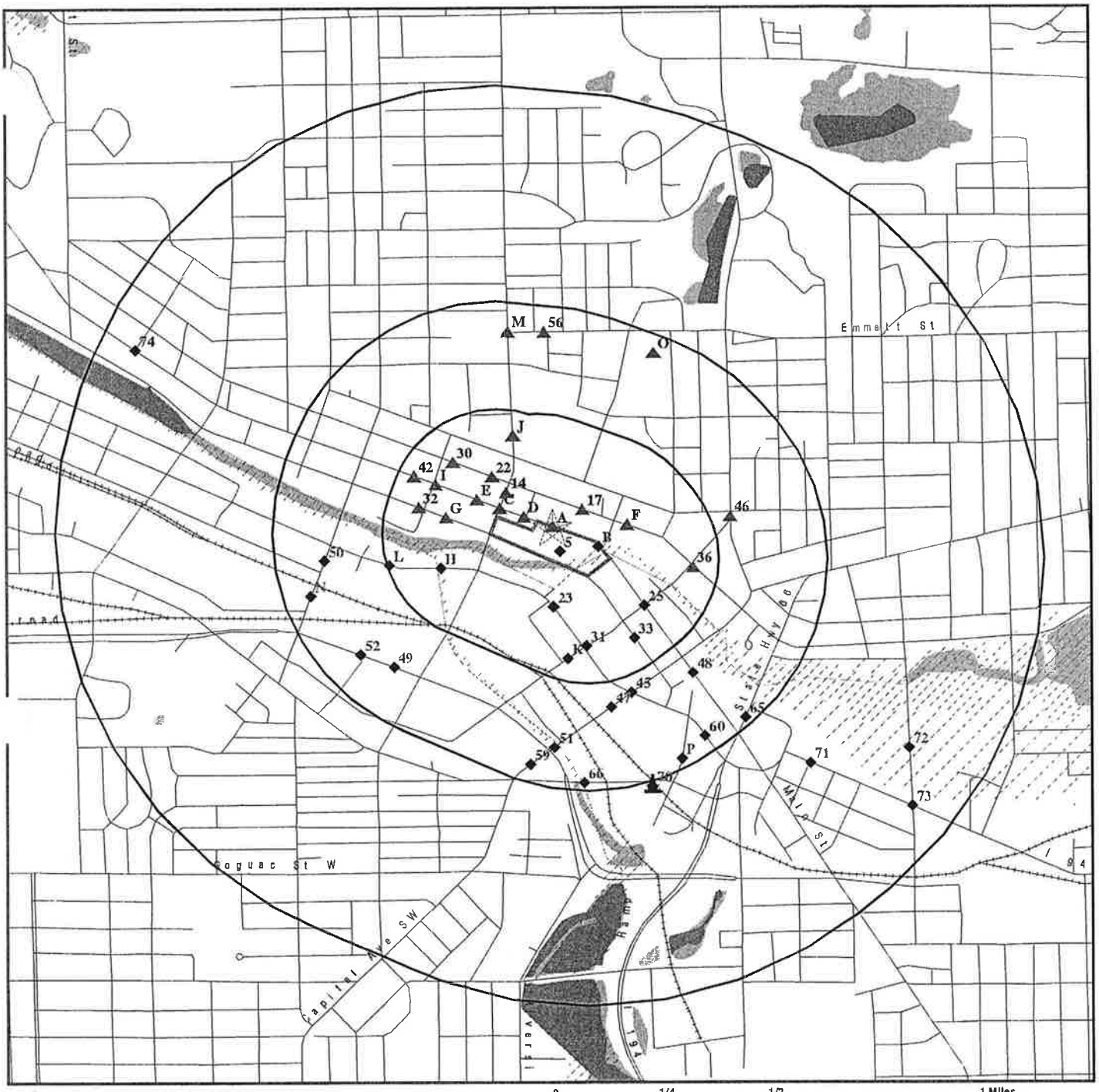
Lower Elevation	Address	Direction / Distance	Map ID	Page
BATTLE CREEK GAS WORKS	FOUNTAIN STREET E	SSE 1/2 - 1 (0.511 mi.)	70	109

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
FORMER MILITARY BASE PROPERTY	SHWS, BROWNFIELDS
S & A INDUSTRIES	SHWS
E COLUMBIA RD GW CONTAMINATION	SHWS
W. DICKMAN ROAD	SHWS, BROWNFIELDS
FOURTH ST AREA GW CONTAM	SHWS, DEL SHWS
BATTLE CREEK AQUATIC CENTER	SHWS
PENNFIELD LANDFILL (FORMER)	SHWS
RAYMOND ROAD LF	SHWS
MAIN ST DUMP	SHWS
MORGAN RD GW CONTAMINATION	SHWS, DEL SHWS
OLD BELLEVUE RD GW CONTAM	SHWS, DEL SHWS
ROOSEVELT AVE (393) VACANT LAND	SHWS, BEA
SHERRODS REFUSE SERVICE	SHWS, HIST LF
DICKMAN RD LF/SPRINGFIELD WELLS W/	SHWS
EATON CORP-SPRINGFIELD	SHWS
SPRINGFIELD WELLS LAFAYETTE AREA	SHWS, DEL SHWS
ORBIT ENTERPRISES	CERCLIS
FORMER UNITED #6314	BROWNFIELDS
CEREAL CITY LF	BROWNFIELDS
W. MICHIGAN AVE. ADJ. TO BC TAXI	BROWNFIELDS
PENNFIELD SCHOOLS	LUST, UST
FORMER RAYMOND TOTAL	LUST, UST
WOLFE AND ASSOCIATES INC	FINDS, UST, RCRA-NonGen
MI DEPT/ENVIRONMENTAL QUALITY	RCRA-NonGen
TIDEYS INC	FINDS, RCRA-NonGen
GALLOUP BUILDING BATTLE CREEK	FINDS, RCRA-NonGen
CITY OF SPRINGFIELD	RCRA-NonGen
SPEEDWAY SUPERAMERICA LLC	RCRA-CESQG
KENDALL (14 & 18) & JACKSON (422)	BEA
FORMER TRANSPORTATION SPECIALIST	BEA
HAMBLIN AND KENDALL STREETS	BEA
H.B. SHERMAN	BEA
CITY OF BATTLE CREEK SUBCONTRACTOR	SPILLS
ORBIT ENTERPRISES FORMER	ICIS

OVERVIEW MAP - 2493670.1s



Target Property

Sites at elevations higher than or equal to the target property

Sites at elevations lower than the target property

Manufactured Gas Plants

National Priority List Sites

Dept. Defense Sites

Indian Reservations BIA

Oil & Gas pipelines

100-year flood zone

500-year flood zone

National Wetland Inventory

State Wetlands

SITE NAME: Former Cereal City Property ADDRESS: 171 Michigan Ave W Battle Creek MI 49017 LAT/LONG: 42.3236 / 85.1882	CLIENT: Horizon Environmental Corp CONTACT: Liz Bartz INQUIRY #: 2493670.1s DATE: May 14, 2009 7:28 am

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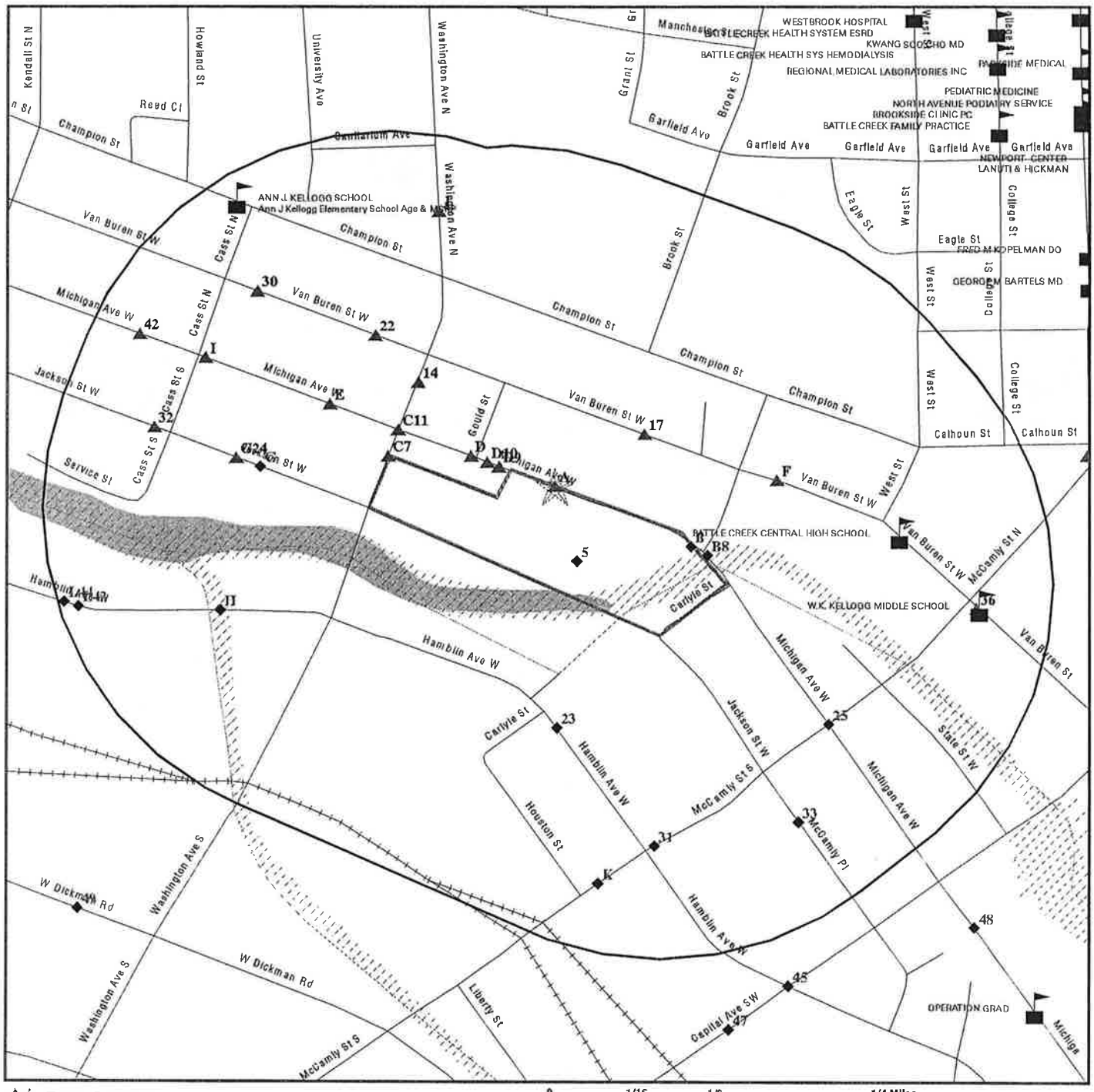
DETAIL MAP - 2493670.1s



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- Oil & Gas pipelines
- 100-year flood zone
- 500-year flood zone
- National Wetland Inventory
- State Wetlands

SITE NAME: Former Cereal City Property ADDRESS: 171 Michigan Ave W Battle Creek MI 49017 LAT/LONG: 42.3236 / 85.1882	CLIENT: Horizon Environmental Corp CONTACT: Liz Bartz INQUIRY #: 2493670.1s DATE: May 14, 2009 7:28 am

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MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Federal NPL site list								
NPL		1.000	0	0	0	0	NR	0
Proposed NPL		1.000	0	0	0	0	NR	0
NPL LIENS		TP	NR	NR	NR	NR	NR	0
Federal Delisted NPL site list								
Delisted NPL		1.000	0	0	0	0	NR	0
Federal CERCLIS list								
CERCLIS		0.500	0	0	0	NR	NR	0
Federal CERCLIS NFRAP site List								
CERC-NFRAP		0.500	1	0	0	NR	NR	1
Federal RCRA CORRACTS facilities list								
CORRACTS		1.000	0	0	0	0	NR	0
Federal RCRA non-CORRACTS TSD facilities list								
RCRA-TSDF		0.500	0	0	0	NR	NR	0
Federal RCRA generators list								
RCRA-LQG		0.250	0	0	NR	NR	NR	0
RCRA-SQG		0.250	1	0	NR	NR	NR	1
RCRA-CESQG		0.250	2	3	NR	NR	NR	5
Federal institutional controls / engineering controls registries								
US ENG CONTROLS		0.500	0	0	0	NR	NR	0
US INST CONTROL		0.500	0	0	0	NR	NR	0
Federal ERNS list								
ERNS		TP	NR	NR	NR	NR	NR	0
State- and tribal - equivalent CERCLIS								
SHWS		1.000	1	0	4	3	NR	8
State and tribal landfill and/or solid waste disposal site lists								
SWF/LF		0.500	0	0	0	NR	NR	0
State and tribal leaking storage tank lists								
LUST		0.500	3	4	11	NR	NR	18
INDIAN LUST		0.500	0	0	0	NR	NR	0
State and tribal registered storage tank lists								
UST		0.250	10	7	NR	NR	NR	17
AST		0.250	0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
INDIAN UST		0.250	0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
AUL		0.500	0	0	0	NR	NR	0
State and tribal voluntary cleanup sites								
INDIAN VCP		0.500	0	0	0	NR	NR	0
State and tribal Brownfields sites								
BROWNFIELDS		0.500	2	0	2	NR	NR	4
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS		0.500	0	0	1	NR	NR	1
Local Lists of Landfill / Solid Waste Disposal Sites								
ODI		0.500	0	0	0	NR	NR	0
DEBRIS REGION 9		0.500	0	0	0	NR	NR	0
HIST LF		0.500	0	0	0	NR	NR	0
INDIAN ODI		0.500	0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US CDL		TP	NR	NR	NR	NR	NR	0
DEL SHWS		1.000	0	1	1	1	NR	3
CDL		TP	NR	NR	NR	NR	NR	0
Local Land Records								
LIENS 2		TP	NR	NR	NR	NR	NR	0
LUCIS		0.500	0	0	0	NR	NR	0
LIENS		TP	NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS		TP	NR	NR	NR	NR	NR	0
SPILLS		TP	NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA-NonGen		0.250	9	7	NR	NR	NR	16
DOT OPS		TP	NR	NR	NR	NR	NR	0
DOD		1.000	0	0	0	0	NR	0
FUDS		1.000	0	0	0	0	NR	0
CONSENT		1.000	0	0	0	0	NR	0
ROD		1.000	0	0	0	0	NR	0
UMTRA		0.500	0	0	0	NR	NR	0
MINES		0.250	0	0	NR	NR	NR	0
TRIS		TP	NR	NR	NR	NR	NR	0
TSCA		TP	NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FTTS		TP	NR	NR	NR	NR	NR	0
HIST FTTS		TP	NR	NR	NR	NR	NR	0
SSTS		TP	NR	NR	NR	NR	NR	0
ICIS		TP	NR	NR	NR	NR	NR	0
PADS		TP	NR	NR	NR	NR	NR	0
MLTS		TP	NR	NR	NR	NR	NR	0
RADINFO		TP	NR	NR	NR	NR	NR	0
FINDS		TP	NR	NR	NR	NR	NR	0
RAATS		TP	NR	NR	NR	NR	NR	0
DRYCLEANERS		0.250	0	0	NR	NR	NR	0
NPDES		TP	NR	NR	NR	NR	NR	0
AIRS		TP	NR	NR	NR	NR	NR	0
BEA	X	0.500	1	2	8	NR	NR	11
INDIAN RESERV		1.000	0	0	0	0	NR	0
SCRD DRYCLEANERS		0.500	0	0	0	NR	NR	0
EDR PROPRIETARY RECORDS								
EDR Proprietary Records								
Manufactured Gas Plants		1.000	0	0	0	1	NR	1

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

A6 Target Property — **MICHIGAN (171) AVENUE, WEST**
171 WEST MICHIGAN AVENUE
BATTLE CREEK, MI 49014

BEA — **S108669909**
N/A

Site 1 of 3 in cluster A

Actual: 839 ft.

BEA:

Secondary Address:	Not reported
BEA Number:	1153
District:	Kalamazoo
Date Received:	7/25/2007 12:59:00 AM
Submitter Name:	Kellogg Company
Petition Determination:	No Request
Petition Disclosure:	0
Category:	No Hazardous Substance(s)
Determination 20107A:	No Request
Reviewer:	brettmag
Division Assigned:	Environmental Response Division

A1 < 1/8 1 ft. — **BURNAM BROOK CTR**
245 MICHIGAN AVE W
BATTLE CREEK, MI 49017

FINDS — **1000866320**
RCRA-NonGen — **MID985664747**

Site 2 of 3 in cluster A

Relative: Higher

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual: 839 ft.

Registry ID: 110007584514

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency:	02/08/2000
Facility name:	BURNAM BROOK CTR
Facility address:	245 MICHIGAN AVE W BATTLE CREEK, MI 49017
EPA ID:	MID985664747
Contact:	JACK FROST
Contact address:	245 MICHIGAN AVE W BATTLE CREEK, MI 49017
Contact country:	Not reported
Contact telephone:	(616) 966-2566
Contact email:	Not reported
EPA Region:	05
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	CITY OF BATTLE CREEK
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported

BURNAM BROOK CTR (Continued) **1000866320**

Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Owner/operator name: CITY OF BATTLE CREEK
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides

BURNAM BROOK CTR (Continued) **1000866320**

Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 08/04/1993
Facility name: BURNAM BROOK CTR
Classification: Not a generator, verified

Violation Status: No violations found

A2 **OLD SUPER BEE MUFFLER SHOP** **UST** **U000250927**
172-176 WEST MICHIGAN AVENUE **N/A**
< 1/8 **BATTLE CREEK, MI 94111**
1 ft.

Site 3 of 3 in cluster A

Relative:
Higher

Actual:
839 ft.

UST:
Facility ID: 00033393
Facility Type: CLOSED
Latitude: Not reported
Longitude: Not reported
Owner Name: Robert D.& Carol B. Wolfe
Owner Address: 100 PINE ST STE 950
Owner City,St,Zip: SAN FRANCISCO, CA 94111
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (415) 989-1200
Contact: ROBERT D.& CAROL B. WOLFE
Contact Phone: ( ) -
Date of Collection: Not reported
Accuracy: Not reported
Accuracy Value Unit: Not reported
Horizontal Datum: Not reported
Source: Not reported
Point Line Area: Not reported
Desc Category: Not reported
Method of Collection: Not reported

Tank ID: 1
Tank Status: Removed from Ground
Capacity: 4000
Install Date: Feb 27 1953
Product: Heating Oil
Remove Date: Aug 17 1989
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: Removed from Ground

OLD SUPER BEE MUFFLER SHOP (Continued) **U000250927**

Capacity:	4000
Install Date:	Feb 27 1953
Product:	Heating Oil
Remove Date:	Aug 17 1989
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	3
Tank Status:	**Removed from Ground**
Capacity:	3000
Install Date:	Feb 27 1953
Product:	Heating Oil
Remove Date:	Aug 17 1989
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

B3 **BATTLE CREEK HEBBLES** **FINDS** **1000414360**
123 MICHIGAN AVE W **RCRA-NonGen** **MID985572874**
< 1/8 **BATTLE CREEK, MI 49017**
1 ft.

Site 1 of 3 in cluster B

Relative: Lower

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual: 830 ft.

Registry ID: 110008455475

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency:	12/31/2001
Facility name:	BATTLE CREEK HEBBLES
Facility address:	123 MICHIGAN AVE W BATTLE CREEK, MI 49017
EPA ID:	MID985572874
Contact:	JANE PARKS
Contact address:	123 MICHIGAN AVE W BATTLE CREEK, MI 49017
Contact country:	Not reported
Contact telephone:	(616) 966-3390
Contact email:	Not reported
EPA Region:	05

BATTLE CREEK HEBBLES (Continued) **1000414360**

Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: CITY OF BATTLE CREEK
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Owner/operator name: CITY OF BATTLE CREEK
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Municipal
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries

BATTLE CREEK HEBBLES (Continued) **1000414360**

Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 10/16/1989
Facility name: BATTLE CREEK HEBBLES
Classification: Not a generator, verified

Violation Status: No violations found

B4 **CITY OF BATTLE CREEK-W. MICH. AVE.** **BROWNFIELDS** **S107136081**
123-151 WEST MICHIGAN AVE **N/A**
< 1/8 **BATTLE CREEK, MI**
1 ft.

Site 2 of 3 in cluster B

Relative: Lower
Actual: 830 ft.

BROWNFIELD:
Facility ID: 00037129
Region: 1
Status: In Progress
Properry Use: Not reported
BEA: Not reported
Ernie Id Number: 13000263
Redevelop Status: Not reported
Before Redevelopment: Not reported
After Redevelopment: Not reported

---

5 **CITATION CO INC SHERMAN MFG CO DIV** **FINDS** **1000159372**
22 BARNEY BLVD **RCRA-NonGen** **MID079299970**
< 1/8 **BATTLE CREEK, MI 49037**
1 ft.

Relative: Lower
Actual: 831 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site

Registry ID: 110003604957

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

CITATION CO INC SHERMAN MFG CO DIV (Continued) **1000159372**

RCRA-NonGen:

Date form received by agency:	06/30/1980
Facility name:	CITATION CO INC SHERMAN MFG CO DIV
Facility address:	22 BARNEY BLVD BATTLE CREEK, MI 49037
EPA ID:	MID079299970
Contact:	PHILLIP RENEAU
Contact address:	22 BARNEY BLVD BATTLE CREEK, MI 49037
Contact country:	Not reported
Contact telephone:	(616) 964-7102
Contact email:	Not reported
EPA Region:	05
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/03/1970
Owner/Op end date:	Not reported

Owner/operator name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/03/1970
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

CITATION CO INC SHERMAN MFG CO DIV (Continued) **1000159372**

Universal Waste Summary:

Waste type:	DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	MERCURY THERMOMETERS
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	MERCURY SWITCHES
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Batteries
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Lamps
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Pesticides
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Thermostats
Accumulated waste on-site:	No
Generated waste on-site:	No
Violation Status:	No violations found

C7
WNW
< 1/8
0.001 mi.
6 ft.

Relative:
Higher

Actual:
840 ft.

UNITED STEEL & WIRE CO INC
105 SOUTH WASHINGTON
BATTLE CREEK, MI 49017

Site 1 of 2 in cluster C

SHWS **1000398841**
FINDS **MID006571087**
LUST
UST
CERC-NFRAP
RCRA-NonGen

SHWS:

Facility ID:	13000041
Source:	Plating & Polishing
SAM Score:	34 out of 48
SAM Score Date:	03/23/2004
Township:	02S
Range:	08W
Section:	01
Quarter:	SW
Quarter/Quarter:	SE
Facility Status:	**Evaluation in progress**
Pollutant(s):	CN; Pb; PCE; Hydrocarbons; Metals

FINDS:
Other Pertinent Environmental Activity Identified at Site

Registry ID: 110000797692

AFS (Aerometric Information Retrieval System (AIRS) Facility

UNITED STEEL & WIRE CO INC (Continued) **1000398841**

Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

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LUST:

Facility ID:	00036816
Source:	STATE OF MICHIGAN
Owner Name:	United Steel & Wire Co
Owner Address:	4909 Wayne Rd
Owner City,St,Zip:	Battle Creek, MI 49015-1023
Owner Contact:	Not reported
Owner Phone:	(616) 962-5571
Country:	USA
District:	Kalamazoo District Office
Site Name:	United Steel & Wire
Latitude:	42.3208320000
Longitude:	-85.1921220000
Date of Collection:	01-11-2001
Method of Collection:	Address Matching-House Number
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported
Leak Number:	C-0394-94
Release Date:	May 3 1995
Substance Released:	Other
Release Status:	Open
Release Closed Date:	Not reported

UST:

Facility ID:	00036816
Facility Type:	CLOSED
Latitude:	42.3208320000
Longitude:	-85.1921220000
Owner Name:	United Steel & Wire Co
Owner Address:	4909 Wayne Rd
Owner City,St,Zip:	Battle Creek, MI 49015-1023
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 962-5571

UNITED STEEL & WIRE CO INC (Continued) **1000398841**

Contact:	TIMOTHY R MURINE
Contact Phone:	(517) 787-3393
Date of Collection:	01-11-2001
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Address Matching-House Number

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	500
Install Date:	Jan 1 1965
Product:	Gasoline
Remove Date:	Oct 13 1995
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Bare Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	2
Tank Status:	**Removed from Ground**
Capacity:	20000
Install Date:	Jan 1 1965
Product:	Hazardous Substance
Remove Date:	May 17 1994
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Bare Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

CERC-NFRAP:

Site ID:	0502396
Federal Facility:	Not a Federal Facility
NPL Status:	Not on the NPL
Non NPL Status:	NFRAP

Site Description: Not reported

CERCLIS-NFRAP Assessment History:

Action:	DISCOVERY
Date Started:	Not reported
Date Completed:	08/01/1980
Priority Level:	Not reported

Action:	SITE INSPECTION
Date Started:	Not reported
Date Completed:	03/31/1986
Priority Level:	High

UNITED STEEL & WIRE CO INC (Continued) **1000398841**

Action: HAZARD RANKING SYSTEM PACKAGE
Date Started: Not reported
Date Completed: 12/08/1986
Priority Level: Not reported

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 12/11/1987
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 12/11/1987
Priority Level: NFRAP (No Futher Remedial Action Planned

RCRA-NonGen:
Date form received by agency: 02/12/1996
Facility name: UNITED STEEL & WIRE CO INC
Site name: UNITED STEEL & WIRE
Facility address: 105 SOUTH WASHINGTON
BATTLE CREEK, MI 490170000
EPA ID: MID006571087
Mailing address: 4909 WAYNE ROAD
BATTLE CREEK, MI 490170000
Contact: RANDY L GAMBLE
Contact address: Not reported
Not reported
Contact country: Not reported
Contact telephone: (517) 787-3393
Contact email: Not reported
EPA Region: 05
Land type: Other land type
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Handler Activities Summary:
U.S. importer of hazardous waste: Unknown
Mixed waste (haz. and radioactive): Unknown
Recycler of hazardous waste: Unknown
Transporter of hazardous waste: Unknown
Treater, storer or disposer of HW: No
Underground injection activity: Unknown
On-site burner exemption: Unknown
Furnace exemption: Unknown
Used oil fuel burner: Unknown
Used oil processor: Unknown
User oil refiner: Unknown
Used oil fuel marketer to burner: Unknown
Used oil Specification marketer: Unknown
Used oil transfer facility: Unknown
Used oil transporter: Unknown
Off-site waste receiver: Commercial status unknown

Historical Generators:
Date form received by agency: 02/09/1994
Facility name: UNITED STEEL & WIRE CO INC

UNITED STEEL & WIRE CO INC (Continued) **1000398841**

Site name: UNITED STEEL & WIRE
Classification: Large Quantity Generator

Date form received by agency: 03/31/1992
Facility name: UNITED STEEL & WIRE CO INC
Classification: Large Quantity Generator

Date form received by agency: 03/05/1990
Facility name: UNITED STEEL & WIRE CO INC
Classification: Large Quantity Generator

Date form received by agency: 07/22/1980
Facility name: UNITED STEEL & WIRE CO INC
Classification: Not a generator, verified

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/10/1992
Date achieved compliance: 01/21/1993
Violation lead agency: State
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR IMMINENT AND SUBSTANTIAL ENDANGERMENT
Enforcement action date: 01/21/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 72000
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 03/10/1992
Date achieved compliance: 01/21/1993
Violation lead agency: State
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR IMMINENT AND SUBSTANTIAL ENDANGERMENT
Enforcement action date: 01/21/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 72000
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 03/10/1992
Date achieved compliance: 01/21/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/10/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

UNITED STEEL & WIRE CO INC (Continued) **1000398841**

Regulation violated: Not reported
Area of violation: LDR - General
Date violation determined: 03/10/1992
Date achieved compliance: 01/21/1993
Violation lead agency: State
Enforcement action: REFERRAL TO ATTORNEY GENERAL
Enforcement action date: 06/05/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/10/1992
Date achieved compliance: 01/21/1993
Violation lead agency: State
Enforcement action: REFERRAL TO ATTORNEY GENERAL
Enforcement action date: 06/05/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/10/1992
Date achieved compliance: 01/21/1993
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/10/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/09/1992
Date achieved compliance: 01/21/1993
Violation lead agency: State
Enforcement action: REFERRAL TO ATTORNEY GENERAL
Enforcement action date: 06/05/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported

UNITED STEEL & WIRE CO INC (Continued) **1000398841**

Area of violation: TSD - General
Date violation determined: 03/09/1992
Date achieved compliance: 01/21/1993
Violation lead agency: State
Enforcement action: REFERRAL TO ATTORNEY GENERAL
Enforcement action date: 06/05/1992
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 03/09/1992
Date achieved compliance: 01/21/1993
Violation lead agency: State
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR IMMINENT AND SUBSTANTIAL ENDANGERMENT
Enforcement action date: 01/21/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 72000
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: TSD - General
Date violation determined: 03/09/1992
Date achieved compliance: 01/21/1993
Violation lead agency: State
Enforcement action: FINAL CIVIL JUDICIAL ACTION FOR IMMINENT AND SUBSTANTIAL ENDANGERMENT
Enforcement action date: 01/21/1993
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: 72000
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 01/13/1988
Date achieved compliance: 07/14/1988
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 01/25/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 08/24/1995

UNITED STEEL & WIRE CO INC (Continued) **1000398841**

Evaluation:	FOLLOW-UP INSPECTION
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	06/06/1995
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	02/14/1992
Evaluation:	FOCUSED COMPLIANCE INSPECTION
Area of violation:	TSD - General
Date achieved compliance:	01/21/1993
Evaluation lead agency:	State
Evaluation date:	02/14/1992
Evaluation:	FOCUSED COMPLIANCE INSPECTION
Area of violation:	Generators - General
Date achieved compliance:	01/21/1993
Evaluation lead agency:	State
Evaluation date:	01/13/1992
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Generators - General
Date achieved compliance:	01/21/1993
Evaluation lead agency:	State
Evaluation date:	01/13/1992
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	LDR - General
Date achieved compliance:	01/21/1993
Evaluation lead agency:	State
Evaluation date:	07/15/1988
Evaluation:	COMPLIANCE SCHEDULE EVALUATION
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State
Evaluation date:	01/13/1988
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Generators - General
Date achieved compliance:	07/14/1988
Evaluation lead agency:	State

B8 **TRANSAMERICA PARKING LOT** **UST** **U003082928**
NE **114 WEST MICHIGAN** **N/A**
< 1/8 **BATTLE CREEK, MI 49015**
0.004 mi.
19 ft. **Site 3 of 3 in cluster B**

Relative:
Lower

Actual:
826 ft.

UST:

Facility ID:	00036914
Facility Type:	CLOSED
Latitude:	42.3223850000
Longitude:	-85.1853010000
Owner Name:	City of Battle Creek

TRANSAMERICA PARKING LOT (Continued) **U003082928**

Owner Address:	RM 200 Terminal Bldg
Owner City,St,Zip:	Battle Creek, MI 49015
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 966-3390
Contact:	JANE PARKS
Contact Phone:	(616) 966-3390
Date of Collection:	01-11-2001
Accuracy:	100
Accuracy Value Unit:	FEET
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	1000
Install Date:	Not reported
Product:	Gasoline
Remove Date:	Sep 29 1992
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Bare Steel
Piping Type:	Suction: No Valve At Tank
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	2
Tank Status:	**Removed from Ground**
Capacity:	1000
Install Date:	Not reported
Product:	Gasoline
Remove Date:	Sep 29 1992
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Bare Steel
Piping Type:	Suction: No Valve At Tank
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

D9 **CITY OF BATTLE CREEK** **UST** **U003082885**
WNW **191 W MICHIGAN** **N/A**
< 1/8 **BATTLE CREEK, MI 49015**
0.009 mi.
49 ft. **Site 1 of 4 in cluster D**

Relative:
Higher

Actual:
839 ft.

UST:

Facility ID:	00036034
Facility Type:	CLOSED
Latitude:	42.3232880000
Longitude:	-85.1879650000
Owner Name:	City of Battle Creek
Owner Address:	RM 200 Terminal Bldg
Owner City,St,Zip:	Battle Creek, MI 49015
Owner Country:	USA

CITY OF BATTLE CREEK (Continued) **U003082885**

Owner Contact:	Not reported
Owner Phone:	(616) 966-3390
Contact:	JANE PARKS
Contact Phone:	(616) 966-3390
Date of Collection:	08-09-2006
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Interpolation-Map

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	600
Install Date:	Not reported
Product:	Gasoline
Remove Date:	Jan 8 1992
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Bare Steel
Piping Type:	Suction: No Valve At Tank
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

D10 **MAACO AUTO PAINTING & BODYWORKS** **FINDS** **1000175071**
WNW **194 MICHIGAN AVE W** **RCRA-NonGen** **MID038615472**
< 1/8 **BATTLE CREEK, MI 49017**
0.019 mi.
99 ft. **Site 2 of 4 in cluster D**

Relative:
Higher

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual:
839 ft.

Registry ID: 110008445744

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency:	08/28/2002
Facility name:	MAACO AUTO PAINTING & BODYWORKS
Facility address:	194 MICHIGAN AVE W BATTLE CREEK, MI 49017
EPA ID:	MID038615472
Contact:	FRANK PERRONE
Contact address:	194 MICHIGAN AVE W BATTLE CREEK, MI 49017
Contact country:	Not reported
Contact telephone:	(616) 964-3796
Contact email:	Not reported

MAACO AUTO PAINTING & BODYWORKS (Continued) **1000175071**

EPA Region:	05
Land type:	Private
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	PERRONE AND BOND
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Owner/operator name:	PERRONE AND BOND
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Universal Waste Summary:

Waste type:	DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site:	No
Generated waste on-site:	No

Waste type:	MERCURY THERMOMETERS
Accumulated waste on-site:	No
Generated waste on-site:	No

Waste type:	MERCURY SWITCHES
Accumulated waste on-site:	No
Generated waste on-site:	No

MAACO AUTO PAINTING & BODYWORKS (Continued) **1000175071**

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 12/31/2001
Facility name: MAACO AUTO PAINTING & BODYWORKS
Classification: Not a generator, verified

Date form received by agency: 11/18/1986
Facility name: MAACO AUTO PAINTING & BODYWORKS
Classification: Not a generator, verified

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 09/12/1988
Date achieved compliance: 12/03/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 09/12/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - General
Date violation determined: 07/11/1988
Date achieved compliance: 12/03/1991
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 07/20/1988
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 09/12/1988

MAACO AUTO PAINTING & BODYWORKS (Continued) **1000175071**

Evaluation:	COMPLIANCE SCHEDULE EVALUATION
Area of violation:	Generators - General
Date achieved compliance:	12/03/1991
Evaluation lead agency:	State
Evaluation date:	07/11/1988
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Generators - General
Date achieved compliance:	12/03/1991
Evaluation lead agency:	State

C11 NNE < 1/8 0.021 mi. 112 ft. | **IVA/MICHIGAN**
301 MICHIGAN AVE W
BATTLE CREEK, MI 49037 | **RCRA-CESQG** | **1004724720**
MIR000011130

Site 2 of 2 in cluster C

Relative: Higher

Actual: 840 ft.

RCRA-CESQG:

Date form received by agency:	12/11/1995
Facility name:	IVA/MICHIGAN
Facility address:	301 MICHIGAN AVE W BATTLE CREEK, MI 49037
EPA ID:	MIR000011130
Contact:	KEN PYLE
Contact address:	301 MICHIGAN AVE W BATTLE CREEK, MI 49037
Contact country:	Not reported
Contact telephone:	(616) 962-2700
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	INTAGLIO VIVI-COLOR ALLIANCE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported
Owner/operator name:	INTAGLIO VIVI-COLOR ALLIANCE

IVA/MICHIGAN (Continued) **1004724720**

Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1970
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

IVA/MICHIGAN (Continued) **1004724720**

Violation Status: No violations found

D12
NNE
< 1/8
0.023 mi.
120 ft.

H. B. SHERMAN
207 W MICHIGAN AVENUE
BATTLE CREEK, MI

BROWNFIELDS **S106515771**
N/A

Site 3 of 4 in cluster D

Relative:
Higher

Actual:
840 ft.

BROWNFIELD:

Facility ID:	50000913
Region:	1
Status:	Closed LP
Properry Use:	Not reported
BEA:	Not reported
Ernie Id Number:	13000188
Redevelop Status:	Not reported
Before Redevelopment:	Not reported
After Redevelopment:	Photo

D13
NNE
< 1/8
0.023 mi.
120 ft.

BURNHAM BROOK CENTER
200 W MICHIGAN AVE
BATTLE CREEK, MI 49015

UST **U004120484**
N/A

Site 4 of 4 in cluster D

Relative:
Higher

Actual:
840 ft.

UST:

Facility ID:	00042093
Facility Type:	CLOSED
Latitude:	Not reported
Longitude:	Not reported
Owner Name:	Burnham Brook Community Center Holding Corp
Owner Address:	34 Jackson St
Owner City,St,Zip:	Battle Creek, MI 49015
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(269) 962-2181
Contact:	Mary Ann Taylor
Contact Phone:	(269) 649-1003
Date of Collection:	Not reported
Accuracy:	Not reported
Accuracy Value Unit:	Not reported
Horizontal Datum:	Not reported
Source:	Not reported
Point Line Area:	Not reported
Desc Category:	Not reported
Method of Collection:	Not reported

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	1000
Install Date:	Not reported
Product:	Gasoline, Diesel
Remove Date:	Mar 27 2008
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported

BURNHAM BROOK CENTER (Continued) **U004120484**

Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

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14 NNE < 1/8 0.061 mi. 322 ft.

SEVENTH DAY ADVENTIST TABERNACLE CHURCH **RCRA-NonGen** **1007099014**
19 N WASHINGTON AVE **MIK596589119**
BATTLE CREEK, MI 49037

Relative: Higher

Actual: 845 ft.

RCRA-NonGen:

Date form received by agency:	09/06/2002
Facility name:	SEVENTH DAY ADVENTIST TABERNACLE CHURCH
Facility address:	19 N WASHINGTON AVE BATTLE CREEK, MI 49037
EPA ID:	MIK596589119
Mailing address:	264 MICHIGAN AVE W BATTLE CREEK, MI 49037
Contact:	CANDACE LEDOUX
Contact address:	19 N WASHINGTON AVE BATTLE CREEK, MI 49037
Contact country:	Not reported
Contact telephone:	(616) 968-8101
Contact email:	Not reported
EPA Region:	05
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	SEVENTH DAY ADVENTISE TABERNACLE CHURCH
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	09/06/2002
Owner/Op end date:	Not reported

Owner/operator name:	SEVENTH DAY ADVENTISE TABERNACLE CHURCH
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	09/06/2002
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No

SEVENTH DAY ADVENTIST TABERNACLE CHURCH (Continued) **1007099014**

Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Universal Waste Summary:

Waste type:	DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	MERCURY THERMOMETERS
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	MERCURY SWITCHES
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Batteries
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Lamps
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Pesticides
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Thermostats
Accumulated waste on-site:	No
Generated waste on-site:	No
Violation Status:	No violations found

E15
NW
< 1/8
0.061 mi.
322 ft.

LASSEN STAN PONT CAD INC
320 MICHIGAN AVE W
BATTLE CREEK, MI 49037

FINDS 1004723990
RCRA-CESQG MID985653872

Site 1 of 2 in cluster E

Relative:
Higher

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual:
840 ft.

Registry ID: 110007582696

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

LASSEN STAN PONT CAD INC (Continued) **1004723990**

RCRA-CESQG:

Date form received by agency:	11/13/1992
Facility name:	LASSEN STAN PONT CAD INC
Facility address:	320 MICHIGAN AVE W BATTLE CREEK, MI 49037
EPA ID:	MID985653872
Contact:	R TURNER
Contact address:	320 MICHIGAN AVE W BATTLE CREEK, MI 49037
Contact country:	Not reported
Contact telephone:	(616) 962-5544
Contact email:	Not reported
EPA Region:	05
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	LASSEN STUART A
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Owner/operator name:	LASSEN STUART A
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No

LASSEN STAN PONT CAD INC (Continued) **1004723990**

Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Universal Waste Summary:

Waste type:	DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	MERCURY THERMOMETERS
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	MERCURY SWITCHES
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Batteries
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Lamps
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Pesticides
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Thermostats
Accumulated waste on-site:	No
Generated waste on-site:	No
Violation Status:	No violations found

E16
NW
< 1/8
0.061 mi.
322 ft.

STAN LASSEN PONTIAC/CADILLAC INC **LUST U003082332**
320 MICHIGAN AVE W **UST N/A**
BATTLE CREEK, MI 49017

Site 2 of 2 in cluster E

Relative:
Higher

Actual:
840 ft.

LUST:

Facility ID:	00014476
Source:	STATE OF MICHIGAN
Owner Name:	Stan Lassen Pontiac/Cadillac Inc
Owner Address:	320 Michigan Ave W
Owner City,St,Zip:	Battle Creek, MI 49017-2314
Owner Contact:	Not reported
Owner Phone:	(616) 962-5544
Country:	USA

STAN LASSEN PONTIAC/CADILLAC INC (Continued) **U003082332**

District:	Kalamazoo District Office
Site Name:	Lassen Pontiac
Latitude:	42.3250530000
Longitude:	-85.1928730000
Date of Collection:	01-11-2001
Method of Collection:	Address Matching-House Number
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported

Leak Number:	C-0361-85
Release Date:	Dec 22 1987
Substance Released:	Not reported
Release Status:	Closed
Release Closed Date:	Jan 12 1996

UST:

Facility ID:	00014476
Facility Type:	ACTIVE
Latitude:	42.3250530000
Longitude:	-85.1928730000
Owner Name:	Stan Lassen Pontiac/Cadillac Inc
Owner Address:	320 Michigan Ave W
Owner City,St,Zip:	Battle Creek, MI 49017-2314
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 962-5544
Contact:	R.L. TURNER
Contact Phone:	(616) 962-5544
Date of Collection:	01-11-2001
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Address Matching-House Number

Tank ID:	N-3
Tank Status:	**Currently In Use**
Capacity:	42
Install Date:	May 15 1979
Product:	PETROLEUM
Remove Date:	Not reported
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Cathodically Protected,Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device:	No

Tank ID:	N-5
Tank Status:	**Currently In Use**
Capacity:	42
Install Date:	May 15 1979

STAN LASSEN PONTIAC/CADILLAC INC (Continued) **U003082332**

Product: HOIST OIL
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: S-6
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: N-1
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: BE-4
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: 3
Tank Status: Removed from Ground
Capacity: 1000
Install Date: May 15 1971
Product: Used Oil

STAN LASSEN PONTIAC/CADILLAC INC (Continued) **U003082332**

Remove Date: Jan 1 1988
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: N-2
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PEROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: N-7
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: S-5
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: S-2
Tank Status: Temporarily out of Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported

STAN LASSEN PONTIAC/CADILLAC INC (Continued) **U003082332**

Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: N-8
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: S-7
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: BW-2
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: S-4
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported

STAN LASSEN PONTIAC/CADILLAC INC (Continued) **U003082332**

Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: BE-5
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: S-1
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: S-3
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: BW-1
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported

STAN LASSEN PONTIAC/CADILLAC INC (Continued) **U003082332**

Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: N-4
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: HOIST OIL
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: 2
Tank Status: Removed from Ground
Capacity: 500
Install Date: May 15 1971
Product: NEW OIL
Remove Date: Jan 1 1988
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: N-6
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device: No

Tank ID: BE-3
Tank Status: Currently In Use
Capacity: 42
Install Date: May 15 1979
Product: PETROLEUM
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Cathodically Protected,Galvanized Steel

STAN LASSEN PONTIAC/CADILLAC INC (Continued) **U003082332**

Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device:	No

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	500
Install Date:	May 15 1971
Product:	NEW OIL
Remove Date:	Jan 1 1988
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

17
NNE
< 1/8
0.062 mi.
326 ft.

FORMER ASHLEY DAIRY INC
208 W VAN BUREN
BATTLE CREEK, MI 49017

UST **U003082958**
N/A

Relative:
Higher

Actual:
840 ft.

UST:

Facility ID:	00037560
Facility Type:	CLOSED
Latitude:	42.3247990000
Longitude:	-85.1886900000
Owner Name:	Architects Inc
Owner Address:	34 W JACKSON ST
Owner City,St,Zip:	BATTLE CREEK, MI 49017
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 968-4300
Contact:	MR LARRY RIZOE
Contact Phone:	(616) 968-4300
Date of Collection:	08-09-2006
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Interpolation-Map

Tank ID:	A
Tank Status:	**Removed from Ground**
Capacity:	6000
Install Date:	Jan 1 1960
Product:	Gasoline
Remove Date:	Jun 2 1994
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Unknown
Impressed Device:	No

FORMER ASHLEY DAIRY INC (Continued) **U003082958**

Tank ID:	B
Tank Status:	**Removed from Ground**
Capacity:	6000
Install Date:	Jan 1 1960
Product:	Gasoline
Remove Date:	Jun 2 1994
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Unknown
Impressed Device:	No

F18 **FEDERATED PUBL. DBA B C ENQUIRER** **LUST** **U003082772**
NE **155 VAN BUREN ST W** **UST** **N/A**
< 1/8 **BATTLE CREEK, MI 49017**
0.082 mi.
433 ft. **Site 1 of 2 in cluster F**

Relative:
Higher

Actual:
840 ft.

LUST:

Facility ID:	00033866
Source:	STATE OF MICHIGAN
Owner Name:	Federated Publ. Dba B C Enquirer
Owner Address:	155 Van Buren St W
Owner City,St,Zip:	Battle Creek, MI 49017-3002
Owner Contact:	Not reported
Owner Phone:	(616) 964-7161
Country:	USA
District:	Kalamazoo District Office
Site Name:	Battle Creek Enquirer
Latitude:	42.3235910000
Longitude:	-85.1852200000
Date of Collection:	01-11-2001
Method of Collection:	Address Matching-House Number
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported
Leak Number:	C-0953-90
Release Date:	Jun 12 1990
Substance Released:	Not reported
Release Status:	Closed
Release Closed Date:	Mar 15 1997

UST:

Facility ID:	00033866
Facility Type:	CLOSED
Latitude:	42.3235910000
Longitude:	-85.1852200000
Owner Name:	Federated Publ. Dba B C Enquirer
Owner Address:	155 Van Buren St W
Owner City,St,Zip:	Battle Creek, MI 49017-3002
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 964-7161
Contact:	GERALD D. HECHT

FEDERATED PUBL. DBA B C ENQUIRER (Continued) **U003082772**

Contact Phone:	(616) 964-7161
Date of Collection:	01-11-2001
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Address Matching-House Number

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	1500
Install Date:	Not reported
Product:	UNK
Remove Date:	Jun 28 1990
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Unknown
Impressed Device:	No

F19 **FEDERATED PUBLICATIONS INC** **RCRA-SQG** **1000214345**
NE **155 WEST VAN BUREN STREET** **FINDS** **MID005357116**
< 1/8 **BATTLE CREEK, MI 49017**
0.082 mi.
433 ft. **Site 2 of 2 in cluster F**

Relative:
Higher

Actual:
840 ft.

RCRA-SQG:

Date form received by agency:	04/21/2008
Facility name:	FEDERATED PUBLICATIONS INC
Facility address:	155 W VAN BUREN ST BATTLE CREEK, MI 49017
EPA ID:	MID005357116
Contact:	TIM EBRIGHT
Contact address:	155 W VAN BUREN ST BATTLE CREEK, MI 49017
Contact country:	Not reported
Contact telephone:	(269) 966-0650
Contact email:	Not reported
EPA Region:	05
Land type:	Private
Classification:	Small Small Quantity Generator
Description:	Handler: generates more than 100 and less than 1000 kg of hazardous waste during any calendar month and accumulates less than 6000 kg of hazardous waste at any time; or generates 100 kg or less of hazardous waste during any calendar month, and accumulates more than 1000 kg of hazardous waste at any time

Owner/Operator Summary:

Owner/operator name:	BATTLE CREEK ENQUIRER
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private

FEDERATED PUBLICATIONS INC (Continued) **1000214345**

Owner/Operator Type: Operator
Owner/Op start date: 01/01/1983
Owner/Op end date: Not reported

Owner/operator name: FEDERATED PUBLICATIONS, INC
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/01/1971
Owner/Op end date: Not reported

Owner/operator name: GANNETT CO
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1971
Owner/Op end date: Not reported

Owner/operator name: FEDERATED PUBLICATIONS, INC
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/01/1971
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

FEDERATED PUBLICATIONS INC (Continued) **1000214345**

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 03/11/2008
Facility name: FEDERATED PUBLICATIONS INC
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 12/31/2007
Facility name: FEDERATED PUBLICATIONS INC
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 03/01/2005
Facility name: FEDERATED PUBLICATIONS INC
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 03/03/2003
Facility name: FEDERATED PUBLICATIONS INC
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 04/12/1999
Facility name: FEDERATED PUBLICATIONS INC
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 08/18/1980
Facility name: FEDERATED PUBLICATIONS INC
Classification: Conditionally Exempt Small Quantity Generator

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 04/28/1999
Date achieved compliance: 06/10/1999
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL

FEDERATED PUBLICATIONS INC (Continued) **1000214345**

Enforcement action date:	04/28/1999
Enf. disposition status:	Not reported
Enf. disp. status date:	Not reported
Enforcement lead agency:	State
Proposed penalty amount:	Not reported
Final penalty amount:	Not reported
Paid penalty amount:	Not reported

Evaluation Action Summary:

Evaluation date:	04/07/1999
Evaluation:	COMPLIANCE EVALUATION INSPECTION ON-SITE
Area of violation:	Generators - Pre-transport
Date achieved compliance:	06/10/1999
Evaluation lead agency:	State

FINDS:
Other Pertinent Environmental Activity Identified at Site

Registry ID: 110003580580

AFS (Aerometric Information Retrieval System (AIRS) Facility Subsystem) replaces the former Compliance Data System (CDS), the National Emission Data System (NEDS), and the Storage and Retrieval of Aerometric Data (SAROAD). AIRS is the national repository for information concerning airborne pollution in the United States. AFS is used to track emissions and compliance data from industrial plants. AFS data are utilized by states to prepare State Implementation Plans to comply with regulatory programs and by EPA as an input for the estimation of total national emissions. AFS is undergoing a major redesign to support facility operating permits required under Title V of the Clean Air Act.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

G20
WNW
< 1/8
0.089 mi.
471 ft.

ENVIRONMENTAL DIAGNOSTICS **FINDS** **1001196704**
296 W JACKSON ST **RCRA-NonGen** **MIR000023739**
BATTLE CREEK, MI 49037

Site 1 of 3 in cluster G

Relative:
Lower

Actual:
838 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site

Registry ID: 110009395029

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

ENVIRONMENTAL DIAGNOSTICS (Continued) **1001196704**

RCRA-NonGen:

Date form received by agency:	09/16/2005
Facility name:	ENVIRONMENTAL DIAGNOSTICS
Facility address:	296 W JACKSON ST BATTLE CREEK, MI 49037
EPA ID:	MIR000023739
Contact:	BEN LAWSON
Contact address:	296 W JACKSON ST BATTLE CREEK, MI 49037
Contact country:	Not reported
Contact telephone:	(269) 964-9780
Contact email:	Not reported
EPA Region:	05
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	09/17/2005
Owner/Op end date:	Not reported

Owner/operator name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	09/17/2005
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

ENVIRONMENTAL DIAGNOSTICS (Continued) **1001196704**

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 09/17/2002
Facility name: ENVIRONMENTAL DIAGNOSTICS
Classification: Not a generator, verified

Date form received by agency: 04/10/2001
Facility name: ENVIRONMENTAL DIAGNOSTICS
Classification: Not a generator, verified

Date form received by agency: 05/09/1997
Facility name: ENVIRONMENTAL DIAGNOSTICS
Classification: Not a generator, verified

Violation Status: No violations found

G21 WNW < 1/8 0.089 mi. 471 ft. **MI DEPT/ENVIRONMENTAL QUALITY** **FINDS 1000241435**
296 JACKSON ST W **RCRA-NonGen MID000259267**
BATTLE CREEK, MI 49017

Site 2 of 3 in cluster G

Relative: Lower

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual: 838 ft.

Registry ID: 110003572697

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport,

MI DEPT/ENVIRONMENTAL QUALITY (Continued) **1000241435**

and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency:	09/30/2004
Facility name:	MI DEPT/ENVIRONMENTAL QUALITY
Facility address:	296 JACKSON ST W BATTLE CREEK, MI 49017
EPA ID:	MID000259267
Mailing address:	525 W ALLEGAN ST LANSING, MI 48933
Contact:	DAVID WAHL
Contact address:	296 JACKSON ST W BATTLE CREEK, MI 49017
Contact country:	Not reported
Contact telephone:	(517) 373-3898
Contact email:	Not reported
EPA Region:	05
Land type:	Other land type
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	10/01/2004
Owner/Op end date:	Not reported

Owner/operator name:	NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	10/01/2004
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No

MI DEPT/ENVIRONMENTAL QUALITY (Continued) **1000241435**

User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 05/25/2004
Facility name: MI DEPT/ENVIRONMENTAL QUALITY
Classification: Not a generator, verified

Date form received by agency: 12/31/2001
Facility name: MI DEPT/ENVIRONMENTAL QUALITY
Classification: Not a generator, verified

Date form received by agency: 10/08/1980
Facility name: MI DEPT/ENVIRONMENTAL QUALITY
Classification: Not a generator, verified

Facility Has Received Notices of Violations:
Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 02/20/2003
Date achieved compliance: 06/23/2003
Violation lead agency: State
Enforcement action: Not reported

MI DEPT/ENVIRONMENTAL QUALITY (Continued) **1000241435**

Enforcement action date: 05/14/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 02/20/2003
Date achieved compliance: 06/23/2003
Violation lead agency: State
Enforcement action: Not reported
Enforcement action date: 06/23/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Regulation violated: Not reported
Area of violation: Generators - Pre-transport
Date violation determined: 02/20/2003
Date achieved compliance: 06/23/2003
Violation lead agency: State
Enforcement action: WRITTEN INFORMAL
Enforcement action date: 03/07/2003
Enf. disposition status: Not reported
Enf. disp. status date: Not reported
Enforcement lead agency: State
Proposed penalty amount: Not reported
Final penalty amount: Not reported
Paid penalty amount: Not reported

Evaluation Action Summary:
Evaluation date: 02/20/2003
Evaluation: FOCUSED COMPLIANCE INSPECTION
Area of violation: Generators - Pre-transport
Date achieved compliance: 06/23/2003
Evaluation lead agency: State

22
North
< 1/8
0.094 mi.
495 ft.

D & H EXHAUST SERVOCE
316 VAN BUREN ST W
BATTLE CREEK, MI 49017

UST **U003211876**
N/A

Relative:
Higher

Actual:
847 ft.

UST:
Facility ID: 00039207
Facility Type: CLOSED
Latitude: 42.3257390000
Longitude: -85.1921540000
Owner Name: Richard Bronson
Owner Address: 306 Candlewyck Dr Apt 1507
Owner City,St,Zip: Kalamazoo, MI 49001-5471
Owner Country: USA

D & H EXHAUST SERVOCE (Continued) **U003211876**

Owner Contact:	Not reported
Owner Phone:	(616) 968-7188
Contact:	RICHARD BRONSON
Contact Phone:	(616) 968-7188
Date of Collection:	08-09-2006
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Interpolation-Map

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	3000
Install Date:	Not reported
Product:	Gasoline
Remove Date:	Dec 4 1996
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Bare Steel
Piping Type:	Suction: No Valve At Tank
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	2
Tank Status:	**Removed from Ground**
Capacity:	2000
Install Date:	Not reported
Product:	Gasoline
Remove Date:	Dec 4 1996
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Unknown
Impressed Device:	No

Tank ID:	3
Tank Status:	**Removed from Ground**
Capacity:	1000
Install Date:	Not reported
Product:	Used Oil
Remove Date:	Dec 4 1996
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Bare Steel,Unknown
Piping Type:	Suction: No Valve At Tank
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	4
Tank Status:	**Removed from Ground**

D & H EXHAUST SERVOCE (Continued) **U003211876**

Capacity:	3000
Install Date:	Not reported
Product:	Gasoline
Remove Date:	Dec 3 1996
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Unknown
Impressed Device:	No

23
SSW
< 1/8
0.097 mi.
512 ft.

W.K. KELLOGG INSTITUTE
93 HAMBLIN AVENUE
BATTLE CREEK, MI 49017

BEA **S104911212**
N/A

Relative:
Lower

Actual:
824 ft.

BEA:

Secondary Address:	Not reported
BEA Number:	396
District:	Kalamazoo
Date Received:	7/28/2000
Submitter Name:	Kellogg Company
Petition Determination:	No Request
Petition Disclosure:	0
Category:	No Hazardous Substance(s)
Determination 20107A:	No Request
Reviewer:	temppm
Division Assigned:	Environmental Response Division

G24
WNW
< 1/8
0.109 mi.
573 ft.

BATTLE CREEK EQUIPMENT CO
307 W JACKSON ST
BATTLE CREEK, MI 49037

FINDS **1000414353**
UST **MID001957422**
RCRA-NonGen

Site 3 of 3 in cluster G

Relative:
Higher

Actual:
839 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site

Registry ID: 110003577790

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

UST:

Facility ID:	00011106
Facility Type:	ACTIVE
Latitude:	42.3238140000
Longitude:	-85.1930930000
Owner Name:	Battle Creek Equip Co
Owner Address:	307 Jackson St W

BATTLE CREEK EQUIPMENT CO (Continued) **1000414353**

Owner City,St,Zip:	Battle Creek, MI 49017-2306
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 962-6181
Contact:	DON FRANZ
Contact Phone:	(616) 962-6181
Date of Collection:	01-11-2001
Accuracy:	100
Accuracy Value Unit:	FEET
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number

Tank ID:	ABC1
Tank Status:	**Temporarily out of Use**
Capacity:	2000
Install Date:	May 6 1970
Product:	#2 FUEL/CONSUMPTIVE
Remove Date:	Not reported
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	ABC2
Tank Status:	**Temporarily out of Use**
Capacity:	4000
Install Date:	May 6 1970
Product:	#2 FUEL/CONSUMPTIVE
Remove Date:	Not reported
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	ABC3
Tank Status:	**Temporarily out of Use**
Capacity:	4000
Install Date:	May 6 1970
Product:	#2 FUEL/CONSUMPTIVE
Remove Date:	Not reported
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Bare Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

BATTLE CREEK EQUIPMENT CO (Continued) **1000414353**

Tank ID:	ABC4
Tank Status:	**Temporarily out of Use**
Capacity:	4000
Install Date:	May 6 1970
Product:	#2 FUEL/CONSUMPTIVE
Remove Date:	Not reported
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

RCRA-NonGen:

Date form received by agency:	02/13/2004
Facility name:	BATTLE CREEK EQUIPMENT CO
Facility address:	307 W JACKSON ST BATTLE CREEK, MI 49037
EPA ID:	MID001957422
Contact:	GORDON BART
Contact address:	307 W JACKSON ST BATTLE CREEK, MI 49037
Contact country:	Not reported
Contact telephone:	(269) 962-6181
Contact email:	Not reported
EPA Region:	05
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	DOTY JOHN
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Owner/operator name:	DOTY JOHN
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No

BATTLE CREEK EQUIPMENT CO (Continued) **1000414353**

Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 02/26/2003
Facility name: BATTLE CREEK EQUIPMENT CO
Classification: Not a generator, verified

Date form received by agency: 08/15/2002
Facility name: BATTLE CREEK EQUIPMENT CO
Classification: Not a generator, verified

Date form received by agency: 10/21/1987
Facility name: BATTLE CREEK EQUIPMENT CO
Classification: Not a generator, verified

Violation Status: No violations found

25 SE 1/8-1/4 0.133 mi. 704 ft. — **MICHIGAN (50) AVENUE, WEST**
50 WEST MICHIGAN AVENUE
BATTLE CREEK, MI 49017

BEA — **S109416726** / **N/A**

Relative: Lower
Actual: 819 ft.

BEA:

Secondary Address:	Not reported
BEA Number:	1331
District:	Kalamazoo
Date Received:	1/5/2009 12:59:00 AM
Submitter Name:	Battle Creek Unlimited
Petition Determination:	No Request
Petition Disclosure:	0
Category:	No Hazardous Substance(s)
Determination 20107A:	No Request
Reviewer:	brettmag
Division Assigned:	RRD

H26 SW 1/8-1/4 0.139 mi. 732 ft. — **HAMBLIN (235) AVENUE**
235 HAMBLIN AVENUE
BATTLE CREEK, MI 49016

Site 1 of 2 in cluster H

BEA — **S105254433** / **N/A**

Relative: Lower
Actual: 821 ft.

BEA:

Secondary Address:	Not reported
BEA Number:	501
District:	Kalamazoo
Date Received:	12/10/2001 12:59:00 AM
Submitter Name:	Battle Creek Area Ambulance
Petition Determination:	Affirmed
Petition Disclosure:	1
Category:	Same Hazardous Substance(s)
Determination 20107A:	Affirmed
Reviewer:	ballof
Division Assigned:	Environmental Response Division

H27 SW 1/8-1/4 0.139 mi. 732 ft. — **WAGNER-FLOOK BUILDERS INC**
235 HAMBLIN AVE W
BATTLE CREEK, MI 49015

Site 2 of 2 in cluster H

LUST — **U003080987**
UST — **N/A**

Relative: Lower
Actual: 821 ft.

LUST:

Facility ID:	00001824
Source:	STATE OF MICHIGAN
Owner Name:	Wagner-Flook Builders Inc
Owner Address:	235 Hamblin Ave W
Owner City,St,Zip:	Battle Creek, MI 49015-2229
Owner Contact:	Not reported
Owner Phone:	(616) 962-9507
Country:	USA
District:	Kalamazoo District Office
Site Name:	Wagner-flook Builders
Latitude:	42.3221180000
Longitude:	-85.1925380000
Date of Collection:	01-11-2001

WAGNER-FLOOK BUILDERS INC (Continued) **U003080987**

Method of Collection:	Address Matching-House Number
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported
Leak Number:	C-0846-97
Release Date:	Sep 17 1997
Substance Released:	Diesel
Release Status:	Closed
Release Closed Date:	Aug 26 1998

UST:

Facility ID:	00001824
Facility Type:	CLOSED
Latitude:	42.3221180000
Longitude:	-85.1925380000
Owner Name:	Wagner-Flook Builders Inc
Owner Address:	235 Hamblin Ave W
Owner City,St,Zip:	Battle Creek, MI 49015-2229
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 962-9507
Contact:	JOHN FLOOK
Contact Phone:	(616) 962-9507
Date of Collection:	01-11-2001
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Address Matching-House Number
Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	4000
Install Date:	Apr 9 1971
Product:	Gasoline
Remove Date:	Sep 5 1997
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No
Tank ID:	3
Tank Status:	**Removed from Ground**
Capacity:	500
Install Date:	Apr 9 1971
Product:	Diesel
Remove Date:	Sep 5 1997
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel

WAGNER-FLOOK BUILDERS INC (Continued) **U003080987**

Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	2
Tank Status:	**Removed from Ground**
Capacity:	3000
Install Date:	Apr 9 1971
Product:	Gasoline
Remove Date:	Sep 5 1997
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

I28
WNW
1/8-1/4
0.160 mi.
846 ft.

EQUIPMENT DIVISION
356 MICHIGAN AVE W
BATTLE CREEK, MI 49017

LUST **U003082418**
UST **N/A**

Site 1 of 2 in cluster I

Relative:
Higher

Actual:
842 ft.

LUST:

Facility ID:	00016024
Source:	STATE OF MICHIGAN
Owner Name:	City of Battle Creek
Owner Address:	150 S Kendall Rd
Owner City,St,Zip:	Battle Creek, MI 49015
Owner Contact:	Not reported
Owner Phone:	269-966-3480
Country:	USA
District:	Kalamazoo District Office
Site Name:	Battle Creek (City of) Equipment Division
Latitude:	42.3254080000
Longitude:	-85.1940500000
Date of Collection:	18-03-2002
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off
Accuracy:	10
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)

Leak Number:	C-0435-89
Release Date:	Aug 24 1989
Substance Released:	Not reported
Release Status:	Open
Release Closed Date:	Not reported

Leak Number:	C-0436-03
Release Date:	Oct 15 2003
Substance Released:	Gasoline
Release Status:	Open
Release Closed Date:	Not reported

Leak Number:	C-0445-89

EQUIPMENT DIVISION (Continued) **U003082418**

Release Date: Aug 21 1989
Substance Released: Not reported
Release Status: Open
Release Closed Date: Not reported

UST:
Facility ID: 00016024
Facility Type: CLOSED
Latitude: 42.3254080000
Longitude: -85.1940500000
Owner Name: City of Battle Creek
Owner Address: 150 S Kendall Rd
Owner City,St,Zip: Battle Creek, MI 49015
Owner Country: USA
Owner Contact: Not reported
Owner Phone: 269-966-3480
Contact: Charles Ken Kohs
Contact Phone: (269) 966-3480
Date of Collection: 18-03-2002
Accuracy: 10
Accuracy Value Unit: METERS
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)
Method of Collection: GPS Code Meas. Standard Positioning Service SA Off

Tank ID: 1
Tank Status: Removed from Ground
Capacity: 12000
Install Date: Apr 28 1972
Product: Diesel
Remove Date: Oct 15 2003
Tank Release Detection: Automatic Tank Gauging,Inventory Control
Pipe Realease Detection: Line Tightness Testing
Piping Material: Double Walled
Piping Type: Suction: No Valve At Tank
Constr Material: Epoxy Coated Steel
Impressed Device: No

Tank ID: 2
Tank Status: Removed from Ground
Capacity: 10000
Install Date: Apr 28 1972
Product: Gasoline
Remove Date: Oct 15 2003
Tank Release Detection: Automatic Tank Gauging,Inventory Control
Pipe Realease Detection: Not reported
Piping Material: Fiberglass reinforced plastic
Piping Type: Suction: No Valve At Tank
Constr Material: Fiberglass Reinforced plastic
Impressed Device: No

Tank ID: 3
Tank Status: Removed from Ground
Capacity: 10000

EQUIPMENT DIVISION (Continued) **U003082418**

Install Date: Apr 28 1972
Product: Gasoline
Remove Date: Jul 1 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Unknown
Impressed Device: No

Tank ID: 4
Tank Status: Removed from Ground
Capacity: 10000
Install Date: Apr 28 1972
Product: Gasoline
Remove Date: Jul 1 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Unknown
Impressed Device: No

Tank ID: 5
Tank Status: Removed from Ground
Capacity: 500
Install Date: Jan 1 1970
Product: MOTOR/OIL
Remove Date: Oct 17 2003
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 6
Tank Status: Removed from Ground
Capacity: 1000
Install Date: Jan 1 1970
Product: MOTOR/OIL
Remove Date: Oct 17 2003
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 7
Tank Status: Removed from Ground
Capacity: 500
Install Date: Jan 1 1970

EQUIPMENT DIVISION (Continued) **U003082418**

Product:	MOTOR/OIL
Remove Date:	Oct 17 2003
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	8
Tank Status:	**Removed from Ground**
Capacity:	1000
Install Date:	Jan 1 1970
Product:	Diesel
Remove Date:	Oct 24 2003
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

I29
WNW
1/8-1/4
0.160 mi.
846 ft.

CITY OF BATTLE CREEK
356 MICHIGAN AVE W
BATTLE CREEK, MI 49037

FINDS 1000414355
RCRA-CESQG MID020893244

Site 2 of 2 in cluster I

Relative:
Higher

Actual:
842 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site

Registry ID: 110008445557

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-CESQG:

Date form received by agency:	04/07/2008
Facility name:	CITY OF BATTLE CREEK
Facility address:	356 MICHIGAN AVE W BATTLE CREEK, MI 49037
EPA ID:	MID020893244
Mailing address:	150 S KENDALL ST BATTLE CREEK, MI 49037
Contact:	CHARLES KOHS
Contact address:	356 MICHIGAN AVE W BATTLE CREEK, MI 49037
Contact country:	Not reported
Contact telephone:	(269) 966-3480
Contact email:	Not reported
EPA Region:	05

CITY OF BATTLE CREEK (Continued) **1000414355**

Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	CITY OF BATTLE CREEK
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Municipal
Owner/Operator Type:	Operator
Owner/Op start date:	12/09/1970
Owner/Op end date:	Not reported

Owner/operator name:	CITY OF BATTLE CREEK
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Municipal
Owner/Operator Type:	Owner
Owner/Op start date:	12/09/1970
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

CITY OF BATTLE CREEK (Continued) **1000414355**

Universal Waste Summary:

Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:

Date form received by agency: 02/13/2006
Facility name: CITY OF BATTLE CREEK
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 03/15/2005
Facility name: CITY OF BATTLE CREEK
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 01/01/2003
Facility name: CITY OF BATTLE CREEK
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 12/31/2001
Facility name: CITY OF BATTLE CREEK
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 06/10/1991
Facility name: CITY OF BATTLE CREEK
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 03/16/1990
Facility name: CITY OF BATTLE CREEK
Classification: Conditionally Exempt Small Quantity Generator

Violation Status: No violations found

30 NW 1/8-1/4 0.163 mi. 859 ft. | **MI-2**
352 VAN BUREN
BATTLE CREEK, MI 48375 | **UST** | **U000251047**
N/A

Relative: Higher

Actual: 850 ft.

UST:

Facility ID:	00018497
Facility Type:	CLOSED
Latitude:	42.3259300000
Longitude:	-85.1927240000
Owner Name:	Knight Enterprises Inc
Owner Address:	40600 Grand River Ave
Owner City,St,Zip:	Novi, MI 48375-2810
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(248) 478-3651
Contact:	DAVID N CACIOPPO
Contact Phone:	(248) 478-3651
Date of Collection:	01-11-2001
Accuracy:	100
Accuracy Value Unit:	FEET
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	7500
Install Date:	May 6 1971
Product:	Gasoline
Remove Date:	Dec 2 1994
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	2
Tank Status:	**Removed from Ground**
Capacity:	7500
Install Date:	May 6 1971
Product:	Gasoline
Remove Date:	Dec 2 1994
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

31 South 1/8-1/4 0.163 mi. 859 ft.

REFUSE SERVICE INC
64 S MCCAMLY ST
BATTLE CREEK, MI 49017

FINDS 1000427820
RCRA-NonGen MID062235973

Relative: Lower

Actual: 819 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site

Registry ID: 110003600755

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency:	09/16/2005
Facility name:	REFUSE SERVICE INC
Facility address:	64 S MCCAMLY ST BATTLE CREEK, MI 49017
EPA ID:	MID062235973
Contact:	POOLEN VAN
Contact address:	64 S MCCAMLY ST BATTLE CREEK, MI 49017
Contact country:	Not reported
Contact telephone:	(616) 962-4048
Contact email:	Not reported
EPA Region:	05
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	REFUSE SERVICE INC
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Owner/operator name:	REFUSE SERVICE INC
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Private
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No

REFUSE SERVICE INC (Continued) **1000427820**

Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 04/06/2001
Facility name: REFUSE SERVICE INC
Classification: Not a generator, verified

Date form received by agency: 08/18/1980
Facility name: REFUSE SERVICE INC
Classification: Not a generator, verified

Violation Status: No violations found

32 WNW 1/8-1/4 0.175 mi. 926 ft. — **OLD SULLIVAN WATERFRONT REDEVELOPMENT**, **343 W. JACKSON STREET**, **BATTLE CREEK, MI 49017** — **DEL SHWS** — **S106508472**, **N/A**

Relative: Higher

Actual: 840 ft.

DELETED HWS:
Facility ID: 13000367
Status: Deleted - available documentation does not support listing

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33 SE 1/8-1/4 0.179 mi. 943 ft. — **KELLOGG COMPANY**, **35 MCCAMLY PLACE**, **BATTLE CREEK, MI 49017** — **RCRA-CESQG** — **1010319881**, **MIK368535969**

Relative: Lower

Actual: 822 ft.

RCRA-CESQG:
Date form received by agency: 10/31/2006
Facility name: KELLOGG COMPANY
Facility address: 35 MCCAMLY PLACE
BATTLE CREEK, MI 49017
EPA ID: MIK368535969
Mailing address: ONE KELLOGG SQ
BATTLE CREEK, MI 49017
Contact: BARB MANTARRO
Contact address: 35 MCCAMLY PLACE
BATTLE CREEK, MI 49017
Contact country: Not reported
Contact telephone: (269) 961-3754
Contact email: Not reported
EPA Region: 05
Classification: Conditionally Exempt Small Quantity Generator
Description: Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:
Owner/operator name: KELLOGG COMPANY
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Owner
Owner/Op start date: 01/02/1995
Owner/Op end date: Not reported

Owner/operator name: KELLOGG COMPANY

KELLOGG COMPANY (Continued) **1010319881**

Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/02/1995
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

KELLOGG COMPANY (Continued) **1010319881**

Violation Status: No violations found

J34
North
1/8-1/4
0.192 mi.
1013 ft.

US DEFENSE LOGISTICS AGENCY
74 WASHINGTON AVE N
BATTLE CREEK, MI 49037

RCRA-CESQG **1000865855**
MI5470000501

Site 1 of 5 in cluster J

Relative:
Higher

Actual:
871 ft.

RCRA-CESQG:

Date form received by agency:	08/20/1993
Facility name:	US DEFENSE LOGISTICS AGENCY
Facility address:	74 WASHINGTON AVE N BATTLE CREEK, MI 49037
EPA ID:	MI5470000501
Contact:	STEVEN SULLIVAN
Contact address:	74 WASHINGTON AVE N BATTLE CREEK, MI 49037
Contact country:	Not reported
Contact telephone:	(616) 961-4921
Contact email:	Not reported
EPA Region:	05
Land type:	Federal
Classification:	Conditionally Exempt Small Quantity Generator
Description:	Handler: generates 100 kg or less of hazardous waste per calendar month, and accumulates 1000 kg or less of hazardous waste at any time; or generates 1 kg or less of acutely hazardous waste per calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste; or generates 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste during any calendar month, and accumulates at any time: 1 kg or less of acutely hazardous waste; or 100 kg or less of any residue or contaminated soil, waste or other debris resulting from the cleanup of a spill, into or on any land or water, of acutely hazardous waste

Owner/Operator Summary:

Owner/operator name:	US GENERAL SERVICES ADMINISTRATION
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Federal
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Owner/operator name:	US GENERAL SERVICES ADMINISTRATION
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Federal
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

US DEFENSE LOGISTICS AGENCY (Continued) **1000865855**

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Universal Waste Summary:

Waste type:	DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	MERCURY THERMOMETERS
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	MERCURY SWITCHES
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Batteries
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Lamps
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Pesticides
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Thermostats
Accumulated waste on-site:	No
Generated waste on-site:	No
Violation Status:	No violations found

Evaluation Action Summary:

Evaluation date:	06/15/1994
Evaluation:	FOCUSED COMPLIANCE INSPECTION
Area of violation:	Not reported
Date achieved compliance:	Not reported
Evaluation lead agency:	State

J35
North
1/8-1/4
0.192 mi.
1013 ft.

US DEPT/DEFENSE
74 WASHINGTON AVE N
BATTLE CREEK, MI 49037

FINDS **1000332156**
RCRA-NonGen **MI4971590068**

Site 2 of 5 in cluster J

Relative:
Higher

Actual:
871 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site

Registry ID: 110003572394

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency:	04/30/1986
Facility name:	US DEPT/DEFENSE
Facility address:	74 WASHINGTON AVE N BATTLE CREEK, MI 49037
EPA ID:	MI4971590068
Contact:	GEORGE TAYLOR
Contact address:	74 WASHINGTON AVE N BATTLE CREEK, MI 49037
Contact country:	Not reported
Contact telephone:	(616) 962-6511
Contact email:	Not reported
EPA Region:	05
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	US DEPT/DEFENSE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Federal
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Owner/operator name:	US DEPT/DEFENSE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Federal
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No

US DEPT/DEFENSE (Continued) **1000332156**

Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Violation Status: No violations found

---

36 East 1/8-1/4 0.192 mi. 1016 ft.

BATTLE CREEK SCHOOLS
60 W VAN BUREN ST
BATTLE CREEK, MI 49017

FINDS 1004725640
RCRA-NonGen MIR000047795

Relative: Higher

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual: 839 ft.

Registry ID: 110003715418

BATTLE CREEK SCHOOLS (Continued) **1004725640**

NCES (National Center for Education Statistics) is the primary federal entity for collecting and analyzing data related to education in the United States and other nations and the institute of education sciences.

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency:	05/17/2007
Facility name:	BATTLE CREEK SCHOOLS
Facility address:	60 W VAN BUREN ST BATTLE CREEK, MI 49017
EPA ID:	MIR000047795
Mailing address:	315 GOODALE AVE W BATTLE CREEK, MI 49017
Contact:	DEAN LINSTEAD
Contact address:	60 W VAN BUREN ST BATTLE CREEK, MI 49017
Contact country:	Not reported
Contact telephone:	(269) 965-9430
Contact email:	Not reported
EPA Region:	05
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	BATTLE CREEK PUBLIC SCHOOLS
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	District
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1901
Owner/Op end date:	Not reported

Owner/operator name:	BATTLE CREEK PUBLIC SCHOOLS
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	District
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1901
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No

BATTLE CREEK SCHOOLS (Continued) **1004725640**

Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 04/24/2006
Facility name: BATTLE CREEK SCHOOLS
Classification: Not a generator, verified

Date form received by agency: 03/01/2006
Facility name: BATTLE CREEK SCHOOLS
Site name: BATTLE CREEK PUBLIC SCHOOLS
Classification: Conditionally Exempt Small Quantity Generator

Date form received by agency: 06/15/2005
Facility name: BATTLE CREEK SCHOOLS
Classification: Not a generator, verified

BATTLE CREEK SCHOOLS (Continued) **1004725640**

Date form received by agency: 06/08/2005
Facility name: BATTLE CREEK SCHOOLS
Classification: Not a generator, verified

Date form received by agency: 09/30/2002
Facility name: BATTLE CREEK SCHOOLS
Classification: Not a generator, verified

Date form received by agency: 08/16/2002
Facility name: BATTLE CREEK SCHOOLS
Classification: Not a generator, verified

Date form received by agency: 09/20/2000
Facility name: BATTLE CREEK SCHOOLS
Classification: Not a generator, verified

Biennial Reports:

Last Biennial Reporting Year: 2005

Annual Waste Handled:
Waste code: D009
Waste name: MERCURY
Amount (Lbs): 34058.7

Violation Status: No violations found

J37
North
1/8-1/4
0.193 mi.
1017 ft.

US GENERAL SERVICES ADMINISTRATION
74 WASHINGTON AVE N
BATTLE CREEK, MI 49037

FINDS **1000376517**
RCRA-NonGen **MI6470000500**

Site 3 of 5 in cluster J

Relative:
Higher

Actual:
871 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site

Registry ID: 110006365478

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:
Date form received by agency: 12/31/2001
Facility name: US GENERAL SERVICES ADMINISTRATION
Facility address: 74 WASHINGTON AVE N
BATTLE CREEK, MI 49037
EPA ID: MI6470000500
Contact: NILS STRAND
Contact address: 74 WASHINGTON AVE N
BATTLE CREEK, MI 49037
Contact country: Not reported
Contact telephone: (616) 962-6511
Contact email: Not reported

US GENERAL SERVICES ADMINISTRATION (Continued) **1000376517**

EPA Region:	05
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	US GENERAL SERVICES ADMINISTRATION
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Federal
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Owner/operator name:	US GENERAL SERVICES ADMINISTRATION
Owner/operator address:	Not reported
	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Federal
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Universal Waste Summary:

Waste type:	DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site:	No
Generated waste on-site:	No

Waste type:	MERCURY THERMOMETERS
Accumulated waste on-site:	No
Generated waste on-site:	No

Waste type:	MERCURY SWITCHES
Accumulated waste on-site:	No
Generated waste on-site:	No

US GENERAL SERVICES ADMINISTRATION (Continued) **1000376517**

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 05/28/1985
Facility name: US GENERAL SERVICES ADMINISTRATION
Classification: Not a generator, verified

Violation Status: No violations found

J38 North 1/8-1/4 0.193 mi. 1017 ft. | **DEFENSE REUTILIZATION & MARKETING SVCS** | **RCRA-NonGen** | **1001232621**
74 WASHINGTON AVE N | **MIR000036616**
BATTLE CREEK, MI 49037

Site 4 of 5 in cluster J

Relative: Higher

Actual: 871 ft.

RCRA-NonGen:
Date form received by agency: 08/21/2000
Facility name: DEFENSE REUTILIZATION & MARKETING SVCS
Facility address: 74 WASHINGTON AVE N
BATTLE CREEK, MI 49037
EPA ID: MIR000036616
Contact: RONALD SCHERER
Contact address: 74 WASHINGTON AVE N
BATTLE CREEK, MI 49037
Contact country: Not reported
Contact telephone: (616) 961-5911
Contact email: Not reported
EPA Region: 05
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: US GENERAL SERVICES ADMINISTRATION
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Federal
Owner/Operator Type: Operator
Owner/Op start date: 03/13/2001
Owner/Op end date: Not reported

Owner/operator name: US GENERAL SERVICES ADMINISTRATION
Owner/operator address: Not reported

DEFENSE REUTILIZATION & MARKETING SVCS (Continued) **1001232621**

	Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Federal
Owner/Operator Type:	Owner
Owner/Op start date:	03/13/2001
Owner/Op end date:	Not reported

Handler Activities Summary:

U.S. importer of hazardous waste:	No
Mixed waste (haz. and radioactive):	No
Recycler of hazardous waste:	No
Transporter of hazardous waste:	No
Treater, storer or disposer of HW:	No
Underground injection activity:	No
On-site burner exemption:	No
Furnace exemption:	No
Used oil fuel burner:	No
Used oil processor:	No
User oil refiner:	No
Used oil fuel marketer to burner:	No
Used oil Specification marketer:	No
Used oil transfer facility:	No
Used oil transporter:	No
Off-site waste receiver:	Commercial status unknown

Universal Waste Summary:

Waste type:	DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	MERCURY THERMOMETERS
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	MERCURY SWITCHES
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Batteries
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Lamps
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Pesticides
Accumulated waste on-site:	No
Generated waste on-site:	No
Waste type:	Thermostats
Accumulated waste on-site:	No
Generated waste on-site:	No

DEFENSE REUTILIZATION & MARKETING SVCS (Continued) **1001232621**

Historical Generators:
Date form received by agency: 12/21/1998
Facility name: DEFENSE REUTILIZATION & MARKETING SVCS
Classification: Not a generator, verified

Violation Status: No violations found

J39 North 1/8-1/4 0.193 mi. 1017 ft. **GENERAL SERVICES ADMINISTRATION**
74 N WASHINGTON AVE
BATTLE CREEK, MI 49017

LUST U003082138
UST N/A

Site 5 of 5 in cluster J

Relative: Higher

Actual: 871 ft.

LUST:
Facility ID: 00011099
Source: STATE OF MICHIGAN
Owner Name: General Serv Admin
Owner Address: 74 NORTH WASHINGTON AVE
Owner City,St,Zip: BATTLE CREEK, MI 49017
Owner Contact: Not reported
Owner Phone: (616) 372-6301
Country: USA
District: Kalamazoo District Office
Site Name: US Federal Center
Latitude: 42.3266610000
Longitude: -85.1898270000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 15
Accuracy Value Unit: METERS
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Not reported

Leak Number: C-2604-91
Release Date: Dec 11 1991
Substance Released: Unknown
Release Status: Closed
Release Closed Date: Dec 8 1994

UST:
Facility ID: 00011099
Facility Type: CLOSED
Latitude: 42.3266610000
Longitude: -85.1898270000
Owner Name: General Serv Admin
Owner Address: 74 NORTH WASHINGTON AVE
Owner City,St,Zip: BATTLE CREEK, MI 49017
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (616) 372-6301
Contact: CHARLES GROENE
Contact Phone: (616) 961-7339
Date of Collection: 01-11-2001
Accuracy: 15
Accuracy Value Unit: METERS
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT

GENERAL SERVICES ADMINISTRATION (Continued) **U003082138**

Desc Category: Not reported
Method of Collection: Address Matching-House Number

Tank ID: 1
Tank Status: Removed from Ground
Capacity: 500
Install Date: Apr 21 1980
Product: Gasoline
Remove Date: Nov 25 1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: Closed in Ground
Capacity: 15000
Install Date: Apr 22 1927
Product: BRINE
Remove Date: Jul 24 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Concrete
Impressed Device: No

Tank ID: 3
Tank Status: Closed in Ground
Capacity: 15000
Install Date: Apr 22 1927
Product: BRINE
Remove Date: Jul 24 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Concrete
Impressed Device: No

K40 **BATTLE CREEK MAIN POST OFFICE** **UST** **U000251160**
SSW **90 MCCAMLY ST S** **N/A**
1/8-1/4 **BATTLE CREEK, MI 49016**
0.198 mi.
1043 ft. **Site 1 of 2 in cluster K**

Relative:
Lower

Actual:
820 ft.

UST:
Facility ID: 00010981
Facility Type: CLOSED
Latitude: 42.3196650000
Longitude: -85.1876610000
Owner Name: United States Postal Serv
Owner Address: 90 Mccamly St S
Owner City,St,Zip: Battle Creek, MI 49016-9998

BATTLE CREEK MAIN POST OFFICE (Continued) **U000251160**

Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 965-3286
Contact:	Not reported
Contact Phone:	(616) 965-3286
Date of Collection:	08-09-2006
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Interpolation-Map

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	6000
Install Date:	Apr 30 1979
Product:	Gasoline
Remove Date:	Oct 5 1992
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Pressure,Suction: Valve at Tank
Constr Material:	Fiberglass Reinforced plastic
Impressed Device:	No

Tank ID:	2
Tank Status:	**Removed from Ground**
Capacity:	6000
Install Date:	Oct 12 1992
Product:	Gasoline
Remove Date:	Jul 16 1997
Tank Release Detection:	Automatic Tank Gauging,Inter Monitoring Double Walled Tank,Inter Monitoring/Second Containment,Inventory Control,Tank Tightness Testing
Pipe Realease Detection:	Interstitial Monitoring Double Walled Piping,Interstitial Monitoring/Second Containment
Piping Material:	Double Walled,Fiberglass reinforced plastic,Secondary Containment
Piping Type:	Suction: No Valve At Tank
Constr Material:	Double Walled,Fiberglass Reinforced plastic
Impressed Device:	No

K41 **US POSTAL SERVICE** **FINDS** **1004725050**
SSW **90 MCCAMLY ST S** **RCRA-NonGen** **MIR000025593**
1/8-1/4 **BATTLE CREEK, MI 49017**
0.198 mi.
1043 ft. **Site 2 of 2 in cluster K**

Relative:
Lower

FINDS:
Other Pertinent Environmental Activity Identified at Site

Actual:
820 ft.

Registry ID: 110003702011

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA

US POSTAL SERVICE (Continued) **1004725050**

program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:

Date form received by agency:	10/31/2002
Facility name:	US POSTAL SERVICE
Facility address:	90 MCCAMLY ST S BATTLE CREEK, MI 49017
EPA ID:	MIR000025593
Contact:	KATHY GRIDLY
Contact address:	90 MCCAMLY ST S BATTLE CREEK, MI 49017
Contact country:	Not reported
Contact telephone:	(616) 965-3286
Contact email:	Not reported
EPA Region:	05
Classification:	Non-Generator
Description:	Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:

Owner/operator name:	US POSTAL SERVICE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Federal
Owner/Operator Type:	Owner
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported
Owner/operator name:	US POSTAL SERVICE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Federal
Owner/Operator Type:	Owner
Owner/Op start date:	10/24/2001
Owner/Op end date:	Not reported
Owner/operator name:	US POSTAL SERVICE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported
Legal status:	Federal
Owner/Operator Type:	Operator
Owner/Op start date:	01/01/1970
Owner/Op end date:	Not reported
Owner/operator name:	US POSTAL SERVICE
Owner/operator address:	Not reported Not reported
Owner/operator country:	Not reported
Owner/operator telephone:	Not reported

US POSTAL SERVICE (Continued) **1004725050**

Legal status: Federal
Owner/Operator Type: Operator
Owner/Op start date: 10/24/2001
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Historical Generators:
Date form received by agency: 07/10/1997
Facility name: US POSTAL SERVICE
Classification: Not a generator, verified

US POSTAL SERVICE (Continued) **1004725050**

Date form received by agency: 01/01/1980
Facility name: US POSTAL SERVICE
Classification: Not a generator, verified

Violation Status: No violations found

42
WNW
1/8-1/4
0.213 mi.
1125 ft.

ZIEBART OF BATTLE CREEK
379 MICHIGAN AVE W
BATTLE CREEK, MI 49037

FINDS **1000161968**
RCRA-NonGen **MID047560685**

Relative:
Higher

Actual:
844 ft.

FINDS:
Other Pertinent Environmental Activity Identified at Site

Registry ID: 110008446182

RCRAInfo is a national information system that supports the Resource Conservation and Recovery Act (RCRA) program through the tracking of events and activities related to facilities that generate, transport, and treat, store, or dispose of hazardous waste. RCRAInfo allows RCRA program staff to track the notification, permit, compliance, and corrective action activities required under RCRA.

RCRA-NonGen:
Date form received by agency: 03/23/1987
Facility name: ZIEBART OF BATTLE CREEK
Facility address: 379 MICHIGAN AVE W
BATTLE CREEK, MI 49037
EPA ID: MID047560685
Contact: IRENE DYETTE
Contact address: 379 MICHIGAN AVE W
BATTLE CREEK, MI 49037
Contact country: Not reported
Contact telephone: (616) 965-6014
Contact email: Not reported
EPA Region: 05
Classification: Non-Generator
Description: Handler: Non-Generators do not presently generate hazardous waste

Owner/Operator Summary:
Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private
Owner/Operator Type: Operator
Owner/Op start date: 01/02/1990
Owner/Op end date: Not reported

Owner/operator name: NO ACTIVE O/OP AS NOT GENERATING WASTE
Owner/operator address: Not reported
Not reported
Owner/operator country: Not reported
Owner/operator telephone: Not reported
Legal status: Private

ZIEBART OF BATTLE CREEK (Continued) **1000161968**

Owner/Operator Type: Owner
Owner/Op start date: 01/02/1990
Owner/Op end date: Not reported

Handler Activities Summary:
U.S. importer of hazardous waste: No
Mixed waste (haz. and radioactive): No
Recycler of hazardous waste: No
Transporter of hazardous waste: No
Treater, storer or disposer of HW: No
Underground injection activity: No
On-site burner exemption: No
Furnace exemption: No
Used oil fuel burner: No
Used oil processor: No
User oil refiner: No
Used oil fuel marketer to burner: No
Used oil Specification marketer: No
Used oil transfer facility: No
Used oil transporter: No
Off-site waste receiver: Commercial status unknown

Universal Waste Summary:
Waste type: DEVICES CONTAINING ELEMENTAL MERCURY
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY THERMOMETERS
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: MERCURY SWITCHES
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Batteries
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Lamps
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Pesticides
Accumulated waste on-site: No
Generated waste on-site: No

Waste type: Thermostats
Accumulated waste on-site: No
Generated waste on-site: No

Violation Status: No violations found

L43 WSW 1/8-1/4 0.235 mi. 1241 ft. — **REED MOTOR SPORTS**, **298 HAMBLIN AVE W**, **BATTLE CREEK, MI 49015** — **UST** — **U003834467**, **N/A**

Site 1 of 2 in cluster L

Relative: Lower

Actual: 822 ft.

UST:

Facility ID:	00003617
Facility Type:	CLOSED
Latitude:	42.3223760000
Longitude:	-85.1949780000
Owner Name:	Martinus Vanderbrink
Owner Address:	1017 W KILGORE RD
Owner City,St,Zip:	KALAMAZOO, MI 49008
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 345-6656
Contact:	DANIEL S KIEFER
Contact Phone:	(616) 965-3969
Date of Collection:	01-11-2001
Accuracy:	100
Accuracy Value Unit:	FEET
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	Address Matching-House Number
Tank ID:	2
Tank Status:	**Removed from Ground**
Capacity:	300
Install Date:	Apr 12 1983
Product:	Used Oil
Remove Date:	Feb 2 1994
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

L44 WSW 1/8-1/4 0.245 mi. 1291 ft. — **ABANDONED BLDG**, **305 HAMBLIN AVE W**, **BATTLE CREEK, MI 49015** — **LUST**, **UST** — **U003868161**, **N/A**

Site 2 of 2 in cluster L

Relative: Lower

Actual: 822 ft.

LUST:

Facility ID:	00039109
Source:	STATE OF MICHIGAN
Owner Name:	S.L Hayes & Associates Inc
Owner Address:	139 Emerson Ave
Owner City,St,Zip:	Ypsilanti, MI 48198-4209
Owner Contact:	Not reported
Owner Phone:	(734) 484-2717
Country:	USA
District:	Kalamazoo District Office
Site Name:	Abandoned Bldg.(305 Hamblin)
Latitude:	42.3221190000
Longitude:	-85.1953220000

ABANDONED BLDG (Continued) **U003868161**

Date of Collection:	01-11-2001
Method of Collection:	Address Matching-House Number
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported
Leak Number:	C-0828-96
Release Date:	Oct 17 1996
Substance Released:	Gasoline
Release Status:	Closed
Release Closed Date:	Nov 1 1996

UST:

Facility ID:	00039109
Facility Type:	CLOSED
Latitude:	42.3221190000
Longitude:	-85.1953220000
Owner Name:	S.L Hayes & Associates Inc
Owner Address:	139 Emerson Ave
Owner City,St,Zip:	Ypsilanti, MI 48198-4209
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(734) 484-2717
Contact:	FLORENE JOHNSON
Contact Phone:	(734) 484-2717
Date of Collection:	01-11-2001
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Address Matching-House Number
Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	1000
Install Date:	Not reported
Product:	Gasoline
Remove Date:	Sep 30 1996
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Suction: No Valve At Tank
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

45 SSE 1/4-1/2 0.288 mi. 1521 ft.

W K KELLOGG INSTITUTE
2 HAMBLIN AVE E
BATTLE CREEK, MI 49017

LUST **U003866267**
UST **N/A**

Relative: Lower

Actual: 822 ft.

LUST:

Facility ID:	00001258
Source:	STATE OF MICHIGAN
Owner Name:	Kellogg Co
Owner Address:	425 Porter St
Owner City,St,Zip:	Battle Creek, MI 49016
Owner Contact:	Barb Mantarro
Owner Phone:	(269) 961-2000
Country:	USA
District:	Kalamazoo District Office
Site Name:	WK Kellogg Inst (BC Transit Auth)
Latitude:	42.3174510000
Longitude:	-85.1822190000
Date of Collection:	10-05-2004
Method of Collection:	Address Matching-House Number
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported
Leak Number:	C-0998-92
Release Date:	Jun 19 1992
Substance Released:	Unknown
Release Status:	Open
Release Closed Date:	Not reported

UST:

Facility ID:	00001258
Facility Type:	CLOSED
Latitude:	42.3174510000
Longitude:	-85.1822190000
Owner Name:	Kellogg Co
Owner Address:	425 Porter St
Owner City,St,Zip:	Battle Creek, MI 49016
Owner Country:	USA
Owner Contact:	Barb Mantarro
Owner Phone:	(269) 961-2000
Contact:	DOUG KLETT
Contact Phone:	(616) 961-3662
Date of Collection:	10-05-2004
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Address Matching-House Number
Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	20000
Install Date:	Mar 5 1977
Product:	Diesel

W K KELLOGG INSTITUTE (Continued) **U003866267**

Remove Date: Jun 19 1996
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: Removed from Ground
Capacity: 5000
Install Date: Mar 5 1977
Product: Gasohol
Remove Date: Jun 19 1996
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Fiberglass Reinforced plastic
Impressed Device: No

Tank ID: 3
Tank Status: Removed from Ground
Capacity: 1000
Install Date: Mar 5 1985
Product: Gasoline
Remove Date: Jul 6 1992
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 4
Tank Status: Removed from Ground
Capacity: 500
Install Date: Mar 5 1977
Product: Used Oil
Remove Date: Jun 19 1996
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Galvanized Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: NRT1
Tank Status: Removed from Ground
Capacity: 560
Install Date: Not reported
Product: Gasoline
Remove Date: Nov 30 1995

W K KELLOGG INSTITUTE (Continued) **U003866267**

Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

46
ENE
1/4-1/2
0.293 mi.
1549 ft.

TRUMBULL SERVICE
94 NORTH AVE
BATTLE CREEK, MI 49017

LUST **U000251177**
UST **N/A**

Relative:
Higher

Actual:
846 ft.

LUST:

Facility ID:	00015452
Source:	STATE OF MICHIGAN
Owner Name:	Roy F Kline
Owner Address:	709 W Highland Blvd
Owner City,St,Zip:	Battle Creek, MI 49015-1714
Owner Contact:	Not reported
Owner Phone:	(616) 962-4043
Country:	USA
District:	Kalamazoo District Office
Site Name:	Trumbull Service Station
Latitude:	42.3240110000
Longitude:	-85.1799870000
Date of Collection:	30-11-2006
Method of Collection:	Interpolation-Map
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported
Leak Number:	C-1195-91
Release Date:	Jun 17 1991
Substance Released:	Unknown
Release Status:	Open
Release Closed Date:	Not reported

UST:

Facility ID:	00015452
Facility Type:	CLOSED
Latitude:	42.3240110000
Longitude:	-85.1799870000
Owner Name:	Roy F Kline
Owner Address:	709 W Highland Blvd
Owner City,St,Zip:	Battle Creek, MI 49015-1714
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 962-4043
Contact:	ROY F KLINE
Contact Phone:	(616) 962-4043
Date of Collection:	30-11-2006
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN

TRUMBULL SERVICE (Continued) **U000251177**

Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Interpolation-Map

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	3000
Install Date:	Apr 12 1951
Product:	Used Oil
Remove Date:	Jul 29 1991
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	2
Tank Status:	**Removed from Ground**
Capacity:	3000
Install Date:	Apr 12 1951
Product:	Gasoline
Remove Date:	Jul 29 1991
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	3
Tank Status:	**Removed from Ground**
Capacity:	3000
Install Date:	Apr 12 1951
Product:	Gasoline
Remove Date:	Jul 29 1991
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	4
Tank Status:	**Removed from Ground**
Capacity:	3000
Install Date:	Apr 12 1951
Product:	Gasoline
Remove Date:	Jul 29 1991
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel

TRUMBULL SERVICE (Continued) **U000251177**

Impressed Device: No

Tank ID: 5
Tank Status: Removed from Ground
Capacity: 1000
Install Date: Not reported
Product: Diesel
Remove Date: Jul 29 1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 6
Tank Status: Removed from Ground
Capacity: 500
Install Date: Not reported
Product: Used Oil
Remove Date: Jul 29 1991
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Unknown
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

---

47 South 1/4-1/2 0.309 mi. 1633 ft.

UNION PUMP CO
87 CAPITAL AVE SW
BATTLE CREEK, MI 49015

LUST U003081983
UST N/A

Relative: Lower

Actual: 821 ft.

LUST:
Facility ID: 00008800
Source: STATE OF MICHIGAN
Owner Name: Union Pump Co
Owner Address: 4600 W Dickman Rd
Owner City,St,Zip: Battle Creek, MI 49015-1025
Owner Contact: Not reported
Owner Phone: (616) 966-4600
Country: USA
District: Kalamazoo District Office
Site Name: WK Kellogg Inst (Union Pump)
Latitude: 42.3174350000
Longitude: -85.1836360000
Date of Collection: 22-11-2006
Method of Collection: Interpolation-Map
Accuracy: 15
Accuracy Value Unit: METERS
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Not reported

Leak Number: C-0062-98

UNION PUMP CO (Continued) **U003081983**

Release Date: Nov 29 1995
Substance Released: Unknown
Release Status: Closed
Release Closed Date: Aug 20 1996

Leak Number: C-1732-91
Release Date: Aug 9 1991
Substance Released: Unknown
Release Status: Open
Release Closed Date: Not reported

UST:
Facility ID: 00008800
Facility Type: ACTIVE
Latitude: 42.3174350000
Longitude: -85.1836360000
Owner Name: Union Pump Co
Owner Address: 4600 W Dickman Rd
Owner City,St,Zip: Battle Creek, MI 49015-1025
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (616) 966-4600
Contact: GARY DARE
Contact Phone: (616) 966-4600
Date of Collection: 22-11-2006
Accuracy: 15
Accuracy Value Unit: METERS
Horizontal Datum: NAD83
Source: STATE OF MICHIGAN
Point Line Area: POINT
Desc Category: Not reported
Method of Collection: Interpolation-Map

Tank ID: 6
Tank Status: Removed from Ground
Capacity: 500
Install Date: Apr 10 1970
Product: WATER
Remove Date: Aug 6 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 4
Tank Status: Removed from Ground
Capacity: 7500
Install Date: Apr 10 1973
Product: COOLANT
Remove Date: Aug 6 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: CONCRETE TRENCHES
Piping Type: Not reported
Constr Material: Concrete

UNION PUMP CO (Continued) **U003081983**

Impressed Device: No

Tank ID: 7
Tank Status: Removed from Ground
Capacity: 10000
Install Date: Apr 10 1936
Product: Diesel
Remove Date: Aug 6 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 5
Tank Status: Removed from Ground
Capacity: 500
Install Date: Apr 10 1968
Product: COOLANT-OIL,
Remove Date: Aug 6 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 1
Tank Status: Removed from Ground
Capacity: 500
Install Date: Apr 10 1946
Product: Gasoline
Remove Date: Aug 6 1990
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: Temporarily out of Use
Capacity: 100
Install Date: Apr 10 1946
Product: Kerosene
Remove Date: Not reported
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Not reported
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

48 SE 1/4-1/2 0.326 mi. 1721 ft. — **MICHIGAN (17) AVENUE, WEST**
17 WEST MICHIGAN AVENUE
BATTLE CREEK, MI 49017

BEA **S106896433**
N/A

Relative: Lower

Actual: 821 ft.

BEA:

Secondary Address:	Not reported
BEA Number:	858
District:	Kalamazoo
Date Received:	3/22/2005 12:59:00 AM
Submitter Name:	17 West Real Estate Holding Co. LLC
Petition Determination:	No Request
Petition Disclosure:	0
Category:	No Hazardous Substance(s)
Determination 20107A:	No Request
Reviewer:	baranosm
Division Assigned:	Environmental Response Division

Secondary Address:	Not reported
BEA Number:	1332
District:	Kalamazoo
Date Received:	1/5/2009 12:59:00 AM
Submitter Name:	Battle Creek Unlimited
Petition Determination:	No Request
Petition Disclosure:	0
Category:	No Hazardous Substance(s)
Determination 20107A:	No Request
Reviewer:	brettmag
Division Assigned:	RRD

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49 SW 1/4-1/2 0.381 mi. 2014 ft. — **HERITAGE CHEVROLET, INC**
350 W DICKMAN RD
BATTLE CREEK, MI 49015

LUST **S105213501**
N/A

Relative: Lower

Actual: 818 ft.

LUST:

Facility ID:	00010942
Source:	STATE OF MICHIGAN
Owner Name:	Heritage Chev Inc
Owner Address:	350 W Dickman Rd
Owner City,St,Zip:	Battle Creek, MI 49015-2255
Owner Contact:	Not reported
Owner Phone:	(616) 964-9431
Country:	USA
District:	Kalamazoo District Office
Site Name:	Heritage Chevrolet, Inc.
Latitude:	42.3198560000
Longitude:	-85.1955580000
Date of Collection:	16-01-2002
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off
Accuracy:	10
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)

Leak Number:	C-0015-91
Release Date:	Jan 20 1991

HERITAGE CHEVROLET, INC (Continued) **S105213501**

Substance Released: Not reported
Release Status: Closed
Release Closed Date: May 28 1991

---

50 West 1/4-1/2 0.386 mi. 2039 ft. **DO BAR INC**
114 KENDALL ST S
BATTLE CREEK, MI 49015

LUST **U003082977**
UST **N/A**

Relative: Lower

Actual: 819 ft.

LUST:

Facility ID:	00037972
Source:	STATE OF MICHIGAN
Owner Name:	Do Bar Inc
Owner Address:	326 Pepperidge Ln
Owner City,St,Zip:	Battle Creek, MI 49015-3114
Owner Contact:	Not reported
Owner Phone:	(616) 965-2258
Country:	USA
District:	Kalamazoo District Office
Site Name:	Do Bar, Inc.
Latitude:	42.3225270000
Longitude:	-85.1989720000
Date of Collection:	22-11-2006
Method of Collection:	Interpolation-Map
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported
Leak Number:	C-0305-94
Release Date:	Apr 6 1994
Substance Released:	Gasoline,Diesel
Release Status:	Open
Release Closed Date:	Not reported

UST:

Facility ID:	00037972
Facility Type:	CLOSED
Latitude:	42.3225270000
Longitude:	-85.1989720000
Owner Name:	Do Bar Inc
Owner Address:	326 Pepperidge Ln
Owner City,St,Zip:	Battle Creek, MI 49015-3114
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 965-2258
Contact:	EDWARD CRUMPTON
Contact Phone:	(616) 965-2258
Date of Collection:	22-11-2006
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Interpolation-Map

DO BAR INC (Continued) **U003082977**

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	8000
Install Date:	Not reported
Product:	Gasoline
Remove Date:	Apr 6 1994
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Gravity Fed?
Constr Material:	Unknown
Impressed Device:	No

Tank ID:	2
Tank Status:	**Removed from Ground**
Capacity:	1500
Install Date:	Not reported
Product:	Gasoline
Remove Date:	Apr 6 1994
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Gravity Fed?
Constr Material:	Unknown
Impressed Device:	No

51
South
1/4-1/2
0.406 mi.
2146 ft.

SENIOR OIL #12
170 CAPITAL AVE SW
BATTLE CREEK, MI 49015

LUST **U003834758**
UST **N/A**

Relative:
Lower

Actual:
820 ft.

LUST:

Facility ID:	00040065
Source:	STATE OF MICHIGAN
Owner Name:	Senior Oil Co
Owner Address:	865 W Michigan Ave
Owner City,St,Zip:	Battle Creek, MI 49017-2024
Owner Contact:	Not reported
Owner Phone:	(269) 962-8549
Country:	USA
District:	Kalamazoo District Office
Site Name:	Former Gas Station
Latitude:	42.3160680000
Longitude:	-85.1890150000
Date of Collection:	06-12-2006
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off
Accuracy:	10
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Leak Number:	C-0080-99
Release Date:	Nov 23 1998
Substance Released:	Unknown
Release Status:	Open

SENIOR OIL #12 (Continued) **U003834758**

Release Closed Date: Not reported

UST:

Facility ID:	00040065
Facility Type:	ACTIVE
Latitude:	42.3160680000
Longitude:	-85.1890150000
Owner Name:	Senior Oil Co
Owner Address:	865 W Michigan Ave
Owner City,St,Zip:	Battle Creek, MI 49017-2024
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(269) 962-8549
Contact:	Art Coats
Contact Phone:	(616) 962-8549
Date of Collection:	06-12-2006
Accuracy:	10
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off

Tank ID:	1
Tank Status:	**Currently In Use**
Capacity:	29000
Install Date:	May 24 1999
Product:	Gasoline, Diesel
Remove Date:	Not reported
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Double Walled,Fiberglass
Piping Type:	Pressure
Constr Material:	Double Walled,Fiberglass
Impressed Device:	No

52
SW
1/4-1/2
0.411 mi.
2168 ft.

SHOULDICE BROS **LUST** **S102723074**
400 W DICKMAN RD **N/A**
BATTLE CREEK, MI 49015

Relative:
Lower

Actual:
820 ft.

LUST:

Facility ID:	50000477
Source:	STATE OF MICHIGAN
Owner Name:	Nrt Owner
Owner Address:	Unknown
Owner City,St,Zip:	Unknown, MI 99999
Owner Contact:	Not reported
Owner Phone:	Not reported
Country:	USA
District:	Kalamazoo District Office
Site Name:	Shouldice Brothers
Latitude:	42.3192720000
Longitude:	-85.1973810000
Date of Collection:	01-11-2001
Method of Collection:	Interpolation-Map

SHOULDICE BROS (Continued) **S102723074**

Accuracy: 15
Accuracy Value Unit: METERS
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Not reported

Leak Number: C-0987-90
Release Date: Jun 4 1990
Substance Released: Not reported
Release Status: Closed
Release Closed Date: May 31 1991

M53 **FIELDSTONE CENTER** **LUST** **U003866752**
North **165 WASHINGTON AVE N** **UST** **N/A**
1/4-1/2 **BATTLE CREEK, MI 49017**
0.430 mi.
2273 ft. **Site 1 of 2 in cluster M**

Relative:
Higher

Actual:
876 ft.

LUST:
Facility ID: 00007791
Source: STATE OF MICHIGAN
Owner Name: Battle Creek Health System
Owner Address: 300 North Ave
Owner City,St,Zip: Battle Creek, MI 49017-3307
Owner Contact: Not reported
Owner Phone: (269) 964-5922
Country: USA
District: Kalamazoo District Office
Site Name: Fieldstone Hospital
Latitude: 42.3295630000
Longitude: -85.1903640000
Date of Collection: 01-12-1998
Method of Collection: GPS Code Meas. Standard Positioning Service SA Off
Accuracy: 10
Accuracy Value Unit: METERS
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Plant Entrance (Freight)

Leak Number: C-1354-98
Release Date: Mar 30 1998
Substance Released: Diesel
Release Status: Closed
Release Closed Date: Sep 15 1998

UST:
Facility ID: 00007791
Facility Type: ACTIVE
Latitude: 42.3295630000
Longitude: -85.1903640000
Owner Name: Battle Creek Health System
Owner Address: 300 North Ave
Owner City,St,Zip: Battle Creek, MI 49017-3307
Owner Country: USA
Owner Contact: Not reported
Owner Phone: (269) 964-5922
Contact: MICHAEL LEWIS
Contact Phone: (616) 966-8691
Date of Collection: 01-12-1998

FIELDSTONE CENTER (Continued) **U003866752**

Accuracy:	10
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Plant Entrance (Freight)
Method of Collection:	GPS Code Meas. Standard Positioning Service SA Off

Tank ID:	2
Tank Status:	**Removed from Ground**
Capacity:	1000
Install Date:	Mar 25 1968
Product:	Diesel
Remove Date:	Mar 30 1998
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Suction: No Valve At Tank
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	3
Tank Status:	**Removed from Ground**
Capacity:	500
Install Date:	Mar 25 1976
Product:	Gasoline
Remove Date:	Oct 17 1990
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Bare Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	4
Tank Status:	**Removed from Ground**
Capacity:	500
Install Date:	Mar 25 1976
Product:	Gasoline
Remove Date:	Oct 17 1990
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Bare Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

Tank ID:	5
Tank Status:	**Currently In Use**
Capacity:	1000
Install Date:	Apr 1 1998
Product:	Diesel
Remove Date:	Not reported
Tank Release Detection:	Automatic Tank Gauging,Inter Monitoring Double Walled Tank

FIELDSTONE CENTER (Continued) **U003866752**

Pipe Realease Detection: Not reported
Piping Material: Double Walled
Piping Type: Suction: No Valve At Tank
Constr Material: Composite(Steel w/Fiberglass)
Impressed Device: No

M54
North
1/4-1/2
0.430 mi.
2273 ft.

BATTLE CREEK ADVENTIST HOSPITAL
165 N. WASHINGTON AVE
BATTLE CREEK, MI 49016

SHWS **S105143920**
N/A

Site 2 of 2 in cluster M

Relative:
Higher

Actual:
876 ft.

SHWS:
Facility ID: 13000273
Source: Gen Medical/Surgical Hospitals
SAM Score: 30 out of 48
SAM Score Date: 03/23/2004
Township: 02S
Range: 08W
Section: 01
Quarter: NW
Quarter/Quarter: SE
Facility Status: Interim Response conducted
Pollutant(s): Phenanthrene; PNAs

N55
WSW
1/4-1/2
0.437 mi.
2306 ft.

A.K. ZINN PROPERTY
160 S. KENDALL
BATTLE CREEK, MI

SHWS **S106515775**
BROWNFIELDS **N/A**

Site 1 of 3 in cluster N

Relative:
Lower

Actual:
821 ft.

SHWS:
Facility ID: 13000361
Source: Not reported
SAM Score: 30 out of 48
SAM Score Date: 03/31/2004
Township: Not reported
Range: Not reported
Section: Not reported
Quarter: Not reported
Quarter/Quarter: Not reported
Facility Status: Interim Response conducted - No further activities anticipated
Pollutant(s): As; Pb; TCE; VC; Xylenes; cis-1,2 DCE

BROWNFIELD:
Facility ID: Not reported
Region: 1
Status: Closed
Properry Use: Not reported
BEA: No
Ernie Id Number: 13000361
Redevelop Status: Not reported
Before Redevelopment: Not reported
After Redevelopment: Not reported

56
North
1/4-1/2
0.440 mi.
2321 ft.

EMMETT (169) STREET WEST
169 WEST EMMETT STREET
BATTLE CREEK, MI

BEA **S105541603**
N/A

Relative:
Higher

Actual:
878 ft.

BEA:

Secondary Address:	Not reported
BEA Number:	49
District:	Jackson
Date Received:	11/21/1996
Submitter Name:	Family Health Center of Battle Creek
Petition Determination:	No Request
Petition Disclosure:	0
Category:	No Hazardous Substance(s)
Determination 20107A:	No Request
Reviewer:	temppm
Division Assigned:	Environmental Response Division

N57
WSW
1/4-1/2
0.445 mi.
2352 ft.

AK ZINC
160 SOUTH KENDALL
BATTLE CREEK, MI 46744

US BROWNFIELDS **1009310362**
N/A

Site 2 of 3 in cluster N

Relative:
Lower

Actual:
823 ft.

US BROWNFIELDS:

Recipient name:	R5 TBA (Superfund Funded)
Project name:	R5 TBA (Superfund Funded)
Property name:	Ak Zinc
Parcel #:	Not reported
Parcel size:	6.00
Latitude:	42.321098
Longitude:	-85.199147
Region:	5
HCM label:	Not reported
Map scale:	Not reported
Point of reference:	Not reported
Datum:	Not reported
ACRES property ID:	10501
Start date:	9/11/1997
Completed date:	9/11/1997
Accomplishment type:	Phase II Environmental Assessment
Accomplishment (acres):	Not reported
Ownership entity:	Not reported
Current use:	Not reported
Current owner:	Not reported
Future use:	Not reported
Past use flag:	Not reported
Future use flag:	Not reported
Cleanup required:	Not reported
Proprietary controls:	Not reported
Gov. control:	Not reported
Enforcement permit tools:	Not reported
Info. devices:	Not reported
Video available:	Not reported
Photo available:	Not reported
Usage type:	Not reported
Not in state/tribal program:	Not reported
IC data address:	Not reported
IC in place date:	Not reported

AK ZINC (Continued) **1009310362**

IC in place flag:	Unknown
IC required flag:	Not reported
NFA issue date:	Not reported
State and tribal program date:	Not reported
State and tribal program ID:	Not reported
Air contaminated:	Not reported
Air cleaned:	Not reported
Asbestos found:	Not reported
Asbestos cleaned:	Not reported
Controled substance found:	Not reported
Controled substance cleaned:	Not reported
Drinking water affected:	Not reported
Drinking water cleaned:	Not reported
Groundwater affected:	Not reported
Groundwater cleaned:	Not reported
Lead contaminant found:	Not reported
Lead cleaned up:	Not reported
None found:	Not reported
None cleaned up:	Not reported
No media found:	Not reported
No media cleaned up:	Not reported
Other found:	Not reported
Other cleaned up:	Not reported
Other metals found:	Not reported
Other metals cleaned:	Not reported
PAHs found:	Not reported
PAHs cleaned up:	Not reported
PCBs found:	Not reported
PCBs cleaned up:	Not reported
Petro products found:	Not reported
Petro products cleaned:	Not reported
Sediments found:	Not reported
Sediments cleaned:	Not reported
Soil affected:	Not reported
Soil cleaned up:	Not reported
Surface water affected:	Not reported
Surface water cleaned:	Not reported
Unknown found:	Not reported
Unknwon cleaned:	Not reported
Unknown media:	Not reported
Unknown media cleaned:	Not reported
VOCs found:	Not reported
VOCs cleaned:	Not reported

N58 **K&M SALVAGE** **SHWS** **S107135926**
WSW **170 S. KENDALL** **BROWNFIELDS** **N/A**
1/4-1/2 **BATTLE CREEK, MI**
0.449 mi.
2371 ft. **Site 3 of 3 in cluster N**

Relative:
Lower

Actual:
824 ft.

SHWS:

Facility ID:	13000366
Source:	Not reported
SAM Score:	34 out of 48
SAM Score Date:	03/31/2004
Township:	Not reported
Range:	Not reported
Section:	Not reported

K&M SALVAGE (Continued) **S107135926**

Quarter: Not reported
Quarter/Quarter: Not reported
Facility Status: Interim Response conducted - No further activities anticipated
Pollutant(s): Cr+3; TCE; cis-1,2 DCE

BROWNFIELD:
Facility ID: Not reported
Region: 1
Status: Closed
Properry Use: Parcel combined with AK Zinn property for the redevelopment.
BEA: No
Ernie Id Number: 13000366
Redevelop Status: Not reported
Before Redevelopment: Not reported
After Redevelopment: Not reported

59
SSW
1/4-1/2
0.458 mi.
2417 ft.

KMART #4065
200 CAPITAL AVE SW
BATTLE CREEK, MI 49015

LUST U003080765
UST N/A

Relative:
Lower

Actual:
825 ft.

LUST:
Facility ID: 00000777
Source: STATE OF MICHIGAN
Owner Name: Kmart Corp
Owner Address: 3100 W Big Beaver Rd
Owner City,St,Zip: Troy, MI 48084-3004
Owner Contact: Bob Keeler
Owner Phone: (248) 614-1310
Country: USA
District: Kalamazoo District Office
Site Name: K-mart Store #4065
Latitude: 42.3156320000
Longitude: -85.1895570000
Date of Collection: 01-11-2001
Method of Collection: Address Matching-House Number
Accuracy: 15
Accuracy Value Unit: METERS
Horizontal Data: NAD83
Point Line Area: POINT
Desc Category: Not reported

Leak Number: C-2413-90
Release Date: Nov 16 1990
Substance Released: Not reported
Release Status: Closed
Release Closed Date: Oct 30 1996

UST:
Facility ID: 00000777
Facility Type: CLOSED
Latitude: 42.3156320000
Longitude: -85.1895570000
Owner Name: Kmart Corp
Owner Address: 3100 W Big Beaver Rd
Owner City,St,Zip: Troy, MI 48084-3004

KMART #4065 (Continued) **U003080765**

Owner Country:	USA
Owner Contact:	Bob Keeler
Owner Phone:	(248) 614-1310
Contact:	T. PARKS
Contact Phone:	(313) 280-0840
Date of Collection:	01-11-2001
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Address Matching-House Number

Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	1000
Install Date:	Apr 8 1968
Product:	Used Oil
Remove Date:	Sep 12 1990
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel
Impressed Device:	No

60
SE
1/4-1/2
0.458 mi.
2420 ft.

W.K. KELLOGG INSTITUTE (WKKI) **BEA** **S109171497**
72 E. HAMBLIN AVENUE **N/A**
BATTLE CREEK, MI 49014

Relative:
Lower

Actual:
831 ft.

BEA:

Secondary Address:	Not reported
BEA Number:	1266
District:	Kalamazoo
Date Received:	6/26/2008 12:59:00 AM
Submitter Name:	Kellogg Company
Petition Determination:	No Request
Petition Disclosure:	0
Category:	No Hazardous Substance(s)
Determination 20107A:	No Request
Reviewer:	brettmag
Division Assigned:	RRD

O61
NNE
1/4-1/2
0.460 mi.
2427 ft.

COMMUNITY HOSPITAL ASSOCIATION **LUST** **1001207092**
183 WEST ST. **MLTS** **N/A**
BATTLE CREEK, MI 49016

Site 1 of 3 in cluster O

Relative:
Higher

Actual:
840 ft.

LUST:

Facility ID:	00039968
Source:	STATE OF MICHIGAN
Owner Name:	Battle Creek Health System

COMMUNITY HOSPITAL ASSOCIATION (Continued) **1001207092**

Owner Address:	300 North Ave
Owner City,St,Zip:	Battle Creek, MI 49017-3307
Owner Contact:	Not reported
Owner Phone:	(269) 964-5922
Country:	USA
District:	Kalamazoo District Office
Site Name:	Westbrook Hospital
Latitude:	42.3296750000
Longitude:	-85.1829870000
Date of Collection:	10-05-2004
Method of Collection:	Address Matching-House Number
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported

Leak Number:	C-0243-00
Release Date:	Mar 10 2000
Substance Released:	Unknown
Release Status:	Closed
Release Closed Date:	May 31 2000

MLTS:

License Number:	21-16809-01
First License Date:	0
License Date:	09/15/1986
Lic. Expiration Date:	09/30/1991
Contact Name:	JOSEPH P. OHLMACHER
Contact Phone:	Not reported
Institution Code:	16809
Primary Program:	Not reported
Department:	Not reported
Building:	Not reported
States Allowing Use:	Not reported
License Use:	Not reported
Store Material Use:	No
Redistribution Use:	No
Incinerate Use:	No
Burial Use:	No
Last Inspection Date:	09/1987
Next Inspection Date:	999999
Inspector Name:	Not reported
Status:	Not reported

O62 **183 WEST STREET** **BEA** **S106802402**
NNE **183 WEST STREET** **N/A**
1/4-1/2 **BATTLE CREEK, MI 49017**
0.460 mi.
2427 ft. **Site 2 of 3 in cluster O**

Relative:
Higher

Actual:
840 ft.

BEA:

Secondary Address:	Not reported
BEA Number:	849
District:	Kalamazoo
Date Received:	3/4/2005 12:59:00 AM
Submitter Name:	Westbrook Place Ltd.
Petition Determination:	No Request

183 WEST STREET (Continued) **S106802402**

Petition Disclosure: 0
Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: baranosm
Division Assigned: Environmental Response Division

O63
NNE
1/4-1/2
0.460 mi.
2427 ft.

183 WEST ST. **BEA** **S106174276**
183 WEST ST. **N/A**
BATTLE CREEK, MI 49016

Site 3 of 3 in cluster O

Relative:
Higher

Actual:
840 ft.

BEA:
Secondary Address: Not reported
BEA Number: 728
District: Kalamazoo
Date Received: 3/9/2004 12:59:00 AM
Submitter Name: Wolgast Corporation
Petition Determination: Affirmed
Petition Disclosure: 1
Category: No Hazardous Substance(s)
Determination 20107A: Affirmed
Reviewer: ballof
Division Assigned: Environmental Response Division

P64
SSE
1/4-1/2
0.476 mi.
2514 ft.

MONROE (73) STREET, SOUTH **BEA** **S104911216**
73 MONROE STREET SOUTH **N/A**
BATTLE CREEK, MI

Site 1 of 4 in cluster P

Relative:
Lower

Actual:
829 ft.

BEA:
Secondary Address: Not reported
BEA Number: 397
District: Kalamazoo
Date Received: 7/28/2000
Submitter Name: Kellogg Company
Petition Determination: No Request
Petition Disclosure: 0
Category: No Hazardous Substance(s)
Determination 20107A: No Request
Reviewer: temppm
Division Assigned: Environmental Response Division

65
SE
1/4-1/2
0.481 mi.
2540 ft.

BATTLE CREEK POLICE DEPT **LUST** **U003082417**
20 N DIVISION ST **UST** **N/A**
BATTLE CREEK, MI 49014

Relative:
Lower

Actual:
828 ft.

LUST:
Facility ID: 00016023
Source: STATE OF MICHIGAN
Owner Name: City Of Battle Creek
Owner Address: 103 E Michigan

BATTLE CREEK POLICE DEPT (Continued) **U003082417**

Owner City,St,Zip:	Battle Creek, MI 49016
Owner Contact:	Not reported
Owner Phone:	(616) 966-3000
Country:	USA
District:	Kalamazoo District Office
Site Name:	Battle Crk (city Of) Police Dept
Latitude:	42.3173230000
Longitude:	-85.1793390000
Date of Collection:	10-05-2004
Method of Collection:	Address Matching-House Number
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported

Leak Number:	C-0057-89
Release Date:	Mar 2 1989
Substance Released:	Not reported
Release Status:	Open
Release Closed Date:	Not reported

Leak Number:	C-0080-89
Release Date:	Mar 17 1989
Substance Released:	Not reported
Release Status:	Open
Release Closed Date:	Not reported

Leak Number:	C-1083-98
Release Date:	Nov 2 1998
Substance Released:	Gasoline
Release Status:	Open
Release Closed Date:	Not reported

UST:

Facility ID:	00016023
Facility Type:	CLOSED
Latitude:	42.3173230000
Longitude:	-85.1793390000
Owner Name:	City Of Battle Creek
Owner Address:	103 E Michigan
Owner City,St,Zip:	Battle Creek, MI 49016
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 966-3000
Contact:	JANE PARKS
Contact Phone:	(616) 966-3395
Date of Collection:	10-05-2004
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Address Matching-House Number

Tank ID:	1
Tank Status:	**Removed from Ground**

BATTLE CREEK POLICE DEPT (Continued) **U003082417**

Capacity:	6000
Install Date:	Apr 28 1974
Product:	Gasoline
Remove Date:	Oct 19 1998
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Copper
Piping Type:	Not reported
Constr Material:	Fiberglass Reinforced plastic
Impressed Device:	No

Tank ID:	2
Tank Status:	**Removed from Ground**
Capacity:	6000
Install Date:	Apr 28 1974
Product:	Gasoline
Remove Date:	Jul 30 1990
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Unknown
Piping Type:	Not reported
Constr Material:	Unknown
Impressed Device:	No

66
South
1/4-1/2
0.481 mi.
2540 ft.

MI PAPERBOARD CORP **SHWS** **S105143913**
79 EAST FOUNTAIN STREET **N/A**
BATTLE CREEK, MI 49016

Relative:
Lower

Actual:
825 ft.

SHWS:

Facility ID:	13000075
Source:	Paper and Allied Products
SAM Score:	18 out of 48
SAM Score Date:	06/24/2004
Township:	02S
Range:	08W
Section:	12
Quarter:	NE
Quarter/Quarter:	SE
Facility Status:	**Interim Response conducted**
Pollutant(s):	Ethylbenzene; Naphthalene; Toluene; Xylenes

P67
SSE
1/4-1/2
0.483 mi.
2548 ft.

BEHNKE TRUCKING **DEL SHWS** **S105965556**
77 S MONROE ST **N/A**
BATTLE CREEK, MI -0-

Site 2 of 4 in cluster P

Relative:
Lower

Actual:
829 ft.

DELETED HWS:

Facility ID:	13000076
Status:	Deleted - available documentation does not support listing

P68
SSE
1/4-1/2
0.483 mi.
2548 ft.

BEHNKE TRUCKING
77 SOUTH MONROE STREET
BATTLE CREEK, MI 49017

BEA **S108669824**
N/A

Site 3 of 4 in cluster P

Relative:
Lower

Actual:
829 ft.

BEA:

Secondary Address:	and East Fountain Street
BEA Number:	1163
District:	Kalamazoo
Date Received:	8/17/2007 12:59:00 AM
Submitter Name:	Battle Creek Unlimited (BCU)
Petition Determination:	No Request
Petition Disclosure:	0
Category:	No Hazardous Substance(s)
Determination 20107A:	No Request
Reviewer:	brettmag
Division Assigned:	Environmental Response Division

P69
SSE
1/4-1/2
0.483 mi.
2548 ft.

W.K. KELLOGG INSTITUTE (WKKI)
77 S. MONROE STREET
BATTLE CREEK, MI 49014

BEA **S109171498**
N/A

Site 4 of 4 in cluster P

Relative:
Lower

Actual:
829 ft.

BEA:

Secondary Address:	Not reported
BEA Number:	1267
District:	Kalamazoo
Date Received:	6/26/2008 12:59:00 AM
Submitter Name:	Kellogg Company
Petition Determination:	No Request
Petition Disclosure:	0
Category:	No Hazardous Substance(s)
Determination 20107A:	No Request
Reviewer:	brettmag
Division Assigned:	RRD

70
SSE
1/2-1
0.511 mi.
2696 ft.

BATTLE CREEK GAS WORKS
FOUNTAIN STREET E
BATTLE CREEK, MI 49017

Manufactured Gas Plants **1008408082**
N/A

Relative:
Lower

Actual:
828 ft.

Manufactured Gas Plants:
Alternate Name:CALHOUN GAS CO.

71 SE 1/2-1 0.661 mi. 3490 ft. | **CITY OF BATTLE CREEK**
177 E MICHIGAN
BATTLE CREEK, MI 49015 | **LUST** **U003082886**
UST **N/A**
DEL SHWS

Relative: Lower

Actual: 831 ft.

LUST:

Facility ID:	00036048
Source:	STATE OF MICHIGAN
Owner Name:	City of Battle Creek
Owner Address:	RM 200 Terminal Bldg
Owner City,St,Zip:	Battle Creek, MI 49015
Owner Contact:	Not reported
Owner Phone:	(616) 966-3390
Country:	USA
District:	Kalamazoo District Office
Site Name:	City Of Battle Crk. Vacant Lot
Latitude:	42.3161070000
Longitude:	-85.1770350000
Date of Collection:	10-05-2004
Method of Collection:	Address Matching-House Number
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported
Leak Number:	C-0044-92
Release Date:	Jan 9 1992
Substance Released:	Gasoline
Release Status:	Closed
Release Closed Date:	Dec 9 1997

UST:

Facility ID:	00036048
Facility Type:	CLOSED
Latitude:	42.3161070000
Longitude:	-85.1770350000
Owner Name:	City of Battle Creek
Owner Address:	RM 200 Terminal Bldg
Owner City,St,Zip:	Battle Creek, MI 49015
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 966-3390
Contact:	TOM MATSON
Contact Phone:	(616) 966-3343
Date of Collection:	10-05-2004
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Address Matching-House Number
Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	1000
Install Date:	Not reported
Product:	Gasoline

CITY OF BATTLE CREEK (Continued) **U003082886**

Remove Date: Jan 9 1992
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Suction: No Valve At Tank
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

Tank ID: 2
Tank Status: Removed from Ground
Capacity: 1000
Install Date: Not reported
Product: Gasoline
Remove Date: Jan 9 1992
Tank Release Detection: Not reported
Pipe Realease Detection: Not reported
Piping Material: Bare Steel
Piping Type: Suction: No Valve At Tank
Constr Material: Asphalt Coated or Bare Steel
Impressed Device: No

DELETED HWS:
Facility ID: 13000226
Status: Deleted - available documentation does not support listing

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72
ESE
1/2-1
0.816 mi.
4307 ft.

SHAY MOTOR CO **SHWS** **1003871155**
200 ELM ST **CERC-NFRAP** **MID127871424**
BATTLE CREEK, MI 49017 **BROWNFIELDS**

Relative:
Lower

Actual:
820 ft.

SHWS:
Facility ID: 13000037
Source: Auto Dealer & Service Stations
SAM Score: 34 out of 48
SAM Score Date: 03/31/2004
Township: 02S
Range: 07W
Section: 07
Quarter: NW
Quarter/Quarter: NE
Facility Status: Interim Response conducted - No further activities anticipated
Pollutant(s): Benzene; Pb; Methylene chloride; Toluene; TCE; VC; Zn; Hg

CERC-NFRAP:
Site ID: 0502717
Federal Facility: Not a Federal Facility
NPL Status: Not on the NPL
Non NPL Status: NFRAP

Site Description: Not reported

CERCLIS-NFRAP Assessment History:
Action: DISCOVERY
Date Started: Not reported

SHAY MOTOR CO (Continued) **1003871155**

Date Completed: 03/03/1986
Priority Level: Not reported

Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 03/31/1986
Priority Level: Low

Action: PRELIMINARY ASSESSMENT
Date Started: Not reported
Date Completed: 06/27/1990
Priority Level: NFRAP (No Futher Remedial Action Planned

Action: ARCHIVE SITE
Date Started: Not reported
Date Completed: 06/27/1990
Priority Level: Not reported

BROWNFIELD:
Facility ID: Not reported
Region: 1
Status: In Progress
Properry Use: Not reported
BEA: No
Ernie Id Number: 13000037
Redevelop Status: Not reported
Before Redevelopment: Not reported
After Redevelopment: Not reported

73
SE
1/2-1
0.901 mi.
4759 ft.

MCLEIEER OIL INC
252 ELM ST
BATTLE CREEK, MI 49003

SHWS **U002300837**
LUST **N/A**
UST

Relative:
Lower

Actual:
827 ft.

SHWS:
Facility ID: 13000348
Source: Petroleum Bulk Stations & Term
SAM Score: 36 out of 48
SAM Score Date: 12/09/2003
Township: 02S
Range: 07W
Section: 07
Quarter: NW
Quarter/Quarter: SE
Facility Status: Interim Response conducted - No further activities anticipated
Pollutant(s): Benzene; Ethylbenzene; Toluene; Xylenes

LUST:
Facility ID: 00013079
Source: STATE OF MICHIGAN
Owner Name: Mcleieer Oil Inc
Owner Address: PO Box 2977
Owner City,St,Zip: Kalamazoo, MI 49003-2977
Owner Contact: Not reported
Owner Phone: (616) 343-7677

MCLEIEER OIL INC (Continued) **U002300837**

Country:	USA
District:	Kalamazoo District Office
Site Name:	McLeieer Oil Co (Elm)
Latitude:	42.3147630000
Longitude:	-85.1721710000
Date of Collection:	10-05-2004
Method of Collection:	Address Matching-House Number
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Data:	NAD83
Point Line Area:	POINT
Desc Category:	Not reported
Leak Number:	C-0675-93
Release Date:	May 28 1993
Substance Released:	Gasoline
Release Status:	Open
Release Closed Date:	Not reported

UST:

Facility ID:	00013079
Facility Type:	CLOSED
Latitude:	42.3147630000
Longitude:	-85.1721710000
Owner Name:	Mcleieer Oil Inc
Owner Address:	PO Box 2977
Owner City,St,Zip:	Kalamazoo, MI 49003-2977
Owner Country:	USA
Owner Contact:	Not reported
Owner Phone:	(616) 343-7677
Contact:	DAVE LARUE
Contact Phone:	(616) 341-4896
Date of Collection:	10-05-2004
Accuracy:	15
Accuracy Value Unit:	METERS
Horizontal Datum:	NAD83
Source:	STATE OF MICHIGAN
Point Line Area:	POINT
Desc Category:	Not reported
Method of Collection:	Address Matching-House Number
Tank ID:	1
Tank Status:	**Removed from Ground**
Capacity:	3000
Install Date:	May 9 1971
Product:	Gasoline
Remove Date:	Jan 6 1995
Tank Release Detection:	Not reported
Pipe Realease Detection:	Not reported
Piping Material:	Galvanized Steel
Piping Type:	Not reported
Constr Material:	Asphalt Coated or Bare Steel,Cathodically Protected Steel
Impressed Device:	No

74
WNW
1/2-1
0.916 mi.
4837 ft.

W. MICHIGAN AVE. ADJ. TO BC
701 W. MICHIGAN AVE
BATTLE CREEK, MI 49017

SHWS **S107544146**
N/A

Relative:
Lower

Actual:
838 ft.

SHWS:

Facility ID:	13000364
Source:	Not reported
SAM Score:	18 out of 48
SAM Score Date:	03/31/2004
Township:	Not reported
Range:	Not reported
Section:	Not reported
Quarter:	Not reported
Quarter/Quarter:	Not reported
Facility Status:	**Interim Response conducted - No further activities anticipated**
Pollutant(s):	As; Pb; PCE

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
BATTLE CREEK	S108414513	KENDALL (14 & 18) & JACKSON (422)	14 / 18 KENDALL STREETS & 42		BEA
BATTLE CREEK	S106896431	FORMER TRANSPORTATION SPECIALIST	255 N. 28TH STREET / 2821 WI	49015	BEA
BATTLE CREEK	S107135925	FORMER MILITARY BASE PROPERTY	BRYDGES DRIVE		SHWS, BROWNFIELDS
BATTLE CREEK	S105143917	S & A INDUSTRIES	344 BURHNAM STREET	49015	SHWS
BATTLE CREEK	1011587144	ORBIT ENTERPRISES FORMER	344 EAST BURNHAM	49017	ICIS
BATTLE CREEK	1001814488	ORBIT ENTERPRISES	344 EAST BURNHAM	49017	CERCLIS
BATTLE CREEK	S106515776	FORMER UNITED #6314	236 CAPITAL AVE.		BROWNFIELDS
BATTLE CREEK	S103595184	E COLUMBIA RD GW CONTAMINATION	E COLUMBIA	49015	SHWS
BATTLE CREEK	S105541602	HAMBLIN AND KENDALL STREETS	NE CORNER OF S. KENDALL ST. /		BEA
BATTLE CREEK	S107135923	W. DICKMAN ROAD	W. DICKMAN ROAD		SHWS, BROWNFIELDS
BATTLE CREEK	U003425882	PENNFIELD SCHOOLS	8001 Q DRIVE NORTH 8587 Q DRIV	49017	LUST, UST
BATTLE CREEK	S103595185	FOURTH ST AREA GW CONTAM	FOURTH STREET		SHWS, DEL SHWS
BATTLE CREEK	S103095404	BATTLE CREEK AQUATIC CENTER	HAMBLIN / MCCALMLY ST.	49017	SHWS
BATTLE CREEK	S108416927	CEREAL CITY LF	HUBBARD ROAD		BROWNFIELDS
BATTLE CREEK	S109149894	PENNFIELD LANDFILL (FORMER)	JESSUP ROAD		SHWS
BATTLE CREEK	S105553966	RAYMOND ROAD LF	LIVINGSTON RD	49017	SHWS
BATTLE CREEK	S103595187	MAIN ST DUMP	MAIN ST	49017	SHWS
BATTLE CREEK	1007102351	MI DEPT/ENVIRONMENTAL QUALITY	2384 W MICHIGAN AVE	49015	RCRA-NonGen
BATTLE CREEK	1001220006	TIDEYS INC	918 E MICHIGAN AVE	49017	FINDS, RCRA-NonGen
BATTLE CREEK	1007096422	SPEEDWAY SUPERAMERICA LLC	1180 E MICHIGAN	49017	RCRA-CESQG
BATTLE CREEK	S107135924	W. MICHIGAN AVE. ADJ. TO BC TAXI	W. MICHIGAN AVE		BROWNFIELDS
BATTLE CREEK	S104909801	H.B. SHERMAN	169/185 W MICHIGAN, 207 W JACK		BEA
BATTLE CREEK	S103595200	MORGAN RD GW CONTAMINATION	MORGAN RD		SHWS, DEL SHWS
BATTLE CREEK	S105965552	OLD BELLEVUE RD GW CONTAM	8749 OLD BELLEVUE ROAD		SHWS, DEL SHWS
BATTLE CREEK	U000251170	FORMER RAYMOND TOTAL	924 RAYMOND RD	49017	LUST, UST
BATTLE CREEK	S109257256	CITY OF BATTLE CREEK SUBCONTRACTOR	RIVERSIDE DR. BETWEEN E. HAMIL		SPILLS
BATTLE CREEK	S106425557	ROOSEVELT AVE (393) VACANT LAND	393 ROOSEVELT AVENUE		SHWS, BEA
BATTLE CREEK	S100069168	SHERRODS REFUSE SERVICE	851 SHEFFIELD E. OF MANNING LK	49017	SHWS, HIST LF
BATTLE CREEK	1000291067	GALLOUP BUILDING BATTLE CREEK	121 E STATE ST	49017	FINDS, RCRA-NonGen
BATTLE CREEK	1000227963	WOLFE AND ASSOCIATES INC	194 THRU 196 W MICHIGAN AVE	49017	FINDS, UST, RCRA-NonGen
SPRINGFIELD	S103086188	DICKMAN RD LF/SPRINGFIELD WELLS W/	1301 AVE A / HARMONIA RD	49015	SHWS
SPRINGFIELD	1010785364	CITY OF SPRINGFIELD	915 BATTERLY	49015	RCRA-NonGen
SPRINGFIELD	S103595203	EATON CORP-SPRINGFIELD	NW CORNER 20TH / AVE C	49015	SHWS
SPRINGFIELD	S103595191	SPRINGFIELD WELLS LAFAYETTE AREA	STRUT AREA	49015	SHWS, DEL SHWS

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Federal NPL site list

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 02/02/2009
Date Data Arrived at EDR: 02/12/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 46

Source: EPA
Telephone: N/A
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/27/2009
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 3
Telephone 215-814-5418

EPA Region 4
Telephone 404-562-8033

EPA Region 5
Telephone 312-886-6686

EPA Region 10
Telephone 206-553-8665

EPA Region 6
Telephone: 214-655-6659

EPA Region 7
Telephone: 913-551-7247

EPA Region 8
Telephone: 303-312-6774

EPA Region 9
Telephone: 415-947-4246

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 02/02/2009
Date Data Arrived at EDR: 02/12/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 46

Source: EPA
Telephone: N/A
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/27/2009
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: No Update Planned

Federal Delisted NPL site list

DELISTED NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 02/02/2009	Source: EPA
Date Data Arrived at EDR: 02/12/2009	Telephone: N/A
Date Made Active in Reports: 03/30/2009	Last EDR Contact: 04/20/2009
Number of Days to Update: 46	Next Scheduled EDR Contact: 07/27/2009
	Data Release Frequency: Quarterly

Federal CERCLIS list

CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 01/09/2009	Source: EPA
Date Data Arrived at EDR: 01/30/2009	Telephone: 703-412-9810
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 05/01/2009
Number of Days to Update: 101	Next Scheduled EDR Contact: 07/13/2009
	Data Release Frequency: Quarterly

Federal CERCLIS NFRAP site List

CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned

Archived sites are sites that have been removed and archived from the inventory of CERCLIS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list this site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. This decision does not necessarily mean that there is no hazard associated with a given site; it only means that, based upon available information, the location is not judged to be a potential NPL site.

Date of Government Version: 12/03/2007	Source: EPA
Date Data Arrived at EDR: 12/06/2007	Telephone: 703-412-9810
Date Made Active in Reports: 02/20/2008	Last EDR Contact: 03/16/2009
Number of Days to Update: 76	Next Scheduled EDR Contact: 06/15/2009
	Data Release Frequency: Quarterly

Federal RCRA CORRACTS facilities list

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 03/25/2009	Source: EPA
Date Data Arrived at EDR: 04/02/2009	Telephone: 800-424-9346
Date Made Active in Reports: 05/11/2009	Last EDR Contact: 03/03/2009
Number of Days to Update: 39	Next Scheduled EDR Contact: 06/01/2009
	Data Release Frequency: Quarterly

Federal RCRA non-CORRACTS TSD facilities list

RCRA-TSDF: RCRA - Transporters, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Quarterly

Federal RCRA generators list

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Quarterly

RCRA-CESQG: RCRA - Conditionally Exempt Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

Federal institutional controls / engineering controls registries

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 03/31/2009
Date Data Arrived at EDR: 04/22/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Varies

US INST CONTROL: Sites with Institutional Controls

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 03/31/2009
Date Data Arrived at EDR: 04/22/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Varies

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 01/23/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 54

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 05/12/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Annually

State- and tribal - equivalent CERCLIS

SHWS: Contaminated Sites

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 02/16/2009
Date Data Arrived at EDR: 02/18/2009
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 42

Source: Department of Environmental Quality
Telephone: 517-373-9541
Last EDR Contact: 02/18/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Semi-Annually

State and tribal landfill and/or solid waste disposal site lists

SWF/LF: Solid Waste Facilities Database

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 02/03/2009
Date Data Arrived at EDR: 02/04/2009
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 56

Source: Department of Environmental Quality
Telephone: 517-335-4035
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Semi-Annually

State and tribal leaking storage tank lists

LUST: Leaking Underground Storage Tank Sites

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 03/19/2009
Date Data Arrived at EDR: 03/11/2009
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 21

Source: Department of Environmental Quality
Telephone: 517-373-9837
Last EDR Contact: 03/11/2009
Next Scheduled EDR Contact: 06/08/2009
Data Release Frequency: Annually

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 02/24/2009
Date Data Arrived at EDR: 03/03/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 02/15/2009
Date Data Arrived at EDR: 02/27/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 17

Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/03/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 20

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 02/20/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 03/13/2009
Date Data Arrived at EDR: 03/17/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 13

Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 12/15/2008
Date Data Arrived at EDR: 12/16/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 04/17/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 03/03/2009
Date Data Arrived at EDR: 03/04/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 26

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

State and tribal registered storage tank lists

UST: Underground Storage Tank Facility List
Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 03/09/2009
Date Data Arrived at EDR: 03/11/2009
Date Made Active in Reports: 04/10/2009
Number of Days to Update: 30

Source: Department of Environmental Quality
Telephone: 517-335-4035
Last EDR Contact: 03/11/2009
Next Scheduled EDR Contact: 06/08/2009
Data Release Frequency: Annually

AST: Aboveground Tanks
Registered Aboveground Storage Tanks.

Date of Government Version: 03/09/2009
Date Data Arrived at EDR: 03/17/2009
Date Made Active in Reports: 04/14/2009
Number of Days to Update: 28

Source: Department of Environmental Quality
Telephone: 517-373-8168
Last EDR Contact: 03/09/2009
Next Scheduled EDR Contact: 06/08/2009
Data Release Frequency: No Update Planned

INDIAN UST R5: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 09/08/2008
Date Data Arrived at EDR: 09/19/2008
Date Made Active in Reports: 10/16/2008
Number of Days to Update: 27

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 02/19/2009
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 25

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 02/24/2009
Date Data Arrived at EDR: 03/03/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 63

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Semi-Annually

INDIAN UST R10: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 03/03/2009
Date Data Arrived at EDR: 03/04/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 26

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

INDIAN UST R6: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/06/2009
Date Data Arrived at EDR: 04/07/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 34

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Semi-Annually

INDIAN UST R7: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/01/2008
Date Data Arrived at EDR: 12/30/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 76

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 02/20/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 03/13/2009
Date Data Arrived at EDR: 03/17/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 13

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

INDIAN UST R9: Underground Storage Tanks on Indian Land
The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 12/15/2008
Date Data Arrived at EDR: 12/16/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 90

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 04/17/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Quarterly

State and tribal institutional control / engineering control registries

AUL: Engineering and Institutional Controls
A listing of sites with institutional and/or engineering controls in place.

Date of Government Version: 01/21/2009
Date Data Arrived at EDR: 01/22/2009
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 69

Source: Department of Environmental Quality
Telephone: 517-373-4828
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Varies

State and tribal voluntary cleanup sites

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng
A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

INDIAN VCP R1: Voluntary Cleanup Priority Listing
A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 04/02/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 04/20/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

State and tribal Brownfields sites

BROWNFIELDS: Brownfields and USTfield Site Database
All state funded Part 201 and 213 sites, as well as LUST sites that have been redeveloped by private entities using the BEA process. Be aware that this is not a list of all of the potential brownfield sites in Michigan.

Date of Government Version: 12/16/2008
Date Data Arrived at EDR: 12/17/2008
Date Made Active in Reports: 01/06/2009
Number of Days to Update: 20

Source: Department of Environmental Quality
Telephone: 517-373-4805
Last EDR Contact: 04/13/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

BROWNFIELDS 2: Brownfields Building and Land Site Locations
A listing of brownfield building and land site locations. The listing is a collaborative effort of Michigan Economic Development Corporation, Michigan Economic Developers Association, Detrot Edison, Detroit Area Commercial Board of Realtors

Date of Government Version: 04/09/2007
Date Data Arrived at EDR: 04/10/2007
Date Made Active in Reports: 05/01/2007
Number of Days to Update: 21

Source: Economic Development Corporation
Telephone: 888-522-0103
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Varies

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites
Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: 10/01/2008
Date Data Arrived at EDR: 11/14/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 04/17/2009
Next Scheduled EDR Contact: 07/13/2009
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations
A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 03/25/2008
Date Data Arrived at EDR: 04/17/2008
Date Made Active in Reports: 05/15/2008
Number of Days to Update: 28

Source: EPA, Region 9
Telephone: 415-972-3336
Last EDR Contact: 04/07/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Varies

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

HIST LF: Inactive Solid Waste Facilities
The database contains historical information and is no longer updated.

Date of Government Version: 03/01/1997
Date Data Arrived at EDR: 02/28/2003
Date Made Active in Reports: 03/06/2003
Number of Days to Update: 6

Source: Department of Environmental Quality
Telephone: 517-335-4034
Last EDR Contact: 02/28/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands
Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 02/23/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/01/2008
Date Data Arrived at EDR: 10/31/2008
Date Made Active in Reports: 12/23/2008
Number of Days to Update: 53

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 03/26/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Quarterly

DEL SHWS: Delisted List of Contaminated Sites
Sites that have been delisted or deleted from the List of Contaminated Sites. The available documentation for the site does not support it's listing or the site no longer meets criteria specified in rules.

Date of Government Version: 02/20/2009
Date Data Arrived at EDR: 02/20/2009
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 40

Source: Department of Environmental Quality
Telephone: 517-373-9541
Last EDR Contact: 02/16/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

CDL: Clandestine Drug Lab Listing
A listing of clandestine drug lab locations.

Date of Government Version: 10/20/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 11/21/2008
Number of Days to Update: 3

Source: Department of Community Health
Telephone: 517-373-3740
Last EDR Contact: 02/20/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

Local Land Records

LIENS 2: CERCLA Lien Information
A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 02/06/2009
Date Data Arrived at EDR: 03/20/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 03/03/2009
Next Scheduled EDR Contact: 05/18/2009
Data Release Frequency: Varies

LUCIS: Land Use Control Information System
LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 12/09/2005
Date Data Arrived at EDR: 12/11/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 31

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 03/09/2009
Next Scheduled EDR Contact: 06/08/2009
Data Release Frequency: Varies

LIENS: Lien List
An Environmental Lien is a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 USC * 9607(1) and similar state or local laws. In other words: a lien placed upon a property's title due to an environmental condition

Date of Government Version: 11/03/2008
Date Data Arrived at EDR: 11/25/2008
Date Made Active in Reports: 01/06/2009
Number of Days to Update: 42

Source: Department of Environmental Quality
Telephone: 517-373-9837
Last EDR Contact: 05/12/2009
Next Scheduled EDR Contact: 11/10/2008
Data Release Frequency: Varies

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System
Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 01/30/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 95

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 04/16/2009
Next Scheduled EDR Contact: 07/13/2009
Data Release Frequency: Annually

PEAS: Pollution Emergency Alerting System
Environmental pollution emergencies reported to the Department of Environmental Quality such as tanker accidents, pipeline breaks, and release of reportable quantities of hazardous substances.

Date of Government Version: 12/28/2008
Date Data Arrived at EDR: 12/30/2008
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 92

Source: Department of Environmental Quality
Telephone: 517-373-8427
Last EDR Contact: 05/01/2009
Next Scheduled EDR Contact: 03/30/2009
Data Release Frequency: Quarterly

Other Ascertainable Records

RCRA-NonGen: RCRA - Non Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 11/12/2008
Date Data Arrived at EDR: 11/18/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 118

Source: Environmental Protection Agency
Telephone: 312-886-6186
Last EDR Contact: 04/23/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 05/14/2008
Date Data Arrived at EDR: 05/28/2008
Date Made Active in Reports: 08/08/2008
Number of Days to Update: 72

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 02/24/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 11/10/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 62

Source: USGS
Telephone: 703-692-8801
Last EDR Contact: 05/08/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: Semi-Annually

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/05/2008
Date Made Active in Reports: 09/23/2008
Number of Days to Update: 18

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Varies

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 01/27/2009
Date Data Arrived at EDR: 04/23/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 18

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 04/21/2009
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 01/27/2009
Date Data Arrived at EDR: 02/04/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 90

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Annually

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 01/05/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 05/08/2009
Number of Days to Update: 1

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 03/16/2009
Next Scheduled EDR Contact: 06/15/2009
Data Release Frequency: Varies

MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 02/19/2009
Date Data Arrived at EDR: 03/24/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 42

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 03/24/2009
Next Scheduled EDR Contact: 06/22/2009
Data Release Frequency: Semi-Annually

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 02/29/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 49

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 04/09/2009
Next Scheduled EDR Contact: 06/15/2009
Data Release Frequency: Annually

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2002
Date Data Arrived at EDR: 04/14/2006
Date Made Active in Reports: 05/30/2006
Number of Days to Update: 46

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 04/14/2009
Next Scheduled EDR Contact: 07/13/2009
Data Release Frequency: Every 4 Years

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 03/16/2009
Next Scheduled EDR Contact: 06/15/2009
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25

Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 03/16/2009
Next Scheduled EDR Contact: 06/15/2009
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing
A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing
A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

SSTS: Section 7 Tracking Systems
Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 03/14/2008
Date Made Active in Reports: 04/18/2008
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 12/04/2008
Next Scheduled EDR Contact: 07/13/2009
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System
The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 03/20/2009
Date Data Arrived at EDR: 03/20/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 46

Source: Environmental Protection Agency
Telephone: 202-564-5088
Last EDR Contact: 04/13/2009
Next Scheduled EDR Contact: 07/13/2009
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 12/04/2007
Date Data Arrived at EDR: 02/07/2008
Date Made Active in Reports: 03/17/2008
Number of Days to Update: 39

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 05/04/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: Annually

MLTS: Material Licensing Tracking System

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 01/07/2009
Date Data Arrived at EDR: 01/15/2009
Date Made Active in Reports: 03/30/2009
Number of Days to Update: 74

Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Quarterly

RADINFO: Radiation Information Database

The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 04/28/2009
Date Data Arrived at EDR: 04/29/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 12

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 04/29/2009
Next Scheduled EDR Contact: 07/27/2009
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 01/20/2009
Date Data Arrived at EDR: 01/23/2009
Date Made Active in Reports: 05/05/2009
Number of Days to Update: 102

Source: EPA
Telephone: (312) 353-2000
Last EDR Contact: 03/30/2009
Next Scheduled EDR Contact: 06/29/2009
Data Release Frequency: Quarterly

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 03/06/2007
Date Made Active in Reports: 04/13/2007
Number of Days to Update: 38

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 02/19/2009
Next Scheduled EDR Contact: 06/08/2009
Data Release Frequency: Biennially

DRYCLEANERS: Drycleaning Establishments
A listing of drycleaning facilities in Michigan.

Date of Government Version: 02/18/2009
Date Data Arrived at EDR: 03/17/2009
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 15

Source: Department of Environmental Quality
Telephone: 517-335-4586
Last EDR Contact: 05/11/2009
Next Scheduled EDR Contact: 08/10/2009
Data Release Frequency: Varies

NPDES: List of Active NPDES Permits
General information regarding NPDES (National Pollutant Discharge Elimination System) permits and NPDES Storm Water permits.

Date of Government Version: 01/27/2009
Date Data Arrived at EDR: 01/29/2009
Date Made Active in Reports: 04/01/2009
Number of Days to Update: 62

Source: Department of Environmental Quality
Telephone: 517-241-1300
Last EDR Contact: 04/29/2009
Next Scheduled EDR Contact: 07/27/2009
Data Release Frequency: Varies

AIRS: Permit and Emissions Inventory Data
Permit and emissions inventory data.

Date of Government Version: 05/22/2007
Date Data Arrived at EDR: 10/19/2007
Date Made Active in Reports: 11/05/2007
Number of Days to Update: 17

Source: Department of Environmental Quality
Telephone: 517-373-7074
Last EDR Contact: 04/17/2009
Next Scheduled EDR Contact: 07/13/2009
Data Release Frequency: Varies

BEA: BASELINE ENVIRONMENTAL ASSESSMENT DATABASE
A Baseline Environmental Assessment (BEA) allows people to purchase or begin operating at a facility without being held liable for existing contamination. BEAs are used to gather enough information about the property being transferred so that existing contamination can be distinguished from any new releases that might occur after the new owner or operator takes over the property.

Date of Government Version: 03/30/2009
Date Data Arrived at EDR: 03/31/2009
Date Made Active in Reports: 04/09/2009
Number of Days to Update: 9

Source: DEPT. OF ENVIRONMENTAL QUALITY
Telephone: 517-373-9541
Last EDR Contact: 03/23/2009
Next Scheduled EDR Contact: 06/08/2009
Data Release Frequency: Semi-Annually

INDIAN RESERV: Indian Reservations
This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 12/08/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 34

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 05/08/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: Semi-Annually

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing
The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 12/08/2008
Date Data Arrived at EDR: 12/09/2008
Date Made Active in Reports: 03/16/2009
Number of Days to Update: 97

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 05/11/2009
Next Scheduled EDR Contact: 08/10/2009
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 12/31/2005
Date Data Arrived at EDR: 02/06/2006
Date Made Active in Reports: 01/11/2007
Number of Days to Update: 339

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 05/08/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: N/A

EDR PROPRIETARY RECORDS

EDR Proprietary Records

Manufactured Gas Plants: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 12/31/2006
Date Data Arrived at EDR: 12/11/2008
Date Made Active in Reports: 03/19/2009
Number of Days to Update: 98

Source: Department of Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 03/13/2009
Next Scheduled EDR Contact: 06/08/2009
Data Release Frequency: Annually

NJ MANIFEST: Manifest Information

Hazardous waste manifest information.

Date of Government Version: 09/30/2007
Date Data Arrived at EDR: 12/04/2007
Date Made Active in Reports: 12/31/2007
Number of Days to Update: 27

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 05/05/2009
Next Scheduled EDR Contact: 08/03/2009
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/27/2009
Date Data Arrived at EDR: 02/25/2009
Date Made Active in Reports: 03/12/2009
Number of Days to Update: 15

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 02/25/2009
Next Scheduled EDR Contact: 05/25/2009
Data Release Frequency: Annually

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 09/11/2008
Date Made Active in Reports: 10/02/2008
Number of Days to Update: 21

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 03/09/2009
Next Scheduled EDR Contact: 06/08/2009
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2008
Date Data Arrived at EDR: 02/12/2009
Date Made Active in Reports: 03/11/2009
Number of Days to Update: 27

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 03/16/2009
Next Scheduled EDR Contact: 06/15/2009
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2007
Date Data Arrived at EDR: 08/22/2008
Date Made Active in Reports: 09/08/2008
Number of Days to Update: 17

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 04/07/2009
Next Scheduled EDR Contact: 07/06/2009
Data Release Frequency: Annually

Oil/Gas Pipelines: This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

Electric Power Transmission Line Data
Source: PennWell Corporation
Telephone: (800) 823-6277
This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Daycare Centers: Day Care Centers, Group & Family Homes
Source: Bureau of REgulatory Services
Telephone: 517-373-8300

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory
Source: Department of Natural Resources
Telephone: 517-241-2254

STREET AND ADDRESS INFORMATION

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APPENDIX D

FOIA REQUESTS

HORIZON ENVIRONMENTAL

Fax

Grand Rapids Office *4771 – 50th Street SE • Suite One • Grand Rapids, MI 49512 • 616-554-3210 • Fax 616-554-3211*
Detroit Office *Suite 1700 Fisher Bldg. • 3011 West Grand Blvd. • Detroit, MI 48202 • 313-874-0124 • Fax 313-874-0135*

Date:	May 27, 2009
To:	Marcia Reidmiller MDEQ-RRD
Company:	MDEQ – Kalamazoo District
Fax Number:	269-567-9440
Phone Number:	269-567-3500
Pages: (including lead sheet)	1
From:	Liz Bartz
RE:	FOIA Request

Message:

I would like to determine if you have any files (including leaking UST) ***dated after June 2007*** that you may have for the property listed below. Horizon prepared a BEA for the site in 2007 and it will not be necessary to review that document at your offices.

171 W. Michigan Avenue, Battle Creek, Calhoun County, Michigan.
This is the former Cereal City property.

Please contact me at 616-554-3210 or email me at eubartz@horizonenv.com in the event files are available.
Thank you very much for your assistance.

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. *If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone (collect), and return the original message to us at the above address via the U.S. Postal Service. Thank You.*

Sender: _____ Date: _____ Time: _____

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
KALAMAZOO DISTRICT OFFICE

JENNIFER M. GRANHOLM
GOVERNOR

STEVEN E. CHESTER
DIRECTOR

May 29, 2009

Ms. Liz Bartz
Horizon Environmental
4771 50th Street SE
Grand Rapids, MI 49512

Dear Ms. Bartz:

SUBJECT: Request for Disclosure of Official Files from Kalamazoo District Office

This written notice is issued in response to your May 27, 2009, request for information under the Freedom of Information Act (FOIA), MCL 15.231 *et seq.*, which was received by this office on FE5493.

The purpose of the FOIA is to provide the public with access to existing, nonexempt public records of public bodies. Your request dated May 27, 2009, to examine or receive a copy of the following documents is denied.

Description of documents being denied: **Fmr Cereal City**
171 W. Michigan Avenue, Battle Creek, MI.

Reason for denial: To the best of this public body's knowledge, information, and belief, the public record does not exist under the name given by the requester, or by another name reasonably known to the public body.

Authority for denial: Public Act No. 442 of 1976, as amended, Section 3(1). Under section 10 of the FOIA, you may do either of the following:

1) Appeal this decision in writing to the Director of the Michigan Department of Environmental Quality at P.O. Box 30473, Lansing, Michigan 48909-7917. The writing must specifically state the word "appeal," and must identify the reason or reasons you believe the denial should be reversed. The head of the department, or his designee, must respond to your appeal within 10 business days after its receipt. Under unusual circumstances, the time for response to your appeal may be extended by 10 business days.

2) File an action in circuit court within 180 days after the date of the final determination to deny the request. If you prevail in such an action, the court is to award reasonable attorney fees, costs, and disbursements. Further, if the court finds the denial to be arbitrary and capricious, you may receive punitive damages in the amount of $500.00.

Sincerely,

C.J. Mattson, FOIA Liaison
Kalamazoo District Office
Remediation and Redevelopment Division
269-567-3530

FE5493

EQP1048a (10/2006)

Subject: RE: FOIA request
From: "Mattson, Carol (DEQ)" <MATTSONC1@michigan.gov>
Date: Wed, 27 May 2009 12:54:58 -0400
To: "Liz Bartz" <eubartz@horizonenv.com>

The BEA that Horizon prepared was filed under HB Sherman, 207 W. Michigan, Battle Creek. There are no other files. Would you like to review these files? If not, please reply that you would like to close your FOIA.

Have a good week.

Ms. C.J. Mattson

From: Liz Bartz [mailto:eubartz@horizonenv.com]
Sent: Wednesday, May 27, 2009 12:15 PM
To: Mattson, Carol (DEQ)
Subject: FOIA request

Hi C.J.,

I hope this is an acceptable method of submitting a FOIA request (attached). Given our most recent conversations, it seemed like email worked best for you. The site is one we have worked at in the past. I'm only looking for file information that is dated between June 2007 to present. There is likely a BEA in the file that we prepared in June 2007 and we do not need a copy of that (or need to review it).

Thank you.

--

Liz Bartz
Senior Project Geologist / Project Manager
4771 50th Street SE
Suite One
Grand Rapids, Michigan 49512
ph: 616.554.3210
fax: 616.554.3211
eubartz@horizonenv.com
HORIZON ENVIRONMENTAL

HORIZON ENVIRONMENTAL

Telephone Memorandum

Horizon Environmental Corporation 4595 Broadmoor SE, Suite 200, Grand Rapids, MI 49512 616 554.3210 Fax 554.3211

Date: 5/27/09

Project No.:

Client: BCU-0101 Battle Creek Unlimited

Subject: FOIA Request MDEQ

Your Name: Liz Bartz

Outside Party: Greg Brettman, Kzoo MDEQ

WAS transferred to Greg by C.J. Mattson

☑ Made Call

☐ Rec'd Call

Summary of Conversation:

Kzoo MDEQ FOIA coordinator ~~the~~ transferred me to Mr. Brettman after she stated he knew everything about Cereal City. It appeared he is actively involved in the Cereal City landfill operated by WMI. He did, however, recall seeing the BEA for the former Cereal City Museum and as he recalled (to the best of his recollection), he has not seen anything pertaining to the subject property since the issuance of the Kellogg BEA.

cc:

Storage Tank Information Database

Storage Tank Facilities List

SID-DEQ

Facility and Tank Details

Facility Information:
Facility ID:00037129
Old Hebbles Site Area
123-151 WEST MICHIGAN AVE, BATTLE CREEK, MI 49017
Phone# : (616) 966-3390

Owner Information:
City of Battle Creek
103 E Michigan, Battle Creek, MI 49016
Phone# : (616) 966-3000

Tank ID	Tank Status	Capacity (in gallons)	Installation Date	Substance Stored	Tank Release Detection	Piping Release Detection	Piping Material	Piping Type	Construction Material	Impressed Device
1	Removed from Ground	1000		UNKNOWN			Unknown		Unknown	No
2	Removed from Ground	1000		UNKNOWN			Unknown		Unknown	No
3	Removed from Ground	1000		UNKNOWN			Unknown		Unknown	No
4	Removed from Ground	1000		UNKNOWN			Unknown		Unknown	No
5	Removed from Ground	1000		UNKNOWN			Unknown		Unknown	No
6	Removed from Ground	1000		UNKNOWN			Unknown		Unknown	No
7	Removed from Ground	1000		UNKNOWN			Unknown		Unknown	No

Release Information

Leak ID	LUST Site Name	Discovery Date	Substance Released	Release Status	Closed Date	Evaluation	Land Use Restrictions
C-0640-89	Hebble Site (city Of Battle Crk.	10/06/1989		Open			
C-2207-92	Hebble Site (city Of Battle Crk.	12/10/1992	Other	Open			

Copyright © 2001-2004 State of Michigan

Storage Tank Information Database

Storage Tank Facilities List

SID-DEQ

Facility and Tank Details

Facility Information:
Facility ID:50000913
City Of Battle Creek H.b. Sherma
207 W MICHIGAN AVE, BATTLE CREEK, MI 49016
Phone# : ( ) -

Owner Information:
Nrt Owner
Unknown, Unknown, MI 99999
Phone# :

Tank ID	Tank Status	Capacity (in gallons)	Installation Date	Substance Stored	Tank Release Detection	Piping Release Detection	Piping Material	Piping Type	Construction Material	Impressed Device
1	Non-Registered Tank	18000	12/31/1899 12:00:00 AM	CRUDE OIL						No
2	Non-Registered Tank	7500	12/31/1899 12:00:00 AM	CRUDE OIL						No

Release Information

Leak ID	LUST Site Name	Discovery Date	Substance Released	Release Status	Closed Date	Evaluation	Land Use Restrictions
734-91	HB Sherman	08/20/1991	Unknown	Open			

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HORIZON ENVIRONMENTAL

Fax

Grand Rapids Office *4771 – 50th Street SE • Suite One • Grand Rapids, MI 49512 • 616-554-3210 • Fax 616-554-3211*
Detroit Office *Suite 1700 Fisher Bldg. • 3011 West Grand Blvd. • Detroit, MI 48202 • 313-874-0124 • Fax 313-874-0135*

Date:	May 27, 2009
To:	Sue
Company:	Calhoun County Health Dept - Environmental Health Division
Fax Number:	269-969-0035
Phone Number:	269-969-0035
Pages: (including lead sheet)	1
From:	Liz Bartz
RE:	FOIA Request
Project Number:	BCU-0101

Message:

I would like to know if your department has any information pertaining to water wells, septic systems, inspections or any environmental or health concerns ***from June 2007 to present*** related to the following property:

171 W. Michigan Avenue, Battle Creek, Michigan. This is the former Cereal City Building

Please contact me at 616-554-3210 to discuss this request, 616-554-3211 to fax a response or the Grand Rapids address above to mail a response.

Thank you for your assistance.

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. *If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received*

Sender: _____ Date: _____ Time: _____

Fax

HORIZON ENVIRONMENTAL

Grand Rapids Office 4771 – 50th Street SE • Suite One • Grand Rapids, MI 49512 • 616-554-3210 • Fax 616-554-3211
Detroit Office Suite 1700 Fisher Bldg. • 3011 West Grand Blvd. • Detroit, MI 48202 • 313-874-0124 • Fax 313-874-0135

Date: ~~May 27, 2009~~ 5-28-09

To: From! Suc

Company: Calhoun County Health Dept - Environmental Health Division

Fax Number: 269-969-0035

Phone Number: 269-969-0035

Pages: (including lead sheet) 1

~~From:~~ TO: Liz Bartz

RE: FOIA Request

Project Number: BCU-0101

Message:

I would like to know if your department has any information pertaining to water wells, septic systems, inspections or any environmental or health concerns ***from June 2007 to present*** related to the following property:

171 W. Michigan Avenue, Battle Creek, Michigan. This is the former Cereal City Building

Please contact me at 616-554-3210 to discuss this request, 616-554-3211 to fax a response or the Grand Rapids address above to mail a response.

Thank you for your assistance.

Nothing in our files. SJ 5/28

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Sender: _____ Date: _____ Time: _____

HORIZON ENVIRONMENTAL

Fax

Grand Rapids Office *4771 – 50th Street SE • Suite One • Grand Rapids, MI 49512 • 616-554-3210 • Fax 616-554-3211*
Detroit Office *Suite 1700 Fisher Bldg. • 3011 West Grand Blvd. • Detroit, MI 48202 • 313-874-0124 • Fax 313-874-0135*

Date:	May 27, 2009
To:	Fire Chief Larry Hausman
Company:	Battle Creek Fire Department
Fax Number:	269-966-3543
Phone Number:	269-966-3519
Pages: (including lead sheet)	1
From:	Liz Bartz
RE:	FOIA Request

Message:

I would like to know if your department has any information pertaining to fires, storage tanks or releases to the environment ***that have occurred since June 2007*** for the following property :

171 W. Michigan Avenue, Battle Creek, Michigan. This is the former Cereal City property.

Please contact me at 616-554-3210 to discuss this request, 616-554-3211 to fax a response or the Grand Rapids address above to mail a response.

Thank you for your assistance.

This message is intended only for the use of the individual or entity to which it is addressed and may contain information that is privileged, confidential and exempt from disclosure under applicable law. *If the reader of this message is not the intended recipient or the employee or agent responsible for delivering the message to the intended recipient, you are hereby notified that any dissemination, distribution, or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone (collect), and return the original message to us at the above address via the U.S. Postal Service. Thank You.*

Sender: _____ Date: _____ Time: _____

CITY OF BATTLE CREEK
BREAKFAST CAPITAL OF THE WORLD

BATTLE CREEK
FIRE PREVENTION DIVISION

May 28, 2009

To Whom It May Concern:

This letter is in reference to your FOIA request for Site Information on the property located at 171 W. Michigan Avenue in Battle Creek, Michigan.

I have searched our records and found no record of any Hazardous Material spills or Incidents at this location. There are no records of any in ground or above ground storage tanks at this location.

This facility has been vacant since Kellogg Cereal City USA closed.
The Kellogg Co. started to renovate the structure for office space in the spring of 2007 and then stopped work on the project in the fall of 2007.

If my office can be of any further assistance please contact me at (269)-966-3521.

Respectfully,

Fire Inspector Ralph Britton
Battle Creek Fire Department

GoldenService
195 East Michigan Avenue • Battle Creek, Michigan • 49014-4015
(269) 966-3519 • Fax (269) 966-3543 • Web: www.battlecreek.org

APPENDIX E

PRIOR SITE ASSESSMENT REPORTS

APPENDIX F

SITE INSPECTION PHOTOGRAPHS

HORIZON ENVIRONMENTAL

Client: Battle Creek Unlimited
Project No.: BCU-0101
Address: 171 W. Michigan Avenue
Date Taken: 05/21/09

Photograph No. 1
Former Cereal City USA building looking north towards main entrance.

Photograph No. 2
West Michigan Avenue looking southeast towards former Cereal City USA surface parking lot and building.

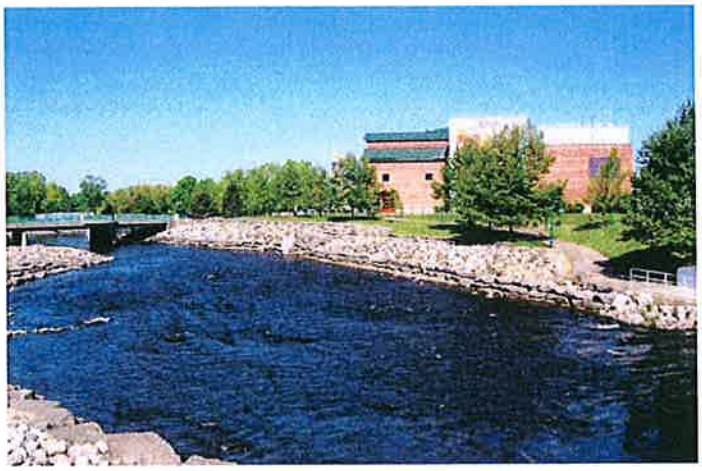
HORIZON ENVIRONMENTAL

Client: Battle Creek Unlimited
Project No.: BCU-0101
Address: 171 W. Michigan Avenue
Date Taken: 05/21/09

Photograph No. 3
Photo taken from eastern property boundary looking west towards the former Cereal City USA building (Battle Creek River in center of photo).

Photograph No. 4
Carlyle Street looking south (eastern property boundary).

Photograph No. 5
W. Michigan Avenue looking southwest towards former Cereal City USA building.



Photograph No. 6
Pad-mounted electrical transformers located in subject property surface parking lot.

HORIZON ENVIRONMENTAL

Client: Battle Creek Unlimited
Project No.: BCU-0101
Address: 171 W. Michigan Avenue
Date Taken: 05/21/09

Photograph No. 7
Enclosed are adjacent to the east side of the building. Formerly contained a dumpster and a trash compactor.

Photograph No. 8
Concrete cut out on first floor. Concrete reportedly removed by Kellogg to remove drains associated with the former kitchen.

Photograph No. 9
Air compressor for water filter and softener located on the 1st floor.

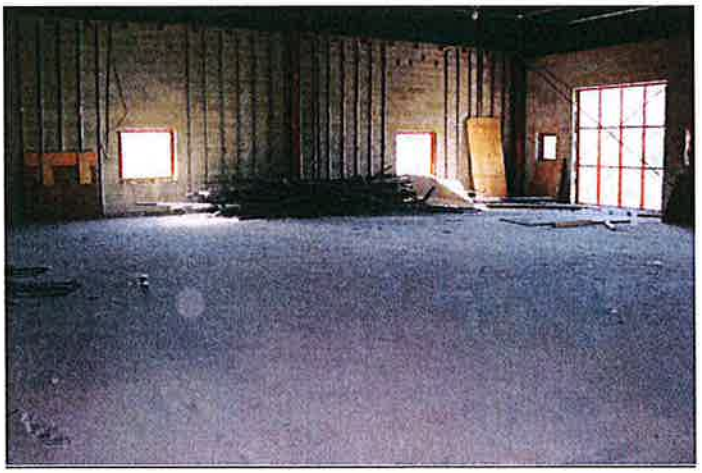
Photograph No. 10
First floor, former restaurant area.

Photograph No. 11
First floor, former entrance. Concrete reportedly removed by Kellogg to install piping to a proposed restroom near the entrance.

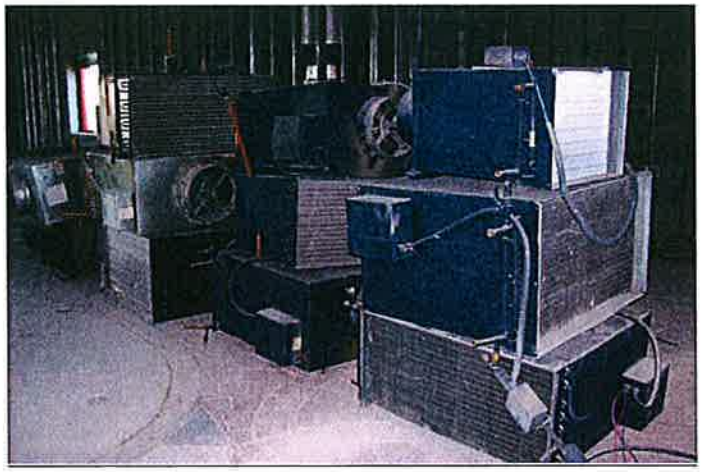
Photograph No. 12
Hydraulic oil reservoir for hydraulic elevator, located on first floor adjacent to elevator shaft. Oil staining on floor.

Photograph No. 13
Oil can to lubricate hydraulic elevator. Oil staining on cement floor in elevator maintenance room.

Photograph No. 14
Typical second floor demolition.



Photograph No. 15
HVAC units removed during demolition, stored on second floor.



Photograph No. 16
Former third floor offices. Flooring and cubicles dismantled but dry wall still intact.

Photograph No. 17
Air compressor in mechanical room on third floor.

Photograph No. 18
Paint stored in mechanical room on third floor.

APPENDIX G

QUALIFICATIONS OF ENVIRONMENTAL PROFESSIONAL

Elizabeth U. Bartz — Senior Project Geologist

EDUCATION

M.S., Geology, Southern Illinois University, 1992
B.S., Geosciences, University of Arizona, 1982

PROFESSIONAL SUMMARY

Ms. Bartz evaluates environmental conditions at subject properties to determine if those conditions are protective of human health and the surrounding environment in accordance with local, state and federal environmental regulations. She has performed a variety of traditional environmental investigations in the Midwest including transactional support assessments, Michigan Part 201 site investigations and closures, CERCLA remedial investigations/feasibility studies, and remedial design/remedial actions. In addition, she has implemented National Environment Policy Act (NEPA) related to surface and air transportation studies.

PROFESSIONAL EXPERIENCE

TRANSACTIONAL SUPPORT

- **Phase I and II Environmental Site Assessment (ESA), Baseline Environmental Assessment (BEA), and Due Care Plan (DCP), 3-Story Vacant Building, Grand Rapids, Michigan.** Principal Investigator for Phase I and II Environmental Site Assessments of a 3-story vacant building in the Heartside Historical District of Grand Rapids, Michigan. In addition to "All Appropriate Inquiry" standards, the Phase I and II ESAs were performed in accordance with Michigan State Housing Development Authority (MSHDA) requirements. The project also included asbestos and lead based paint sampling and abatement. A positive determination was received for the BEA and DCP by the Michigan Department of Environmental Quality. The developer was successful in earning a MSDHA tax credit.

- **Phase I and II ESAs, BEA and Due Care Plans, City of Muskegon Brownfield Redevelopment Authority (BRA) and City of Grand Rapids BRA, Michigan.** Prepared Phase I and Phase II ESA Reports, BEAs and Due Care Plans for brownfield sites in the Cities of Grand Rapids and Muskegon under environmental site assessment grants provided by the State of Michigan.

- **Phase I and II ESAs for a Major Local Retailer at sites located in Michigan and Indiana.** Principal Investigator for Phase I and II ESAs of vacant and occupied propertie typically 80 to 100 acres in size. Also implement remediation activities for resolution of recognized environmental conditions.

- **Phase I ESA, Distribution Warehouse, Grand Rapids, Michigan.** Principal Investigator for Phase I ESA of a 100-acre site containing a 100,000 ft^2 distribution

warehouse and several other structures. Oil filled equipment included hydraulic elevators, boilers, back-up generators, trash compactors, conveyor system, and balers.

- **Phase I ESA, BEA and Due Care Plan, Amusement Attraction, Battle Creek, Michigan.** Principal Investigator for a Phase I ESA, BEA, and DCP at a former cereal-related amusement attraction. Numerous investigations had occurred on the site through time and existing data was reviewed utilized to develop a BEA. A DCP was also prepared for the new users of the property.

- **Limited Phase II ESA, BEA and Due Care Plan, Agricultural Property, Coopersville, Michigan** Principal Investigator for a Limited Phase II ESA consisting of soil sampling in the vicinity of an old on-site underground storage tank (UST). During the BEA process, the UST was removed from the site. A BEA and DCP were prepared in anticipation of the site to be re-developed into a residential condominium development.

- **Phase I ESA, Automobile Dealership, Wyoming, Michigan.** Project Manager for a Phase I ESA at 30-year old automobile dealership. Recognized Environmental Conditions (RECs) related to leaking underground storage tanks (LUSTs), hydraulic hoists and former septic systems were identified. A Phase II ESA and Baseline Environmental Assessment were recommended.

- **Phase I ESA, Commercial Office Building, Cascade Township, Michigan.** Project Manager for a Phase I ESA at 20-year old, three story office building.

- **Phase I ESA, Nursing Home Facility, Hamtramck, Michigan.** Project Manager for a Phase I ESA at a 30-year old nursing home facility. Project also included asbestos sampling and analysis.

- **Phase I ESA, Commercial Office Buildings, Houston, Indianapolis, Atlanta, and Minneapolis.** Project Manager for Phase I ESAs prepared for a confidential real estate investment trust located in Boston, Massachusetts. The office buildings ranged in size from four to thirty-five stories and typically included open or enclosed parking structures. Investigations also included indoor air monitoring to screen for sick building syndrome.

- **Phase I and II ESAs, Metal Fabricating Facility, Battle Creek, Michigan.** Project Manager for a Phase I and II ESA at a metal fabricating facility for Bank of America. RECs related to drum storage; floor drains and a fire were identified and evaluated.

- **Fifteen Phase I ESAs, Propane Distribution Centers, Western Michigan.** Principal Investigator for fifteen Phase I ESAs performed on an expedited basis for a national propane gas company. RECs related to methanol use to denature the propane and past property uses were identified on several of the properties.

- **Phase I ESA, Proposed Location for Whitehall Public Schools High School, Whitehall, Michigan.** Principal Investigator for a Phase I ESA of rural property near Whitehall, Michigan.

- **Phase I ESAs for Federal Aviation Administration, South Bend Regional Airport, South Bend, Indiana.** Principal Investigator for four Phase I ESAs in support of citing a new airport traffic control tower at the South Bend Regional Airport.

- **Phase I ESAs for Federal Aviation Administration, Kalamazoo/Battle Creek International Airport, Kalamazoo, Michigan.** Principal Investigator for three Phase I ESAs in support of citing a new airport traffic control tower at the Kalamazoo/Battle Creek International Airport.

- **Phase I ESA, Industrial Property, Grand Rapids, Michigan.** Principal Investigator for a Phase I ESA of property in downtown Grand Rapids with a 100+year history of industrial use. A Phase II ESA, BEA and Due Care Plan were recommended.

- **Phase II ESAs, Indiana Dunes National Lakeshore, National Park Service, Chesterton, Indiana.** Project Manager for Phase II ESAs on three properties incorporated into the park boundaries due to the expiration of life leases. Properties included a gas station and two residences with historical chemical usage.

TRAINING

- American Red Cross First Aid, CPR, and AED Trained

- 40 hour OSHA HAZWOPER and 8 hour refreshers

- National Brownfields Organization, All Appropriate Inquiry (AAI) Training

ORGANIZATIONS

- City of Kentwood Economic Development Corporation and Brownfield Redevelopment Authority (Appointed Member)

APPENDIX C

PROPERTY LEGAL DESCRIPTION

FORMER CEREAL CITY USA PROPERTY
171 W. MICHIGAN AVENUE
BATTLE CREEK, MI 49017

LEGAL DESCRIPTION

Parcel ID No. 0254-00-060-0

BC CITY RB4 PART OF LOTS 48, 49, 50, 59, 61 THRU 65, 70, 71 & 72, ALL OF LOTS 51 THRU 58, 66 THRU 69, 73 THRU 79, MORE PARTICULARY DESC AS FOLLOWS: COMM NW COR OF LOT 65 OF SD PLAT - S 74 DEG 30 MIN 00 SEC E ALG SLY LI OF MICHIGAN AVE 400.29 FT TO TRUE POB - CONTN S 74 DEG 30 MIN 00 SEC E ALG SD SLY LI 684.34 FT - SELY ALG SD ALG ARC TO RT & SLY LI OF RELOCATED MICHIGAN AVE 324.10 FT (RAD 539.96 FT; CHORD BRG S 57 DEG 18 MIN 17 SEC E 319.25 FT) - CONT ALG SLY LI OF RELOCATED MICHIGAN AVE 7.08 FT - S 49 DEG 44 MIN 42 SEC W ALG NWLY LI OF CARLYLE ST (49.5 FT WIDE) 265.03 FT - N 40 DEG 07 MIN 39 SEC W ALG NWLY EXT OF SLY LI OF 72 THRU 81 OF BC CITY RB3 DIST OF 95.85 FT - N 74 DEG 33 MIN 05 SEC W ALG SLY LI OF LOTS 66 TROUGH 77 OF BC CITY RB4 & ELY EXT THEREOF 1169.93 FT - N 16 DEG 05 MIN 29 SEC E ALG WLY LI OF LOTS 66 & 65 OF BC CITY RB4 DIST OF 141.90 FT - S 74 DEG 30 MIN 00 SEC E 278.76 FT - S 15 DEG 30 MIN 00 SEC W 12.50 FT - S 74 DEG 30 MIN 00 SEC E 122.79 FT - N 15 DEG 30 MIN 00 SEC E 135 FT TO POB ((ASSESSED WITH 0254-00-054-0, -055-0, -056-0, -058-0, -059-0, -060-0, -062-0, -063-0, -065-0, -084-0, -084-1, -084-2, 084-3, -086-0 IN 1998))

DESCRIPTIONS OF FORMER PARCELS THAT COMPRISE CURRENT SUBJECT PROPERTY PARCEL

Kellogg Heritage Center
35 W. Jackson Street, Suite 210, Battle Creek, Michigan 49017
(616) 962-6230, Fax: (616) 962-6639

March 25, 1997

By Fax Transmission 616.554.3211

William J. Farrell
Horizon Environmental Corporation
4595 Broadmoor SE, Suite 200
Grand Rapids MI 49512

Dear Bill:

We have contacted Mike Buckley who is with the City of Battle Creek for the most accurate property description. At this time, there is not a legal which make up the site together with the property numbers for each and their legal description as shown in the tax and property file.description which covers the entire site. However, Mr. Buckley did provide a map showing all the parcels

There are twelve parcels and the property numbers are:

0254000840	0254000540
0254000620	0254000600
0254000580	0253000650
0253000630	0254000590
0254000560	0254000550
0254000850	0254000860

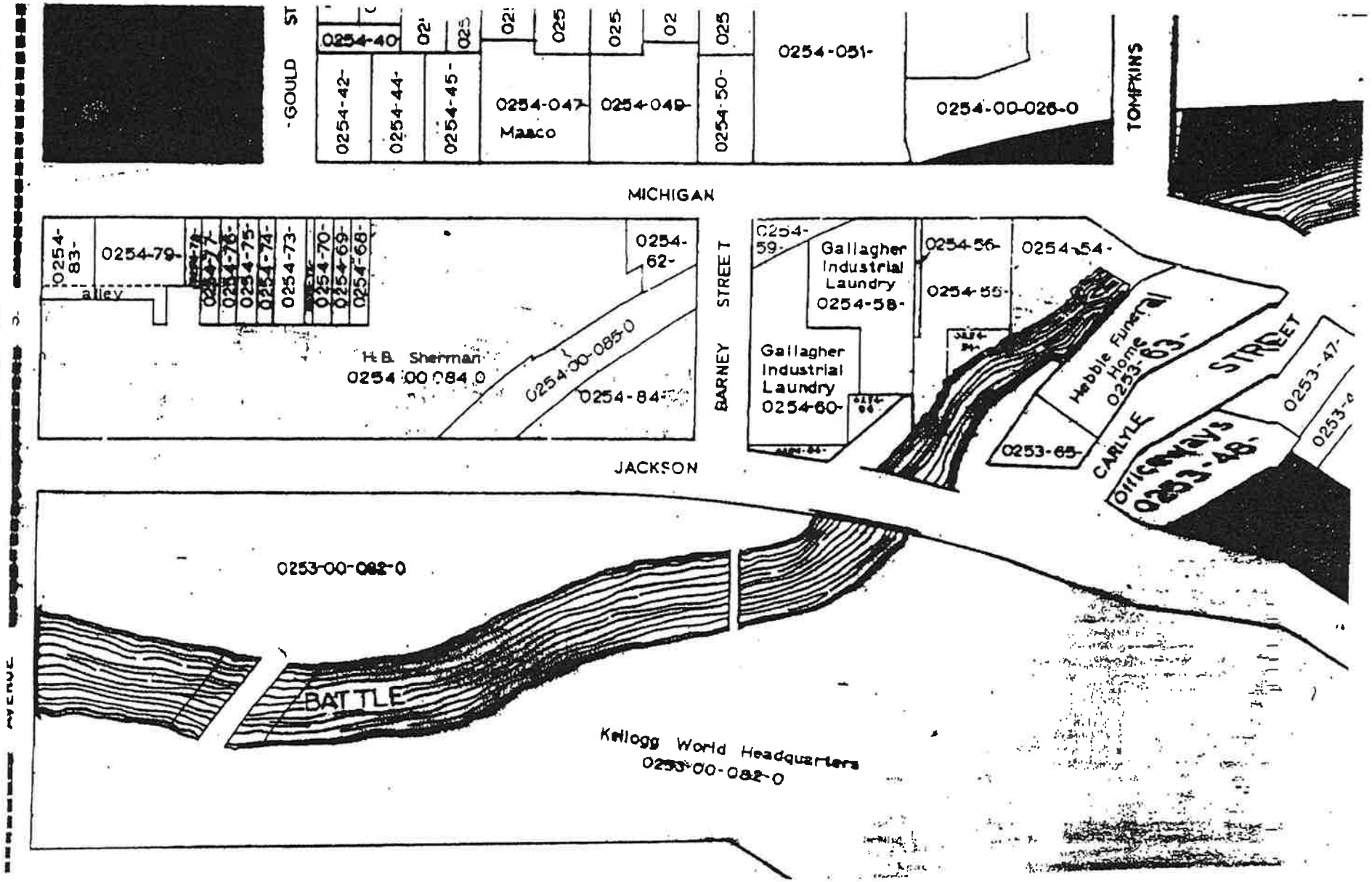
Please let me know how you would like to proceed.

Sincerely,

Paula Boyer

Paula Boyer

Attachment (13 pages)


GOULD ST
0254-40
0254-42-
0254-44-
0254-45-
0254-047-
Maaco
0254-049-
0254-50-
0254-051-
0254-00-026-0
TOMPKINS
MICHIGAN
0254-83-
0254-79-
alley
0254-73-
0254-70-
0254-69-
0254-68-
0254-62-
H.B. Sherman
0254-00-084-0
0254-00-085-0
0254-84-
BARNEY STREET
JACKSON
0254-59-
Gallagher Industrial Laundry
0254-58-
Gallagher Industrial Laundry
0254-60-
0254-56-
0254-55-
0254-54-
Hebble Funeral Home
0253-63-
0253-65-
CARLYLE
STREET
0253-47-
0253-48-
0253-00-082-0
BATTLE
Kellogg World Headquarters
0253-00-082-0

Print Key Output

5716SS1 V3R7M0 961108 S1026259 03/25/97 14:14:59

Display Device . . . . . : CH26
User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

TRY190 S2
F3 = EXIT

Status:
Property Number: 0254000840 ** P.P. **

OWNER: CEREAL CITY DEVELOPMENT CORP

Mail to: CEREAL CITY DEVELOPMENT CORP
2 MICHIGAN AVE W
SUITE 208
BATTLE CREEK MI
49017-0000

School: 1 - BATTLE CREEK
Bank: -

Delinquent Base Tax: .00
Delinquent Tax Due: .00
Current Utilities Due: .00
Tax Information: Cert. Work
Assessed Value: 47,500
SEV.....: 47,500
Taxable Value.: 47,500
Summer.....: 2152.53 *
Winter.....: 1201.49 *

Date Paid:

Pot

Chg Src: LEG Chg Date: 12/23/

Property Address:
180 JACKSON ST W
BATTLE CREEK MI
49017-3509

Percent declared as Homestead: 000
STATE LIEN:
MAP: P 18 Page: 169
Width: 557.14 Liber: 1766
Depth: 264.00 QUAD: CI
Improvement Code:
Land Code: IS
Sales Zone: 015 NEZ:
Class: I Exempt Code: 000
Summer Defered: 000
Tax Type: R Record Status: A
F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
Value
nts
tion
n

Legal Description

BC CITY RB4 PART OF LOTS 54 THRU 56, 68 THRU 74, ALL OF LOTS 75 THRU 77, PART OF VAC BARNEY ST MORE PARTICULARLY DESC AS BEG SLY LI OF MICHIGAN AVE AT PT S 74 DEG 30 MIN 00 SEC E 590 FT FROM NWLY COR OF 65 - CONTN S 74 DEG 30 MIN 00 SEC E ALG SD SLY LI 58.14 FT - S 15 SEC 30 MIN 04 SEC W 70 FT - S 74 DEG 30 MIN 00 SEC E 59 FT - S 15 DEG 30 MIN 04 SEC W 29.35 FT M/L - NELY ALG NLY LI OF FORMER CONRAIL R/W THE FOLLOWING THREE COURSES: NELY 23.89 FT M/L - SWLY ALG WLY LI OF LOT 54 DIST OF 3.56 FT M/L - NELY ALG ARC TO RT 77 FT M/L (RAD 1439.8 FT) - S 74 DEG 29 MIN 56 SEC E 33 FT - N 15 DEG 30 MIN 04 SEC E ALG C/L OF VAC BARNEY ST 0.34 FT - N 74 DEG 29 MIN 56 SEC W 33 FT - S 76 DEG 54 MIN 28 SEC W 37.72 FT - N 15 DEG 30 MIN 04 SEC E 54.05 FT - S 74 DEG 30 MIN 00 SEC E 2 FT - N 15 DEG 30 MIN 04 SEC E 14 FT - S 74 DEG 30 MIN 00 SEC E ALG SLY LI OF MICHIGAN AVE 97.12 FT - S 15 DEG 30 MIN 04 SEC W ALG ELY LI OF VAC BARNEY ST 263.63 FT - N 74 DEG 33 MIN 05 SEC W ALG NLY LI OF JACKSON ST 711.97 FT - N 16 DEG 05 MIN 20 SEC E 124.28 FT - S 74 DEG 30 MIN 00 SEC E 441.45 FT - N 15 DEG 30 MIN 00 SEC E 139.99 FT TO POB

Print Key Output

5716SS1 V3R7M0 961108 S1026259 03/25/97 14:22:44 Page 1

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User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

TRY190 S2
F3 = EXIT

Status:
Property Number: 0254000540 ** P.P. **

OWNER: CITY OF BATTLE CREEK

Mail to: CITY OF BATTLE CREEK

PO BOX 1717
BATTLE CREEK MI
49016-1717

School: 1 - BATTLE CREEK
Bank: 44 - CITY OF BATTLE CREEK

Delinquent Base Tax:	.00
Delinquent Tax Due:	.00
Current Utilities Due:	.00
Tax Information: Cert.	Work
Assessed Value:	0
SEV.....:	0
Taxable Value.:	0
Summer.....:	.00
Winter.....:	.00

Date Paid:
0/00/00
0/00/00

Potential Specl Assmnts

Chg Src: LEG Chg Date: 11/12/96 OPERATOR: MLC

Property Address:
129 MICHIGAN AVE W
BATTLE CREEK MI
49017-3608

Percent declared as Homestead: 000
STATE LIEN:
MAP: Q 20 Page: 480
Width: 190.00 Liber: 1434
Depth: 50.00 QUAD: C2
Improvement Code: XXXXXXX
Land Code: X
Sales Zone: 016 NEZ:
Class: EX Exempt Code: 023
Summer Defered: 000
Tax Type: R Record Status: A

F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
F8 - Detail Assessed Value
F9 - Special Assessments
F10- Delq Tax Information
F11- Sales Information

Legal Description
BC CITY RB4 LOT 48 & SELY 16.5 FT OF LOT 49

Print Key Output

5716SS1 V3R7M0 961108 S1026259 Page 1
03/25/97 14:21:56

Display Device . . . . . : CH26
User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

TRY190 S2
F3 = EXIT

Status:
Property Number: 0254000620 ** P.P. **

OWNER: HANNA,RONALD G

Mail to: HERTIAGE CENTER FOUNDATION

1 KELLOGG SQ
BATTLE CREEK MI
49017-9446

School: 1 - BATTLE CREEK
Bank: -

Delinquent Base Tax: .00
Delinquent Tax Due: .00
Current Utilities Due: .00

Tax Information:	Cert.		Work	
Assessed Value:	28,150			
SEV.....:	28,150			
Taxable Value.:	8,200		Date Paid:	
Summer.....:	274.30	*	12/31/96	C
Winter.....:	201.42		1/14/97	C

Potential Specl Assmnts

Chg Src: ADD Chg Date: 1/02/97 OPERATOR: DEH

Property Address:
183 MICHIGAN AVE W
BATTLE CREEK MI
49017-3601

Percent declared as Homestead: 000
STATE LIEN:
MAP: P 18 Page: 857
Width: 113.98 Liber: 1767
Depth: 70.00 QUAD: CI
Improvement Code: XXXXXXX
Land Code: X
Sales Zone: 015 NEZ:
Class: C Exempt Code: 000
Summer Defered: 000
Tax Type: R Record Status: A

F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
F8 - Detail Assessed Value
F9 - Special Assessments
F10- Delq Tax Information
F11- Sales Information

Legal Description

BC CITY RB4 PART OF LOTS 54,55 & 56 BEG SLY LI OF MICHIGAN AVE AT PT S 74 DEG 30 MIN 00 SEC E 648.14 FT FROM NW COR OF LOT 65 - CONTN S 74 DEG 30 MIN 00 SEC E ALG SD SLY LI 113.98 FT - S 15 DEG 30 MIN 04 SEC W 14 FT - N 74 DEG 30 SEC 00 SEC W 2 FT - S 15 DEG 30 MIN 04 SEC W 54.05 FT - N 76 DEG 54 MIN 28 SEC E 37.72 FT - S 74 DEG 30 MIN 00 SEC E 33 FT - S 15 DEG 30 MIN 04 SEC W ALG C/L OF VAC BARNEY ST .034 FT M/L - N 74 DEG 30 00 SEC W 33 FT - ALG FORMER NLY LI OF CONRAIL R/W THE FOLLOWING THREE COURSES: SWLY ALG ARC TO LT 77 FT M/L (RAD 1439.8 FT) - NELY ALG WLY LI OF LOT 54 DIST 3.56 FT M/L - SWLY 29.89 FT M/L - N 15 DEG 30 MIN 04 SEC E 29.35 M/L - N 74 DEG 30 MIN 00 SEC W 59 FT - N 15 DEG 30 MIN 04 SEC E 70 FT TO POB

Print Key Output

5716SS1 V3R7M0 961108 S1026259 Page 1
03/25/97 14:38:14

Display Device . . . . . : CH26
User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

TRY190 S2
F3 = EXIT

Status:
Property Number: 0254000600 ** P.P. **
** CFT **
OWNER: CITY OF BATTLE CREEK

Mail to: GALLAGHER IND LAUNDRY INC

169 MICHIGAN AVE W
BATTLE CREEK MI
49017-3608

School: 1 - BATTLE CREEK
Bank: 44 - CITY OF BATTLE CREEK

Delinquent Base Tax:		.00
Delinquent Tax Due:		.00
Current Utilities Due:		.00
Tax Information: Cert.		Work
Assessed Value:	0	
SEV.....:	0	
Taxable Value.:	0	Date Paid:
Summer.....:	.00	0/00/00
Winter.....:	.00	0/00/00

Chg Src: LOT Chg Date: 5/11/92 OPERATOR: SLW

Property Address:
169 MICHIGAN AVE W
BATTLE CREEK MI
49017-3662

Percent declared as Homestead: 000
STATE LIEN:
MAP: Q 20 Page: 666
Width: 66.00 Liber: 1556
Depth: 205.60 QUAD: C2
Improvement Code:
Land Code: IS
Sales Zone: 016 NEZ:
Class: EX Exempt Code: 018
Summer Defered: 000
Tax Type: R Record Status: A

F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
F8 - Detail Assessed Value
F9 - Special Assessments
F10- Delq Tax Information
F11- Sales Information

Legal Description
BC CITY RB4 LOT 53 EXC RR ALSO LOT 78 ALSO N 16 FT OF LOT 79 & W 120 FT OF S 60 FT OF N 76 FT OF LOT 79 EXC EASEMENT OF RECORD

Print Key Output

5716SS1 V3R7M0 961108 S1026259 Page 1
03/25/97 14:37:46

Display Device . . . . . : CH26
User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

TRY190 S2
F3 = EXIT

Status:
Property Number: 0254000580
** CFT **
OWNER: CITY OF BATTLE CREEK

Mail to:

Property Address:
157 MICHIGAN AVE W
BATTLE CREEK MI
49017-3608
Percent declared as Homestead: 000
STATE LIEN:
MAP: Q 20 Page: 666
Width: 66.00 Liber: 1556
Depth: 203.00 QUAD: C2
Improvement Code: XXXXXXX
Land Code: X
Sales Zone: 016 NEZ:
Class: EX Exempt Code: 018
Summer Defered: 000
Tax Type: R Record Status: A

School: 1 - BATTLE CREEK
Bank: -
Delinquent Base Tax: .00
Delinquent Tax Due: .00
Current Utilities Due: .00
Tax Information: Cert. Work
Assessed Value: 0
SEV.....: 0
Taxable Value.: 0 Date Paid:
Summer.....: .00 0/00/00
Winter.....: .00 0/00/00
Potential Specl Assmnts
Chg Src: BNK Chg Date: 10/30/96 OPERATOR: SKL

F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
F8 - Detail Assessed Value
F9 - Special Assessments
F10- Delq Tax Information
F11- Sales Information

Legal Description
BC CITY RB4 LOTS 51-52 EXC PT OF 51 TO CITY OF BC POB E LI LOT 79 & N LI OF BC RIVER NLY TO PT 16 FT SLY OF NELY COR LOT 79 - RT AGL 66 FT TO E LI 51 SLY TO BC RIVER NLY POB

Print Key Output

5716SS1 V3R7M0 961108 S1026259 03/25/97 Page 1 14:42:09

Display Device . . . . . : CH26
User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

TRY190 S2
F3 = EXIT

Status:
Property Number: 0253000650

OWNER: CITY OF BATTLE CREEK

Mail to:

Property Address:
CARLYLE ST
BATTLE CREEK MI
49017-0000
Percent declared as Homestead: 000
STATE LIEN:
MAP: Q 20 Page:
Width: 46.00 Liber:
Depth: 96.95 QUAD: CI
Improvement Code:
Land Code: IS
Sales Zone: 016 NEZ:
Class: EX Exempt Code: 001
Summer Defered: 000
Tax Type: R Record Status: A

School: 1 - BATTLE CREEK
Bank: 44 - CITY OF BATTLE CREEK

Delinquent Base Tax:		.00
Delinquent Tax Due:		.00
Current Utilities Due:		.00
Tax Information: Cert.		Work
Assessed Value:	0	
SEV.....:	0	
Taxable Value.:	0	Date Paid:
Summer.....:	.00	0/00/00
Winter.....:	.00	0/00/00

Chg Src: LEG Chg Date: 10/17/96 OPERATOR: MLW

F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
F8 - Detail Assessed Value
F9 - Special Assessments
F10- Delq Tax Information
F11- Sales Information

Legal Description
BC CITY RB3-POB NE COR OF JUNCTION OF JACKSON ST & CARLYLE ST - NELY 46 FT - NWLY 96.95 FT TO BED OF KAL RIVER - S WLY ALG RIVER BED TO NLY LN OF JACKSON ST - SELY ALG NLY LN JACKSON ST TO POB

Print Key Output

5716SS1 V3R7M0 961108 S1026259 03/25/97 14:41:48 Page 1

Display Device . . . . . : CH26
User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

TRY190 S2
F3 = EXIT

Status:
Property Number: 0253000630 ** P.P. **

OWNER: CITY OF BATTLE CREEK

Mail to:

Property Address:
123 MICHIGAN AVE W
BATTLE CREEK MI
49017-3608
Percent declared as Homestead: 000
STATE LIEN:
MAP: Q 20 Page: 58
Width: 76.30 Liber: 1439
Depth: 152.00 QUAD: CI
Improvement Code:
Land Code:
Sales Zone: 016 NEZ:
Class: EX Exempt Code: 023
Summer Defered: 000
Tax Type: R Record Status: A

School: 1 - BATTLE CREEK
Bank: 44 - CITY OF BATTLE CREEK

Delinquent Base Tax:		.00
Delinquent Tax Due:		.00
Current Utilities Due:		.00
Tax Information:	Cert.	Work
Assessed Value:	0	
SEV.....:	0	
Taxable Value.:	0	Date Paid:
Summer.....:	.00	0/00/00
Winter.....:	.00	0/00/00

F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
F8 - Detail Assessed Value
F9 - Special Assessments
F10- Delq Tax Information
F11- Sales Information

Chg Src: LEG Chg Date: 10/17/96 OPERATOR: MLW

Legal Description
BC CITY RB3 POB WLY COR MICH & CARLYLE ST NLY 67.19 FT - N WLY 154.62 FT - NWLY 55 FT - SELY 96.95 FT ALONG CARLYLE ST 206.75 FT TO POB

Print Key Output

5716SS1 V3R7M0 961108 S1026259 03/25/97 Page 14:41:0

Display Device . . . . . : CH26
User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

Status: TRY190 S2
Property Number: 0254000590 F3 = EXIT

OWNER: CITY OF BATTLE CREEK

Mail to:

Property Address:
MICHIGAN AVE W
BATTLE CREEK MI
49017-0000
Percent declared as Homestead: 000
STATE LIEN:
MAP: Q 20 Page:
Width: 128.60 Liber:
Depth: 29.20 QUAD: C2
Improvement Code:
Land Code: IS
Sales Zone: 016 NEZ:
Class: EX Exempt Code: 001
Summer Defered: 000
Tax Type: R Record Status: A

School: 1 - BATTLE CREEK
Bank: 44 - CITY OF BATTLE CREEK

Delinquent Base Tax:		.00
Delinquent Tax Due:		.00
Current Utilities Due:		.00
Tax Information: Cert.		Work
Assessed Value:	0	
SEV.....:	0	
Taxable Value.:	0	Date Paid:
Summer.....:	.00	0/00/00
Winter.....:	.00	0/00/00
	Potential Specl Assmnts	

Chg Src: LOT Chg Date: 5/11/92 OPERATOR: SLW

F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
F8 - Detail Assessed Value
F9 - Special Assessments
F10- Delq Tax Information
F11- Sales Information

Legal Description

BC CITY BEG N COR LOT 53 OF RB4 - SELY ALG SWLY LI W MICHIGAN AVE 128.6 FT - WLY ALG ARC TO LT 140.5 FT (RAD 1401.8 FT) TO SELY LI BARNEY ST - NELY ALG SAME 58.4 FT & POB

Print Key Output

5716SS1 V3R7M0 961108 S1026259 03/25/97 14:37:23 Page 1

Display Device . . . . . : CH26
User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

TRY190 S2
F3 = EXIT

Status:
Property Number: 0254000560

OWNER: CITY OF BATTLE CREEK

Mail to:

Property Address:
SEWAGE PUMP STATION
BATTLE CREEK MI
49017-0000
Percent declared as Homestead: 000
STATE LIEN:
MAP: Q 20 Page:
Width: 74.50 Liber:
Depth: 130.00 QUAD: C2
Improvement Code: XXXXXXX
Land Code: X
Sales Zone: 016 NEZ:
Class: EX Exempt Code: 001
Summer Defered: 000
Tax Type: R Record Status: A

School: 1 - BATTLE CREEK
Bank: 44 - CITY OF BATTLE CREEK
Delinquent Base Tax: .00
Delinquent Tax Due: .00
Current Utilities Due: .00
Tax Information: Cert. Work
Assessed Value: 0
SEV.....: 0
Taxable Value.: 0 Date Paid:
Summer.....: .00 0/00/00
Winter.....: .00 0/00/00

Chg Src: LEG Chg Date: 10/17/96 OPERATOR: MLW

F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
F8 - Detail Assessed Value
F9 - Special Assessments
F10- Delq Tax Information
F11- Sales Information

Legal Description
BC CITY RB4 NWLY 49.5 FT OF LOT 49 EXC
NELY 133.5 FT SELY 25.5 FT OF LOT 50 EXC
NELY 133.5 FT WLY 8 FT OF NLY 143.5 FT
OF LOT 50

Print Key Output

5716SS1 V3R7M0 961108 S1026259 Page 1
03/25/97 14:36:59

Display Device . . . . . : CH26
User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

TRY190 S2
F3 = EXIT

Status:
Property Number: 0254000550 ** P.P. **

OWNER: CITY OF BATTLE CREEK

Mail to: CITY OF BATTLE CREEK

PO BOX 1717
BATTLE CREEK MI
49016-1717

School: 1 - BATTLE CREEK
Bank: 74 - NEIGHBORHOODS INC

Delinquent Base Tax:	498.14
Delinquent Tax Due:	.00
Current Utilities Due:	.00
Tax Information: Cert.	Work
Assessed Value:	0
SEV.....:	0
Taxable Value.:	0
Summer.....:	.00
Winter.....:	.00

Date Paid:
0/00/00
0/00/00

Potential Specl Assmnts

Chg Src: LEG Chg Date: 10/17/96 OPERATOR: MLW

Property Address:
MICHIGAN AVE W
BATTLE CREEK MI
49017-0000

Percent declared as Homestead: 000
STATE LIEN:
MAP: Q 20 Page: 571
Width: 107.50 Liber: 1418
Depth: 133.50 QUAD: C2
Improvement Code: XXXXXXX
Land Code: X
Sales Zone: 016 NEZ:
Class: EX Exempt Code: 008
Summer Defered: 000
Tax Type: R Record Status: A

F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
F8 - Detail Assessed Value
F9 - Special Assessments
F10- Delq Tax Information
F11- Sales Information

Legal Description

BATTLE CREEK CITY RB4 NLY 133.5 FT OF WLY 49.5 FT OF LOT 49 & LOT 50 EXC WLY 8 FT OF NLY 143.5 FT & ELY 25.5 FT LYING 133.5 FT S OF N LI & EXC SEWER ESMTS

Print Key Output

5716SS1 V3R7M0 961108 S1026259 Page 1
03/25/97 14:40:29

Display Device . . . . . : CH26
User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

TRY190 S2
F3 = EXIT

Status: Deleted
Property Number: 0254000850

OWNER: CITY OF BATTLE CREEK

Mail to:

Property Address:
JACKSON ST W
BATTLE CREEK MI
49017-0000
Percent declared as Homestead: 000
STATE LIEN:
MAP: P 18 Page:
Width: .00 Liber:
Depth: .00 QUAD: SE
Improvement Code:
Land Code:
Sales Zone: 015 NEZ:
Class: EX Exempt Code: 001
Summer Defered: 000
Tax Type: R Record Status: D

School: 1 - BATTLE CREEK
Bank: 44 - CITY OF BATTLE CREEK
Delinquent Base Tax: .00
Delinquent Tax Due: .00
Current Utilities Due: .00
Tax Information: Cert. Work
Assessed Value: 0
SEV.....: 0
Taxable Value.: 0 Date Paid:
Summer.....: .00 0/00/00
Winter.....: .00 0/00/00

Chg Src: CHG Chg Date: 2/28/92 OPERATOR: USE

F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
F8 - Detail Assessed Value
F9 - Special Assessments
F10- Delq Tax Information
F11- Sales Information

Legal Description

BC CITY RB4 COMM S COR LOT 77- N 68 DEG 50 MIN 32 SEC W 214.7 TO POB - NELY ALG ARC TO RT 261 FT M/L TO PT ON SELY LI LOT 54 LYING 156.15 FT FROM S COR SD LOT - N 77 DEG 9 MIN 2 SEC E 57.25 FT - SWLY ON ARC TO LT 77.224 FT TO PT ON NWLY LI LOT 54 LYING 14 FT NWLY OF C/L W BND TRACK OF MCRR - NELY ALG NWLY LI LOT 54 TO PT 17 FT NWLY SD C/L - SWLY TO PT ON NWLY LI LOT 75 LYING 24.75 FT NWLY OF SD C/L -NELY ALG NWLY LI LOT 75 TO PT 30 FT NWLY SD C/L - SWLY ON ARC TO LT 151.1 FT TO NELY LI JACKSON ST - S 68 DEG 50 MIN 32 SEC E 95.95 FT TO POB

Print Key Output

5716SS1 V3R7M0 961108 S1026259 Page 03/25/97 14:39:3

Display Device . . . . . : CH26
User . . . . . : PLNSTAFF

TAX and PROPERTY FILE INQUIRY

TRY190 S2
F3 = EXIT

Status:
Property Number: 0254000860

OWNER: CITY OF BATTLE CREEK

Mail to:

Property Address:
BARNEY BLVD
BATTLE CREEK MI
49017-0000
Percent declared as Homestead: 000
STATE LIEN:
MAP: Q 20 Page:
Width: 100.58 Liber:
Depth: 60.00 QUAD: C2
Improvement Code:
Land Code: IS
Sales Zone: 016 NEZ:
Class: EX Exempt Code: 001
Summer Defered: 000
Tax Type: R Record Status: A

School: 1 - BATTLE CREEK
Bank: 44 - CITY OF BATTLE CREEK

Delinquent Base Tax:		.00
Delinquent Tax Due:		.00
Current Utilities Due:		.00
Tax Information: Cert.		Work
Assessed Value:	0	
SEV.....:	0	
Taxable Value.:	0	Date Paid:
Summer.....:	.00	0/00/00
Winter.....:	.00	0/00/00

Chg Src: CHG Chg Date: 8/23/94 OPERATOR: USE

F5 - Certified Descriptions
F6 - New Year Descriptions
F7 - Detail Tax Information
F8 - Detail Assessed Value
F9 - Special Assessments
F10- Delq Tax Information
F11- Sales Information

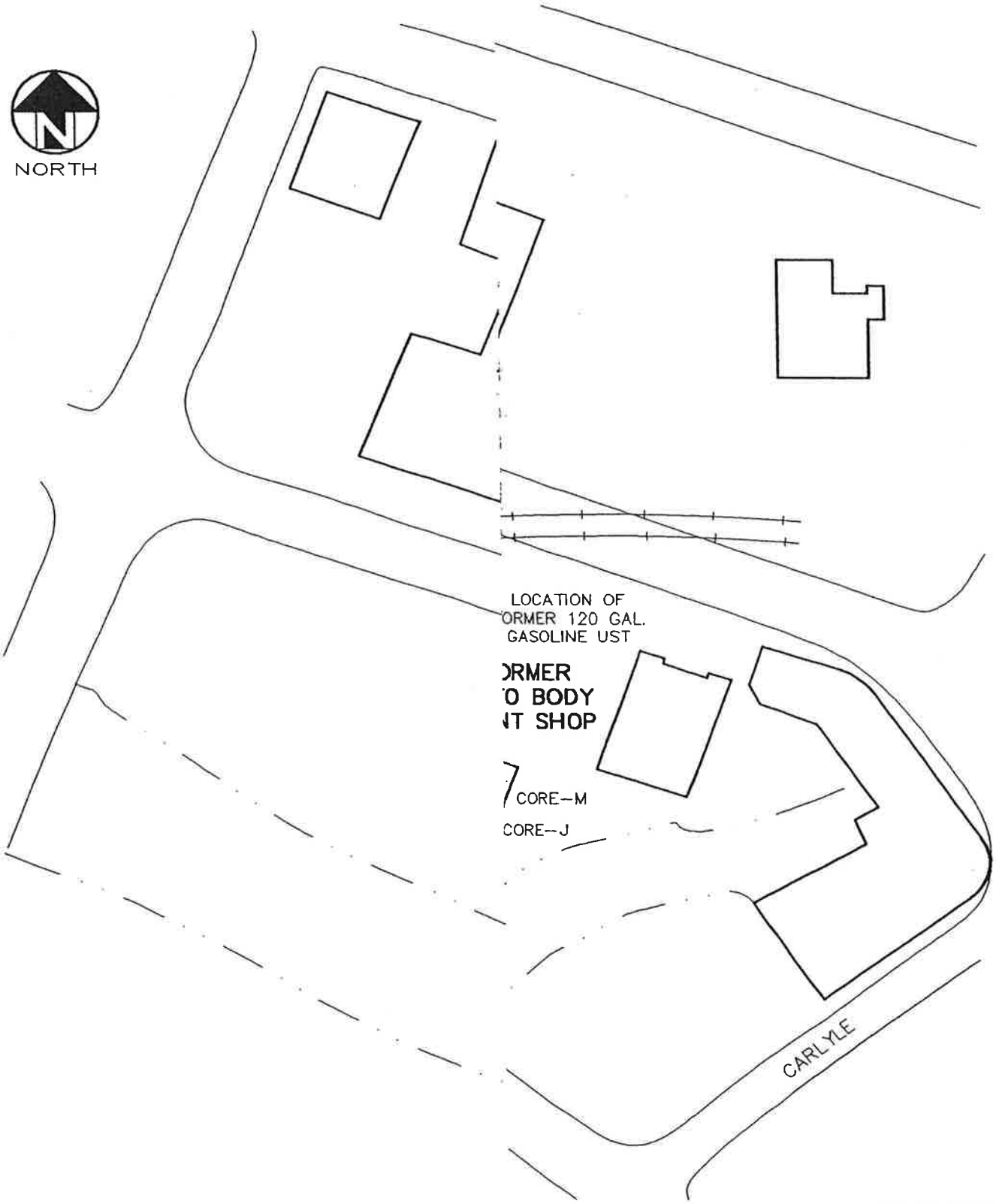
Legal Description

BC CITY RB 4-PART OF LOTS 79 & 51 COMM AT NE COR JACKSON & BARNEY STS - N 20 DEG 24 MIN 59 SEC E 6.33 FT-S 69 DEG 47 MIN 01 SEC E 120 FT - N 20 DEG 24 MIN 59 SEC E 60 FT - S 69 DEG 47 MIN 01 SEC E 68.43 FT - S 67 DEG 38 MIN 29 SEC W 121.30 FT - N 60 DEG 46 MIN 57 SEC W 100.58 FT TO POB DDA000576

APPENDIX D

SAMPLE LOCATION FIGURES

KHF–BM1/DEC1196



ZON ENVIRONMENTAL

H.B. SHERMAN/GALLAGHER PROPERTIES
BATTLE CREEK, MICHIGAN

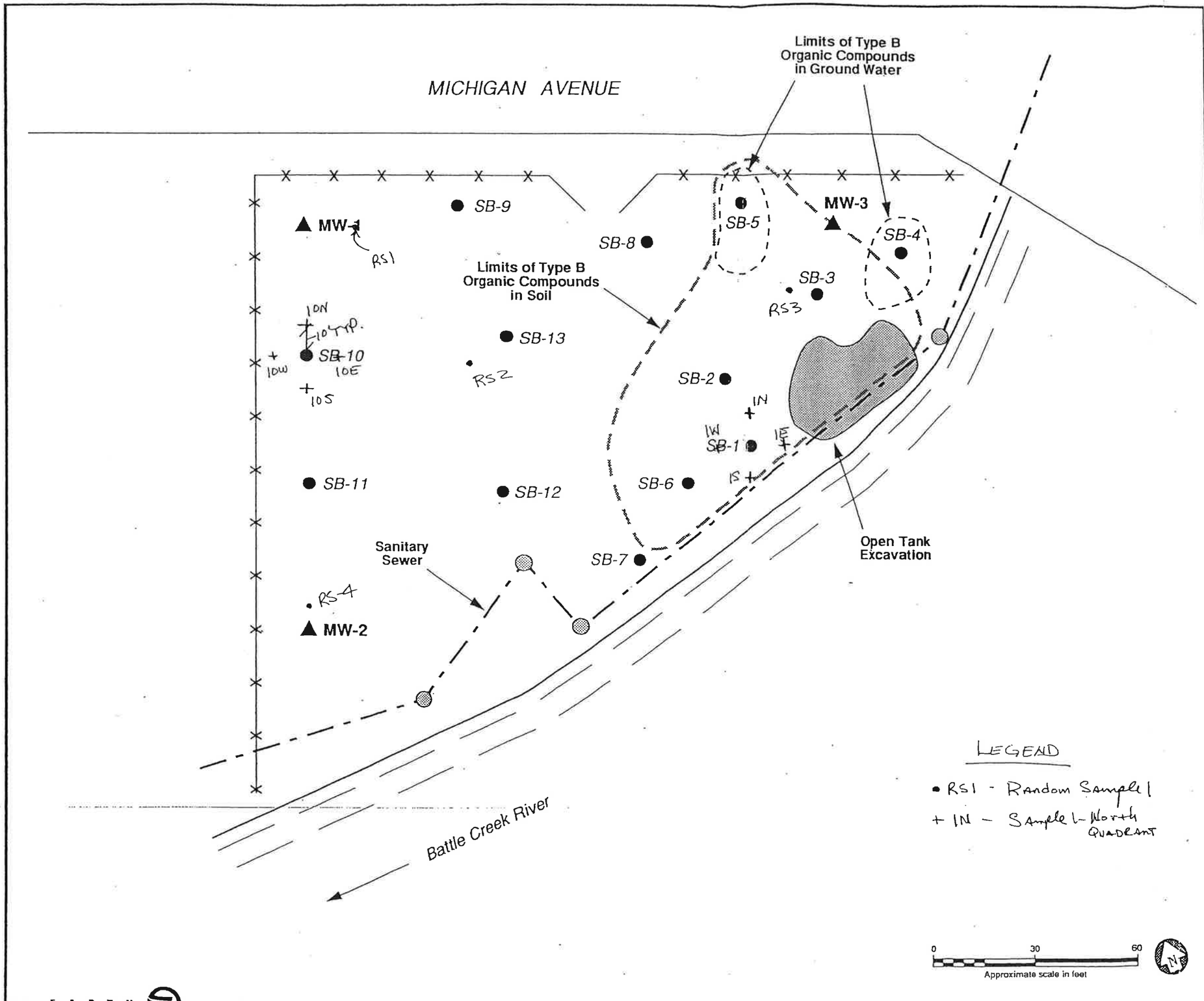
SITE MAP

PROJECT NUMBER:
KHF–0101

FIGURE:
2

DECEMBER, 1996

91064/0894/TW



LEGEND

- ▲ Monitoring Well
- ● Soil Boring
- ◍ Manhole Cover

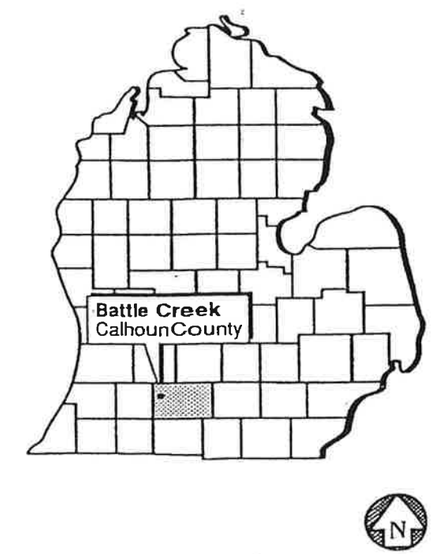
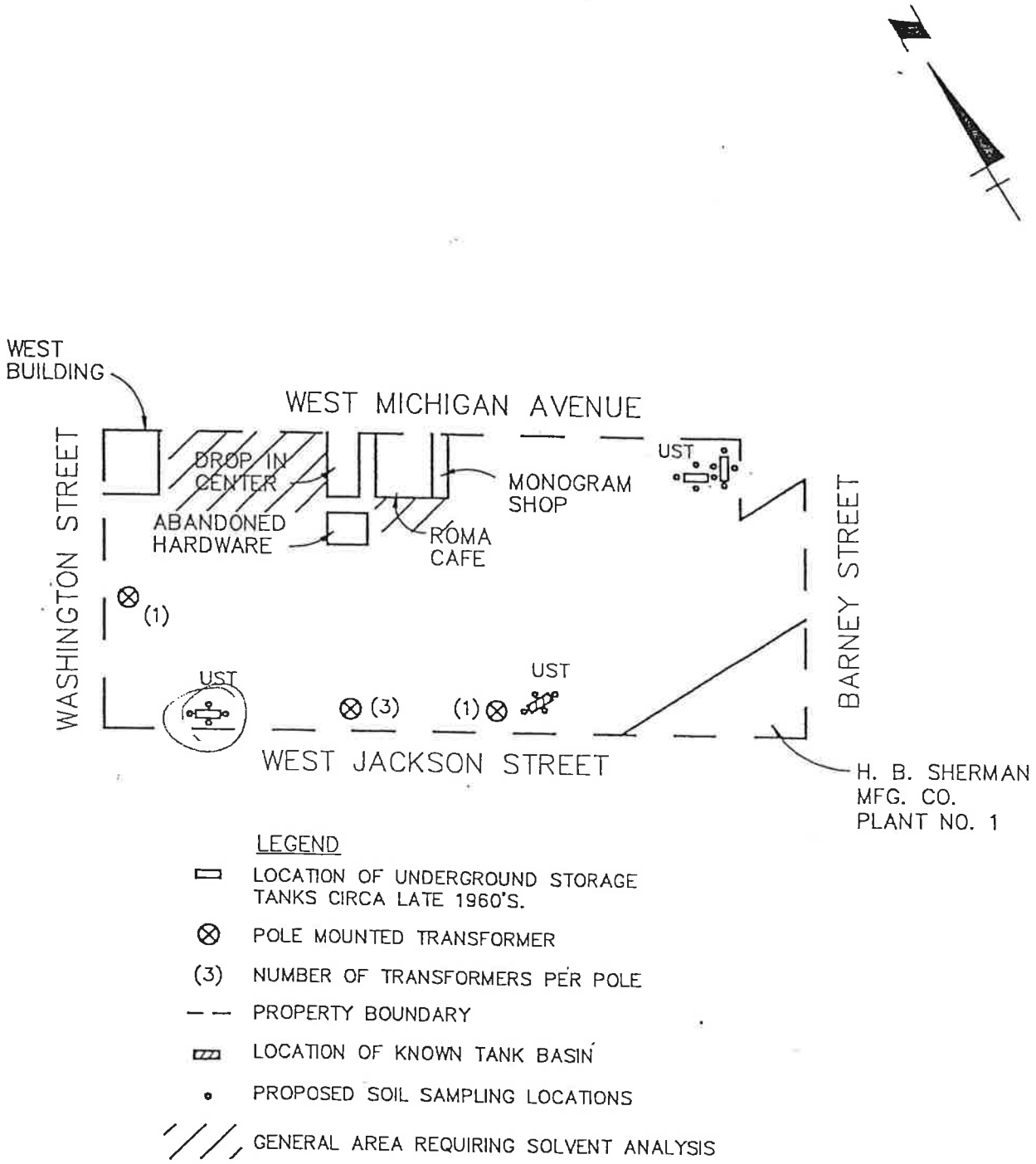


Figure 1

Site Map
Hebble Site
City of Battle Creek, Michigan

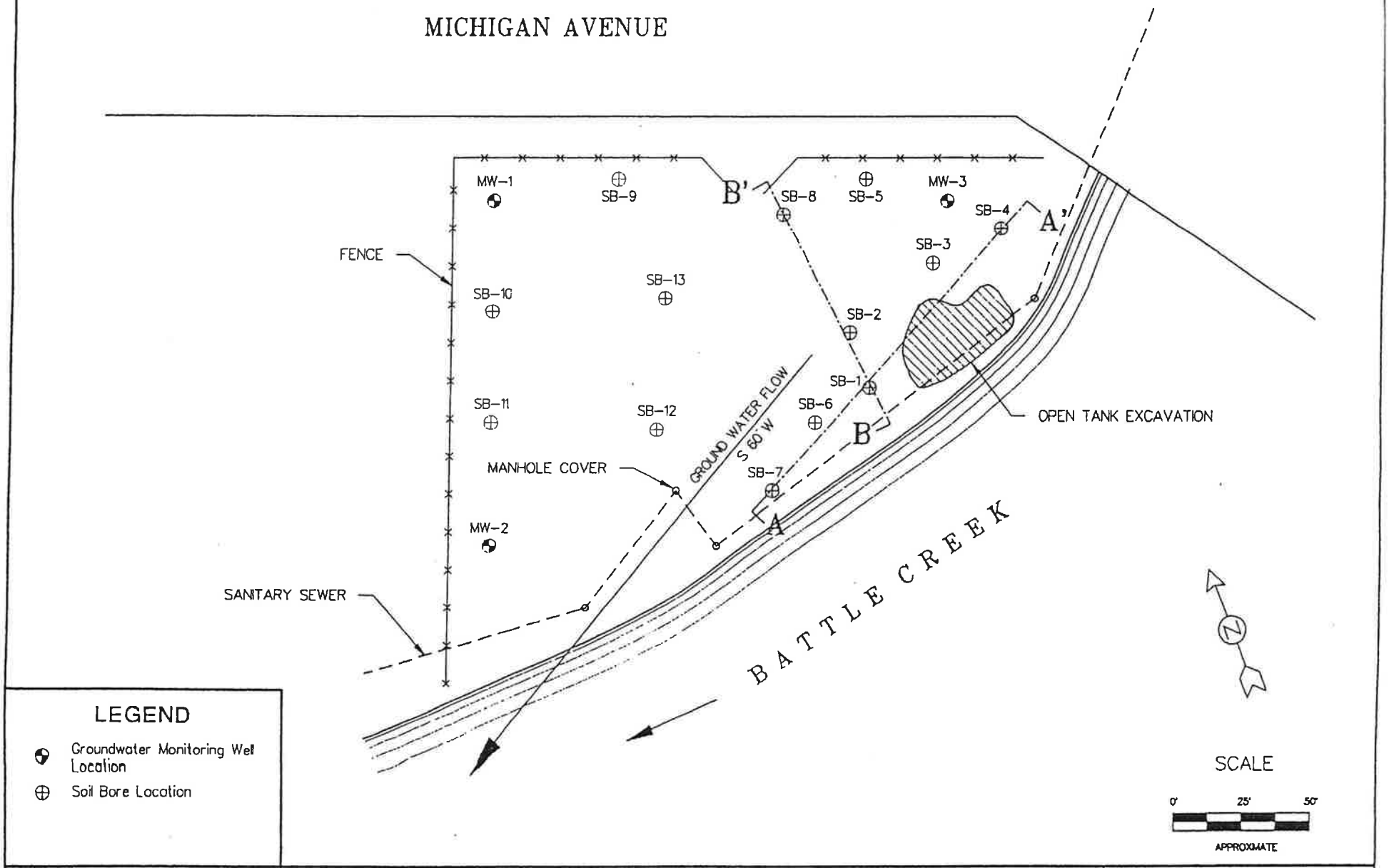
August 1994 9106

EARTH TECH



SEG SNELL ENVIRONMENTAL GROUP, INC. ENGINEERS • LANDSCAPE ARCHITECTS • SURVEYORS	PURCHASING DIVISION CITY OF BATTLE CREEK CALHOUN COUNTY, MICHIGAN	SITE MAP H. B. SHERMAN MFG. CO. BATTLE CREEK, MICHIGAN	SCALE: 1"=200' FIGURE 2

DRAWING #:	DATE:
024-1001	6/1/93



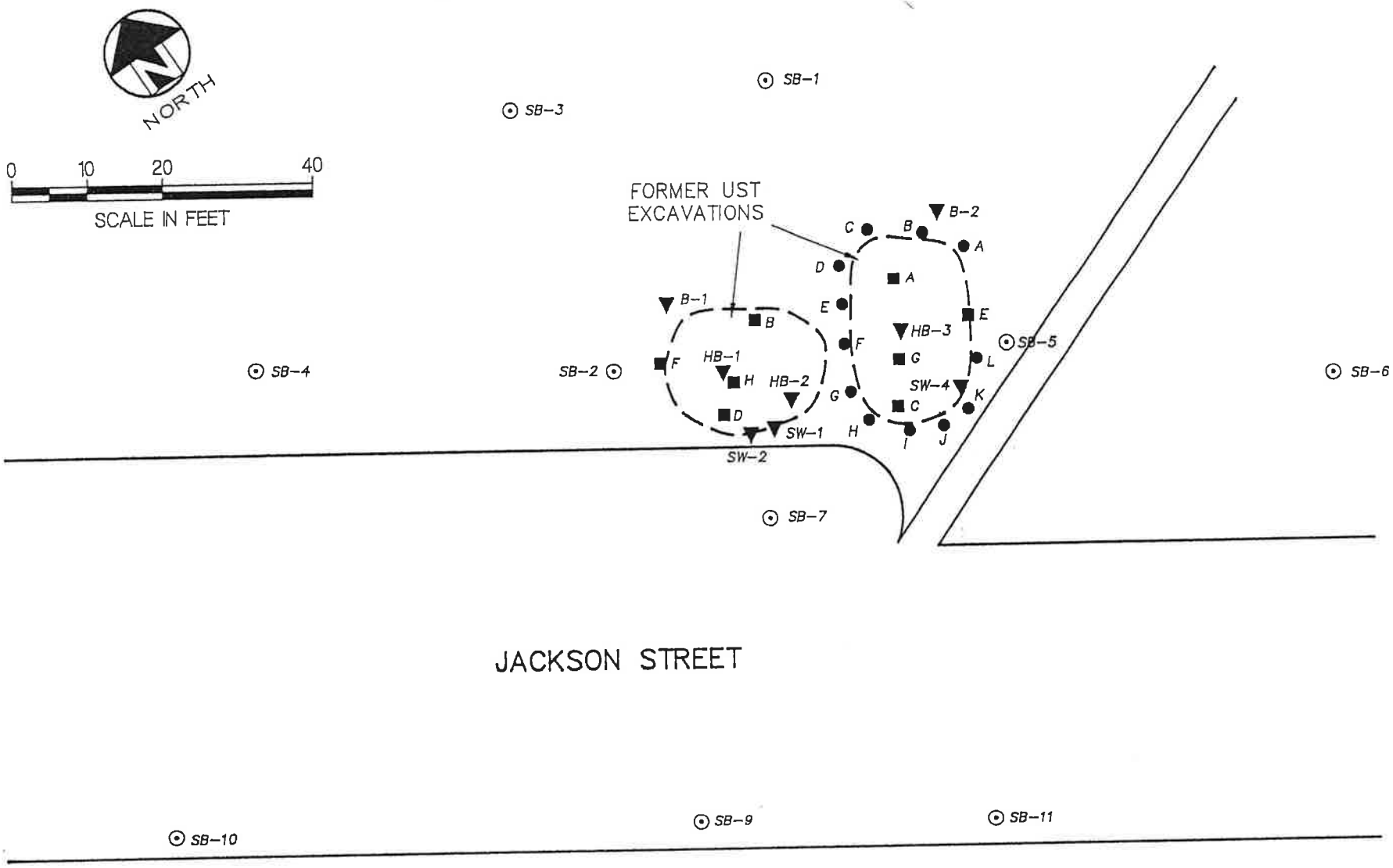
Global Environmental Engineering Inc.

Figure 2

SITE SKETCH

City of Battle Creek
Hebble Site
Battle Creek, MI

KHF-SB1/APR3096



LEGEND

- ▼ – HAND AUGER BORING (OCT. '91)
- ■ – HAND AUGER BORING (APR. '92)
- ● – HAND AUGER BORING (AUG. '93)
- ⊙ – TERRA ENVIRONMENTAL BORING (APR./JUL. '93)

HORIZON ENVIRONMENTAL

FORMER H.B. SHERMAN/GALLAGHER PROPERTIES
BATTLE CREEK, MICHIGAN

BORING LOCATION MAP

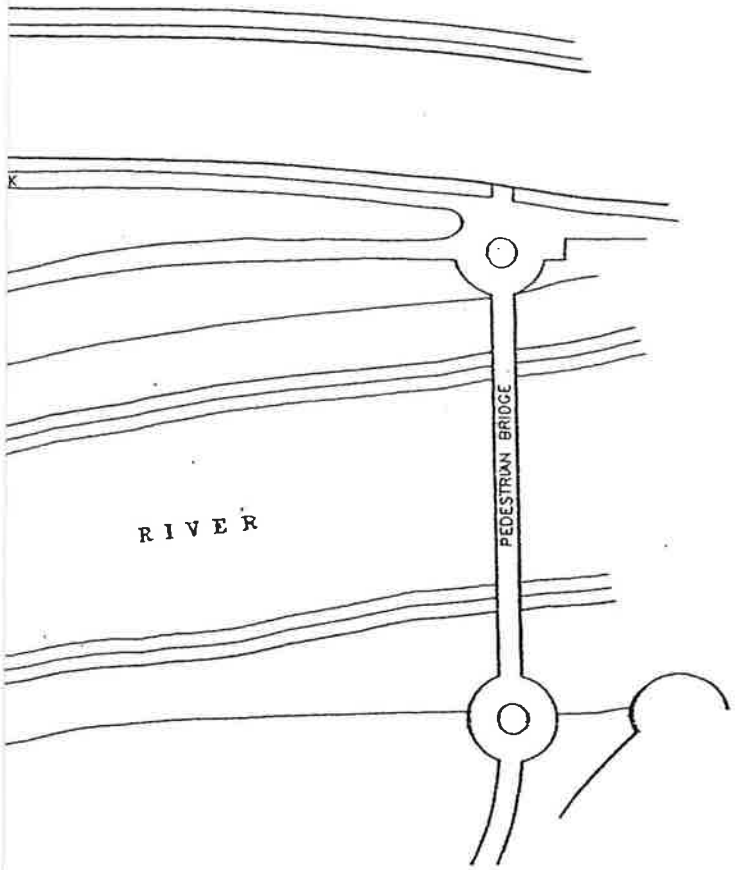
PROJECT NUMBER: KHF-0101

FIGURE: 3

APRIL 1996

Notes: Information on this map was compiled from several maps: Earth Tech Phase II Investigation Work Plan (January 1995), Horizon Environmental Boring Location Map, Figure 3 (April 1996) and Global Environmental Site Sketch, Figure 1. This map, which was the Earth Tech Work Plan, was annotated to include the previous boring information and the Geoprobe® locations placed by Prein&Newhof.

2001 locations (GP)



FORMER H.B. SHERMAN SITE
BATTEL CREEK, MICHIGAN